

ORIENTAL INSTITUTE PUBLICATIONS · NO. 131  
THE ORIENTAL INSTITUTE OF THE UNIVERSITY OF CHICAGO

*Series Editors*

Leslie Schramer

*and*

Thomas G. Urban

*DEDICATED TO*  
LINDA S. BRAIDWOOD  
*AND*  
ROBERT J. BRAIDWOOD

**THE AMUQ VALLEY REGIONAL PROJECTS**  
**VOLUME 1**  
**SURVEYS IN THE PLAIN OF ANTIOCH AND**  
**ORONTES DELTA, TURKEY, 1995–2002**

*edited by*

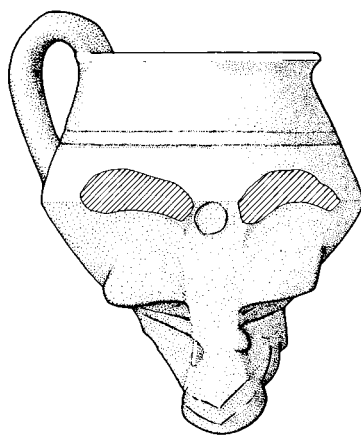
**KUTLU ASLIHAN YENER**

*with chapters by*

**STEPHEN BATIUK, AARON A. BURKE, JESSE J. CASANA, AMY REBECCA GANSELL,  
TIMOTHY P. HARRISON, HATICE PAMIR, LAURENCE PAVLISH,  
TONY J. WILKINSON, AND KUTLU ASLIHAN YENER**

*and contribution by*

**ROBERT K. RITNER**



THE ORIENTAL INSTITUTE OF THE UNIVERSITY OF CHICAGO  
ORIENTAL INSTITUTE PUBLICATIONS • NO. 131  
CHICAGO • ILLINOIS

Library of Congress Control Number: 2005924805

ISBN: 1-885923-32-5

ISSN: 0069-3367

©2005 by The University of Chicago. All rights reserved.

Published 2005. Printed in the United States of America.

*The Oriental Institute, Chicago*

Co-managing Editors

Thomas A. Holland *and* Thomas G. Urban

*Series Editors' Acknowledgments*

The series editors thank Katherine Strange Burke and Katie L. Johnson for their assistance in the production of this volume.

*Spine and Title Page Illustration*

“Miss Piggy” Animal-headed Vessel discovered at Tell Atchana (Alalakh; AS 136). See fig. 4.26 and pl. 8

*Printed by McNaughton & Gunn, Saline, Michigan*

The paper used in this publication meets the minimum requirements of American National Standard for Information Services — Permanence of Paper for Printed Library Materials, ANSI Z39.48-1984.

## TABLE OF CONTENTS

LIST OF ABBREVIATIONS .....	ix
LIST OF FIGURES .....	xi
LIST OF PLATES .....	xvii
LIST OF TABLES .....	xvii
ACKNOWLEDGMENTS .....	xix
TEAM MEMBERS BY NAME AND SEASON .....	xxi
BIBLIOGRAPHY .....	xxiii
CHAPTER ONE: THE AMUQ VALLEY REGIONAL PROJECTS. <i>Kutlu Aslıhan Yener</i> .....	1
INTRODUCTION .....	1
IMPORTANCE OF THE AMUQ .....	2
A SHORT HISTORY OF INVESTIGATIONS .....	4
THE AMUQ VALLEY REGIONAL PROJECTS 1995–2002 .....	7
THE RESEARCH DESIGN .....	9
REGIONAL INVESTIGATIONS .....	10
SITE-SPECIFIC INVESTIGATIONS .....	11
ARTIFACTUAL INVESTIGATIONS .....	14
OUTREACH PROGRAMS .....	15
TERMINOLOGY AND DEFINITIONS .....	16
CHAPTER TWO: SETTLEMENT AND LANDSCAPES IN THE AMUQ REGION. <i>Jesse J. Casana</i> and <i>Tony J. Wilkinson</i> .....	25
INTRODUCTION .....	25
HISTORY AND TECHNIQUES OF SURVEY .....	25
THE AMUQ VALLEY REGIONAL PROJECT SURVEY .....	26
THE PHYSICAL ENVIRONMENT AND GEOARCHAEOLOGY .....	28
DIMINISHING ARCHAEOLOGICAL RECORD: PHYSICAL TRANSFORMATIONS .....	30
DIMINISHING ARCHAEOLOGICAL RECORD: CULTURAL TRANSFORMATIONS .....	31
ENVIRONMENTAL CONTEXT OF PREHISTORIC SETTLEMENT .....	33
PATTERNS OF SETTLEMENT THROUGH TIME .....	34
<i>Paleolithic</i> .....	34
<i>Epipaleolithic and Pre-pottery Neolithic</i> .....	35
<i>Early Prehistoric: Amuq Phases A–D/E</i> .....	36
<i>Bronze and Iron Age Settlement: Landscape of Tells</i> .....	37
<i>Dispersed Settlement of Seleucid and Later Times</i> .....	40
<i>The Islamic Period</i> .....	44
CONCLUSIONS AND FUTURE WORK .....	45
CHAPTER THREE: THE ORONTES DELTA SURVEY. <i>Hatice Pamir</i> .....	67
INTRODUCTION .....	67
THE NATURAL SETTING .....	68

SURVEY METHODS .....	69
ANALYSES OF THE SURVEY RESULTS .....	70
THE NEOLITHIC/EARLY CHALCOLITHIC SITES .....	70
BRONZE AGE SITES .....	70
IRON AGE SITES .....	72
HELLENISTIC, ROMAN, AND ISLAMIC SITES .....	73
CONCLUSIONS .....	75
ACKNOWLEDGMENTS .....	76
CHAPTER FOUR: ALALAKH SPATIAL ORGANIZATION. <i>Kutlu Aslıhan Yener</i> .....	99
INTRODUCTION .....	99
AUGMENTING THE ARCHITECTURAL LAYOUTS OF LEVELS VII–0 .....	99
PREVIOUS INVESTIGATIONS AT ALALAKH AND CHRONOLOGY .....	100
THE ORIENTAL INSTITUTE EXPEDITION TO ALALAKH (2000–2002) .....	103
ALALAKH SITE MAPS .....	105
<i>Level VII</i> .....	105
<i>Level VIA and VIB and Level VA and VB</i> .....	106
<i>Level IV</i> .....	108
<i>Levels III and II</i> .....	110
<i>Level I</i> .....	112
<i>Level 0</i> .....	112
CONCLUSION .....	113
CHAPTER FIVE: THE TELL ATCHANA MAPPING AND GIS PROJECT. <i>Stephen Batiuk and Aaron A. Burke</i> .....	145
OBJECTIVES .....	145
PROBLEMS .....	145
METHOD .....	149
CONCLUSIONS .....	150
CHAPTER SIX: SURFACE CERAMICS, OFF-SITE SURVEY, AND FLOODPLAIN DEVELOPMENT AT TELL ATCHANA (ALALAKH). <i>Jesse J. Casana and Amy Rebecca Gansell</i> .....	153
INTRODUCTION .....	153
ON-SITE SURFACE COLLECTION .....	153
SPATIAL DISTRIBUTION OF SURFACE MATERIAL .....	153
DATING OF THE BRONZE AGE SURFACE MATERIAL .....	154
ROMAN, LATE ROMAN, AND ISLAMIC CERAMIC EVIDENCE .....	157
OFF-SITE SURFACE COLLECTION .....	157
FLOODPLAIN DEVELOPMENT .....	158
CHAPTER SEVEN: THE TA‘YINAT SURVEY, 1999–2002. <i>Stephen Batiuk, Timothy P. Harrison, and Laurence Pavlish</i> .....	171
INTRODUCTION .....	171
PREVIOUS INVESTIGATIONS AT TELL TA‘YINAT .....	172
THE SYRO-HITTITE EXPEDITION .....	172
HISTORICAL REFERENCES TO IRON AGE TELL TA‘YINAT .....	173
THE TA‘YINAT SURVEY .....	174
SITE TOPOGRAPHY .....	175

GEOMAGNETIC REMOTE SENSING SURVEY .....	175
THE SURFACE SURVEY .....	176
<i>Sampling Strategy and Recovery Methods</i> .....	176
<i>Settlement Patterns</i> .....	176
<i>Miscellaneous Finds</i> .....	177
SUMMARY OBSERVATIONS .....	177
ACKNOWLEDGMENTS .....	178
CHAPTER EIGHT: CONCLUSIONS. <i>Kutlu Aslıhan Yener</i> .....	193
THE AMUQ VALLEY AND ITS WIDER CONTEXT .....	193
PALEOLITHIC AND AMUQ PHASES A–D/E (NEOLITHIC–UBAID) .....	194
AMUQ PHASES F–J (LATE FOURTH TO THE END OF THE THIRD MILLENNIUM B.C.) .....	195
AMUQ PHASES K–O (MIDDLE/LATE BRONZE–IRON AGES, CA. 2000–SEVENTH CENTURY B.C.) .....	197
AMUQ PHASES P–V (HELLENISTIC–PRESENT) .....	200
FUTURE GOALS .....	201
APPENDIX A: GAZETTEER OF SITES. <i>Jesse J. Casana and Tony J. Wilkinson</i> .....	203
POTTERY ASSESSMENTS .....	203
GAZETTEER OF SITES .....	203
APPENDIX B: SCARAB. <i>Robert K. Ritner</i> .....	281
INDEX OF GEOGRAPHICAL NAMES .....	283
PLATES .....	294





## LIST OF ABBREVIATIONS

A.H.	<i>anno Hegirae</i> , in the year of the Hegira
AS	Amuq Survey
AVRP	Amuq Valley Regional Projects
B.P.	before present
cf.	<i>confer</i> , compare
cm	centimeter(s)
diam.	diameter
ed(s).	editor(s), edited, edition
e.g.	<i>exempli gratia</i> , for example
et al.	<i>et alii</i> , and others
f(f).	and following
fig(s).	figure(s)
GIS	Geographical Information Systems
GPS	Global Positioning System
ha	hectare(s)
ibid.	<i>ibidem</i> , in the same place
i.e.	<i>id est</i> , that is
in prep.	in preparation
m	meter(s)
max.	maximum
mm	millimeter(s)
MTA	<i>Maden Tetkik ve Arama Genel Müdürlüğü</i> (Turkish Mineral Research and Exploration Directorate: Turkish Geological Survey)
n(n).	note(s)
no(s).	number(s)
OS	Orontes Survey
p(p).	page(s)
pl(s).	plate(s)
sect.	section
Sq(s).	square(s)
TAP	Ta'yinat Archaeological Project
UTM	Universal Transverse Mercator
XML	Extensible Markup Language



## LIST OF FIGURES

1.1. CORONA Image of the Amuq Valley and the Orontes Delta .....	17
1.2. Lead Isotope Ratios of Artifacts from Tell al-Judaidah (AS 176) and Tell Ta‘yinat (AS 126) .....	18
1.3. Amanus Mountain Mine Entrance near Kisecik Showing Vertical Vein of Arsenopyrite/Chalcopyrite .....	18
1.4. Ubaid Structures, Phases 1–4, Tell Kurdu (AS 94) .....	19
1.5. Ubaid Structures, Phases 1–4, Tell Kurdu (AS 94) .....	19
1.6. Wattle and Daub Structures on Tell Atchana (AS 136) and Reed Structure, Amuq Valley 1930s Expedition .....	20
1.7. Figurine at Argonne National Laboratory, Advanced Photon Source (APS), Judaidah Phase G (ca. 3000 B.C.), and Synchrotron X-ray Fluorescence Spectra of Figurine Recorded by a Ge-solid-state Energy Dispersive Detector with 66-keV Incident Photons .....	21
1.8. Satellite Image of the Amuq Valley Depicting the 2003 Flood .....	22
1.9. Woolley’s Dig House with Floodwaters Below and Tell Ta‘yinat al-Saghir (AS 127) in Background .....	22
1.10. Tell Atchana Panel (Antakya Archaeological Museum) .....	22
1.11. Amuq Valley Regional Projects Crew Members in 1995 and 1998 .....	23
2.1. Distribution of Archaeological Sites in the Amuq Valley and Immediate Surrounding Areas .....	47
2.2. Field Scatters Plotted as the Number of Sherds per 10 × 10 m Square for the Area to the Northeast of Tell al-Judaidah (AS 176) .....	48
2.3. CORONA Image Showing Small and Large Sites in the Amuq Valley (December 2, 1970) .....	49
2.4. Geomorphological Sketch Map of the Amuq Valley and the Main Sedimentary Units Mapped .....	50
2.5. North–South Section through the Edge of the Orontes Floodplain at Tell Habeş (Sultan Merkezi) (AS 227) Showing the Dark Palaeosol (Unit 12) as It Was Revealed in 1998 and Two Sections Near the 40 m Mark on the 1998 Section as They Were Eroded away in 2000 and 2001 to Reveal Roman Built Structures Encapsulated within the Sedimentary Sequence .....	51
2.6. Valley Fill Overlying Roman Building at AS 271 in the Avsuyu Area .....	52
2.7. Close-up of the Roman Building Shown in Figure 2.6, Showing Stones and Overlying Roof Tiles .....	52
2.8. Heavily Eroded Terrain in the Jebel al-Aqra Area .....	52
2.9. Aggraded Fill Behind Relict Terrace Features to the North of Yenişehir (Imma; AS 345) .....	53
2.10. Tell Wasfe (AS 31) after Being Severed in Two by Earth-moving Machines for the Expansion of Fields ..	53
2.11. Contour Plan of Tell ‘Imar al-Jadid al-Sharqi (AS 101) .....	54
2.12. Damaged Site of Tell Dhahab (AS 177) from Tell al-Judaidah (AS 176) .....	54
2.13. CORONA Image of the Area of AS 333 Showing the Landscape Prior to the Destruction of Sites (December 2, 1970) .....	55
2.14. Late Roman/Byzantine Ruins at Yenişehir (Imma; AS 345) .....	55
2.15. Distribution of Prehistoric Sites in the Amuq Valley .....	56
2.16. Distribution of Major and Minor Tells of the Bronze and Iron Age in the Amuq Valley .....	57
2.17. Scatter Plot of Tells: Height vs. Long Axis .....	58
2.18. CORONA Image of the Mound of Hasanuşağı/Yurt Höyük (AS 99) .....	58
2.19. Unqians Bearing Tribute in a Depiction of a Settlement of the Unqians (Umqians) Surrounded by the Water of a Possible Moat .....	58
2.20. Rank Size Plot of Sites in the Amuq Valley .....	59
2.21. Map of Minor Tells in the Area of Tell Salihyyah (AS 129) .....	59

2.22. Distribution of Hellenistic, Roman, and Byzantine Sites in the Amuq Valley .....	60
2.23. Distribution of Bronze Age and Hellenistic, Roman, and Byzantine Sites in the Area of Jebel al-Aqra .....	61
2.24. CORONA Image of Antakya (Antioch) (December 2, 1970) .....	62
2.25. Tomb Complex at Ceylanlı (Gündüzlü; AS 287) .....	62
2.26. Hilltop Temple at Ceylanlı Kale (AS 272) .....	63
2.27. Long Profile along the Water Mills at Khirbet al-Tahoun (AS 171) near Yenişehir (Imma; AS 345) .....	63
2.28. Masonry Penstock of a Roman/Late Roman Water Mill at Khirbet al-Tahoun (AS 171) .....	64
2.29. Detail of the 30 cm Wide Inlet Channel as It Crosses One of the Masonry Penstocks at Khirbet al-Tahoun (AS 171) .....	64
2.30. CORONA Image of the Yenişehir (Imma; AS 345) Area with Location of Pools, Water Mills, and Inlet Channel .....	65
2.31. Mortar-lined Water-supply Channel near Narlıca .....	65
3.1. Map of the Northern Levant Including the Orontes Delta Area and the Amuq Valley .....	77
3.2. Site Distribution in the Orontes Delta, 1999–2001 .....	78
3.3. Paleolithic and Neolithic/Early Chalcolithic Sites in the Orontes Delta and Surface Finds from OS 47 .....	79
3.4. Bronze Age Sites in the Orontes Delta .....	80
3.5. Topographical Map of Sabuniye (OS 12) .....	81
3.6. Southwest Section of Sabuniye (OS 12), 1999 .....	81
3.7. Late Bronze Age Imported Wares and Iron I Age Pot Stands .....	82
3.8. Middle/Late Bronze Age and Iron Age Finds .....	84
3.9. Iron Age Sites in the Orontes Delta .....	86
3.10. Surveyed and Excavated Areas of al-Mina (OS 11) and East Section of al-Mina .....	87
3.11. Iron Age Painted Wares (including Aegeanizing and Cypriot wares) and Attic Black-glazed and Red-figure Wares .....	88
3.12. Iron Age Plain, Red-Slipped, and Painted Wares .....	90
3.13. Hellenistic, Roman, and Islamic Sites in the Orontes Delta .....	92
3.14. Persian, Hellenistic, and Roman Period Wares .....	93
3.15. Middle and Late Islamic Period Sherds .....	94
3.16. Byzantine and Islamic Period Sherds .....	96
3.17. Seleuceia Pieria (OS 55) Site Map .....	98
4.1. Topographic Map of Tell Atchana (Alalakh; AS 136) .....	114
4.2. Topographic Map Showing Woolley’s Excavation Trenches at Tell Atchana (Alalakh; AS 136) .....	115
4.3. Woolley’s Dig House on Tell Atchana (Alalakh; AS 136) and Basalt Artifacts in Backyard of Woolley’s Dig House .....	116
4.4. Woolley’s Temple Soundings Showing Location of 2002 Sections. Tell Atchana (Alalakh; AS 136) .....	117
4.5. Section Cleaning Operations 2002 with Stephen Batiuk Rappelling Off the Edge of Woolley’s Temple Sounding. Tell Atchana (Alalakh; AS 136) .....	117
4.6. Level VII City Gate and Door of the Sentry-box at Tell Atchana (Alalakh; AS 136): Past and Present .....	118
4.7. Guard Chamber at Tell Atchana (Alalakh; AS 136): Past and Present .....	119
4.8. View from the Courtyard across Room 8 to the Staircase at Tell Atchana (Alalakh; AS 136): Past and Present .....	120
4.9. Cement Threshold between Rooms 5 and 5a at Tell Atchana (Alalakh; AS 136): Past and Present .....	121
4.10. Entrance-room (7) from the Outside, Yarimlim’s Palace at Tell Atchana (Alalakh; AS 136): Past and Present .....	122

4.11. Staircase and Shaft below Room 17 at Tell Atchana (Alalakh; AS 136): Past and Present .....	123
4.12. Room 15 at Tell Atchana (Alalakh; AS 136), Seen from Room 16; the Bath and Drain Intake Are in the Background: Past and Present .....	124
4.13. Room 10, Staircase at Tell Atchana (Alalakh; AS 136); the First Flight of the Winding Staircase and Steps Leading to Passage 14: Past and Present .....	125
4.14. View from Room 2 across Room 13 to Room 22 at Tell Atchana (Alalakh; AS 136): Past and Present .....	126
4.15. Forecourt and Façade at Tell Atchana (Alalakh; AS 136): Past and Present .....	127
4.16. Domestic Wing at Tell Atchana (Alalakh; AS 136): Past and Present .....	128
4.17. Room 9 (Bath) at Tell Atchana (Alalakh; AS 136): Past and Present .....	129
4.18. Room 9 (doorway) Showing Wooden Sill-edge and the Packing of the Raised Threshold at Tell Atchana (Alalakh; AS 136): Past and Present .....	130
4.19. Room 5 (Lavatory) at Tell Atchana (Alalakh; AS 136): Past and Present .....	131
4.20. Room 28, with Sunken Column-base, at Tell Atchana (Alalakh; AS 136): Past and Present .....	132
4.21. Room 27, Seen from Above, Showing the Stair Newel and the Cupboard Below the Stairs, at Tell Atchana (Alalakh; AS 136): Past and Present .....	133
4.22. General View of Gateway from Inside at Tell Atchana (Alalakh; AS 136): Past and Present .....	134
4.23. Room 35 (Cellar) at Tell Atchana (Alalakh; AS 136): Past and Present .....	135
4.24. Room 33 (Archive), with Cemented Shelf around the Walls for Storing Tablets, at Tell Atchana (Alalakh; AS 136): Past and Present .....	136
4.25. Room 32, Showing the Half-timber Construction of the Wall, at Tell Atchana (Alalakh; AS 136): Past and Present .....	137
4.26. Animal-headed Vessel from Tell Atchana (Alalakh; AS 136) .....	138
4.27. Architectural Layout of Level VII, Tell Atchana (Alalakh; AS 136) .....	138
4.28. Architectural Layout of Level VI. Tell Atchana (Alalakh; AS 136) .....	139
4.29. Architectural Layout of Level V. Tell Atchana (Alalakh; AS 136) .....	140
4.30. Architectural Layout of Level IV. Tell Atchana (Alalakh; AS 136) .....	141
4.31. Architectural Layout of Level III. Tell Atchana (Alalakh; AS 136) .....	142
4.32. Architectural Layout of Level II. Tell Atchana (Alalakh; AS 136) .....	143
4.33. Architectural Layout of Level I. Tell Atchana (Alalakh; AS 136) .....	144
4.34. Architectural Layout of Level 0. Tell Atchana (Alalakh; AS 136) .....	144
5.1. Plan of Areas Excavated by Woolley at Tell Atchana (Alalakh; AS 136) in 1937 Showing Alignment of Grid to French Cadastral Survey of 1930 .....	151
5.2. Excavation Grid and Atchana Contours at Tell Atchana (Alalakh; AS 136) Mapped by Woolley Superimposed on CORONA Satellite Imagery after Being Rotated 5° .....	152
5.3. Level XII Temple at Tell Atchana (Alalakh; AS 136) Showing Extent of Temple Sounding and Approximate Placement of Sections .....	152
6.1. Tell Atchana (Alalakh; AS 136) with On-site Collection Units .....	160
6.2. On-site Tell Atchana (Alalakh; AS 136) Surface Ceramics: Mid-/Late Second Millennium B.C. Imported, Painted, and Fine Wares from Surface Collection .....	161
6.3a-c. On-site Tell Atchana (Alalakh; AS 136) Surface Ceramics: Mid-/Late Second Millennium .....	162
6.4. Sherd Density Map of Fields Surrounding Tell Atchana (Alalakh; AS 136) .....	165
6.5. Location of Geophysical Plots, Atchana Drain, and Woolley's Excavation Area at Tell Atchana (Alalakh; AS 136) .....	166
6.6. Sedimentary Record Preserved in the Atchana Drain .....	167

6.7. Three Ground-penetrating Radar Images: Radar Image from GPR 1 Reveals the Slope of the Mound at Tell Atchana (Alalakh; AS 136) and the Bronze Age Land Surface, Now Buried 2.5 m Below the Modern Floodplain; Radar Image from GPR 1 Shows a Strong Anomaly at 6.0 m Depth, Probably an Ancient Land Surface; and Radar Image from GPR 2 Reveals the Edge of What May Be a Relict Orontes River Channel .....	168
6.8. Schematic Reconstruction of Floodplain Development on the Orontes River Floodplain Surrounding Tell Atchana (Alalakh; AS 136) .....	169
6.9. CORONA Image of Tell Atchana (Alalakh; AS 136)/Tell Ta'yinat (AS 126) Area .....	169
7.1. Map of the Amuq Valley in the Hatay Region, Showing the Location of Tell Ta'yinat (AS 126) .....	178
7.2. Topographic Map of Tell Ta'yinat (AS 126) with Excavated Areas (T 2, 4–7, 10–13) and Building Units (Buildings I–II, IV, VI, IX–X, XIII–XIV; Courtyard VIII; Gateways III, VII, XI–XII; and Platform XV) Indicated .....	179
7.3. Plan of the West Central Area at Tell Ta'yinat (AS 126) Showing Architecture Assigned to the Second Building Period: Buildings I, II, IV, and VI; Courtyard VIII; and Gateway XII .....	180
7.4. Topographic Map of Tell Ta'yinat (AS 126) .....	181
7.5. Topographic Map of Tell Ta'yinat (AS 126) Overlaid on a CORONA Satellite Image of the Site .....	182
7.6. Composite Plan of Tell Ta'yinat (AS 126), Including a Density Distribution of Surface Pottery, Delineating the Extent of the Lower Settlement .....	183
7.7. Contour Map of Tell Ta'yinat (AS 126) Showing the Area of the 2002 Geomagnetic Survey .....	184
7.8. Geomagnetic Survey of Tell Ta'yinat (AS 126), Lower Town, with a Highlight of Angular Magnetic Anomaly No. 1 .....	185
7.9. Geomagnetic Survey of Tell Ta'yinat (AS 126), Lower Town, with Highlights of Magnetic Anomalies Nos. 2, 3, and 4 .....	185
7.10. Geomagnetic Survey of Tell Ta'yinat (AS 126) with Outlines Tracing the Linear Features Associated with Anomalies Nos. 1–4 .....	186
7.11. Microgradient Topographic Map of the Tell Ta'yinat (AS 126) Lower Settlement, Showing the Composite Plan and Orientation of the Linear Features Delineated by the Geomagnetic Survey .....	187
7.12. Plan of Gateway III at Tell Ta'yinat (AS 126) Overlaid on the Topographic Base Map .....	188
7.13. Plan of Tell Ta'yinat (AS 126) Outlining the Surface Survey Sampling Units .....	189
7.14. Surface Pottery from Tell Ta'yinat (AS 126), Including Red-slipped Burnished Ware, Red-black Burnished Ware, and Simple Ware .....	190
7.15. Miscellaneous Surface Finds from Tell Ta'yinat (AS 126) .....	192

## FIGURES IN THE APPENDICES

A.1. Key to Maps of Quadrants 1–8 Indicating Amuq Survey (AS) Sites in the Amuq Valley, Turkey .....	259
A.2. Map of Quadrant 1 in the Amuq Valley, Turkey .....	260
A.3. Map of Quadrant 2 in the Amuq Valley, Turkey .....	261
A.4. Map of Quadrant 3 in the Amuq Valley, Turkey .....	262
A.5. Map of Quadrant 4 in the Amuq Valley, Turkey .....	263
A.6. Map of Quadrant 5 in the Amuq Valley, Turkey .....	264
A.7. Map of Quadrant 6 in the Amuq Valley, Turkey .....	265
A.8. Map of Quadrant 7 in the Amuq Valley, Turkey .....	266
A.9. Map of Quadrant 8 in the Amuq Valley, Turkey .....	267
A.10. Illustrative Drawings of Plain Simple Ware (Amuq Phases G–J; Early Bronze Age) and Cooking Pots (Amuq Phase G; Early Bronze Age) .....	268
A.11. Illustrative Drawings of Red-black Burnished Ware (Amuq Phase H/I; Early Bronze Age) .....	269

A.12. Illustrative Drawings of Painted Jars (Middle/Late Bronze Age), Carinated Cups (Middle/Late Bronze Age), and Platters or Shallow Open Bowls (Middle/Late Bronze Age) .....	270
A.13. Illustrative Drawings of Jars (Middle/Late Bronze Age) and Pithoi (Middle/Late Bronze Age) .....	271
A.14. Illustrative Drawings of Red-slipped Burnished Ware (Amuq Phase O; Iron Age) .....	272
A.15. Illustrative Drawings of Painted Ware (Amuq Phase N; Early Iron Age) .....	273
A.16. Illustrative Drawings of Pithoi (Amuq Phases N–O; Early Iron Age/Iron Age) .....	274
A.17. Illustrative Drawings of Black-glazed Incurved-rim Bowls (Seleucid) and Red- or Brown-slipped Ware (Seleucid) .....	275
A.18. Illustrative Drawings of Terra Sigillata Ware (Amuq Phase R; Roman) .....	276
A.19. Illustrative Drawings of Red-slipped and Brown-slipped Wares (Amuq Phases S–T; Late Roman/Early Byzantine) .....	277
A.20. Illustrative Drawings of Brittleware (Late Antique [Late Roman/Early Islamic]) .....	278
A.21. Illustrative Drawings of Buff Ware (Late Antique/Early Islamic) .....	279
A.22. Illustrative Drawings of Glazed Wares: Yellow and Green Slash Ware (Early Islamic), Green-glazed Ware (Early Islamic), Yellow-glazed Ware (Early Islamic), and Multi-colored Glazed Ware of Yellow, Green, and Blue (Early Islamic) .....	280
B.1. Scarab AS 6.1 .....	281





## LIST OF PLATES

1. Seals and Sealings from Diverse Periods
2. Metals, Molds, and Slag
3. Figurines
4. Ceramic Assemblages
5. Ceramic Assemblages
6. Inscribed Stones
7. Various Stone and Glass Pieces
8. Animal-headed Vessel

## LIST OF TABLES

2.1. Main Periods of Occupation Recorded from Excavated Sites in the Amuq Valley .....	26
2.2. Sedimentation Recorded at Various Sites .....	30
5.1. Observations Regarding Figures Used for ArcGIS Mapping of Alalakh from Woolley 1955 .....	146
6.1. Sherd Counts and Weights in Selected On-site Collection Units .....	153
6.2. Chronological Range of Diagnostic Types Found in the On-site Surface Survey of Tell Atchana (AS 136) According to Woolley (1955) .....	156



## ACKNOWLEDGMENTS

The Amuq Valley Regional Projects (AVRP) were funded by the Oriental Institute of the University of Chicago, its members, and numerous private donors. The research was additionally supported by grants from the National Geographic Society, the University of Chicago, the Institute for Aegean Prehistory, the Kress Foundation, the Martha Joukowsky Family Foundation, the Fulbright Program, and the Sunrise Rotary Club, Chicago. Special thanks go to Malcolm H. Wiener. Heartfelt thanks go to the two “Friends of the Amuq” committees, one based in Chicago (Sel Yackley, Ayhan Lash, Tuncer Kuzay, Emel Singer, Ercan Alp, Muammer Akgun, Matt Argon, Jim Stoyhoff, Yüksel Selçukoğlu, Katherine Miller, Fatoş Aktaş, Meral Bensch), the other in Antakya (Osman Çinçinoğlu, Berna Alpagut, Kenan Yurttagül, Josef Naseh, Reşit Kuseyrioğlu), for their untiring efforts.

I am particularly grateful to the Oriental Institute members who contributed financially to the success of the projects. I wish to express my gratitude to certain individuals who contributed both financially and in kind to the success of the project, especially Mr. and Mrs. Albert F. Haas, Mr. and Mrs. Maurice D. Schwartz, Melanie Ann Weill, Ahmet Ertegun, Mrs. Elizabeth B. Tiekens, Professor Robert J. Braidwood, Linda S. Braidwood, Professor William M. Sumner, Professor Hans G. Güterbock, Dr. Raymond D. Tindel, and members of the original excavations and researchers preparing the earlier Amuq excavation materials for publication. Research assistant Simrit Dhesi in Chicago greatly added to our ability to process finds from the sites, and I thank her sincerely. I gratefully acknowledge Ercan Alp, Elizabeth S. Friedman, Denny Mills, Dean Haeffner, and Laura D’Alessandro for the instrumental analyses.

The research was conducted under the auspices of the Turkish Ministry of Culture, Directorate General of Monuments and Museums. In Ankara we were greatly assisted by the General Directorate of Monuments and Museums, Dr. Engin Özgen, Mehmet Akif Işık, Kenan Yurttagül, and Alpay Pasinli. Special thanks go to Ergun Kaptan at the Turkish Geological Survey and Research Directorate (MTA).

Special acknowledgment and thanks go to the Mustafa Kemal University and its former Rector Haluk Ipek, Provost Mikat Doğanlar, and Dean Berna Alpagut for help and guidance. I thank the Antakya Archaeological Museum directors and staff members Hüseyin Dinçer, Faruk Kılınc, Murat Süslü, Mehmet Erdem, Lale Saraç, Aslı Tuncer, and Ömer Çelik. Thanks also go to members of the Hatay and Reyhanlı administration: Utku Acun, Ayhan Çiftaslan, Hasan Eliaçık, İbrahim Oflazoğlu, Mehmet Hazırlar, Ömer Doğanay, Mahmut Ekmen, and Zekeriya Herdem.

As this volume was being completed (2003), Robert J. Braidwood has passed away at age ninety-five, his wife Linda, eighteen hours later, following him at age ninety-three. To state that he was an inspiration for the present research is little compared to the importance of the field methods he established, the students he trained both in the United States and in Turkey, as well as the openness, guidance, and mentoring he provided to younger researchers. Even in his later years I greatly appreciated his insights, reminiscences, and guidance during the initial stages of the Amuq projects. It is to the Braidwoods’ pioneering research, begun some seventy years ago, that I dedicate this volume.

Kutlu Aslıhan Yener, Editor



## TEAM MEMBERS BY NAME AND SEASON

- Yener, K. Aslihan (University of Chicago) — 1995–2002, director, Amuq Valley Regional Projects
- Wilkinson, Tony J. (University of Chicago) — 1995–2002, director of geoarchaeological and archaeological surveys
- Altan, Bekir (Ministry of Culture, Directorate of Monuments and Museums) — 1995, representative of the Ministry of Culture
- Arslanoğlu, Tülin (Mustafa Kemal University, Antakya) — 1995, member of survey team; 1996, ceramic illustration; 1997, member of survey team; 1998, illustrator; 2000, 2002, member of survey team
- Barbanes, Eleanor (University of California) — 1997, 2000, topographical mapping, section drawing, ceramic illustration; 1997, member of survey team
- Batiuk, Stephen (University of Toronto) — 2000–2002, member of survey team
- Berghoffen, Celia (New York) — 2000, member of survey team
- Beyazlar, Ahmet (Ministry of Culture) — 1999, 2000, representative of the General Directorate
- Branting, Scott (University of Chicago) — 1995, member of survey team
- Casana, Jesse J. (University of Chicago) — 2000–2002, member of survey team
- Craddock, Brenda (United Kingdom, independent scholar) — 1995–2002, illustrator
- Demirer, Ünal (Antalya Archaeological Museum) — 2001, representative of the Ministry of Culture
- Dhesi, Simrit (University of Chicago) — 1997, 1998, 2000, member of survey team
- Andrea de Giorgi — 2002, member of survey team
- Doğan, Özlem (Mustafa Kemal University, Antakya) — 2000, member of survey team
- Earl, Bryan (Cornwall, independent scholar) — 1995, 1999, archaeometallurgical survey
- Eger, Alexander Asa (University of Chicago): 2001–2002, member of survey team
- Ensert, Kubra (Mustafa Kemal University, Antakya) — 1997, member of survey team
- Erdem, Mehmet (Antalya Archaeological Museum) — 1998, representative of the Ministry of Culture
- Erek, Merih — 2002, member of survey team
- Friedman, Elizabeth S. (University of Chicago) — 1995, salvage sounding at Tell al-Judaidah, fine-tuning of ceramics
- Gansell, Amy Rebecca (Harvard University, Cambridge) — 2001, member of survey team
- Gürbüz, Cemil (Director of geophysics team from the Kandilli Observatory, Boğaziçi University, Istanbul) — 1999, 2000, remote sensing
- Harrison, Timothy P. (Toronto University) — 1998, member of the survey team
- Hartnell, Tobin Montgomery (University of Chicago) — 2001, member of survey team
- Kaptan, Ergun (Turkish Geological Survey and Research Directorate [MTA]) — 1995, 1999, archaeometallurgical survey
- Karaköse, Dilem (Mustafa Kemal University, Antakya) — 2000, 2001, member of survey team
- Klinger, Christina (University of Chicago) — 2002, member of survey team
- Koehl, Robert (Hunter College, New York) — 2000, 2001, 2002, ceramic specialist
- Lauinger, Jacob (University of Chicago) — 2002, epigrapher
- Lyon, Jerry (University of Chicago) — 1995, member of survey team
- Miller, Lisa Ann (University of Chicago) — 2000, member of survey team
- Nishiyama, Shin'ichi (Institute of Archaeology, London) — 1998, 2000, 2001, member of survey team
- Oner, Ertuğ (Dokuz Eylül University, Izmir) — 2000, geomorphological survey
- Özbal, Hadi (Boğaziçi University, Istanbul) — 1995, 1999, archaeometallurgical survey
- Pamir, Hatice (Mustafa Kemal University, Antakya) — 1995–2002, member of survey team
- Pulhan, Gül (Koç University, Istanbul) — 2001, member of survey team
- Reichel, Clemens D. (University of Chicago) — 1995, salvage sounding at Tell al-Judaidah, topographical mapping, section drawing
- Somers, Lew (independent businessperson) — 1998, director of magnetometry survey

Snow, Heather (University of Toronto) — 2000, 2001, member of survey team  
Süslü, Murat (Mustafa Kemal University, Antakya; Antakya Archaeological Museum) — 1996, member of survey team  
Temiz, Mine (Mustafa Kemal University, Antakya) — 2002, architectural illustration  
Uncu, Levent (Dokuz Eylül University, Izmir) — 2000, member of geomorphological team  
Verstraete, Jan (University of Cincinnati) — 1996–1998, member of survey team  
Vorderstrasse, Tasha (University of Chicago) — 2000, member of survey team  
Witsell, Alexandra (University of Chicago) — 2001, member of survey team  
Yazıcıoğlu, Bike (Istanbul University) — 2001, 2002, member of survey team  
Zadunaisky, Ivan (Hunter College, New York) — 2002, ceramic specialist  
Zimmerman, Paul (University of Pennsylvania) — 1998, topographical survey

## BIBLIOGRAPHY

- Adams, Robert McCormick  
2000 "Accelerated Technological Change in Archaeology and Ancient History." In *Cultural Evolution: Contemporary Viewpoints*, edited by Gary M. Feinman and Linda Manzanilla, pp. 95–118. New York: Plenum.
- Adriaens, A.; Brian Earl; Hadi Özbal; and Kutlu Aslıhan Yener  
2002 "Tin Bronze Metallurgy in Transformation: Analytical Investigation of Crucible Fragments from Tell al-Judaidah, Amuq (Turkey) Dating to circa 3000–2900 BC." In *Archaeometry* 98 (Proceedings of the 31st Symposium, Budapest, April 26–May 3 1998), Volume 2, edited by Erzsébet Jerem and Katalin T. Biró, pp. 273–77. British Archaeological Reports, International Series 1043; Archaeolingua Central European Series 1. Oxford: Archaeopress.
- Akahane, Sadayuki  
2003 "Landforms and Geology of the Rouj Basin." In *Archaeology of the Rouj Basin, Volume 1: A Regional Study of the Transition from Village to City in Northwest Syria*, edited by Takuya Iwasaki and Akira Tsuneki, pp. 11–27. Al-Shark: University of Tsukuba Studies for West Asian Archaeology 2. Tsukuba, Japan: Department of Archaeology, Institute of History and Anthropology, University of Tsukuba.
- Akurgal, Ekrem  
1987 *Anadolu Uygarlıkları*. Istanbul: Net Turistik Yayınlar.
- Albright, William Foxwell  
1957 "Further Observations on the Chronology of Alalah." *Bulletin of the American Schools of Oriental Research* 146: 26–34.
- Algaze, Guillermo  
1993 *The Uruk World System: The Dynamics of Expansion of Early Mesopotamian Civilization*. Chicago: University of Chicago Press.  
2001 "Initial Social Complexity in Southwestern Asia: The Mesopotamian Advantage." *Current Anthropology* 42: 199–233.
- Algaze, Guillermo; Ray Breuninger; and James Knutstad  
1994 "The Tigris-Euphrates Archaeological Reconnaissance Project: Final Report of the Birecik and Carchemish Dam Survey Areas." *Anatolica* 20: 1–96.
- Algaze, Guillermo; Ray Breuninger; Chris Lightfoot; and Michael Rosenberg  
1991 "The Tigris-Euphrates Archaeological Reconnaissance Project, 1989–90: A Preliminary Report of the 1989–1990 Seasons." *Anatolica* 17: 175–240.
- Algaze, Guillermo; John Kelley; Timothy Matney; and Duncan Schlee  
1996 "Late EBA Urban Structure at Titris Höyük, Southeastern Turkey: The 1995 Season." *Anatolica* 22: 129–43.
- Algaze, Guillermo; Adnan Mısırs; and Tony J. Wilkinson  
1992 "Şanlıurfa Museum/University of California Excavations and Surveys at Titriş Höyük, 1991: A Preliminary Report." *Anatolica* 18: 33–60.
- Alkım, Uluğ Bahadır  
1959a "Ein Altes Wegenetz im Südwestlichen Antitaurus Gebiet." *Anadolu Araştırmaları* 1: 207–23.  
1959b "Güney-Batı Antituros Bölgesinde Eski Bir Yol Şebekesi [An Ancient Road System in the South-Western Antitaurus]." *Belleten* 23: 59–78.  
1965 "The Road from Sam'al to ASITAWANDAWA: Contributions to the Historical Geography of the Amanus Region." *Anadolu Araştırmaları* 2: 1–45.  
1968 *Anatolia, Volume 1: From the Beginnings to the End of the 2nd Millennium B.C.* Archaeologia mundi. Translated from the French by James Hogarth. Geneva: Nagel; Cleveland: The World Publishing Company.  
1969 "The Amanus Region in Turkey: New Light on the Historical Geography and Archaeology." *Archaeology* 22: 280–89.  
1974 *Yesemek Taşocağı ve Heykel Atelyesinde Yapılan Kazı ve Araştırmalar*. Türk Tarih Kurumu Yayınlarından 5th Series 32; İslâhiye Bölgesi Araştırmaları 1. Ankara: Türk Tarih Kurumu Basımevi.
- Alkım, Uluğ Bahadır, and Handan Alkım  
1966 "Excavations at Gedikli (Karahüyük): First Preliminary-Report." *Belleten* 30: 27–58.
- Arık, Remzi Oğuz  
1944 "1942 de Türk Tarih Kurumu Adına Yapılan: Bitik Kazısı ve Hatay Tetkikleri Hakkında Kısa Rapor." *Belleten* 8: 341–84.
- Arnaud, Daniel  
1996 "Études sur Alalah et Ougarit à l'âge du bronze récent." *Studi Micenei ed Egeo-Anatolici* 37: 47–65.

- Arslıanoğlu, Tülin  
2001 Amik Ovası Tell Kurdu E Evresi Seramiklerinin Termoluminesans (TL) Yöntemi ile Tarihlendirilmesi ve Mikromorfolojik Analizleri [Thermoluminescence Dating and Micromorphological Analysis of Amuq E Tell Kurdu Ceramics]. M.A. Thesis, Cukurova University, Adana, Turkey.
- Aruz, Joan  
1992 "The Stamp Seals from Tell esh Sheikh." *Anatolian Studies: Journal of the British Institute of Archaeology at Ankara* 42: 15–28.
- Astour, Michael C.  
1969 "The Partition of the Confederacy of Mukiš-Nuḥašše-Nii by Šuppiluliuma: A Study in Political Geography of the Amarna Age." *Orientalia* 38: 381–414.  
1972 "Ḫattušiliš, Ḫalab, and Ḫanigalbat." *Journal of Near Eastern Studies* 31: 102–09.  
1992 "Alalakh." In *The Anchor Bible Dictionary*, Volume 1, edited by David Noel Freedman, pp. 142–45. New York: Doubleday.
- Åström, Paul, editor  
1987 *High, Middle or Low?* (Acts of an International Colloquium on Absolute Chronology Held at the University of Gothenburg, 20th–22nd August 1987), Volume 2. Studies in Mediterranean Archaeology and Literature Pocketbook 57. Gothenburg: Paul Åströms.
- Austin, M. M.  
1981 *The Hellenistic World from Alexander to the Roman Conquest: A Selection of Ancient Sources in Translation*. Cambridge: Cambridge University Press.
- Ball, Warwick  
2000 *Rome in the East: The Transformation of an Empire*. London: Routledge.
- Bartl, Karin  
1996 "Balīḫ Valley Survey: Settlements of the Late Roman/Early Byzantine and Islamic Period." In *Continuity and Change in Northern Mesopotamia from the Hellenistic to the Early Islamic Period* (Proceedings of a Colloquium Held at the Seminar für Vorderasiatische Altertumskunde at Freie Universität Berlin, 6–9 April 1994), edited by Karin Bartl and Stefan R. Hauser, pp. 333–48. Berliner Beiträge zum Vorderen Orient 17. Berlin: Dietrich Reimer.
- Bass, George F.; Cemal Pulak; Dominique Collon; and James Weinstein  
1989 "The Bronze Age Shipwreck at Ulu Burun: 1986 Campaign." *American Journal of Archaeology* 93: 1–29.
- Batiuk, Stephen  
2000 "Petrographic Analysis of Early Trans-Caucasian Ceramics from the Bayburt Region, North Eastern Anatolia: An Exploratory Study." *Ancient Near Eastern Studies (formerly Abr-Nahrain): An Annual Published by the Centre for Classics and Archaeology, University of Melbourne* 37: 153–63.
- Beazley, John D.  
1939 "Excavation at Al Mina, Suedia 3: The Red-figured Vases." *Journal of Hellenic Studies* 59: 1–44.
- Bennet, John, and Jack L. Davis  
1999 "Making Mycenaeans: Warfare, Territorial Expansion, and Representations of the Other in the Pylian Kingdom." In *Polemos: Le contexte guerrier en Égée à l'âge du Bronze* (Actes de la 7e Rencontre égéenne internationale, Université de Liège, 14–17 avril 1998), Volume 1, edited by Robert Laffineur, pp. 105–20. Aegaeum: Annales d'archéologie égéenne de l'Université de Liège et University of Texas at Austin-Program in Aegean Scripts and Prehistory 19. Liège: Université de Liège; Austin: University of Texas.
- Ben-Tor, Daphna  
1989 *The Scarab: A Reflection of Ancient Egypt*. Jerusalem: The Israel Museum.
- Berghoffen, Celia  
2002 "The Cypriote Pottery from Alalakh." Abstract of Paper Presented at American Schools of Oriental Research Annual Meetings Toronto, Canada.
- Beste, Irmtraut  
1978 *Skarabäen. Corpus Antiquitatum Aegyptiacarum* 2/1. Hannover: Kestner Museum.  
1979 *Skarabäen. Corpus Antiquitatum Aegyptiacarum* 2/2. Hannover: Kestner Museum.
- Bietak, Manfred  
1997 "Avaris, Capital of the Hyksos Kingdom: New Results of Excavations." In *The Hyksos: New Historical and Archaeological Perspectives*, edited by Eliezer D. Oren, pp. 87–140. University Museum Monograph 96; University Museum Symposium Series 8. Philadelphia: University Museum, University of Philadelphia.
- Boardman, John  
1980 *The Greeks Overseas: The Early Colonies and Trade*. New and Enlarged Edition. London: Thames and Hudson.  
1990 "Al Mina and History." *Oxford Journal of Archaeology* 9: 169–90.  
1999 "The Excavated History of Al Mina." In *Ancient Greeks West and East*, edited by Gocha R. Tsetskhladze, pp. 135–61. Mnemosyne: Biblio-



- thea Classica Batava, Supplementum 196. Leiden: Brill.
- Bostancı, Ekrem  
1971/73 "Homo Sapiens Çevlikiyensis in the Canal and Big Caves of Çevlik Near Samandağ of the Province of Antakya on the Mediterranean Coast of Anatolia." *Dil ve Tarih Coğrafya Fakültesi Antropoloji Dergisi* 6: 29–55.
- Braidwood, Robert J.  
1937 *Mounds in the Plain of Antioch: An Archaeological Survey*. Oriental Institute Publications 48. Chicago: University of Chicago Press.
- Braidwood, Robert J., and Linda S. Braidwood  
1960 *Excavations in the Plain of Antioch, Volume 1: The Earlier Assemblages, Phases A–J*. Oriental Institute Publications 61. Chicago: University of Chicago Press.
- Braidwood, Robert J.; J. E. Burke; and N. H. Nachtrieb  
1951 "Ancient Syrian Coppers and Bronzes." *Journal of Chemical Education* 28: 87–96.
- Braidwood, Linda S.; Robert J. Braidwood; Bruce Howe; Charles A. Reed; and Patty Jo Watson, editors  
1983 *Prehistoric Archaeology along the Zagros Flanks*. Oriental Institute Publications 105. Chicago: The Oriental Institute.
- Breasted, James Henry  
1933 "The Anatolian-Hittite Expedition." In *The Oriental Institute*, edited by James Henry Breasted, pp. 265–309. The University of Chicago Survey 12. Chicago: University of Chicago Press.
- Breniquet, Catherine  
1996 *La disparition de la culture de Halaf: Les origines de la culture d'Obeid dans le nord de la Mésopotamie*. Bibliothèque de la délégation archéologique française en Iraq 9; Centre de recherche d'archéologie orientale, Université de Paris I/12. Paris: Éditions recherche sur les civilisations.
- Bressy, C.; G. Poupeau; and Kutlu Aslıhan Yener  
In prep. *Cultural Interactions during the Ubaid and Halaf Periods: Tell Kurdu (Amuq Valley, Turkey) Obsidian Sourcing*.
- Brinkman, John A.  
1977 Review of *Einleitung in die assyrischen Königsinschriften*, Part 2: 934–722 v. Chr., by Wolfgang Schramm. *Journal of Cuneiform Studies* 29: 60–63.
- British Admiralty  
1976 *The Coasts of Libya, Egypt, Syria, Lebanon and Israel: Coast of Turkey and the Island of Cyprus*. Mediterranean Pilot 5. London: Hydrographer of the Navy.
- Bron, François, and André Lemaire  
1989 "Les inscriptions araméennes de Hazael." *Revue d'Assyriologie et d'Archéologie Orientale* 83: 35–44.
- Bruins, Hendrik J.; Johannes van der Plicht; and Amihai Mazar  
2003 "<sup>14</sup>C Dates from Tel Rehov: Iron-Age Chronology, Pharaohs, and Hebrew Kings." *Science* 300: 315–18.
- Bryce, Trevor  
1998 *The Kingdom of the Hittites*. Oxford: Clarendon Press; New York: Oxford University Press.
- Bunnens, Guy  
1982 "Quelques aspects de la vie quotidienne au palais d'Alalakh d'après les listes de rations du niveau VIII (XVIIIe/XVIIe s.)." In *Vorträge gehalten auf der 28. Rencontre Assyriologique Internationale in Wien, 6.–10. Juli, 1981*, edited by Hans Hirsch and Hermann Hunger, pp. 72–84. *Archiv für Orientforschung* 19. Horn: Ferdinand Berger.
- Burney, Charles A.  
1989 "The Khirbet Kerak Question and the Early Transcaucasian Background." In *L'urbanisation de la Palestine à l'âge du Bronze ancien: Bilan et perspectives des recherches actuelles* (Actes du colloque d'Emmaüs [20–24 Octobre 1986]), Volume 2, edited by Pierre de Miroschedji, pp. 331–40. *British Archaeological Reports, International Series* 527. Oxford: British Archaeological Reports.
- Çağatay, A. I.; S. Sayılı; Y. Ulutürk; and M. Z. Ateş  
1991 "Kisecik (Hatay) Hydrothermal Gold Veins." *Bulletin of the Mineral Research and Exploration Institute of Turkey* 112: 17–38.
- Cahen, Claude  
1940 *La Syrie du nord à l'époque des croisades et la principauté franque d'Antioche*. Institut français de Damas, bibliothèque orientale 1. Paris: Librairie Orientaliste Paul Geuthner.
- Campbell, Stuart  
1998 "Problems of Definition: The Origins of the Halaf in North Iraq." In *About Subartu: Studies Devoted to Upper Mesopotamia*, edited by Marc Lebeau, pp. 39–52. *Subartu* 4/1. Turnhout: Brepols.
- Campbell, Stuart; Elizabeth Carter; Elizabeth Healey; Seona Anderson; Amanda Kennedy; and Sarah Witcher  
1999 "Emerging Complexity on the Kahramanmaraş Plain, Turkey: The Domuztepe Project, 1995–1997." *American Journal of Archaeology* 103: 395–418.

- Campbell, William A  
 1941 "The Martyrion at Seleuceia Pieria." In *Antioch-on-the-Orontes*, Volume 3: *The Excavations of 1937–1939*, edited by Richard Stillwell, pp. 35–54. Publications of the Committee for the Excavation of Antioch and Its Vicinity 3. Princeton: Princeton University Press; London: Oxford University Press; The Hague: Martinus Nijhoff.
- Campbell, William A., and Richard Stillwell  
 1941 "Catalogue of Mosaics 1937–1939." In *Antioch-on-the-Orontes*, Volume 3: *The Excavations of 1937–1939*, edited by Richard Stillwell, pp. 171–219. Publications of the Committee for the Excavation of Antioch and Its Vicinity 3. Princeton: Princeton University Press; London: Oxford University Press; The Hague: Martinus Nijhoff.
- Cann, J. R., and Colin Renfrew  
 1964 "The Characterization of Obsidian and Its Application to the Mediterranean Region." *Proceedings of the Prehistoric Society* 30: 111–33.
- Carne, John; William H. Bartlett; William Purser; and Thomas Allom  
 1836–38 *Syria, the Holy Land, Asia Minor, &c. Illustrated in a Series of Views Drawn from Nature*. Three volumes. London: Fisher.
- Carter, Theresa Howard  
 1970 "The Stone Spirits." *Expedition* 12: 22–40.
- Casana, Jesse J.  
 2003a "The Archaeological Landscape of Late Roman Antioch." In *Culture and Society in Late Roman Antioch* (Papers from a Colloquium, London, 15 December 2001), edited by Janet A. R. Huskinson and Isabella Sandwell, pp. 102–25. Oxford: Oxbow Books.  
 2003b From Alalakh to Antioch: Settlement, Land Use, and Environmental Change in the Amuq Valley of Southern Turkey. Ph.D. Dissertation, Department of Near Eastern Languages and Civilizations, University of Chicago.
- Catling, H. W.; E. E. Richards; and A. E. Blin-Stoyle  
 1963 "Correlations between Composition and Provenance of Mycenaean and Minoan Pottery." *Annual of the British School at Athens* 58: 94–115.
- Chapot, M. Victor  
 1902 "Antiquités de la Syrie du nord." *Bulletin de correspondance hellénique* 26: 161–208.  
 1906 "Séleucie de Piérie." *Memoires de la Société nationale des antiquaires de France* 66: 149–226.
- Charbonnet, A.  
 1986 "Le dieu aux lions d'Eretrie." *Annali del Dipartimento di Studi del Mondo Classico e del Mediterraneo Antico, Sezione di Archeologia e Storia Antica* 8: 117–56.
- Cline, Eric H.  
 1994 *Sailing the Wine-Dark Sea: International Trade and the Late Bronze Age Aegean*. British Archaeological Reports, International Series 591. Oxford: British Archaeological Reports.
- Collon, Dominique  
 1975 *The Seal Impressions from Tell Atchana/Alalakh*. *Alter Orient und Altes Testament* 27. Kevalaer: Butzon and Bercker.  
 1977 "A New Look at the Chronology of Alalakh Level VII: A Rejoinder." *Anatolian Studies: Journal of the British Institute of Archaeology at Ankara* 27: 127–31.  
 1982 *The Alalakh Cylinder Seals: A New Catalogue of the Actual Seals Excavated by Sir Leonard Woolley at Tell Atchana, and from Neighbouring Sites on the Syrian-Turkish Border*. British Archaeological Reports, International Series 132. Oxford: British Archaeological Reports.  
 2000 "Implications of Introducing a Low Mesopotamian Chronology." *British Association for Near Eastern Archaeology* 13: 6–9.
- Courtois, Jacques-Claude, and Lilian Courtois  
 1978 "Corpus céramique de Ras Shamra-Ugarit: Niveaux historiques d'Ugarit, Bronze moyen et Bronze récent, deuxième partie." In *Ugaritica* 7, edited by Claude F.-A. Schaeffer, pp. 191–370. Mission de Ras Shamra 18; Bibliothèque archéologique et historique de l'Institut français d'archéologie de Beyrouth 99. Paris: Librairie Orientaliste Paul Geuthner.
- Courtois, Lilian  
 1969 "Le mobilier funéraire céramique de la Tombe 4253 du Bronze récent (ville sud d'Ugarit)." In *Ugaritica* 6, edited by Claude F.-A. Schaeffer, pp. 121–37. Mission de Ras Shamra 17; Bibliothèque archéologique et historique de l'Institut français d'archéologie de Beyrouth 71. Paris: Librairie Orientaliste Paul Geuthner.
- Courty, Marie-Agnès  
 1998 "The Soil Record of an Exceptional Event at 4000 B.P. in the Middle East." In *Natural Catastrophes during Bronze Age Civilisations: Archaeological, Geological, Astronomical, and Cultural Perspectives*, edited by Benny J. Peiser, Trevor Palmer, and Mark E. Bailey, pp. 93–108. British Archaeological Reports, International Series 728. Oxford: Archaeopress.
- Curvers, Hans H., and Glenn M. Schwartz  
 1997 "Umm el-Marra, a Bronze Age Urban Center in the Jabbul Plain, Western Syria." *American Journal of Archaeology* 101: 201–39.

- Demir, Ataman  
1996 *Through the Ages: Antakya*. Akbank Culture and Art Publications 62. Istanbul: Atabank.
- Dietrich, M., and O. Loretz  
1981 "Die Inschrift der Statue des Königs Idrimi von Alalakh." *Ugarit-Forschungen* 13: 201–69.
- Dinçer, Hüseyin; Erksin Güleç; Steve Kuhn; and Mary Stiner  
2000 "1999 Yılı Üçağızlı Mağarası Kazısı." *Kazi Sonuçları Toplantısı* 22: 1–8.
- Dion, Paul-Eugène  
1995 "Syro-Palestinian Resistance to Shalmaneser III in the Light of New Documents." *Zeitschrift für die Alttestamentliche Wissenschaft* 107: 482–89.  
1997 *Les araméens à l'âge du fer: Histoire politique et structures sociales*. Études bibliques 34. Paris: J. Gabalda.
- Djobadze, Wachtang Z.  
1986 *Archeological Investigations in the Region West of Antioch-on-the-Orontes*. Forschungen zur Kunstgeschichte und christlichen Archäologie 13. Stuttgart: Franz Steiner.
- Donbaz, Veyzel  
1990 "Two Neo-Assyrian Stelae in the Antakya and Kahramanmaraş Museums." *Annual Review of the Royal Inscriptions of Mesopotamia Project* 8: 5–24.
- Donner, Herbert, and W. Röllig  
1976 *Kanaanäische und aramäische Inschriften*, Volume 3. Third Edition. Wiesbaden: Otto Harrassowitz.
- Dornemann, Rudolph H.  
2000 "The Iron Age Remains at Tell Qarqur in the Orontes Valley." In *Essays on Syria in the Iron Age*, edited by Guy Bunnens, pp. 459–85. *Ancient Near Eastern Studies, Supplement 7*. Louvain: Peeters.
- Downey, Glanville  
1961 *A History of Antioch in Syria: From Seleucus to the Arab Conquest*. Princeton: Princeton University Press.
- Drummond, Alexander  
1754 *Travels through Different Cities of Germany, Italy, Greece, and Several Parts of Asia, as far as the Banks of the Euphrates: In a Series of Letters. Containing, An Account of What is Most Remarkable in Their Present State, As Well as in Their Monuments of Antiquity*. London: W. Strahan.
- Durand, Jean-Marie  
2002 *Le culte d'Addu d'Alep et l'affaire d'Alahtum*. *Florilegium Marianum* 7; *Memoires de Nouvelles assyriologiques brèves et utilitaires* 8; Supplément à *Nouvelles assyriologiques brèves et utilitaires* 2. Paris: Société pour l'Étude du Proche-Orient ancien.
- Duru, Refik  
2003 *Tilmen, A Forgotten Capital City: The Story of a 6500 Year Old Settlement in the Islahiye Region, Southeast Anatolia*. Istanbul: Türsab Cultural Publications.
- Edens, Christopher  
2000 "Tell al-Judaidah Sounding, 1995." In "The Amuq Valley Regional Project, 1995–1998," by Kutlu Aslıhan Yener, Christopher Edens, Timothy P. Harrison, Jan Verstraete, and Tony J. Wilkinson, pp. 164–220. *American Journal of Archaeology* 104: 195–98.
- Edens, Christopher, and Kutlu Aslıhan Yener  
2000 "Excavations at Tell Kurdu, 1996 and 1998." In "The Amuq Valley Regional Project, 1995–1998," by Kutlu Aslıhan Yener, Christopher Edens, Timothy P. Harrison, Jan Verstraete, and Tony J. Wilkinson, pp. 163–220. *American Journal of Archaeology* 104: 198–215.
- Elderkin, George W., editor  
1934 *Antioch-on-the-Orontes 1: The Excavations of 1932*. Publications of the Committee for the Excavation of Antioch and Its Vicinity 1. Princeton: Princeton University Press; London: Oxford University Press; The Hague: Martinus Nijhoff.
- Elliger, Karl  
1947 "Sam'al und Hamat in ihrem Verhältnis zu Hattina, Unqi und Arpad." In *Festschrift Otto Eissfeldt zum 60. Geburtstag 1. September 1947. Dargebracht von Freunden und Verehrern*, edited by Johann Fück, pp. 69–108. Halle an der Saale: Max Niemeyer.
- Eph'al, Israel, and Joseph Naveh  
1989 "Hazeal's Booty Inscriptions." *Israel Exploration Journal* 39: 192–200.
- Epstein, Claire  
1985 "Dolmens Excavated in the Golan." *Atiqot* (English Series) 17: 20–58.
- Erol, Oğuz  
1963 *Asi Nehri Deltası'nın Jeomorfolojisi ve Dördüncü Zaman Deniz-Akarsu Sekileri*. Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi Yayınları 148. Ankara: Ankara Üniversitesi Basımevi.
- Erol, Oğuz, and P. A. Pirazzoli  
1992 "Seleucia Pieria: An Ancient Harbour Submitted to Two Successive Uplifts." *International Journal of Nautical Archaeology* 21: 320–28.

- Esin, Ufuk  
1989 "An Early Trading Center in Eastern Anatolia." 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. 135–41. Ankara: Türk Tarih Kurumu.
- Esse, Douglas L., and P. K. Hopke  
1984 "Levantine Trade in the Early Bronze Age." In *Proceedings of the 24th International Archaeometry Symposium*, edited by Jacqueline S. Olin and M. J. Blackman, pp. 327–39. Washington, D.C.: Smithsonian Institution Press.
- Fortin, Michel  
1999 *Syria: Land of Civilizations*. English translation by Jane Macaulay. Quebec: Musée de la civilisation and Les éditions de l'homme.
- Frangipane, Marcella  
1993 "Local Components in the Development of Centralized Societies in Syro-Anatolian Regions." In *Between the Rivers and Over the Mountains: Archaeologica Anatolica et Mesopotamica Alba Palmieri Dedicata*, edited by Marcella Frangipane, Harald Hauptmann, Mario Liverani, Paolo Matthiae, and Machteld Mellink, pp. 133–61. Rome: Università di Roma.
- Frankfort, Henri  
1939 *Cylinder Seals: A Documentary Essay on the Art and Religion of the Ancient Near East*. London: MacMillan.  
1952 "The Origin of the Bît Hilani." *Iraq* 14: 120–31.
- French, David H.  
1985 "Mersin and Tell esh-Sheikh." In *Studi di Paletnologia in onore di Salvatore M. Puglisi*, edited by Mario Liverani, Alba Palmieri, and Renato Peroni, pp. 265–71. Rome: Università di Roma.  
1990 "Gaziantep ve Hatay Müzelerinde Bulunan Sakçagözü ve Tell esh-Sheik Kazıları Malzemesi." *Araştırma Sonuçları Toplantısı* 7: 435–41.
- Friedman, Elizabeth S.; A. P. J. Stampfl; Y. Sato; E. E. Alp; D. R. Haeffner; Tony J. Wilkinson; C. E. Johnson; and Kutlu Aslıhan Yener  
1999 "Archaeology at the APS: Illuminating the Past." *Advanced Photon Source Research* 2: 12–16.
- Friedman, Elizabeth S., and Clemens D. Reichel  
1996 "III. Tell al-Judaidah 1995: The Amuq F and G Horizons Revisited." In "The Oriental Institute Amuq Regional Projects, 1995," by Kutlu Aslıhan Yener, Tony J. Wilkinson, Scott Branting, Elizabeth S. Friedman, Jerry D. Lyon, and Clemens D. Reichel, pp. 49–84. *Anatolica* 22: 67–70.
- Gaál, E.  
1982–84 "State and Private Sectors in Alalah VII." *Acta Antiqua Academiae Scientiarum Hungaricae* 30: 1–44.
- Garrard, Andrew; James Connolly; Norah Moloney; and Katherine Wright  
1996 "The Early Prehistory of the Sakçagözü Region, North Levantine Rift Valley: Report on the 1995 Survey Season." *Anatolian Studies: Journal of the British Institute of Archaeology at Ankara* 46: 53–81.
- Garstang, John  
1953 *Prehistoric Mersin, Yümük Tepe in Southern Turkey: The Neilson Expedition in Cilicia*. Oxford: Clarendon.
- Gasche, Hermann; James A. Armstrong; Steven W. Cole; and V. G. Gurzadyan  
1998 *Dating the Fall of Babylon: A Reappraisal of Second-Millennium Chronology (A Joint Ghent-Chicago-Harvard Project)*. Mesopotamian History and Environment Series 2, Mémoires 4. Ghent: University of Ghent; Chicago: The Oriental Institute.
- Gates, Charles  
1995 "Defining Boundaries of a State: The Mycenaean and Their Anatolian Frontier." In *Politeia: Society and State in the Aegean Bronze Age* (Proceedings of the 5th International Aegean Conference, University of Heidelberg, Archäologisches Institut, 10–13 April 1994), Volume 1, edited by Robert Laffineur and Wolf-Dietrich Niemeier, pp. 289–98. Aegaeum: Annales d'archéologie égéenne de l'Université de Liège et University of Texas at Austin-Program in Aegean Scripts and Prehistory 12. Liège: Université de Liège; Austin: University of Texas.
- Gates, Marie-Henriette Carre  
1981 *Alalakh Levels VI and V: A Chronological Reassessment*. Monographic Journals of the Near East; Syro-Mesopotamian Studies 4/2. Malibu: Undena.  
1987 "Alalakh and Chronology Again." In *High, Middle or Low?* (Acts of an International Colloquium on Absolute Chronology Held at the University of Gothenburg 20th–22nd August 1987), Volume 2, edited by Paul Åström, pp. 60–86. Studies in Mediterranean Archaeology and Literature Pocketbook 57. Gothenburg: Paul Åströms.  
1993 "1992 Excavations at Kinet Höyük (Dörtyol/Hatay)." *Kazı Sonuçları Toplantısı* 15: 193–200.  
1998 "1997 Archaeological Excavations at Kinet Höyük (Yeşil-Dörtyol, Hatay)." *Kazı Sonuçları Toplantısı* 20: 259–81.

- 2000 “Kinet Höyük (Hatay, Turkey) and MB Levantine Chronology.” *Akkadica* 119–20: 77–101.
- 2001 “Potmarks at Kinet Höyük and the Hittite Ceramic Industry.” In *La Cilicie: Espaces et pouvoirs locaux (2e millénaire av. J.-C.–4e siècle ap. J.-C.)* (Actes de la table ronde internationale d’Istanbul, 2–5 novembre 1999), edited by Éric Jean, Ali M. Dinçol, and Serra Durugönül, pp. 137–57. *Varia Anatolica* 13. Paris: Édition de Boccard for the Institut français d’études anatoliennes Georges Dumézil-Istanbul.
- Gelb, Ignace J.  
1935 “Calneh.” *American Journal of Semitic Languages and Literatures* 51: 189–91.  
1939 *Hittite Hieroglyphic Monuments*. Oriental Institute Publications 45. Chicago: University of Chicago Press.
- Gevirtz, Stanley  
1967 “A Spindle Whorl with Phoenician Inscription.” *Journal of Near Eastern Studies* 26: 13–16.
- Gitin, Seymour; Amihai Mazar; and Ephraim Stern, editors  
1998 *Mediterranean Peoples in Transition: Thirteenth to Early Tenth Centuries BCE in Honor of Professor Trude Dothan*. Jerusalem: Israel Exploration Society.
- Giveon, Raphael  
1985 *Egyptian Scarabs from Western Asia from the Collections of the British Museum*. *Orbis Biblicus et Orientalis, Series Archaeologica* 3. Freiburg: Universitätsverlag; Göttingen: Vandenhoeck & Ruprecht.  
1988 *Scarabs from Recent Excavations in Israel*. Edited by David Warburton and Christoph Uehlinger. *Orbis Biblicus et Orientalis* 83. Freiburg: Universitätsverlag; Göttingen: Vandenhoeck & Ruprecht.
- Goetze, Albrecht  
1957a “Alalah and Hittite Chronology.” *Bulletin of the American Schools of Oriental Research* 146: 20–26.  
1957b “On the Chronology of the Second Millennium B.C.” *Journal of Cuneiform Studies* 11: 63–73.  
1959 “Remarks on the Ration Lists from Alalakh VII.” *Journal of Cuneiform Studies* 13: 34–38.
- Goldman, Hetty  
1950 *Excavations at Gözllü Kule, Tarsus, Volume 1: The Hellenistic and Roman Periods*. Two Volumes. Princeton: Princeton University Press.  
1956 *Excavations at Gözllü Kule, Tarsus, Volume 2: From the Neolithic through the Bronze Age*. Two Volumes. Princeton: Princeton University Press.
- Gorny, Ronald L.  
1995 “The Alişar Regional Project (1993–1994).” *Biblical Archaeologist* 58: 52–54.
- Graham, A. John  
1986 “The Historical Interpretation of Al Mina.” *Dialogues d’histoire ancienne* 12: 51–65.
- Granott, Abraham  
1952 *The Land System in Palestine: History and Structure*. London: Eyre and Spottiswoode.
- Grant, Michael  
1969 *The Ancient Mediterranean*. New York: Scribner.
- Grayson, Albert Kirk  
1991 *Assyrian Rulers of the Early First Millennium BC, Volume 1: (1114–859 BC)*. The Royal Inscriptions of Mesopotamia, Assyrian Periods 2. Toronto: University of Toronto.  
1996 *Assyrian Rulers of the Early First Millennium BC, Volume 2: (858–745 BC)*. The Royal Inscriptions of Mesopotamia, Assyrian Periods 3. Toronto: University of Toronto.
- Greenstein, Edward L., and David Marcus  
1976 “The Akkadian Inscription of Idrimi.” *Journal of the Ancient Near Eastern Society of Columbia University* 8: 59–96.
- Grove, Alfred Thomas, and Oliver Rackham  
2001 *The Nature of Mediterranean Europe: An Ecological History*. New Haven: Yale University Press.
- Güçlü, Yücel  
2001 *The Question of the Sanjak of Alexandretta: A Study in Turkish-French-Syrian Relations*. *Türk Tarih Kurumu Yayınlarından Series 16, Volume 87*. Ankara: Turkish Historical Society.
- Haines, Richard C.  
1971 *Excavations in the Plain of Antioch, Volume 2: The Structural Remains of the Later Phases: Chatal Hüyük, Tell Al-Judaidah, and Tell Ta’yinat*. Oriental Institute Publications 95. Chicago: University of Chicago Press.
- Harrison, Timothy P.  
2000a “The 1998 Amuq Valley Regional Project Survey.” *Araştırma Sonuçları Toplantısı* 17/2: 127–32.  
2000b “Amuq Valley Damaged-Site Documentation Project, 1998.” In “The Amuq Valley Regional Project, 1995–1998,” by Kutlu Aslıhan Yener, Christopher Edens, Timothy P. Harrison, Jan Verstraete, and Tony J. Wilkinson, pp. 163–220. *American Journal of Archaeology* 104: 192–95.  
2001a “The Evidence for Aramaean Cultural Expansion in the Amuq Plain.” *Canadian Society for Mesopotamian Studies Bulletin* 36: 135–44.

- 2001b "Tell Ta'yinat and the Kingdom of Unqi." In *The World of the Aramaeans*, Volume 2: *Studies in History and Archaeology in Honour of Paul-Eugène Dion*, edited by P. M. Michèle Daviau, John William Wevers, and Michael Weigl, pp. 115–32. *Journal for the Study of the Old Testament*, Supplement Series 325. Sheffield: Sheffield Academic Press.
- Harrison, Timothy P., and Stephen Batiuk  
2001 "The 1999 Amuq Valley Regional Project Survey." *Araştırma Sonuçları Toplantısı* 18/2: 181–86.
- Harverson, Michael  
1993 "Watermills in Iran." *Iran* 31: 149–77.
- Hawkins, John David  
1974 "Assyrians and Hittites." *Iraq* 36: 67–83.  
1982 "The Neo-Hittite States in Syria and Anatolia." In *Cambridge Ancient History*, Volume 3, Part 1: *The Prehistory of the Balkans, and the Middle East and the Aegean World, Tenth to Eighth Centuries B.C.*, edited by John Boardman, I. E. S. Edwards, N. G. K. Hammond, and E. Sollberger, pp. 372–441. Cambridge: Cambridge University Press.  
1980–83 "Kullani(a)." *Reallexikon der Assyriologie* 6: 305–06.  
1995 "The Political Geography of North Syria and South-East Anatolia in the Neo-Assyrian Period." In *Neo-Assyrian Geography*, edited by Mario Liverani, pp. 87–101. *Quaderni di Geografia Storica* 5. Rome: Università di Roma.  
2000 *Corpus of Hieroglyphic Luwian Inscriptions*, Volume 1: *Inscriptions of the Iron Age*. Untersuchungen zur indogermanischen Sprach- und Kulturwissenschaft, neue Folge, 8.1. Berlin: Walter de Gruyter.
- Heinz, Marlies  
1992 *Tell Atchana/Alalakh: Die Schichten VII–XVII*. *Alter Orient und Altes Testament* 41. Kevelaer: Butzon and Bercker.
- Helms, Mary W.  
1993 *Craft and the Kingly Ideal: Art, Trade, and Power*. Austin: University of Texas.
- Hess, Richard S.  
1988 "A Preliminary List of the Published Alalakh Texts." *Ugarit-Forschungen* 20: 69–87.  
1992 "Observations on Some Unpublished Alalakh Texts, Probably from Level IV." *Ugarit Forschungen* 24: 113–19.
- Hole, Frank  
1994 "Environmental Instabilities and Urban Origins." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by Gil J. Stein and Mitchell S. Rothman, pp. 121–52. *Monographs in World Archaeology* 18. Madison: Prehistory Press.
- Holleaux, Maurice  
1942 "Les guerres syriennes: Le papyrus de Gourob." *Études d'épigraphie et d'histoire grecques*, Volume 3: *Lagides et séleucides*, edited by Maurice Holleaux, pp. 281–310. Paris: E. de Boccard.
- Honigmann, Ernst  
1921 "Seleukia (Pieria)." In *Paulys Realencyclopädie der classischen Altertumswissenschaft*, 2nd Series, Volume IIA.1, edited by Wilhelm Kroll and Kurt Witte, pp. 1183–1200. Munich: Alfred Druckenmüller. Reprint 1974.
- Hood, Sinclair  
1951 "Excavations at Tabara El Akrad, 1948–49." *Anatolian Studies: Journal of the British Institute of Archaeology at Ankara* 1: 113–47.
- Hornung, Erik, and Elisabeth Staehelin  
1976 *Skarabäen und andere Siegelamulette aus Basler Sammlungen*. Ägyptische Denkmäler in der Schweiz 1. Mainz: Philipp von Zabern.
- Invernizzi, Antonio  
1991 "Seleucia on the Tigris: Centre and Periphery in Seleucid Asia." In *Centre and Periphery in the Hellenistic World*, edited by Per Bilde, Troels Engberg-Pedersen, Lise Hannestad, Jan Zahle, and Klavs Randsborg, pp. 230–50. *Studies in Hellenistic Civilization* 4. Aarhus: Aarhus University.
- Iwasaki, Takuya; Hajime Nishino; and Akira Tsuneki  
1995 "The Prehistory of the Rouj Basin, Northwest Syria: A Preliminary Report." *Anatolica* 21: 143–87.
- Iwasaki, Takuya, and Akira Tsuneki, editors  
2003 *Archaeology of the Rouj Basin: A Regional Study of the Transition from Village to City in Northwest Syria*. Al-Shark 2, *Studies for West Asian Archaeology*. Tsukuba, Japan: Institute of History and Anthropology, University of Tsukuba.
- Jalabert, Louise, and René Mouterde  
1953 *Inscriptions grecques et latines de la Syrie*, Volume 3, Part 1: *Région de l'Amanus, Antioche*. Bibliothèque archéologique et historique de l'Institut français d'archéologie de Beyrouth 12. Paris: Librairie Orientaliste Paul Geuthner.
- Kantor, Helene J.  
1947 *The Aegean and the Orient in the Second Millennium B.C.* 1997 edition. *Monographs on Archaeology and Fine Arts* 4; *Archaeological Institute of America Monograph* 1. Boston: Archaeological Institute of America.

- 1956 "Syro-Palestinian Ivories." *Journal of Near Eastern Studies* 15: 153–74.
- 1962 "A Bronze Plaque with Relief Decoration from Tell Tainat." *Journal of Near Eastern Studies* 21: 93–117.
- Kayan, İlhan  
1999 "Holocene Stratigraphy and Geomorphological Evolution of the Aegean Coastal Plains of Anatolia." *Quaternary Science Reviews* 18: 541–48.
- Kearsley, R. A.  
1999 "Greeks Overseas in the 8th Century B.C.: Euboeans, Al Mina and Assyrian Imperialism." In *Ancient Greeks West and East*, edited by Gocha R. Tsetskhladze, pp. 109–34. Mnemosyne: Bibliotheca Classica Batava, Supplementum 196. Leiden: Brill.
- Kempinski, Aharon  
1983 *Syrien und Palästina (Kanaan) in der letzten Phase der Mittelbronze IIB-Zeit (1650–1570 v. Chr.)*. Ägypten und Altes Testament 4. Wiesbaden: Otto Harrassowitz.  
1997 "The Hyksos: A View from Northern Canaan and Syria." In *The Hyksos: New Historical and Archaeological Perspectives*, edited by Eliezer D. Oren, pp. 327–34. University Museum Monograph 96; University Museum Symposium Series 8. Philadelphia: University Museum, University of Philadelphia.
- King, Leonard William  
1915 *Bronze Reliefs from the Gates of Shalmaneser III, King of Assyria, B.C. 860–825*. London: Oxford University Press for the British Museum Department of Egyptian and Assyrian Antiquities.
- Klengel, Horst  
1992 *Syria 3000 to 300 B.C.: A Handbook of Political History*. Berlin: Akademie.
- Knapp, Arthur Bernard  
1993 *Society and Polity at Bronze Age Pella: An Annales Perspective*. Journal for the Study of the Old Testament/American Schools of Oriental Research Monographs Series 6. Sheffield: Sheffield Academic Press.  
1997 *The Archaeology of Late Bronze Age Cypriot Society: The Study of Settlement, Survey and Landscape*. University of Glasgow Occasional Paper 4. Glasgow: Department of Archaeology, University of Glasgow.
- Koehl, Robert B.  
1985 *Sarepta, Volume 3: The Imported Bronze and Iron Age Wares from Area II, X: The University Museum of the University of Pennsylvania Excavations at Sarafand, Lebanon*. Publications de l'Université libanaise, section des études archéologiques 2. Beirut: Librairie Orientale.
- Kuhn, Steven L.; Mary C. Stiner; and Erksin Güleç  
1999 "Initial Upper Paleolithic in South-Central Turkey and Its Regional Context: A Preliminary Report." *Antiquity* 73: 505–17.
- Kuhn, Stephen L.; Mary C. Stiner; David S. Reese; and Erskin Güleç  
2001 "Ornaments in the Earliest Upper Paleolithic: New Insights from the Levant." *Proceedings of the National Academy of Sciences* 98: 7641–46.
- Kyrieleis, Helmut, and Wolfgang Röhlig  
1988 "Ein altorientalischer Pferdeschmuck aus dem Heraion von Samos." *Mitteilungen des Deutschen archäologischen Instituts, Athenische Abteilung* 103: 37–75.
- Larsen, Mogens Trolle  
1976 *The Old Assyrian City-State and Its Colonies. Mesopotamia: Copenhagen Studies in Assyriology* 4. Copenhagen: Akademisk.
- Lehmann, Gunnar  
2000 "East Greek or Levantine? Band-Decorated Pottery in the Levant during the Achaemenid Period." *Transeuphratène* 19: 83–113.
- Lehmann, Karl  
1923 *Die antiken Hafenanlagen des Mittelmeeres: Beiträge zur Geschichte des Städtebaues im Altertum*. Klio, Beiheft 14, neue Folge, 1. Leipzig: Dieterich.
- Lemonnier, Pierre  
1993 *Technological Choices: Transformation in Material Cultures since the Neolithic*. Material Cultures. London and New York: Routledge.
- Le Strange, Guy  
1890 *Palestine under the Moslems: A Description of Syria and the Holy Land from A.D. 650 to 1500*. Boston: Houghton Mifflin.
- Levi, Doro  
1947 *Antioch Mosaic Pavements*. Two Volumes. Princeton: Princeton University; London: Oxford University Press; The Hague: Martinus Nijhoff.
- Levy, Thomas Evan, editor  
1995 *The Archaeology of Society in the Holy Land*. New York: Facts on File.
- Liverani, Mario  
1987 "The Collapse of the Near Eastern Regional System at the End of the Bronze Age: The Case of Syria." In *Centre and Periphery in the Ancient World*, edited by Michael Rowlands, Mogens Trolle Larsen, and Kristian Kristiansen, pp. 66–73. New Directions in Archaeology. Cambridge: Cambridge University Press.

- 1990 *Prestige and Interest: International Relations in the Near East ca. 1600–1100 B.C.* History of the Ancient Near East Studies 1. Padova: Sargon.
- 1992 *Studies on the Annals of Ashurnasirpal*, Volume 2: *Topographical Analysis*. Quaderni di Geografia Storica 4. Rome: Università di Roma.
- Magie, David
- 1950 *Roman Rule in Asia Minor, to the End of the Third Century after Christ*. Two Volumes. Princeton: Princeton University Press.
- Magness-Gardiner, Bonnie
- 1994 “Urban-Rural Relations in Bronze Age Syria: Evidence from Alalah Level VII Palace Archives.” In *Archaeological Views from the Countryside: Village Communities in Early Complex Societies*, edited by Glenn M. Schwartz and Steven E. Falconer, pp. 37–47. Washington, D.C.: Smithsonian Institution Press.
- Mallowan, Max E. L., and J. Cruikshank Rose
- 1935 “Excavations at Tell Arpachiyah, 1933.” *Iraq* 2: 1–178.
- Manning, Stuart W.; Bernd Kromer; Peter Ian Kuniholm; and Maryanne W. Newton
- 2001 “Anatolian Tree Rings and a New Chronology for the East Mediterranean Bronze-Iron Ages.” *Science* 294: 2532–35.
- Margueron, Jean Claude
- 1980 “Emar: Un exemple d’implantation Hittite en terre syrienne.” In *Le Moyen Euphrate: Zone de contacts et d’échanges* (Actes du Colloque de Strasbourg, 10–12 mars 1977), edited by Jean Claude Margueron, pp. 285–312. Université des Sciences Humaines de Strasbourg, Travaux du Centre de recherche sur le Proche-Orient et la Grèce antiques 5. Leiden: Brill.
- 1995 “Emar, Capital of Aštata in the Fourteenth Century BCE.” *Biblical Archaeologist* 58: 126–38.
- Marin, J. A. Belmonte
- 2001 *Die Orts- und Gewässernamen der Texte aus Syrien im 2. Jt. v. Chr.* Beihefte zum Tübinger Atlas des Vorderen Orients, Reihe B (Geisteswissenschaften) 7; Répertoire Géographique des Textes Cunéiformes 12/2. Wiesbaden: Ludwig Reichert.
- Matthiae, Paolo
- 1982 “The Western Palace of the Lower City of Ebla: A New Administrative Building of Middle-Bronze I–II.” In *Vorträge gehalten auf der 28. Rencontre Assyriologique Internationale in Wien, 6.–10. Juli, 1981*, pp. 121–29. Archiv für Orientalforschungen Beiheft 19. Horn: Ferdinand Berger.
- 1990 “A New Monumental Temple of Middle Bronze II at Ebla and the Unity of the Architectural Tradition of Syria-Palestine.” *Annales Archéologiques Arabes Syriennes* 40: 111–21.
- 1992 “High Old Syrian Royal Statuary from Ebla.” In *Von Uruk nach Tuttul: Eine Festschrift für Eva Strommenger: Studien und Aufsätze von Kollegen und Freunden*, edited by Barthel Hrouda, Stephan Kroll, and Peter Z. Spanos, pp. 111–28. Münchener vorderasiatische Studien 12. Munich: Profil.
- 1997 “Tell Mardikh, 1977–1996: Vingt ans de fouilles et de découvertes. La renaissance d’Ebla amor-réenne.” *Akkadica* 101: 1–29.
- Mazar, Amihai
- 1990 *Archaeology of the Land of the Bible 10,000–586 B.C.E.* The Anchor Bible Reference Library. New York: Doubleday.
- Mazzoni, Stefania
- 1975 “Tell Mardikh e una classe glittica siro-anatolica del periodo di Larsa.” *Annali Istituto Superiore Orientali di Napoli* 35: 21–43.
- 1985 “Elements of Ceramic Cultures of Early Syrian Ebla in Comparison with Syro-Palestinian EB IV.” *Bulletin of the American Schools of Oriental Research* 257: 1–18.
- 1979 “A proposito di un sigillo in stile lineare-corsivo de Mardikh IIIB.” *Studi Eblaiti* 1: 49–64.
- 1993 “Cylinder Seal Impressions on Jars at Ebla: New Evidence.” In *Aspects of Art and Iconography: Anatolia and Its Neighbors: Studies in Honor of Nimet Özgüç*, edited by Machteld J. Mellink, Edith Porada, and Tahsin Özgüç, pp. 399–414. Ankara: Türk Tarih Kurumu Basımevi.
- 1994 “Aramaean and Luwian New Foundations.” In *Nuove fondazioni nel Vicino Oriente antico: Realtà e ideologia* (Atti del colloquio 4–6 dicembre 1991, Dipartimento di Scienze Storiche del Mondo Antico, Sezione di Egittologia e Scienze Storiche del Vicino Oriente, Università degli Studi di Pisa), edited by Stefania Mazzoni, pp. 319–40. Seminari di orientalistica 4. Pisa: Giardini Editori e Stampatori.
- 1995 “Settlement Pattern and New Urbanization in Syria at the Time of the Assyrian Conquest.” In *Neo-Assyrian Geography*, edited by Mario Liverani, pp. 181–91. Quaderni di Geografia Storica 5. Rome: Università di Roma.
- 1997 “The Gate and the City: Change and Continuity in Syro-Hittite Urban Ideology.” In *Die orientalische Stadt: Kontinuität, Wandel* (Internationales Colloquium der Deutschen Orient-Gesellschaft, 9–10 Mai 1996 in Halle/Saale), Volume 1, edited by Gernot Wilhelm, pp. 307–38. Colloquien der Deutschen Orient-Gesellschaft 1. Saarbrücken: Saarbrücker.
- 2000 “Syria and the Periodization of the Iron Age: A Cross-cultural Perspective.” In *Essays on Syria in*



- the Iron Age*, edited by Guy Bunnens, pp. 31–59. Ancient Near Eastern Studies, Supplement 7. Louvain: Peeters.
- McClellan, Thomas L.  
 1989 “The Chronology and Ceramic Assemblages of Alalakh.” In *Essays in Ancient Civilization Presented to Helene J. Kantor*, edited by Albert Leonard, Jr., and Bruce Beyer Williams, pp. 181–212. Studies in Ancient Oriental Civilization 47. Chicago: The Oriental Institute.  
 1997 “Houses and Households in North Syria during the Late Bronze Age.” In *Les maisons dans la Syrie antique du III<sup>e</sup> millénaire aux débuts de l’Islam: Pratique et représentations de l’espace domestique*, edited by Corinne Castel, Michel al-Maqdissi, and François Villeneuve, pp. 29–59. Bibliothèque archéologique et historique 150. Beirut: Institut français d’archéologie du Proche-Orient.
- McEwan, Calvin Wells  
 1937 “The Syrian Expedition of the Oriental Institute of the University of Chicago.” *American Journal of Archaeology* 41: 8–16.
- Mellaart, James  
 1975 *The Neolithic of the Near East. The World of Archaeology*. London: Thames and Hudson.
- Mellink, Machteld J.  
 1957 “Review: *Alalakh: An Account of the Excavations at Tell Atchana in the Hatay, 1937–1949*. Reports of the Research Committee of the Society of Antiquaries of London 18. London: Oxford University Press for the Society of Antiquaries, Burlington House, London, 1955.” *American Journal of Archaeology* 61: 395–400.  
 1962 “The Prehistory of Syro-Cilicia.” Review of *Excavations in the Plain of Antioch, Volume 1: The Earlier Assemblages Phases A–J*, by Robert J. Braidwood and Linda Braidwood. *Bibliotheca Orientalis* 19: 219–26.  
 1992 “Anatolian Chronology.” In *Chronologies in Old World Archaeology, Volume 1*, edited by Robert W. Ehrich, pp. 207–20. Third edition. Chicago: University of Chicago Press.  
 1994 “The Anatolian South Coast in the Early Bronze Age: The Cilician Perspective.” In *Between the Rivers and Over the Mountains: Archaeologica Anatolica et Mesopotamica Alba Palmieri Dedicata*, edited by Marcella Frangipane, Harald Hauptmann, Mario Liverani, Paolo Matthiae, and Machteld Mellink, pp. 495–508. Rome: Università di Roma.
- Meyer, Jan-Waalke  
 1992 Die eisenzeitlichen Stempelsiegel aus dem Amuq-Gebiet. Habilitationsschrift, University of Saarlandes.
- van de Mierop, Marc  
 1999 “Literature and Political Discourse in Ancient Mesopotamia: Sargon II of Assyria and Sargon of Agade.” In *Munuscula Mesopotamica: Festschrift für Johannes Renger*, edited by Barbara Böck, Eva Chrinistiane Cancik-Kirschbaum, and Thomas Richter, pp. 327–39. Alter Orient und Altes Testament 267. Münster: Ugarit.
- Millard, Alan R.  
 1994 *The Eponyms of the Assyrian Empire 910–612 BC*. State Archives of Assyria Studies 2. Helsinki: Vammalan Kirjapaino Oy for the Neo-Assyrian Text Corpus Project, University of Helsinki.
- Minzoni-Déroche, A.  
 1992 “Üçagızlı Magara, un site aurignacien dans le Hatay (Anatolie): Premiers résultats.” *Paléorient* 18: 89–96.
- Moore, Andrew M. T.; Gordon C. Hillman; and Anthony J. Legge  
 2000 *Village on the Euphrates: From Foraging to Farming at Abu Hureyra*. London: Oxford University Press.
- Müller-Karpe, Andreas  
 2002 “Kuşaklı-Sarissa: A Hittite Town in the ‘Upper Land.’” In *Recent Developments in Hittite Archaeology and History: Papers in Memory of Hans G. Güterbock*, edited by Kutlu Aslıhan Yener and Harry A. Hoffner, Jr., with the assistance of Simrit Dhesi, pp. 145–55. Winona Lake: Eisenbrauns.
- Naumann, Rudolf  
 1971 *Architektur Kleinasiens von ihren Anfängen bis zum Ende der hethitischen Zeit*. Second edition. Deutsches Archäologisches Institut. Tübingen: Ernst Wasmuth.
- Newberry, Percy E.  
 1905 *Ancient Egyptian Scarabs: An Introduction to Egyptian Seals and Signet Rings*. London: Ares Publishers Reprint.  
 1907 *Scarab-shaped Seals*. Catalogue Général des Antiquités Égyptiennes du Musée du Caire, Nos. 36001–37521. London: Archibald Constable.
- Neve, Peter  
 1987 *Hattuscha Information*. Ancient Anatolian Civilizations Series 2. Istanbul: Archaeology and Art Publications.  
 1993 *Hattusa: Stadt der Götter und Tempel: Neue Ausgrabungen in der Hauptstadt der Hethiter*. Zaberns Bildbände zur Archäologie 8. Mainz am Rhein: Philipp von Zabern.

- Niedorf, Christian F.  
2002 "Ein hethitisches Brieffragment aus Alalakh." In *Ex Mesopotamia et Syria Lux: Festschrift für Manfred Dietrich zu seinem 65. Geburtstag*, edited by Oswald Loretz, Kai Alexander Metzler, and Hanspeter Schaudig, pp. 517–26. *Alter Orient und Altes Testament* 281. Münster: Ugarit.
- Niemeier, Wolf-Dietrich, and Barbara Niemeier  
1998 "Minoan Frescoes in the Eastern Mediterranean." In *The Aegean and the Orient in the Second Millennium* (Proceedings of the 50th Anniversary Symposium, Cincinnati, 18–20 April 1997), edited by Eric H. Cline and Diane Harris-Cline, pp. 69–98. Aegaeum: Annales d'archéologie égéenne de l'Université de Liège et University of Texas at Austin-Program in Aegean Scripts and Prehistory 18. Liège: Université de Liège; Austin: University of Texas.
- Nishiyama, Shin'ichi, and Satoru Yoshizawa  
1997 "Who Worshipped the Clay Goddess? The Late First Millennium BC Terracotta Figurines from Tell Mastuma, Northwest Syria." *Bulletin of the Ancient Orient Museum* 18: 73–98.
- Nissen, Hans Jörg  
1988 *The Early History of Ancient Near East, 9000–2000 B.C.* Chicago: University of Chicago Press.
- Oates, Joan  
1993 "Trade and Power in the Fifth and Fourth Millennia BC: New Evidence from Northern Mesopotamia." *World Archaeology* 24: 403–22.
- O'Brien, T. P.  
1933 "A Chalcolithic Cave Site in North Syria." *Man* 33: 173–78.
- Oller, Gary Howard  
1977 *The Autobiography of Idrimi: A New Text Edition with Philological and Historical Commentary*. Ph.D. Dissertation, University of Pennsylvania.
- Olmstead, A. T.  
1918 "The Calculated Frightfulness of Ashur Nasir Apal." *Journal of the American Oriental Society* 38: 209–63.
- Orthmann, Winfried  
1971 *Untersuchungen zur späthethitischen Kunst*. Saarbrücker Beiträge zur Altertumskunde 8. Bonn: Rudolf Habelt.  
1993 "Zur Datierung des Ištar-Reliefs aus Tell 'Ain Dara." *Istanbuler Mitteilungen* 43: 245–51.
- Ottosson, Magnus  
1980 *Temples and Cult Places in Palestine*. Acta Universitatis Upsaliensis. Boreas: Uppsala Studies in Ancient Mediterranean and Near Eastern Civilizations 12. Uppsala: Almqvist and Wiksell.
- Özbal, Rana; Fokke Gerritsen; and Kutlu Aslıhan Yener  
2003 "2001 Tell Kurdu Kazıları." *Kazı Sonuçları Toplantısı* 24: 501–12.
- Özbal, Rana; Fokke Gerritsen; Benjamin Diebold; Elizabeth Healey; Nihal Aydin; Michelle Loyet; Frank Nardulli; David Reese; Heidi Ekstrom; Sabrina Sholts; Nitzan Mekel-Bobrov; and Bruce Lahn  
2004 "Tell Kurdu Excavations 2001." *Anatolica* 30: 37–107.
- Özgüç, Tahsin  
1999 *The Palaces and Temples of Kültepe-Kaniš/Neša*. Türk Tarih Kurumu Yayınları 5th Series, Volume 46. Ankara: Türk Tarih Kurumu Basımevi.  
2002a "Maşathöyük." In *Die Hethiter und ihr Reich: Das Volk der 1000 Götter* (vom 18. Januar bis 28. April 2002 in der Kunst- und Ausstellungshalle der Bundesrepublik Deutschland in Bonn), edited by Tahsin Özgüç, pp. 168–71. Stuttgart: Konrad Theiss.  
2002b "Opfer und Libation." In *Catalogue of Exhibition: Die Hethiter und ihr Reich: Das Volk der 1000 Götter* (vom 18. Januar bis 28. April 2002 in der Kunst- und Ausstellungshalle der Bundesrepublik Deutschland in Bonn), edited by Tahsin Özgüç, pp. 122–27. Stuttgart: Konrad Theiss.
- Palmieri, Alberto M.; Kemal Sertok; and Evgenij Chernykh  
1993 "From Arslantepe Metalwork to Arsenical Copper Technology in Eastern Anatolia." In *Between the Rivers and Over the Mountains: Archaeologica Anatolica et Mesopotamica Alba Palmieri Dedicata*, edited by Marcella Frangipane, Harald Hauptmann, Mario Liverani, Paolo Matthiae, and Machteld Mellink, pp. 573–99. Rome: Università di Roma.
- Pamir, Hatice  
2001 *Seleuceia Pieria*. Ph.D. Dissertation, Institute of Social Science, Ankara University.
- Perdrizet, Paul  
1898 "Syriaca 3: Les flottes romaines en Syrie." *Revue archéologique*, Third Series, Volume 32: 41–49.  
1900 "Mélanges épigraphiques, Part 2: Inscriptions d'Antioche." *Bulletin de correspondance hellénique* 24: 288–91.
- Perdrizet, Paul, and Ch. Fossey  
1897 "Voyage dans la Syrie du Nord, Part 2: Monuments figurés, Part 1: Sculptures rupestres dans une des nécropoles d'Antioche." *Bulletin de correspondance hellénique* 21: 79–85.
- Petrie, William M. Flinders  
1889 *Historical Scarabs: A Series of Drawings from the Principal Collections*. London: Ares Publishers Reprint.

- 1917 *Scarabs and Cylinders with Names*. British School of Archaeology in Egypt. Warminster: Aris and Phillips.
- Philip, Graham  
 1989 *Metal Weapons of the Early and Middle Bronze Ages in Syria-Palestine*. Two Volumes. British Archaeological Reports, International Series 526. Oxford: British Archaeological Reports.  
 1999 "Complexity and Diversity in the Southern Levant during the Third Millennium BC: The Evidence of Khirbet Kerak Ware." *Journal of Mediterranean Archaeology* 12: 26–57.
- Philip, Graham, and Andrew R. Millard  
 2000 "Khirbet Kerak Ware in the Levant: The Implications of Radiocarbon Chronology and Spatial Distribution." In *Chronologies des pays du Caucase et de l'Euphrate aux IVe–IIIe millénaires* (Actes du colloque d'Istanbul, 16–29 décembre 1998), edited by Catherine Marro and Harald Hauptmann, pp. 279–96. *Varia Anatolica* 11. Paris: Institut français d'études anatoliennes d'Istanbul de Boccard.
- Pirazzoli, P. A.; J. Laborel; J. F. Saliège; Oğuz Erol; İlhan Kayan; and A. Person  
 1991 "Holocene Raised Shorelines on the Hatay Coasts (Turkey): Palaeoecological and Tectonic Implications." *Marine Geology* 96: 295–311.
- Pococke, Richard  
 1743–45 *A Description of the East, and Some Other Countries*. Two Volumes. London: W. Bowyer.
- Porada, Edith  
 1957 "The Cylinder Seals." In "Review: *Alalakh: An Account of the Excavations at Tell Atchana in the Hatay, 1937–1949*. (Reports of the Research Committee of the Society of Antiquaries of London 18) London: Oxford University Press for the Society of Antiquaries, Burlington House, London, 1955," by Machteld J. Mellink, pp. 396–97. *American Journal of Archaeology* 61: 395–400.
- Porter, Barbara A.  
 2001 *Old Syrian Popular Style Cylinder Seals*. Ph.D. Dissertation, Columbia University.
- Pruß, Alexander  
 1996 *Die Amuq-Terrakotten: Untersuchungen zu den Terrakotta-Figuren des 2. und 1. Jahrtausends v. Chr. aus den Grabungen des Oriental Institute Chicago in der Amuq-Ebene*. Ph.D. Dissertation, Martin-Luther Universität.
- Pulak, Cemal  
 1988 "The Bronze Age Shipwreck at Ulu Burun, Turkey: 1985 Campaign." *American Journal of Archaeology* 92: 1–37.
- Redford, Donald B.  
 1992 *Egypt, Canaan, and Israel in Ancient Times*. Princeton: Princeton University Press.
- Redford, Scott  
 2001 "Port Saint Symeon Seramiği [So-called Port Saint Symeon Ware, the Ceramics of the Region of Cilicia and Antioch]." In *Proceedings of the 5th Medieval and Turkish Archaeology Symposium*, pp. 485–90. Ankara: Hacettepe University.
- Redford, Scott; Salima Ikram; Elizabeth M. Parr; and Timothy Beach  
 2001 "Excavations at Medieval Kinet, Turkey: A Preliminary Report." *Ancient Near Eastern Studies (formerly Abr-Nahrain): An Annual Published by the Centre for Classics and Archaeology, University of Melbourne* 38: 58–138.
- Renfrew, Colin  
 1990 "Archaeology and Linguistics: Some Preliminary Issues." In *When Worlds Collide: Indo-Europeans and Pre-Indo-Europeans. The Bellagio Papers* (The Rockefeller Foundation's Bellagio Study and Conference Center, Lake Como, Italy, February 8–13, 1988), edited by Thomas L. Markey and John A. C. Greppin, pp. 15–24. *Linguistica Extranea Studia* 19. Ann Arbor: Karoma.
- Renfrew, Colin, and John Dixon  
 1976 "Obsidian in Western Asia: A Review." In *Problems in Economic and Social Archaeology*, edited by Gale de Giberne Sieveking, Ian H. Longworth, and K. E. Wilson, pp. 137–50. London: Duckworth.
- Robertson, Martin  
 1940 "The Excavations at Al Mina, Suedia IV: The Early Greek Vases." *Journal of Hellenic Studies* 60: 2–21.
- Rossner, Eberhard P.  
 1987 *Die neuassyrischen Felsreliefs in der Türkei: Ein archäologischer Reiseführer*. Felsdenkmäler in der Türkei 2. Munich: E. P. Rossner.
- Rostovtzeff, Michael Ivanovitch  
 1941 *The Social and Economic History of the Hellenistic World*, Volume 3. Oxford: Clarendon.
- Sagona, Antonio G.  
 1984 *The Caucasian Region in the Early Bronze Age*. Three Volumes. British Archaeological Reports, International Series 214. Oxford: British Archaeological Reports.  
 2000 "Sos Höyük and the Erzurum Region in Late Prehistory: A Provisional Chronology for Northeast Anatolia." In *Chronologies des pays du caucase et de l'Euphrate aux IVe–IIIe millénaires* (Actes du colloque d'Istanbul, 16–29 décembre 1998),

- edited by Catherine Marro and Harald Hauptmann, pp. 329–73. *Varia Anatolica* 11. Paris: Institut français d'études anatoliennes d'Istanbul de Boccard.
- Salač, A.  
1922 “ZEYΣ KΑΣΙΟΣ.” *Bulletin de correspondance hellénique* 46: 160–89.
- Saltz, Diane Lynn  
1978 Greek Geometric Pottery in the East: The Chronological Implications. Ph.D. Dissertation, Harvard University.
- Sanlaville, Paul; Jacques Besançon; Lorraine Copeland; and Sultan Muhesen  
1993 *Le paléolithique de la vallée moyenne de l'Oronte (Syrie): Peuplement et environnement*. British Archaeological Reports, International Series 587. Oxford: British Archaeological Reports.
- Sasson, Jack M.  
1981 “On Idrimi and Sarruwa, the Scribe.” In *Studies on the Civilization and Culture of Nuzi and the Hurrians*, Volume 1: *In Honor of Ernest René Lacheman on His Seventy-fifth Birthday, April 29, 1981*, edited by Martha A. Morrison, David I. Owen, Maynard P. Maidman, and Gernot Wilhelm, pp. 309–24. Winona Lake: Eisenbrauns.
- Sayre, E. V.; E. C. Joel; M. J. Blackman; Kutlu Aslıhan Yener; and Hadi Özbal  
2001 “Stable Lead Isotope Studies of Black Sea Anatolian Ore Sources and Related Bronze Age and Phrygian Artefacts from Nearby Archaeological Sites. Appendix: New Central Taurus Ore Data.” *Archaeometry* 43: 77–115.
- Sayre, E. V.; Kutlu Aslıhan Yener; E. C. Joel; and I. L. Barnes  
1992 “Statistical Evaluation of the Presently Accumulated Lead Isotope Data from Anatolia and Surrounding Regions.” *Archaeometry* 34: 73–105.
- Schaeffer, Claude F.-A.  
1938 “Les fouilles de Ras Shamra-Ugarit neuvième campagne (printemps 1937): Rapport sommaire.” *Syria* 19: 193–255.  
1948 *Stratigraphie comparée et chronologie de l'Asie occidentale (IIIe et IIe millénaires): Syrie, Palestine, Asie Mineure, Chypre, Perse et Caucase*. London: Oxford University Press.
- Schloen, J. David  
2001 *The House of the Father as Fact and Symbol: Patrimonialism in Ugarit and the Ancient Near East*. Studies in the Archaeology and History of the Levant 2; Harvard Semitic Museum Publications. Winona Lake: Eisenbrauns.
- Schwartz, Glenn M.; Hans H. Curvers; Fokke A. Gerritsen; Jennifer A. MacCormack; Naomi F. Miller; and Jill A. Weber  
2000 “Excavation and Survey in the Jabbul Plain, Western Syria: The Umm al-Marra Project, 1996–1997.” *American Journal of Archaeology* 104: 419–62.
- Schwartz, Glenn M., and Harvey Weiss  
1992 “Syria, ca. 10,000–2000 B.C.” In *Chronologies in Old World Archeology*, Volume 1, edited by Robert W. Ehrich, pp. 221–43. Third edition. Chicago: University of Chicago Press.
- Seeher, Jurgen  
2002 “Boğazköy-Hattusa 2000 Yılı Çalışmalar.” *Kazı Sonuçları Sempozyumu Yayınları* 23: 189–96. [Ankara: Ministry of Culture.]  
2003 “Boğazköy-Hattusa 2001 Yılı Çalışmalar.” *Kazı Sonuçları Sempozyumu Yayınları* 24: 105–12. [Ankara: Ministry of Culture.]
- Şenyürek, Muzaffer S.  
1959 “A Note on the Paleolithic Industry of the Plugged Cave.” *Belleten* 23: 27–58.
- Şenyürek, Muzaffer S., and Enver Bostancı  
1958 “The Excavation of a Cave Near the Village of Mağaracık in the Vîlâyet of Hatay: Preliminary Notice.” *Anatolia: Revue annuelle d'archéologie* 1: 81–83.
- Seton-Williams, M. V.  
1954 “Cilician Survey.” *Anatolian Studies: Journal of the British Institute of Archaeology at Ankara* 4: 121–74.
- Seyrig, Henri  
1939 “Le cimetière des Marins à Seleucie de Pierre.” In *Mélanges syriens offerts à monsieur René Dussaud: Secrétaire perpétuel de l'Académie des inscriptions et belles-lettres par ses amis et ses élèves*, pp. 451–59. Bibliothèque archéologique et historique 30. Paris: Librairie Orientaliste Paul Geuthner.
- Sherwin-White, Susan M., and Amélie Kuhrt  
1993 *From Samarkhand to Sardis: A New Approach to the Seleucid Empire*. Hellenistic Culture and Society 13. Berkeley: University of California Press.
- Sinclair, T. A.  
1990 *Eastern Turkey: An Architectural and Archaeological Survey* 4. London: Pindar.
- Smith, Sidney  
1939 “A Preliminary Account of the Tablets from Atchana.” *Antiquaries Journal* 19: 38–48.  
1940 *Alalakh and Chronology*. London: Luzac.  
1949 *The Statue of Idri-Mi*. Occasional Publications of the British Institute of Archaeology in Ankara 1.

- London: British Institute of Archaeology in Ankara.
- Stager, Lawrence E.  
2001 "Port Power in the Early and the Middle Bronze Age: The Organization of Maritime Trade and Hinterland Production." In *Studies in the Archaeology of Israel and Neighboring Lands in Memory of Douglas L. Esse*, edited by Samuel R. Wolff, pp. 625–38. *Studies in Ancient Oriental Civilization* 59; American Schools of Oriental Research Books 5. Chicago: The Oriental Institute.
- Stein, Diana L.  
1984 *Khabur Ware and Nuzi Ware: Their Origin, Relationship, and Significance*. Assur 4/1. Malibu: Undena.  
1997 "Alalakh." In *The Oxford Encyclopedia of Archaeology in the Near East*, Volume 1, edited by Eric M. Meyers, pp. 55–59. American Schools of Oriental Research. New York: Oxford University Press.
- Stein, Gil J.  
1994 "Economy, Ritual, and Power in 'Ubaid Mesopotamia." In *Chiefdoms and Early States in the Near East: The Organizational Dynamics of Complexity*, edited by Gil J. Stein and Mitchell S. Rothman, pp. 35–46. *Monographs in World Archaeology* 18. Madison: Prehistory Press.  
1998 "World Systems Theory and Alternative Modes of Interaction in the Archaeology of Culture Contact." In *Studies in Culture Contact: Interaction, Culture Change, and Archaeology*, edited by James G. Cusick, pp. 220–55. Center for Archaeological Investigations, Southern Illinois University Occasional Paper 25. Carbondale: Southern Illinois University.  
1999 *Rethinking World-Systems: Diasporas, Colonies, and Interaction in Uruk Mesopotamia*. Tucson: University of Arizona Press.
- Stillwell, Richard  
1938 *Antioch-on-the-Orontes*, Volume 2: *The Excavations of 1933–1936*. Publications of the Committee for the Excavation of Antioch and Its Vicinity 2. Princeton: Princeton University Press; London: Oxford University Press; The Hague: Martinus Nijhoff.  
1941 *Antioch-on-the-Orontes*, Volume 3: *The Excavations of 1937–1939*. Publications of the Committee for the Excavation of Antioch and Its Vicinity 3. Princeton: Princeton University Press; London: Oxford University Press; The Hague: Martinus Nijhoff.
- Stone, Elizabeth C., and Paul E. Zimansky  
1999 *The Iron Age Settlement at 'Ain Dara, Syria: Survey and Soundings*. British Archaeological Reports, International Series 786. Oxford: Archaeopress.
- Stoyke, Sinje Caren  
1999 Rollsiegel des 2. und 1. Jahrtausends aus dem Amuq-Gebiet. M.A. Thesis, Johann Wolfgang Goethe-Universität.
- Süel, Aygül  
2002 "Ortaköy-Sapinuwa." In *Recent Developments in Hittite Archaeology and History: Papers in Memory of Hans G. Güterbock*, edited by Kutlu Aslıhan Yener and Harry A. Hoffner, Jr., with the assistance of Simrit Dhesi, pp. 157–65. Winona Lake: Eisenbrauns.
- Swift, Gustavus F., Jr.  
1953 "The Sphinx from Tell Tayinaat." *Archaeology* 6: 230–31.  
1958 The Pottery of the 'Amuq: Phases K to O and Its Historical Relationships. Ph.D. Dissertation, University of Chicago.
- Tadmor, Hayim  
1994 *The Inscriptions of Tiglath-pileser III, King of Assyria*. Jerusalem: Israel Academy of Sciences and Humanities.
- Tanındı, Oğuz, and Mete Aksan  
2002 *Archaeological Destruction in Turkey: Year 2001 Preliminary Report: Mediterranean and South-eastern Anatolia Regions: June–October 2001*. TASK Foundation Publications; Scientific Reports Series. Istanbul: TASK (Tarih, Arkeoloji, Sanat ve Kültür Mirasını, Koruma Vakfı [History, Archaeology, Art, and Cultural Heritage]) Foundation and TAY (Türkiye Arkeolojik Yerleşmeleri [The Archaeological Settlements of Turkey]) Project.
- Tate, Georges  
1992 *Les campagnes de la Syrie du nord du IIe au VIIIe siècle*, Volume 1: *Un exemple d'expansion démographique et économique à la fin de l'antiquité*. Bibliothèque archéologique et historique de l'Institut français d'archéologie de Beyrouth 133. Paris: Librairie Orientaliste Paul Geuthner.  
1997 "The Syrian Countryside during the Roman Era." In *The Early Roman Empire in the East*, edited by Susan E. Alcock, pp. 55–72. Oxbow Monograph 95. Oxford: Oxbow Books.
- Taylor, Joan du Plat  
1959 "The Cypriot and Syrian Pottery from Al Mina, Syria." *Iraq* 21: 62–92.
- Tchalenko, Georges  
1953–58 *Villages antiques de la Syrie du Nord: Le massif du Bélus à l'époque romaine*. Three Volumes. Bibliothèque archéologique et historique de

- l'Institut français d'archéologie de Beyrouth 50. Paris: Librairie Orientaliste Paul Geuthner.
- Todd, Ian A., and Despo Pilides  
 2001 "The Archaeology of White Slip Production." In *The White Slip Ware of Late Bronze Age Cyprus* (Proceedings of an International Conference Organized by the Anastasios G. Leventis Foundation, Nicosia, in Honour of Malcolm Wiener, 29th–30th October 1998), edited by Vassos Karageorghis, with editorial assistance from Ernst Czerny and Ian A. Todd, pp. 27–44. *Denkschriften der Gesamtakademie* 20; Contributions to the Chronology of the Eastern Mediterranean 2. Vienna: Österreichischen Akademie der Wissenschaften.
- van Soldt, W.  
 1995 "Ugarit: A Second-Millennium Kingdom on the Mediterranean Coast." In *Civilizations of the Ancient Near East, Volume 2: History and Culture*, edited by Jack M. Sasson, pp. 1255–66. New York: Charles Scribner's Sons.
- Verstraete, Jan, and Tony J. Wilkinson  
 2000 "The Amuq Regional Archaeological Survey." In "The Amuq Valley Regional Project, 1995–1998," by Kutlu Aslıhan Yener, Christopher Edens, Timothy P. Harrison, Jan Verstraete, and Tony J. Wilkinson, pp. 163–220. *American Journal of Archaeology* 104: 179–92.
- Voigt, Mary M.  
 1985 "Village on the Euphrates: Excavations at Neolithic Gritille on the Euphrates." *Expedition* 27: 10–24.
- von Dassow, Eva Melita  
 1997 Social Stratification of Alalah under the Mittani Empire. Ph.D. Dissertation, Department of Hebrew and Judaic Studies, New York University.
- von Wickede, Alwo  
 1990 *Prähistorische Stempelglyptik in Vorderasien*. Münchener Universitäts-Schriften philosophische Fakultät 12; Münchener vorderasiatische Studien 6. Munich: Profil.
- Waagé, Dorothy B.  
 1952 *Antioch-on-the-Orontes, Volume 4, Part 2: Greek, Roman, Byzantine and Crusaders' Coins*. Publications of the Committee for the Excavation of Antioch and Its Vicinity 4. Princeton: Princeton University Press; London: Oxford University Press; The Hague: Martinus Nijhoff.
- Waagé, Frederick O.  
 1934 "Lamps, Pottery, Metal and Glass Ware." In *Antioch-on-the-Orontes, Volume 1: The Excavations of 1932*, edited by George W. Elderkin, pp. 58–75. Publications of the Committee for the Excavation of Antioch and Its Vicinity 1. Princeton: Princeton University Press; London: Oxford University Press; The Hague: Martinus Nijhoff.
- 1941 "Lamps." In *Antioch-on-the-Orontes, Volume 3: The Excavations of 1937–1939*, edited by Richard Stillwell, pp. 55–82. Publications of the Committee for the Excavation of Antioch and Its Vicinity 3. Princeton: Princeton University Press; London: Oxford University Press; The Hague: Martinus Nijhoff.
- 1948 "The Glazed Pottery." In *Antioch-on-the-Orontes, Volume 4, Part 1: Ceramics and Islamic Coins*, edited by Frederick O. Waagé, pp. 79–108. Publications of the Committee for the Excavation of Antioch and Its Vicinity 4. Princeton: Princeton University Press; London: Oxford University Press; The Hague: Martinus Nijhoff.
- Waldbaum, Jane C.  
 1997 "Greeks in the East or Greeks and the East? Problems in the Definition and Recognition of Presence." *Bulletin of the American Schools of Oriental Research* 305: 1–17.
- Weippert, Manfred  
 1982 "Zur Syrienpolitik Tiglathpilesers III." In *Mesopotamien und seine Nachbarn: Politische und kulturelle Wechselbeziehungen im alten Vorderasien vom 4. bis 1. Jahrtausend v. Chr.* (XXV. Rencontre Assyriologique Internationale, Berlin, 3. bis 7. Juli, 1978), Volume 2, edited by Hans Jörg Nissen and Johannes Renger, pp. 395–408. *Berliner Beiträge zum Vorderen Orient* 1. Berlin: Dietrich Reimer.
- 1992 "Die Feldzüge Adadnaris III. nach Syrien: Voraussetzungen, Verlauf, Folgen." *Zeitschrift des Deutschen Palästina-Vereins* 108: 42–67.
- Weiss, Harvey; Mary-Agnès Courty; W. Wetterstrom; F. Guichard; L. Senior; R. Meadow; and A. Curnow  
 1993 "The Genesis and Collapse of Third Millennium North Mesopotamian Civilization." *Science* 261: 995–1004.
- Wiener, Malcolm H.  
 2003 "Time Out: The Current Impasse in Bronze Age Archaeological Dating." In *METRON: Measuring the Aegean Bronze Age* (Proceedings of the 9th International Aegean Conference/9e Rencontre égéenne internationale, New Haven, Yale University, 18–21 April 2002), edited by Karen Polinger Forster and Robert Laffineur, pp. 363–95. *Aegaeum: Annales d'archéologie égéenne de l'Université de Liège et University of Texas at Austin-Program in Aegean Scripts and Prehistory* 24. Liège: Université de Liège; Austin: University of Texas.

- Wilhelm, Gernot  
1989 *The Hurrians*. Warminster: Aris and Phillips.
- Wilkinson, Tony J.  
1982 "The Definition of Ancient Manured Zones by Means of Extensive Sherd-Sampling Techniques." *Journal of Field Archaeology* 9: 323–33.  
1989 "Extensive Sherd Scatters and Land-Use Intensity: Some Recent Results." *Journal of Field Archaeology* 16: 31–46.  
1990 *Town and Country in Southeastern Anatolia*, Volume 1: *Settlement and Land Use at Kurban Höyük and Other Sites in the Lower Karababa Basin*. Oriental Institute Publications 109. Chicago: The Oriental Institute.  
1997 "The History of the Lake of Antioch: A Preliminary Note." In *Crossing Boundaries and Linking Horizons: Studies in Honor of Michael C. Astour on His 80th Birthday*, edited by Gordon Douglas Young, Mark W. Chavalas, and Richard E. Averbeck, pp. 557–76. Bethesda: CDL Press.  
1999 "Holocene Valley Fills of Southern Turkey and Northwestern Syria: Recent Geoarchaeological Contributions." *Quaternary Science Reviews* 18: 555–71.  
2000 "Geoarchaeology of the Amuq Plain." In "The Amuq Valley Regional Project 1995–1998," by Kutlu Ashihan Yener, Christopher Edens, Timothy P. Harrison, J. Verstraete, and Tony J. Wilkinson, pp. 163–220. *American Journal of Archaeology* 104: 168–79.  
2002 "Archaeological Survey in the Amuq Valley, Tell Atchana." In *The Oriental Institute 2001–2002 Annual Report*, edited by Gene B. Gragg, pp. 20–23. Chicago: The Oriental Institute.  
2003 *Archaeological Landscapes of the Near East*. Tucson: University of Arizona Press.
- Wilkinson, Tony J.; Elizabeth S. Friedman; E. E. Alp; and A. P. J. Stampfl  
2001 "The Geoarchaeology of a Lake Basin: Spatial and Chronological Patterning of Sedimentation in the Amuq Plain, Turkey." In *Journées d'étude du Groupe de recherches en archéométrie du CELAT (1997–1999)*, edited by Michel Fortin, pp. 211–26. Cahiers d'archéologie du Centre interuniversitaire d'études sur les lettres, les arts et les traditions 10; Série archéométrie 1. Quebec: Centre interuniversitaire d'études sur les lettres, les arts et les traditions.
- Wilkinson, Tony J., and D. J. Tucker  
1995 *Settlement Development in the North Jazira, Iraq: A Study of the Archaeological Landscape*. Iraq Archaeological Reports 3. Warminster: Aris and Phillips.
- Winstone, Harry Victor Frederick  
1990 *Woolley of Ur: The Life of Sir Leonard Woolley*. London: Secker and Warburg.
- Wiseman, Donald John  
1953 *The Alalakh Tablets*. Occasional Publications of the British Institute of Archaeology at Ankara 2. London: British Institute of Archaeology at Ankara.  
1954 "Supplementary Copies of Alalakh Tablets." *Journal of Cuneiform Studies* 8: 1–30.  
1958 "Abban and Alalah." *Journal of Cuneiform Studies* 12: 124–29.  
1959a "Ration Lists from Alalah IV." *Journal of Cuneiform Studies* 13: 50–59.  
1959b "Ration Lists from Alalakh VII." *Journal of Cuneiform Studies* 13: 19–33.  
1967 "Alalakh." In *Archaeology and Old Testament Study: Jubilee Volume of the Society for Old Testament Study, 1917–1967*, edited by David Winton Thomas, pp. 118–35. Oxford: Clarendon Press.
- Wiseman, Donald John, and Richard S. Hess  
1994 "Alalakh Text 457." *Ugarit Forschungen* 26: 501–08.
- Woolley, C. Leonard  
1936 "Tal Atchana." *Journal of Hellenic Studies* 56: 125–32.  
1937a "Excavations Near Antioch in 1936." *Antiquaries Journal* 17: 1–15.  
1937b "New Clues to Hittite History in Syria." *Illustrated London News*, October 9, 1937; Volume 2633, Number 101: 604–05.  
1938a "Excavations at al Mina, Sueidia." *Journal of Hellenic Studies* 58/1–2: 1–30, 133–70.  
1938b "Excavations at Tal Atchana, 1937." *Antiquaries Journal* 18: 1–28.  
1939 "Excavations at Atchana-Alalakh, 1938." *Antiquaries Journal* 19: 1–37.  
1947a "Archaeological News." *American Journal of Archaeology* 51: 425–28.  
1947b "Atchana 1946." *Man* 47: 60–61.  
1947c "The Tomb of Yarim-Lim: A Hittite King's Four-thousand-year-old Mausoleum, the Latest Discovery at Alalakh." *Illustrated London News*, October 25, 1947; Volume 121, Number 3157: 470–72.  
1948a "The Date of al Mina." *Journal of Hellenic Studies* 68: 148.  
1948b "Excavations at Atchana-Alalakh, 1939." *Antiquaries Journal* 28: 1–19.  
1950a "Archaeological News." *American Journal of Archaeology* 54: 63–64.  
1950b "Excavations at Atchana-Alalakh, 1946." *Antiquaries Journal* 30: 1–21.  
1953a *A Forgotten Kingdom: A Record of the Results Obtained from the Recent Important Excavation of Two Mounds, Atchana and al Mina, in the Turkish Hatay*. Baltimore: Penguin Books.  
1953b *Spadework: Adventures in Archaeology*. London: Lutterworth.

- 1955 *Alalakh: An Account of the Excavations at Tell Atchana in the Hatay, 1937–1949*. Reports of the Research Committee of the Society of Antiquaries of London 18. London: Oxford University Press.
- Wright, Henry T.  
1986 “The Evolution of Civilizations.” In *American Archaeology Past and Future: A Celebration of the Society for American Archaeology, 1935–1985*, edited by David J. Meltzer, Don D. Fowler, and Jeremy A. Sabloff, pp. 323–65. Washington, D.C.: Smithsonian Institution Press.
- Yalçinkaya, Işin; M. B. Kösem; A. L. Atıcı; K. Özçelik; C. M. Ereğ; and M. Kartal  
1999 “1998 Yılı Yüze Araştırmaları ve Hatay Paleolitikliği.” *Araştırma Sonuçları Toplantısı* 17: 163–74.
- Yasuda, Yoshinori; Hiroyuki Kitagawa; and Takeshi Nakagawa  
2000 “The Earliest Record of Major Anthropogenic Deforestation in the Ghab Valley, Northwest Syria: A Palynological Study.” *Quaternary International* 73/74: 127–36.
- Yener, Kutlu Aslıhan  
1995 “The Archaeology of Empire in Anatolia: Comments.” *Bulletin of the American Schools of Oriental Research* 299/300: 117–21.  
1998 “A View from the Amuq Valley in South-Central Turkey: Societies in Transformation in the Second Millennium BC.” In *The Aegean and the Orient in the Second Millennium* (Proceedings of the 50th Anniversary Symposium, Cincinnati, 18–20 April 1997), edited by Eric H. Cline and Diane Harris-Cline, pp. 273–80. Aegaeum: Annales d’archéologie égéenne de l’Université de Liège et University of Texas at Austin-Program in Aegean Scripts and Prehistory 18. Liège: Université de Liège; Austin: University of Texas.  
1999 “Oriental Institute Returns to the Amuq: 1998 Excavation Season at Tell Kurdu, Turkey.” *Oriental Institute News & Notes* 161: 1–3.  
2000a “Between the Tigris-Euphrates and the Mediterranean Sea: The Oriental Institute Amuq Valley Regional Projects, Turkey.” In *Proceedings of the First International Congress on the Archaeology of the Ancient Near East, Rome, May 18th–23rd, 1998*, Volume 2, edited by Paolo Matthiae, Alessandra Ene, Luca Peyronel, and Frances Pinnock, pp. 1801–12. Rome: Università di Roma.  
2000b *The Domestication of Metals: The Rise of Complex Metal Industries in Anatolia*. Culture and History of the Ancient Near East 4. Leiden: Brill.  
2001a “The Amuq Valley Regional Project: Tell Atchana (Ancient Alalakh) Survey 2000.” In *The Oriental Institute 2000–2001 Annual Report*, edited by Gene B. Gragg, pp. 11–15. Chicago: The Oriental Institute.  
2001b “Alalakh: A Late Bronze Age Capital in the Amuq Valley, Southern Turkey.” *Oriental Institute News & Notes* 169: 1–6.  
2002a “Swords, Armor, and Figurines: A Metalliferous View from the Central Taurus.” In *Across the Anatolian Plateau: Readings in the Archaeology of Ancient Turkey*, edited by David C. Hopkins, pp. 35–42. Annual of the American Schools of Oriental Research 57. Boston: American Schools of Oriental Research.  
2002b “Amuq Valley Regional Projects: Tell Atchana (Ancient Alalakh) Survey.” In *The Oriental Institute 2001–2002 Annual Report*, edited by Gil J. Stein, pp. 13–19. Chicago: The Oriental Institute.  
In press “Transformative Impulses in Late Bronze Age Technology: A Case Study from the Amuq Valley, Southern Turkey.” In *Studies in Honor of Robert McCormick Adams*, edited by Elizabeth C. Stone.
- Yener, Kutlu Aslıhan; Christopher Edens; Jesse J. Casana; Benjamin Diebold; Heidi Ekstrom; Michelle Loyet; and Rana Özbal  
2000a “Tell Kurdu Excavations, 1999.” *Anatolica* 26: 31–117.
- Yener, Kutlu Aslıhan; Christopher Edens; Timothy P. Harrison; Jan Verstraete; and Tony J. Wilkinson  
2000b “The Amuq Valley Regional Project, 1995–1998.” *American Journal of Archaeology* 104: 163–220.
- Yener, Kutlu Aslıhan; Timothy Harrison; and Hatice Pamir  
2002 “University of Chicago, Oriental Institute 2000 Yılı Hatay Aççana, Tayinat Höyükleri ve Samandağı Yüze Araştırmaları.” *Araştırma Sonuçları Toplantısı* 19: 289–302.
- Yener, Kutlu Aslıhan; Paul Jett; and Annemie Adriaens  
1995 “Silver and Copper Artifacts from Ancient Anatolia.” *Journal of Metals* 47/5: 70–72.
- Yener, Kutlu Aslıhan; Hadi Özbal; A. Minzoni-Deroche; and B. Aksoy  
1989a “Bolkardag: Archaeometallurgy Surveys in the Taurus Mountains, Turkey.” *National Geographic Research* 5: 477–94.
- Yener, Kutlu Aslıhan; Hadi Özbal; Ergun Kaptan; A. Necip Pehlivan; and Martha Goodway  
1989b “Kestel: An Early Bronze Age Source of Tin Ore in the Taurus Mountains, Turkey.” *Science* 244: 200–03.
- Yener, Kutlu Aslıhan; E. V. Sayre; E. C. Joel; Hadi Özbal; I. L. Barnes; and R. H. Brill  
1991 “Stable Lead Isotope Studies of Central Taurus Ore Sources and Related Artifacts from Eastern



- Mediterranean Chalcolithic and Bronze Age Sites.” *Journal of Archaeological Science* 18: 541–77.
- Yener, Kutlu Aslıhan, and Tony J. Wilkinson
- 1996a “1995 Chicago Oriental Institute Hatay-Amik Ovası Bölge Projeleri [The Oriental Institute Amuq Regional Project, 1995].” *Araştırma Sonuçları Toplantısı* 14/2: 413–31.
- 1996b “Amuq Valley Projects.” In *The Oriental Institute 1995–1996 Annual Report*, edited by William M. Sumner, pp. 11–21. Chicago: The Oriental Institute.
- 1996c “The Amuq Valley Projects, 1995.” *Oriental Institute News & Notes* 148: 1–6.
- 1997a “Amuq Valley Regional Project.” In *The Oriental Institute 1996–1997 Annual Report*, edited by William M. Sumner, pp. 11–21. Chicago: The Oriental Institute.
- 1997b “Oriental Institute Amuq Valley Project: The 1996 Field Season.” *Oriental Institute News & Notes* 155: 1–4.
- 1998 “Amuq Valley Regional Project.” In *The Oriental Institute 1997–1998 Annual Report*, edited by Gene B. Gragg, pp. 9–15. Chicago: The Oriental Institute.
- 1999 “1996–1997 Yılları Oriental Institute Amik Ovası Projesleri: Yüzey Araştırmaları, Arkeometri ve Tell Kurdu Kazısı [The 1996–1997 Oriental Institute Amuq Regional Projects: Survey, Archaeometry, and Excavations at Tell Kurdu].” *Arkeometri Sonuçları Toplantısı* 14: 97–112.
- Yener, Kutlu Aslıhan; Tony J. Wilkinson; Scott Branting; Elizabeth S. Friedman; Jerry D. Lyon; and Clemens D. Reichel
- 1996 “The Oriental Institute Amuq Regional Projects, 1995.” *Anatolica* 22: 49–84.
- Yılmaz, I.; F. Erhan; and T. Hos
- 1993 “Yukarı Orta Amanoslar’ın Genel Jeolojisi ve Bölgenin Mühendislik Jeolojisine Etkisi [General Geology of the Upper Central Amanos and Its Influence on Engineering Geology of the Region].” *Türkiye Jeoloji Kurultayı Bülteni* [Bulletin of the Geological Congress of Turkey] 8: 30–38.
- Yoffee, Norman
- 1993 “Too Many Chiefs? (or, Safe Texts for the ’90s).” In *Archaeological Theory: Who Sets the Agenda?*, edited by Norman Yoffee and Andrew Sherratt, pp. 60–78. New Directions in Archaeology. Cambridge: Cambridge University Press.
- Yon, Marguerite
- 1997 “Ugarit.” In *The Oxford Encyclopedia of Archaeology in the Near East*, Volume 1, edited by Eric M. Meyers, pp. 393–401. New York and Oxford: Oxford University Press.
- 2001 “White Slip Ware in the Northern Levant.” In *The White Slip Ware of Late Bronze Age Cyprus* (Proceedings of an International Conference Organized by the Anastasios G. Leventis Foundation, Nicosia, in Honour of Malcolm Wiener, 29th–30th October 1998), edited by Vassos Karageorghis, Ernst Czerny, and Ian A. Todd, pp. 117–25. *Denkschriften der Gesamtkademie* 20; Contributions to the Chronology of the Eastern Mediterranean 2. Vienna: Österreichischen Akademie der Wissenschaften.
- Yükmen, Bakiye
- 2000 “1999 Yılı Adıyaman, Kahramanmaraş, Hatay, Kars İlleri Yüzey Araştırması [1999 Surveys in the Provinces of Adıyaman, Hatay, Kars].” *Araştırma Sonuçları Toplantısı* 18/2: 151–56.
- Zeeb, Frank
- 2001 *Die Palastwirtschaft in Altsyrien nach den spätaltbabylonischen Getreidelieferlisten aus Alalah (Schicht VII)*. *Alter Orient und Altes Testament* 282. Münster: Ugarit.
- Zevulun, Uza
- 1987 “A Canaanite Ram-headed Cup.” *Israel Exploration Society* 37: 88–104.
- Zimansky, Paul
- 2002 “The ‘Hittites’ at ‘Ain Dara.” In *Recent Developments in Hittite Archaeology and History: Papers in Memory of Hans G. Güterbock*, edited by Kutlu Aslıhan Yener and Harry A. Hoffner, Jr., with the assistance of Simrit Dhesi, pp. 177–91. Winona Lake: Eisenbrauns.



# CHAPTER ONE

## THE AMUQ VALLEY REGIONAL PROJECTS

KUTLU ASLIHAN YENER

### INTRODUCTION

Standing about 900 m above sea level at the Belen Pass, the green Amuq Valley appears to the observer as agriculturally wealthy, well watered, and vast. The valley is clearly an inviting place to make a living and large numbers of diverse people reside there today — and not all are recent immigrants. In the past, the large, pluralistic populations of the Amuq supported impressive achievements and at the same time had the capacity to absorb a rainbow of different cultural traditions. Yet at no time did vast, imperial centers emerge from this valley; instead, the population developed impressive and inventive coping mechanisms and thrived, foreshadowing early internationalism.

The results of the Amuq Valley Regional Projects (AVRP) presented in this volume are the outcome of eight seasons of intensive fieldwork (1995–2002) representing the first phase of a long-range, broadly-based archaeological investigation in the Hatay region of southern Turkey (figs. 1.1, 2.1). From its inception the research was conceived as a series of coordinated field projects. The detailed and expansive scope of the regional project originated from a number of theoretical and methodological considerations. Encouraged in part by its potential for providing the examination of interactions between technological developments, complex social institutions, natural resources, and the environment, the original Oriental Institute project (then called the Syro-Hittite Expedition) in the 1930s was formally reactivated in 1995 (Yener et al. 1996, 2000b). The strategy of taking a regional approach with a series of linked field projects established an unusual multi-institutional laboratory to research key themes that we hope will have explanatory power about transformations of regional and interregional relationships. The initial stage of the research strategy focused on contextualizing the settlements by survey, followed by site-specific investigations prior to the resumption of new excavations. The regional surveys targeted the Amuq Valley (the plain of Antioch, today Antakya; Turkish Amik Ovası) and the delta of the Orontes River (today Samandağ; Turkish Asi Nehri). Artifactual and micro-scale studies were the focus of the third scale of investigations.

The information from the ongoing surveys in the Amuq Valley, which recorded a total of 346 sites, is presented here in part and is accompanied by copious environmental data. A separate volume that incorporates the data from the highland segment of the survey, which is still ongoing, will be published in the near future. The archaeological and geoarchaeological surveys, which provided the optimum context for subsequent excavations, were directed by Tony J. Wilkinson. The rich corpus of human settlement data is given in *Appendix A: Site Gazetteer*. Envisioning the relevance of interconnections between the Amuq Valley and the Mediterranean Sea, survey data from the Orontes Delta region are also included in this volume (*Chapter Three: The Orontes Delta Survey*).

Three intensive site-specific survey operations were localized at Tell Kurdu (AS 94), Tell Atchana (Aççana Höyük; AS 136), and Tell Ta‘yinat (AS 126) and reflect diverse research designs. With its own unique characteristics and time frame, each of the three sites represents a major urban center in the plain. While all three surfaces of the sites were surveyed prior to their recent excavations, only the results of two surface investigations, the Tell Atchana and Ta‘yinat surveys, are presented in this volume (see *Chapter Six: Surface Ceramics, Off-Site Survey, and Floodplain Development at Tell Atchana (Alalakh)*; *Chapter Seven: The Ta‘yinat Survey, 1999–2002*). Preliminary reports from Tell Kurdu have already been published.<sup>1</sup>

A number of contributions follow, three of which focus on Tell Atchana (AS 136; ancient Alalakh). The first is a critical review of spatial organization, architectural features, and pre-excavation activities at Alalakh and provides insights into urban planning at a small-scale territorial state (*Chapter Four: Alalakh Spatial Organization*). The next contribution discusses the technical difficulties of re-digging a long-abandoned site, despite advanced instruments (*Chapter Five: The Tell Atchana Mapping and GIS Project*). The final excavation reports of these sites, including the

---

1. Yener 2000a; Edens and Yener 2000; Özbal et al. 2003

unpublished portions of the older Oriental Institute excavations, will constitute subsequent volumes. Finally, the plates catalog specific small finds from the Amuq site survey.

## IMPORTANCE OF THE AMUQ

The areas investigated lay in part within a hitherto fairly well-studied region of the upper Orontes (Asi) River and the former Lake of Antioch (Amik Gölü) tucked into the bend of the northeastern Mediterranean coast. Measuring 535 sq. km (330 sq. miles), the Amuq Valley (variously, the plain of Antioch, modern Antakya) is defined here as culturally a part of the northern Levant and southern fringes of Anatolia. It is strategically situated between the upper Tigris and Euphrates River systems of eastern Turkey/northern Syria and Iraq and the Mediterranean Sea. Two main passes over the Amanus Mountain range are Beylan (Belen) and Arslanlı Bel in the northeast (Alkım 1969: 280). Beylan is known as the “Syrian Gates” and affords communication between the Amuq and southern coastal Cilicia (Çukurova) via Iskenderun (Alexandretta). Furthermore, as a northern extension of the African Rift Valley, the Amuq provides access between the high alpine highlands of eastern Turkey, the Caucasus region, and the inland river valleys of Israel, Jordan, and farther to Egypt. Considered to be one of the few viable outlets between these regions, the Amuq Valley certainly is a bridge providing environmental and cultural connectivity. Having said this, however, I have long disliked the metaphorical use of the word “bridge.” This term is also often overused to define its neighbor to the north, Anatolia, which is strictly speaking both a transit node and something much more. Viewing this region as a bridge marginalizes local developments and reduces the cultural landscape into an offshoot of other areas. One does not inhabit a “bridge.” It is the notion of connectivity, and capacity to absorb that is implied here, which can auspiciously lead to great creativity and innovation by local populations. Yet, this interregional discourse and accrued wealth acted as a magnet attracting unwanted attention and often required ingenious measures against incursions by more powerful neighbors.

At the same time, the unusual confluence of both highland and well-watered lowland resources in the Amuq drew a dense and diverse ethnic population, which settled there for millennia. As a lakeside and riverine environment through most of its history, the mountain ranges that surround the fertile Amuq Valley introduced a value-added aspect to its attractiveness, supplying abundant timber, minerals, and pasturage resources. Drawing upon these opportunities in a mutually beneficial two-way loop, these populations were affected by and concurrently altered the landscape, triggering significant socioeconomic and political consequences. With this bounty of natural and human diversity, during some periods, and under certain sets of circumstances, the Amuq nurtured a very special place to live. The main conclusions to be drawn from this are that the valley was at once an open system and functioned as a self-reliant, small state system as well.

A number of scholars have provided critical insight through a diversity of theoretical mechanisms that have had explanatory power about societal change — trade, distance-parity, population pressure, technology, bureaucracy building, ideological aspects, and the environment, to name a few (see G. Stein 1998, 1999; Algaze 2001). Certainly, our selection of the Amuq for this recent round of research was partly based on the advantages it presented as an ideal regional laboratory to test key themes against the archaeological record, given the smaller scale of the valley’s complex societies. Approaching the problem through the perspective of my own previous research, which focused on the underpinnings of material wealth, primarily metals, and their production and exchange systems, the Amuq offered an appealing opportunity to investigate the lowland tier of the industry. Having completed the first stages of research at industrial production sites throughout several mining zones of highland Turkey (Yener 2000a), ultimately, a more scaled-down sampling area targeted the central Taurus Mountain range, an area of mineral-rich hinterlands especially relevant to the Amuq Valley and its interaction zone. Yet the mining finds from the Taurus Mountains raised more questions than it answered. It was time to come down off the mountains.

While most archaeologists secretly aspire to find the oldest, the largest, the first, and the most spectacular site to research, the Amuq Valley sites have represented none of these ideal cases. On the contrary, the Amuq Valley is known historically as a region where secondary power nodes emerged, as is evident by the kingdoms of Mukish (Middle/Late Bronze Age), Unqi (Iron Age), and Antioch (classical and Islamic). These polities were often vassal states, and at best, were independent “second cities.” Yet, the Amuq Valley and its various urban centers have long been recognized for being the backdrop of a number of important cultural developments. Throughout the sixth and fifth millennia B.C. (the Halaf/Ubaid periods) unusually large, early agriculture-based settlements such as Tell Kurdu (AS 94) arose, dominating the cultural landscape of the region. At the cusp of urbanization and the emergence of bureaucracy, this central site (perhaps already a state polity) provides important information about administrative man-

agement in such an early period. During the subsequent span from the fourth through the second millennium B.C., the growing importance of interregional trade, cohesive symbolic systems, as well as the consolidation of agricultural storage and production potentials, gave rise to regional hierarchies. Urban centers ballooned in size, first at Tell Atchana (Alalakh [AS 136]), then at Tell Ta'yinat (AS 126), and politically aggregated into successful confederations. Still, these small-scale regional states in the Amuq bear little resemblance to their neighbors, which were more aggressive and dominant imperial states. Although the Amuq regional societies did not attain a level of significance to rival Egypt, Anatolia, or Mesopotamia until the classical period, nevertheless, through a complex blend of ethnicities, socio-political circumstances, and favorable locations, these sites emerged as special suites of resilient states. That is, the densely populated settlements of the Amuq Valley consistently endured numerous episodes of military incursion, occupation, and inclusion into larger aggrandizing imperial structures. But more often than not, they persevered as small, interdependent sites nested within the valley; evidently the constantly shifting relationships of the Amuq settlements with more powerful states often elicited a complex mosaic of clever survival strategies.

One of these strategies was the incorporation of the idiosyncratic environmental advantages of the Amuq into city constructs. The lacustrine environment and ample rainfall provided requisite water resources to channel into defensive moats. This is evident at the moated site of Tell Hasanuşağı (Yerkuyu, Yurt Höyük [AS 99]), which Wilkinson (2000) identifies as the site depicted on the relief-decorated, bronze Balawat Gates (fig. 2.19; see *Chapter Two: Settlement and Landscapes in the Amuq Region*). The cuneiform inscription accompanying the relief identifies the “Unqians” bearing tribute after being attacked by the Neo-Assyrian army. Thus rivers, marshes, and lakes not only provided wild and domestic subsistence, but they also gave a measure of security. Likewise, substantial security also came from the diverse terrain in manifold ways. Surrounded on most sides by protecting mountains, massive sites such as Tell al-Judaidah (AS 176) and fortified Iron Age Chatal Höyük (AS 167) guarded the entrance into the valley from the east at the Cilvegözü Gate (Bab al-Hawa). Equally strategically placed are the fortified capitals of Alalakh (AS 136) and Tell Ta'yinat (AS 126) guarding the Orontes River passes from the south. This defensive strategy is again reflected in the strategic emplacement of the classical capital, Antioch, which imposes itself on the narrow gorge passageway to the Mediterranean from the Amuq Valley. During the Roman and Eastern Roman Empires, (Byzantine) Antioch controlled the outlet of the lucrative Silk Route. These “gateway community” sites clearly define a common protectionism, monitoring passage, trade, and accessibility to and from the valley.

Likewise, location is also a significant factor of another transformation that occurred at the end of the third millennium B.C., which restructured settlement relationships in the plain and may have had bearing on the placement of the urban center. Wilkinson (2000) posits that by Amuq Phase H/I the main settlement concentration exhibited a major shift toward the southern edge of the plain, a nodal point in interregional communication. In the third millennium B.C. the plain was dominated by Tell Ta'yinat (AS 126); in the early second millennium B.C. the locus of occupation jumped to Tell Atchana (Alalakh [AS 136]; Amuq Phases K/L/M), a move perhaps catalyzed by interregional exchange. This disjunction formed the core hypothesis of our investigations into economies based on wealth finance, that is, traders, metallurgists, and craft specialists. In particular, I (Yener in press) turned attention to complex technological systems and how these systems changed and articulated with the rise and collapse of territorial states. The sumptuous palatial luxury finds at Alalakh and deposits of raw materials such as ivory, metal, and obsidian stored in several rooms of the palace and temple structures underscore the importance of public-sector craft workshops and the production of artifacts of power and prestige.

Historically, cuneiform texts identify a state called *Mu-ki-iš<sup>ki</sup>* and the city of Ebla, which are mentioned as vassals of the kings of Ur during the Third Dynasty of Ur. *Mukiš* is again the name of the area among Late Bronze Age sources from Alalakh, Ugarit, and Hattuša. Long baffled by the hypothesized mention of Alalakh in Ebla texts, and despite the lack of third-millennium levels at Tell Atchana (AS 136), I speculated whether Tell Ta'yinat (AS 126) might have actually been “Alalakh” at that time. According to the epigraphic documents from Tell Mardikh, Alalakh was evidently a dependency of Ebla, mentioned in contemporary textual documents as various forms of *A-la-la-hu<sup>ki</sup>* (Astour 1992). Certainly the rise of Ebla as a regional power in northern Syria raises a number of questions about its relationship with the Amuq area that need elucidation. But a number of archaeological studies suggest that Alalakh was not occupied earlier than 2200/2000 B.C. (Mellink 1957; Porada 1957, contra Woolley 1955). Since C. Leonard Woolley's (ibid.) publication, several scholars have pointed out the confusion of Syro-Cilician painted wares (now known to date to roughly late third/early second millennium B.C.) with Chalcolithic painted pottery, which had been the rationale for positing Chalcolithic levels at Tell Atchana (Braidwood and Braidwood 1960). However, counter-intuitive to the exclusive dating of Woolley's levels to the second millennium at Alalakh are the chance finds of beveled-rim bowls (Woolley 1955: 308–09). Ironically, Woolley's instincts may indeed have been correct since suggestions

that a buried Chalcolithic site exists somewhere in proximity to Tell Atchana or under the plain level are compelling (Wilkinson 2000; *Chapter Two: Settlement and Landscapes in the Amuq Region*). If the buried site ultimately gives credence to the presence of an actual Chalcolithic occupation at Tell Atchana, then the references to Alalakh at third-millennium B.C. Ebla would not be surprising at all. Ultimately the problematic and repetitive mention of Alalakh in the mid-third millennium may be resolved with the reopening of those levels at Tell Ta'yinat.

A more cogent reason for this shift of capital from one site to another lies in another alternative. Wilkinson suggested an even more audacious idea, that Tell Atchana (AS 136) and Tell Ta'yinat (AS 126) could possibly be viewed as one mega-site with a shifting locus of occupation. Striking evidence of successful survival strategies is directly evident in the shifting location of the capital between Alalakh and Tell Ta'yinat, located roughly 700 m apart (fig. 2.1). Perhaps so, but this still does not explain why relocation took place at a much lower elevation (perhaps at the plain level) at Tell Atchana, a spot potentially more prone to flooding. Whether shifting river channels, floods, or socioeconomic forces transformed the location of the capital to Alalakh, these and other factors are the target of future exploration.

Similarly, other adjustments of settlement densities occurred at the end of the Hellenistic and through the classical periods (see *Chapter Two: Settlement and Landscapes in the Amuq Region*; *Chapter Three: The Orontes Delta Survey*). Populations radically altered settlement complementarities between the mountains and lowlands during the later Amuq Phases (P–V) by moving to the uplands both in the Amuq and in the Orontes Delta. Yet high mountain plateaus are harsh and forbidding places. That is why mountains were settled much later, as documented by our finds. But these upland site examples in the Amanus Mountains and complementary information from survey research in the Taurus Mountains make it abundantly clear that high elevations are not intrinsically inimical to occupation. Certainly these high-altitude societies underwent long periods of fission and reintegration before effective imperial administrations were established, integrating the highlands and the lowlands. Nevertheless, evocative testimony from our geoarchaeological research indicates environmental factors may also have played an important role in these changes of site location.

In the past, excavations of single sites provided intellectual insight into processes of change, but they have often been embedded in a matrix of description about the settlement or its material culture. Thus researching complex interactions and radical transformations, which themselves can be fuzzy concepts, is difficult to accomplish with excavations on a site-specific level. Bold and challenging questions about power, ideologies, organization of control, and identity demanded a much larger laboratory: a region. Consequently this volume represents a tremendous amount of regional study that provides extensive new information about the environment, culture, and history acquired during the past decades. Nevertheless, we are still far from being able to provide convincing explanations for the changing patterns of settlement, or in our case, how a region with a history of backwater kingdoms ultimately gave rise to one of the most significant cities in the Near East, Antioch, and then collapsed into backwater again. In our view historical texts from Amuq sites such as Tell Alalakh, Tell Ta'yinat (AS 126), and Antioch at the edge of the valley, combined with the implemented regional approach, agree with current thinking that complexity is measured in terms not only of quantity but also qualities of interactions. In any case, an important prerequisite for qualitative comparisons with other periods and areas is the establishment of reliable linkages between the multi-scaled landscape of sites and finds.

## A SHORT HISTORY OF INVESTIGATIONS

As an Ottoman administrative district (*sanjak* in Turkish) the Hatay was called the Sanjak of Alexandretta. A multi-ethnic population (Turks, Greek, Arabs, Armenians) has been in this region with the Turkish-speaking populations, descendants of the early Seljuks and Turkomans who arrived at the end of the Crusades in the eleventh century. The incorporation of the region into the Ottoman Empire dates to 1516 during Selim I's Syrian campaign. It was part of the Ottoman Empire for 422 years.

The impetus for research stemmed from the path-breaking body of surveys and excavations conducted in the Hatay at the end of World War I during the 1920s. The original pre-World War II Amuq survey director, Robert J. Braidwood, was then a graduate student and part of a University of Chicago team assembled in 1931/1932 by James Henry Breasted, director of the Oriental Institute.<sup>2</sup> With the arrival of the first full director, Calvin Wells McEwan, in the summer of 1933, the Oriental Institute project was established and lasted to 1938 when the state of Hatay was reattached to Turkey.

---

2. Team members included Calvin Wells McEwan, Richard Haines, A. Walter, Robert and Linda Braidwood, A. Pierson, William Henry Noble, E. McEwan, John Dennison, and Abdulla

---

al-Sudani. In 1934 D. Hill, Thorkild and Rigmor Jacobsen, and Seton Lloyd were added to the team.

The “Syro-Hittite Expedition” arrived in the Amuq Valley and found several sites with monumental architecture of the Late Hittite, Iron Age kingdom of Ḫattina (Breasted 1933). This research activity in Hatay, which involved France, the United Kingdom, the United States, and other countries, took place during a window of opportunity when Hatay was administered by a French governor appointed as a function of the League of Nations mandate (Güçlü 2001). Hatay was reunited with Turkey after a plebiscite in 1938.

Braidwood’s publication of his (1937) survey of the Amuq region reflects the other aim of the original Oriental Institute project, which was to provide a thorough reconnaissance of the settlements in the valley. The Amuq Survey (AS) recorded 178 sites that range in age from the Neolithic to the Islamic period. A comprehensive record of all visible sites established an archaeological methodology that served as a model for future surveys in many parts of southwestern Asia. Braidwood’s catalog of numbered sites (AS 1–178) includes descriptions of surface finds as criteria for dating. All sites were mounds and were registered as small, medium, or large. Mounds were not measured but described as “large” if like Chatal Höyük (AS 167; 400 × 250 × 30 m) or small as with Tell Dhahab (AS 177; 25 m diam.). Individual sites were plotted on 1:100,000 maps and were used to document shifts of settlement location throughout the periods, designated Amuq Phases A–V (Neolithic–Islamic).

The “Excavations in the Plain of Antioch” arm of the project initially undertook work at the sites of Chatal Höyük (AS 167), Tell al-Judaidah (AS 176), and Tell Ta‘yinat (AS 126; Braidwood and Braidwood 1960). During subsequent years Tulail al-Sharqi (AS 135), Tell Ta‘yinat al-Saghir (AS 127), Tell Kurcoğlu (AS 55), and a cave (Wadi al-Hammam) 500 m southwest of Tell al-Judaidah (O’Brien 1933) near Reyhanlı were also sounded. Since some prehistoric periods were not well represented in these excavations, trenches were put into Tell Dhahab (AS 177) and Tell Kurdu (AS 94) during the final year (1938) in order to complete the sequence. Excavations at Tell al-Judaidah undertaken between 1935 and 1936 were crucial in establishing the earlier part of the Amuq sequence. The archaeological assemblage from a deep sounding (JK 3) and step trench (TT 20) was divided into ten phases (Amuq Phases A–J) ranging from the Neolithic to the end of the Early Bronze Age (ca. 6000–2000 B.C.). Soundings below the Amuq Phase O levels at Tell Ta‘yinat revealed isolated remains from the third millennium B.C. (Amuq Phases I/J and H).

In contrast to the narrow soundings at some of the sites, the upper levels of three sites, Tell al-Judaidah (AS 176), Tell Ta‘yinat (AS 126; see *Chapter Seven: The Ta‘yinat Survey, 1999–2002*), and Chatal Höyük (AS 167) had been given wide horizontal exposures (Haines 1971). Excavations at Tell Ta‘yinat unearthed five architectural phases, called Building Periods, dating to Amuq Phase O (ca. 950–550 B.C.). Trenches were concentrated on the west central part of the site with a few trenches opened on the edges of the mound. Chatal Höyük was divided into four parts with 20 sq. m grids and revealed a large settlement aligned along streets and with a fortification wall in Iron Age Amuq Phases N and O. Tell al-Judaidah was excavated according to a grid of 20 sq. m, and Squares D–F 7–10 on the west part of mound furnished information about later phases.

The Amuq prehistoric stratigraphic sequence provided an important prerequisite for making comparisons with other areas. Artifact typology and comparative stratigraphy formed the basis of ten prehistoric phases (Amuq Phases A–J). A total of twenty-two phases in all were identified (through V), which together span most of the Holocene through to the Islamic period (ca. 6000 B.C. until today). The formulation of the stratigraphic and chronological sequence for the region relied heavily on changes in the ceramic repertoire and other material culture from the excavations. Thus a chronological key was produced that became a requisite for an even wider zone than the original publications intended. Considered by many to be one of the great contributions to archaeological methodology, the Amuq sequence became a standard reference point for chronologies and material culture for Anatolia, Syro-Palestine, and northern Mesopotamia (Mellink 1992; Schwartz and Weiss 1992).

C. Leonard Woolley, another influential explorer and archaeologist in the Amuq, sparked an awareness in the general public and scholarly community of the cultural diversity that the northern Levant/southern Anatolian region brought to bear. Woolley initiated excavations at Tell Atchana (Alalakh; AS 136), Tabarat al-Akrad (AS 182), and Tell es-Sheikh (AS 135) and made some soundings at small sites<sup>3</sup> between 1936 and 1949 (see Woolley 1953a, 1955; French 1985, 1990; Hood 1951). As a result of his initial reconnaissance and military intelligence exploits in the eastern Mediterranean coast prior to and during World War I (see his colorful biography by Winstone 1990), Iskenderun (Alexandretta), and its hinterland near Antakya became an area of enduring interest to Woolley. Driven by his desire to, among other things, understand the development of Minoan culture on Crete and its links to the “great civilizations of history,” he sought to find the connections between the Aegean, Mesopotamia, and Anatolia.

3. He conducted soundings in a variety of different Amuq sites in 1936, but these remain unpublished: Uzunarab-Boz Höyük (AS

84) and the twin mounds Tulul Salihhiye (AS 128) and Tell Salihhiye (AS 129).

Woolley initially excavated the Mediterranean port site of al-Mina (OS 11) and a Late Bronze Age mound, Sabuniye (OS 12), located in the delta of the Orontes River, near present-day Samandağ (Woolley 1937a–c, 1938a, 1948a). While he believed that al-Mina had been established in the Late Bronze Age, the earliest levels he actually found dated to the Iron Age (750–301 B.C.). Nevertheless, he may have unwittingly found the Late Bronze Age port at the other site he briefly sounded, Sabuniye, located three miles upriver. Woolley believed that Mycenaean merchants who conducted business in al-Mina lived in this town (Woolley 1953a) and suggested an organic and economic relationship between Sabuniye and al-Mina. Unfortunately, the finds from the Sabuniye trenches were not published, nor was the site indicated on a map, but aging former dig workers and local informants pointed the survey team to the location.<sup>4</sup> New understandings of tectonic shoreline changes and the silting of estuaries suggest that the al-Mina port was possibly established after Sabuniye ceased to function as a port. This situation compares well with the west coast of Turkey and the numerous silted port sites such as Troy and Ephesus.

Disappointed that al-Mina (OS 11) yielded primarily Islamic/classical and Iron Age levels, Woolley moved his operations upriver to the inland Amuq Valley and received a permit to excavate at Tell Atchana (AS 136) from the French occupation authorities. Strategically located where the Orontes River turns abruptly west from its south–north flow, the site was one of those surveyed by Robert J. Braidwood and his Chicago team. They, however, chose the larger site, Tell Ta‘yināt (AS 126), located in proximity to Tell Atchana, as the possible candidate of a centralized capital city. Two royal archives identified the site as Alalakh, capital of the Mukish province. During the Middle Bronze Age, this Amorite kingdom was vassal to Yamhad (Aleppo) in the early second millennium B.C. It subsequently formed part of the Hurro-Mitanni realm. Eventually drawn into the Hittite Empire, the site was finally destroyed around 1200 B.C. Synchronisms with the kings of Yamhad, Mari, Babylon, Hatti, Mitanni, and Egypt have provided materials bearing on relative chronologies (see various versions of dating in Astour 1969, 1972; Albright 1957; Dietrich and Loretz 1981; Goetze 1957a–b, 1959).

In his subsequent summary observations Woolley (1953: 15) articulated the importance of Alalakh as gleaned from the cuneiform tablets he found there:

“It invokes continual reference to the great empires of ancient Sumer, of Babylon, and of Egypt to the Hittite empire centered on Boğazköy in Anatolia and to the less known powers of Hurri and Mitanni; it bears on the development of Cretan art which astonishes us in the palace of Minos at Knossos, it is associated with the Bronze Age culture of Cyprus, bears witness to the eastward expansion of the trade of the Greek islands in the proto-historic age, throws an entirely new light on the economic aspects of the Athenian empire and even, at the last, suggests a Syrian contribution to the Italian Renaissance. This is the outcome of seven seasons of excavation.”

Woolley’s momentous finds of the Middle and Late Bronze Age and his infectious enthusiasm galvanized public attention, and research in the Amuq Valley and Alalakh took on mythic stature in archaeological circles. But curiously, Alalakh has always been localized out of context as if it conceptually floated somewhere between the Amanus Mountains and the Mediterranean coast. Very few can actually place it within the Amuq Valley, that is, as the sovereign capital of multiple sites in the plain of Antioch.

Other research groups in the Amuq Valley included a Princeton University project, which excavated Roman Antioch and its hinterlands during the 1920s (Elderkin 1934; Stillwell 1938; F. Waagé 1948; D. Waagé 1952). The multi-national Princeton project encompassed the Hellenistic port city, Seleuceia Pieria (OS 55), on the Mediterranean coast near the mouth of the Orontes River. With impending hostilities in Europe, archaeological research in the Amuq and its hinterlands experienced a lull in activity. First of all, substantial changes had been introduced with the resumption of strict Turkish antiquities laws. After World War II only the British teams returned to resume work at Tell Atchana (AS 136), while most of the other excavation teams culminated their research.

Another contributing factor, which accounts for diminished archaeological focus in the Amuq between 1949 and 1995, was a change of emphasis in archaeological research designs. Braidwood and his associates went on to investigate the origins of plant and animal domestication in the hilly flanks of the Taurus and Zagros Mountains of Iran, Iraq, and eastern Turkey (L. Braidwood et al. 1983). In terms of Braidwood’s substantive approach, methodological concerns, and theoretical perspective, the immediate impact of this body of research focused a new generation of archaeologists on determining the emergence of cultural complexity in the Near East. But this did not spill over into the

4. One informant who was fishing in the Mediterranean while we were surveying in 1995 informed me that he had worked for Mr.

Woolley at Atchana when he was sixteen years old and knew where Sabuniye could be located.



Amuq area because during the 1960s through 1980s foreign teams of archaeologists who wished to excavate were encouraged to participate in dam salvage projects in Turkey, often a conditional prerequisite in obtaining excavation permits for other areas. In particular the upper Euphrates and Tigris River dam zones in eastern Turkey, the so-called GAP project (*Güneydoğu Anadolu Projesi*, Southeastern Anatolia Project), took priority. At the same time new permit requirements demanded enhanced conservation and preservation of excavated finds, and the construction of depots and dig houses, which increased the capital expenditures for all excavation teams. In light of shrinking funding streams in the United States, coupled with the related increasing emphasis on short-term testing of anthropological concepts, archaeologists were forced to turn their attention to other countries within southwestern Asia, especially where decades-long excavation commitments were not required.

Other research developments in the Amuq Valley, albeit on a much smaller scale, filled the void left when foreign teams departed. With the initiation of archaeological research at Turkish universities, several focused projects took off, supported by the newly-created Turkish Historical Society (*Türk Tarih Kurumu*). One of these surveys was headed by Remzi Oğuz Arık (1944), who went to the newly-reinstated state of Hatay in 1942, revisited the Amuq sites, and added three sites over the Amanus Mountains on the Mediterranean coast. These were Karağaç Höyük, Karahöyük (also visited by Seton-Williams in 1951), and Kinet Höyük. Multi-period Kinet Höyük is currently being excavated by Bilkent University in Ankara (M.-H. Gates 1993, 2000, 2001; S. Redford 2001; S. Redford et al. 2001), opening up new directions for researching connectivity and chronological fine-tuning between the coast and inland Amuq sites.

Elsewhere in Hatay during 1955 and from 1958 to 1963, Uluğ Bahadır Alkım of Istanbul University (1959a–b, 1974; Alkım and Alkım 1966) surveyed the upper Kara Su Valley and the Amanus Mountain passes, revisited some of the Amuq sites, and added sixty-three more sites to the immediate north in the region near the city of İslahiye. Alkım also briefly retested the stratigraphy of Tell Atchana (Alalakh; AS 136), having participated in the excavation as a young scholar during Woolley's expedition. He subsequently excavated the sites of Gedikli and Tilmen Höyük (Alkım 1969) and investigated the mostly Neo-Hittite sculptural workshop, mound, and nearby rock quarry, Yesemek (Alkım 1974), located near İslahiye immediately to the north of Hatay. Although the ancient designation of Tilmen Höyük is as yet unknown, an inscription on a clay bulla tentatively suggests that the site was in communication with Ebla (Alkım 1969: fig. 139). In addition, Tilmen Höyük, with its sculptural lions eternally guarding its monumental gates and an unusually early Middle Bronze Age *bīt hilāni*-palace complex (Duru 2003), points to its being an important nexus of political power. The recent reactivation of this neighboring regional capital with its interrelated cultural attributes, ideological parallels, and probable alliances with the Middle and Late Bronze Age Amuq capital, Alalakh, is welcome news indeed. In addition to the sites in the periphery of the Amuq located in Turkey, a number of Amuq Valley sites are now located across the modern political border in Syria. Tell Jindaris (AS 58) is being excavated by D. Sürenhagen from Constanza University in Germany, while Tell 'Ain Dara (AS 62), an important Neo-Hittite Iron Age site, has also been investigated in recent years (Stone and Zimansky 1999; Zimansky 2002).

Clearly a tremendous amount of work was accomplished on mounded sites in this region during the earlier part of the twentieth century. Afterwards a marked concentration on investigations of caves and open shelters was undertaken in order to expand information about Paleolithic occupation. Muzaffer Şenyürek and Enver Bostancı (Bostancı 1971/73) excavated two Paleolithic sites (Mağaracık and Altınözü) near the Orontes Delta on the Mediterranean coastal strip. More recently, new theoretical developments regarding migrations of early humans from Africa and DNA studies have focused attention on this important corridor connecting Africa to Eurasia. Several new projects have targeted the Paleolithic industries; most notable is the Üçağızlı Cave site, which provided important dating information and faunal assemblages (Minzoni-Déroche 1992; Kuhn et al. 1999, 2001).

With the exception of Paleolithic research and museum salvage operations, archaeological research in the Amuq Valley remained minimal after 1949 until the Oriental Institute returned in 1995 (fig. 1.11a).

## THE AMUQ VALLEY REGIONAL PROJECTS 1995–2002

The Oriental Institute teams resumed investigations in the Amuq Valley after a hiatus of over half a century.<sup>5</sup> While Wilkinson oversaw the survey operations, I focused on the Amuq collections in the Antakya and Oriental Institute Museums, site-specific survey, excavation goals, and potential mining sites. The timely confluence of a number of

5. Brief summaries covering the survey and other aspects of the Amuq Valley Regional Projects can be found in Wilkinson (1997, 1999, 2000, 2002), Yener (1999, 2000a, 2001a–b,

2002a), Yener and Wilkinson (1996b–c, 1997a–b, 1998, 1999), and online on the Oriental Institute Web site ([oi.uchicago.edu/OI/PROJ/AMU/Amuq.html](http://oi.uchicago.edu/OI/PROJ/AMU/Amuq.html)).

research agendas radically altered the scope of the renewed project. First of all, a general picture of substantial agricultural potential, environmental diversity, interregional trade or interaction, and technological knowledge emerged as the optimum basis for investigating the broader Amuq Valley and its sites. Thus from an initially modest aim of excavating one site (initially Tell Kurdu, AS 94) within a comprehensive survey, a vision of a regional investigation took hold. Along with these cogent reasons, encouragement came from a number of other sources as well.

Second, and of critical importance in steering the project to a broader spectrum, unprecedented permission was forthcoming from the Directorate of Monuments and Museums in Ankara to examine a whole region, that is, the state of Hatay, and to excavate multiple sites, irrespective of the fact that threatening dams or salvage projects were not on the immediate horizon. Certainly the interim years had been unkind to the Amuq Valley mounds after excavation stopped and the last Tell Atchana teams from the United Kingdom departed in 1949. Expanding urbanization, increased cotton farming, irrigation, and bulldozing activities had consistently encroached upon and destroyed many of the archaeological sites.<sup>6</sup> The acting director of Monuments and Museums in Ankara, K. Yurttagül, was keen to prioritize research in his hometown, Antakya, which had been in abeyance for sixty years. Accordingly, it was the hearty encouragement of the Ministry of Culture that galvanized the Chicago teams to renew investigations in this rapidly changing landscape.

Third, part of the decision to reactivate the Amuq project was, frankly, my interest in understanding the connections between the industrial zones and mines in the Taurus Mountains and the production and exchange of metal in urban locations. During the 1980s the discovery of an Early Bronze Age tin mine at Kestel and the miner's village, Göltepe, in the central Taurus Mountains had shed light on the appearance of very early tin bronzes (Amuq Phase G) previously found at Tell al-Judaidah (AS 176) and opened up fruitful new directions for research. The time was ripe to evaluate the strategies of organizing a metals industry from the perspective of the marketplace and consumer as well (see Yener et al. 1996). Indeed, instrumental analyses of ore/slag samples from the Taurus Range mines to the north and excavated metal artifacts from Tell Ta'yinat (AS 126), Tell al-Judaidah, and Chatal Höyük (AS 167) had already implied exchange links between these regions (Yener et al. 1991; Sayre et al. 1992, 2001). Specifically, lead isotope analysis programs (fig. 1.2) indicated a source of metal for technologically precocious arsenic and tin bronzes from Tell al-Judaidah and Early Iron Age silver artifacts from Tell Ta'yinat. Adding to this evidence, recently published data from an Amuq Phase G crucible from Tell al-Judaidah<sup>7</sup> dating to the late fourth/early third millennium B.C. vividly supported the validity of precocious alloying with tin in the Amuq region and its implication for its exchange from the Taurus mines.

Yet an even more substantive link with local mining regions such as the Amanus Range can be inferred as well. The proximity of the copper, arsenic, iron, and gold-bearing veins in the Amanus Mountains as well as the position of the Amuq astride routes to the more distant deposits of the Taurus Mountains appeared from an early date to have made an important contribution to the regional economy, especially in the prehistoric periods. This pattern is a resilient one since it appears that at least one other extraction/production cycle occurred later on. For instance, preliminary metallographic results from Amuq metal artifacts (Yener in press) are highly suggestive of the rapid technological shift from the use of bronze to iron during the collapse of palace economies at the middle of the second millennium B.C. (Adams 2000; Liverani 1987). For some time archaeometallurgists predicted that bronzes worked like iron should exist somewhere in the archaeological record. Indeed an Early Iron Age bronze blade from Chatal Höyük (AS 167) furnishes evidence of practices resembling the crafting of "Damascus" steel later on, practices which include multiple folding and annealing of separate slabs of bronze. Accordingly, the determination of specialized metal production in the Amuq sites and the role of metal technologies and of exchange of prestige goods in their economies steered further investigation in the Amuq Valley. Although Tell al-Judaidah (AS 176) should have been the ideal choice given the early tin bronzes, Amuq Phase G and earlier levels were buried under meters of overlay, and the earlier Chalcolithic Tell Kurdu (AS 94) was selected for the previously known accessibility of its Amuq Phase E levels.<sup>8</sup>

This research design coincided with the vision of William M. Sumner, Director of the Oriental Institute between 1992 and 1998. Among other things he was interested in resuming archaeological projects in Turkey, dormant for a decade since the end of the Kurban Höyük excavations in the Urfa/Karababa Dam area of the Euphrates. The challenge he presented to me was to organize an Oriental Institute expedition in Turkey to investigate a major arena of archaeo-

6. Yener and Wilkinson 1996a–c, 1997a–b, 1998; Tanındı and Aksan 2002.

7. Using Secondary Ion Mass Spectrometry (Adriaens et al. 2000) the analysis demonstrated that bronze prills (metal globules) entrapped in slag contained up to 37% tin content.

8. Unfortunately the Amuq Phase E levels were mostly bulldozed in the years subsequent to the 1930s excavations. The loss of this information became apparent after we started excavations in 1996.

logical importance; the Amuq Valley was one of the alternatives he presented.<sup>9</sup> Having come to the end of the excavations at Kestel and Göltepe in the Taurus, the next phase of investigation<sup>10</sup> would have been the option of seeking north or south of the Taurus Mountains for the second tier of production, the specialized workshops at an urban center. Given the direction of the underlying associations of the Taurus mines with the metal artifacts from the Amuq excavations, the choice was obvious. These sites provided a rare opportunity to understand broader spatial organization within the sites, and also to investigate the interactions between regional capitals and their subsidiary settlements with more distant regions. Robert J. Braidwood, who was in the Director's office when the invitation was formally accepted, expressed great pleasure that the Amuq was finally receiving the attention it deserved. Indeed, even after close to a decade of work, the full potential of the Amuq remains unexplored. For example, it is important to note here that the Ottoman and Turkish Republican eras (1516–today) are two major periods represented by 500 years of material culture and historical processes that are cursorily included in this volume, despite my own Turkish background. Ottoman archaeology is well developed in terms of art and architectural studies, but settlement archaeology is still in its infancy for this period. The development of archaeological fieldwork in the later Islamic periods is a fast growing specialization and will eventually provide specialist consideration of this material housed in Antakya. The presentations in the site gazetteer (*Appendix A: Site Gazetteer*) make clear that several other periods in addition to the Ottoman need specialist studies to research the full implications of the survey collections.

## THE RESEARCH DESIGN

Unlike many research projects conducted in the Middle East, the overall approach of the Amuq Valley Regional Projects has been to undertake three tiers of investigation that are vertically linked to each other. Accordingly, the (1) regional, (2) sites, and (3) micro-artifactual scales inform multi-level interpretations based on integrated analyses, data-sharing, and use of advanced analytical methods. Efforts have been made to standardize terminology, recording techniques, and sharing of databases between the project's survey and excavation teams. Site survey was immediately launched and three sites were selected for excavation programs: Tell Kurdu (AS 94) in 1996, Tell Atchana (AS 136) in 2003, and Tell Ta'yinat (AS 126) in 2004. Much emphasis was placed on the regional scale in the initial years with intensive exploration of settlement and the palaeoenvironment. The successful outcome of this geoarchaeological research owes much to the director of survey activities, Tony J. Wilkinson, who accepted my invitation to join the survey team in 1995. These activities were nested within the broader regional surveys, which included the objective of recreating the dating criteria, that is, the sherd collections as a database for future projects aimed at particular periods.

Alongside the pottery collected from the surveyed sites, it was generally known that important collections were displayed and stored at the Hatay Archaeological Museum, although very little information was available about the magnitude of the stored finds or how they had been partitioned between the institutions that had conducted excavations in the state of Hatay in the past. Several new initiatives also targeted the cataloging and photographing of the collections in the museum. With a view to creating an accessible research environment, an archaeological compound was established both in the city of Antakya and in the Amuq Valley. Various collections from previously excavated Amuq and Orontes Delta sites in the Hatay Archaeological Museum were entered into a database and will be made available online.

As part of the broader overarching research design a number of excavations were planned at specific sites. While Tell Kurdu (AS 94), Tell Atchana (AS 136), and Tell Ta'yinat (AS 126) were identified for immediate excavation, three others, Tell al-Judaidah (AS 176), Chatal Höyük (AS 167), and Tell 'Imar al-Jadid al-Sharqi (AS 101), were designated as important sites for future research. To facilitate the housing of expedition teams and the curation of large quantities of excavation materials, which would overwhelm the storage capacity of the local museum, construction plans for several new buildings were begun in 2000. As part of the conditions for an excavation permit in Turkey, the Oriental Institute executed plans to finance a dig house and depot for the upcoming excavations at Tell Atchana. As of 2003, a multi-unit excavation compound has been constructed in the Tayfur Sökmen village, just east of Tell Ta'yinat and Tell Atchana. Designated as the Amuq headquarters for years to come, the buildings contain dormitories, laboratories, and storerooms that will be shared among the excavation teams of Tell Atchana, Tell Ta'yinat, and Tell Kurdu, as well as the survey teams.

9. Resuming the excavations of Alişar and continuing the archaeometallurgical investigations in the Taurus were the other two choices. Alişar was subsequently excavated by Ronald L. Gorny (1995).

10. See metallurgical discussions in Yener 1995, 1998, 2002a.

## REGIONAL INVESTIGATIONS

Taking Robert J. Braidwood's survey between 1932 and 1938 as a baseline, Wilkinson and his team revisited the sites in the basin between 1995 and 2002. With recent developments in ge archaeology, the Amuq was poised to provide information of mid-Holocene landscape conditions. Previously unexplored regions were also added to the survey schedule and an amplified environmental program was put into motion. Braidwood's survey had approached the city limits of Antakya and had been limited to the mounded sites of the flat valley bottom. The site of Antioch and the stretch between the city and the Mediterranean were as yet unexplored. Much of the wealth of this Orontes corridor is rich agricultural land, which is heavily terraced with fields. Its importance to the Amuq Valley Regional Projects is obvious by the connectivity of river trade between the Amuq Valley and the Mediterranean Sea. The recently drained bed of Lake Antioch, which was inaccessible to the original Braidwood survey, provided new information on lake, marshland, and wetland development, as well as on pre-lake settlement sites. Finally, since the original Oriental Institute projects concentrated on the Amuq mounds, the uplands had also been left to future projects.

Methodologically, the discovery and recording of sites on survey was enhanced by the use of Geographical Positioning Systems (GPS), CORONA photographs, Geographical Information Systems (GIS)-based modeling, satellite imagery, and a whole battery of advanced instrumental methods that will be linked to a detailed database by means of the XSTAR system on the Web. To supplement these studies, Wilkinson oversaw pollen coring of the Tell Atchana drainage canals and Lakes Antioch and Gölbaşı (Wilkinson 2000), the recording of profiles of damaged third-millennium B.C. sites (Harrison 2000b), brief explorations of the foothills of Kurt Dağ and Amanus Mountains, and fine-tuning the radiocarbon sequences obtained from exposed strata. Yükmén (2000) resurveyed Kızılkaya Tepesi (AS 207) and recorded 144 dolmens, reflecting an important new unexplored phenomenon in this region. Jesse J. Casana joined the survey teams in 2000 and was invited to lead the survey of Tell Atchana (AS 136). He subsequently investigated the changing social landscape of the Amuq Valley (Casana 2003b).

Envisioning the need to study the interconnections between the Amuq Valley and the Mediterranean Sea, the Orontes Delta survey was launched in 1999 by the Mustafa Kemal University in Antakya under the leadership of Hatice Pamir and with the collaboration of Wilkinson and myself. This new initiative aimed at surveying the Orontes River from the eastern Mediterranean coast inland through Antakya (ancient Antioch) to the Amuq. Unexplored by the Braidwood survey, the area connects the Amuq Valley with links to inland Anatolia, the Levantine coast, and northern Syro-Mesopotamia with the Aegean. To date, fifty-five Orontes Survey (OS) sites have been identified dating from the Paleolithic through the Islamic periods (see *Chapter Three: The Orontes Delta Survey*). The port site of al-Mina (OS 11; now Liman Mahallesi), located on the northern bank of the Orontes River, today lies 1.5 km from the Mediterranean Sea. This important site was intensively surveyed and the elusive Sabuniye (OS 12), which was closely associated with it (Woolley 1938a), was also investigated.

Recognizing the critical importance of a reconstruction of the Orontes Delta shoreline early on, I invited İlhan Kayan of Dokuz Eylül University in Izmir, who mobilized a geomorphological team. Lead by Öner and Uncu, twelve cores in the vicinity of al-Mina (OS 11) and Sabuniye (OS 12) were taken during 2000 and 2001 to document shoreline changes and alluvial deposition. The data generated through these cores, although still preliminary, provide a better understanding of the traffic of commodities eastward through the Orontes River route. These data will certainly amplify the nature of the appearance of Aegean materials concentrated on the larger sites in the Amuq such as Tell Atchana (Alalakh; AS 136), Chatal Höyük (AS 167), Tell Ta'yinat (AS 126), and Tell al-Judaidah (AS 176).

Research teams also prioritized hitherto less well-known economic resource distributions, such as soft stone, basalt, ore potentials, ancient irrigation canals, road systems, and patterns of cultivation. These will provide a framework for the overall study of settlement, the growth and decline of regional power, and economic relations through time. Another aim was to include the Amanus Range mines in a broader archaeometallurgy survey that had been ongoing since the 1980s.<sup>11</sup> In 1987, prior to the formulation of the Amuq project, myself, Hadi Özbal, and teams from the Turkish Geological Survey (MTA) had conducted several reconnaissance forays into the archaeologically unexplored Kisecik mines and other mining regions of the Amanus Mountain Range (for gold mineralization, see Çağatay et al. 1991). The results of these investigations will constitute a separate publication of the Amuq series. After 1995, yearly visits were made, but no formal survey was undertaken since the mountains were under restriction by the military until 2001.

11. The success of mountain surveys is best exemplified by previous work in the difficult alpine terrain of the Taurus Mountains where every summit surveyed during archaeometallurgical research in the 1980s revealed a settlement or a burial site. Even

aceramic Neolithic and Neolithic sites appeared at levels (at 1,600 m altitude) and locations not previously suspected (Yener 1995; Yener et al. 1989b).

During these restricted years, accessible sites were visited and unexplored quarries, seasonal settlements, pastures, timber, and mining sites (fig. 1.3) became part of broader investigation of resource management and raw material potential. During these investigations an inscription was found in the passes (pl. 6C).

Another aspect of the regional survey was to refine the chronology of particular phases as published by Braidwood and Braidwood (1960). These operations had been part of a reinvestigation of damaged sites undertaken within the scope of the survey permit (Wilkinson 2000; Harrison 2000b). A simple but elegant research design suggested by Wilkinson was put into motion, and exposed sections of several bulldozed sites (Tell Ta'yinat [AS 126], Tell Dhahab [AS 177], Tutlu Höyük [AS 105], Tell al-Judaidah [AS 176]) and the drainage canals coursing through the valley resolved the dilemma of major chronological gaps in the earlier Amuq sequence. Braidwood's chronology with radiocarbon dates and ceramics was fine-tuned, sections from several mounded sites and drainage canals were redrawn and published (see Yener et al. 2000b: table 2).

While fieldwork was progressing, ongoing programs of instrumental analysis at Argonne National Laboratory provided relevant results for the survey. A source of brilliant non-destructive x-rays, the Advanced Photon Source (APS) focused initially on environmental information and was monitored by Wilkinson. Team members Elizabeth S. Friedman and Ercan Alp obtained trace element measurements from ancient lake sediment cores taken through Lake Gölbaşı located to the north of the Lake of Antioch basin. The results suggested periods of lake drying, erosion, and unusual depositions of copper, perhaps due to mining activities (Wilkinson et al. 2001; Friedman et al. 1999).

### SITE-SPECIFIC INVESTIGATIONS

With a view to amplifying the site-specific tier of investigation, attention turned to the excavation of one of the major previously excavated Oriental Institute sites in the valley, Tell Kurdu (AS 94). Considered to be of massive size for the Amuq (at least 15 ha), Tell Kurdu is a bilobate mound situated in the middle of the plain. In 1938, Tell Kurdu yielded important information about the earlier prehistoric phases (Amuq Phases C–E; Braidwood and Braidwood 1960) and promised to provide the opportunity to investigate broad horizontal exposures at one of the larger Halaf/Ubaid (ca. 5700–4800 B.C.) centers outside of the core Mesopotamian area. Archaeological field goals in the Amuq had changed considerably since the 1930s with better articulation of survey, excavation, and environmental records. The selection of Tell Kurdu as the first of several sites to be excavated reflected a desire to take account of both long-term change and finer level spatial and chronological resolution. A brief exploratory season in 1996 was followed by excavations in 1998 (fig. 1.11b) and 1999 (directed by myself with Edens as field director; Yener 2000a–b), 2000 (under the direction of Rana Özbal), and 2001 (under the direction of Fokke Gerritsen; Özbal et al. 2003, 2004).

The Halaf period at Tell Kurdu (AS 94; Amuq Phase C) represents the most impressive and so far earliest coherent remains to date. An extensive neighborhood consisting of four different types of architectural units was exposed in the 2001 season (Özbal et al. 2004). Some niched and buttressed buildings were carefully plastered and seem to have had a special function, perhaps for ritual purposes. Other units were mostly domestic and were laid out along courtyards and streets. The ceramic corpus at Tell Kurdu contained Halaf-related elements including carinated bowls with bucrania and bowl fragments in a Halaf style. Excellent parallels can also be found at Domuztepe, the unusually large Halaf site in Kahramanmaraş north of the Amuq along the Rift Valley (Campbell et al. 1999). Telltale evidence of connectivity in the Halaf period is also forthcoming in the ceramic finds from Kinet Höyük on the coast near Iskenderun, although these levels are still not widely exposed (M.-H. Gates 1993, 1998). On the basis of ceramics and seals, an important prehistoric site (AS 246 [Çakallı Karakol]) was recently discovered on the Belen Pass leading from the Amuq Valley to Iskenderun. This westward trajectory of Halaf-related assemblages gives some insight into the path of connectivity for this attractive ceramic style. Painted and well-made ceramics of this category are also found in Cilicia (Mellink 1962) with more nebulous links (Campbell 1998) to the broader category of Late Neolithic painted ceramics that characterize Anatolia during these millennia.

Tell Kurdu (AS 94) also yielded important information about the subsequent Amuq Phases D/E relating to the Ubaid period. These polities were characterized by increased exchange of goods and services and the use of administrative devices to document transactions, thereby attesting to increased redistribution and central collection of goods. During this period the archaeological record indicates a spread of similar material culture from southern Mesopotamia across northern Iraq and Syria, and into eastern Anatolia (Yoffee 1993). A number of views regarding this spread have been put forth including colonization/migration (Hole 1994), trade (Oates 1993), as well as emulation of ideologies (G. Stein 1994), invasion (Mallowan and Rose 1935), technological diffusion (Nissen 1988), and acculturation (Breniquet 1996). While local expressions of the Chalcolithic are rather undervalued and need to be given more atten-

tion, this very large, sixth/fifth-millennium B.C. site provides the opportunity to test these and other explanatory models.

The Ubaid period was mostly exposed during the 1996–1999 seasons at Tell Kurdu (AS 94) and indicated that the settlement shrank in size after the Halaf period. Nevertheless, a large multi-roomed building with long, narrow grill-like storage rooms made of pisé slabs was found set on a terrace on the summit (fig. 1.4). Undulating reed bedding had been laid horizontally like beams and partly covered the base of the storage rooms. Wattle and daub as well as reed huts are still constructed in the Amuq Valley and are often used for storage of grain and animal feed. This architectural idiom was more ubiquitous when the lake was still extant and the reed building material more widespread (fig. 1.6a–b). Grillroom storage complexes have had long continuity from the aceramic Neolithic such as at Çayönü and continued in use into the Bronze Age as exemplified by the long narrow gallery units found adjacent to the temple buildings at Tell Atchana (AS 136; *Chapter Four: Alalakh Spatial Organization*). Nearby, pisé units constructed like pigeon-holes contained a dense spill of charred cereals associated with several bins. A large tholos building of pisé (roughly 7 m diam.) with triangular internal buttresses surprisingly dated to Amuq Phase E (Ubaid period; fig. 1.5), although tholoi are normally associated with the Halaf period. Kilns for firing pottery formed three sides around a central open space, and numerous wasters and frequent ceramic slag suggested that the production of pottery was beyond a cottage industry and that it was a specialized craft product. Dark-faced burnished ware and Ubaid-like monochrome painted wares found within and adjacent to the kilns can be paralleled at Hammam al-Turkman IVA and Ras Shamra IIIB south on the Mediterranean coast.<sup>12</sup>

Quantities of small finds offered a clear connection between the storage facilities and bureaucratic accounting. Clay tags, tokens and baling tags, personal ornaments, stamp seals, and geometric devices were the first foreshadowing of later period bulk storage of staple products and increased wealth in the form of high-status artifacts and their distribution. The excavation recovered only very small fragments of copper and a complete flat ax consistent with Ubaid typology. Unfortunately for purposes of metallurgical investigations, it was a surface find and perhaps from the now mostly missing Amuq Phase E period leveled by bulldozers. Interestingly, for the coming of the use of iron in much later millennia, hematite and goethite (iron ores) were used to make polished stone mace-heads and hammerstones. Nevertheless, a diversity of minerals and ores, assumed to be from the Amanus Mountains, were exploited for making personal ornaments, figurines, and beads. Multi-colored, attractive, but soft, flat axes may have functioned as a medium of exchange prior to the widespread use of metal.

Other aspects of the site excavation program included a brief salvage operation at Tell al-Judaidah (AS 176), one of the damaged sites previously excavated by the Oriental Institute (Friedman and Reichel 1996; Edens 2000). Topographical maps were also rendered for potential excavation sites, one of which was Tell ʿImar al-Jadid al-Sharqi (AS 101), a major, though damaged, Late Chalcolithic site with Uruk-related materials, and Tell Dhahab (AS 177) (also damaged), which had yielded some of the earliest levels from previous excavations (Yener et al. 2000b).

At the sixth year of investigation, the increasingly successful surveys and surprising finds from the excavation of Chalcolithic Tell Kurdu (AS 94) prompted us to explore questions that would aid us in conceptualizing the significance of these and other sites dating to later periods within the broader Amuq Valley. Plans were put in place for the preparation of a second excavation site at Tell Atchana (AS 136), ancient Alalakh. Anticipating the need for surface survey, map making, and integrating past excavation finds, the Oriental Institute returned to Alalakh in 2000. A three-year investigation was undertaken in preparation for the resumption of excavations in 2003.<sup>13</sup> Ancient Alalakh was uniquely poised to answer a number of compelling issues that demanded more complex forms of data than were available from the first series of excavations there. For example, a substantial body of regional data was now available and had bearing on the relationship of cultures spread out in the plain. Similarly, the decades-long interpretative progress made on the important archives of Alalakh added to our ability to make explicit and informed decisions about the regional center (Smith 1939, 1949; Wiseman 1953, 1954, 1958, 1959a–b, 1967; Wiseman and Hess 1994; Von Dassow 1997; Zeeb 2001; Hess 1988, 1992). Taken from a more materialist perspective, the site certainly had control of trade routes and perhaps large-scale resource extraction. But aside from these economic factors, the Alalakh archives had additionally provided insight about the nature of bureaucracies, processes of legitimization, and the management of labor and rationing. Complementary data about these insights were also forthcoming through its material culture. The Woolley excavations had revealed monumental public art, architecture, and its ideological aspects, as well as empirical

12. Recently a thermoluminescence date (4985–4787 B.C.) was obtained for the kilns (Arslanoğlu 2001).

13. Short summaries and radiocarbon dates are forthcoming from section cleaning operations. See Yener 2001a–b, 2002b; Yener et al. 2002.

data about the production of prestige goods. While the “imports” at Alalakh have given Alalakh its caché and have constituted the weight of attention paid to the site in the past, the nature of “local” expressions have been much undervalued. We are hard-put to define what is local in burial customs, and expressions of wealth and prestige, as opposed to those items defined as “imported.”

Foremost, the metallurgical finds were intensely attractive. Special categories of high-value metal artifacts were part of the archaeological record and provided inferential evidence to document hierarchy and prestige. Furthermore, the workshops, some of which were loci for the production of metals, seemed to be situated within the palace/temple complexes as well. Here was the opportunity to research the nature and extent of a metals industry within the capital city itself. Equally intriguing was the opportunity to compare metal finds from contemporary Middle and Late Bronze Age Amuq sites housed in the Oriental Institute Museum. These collections had bearing on the nature of Alalakh’s administrative needs and thus they could be seen not only in terms of raw materials and subsistence goods but also in Alalakh’s need to exercise sociopolitical control.

Doubtless both the textual and archaeological record made Tell Atchana (AS 136) the ideal test case for the examination of the social framework of Middle and Late Bronze Age communities. Therefore, it would be possible to examine critically many aspects of theories such as the Patrimonial Household Model as discussed by David Schloen (2001) and the unexcavated domestic quarters of the site. Also appealing were opportunities presented to investigate the latest levels of the site (Levels III–0) and the information they brought to bear on the reasons behind the social disruptions at the end of the Late Bronze Age. Finally, as the capital of the kingdom of Mukish, Alalakh spanned the second millennium B.C., a pivotal period of global sociopolitical transformation, demographic pressures, and a widening of communication with the rest of southwestern Asia.

The word “chronologies” and the nature of imports used for dating stemming from sites in Hittite Anatolia, the Aegean, Egypt, and Cyprus also provided encouragement for re-excavating Alalakh. Recent debates about dynastic synchronisms, Egyptian chronological assessments, new radiocarbon data, and interregional ceramic connections were strongly suggestive that fine-tuning the Alalakh sequences had to be given high priority. In particular, the site should eventually provide radiocarbon data and dendrochronological calibration dates to refine the much-disputed stratigraphic sequences. Excavation practices of the twentieth century often relied on the relative dating of strata based on stylistic parallels of recognizable artifacts, most often ceramics. The limited utility of ceramics (usually imports) to date the floors and strata has often been pointed out as being counterintuitive, but the attractiveness of this continues even today. Local cultural preferences and ceramic practices are, at best, opaque at Alalakh since a great deal of attention has previously been afforded to imported and decorated ceramics at the site.<sup>14</sup> The work undertaken by the Amuq Valley Regional Projects, including the re-excavation of Tell Atchana (AS 136; Oriental Institute Expedition to Alalakh), strongly discourages this practice by establishing an independent stratigraphy before linking with earlier frameworks. In turn, the “local” ceramic sequence is defined by statistical relationships based on the stratigraphy. Given the importance of these issues and the establishment of a reliable second-millennium chronology for the overall history of the region, a re-examination of Tell Alalakh and its relations with its neighbors was urgently needed.

The third site, Tell Ta‘yinat (AS 126), perhaps Iron Age Wadasatini (Kunulua) and the successor of Alalakh as regional capital (see discussion of Wadasatini Unqi in *Chapter Seven: The Ta‘yinat Survey, 1999–2002*; Harrison 2001a–b) was also selected for re-excavation. Tell Ta‘yinat was one of the major sites yielding red-black burnished wares during the third millennium B.C. After several survey seasons working in tandem with the Oriental Institute survey teams, Timothy P. Harrison was urged to select a site for future excavation. Initially Tutlu Höyük (AS 105) was an attractive candidate since it had yielded red-black burnished ware wasters, suggesting a production site and as yet elusive kilns for this attractive pottery. Having reflected on the exigencies of permits, I advised Harrison to select a larger site, Tell Ta‘yinat, despite the attractiveness of excavating a production site. Given the Ministry of Culture’s permit requirements of long-term commitment at a single location, the site of Tell Ta‘yinat was thus made ready for full-scale survey and excavation. Tell Ta‘yinat has been nicknamed the “sister site” of Alalakh by the teams and is located a mere 700 m from Tell Atchana (AS 136), flourishing in the Iron Age kingdom of Unqi, as the Amuq was called by the Assyrians at that time. Under the direction of Harrison, teams undertook intensive surface survey and applied remote sensing techniques both on the mound and in the areas surrounding the site. With the added application of magnetom-

14. This was best exemplified by the Alalakh Area 1 excavations in the summer of 2003, where great quantities of diagnostic local

ceramics were found discarded in what must have been Woolley’s sherd yard in back of the dig house on site.

etry and CORONA images the teams revealed a large lower town extending down to the level of the plain. Excavations began in 2004.

Frankly speaking, one of the major weaknesses apparent in the excavation program to date is the exclusive selection of large sites for excavation, although small sites were not undervalued in other programs. This decision to excavate the centrally placed capitals is partly due to the requirements and conditions of obtaining permits from the Cultural and Tourism Ministry in Ankara. Unfortunately this skews archaeological understanding on a regional scale, especially since smaller sites are critical in revealing the nature of institutional and intra-regional interaction within the Amuq. Furthermore, they would have provided important, often less-researched information on specialized production zones and special-function sites such as pottery kilns and industrial sites. Certainly recurrent processes and major trends may be implied by excavating the large centers, but these conclusions would be necessarily constrained by the lack of marginal and attached satellite sites. The concentration of attention on large urban centers at the start of the program is we hope only temporary. It is hoped that future permits will allow exploration at these smaller sites with short-termed projects that provide more robust understandings of their relationships to the centers.

#### ARTIFACTUAL INVESTIGATIONS

The comprehensive investigation of the material culture of the Amuq has been approached from a number of directions. Coordinated efforts have now been put into motion to bring to final publication the much-delayed later periods of the Oriental Institute excavations. Further, Web-based databases and instrumental analyses of artifactual and non-artifactual materials have been initiated. To date, the architecture (Haines 1971), survey (Braidwood 1937), and early periods (Braidwood and Braidwood 1960) have been published. Some inscriptions and major sculptural pieces from Tell Ta'yinat (AS 126), Chatal Höyük (AS 167), and Tell al-Judaidah (AS 176) have been separately published (Hawkins 2000; Orthmann 1971; Kantor 1956, 1962; Swift 1953; Gelb 1939). Several classes of small finds and ceramics have been the topic of a number of dissertations and master's theses (Stoyke 2001; Swift 1958; Meyer 1992; Pruß 1996), although their typologically generated and tentative conclusions will eventually be modified through contextual fine-tuning of the stratigraphy in future re-excavations. Seals and inscriptions have also been published as separate pieces or included in a number of dissertations (Porter 2001; Frankfort 1939; Kantor 1947; Gevirtz 1967; Brinkman 1977).

Through an unavoidable series of research priority changes, as well as the deaths of the researchers responsible for the initial publication of the Amuq excavation finds, the publication of these collections has been in abeyance for over half a century. When the Amuq field projects were put back into motion in 1995, the Oriental Institute issued a final deadline (1999), after which time the right of first publication was rescinded. As a result, the publication of these important collections from the previously excavated sites have now been integrated into the monograph series and new editorships have been established with time limits. The Amuq Valley Regional Projects are committed to bring to completion the publication of the second- and first-millennium B.C. materials in coordination with the new research activities. To date, an in-house Amuq publications committee has designated Timothy P. Harrison as the editor of the Tell Ta'yinat volume, which will be coordinated with the new excavations planned at the site.

The lack of local chronological benchmarks and publication of all post-2000 B.C. artifacts from the Amuq sites significantly impacted several interpretive aspects of the surveys. None of the post-Amuq Phase J pottery sequences, small finds, or sculptural materials had as yet been fully documented, thus much of the identification of later site materials relied heavily on the results of recent excavations in neighboring regions and Tell Atchana (AS 136). Luckily, the important Amuq collections were housed in the Oriental Institute Museum (Yener 2001a–b), although identifying the artifacts became a challenge. Unexpectedly, the identification handicap became greater when plans for the reinstallation of the Syro-Anatolian Gallery of the East Wing of the Oriental Institute Museum were announced in the late 1990s. To resolve the dilemma several graduate seminars targeting the artifacts of the Amuq later periods gave graduate students, faculty, and museum staff the opportunity to research this long-overlooked material. With the intense teamwork of all concerned, a tremendous amount of research was initiated from 1999 to 2004. Mostly unpublished large-scale monumental sculptural fragments replete with hieroglyphic and cuneiform inscriptions, seals, and other dramatic finds were rediscovered, researched, and made ready for display in a newly modified space in the East Wing of the Oriental Institute Museum. New themes and concepts were introduced for the display cases highlighting the global nature of this intensely diverse cultural region.

Another priority was to locate notebooks, illustrations, sections, architectural plans, and ultimately the finds themselves, especially of the non-Oriental Institute excavations. While the entire corpus of documentation for the Oriental



Institute excavations is archived at the University of Chicago, a large part of the Amuq finds are split between the Oriental Institute and Hatay Archaeological Museums. The same can be said for the Alalakh, Tell es-Sheikh (AS 135), and Tabarat al-Akrad collections, which are partly in Antakya, but the bulk of the pre-World War II Alalakh finds are in the British Museum in London and the Ashmolean Museum in Oxford. Although the Tell Atchana notebooks are still unavailable, a major collection of photographs and negatives are in the University of London (see *Chapter Four: Alalakh Spatial Organization*).

Finally, a recently introduced line of artifactual investigation fits neatly into the metallurgical paradigm. Drawing on ideas developed in Europe in the last two decades, this research focuses on the technological knowledge behind the manufacture of artifacts (see Lemmonier 1993). In this view, technology can no longer be viewed as merely the capability to transform raw materials into finished objects. It has been shown that cultural logic, not just physical constraints, shapes productive pathways. While archaeological applications of this understanding are just beginning to emerge, how artifacts were manufactured, how they circulated, and how they were used, all provide information about the object, how it conveyed status, and the social milieu in which it was located. Empirical evidence for this approach uses recent developments in science applied to archaeology.

Reflective of innovative methods, the finds form part of a number of dissertations and research projects, some of which have relied heavily on instrumental techniques. To mention only a few examples, the Scanning Electron Microscope (SEM), the Inductively Coupled Plasma Mass Spectrometer (ICPMS) with laser ablation at the Department of Geophysical Science, and polarized light microscopy at the Oriental Institute were used at the University of Chicago for metallurgical examinations. Together with Alp and Friedman I oversaw the project of artifactual analysis at the beam lines at the Advanced Photon Source (APS) facility (fig. 1.7a–b). Providing for high-precision compositional identification to parts per billion, the APS has the distinct advantage of not damaging artifacts (see Friedman et al. 1999). In addition, provenience studies of dark-faced burnished ware and painted ceramics and other topics requiring instrumental analyses have been initiated at the University of Missouri Research Reactor (MURR) in Missouri by Diebold, a team member of the Tell Kurdu (AS 94) excavations. Obsidian analysis is now ongoing in Paris at the Centre National de la Recherche Scientifique (CNRS) with Gérard Poupeau and his team (Bressy et al. in prep.).

## OUTREACH PROGRAMS

Perhaps the most profound change that was immediately noticeable in the Amuq Valley over the half-century of archaeological inactivity was the extent of damage to the mounded sites. In my view this was the most disturbing aspect faced by the investigation. With the draining of Lake Antioch and the implementation of vast irrigation systems the new cash crop, cotton, changed the economic viability of farmers in this region. Now mechanized earth-moving equipment, bulldozers, and tractors can more easily be purchased and used in ways that were heretofore not possible. But economic prosperity and progress brought with it a price tag: cultural destruction. Mounds were being dug up, cut into, shaved, and shaped to accommodate the expansion of crop fields. Some mounds had completely disappeared off the face of the earth, while others had been drastically modified. One mound had a slice right down the center to accommodate an irrigation pipe (Mirmiran AS 120), and in another case a bulldozer cut 60 m long in section could be seen.

Unwittingly, mayors had used the mounds as easily accessible earth for constructing medians in new highways, and the dark-faced burnished ware sherds of Tell Dhahab (AS 177) could be seen lining the road from Reyhanlı to the Syrian border. Farmers, whose land deeds included the mounds, had planted a forest of trees on top of mounds for refuge from the heat and relief from the relentlessly flat cropland. While farmsteads on the top of these newly wooded mounds were wonderfully situated in most cases as protection from floods, the roots of the trees and construction of the homes caused irreparable damage to the sites. Factories and mills were constructed on summits to be on high ground to escape high water in this oft-flooded plain (figs. 1.8–9); the most dramatic example is the huge cotton gin structure on top of Tell Ta‘yinat (AS 126), rivaling the size of the Neo-Hittite palace that once stood there. The important cultural heritage site, the ancient city of Antioch itself, has been steadily encroached upon by the modern city of Antakya. Unhappily, a number of new buildings now stand on locations such as the great hippodrome, the site of chariot racing and Olympic Games in classical antiquity.

Faced with minimal resources, no vehicle, less authority, and even less personnel, the Hatay Archaeological Museum was powerless to prevent this cultural destruction. Thus in this rapidly shrinking landscape of disappearing mounds, one more objective needed immediate attention: to halt the destruction by approaching the problem through the participation and help of the Antakya citizens. Well-meaning officials would often ask me, “What is a höyük?” (Turkish for mound, the other terms used are tell and tepe, Arabic and Persian respectively) and would be surprised that the mounds were not just a pile of earth with the occasional pot of gold in it but actually were layered cities in ruin. In an attempt to expand the sense of local

pride in the history and culture of the region, a number of outreach programs were initiated in Antakya that proved to be time-consuming but mutually reinforcing. Yearly, well-attended and well-illustrated lectures were followed by receptions at the Mustafa Kemal University in Antakya. The First International Amuq Symposium took place in 2002 with a multi-national roster of speakers and more are scheduled for the future. With the establishment of a fledgling archaeology department at the new Mustafa Kemal University in Antakya, archaeological activity in the Amuq has been growing; a whole new generation of archaeologists received training at the Oriental Institute-sponsored excavations and surveys.

These outreach activities served to demonstrate the global importance of the cultures represented in the Amuq and sparked a change in the attitude of many. With the help of the Ministry of Culture, the Hatay Archaeological Museum is undergoing reinstallation, and several panels and graphics of Oriental Institute excavations past and present were designed by projects staff (fig. 1.10). With the participation of several Antakya citizens, HADD (Hatay Arkeoloji Dostları Derneği [Hatay Friends of Archaeology Committee]), an organization devoted to preserving the cultural heritage of this region, was founded in 2000. It was formally established with the participation of museum staff, university personnel, local officials, and interested citizens. Lectures, tours to historical and archaeological sites, and other outreach activities were part of its over-reaching mandate. Between 1995 and 2002, some progress was made to slow the destruction of sites when the local magistrates and gendarmes were invited to participate in field investigations and witnessed the devastation directly, and a new law was passed in Ankara prohibiting crop planting on top of mounds. In 2000, National Geographic funded the TAY (Türkiye Arkeolojik Yerleşmeleri [The Archaeological Settlements of Turkey]) survey team, and the Amuq was included in their comprehensive ground-truthing investigations throughout Turkey. These and other damaged sites were posted on their Website and published (Tanındı and Aksan 2002). Local newspapers and television featured interviews and helped enhance awareness of the important cultural heritage of the Amuq.

## TERMINOLOGY AND DEFINITIONS

This book follows the usual practice of referring to geographical locations using modern designations within the state of Hatay, Turkey; place names in antiquity tend to follow a more or less contemporary usage. Thus, the Hittites are located in northern Anatolia; the site of Tell Atchana (AS 136) is located in southern Turkey. Current debate has also queried whether to call the region Near or Mid-East or Middle East as discussed in a recent *New York Times* article. “Ancient Near East” is used here to conform to the usual practice of most “Old World” archaeologists. The use of the quaint term, “Asia Minor,” which is most often used by classicists, is eschewed here for the sake of consistency with the use of the term Anatolia.

Profoundly associated with the mosaic of peoples that have lived in this region throughout the millennia is the terminological problem of what to call this area culturally. It is worth reiterating the obvious point that present-day modern national borders are a twentieth-century construct and can still carry a great deal of emotional intensity. Turkey calls the region Hatay, perhaps a variant of Ḫattina, one of the Iron Age kingdoms in the region. Using the term “Anatolia” or “Syria” only exacerbates the problem by giving unnecessary political weight to the region and making those traditions mutually confrontational in the Amuq. The designations “eastern Mediterranean” or “southwestern Asia” are too vague to make them useful. Referring to the valley as Mukish, Unqi, Antioch, or half a dozen of its other designations known through the ages would lead to confusion. In the end, I decided to use the term “northern Levant/southern Anatolia” in defining it as a cultural zone. That is, the northern Levant here is taken to be from the bend of the eastern Mediterranean littoral through Lebanon. By so doing, we hope to sidestep any modern political baggage or social implications of naming this distinct material culture anything else. Clearly, it is by the nature of its location a frontier zone that connotes a fusion of traditions. It functioned at once as a buffer and a conduit between Anatolia to the north, Cilicia/Çukurova to the west, Assyria/Mesopotamia to the east, and the southern Levant, that is, Canaan/Palestine, and Egypt, also to the south. Indeed, it is a place of international heritage that continually impacted areas grander than its size.

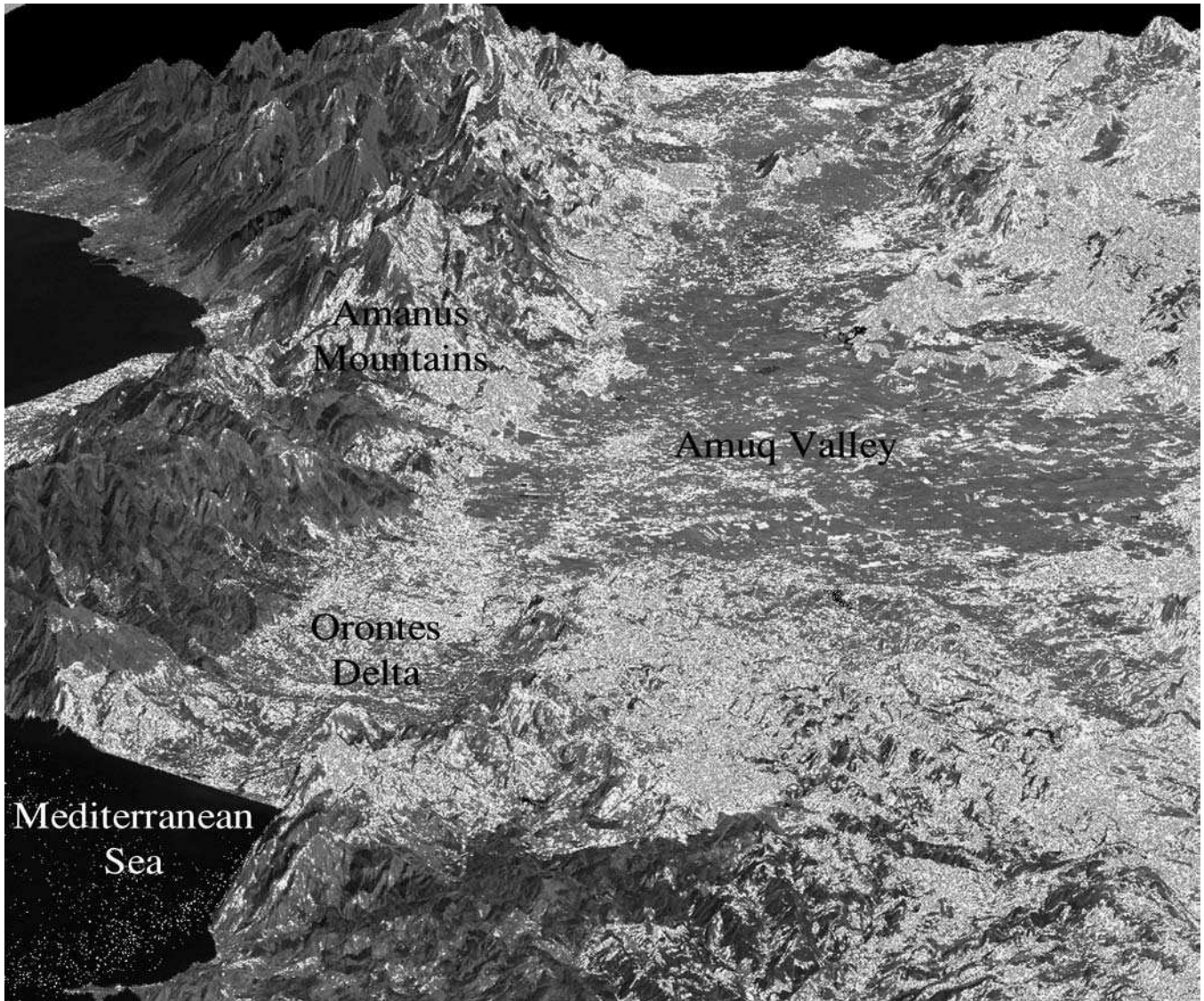


Figure 1.1. CORONA Image of the Amuq Valley and the Orontes Delta. Courtesy of Jesse J. Casana

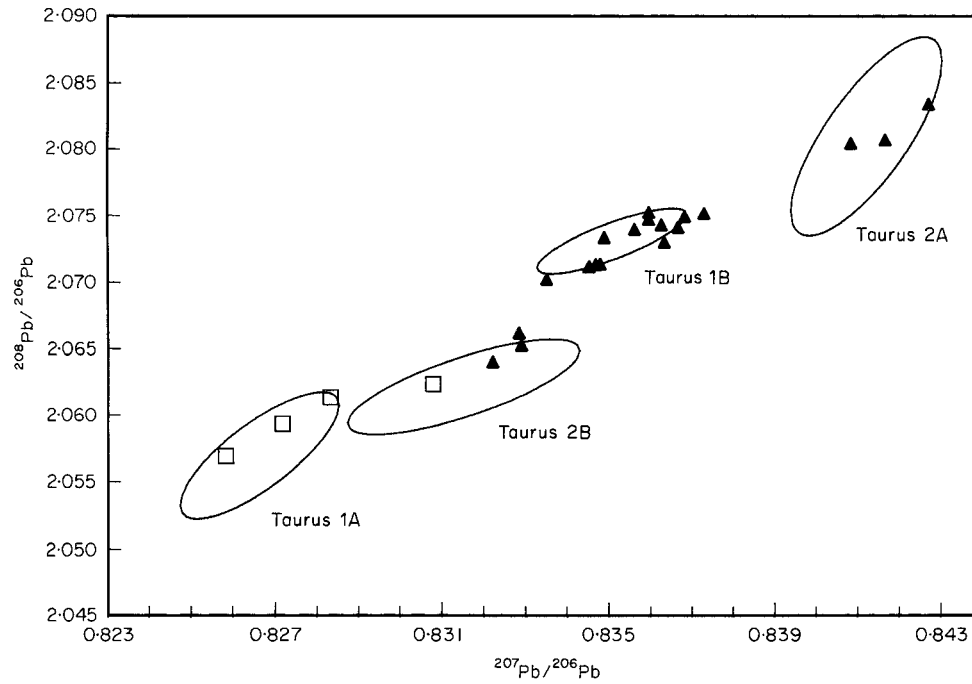


Figure 1.2. Lead Isotope Ratios of Artifacts from Tell al-Judaidah (AS 176) and Tell Ta'ayinat (AS 126).  
After Yener et al. 1991

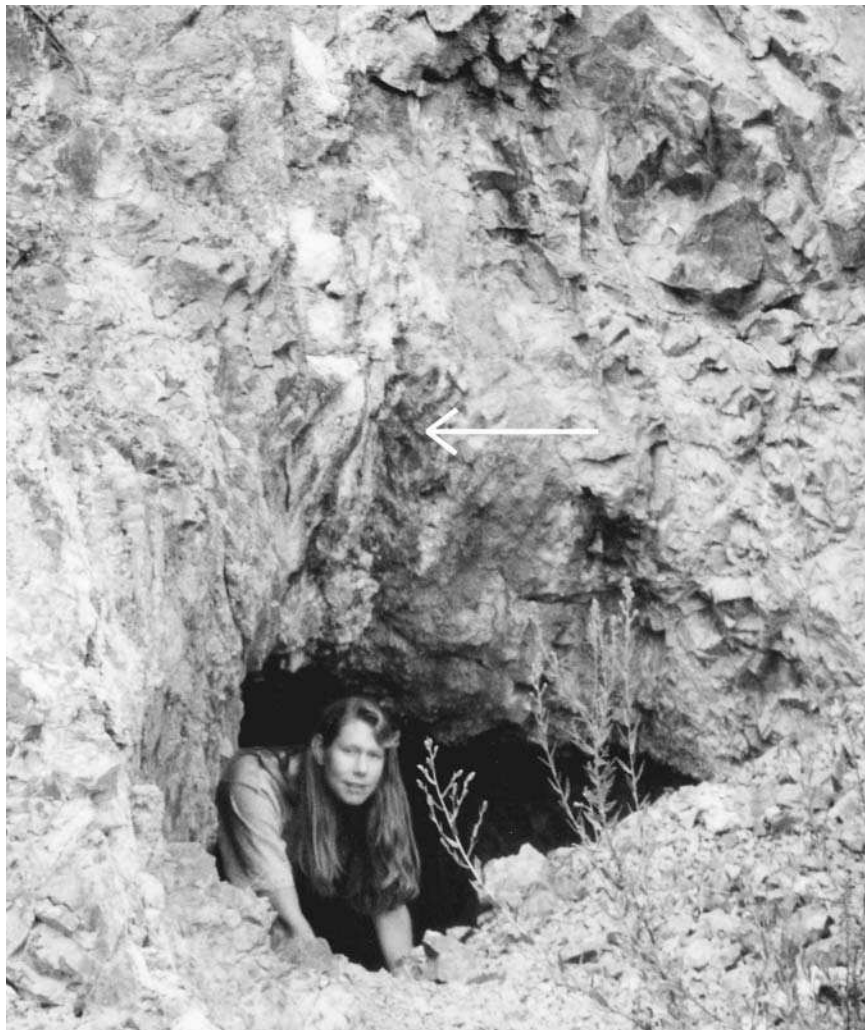


Figure 1.3. Amanus Mountain Mine Entrance near Kisecek Showing Vertical Vein of Arsenopyrite/Chalcopyrite with Heidi Ekstrom as Scale. Photograph by K. Aslihan Yener

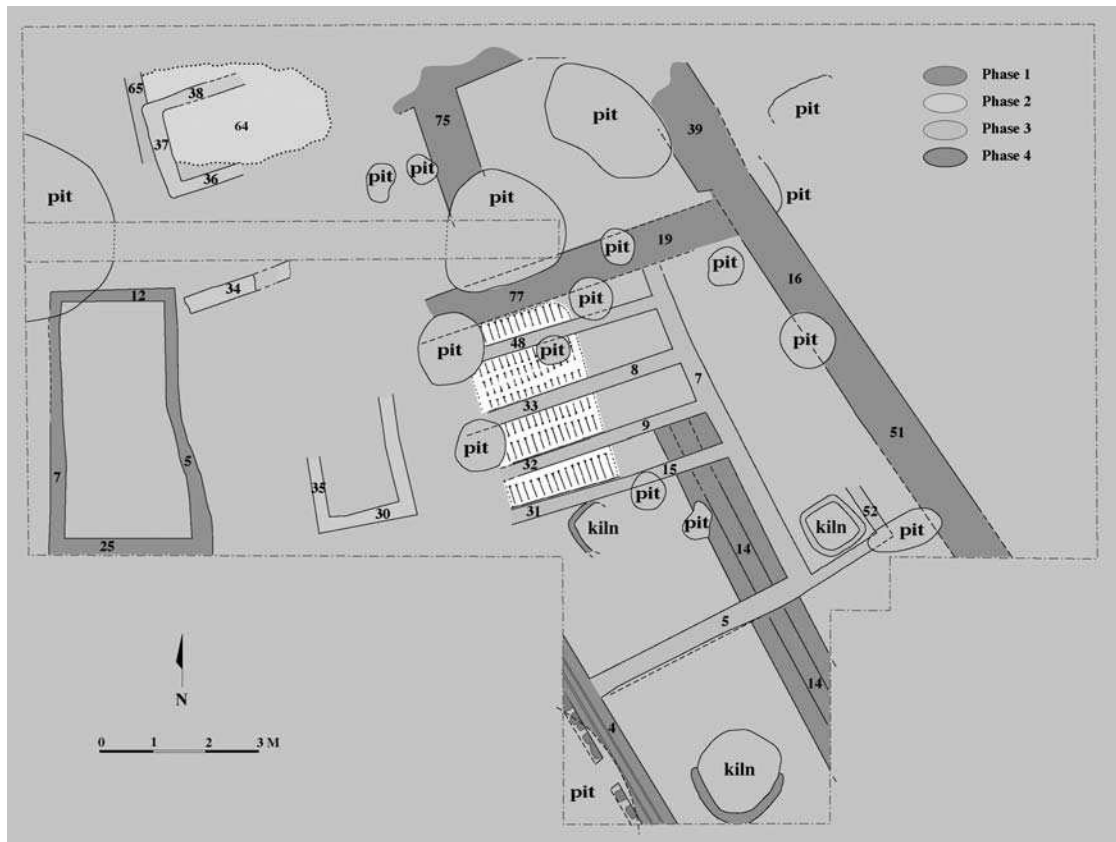


Figure 1.4. Ubaid Structures, Phases 1–4, Tell Kurdu (AS 94). Courtesy of Peggy Sanders (after Yener et al. 2000b)

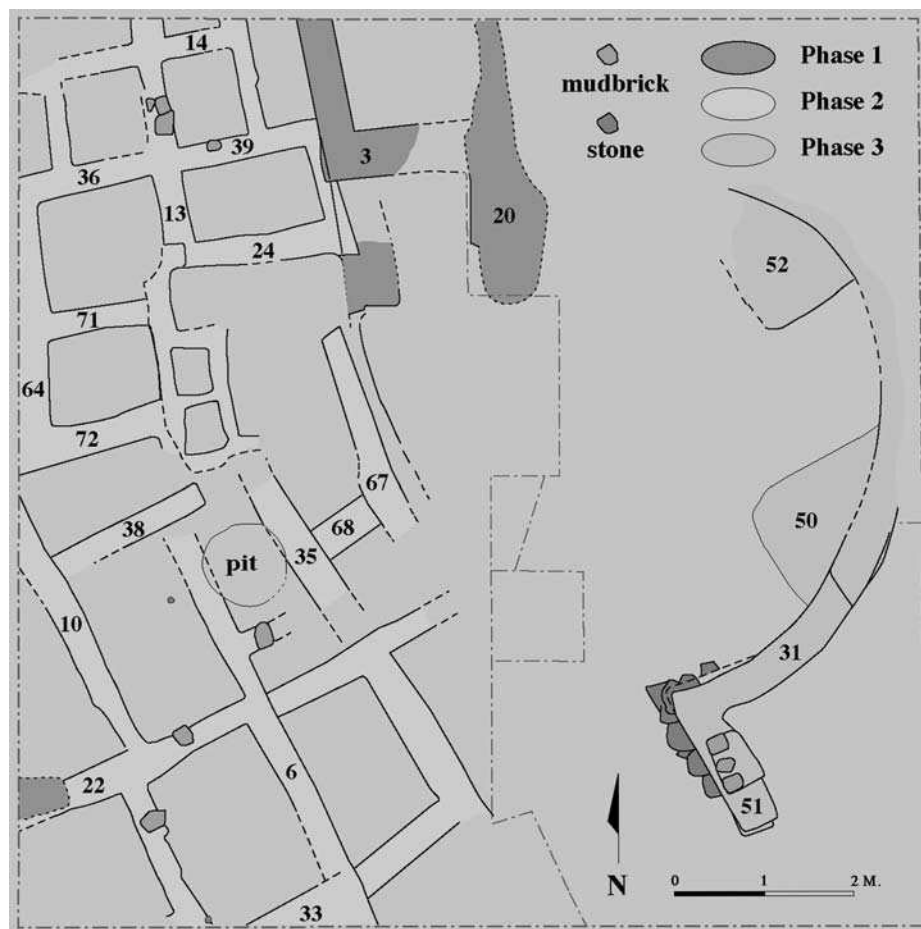


Figure 1.5. Ubaid Structures, Phases 1–4, Tell Kurdu (AS 94). Courtesy of Peggy Sanders (after Yener et al. 2000b)

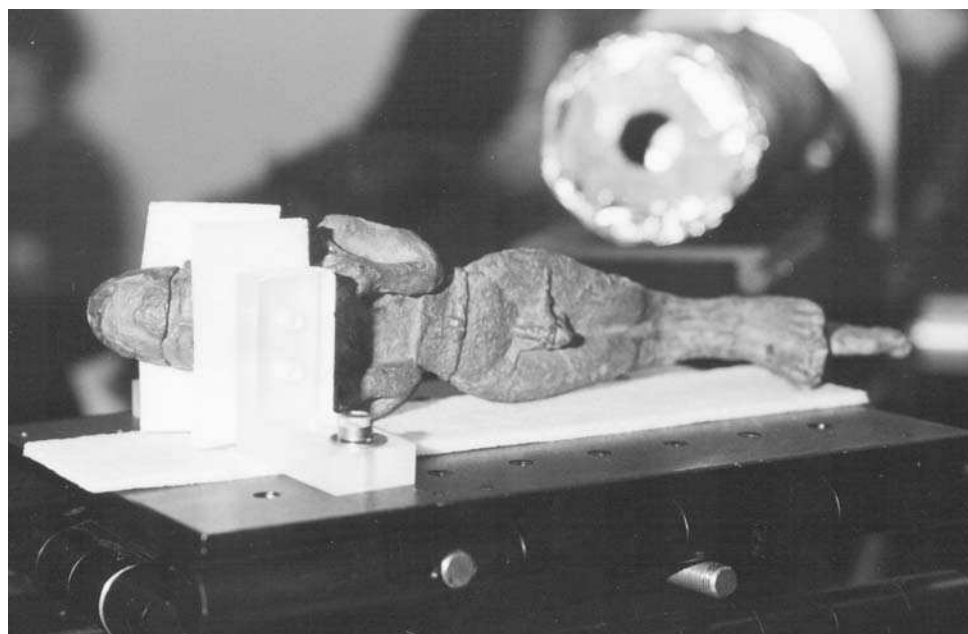


a

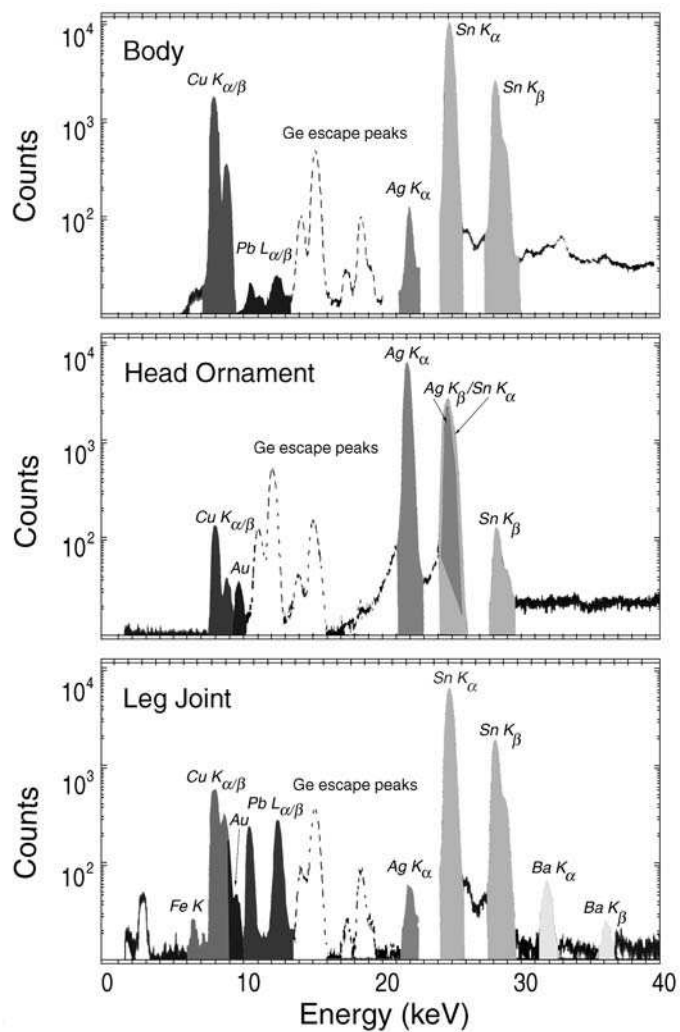


b

Figure 1.6. (a) Wattle and Daub Structures on Tell Atchana (AS 136) (Photograph by K. Aslihan Yener) and (b) Reed Structure, Amuq Valley 1930s Expedition (Photograph Courtesy of Robert J. Braidwood)



a



b

Figure 1.7. (a) Figurine at Argonne National Laboratory, Advanced Photon Source (APS; after Friedmann et al. 1999), Judaidah Phase G (ca. 3000 B.C.), and (b) Synchrotron X-ray Fluorescence Spectra of Figurine Recorded by a Ge-solid-state Energy Dispersive Detector with 66-keV Incident Photons

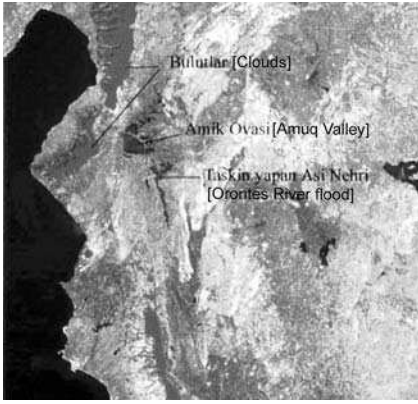


Figure 1.8. Satellite Image of the Amuq Valley Depicting the 2003 Flood. Courtesy of Hatice Pamir



Figure 1.9. Woolley's Dig House with Floodwaters Below and Tell Taçınat al-Saghir (AS 127) in Background. Courtesy of Mine Temiz

## Tell Atchana Excavations: Past & Present

### Tell Açıana Höyüğü Kazıları: Geçmiş ve Günümüz Çalışmaları

The Oriental Institute THE UNIVERSITY OF CHICAGO

Created by: K. Aşhan Yener & Stephen Batink

Figure 1.10. Tell Atchana Panel (Antakya Archaeological Museum). Courtesy of Stephen Batiuk





a



b

Figure 1.11. Amuq Valley Regional Projects Crew Members in (a) 1995 and (b) 1998



# CHAPTER TWO

## SETTLEMENT AND LANDSCAPES IN THE AMUQ REGION

JESSE J. CASANA AND TONY J. WILKINSON

### INTRODUCTION

The Amuq Valley occupies an important position in Near Eastern archaeology both in terms of its geographical position and because of the prominent role it has played in the development of archeological sequences (see *Chapter One: The Amuq Valley Regional Projects*). Although the plain was surveyed in the spring of 1936 by Robert J. Braidwood, in 1995 — about sixty years after this initial investigation — it was felt that the time was ripe to initiate another phase of survey. The goals of this new phase were to compile a more detailed database on the sites themselves, to provide a much-needed environmental context for the known archaeological sites, to intensify the survey so that non-mounded sites and off-site areas were included in the settlement database, and to extend the survey coverage into the surrounding uplands. This latter point was crucial because the earlier surveys in the region tended to privilege either mounds on the lowlands (Braidwood 1937) or to focus on the limestone massifs where numerous building plans (and indeed entire buildings) were preserved (Tchalenko 1953–1958; Tate 1992). In the former case this inadvertently biased the study toward earlier sites, especially those of the Bronze Age, whereas the latter policy resulted in a strong bias toward the later sites of the Seleucid and later periods. By extending the survey into the foothills surrounding the plain it was possible to start to forge a link between the earlier surveys of Braidwood and Georges Tchalenko and to gain important insights into the progressive extension of settlement through time.

Following an introduction to the history and techniques of survey in the area, we devote considerable space to outlining processes of landscape transformation. An understanding of such processes is crucial if the regional archaeological record is to be interpreted correctly. The following section examines the development of the landscape of settlement through most of the last 10,000 years. Because the survey data has not yet been fully analyzed, and for some sites the survey collections remain inadequate for detailed analysis, it would be premature to provide a detailed phase-by-phase settlement sequence for the entire area. Instead we have adopted a “landscape approach” that seeks to examine broad trends in the development of the settled landscape through time. Not only does this approach give a better idea of broad patterns of settlement stability or change, it also avoids spurious accuracy in cases where an inadequate record of the pre-Iron Age occupation of many of the sites seems to exist. Nevertheless, the project has amassed a large amount of settlement data since 1995 and we have compiled an extensive gazetteer summarizing the basic data on the sites visited (*Appendix A: Gazetteer of Sites*). This report therefore aims to provide much of the basic data on archaeological sites that for reasons of space was missing from earlier reports (e.g., Yener et al. 2000b). Much work still needs to be done on the surface collections and ceramic sequences, and this data will follow in future thematic studies and more specialized reports.

### HISTORY AND TECHNIQUES OF SURVEY

The Braidwood survey, published in 1937, was in terms of its conception and technique well ahead of its time. It aimed to provide a fairly comprehensive record of settlement of all obvious site remains in the plain of Antioch (i.e., the Amuq Valley). Nevertheless, in terms of modern techniques of archaeological survey (even those of traditional mound survey) a number of shortcomings are noted, for example, the site descriptions lacked major axial dimensions. In addition, even though the ceramic dating evidence was based on a pioneering study of the ceramic sequence, after about sixty-five years it has become necessary to provide an updated assessment of the ceramic sequences present. Not only was the original survey report a pioneering document, but it also provides abundant fascinating insights into the environment of the time. This was dominated by the Lake of Antioch itself, together with its fringing marshlands, and from the perspective of the present flat and cultivated plain it is remarkable to read how frequently it was necessary for the surveyors to wade through marshes to gain access to some of the more isolated sites. The landscape of the plain has changed over the decades from a sparsely occupied, reed-fringed, marshy, and verdant plain, to an intensively cultivated landscape dotted with numerous villages and crisscrossed by a network of metalled roads. On the one hand, irri-

gated agriculture has resulted in a significant degree of damage to and loss of especially smaller sites, whereas the improved road network has made site survey much easier.

Between 1958 and 1963 Uluğ Alkim's survey made a general record of tells and *höyüks* within the northern part of the plain along the Kara Su River (Alkim 1959b, 1969). Because they lie in the northernmost extension of the plain, not all of these sites have been field checked by the Amuq Valley Regional Projects and consequently it has not yet been possible to link the results of the Braidwood and Alkim surveys and incorporate all of the latter's results within their database.

Additional information on regional settlement derives from a series of excavations by Leonard Woolley and collaborators, specifically at Tabarat al-Akrad (AS 182), Tell es-Sheikh (AS 135), and Tell Atchana (AS 136). Altogether the various excavations from the 1930s, 1940s, and 1950s provide a remarkable degree of stratigraphic control as indicated in table 2.1.

Table 2.1. Main Periods of Occupation Recorded from Excavated Sites in the Amuq Valley

<i>Site name</i>	<i>Amuq Phase</i>	<i>Reference</i>
Tell Kurdu (AS 94)	C, D, E	Yener et al. 2000a–b; Braidwood and Braidwood 1960
Tell es-Sheikh (AS 135)	C, D	Woolley 1953a
Tell al-Judaïdah (AS 176)	A through S	Haines 1971; Braidwood and Braidwood 1960
Chatal Höyük (AS 167)	F, H, I, K, M, N, O, Q–R, T–U	Haines 1971; Braidwood and Braidwood 1960
Tell Atchana (AS 136)	K, L, M	Woolley 1955
Tell Ta'yinat (AS 126)	G(?), H, I, J, N, O	Haines 1971; Braidwood and Braidwood 1960
Tabarat al-Akrad (AS 182)	H/I	Hood 1951
Tell Dhahab (AS 177)	A, F, G	Haines 1971; Braidwood and Braidwood 1960

## THE AMUQ VALLEY REGIONAL PROJECT SURVEY

The initial aims of the Amuq Valley Regional Projects (conducted between 1995 and 1998) were to provide an updated assessment and description of the previously surveyed sites in the Amuq Valley, as well as any sites in the immediately surrounding areas. Essentially all of the field teams' time between 1995 and 1998 was occupied by the survey of sites on the plain together with the associated investigations of the archaeological landscape and geoarchaeology; a second stage, which explored the archaeology of the surrounding hills and upland valleys, occupied the period between 2000 and 2002 (fig. 2.1). During the first stage of the project the presence on the team of Jan Verstraete, a specialist in Aegean ceramics of the second and first millennia B.C., provided an opportunity to focus part of the research on linkages between the Aegean and the Near East; this study, which explores many of the long-standing questions raised by Woolley and others, is continuing. In general, the survey was intended to provide a context for the excavations (both ongoing and those of the original Chicago team) at Tell al-Judaïdah (AS 176), Tell Ta'yinat (AS 126), Chatal Höyük (AS 167), Tell Kurdu (AS 94), and most recently Tell Atchana (AS 136; Alalakh), as well as to provide ongoing research opportunities for graduate students in the department of Near Eastern Languages and Civilizations at the University of Chicago and related institutions.

During the 1995–1996 seasons, surveys were mainly of the extensive, full-coverage type. Surveys of this kind entail driving around all the roads on the plain, recognizing and recording all previously known sites, collecting surface artifacts according to site areas, and sketching and measuring them. Site sub-divisions (designated A, B, C, etc.) were allocated to all collection areas that were defined as areas of 1 ha or less. As a result, ceramic collections and dated occupations could be used to provide estimates of aggregate settlement areas using a finer spatial sampling unit than the site itself. Although in certain cases (as, e.g., at AS 40), more detailed sample schemes were employed to tackle specific problems, in general this was left until the later phases of the project (as, e.g., at Tell Atchana [AS 136], for which see *Chapter Six: Surface Ceramics, Off-Site Survey, and Floodplain Development at Tell Atchana (Alalakh)*; and Tell Ta'yinat [AS 126], for which see *Chapter Seven: The Ta'yinat Survey, 1999–2002*).

Further refinements were then undertaken in 1997 and 1998 when off-site survey techniques were employed to provide detailed coverage of areas between the mounded sites. Although some off-site survey had been conducted in the 1995 season, this was primarily aimed at the recovery of "field scatters" to the east of Tell al-Judaïdah (AS 176)

where the main crops were cereals and therefore large areas of land were available for collection at the time of survey. The 1995 collections, although conducted over a limited area, demonstrated that in the gently sloping terrain to the east of Tell al-Judaidah, which is elevated a little above the level of the plain, a consistent scatter of pottery is indeed present (fig. 2.2). Scatter densities were higher near Tell al-Judaidah (i.e., primarily between forty and eighty sherds per  $10 \times 10$  m sample square) and declined progressively away from the site attaining values of seven to ten sherds per 100 sq. m between 1.5 and 2.0 km from the site. Although most of the body sherds were rather undiagnostic plain wares, the diagnostic sherds included a high percentage of Roman/Byzantine brittlewares (eight in total) and handles of similar date (twenty-seven in total of which five handles were of brittleware). This suggests that a significant or predominant part of the field scatters accumulated during the Roman/Byzantine period. Nevertheless, the presence of a small number of lithics of apparently prehistoric date suggests that the artifact scatters accumulated over a long period of time. Because “field scatters” have a number of origins, including ancient land use practices (Wilkinson 1982), the existence of such continuous carpets of off-site sherd scatters demonstrated that the presence of sherds alone should not be taken as indicative of human occupation. It was therefore necessary that the survey team be able to distinguish between continuous carpets of artifacts and discrete concentrations that were more likely to result from *in situ* occupation.

The new phase of off-site survey led by Jan Verstraete had to take account of the very dense and intensive modern land use that resulted in large areas of the land surface being obscured by crops. Owing to the 90–95% covering of cotton, only certain land use windows such as fallow and cereal crops could be investigated by off-site techniques, but even though these covered only a relatively small percentage of the plain, they did provide a rather broad and representative coverage of the entire area. These surveys provided a useful corrective to the full-coverage surveys of the 1995 and 1996 seasons, especially by demonstrating the existence of numerous small Roman/Byzantine sites. The technique employed teams of field walkers spaced 20 m apart along lines parallel to major field boundaries. Artifacts were collected along each 100 m pedestrian leg, diagnostic sherds being retained after the total number of all sherds had been counted and the body sherds discarded. Supplementary  $10 \times 10$  m sample squares were laid out at the end of each transect in order to provide comparable data to other off-site surveys conducted in the Near East (Wilkinson 1989).

When the neighboring uplands were investigated it was necessary to amend the survey techniques in order to accommodate the very different set of conditions that confronted the survey team. Uplands are notoriously difficult to survey systematically, and the Amuq foothills were no exception owing to their steep, unforgiving terrain with frequent bare, rocky slopes and poor ground visibility due to areas of dense woodland and occasional modern villages. Moreover, the nature of settlement immediately appeared to differ markedly from that on the plain, consisting of more and smaller sites dispersed widely across the landscape. Consequently, in the upland ranges surrounding the Amuq Valley a sampling strategy was used in which natural drainage basins provide the limits of sample survey areas. This strategy allowed the limits of an individual survey area to be readily recognized in the field, offered a systematic means by which to sample all topographic and ecological zones, and also enabled sedimentary sequences recovered in valley fills to be linked with settlement and land use histories of surrounding slopes. Within the selected drainage basins, the pedestrian transects were conducted with surveyors spaced at 100 m intervals over areas chosen on the basis of accessibility and ground cover conditions. While sampling at 100 m is only “semi-intensive” by the standards of many Mediterranean surveys, the region covered is much larger than most Mediterranean projects and therefore requires some sacrifices in terms of intensity in order to build a general picture of settlement at a regional scale. At higher elevations in both the Amanus Mountains and the Jebel al-Aqra, increasingly steep and rocky terrain often prevents any transects from being effectively undertaken, and therefore in those areas we rely increasingly on local informants to indicate the location of sites.

The 2001 and 2002 seasons were aided tremendously by the introduction of very high-resolution CORONA satellite imagery to the survey project. This imagery is extremely useful in the identification of small, previously unrecorded archaeological sites and other landscape features such as canals and ancient watercourses. Use of CORONA imagery has become increasingly common in archaeological projects, although not all image series are of equal value. Depending on the time of year, ground cover, atmospheric conditions, and other variables, the visibility of archaeological features and therefore the imagery’s utility for archaeological survey can vary tremendously. We are fortunate in the Amuq Valley to have one KH-4B image series taken on a crisp, clear day on December 2, 1970, on which nearly all known archaeological sites in the Amuq Valley appear with great clarity (fig. 2.3). Images from this series were enlarged to produce high quality image-maps with a spatial resolution of 3 m, and details from this series of images appear throughout this report. The images have been geo-rectified to UTM (Universal Transverse Mercator) coordinates and stitched together to produce a series of field maps that allow features to be located in the field within about 20 m

using a hand-held GPS unit. The imagery has aided in recognizing a large number of previously unrecorded archaeological sites and other features (see below). Additionally, because CORONA imagery dates from the late 1960s to the early 1970s, it provides a detailed record of the landscape at a time before the destruction of much of the archaeological record in recent decades and is therefore also useful in evaluating the extent of damage to sites.

Critical for the survey, CORONA images have proved ideal for viewing the landscape only a little later than when it was surveyed by Braidwood. As a result it has been possible to use the imagery to sort out ambiguities in the survey record. For example, when several visits had been made to sites by both the Braidwood survey and different members of the Amuq Valley Regional Projects, by the use of GPS readings and geo-rectified CORONA images it has been possible to recognize which sites were originally recorded by the Braidwood team and to confirm (or refute) whether these were in fact the sites visited by the projects' team. Although in most cases the Braidwood numbers had been assigned to the correct sites, in one area it was possible to straighten out several ambiguities in the record.

From the very outset it became evident that simply recording the sites on the plain was providing a skewed record of total settlement when this was viewed at the regional scale. It has long been known that ancient settlement in the Near East, although frequently occurring in the form of tells on plains, was not confined to alluvial lowlands alone. When survey is confined to the plains, with their dense scatter of large multi-period tells, a considerable chance exists that key phases of settlement might be underrepresented. Specifically for the Amuq, the archaeological record as it appeared in the early 1990s consisted of early and multi-period settlement on the plain and later settlement (predominantly Hellenistic, Roman, and Byzantine, with some Early Islamic) on the limestone uplands to the south and east (the so-called Massif Calcaire: Tchalenko 1953–1958; Tate 1992). It was therefore crucial to initiate surveys of the uplands surrounding the plains in order to fill in this potentially embarrassing gap between multi-period settlement on the plain and the later mainly post-Iron Age veneer of settlement seemingly characteristic of the uplands. Of immediate interest was to what degree pre-Hellenistic settlement could be identified on the uplands that immediately surrounded the Amuq Valley. The second stage was therefore conducted in the fringing uplands of the Amuq Valley in order to test whether Bronze Age settlement extended into these areas or was confined to the plains alone. In other words was the apparent concentration of Bronze Age settlement on the plains merely an artifact of the mode of selection of the survey area? It was also necessary to examine when and under what circumstances settlement of the uplands did occur. Consequently, following a gap of one year in 1999 and a brief reconnaissance season in 2000, the second phase of the survey was undertaken during 2001 and 2002. The results of the upland survey will be published in a forthcoming volume.

The projects were aided considerably by the availability of old maps made under the French Colonial authorities at scales of 1:5,000, 1:10,000, and 1:50,000. In addition, Turkish topographic base maps at a scale of 1:25,000 provided the main mapping framework. Sites were positioned using hand-held GPS units, and whenever possible the earlier fixes (which were undertaken when the error factor of "selective availability" was still in place) were later updated by re-survey. In addition, recently declassified CORONA satellite images proved ideal for site recognition and LANDSAT images were used for general terrain mapping. Together, traditional maps, digital elevation data, and satellite images provided the ideal mapping framework for a site GIS.

## THE PHYSICAL ENVIRONMENT AND GEOARCHAEOLOGY

The Amuq Valley (Amik Ovası) forms a roughly 30 × 30 km plain (elevation 80–85 m above sea level) sandwiched between the Amanus Mountains to the west, limestone uplands to the east and south, and a series of rolling hills of readily eroded Tertiary sediments to the southwest. The distinctive topography of the plain is partly accounted for by its location along the Amik-Gölbaşı graben, itself part of the Dead Sea Rift Valley (Wilkinson 2000: 168). The plain is drained by three major rivers, all receiving their flow from hydrological catchments extending well beyond the confines of the plain itself: the Orontes River flowing north from a catchment within Syria, the Afrin flows from the northeast, and the Kara Su from the north along the line of the fault guided valley itself. Rainfall averages within the range 500–700 mm per annum but is significantly higher to the west and in the mountains. Rainfall, although sufficient for rain-fed crops, was supplemented during the Roman, Byzantine, and Islamic periods by some localized irrigation systems that were presumably intended more for the production of specialized crops and the intensification of production than to offset soil moisture deficits alone. A noteworthy feature of the plain over the last few millennia was the Lake of Antioch which, until its drainage in the 1950s and 1960s, formed an extensive reed-fringed shallow lake within the western part of the basin (Wilkinson 1997).

Today, most of the Amuq region is without significant woodland cover, but in the Amanus Mountains the following vegetation-land use zones can be distinguished:

- Zone 1 Up to an elevation of ca. 300 m above sea level on rolling hills of Tertiary marls, limestone, and shale, the landscape is predominantly a cultural landscape of mixed cereal cropping with common grape and olive orchards.
- Zone 2 From 300–600 m occurs a mixed area of woodland and orchards on similar rock types as zone 1 or on basic igneous and ophiolitic rocks of the Amanus foothills.
- Zone 3 From 600 m to ca. 1,800 m above sea level the zone of mixed evergreen forest consists of black pine, abies (fir), cedar, and oak, some of the last named being of dwarf or scrub variety.
- Zone 4 Above 1,800 m above sea level occurs bare alpine terrain of loose stones and bare rock surfaces; these extend up to the highest summits of the Amanus Mountains, namely to around 2,250 m above mean sea level.

The geoarchaeology and alluvial chronology of the Amuq has already been summarized in Yener et al. 2000b, and here it is only necessary to present some of the more recent results. Valley floor sedimentation over the last 10,000 years has been highly variable and patchy with the result that parts of the Amuq Valley have experienced very little aggradation whereas other areas have accumulated 3 m or more of sediment over a period of about 2,000 years (fig. 2.4). Recent investigations along the Orontes floodplain have now clarified the alluvial sequence as previously published (Wilkinson 2000). Earlier work demonstrated that a significant shift occurred in the flow energy of the Orontes River with the deposition of a fine sandy post-Hellenistic alluvium over a stable, low-energy Chalcolithic floodplain clay (i.e., the early/mid-Holocene clays of the 2000 report [ibid., p. 171]). Farther to the west at AS 227B the fluvial succession appeared rather different because a well-developed Holocene palaeosol (Unit 12 of Wilkinson 2000: fig. 2a) that was draped over Late Pleistocene gravel fan deposits was tentatively suggested to have been of Early Holocene or even Late Pleistocene date (ibid., p. 169). Although a sandy deposit of a levee was noted at the north end of this section, a post-palaeosol fine gravel appeared to represent a phase of moderately high-energy Early Holocene sedimentation. However, following heavy winter and spring rains in 2001 and 2002, intense erosion of these 5–6 m deep sections resulted in the exposure of Roman and Late Roman *in situ* masonry structures that enabled the associated stratigraphic units to be dated with greater precision (fig. 2.5). In this case the dark palaeosol (Unit 12) can now be seen to predate Roman wall A (fig. 2.5b) and the overlying fine gravels of Unit 13 (i.e., the stippled lenses mainly above Unit 12) can now be seen clearly to overlie and postdate Roman wall A and predate a later wall of Late Roman or Byzantine date. Consequently, the complex suite of fine to medium gravels (Unit 13) washed from the nearby valley to the south can now be seen to be of Roman to Late Roman date, whereas the palaeosol (Unit 12) appears to represent a land surface that was stable for much of the Holocene through to the Roman period. The gravels (Unit 13) appear to represent a distinct episode of within-channel and over-bank flooding that was caused by discharge from the local watershed, and as such it represents a significant increase in the energy of locally generated floods over and above that experienced earlier in the Holocene. As in the Tell Atchana drain site and the Arpalı pits, we are therefore again witnessing a significant increase in local erosion as well as the deposition of sediments from higher energy flows during the Hellenistic/Roman period.

Deep valley fills are particularly evident in the valleys draining from the uplands of the Jebel al-Aqra. The fills aggraded in the form of a series of fine-grained sedimentary beds separated by weak palaeosols. The best example was recorded from site AS 271 where nearly 5 m of fine-grained fill could be seen to overlie a building of Roman date (figs. 2.6–7; Casana 2003a). The Roman/Late Roman date of deposition was supported by the presence of a number of first/second-century A.D. sherds found amidst roof tiles and building debris overlying the stone building, and by numerous sherds of Late Roman date found within the lower units of the aggraded fill. In the case of this particular drainage basin it is quite evident that the deep valley fill occurs in an area of relatively non-resistant sandstones and other sedimentary rocks that show signs of having been heavily eroded over the last few centuries (fig. 2.8). Hillslopes therefore show signs of intensive sheet erosion and localized gullying. A particularly conspicuous feature of certain olive orchards is that the lower trunks and upper roots of the trees have been pedestalled well above the ground surface. This demonstrates clearly that 20–30 cm of erosion has taken place over the lifetime of the trees (i.e., over a century or so).

Although some of the eroded sediment remained within the valleys to form valley fills, some was trapped by terrace walls or other agricultural structures on hillslopes. One section near Yenişehir in the southeast Amuq, showed a series of stepped, terrace-like features around the edge of the low limestone plateau of Imma. These steps are parallel to the contours and a section through one of these aggraded terraces (fig. 2.9) indicates that approximately 3.5 m of

brown loam had been washed from the low limestone plateau to the south. Small freshwater gastropods within the lower horizons suggest that these soils were irrigated by perennial flow from spring-fed pools, presumably those at Imma, which in turn had also supplied water to turn several water mills similar to those indicated on figures 2.27–30. Although the mill sites are indicated on the French series maps of the area, these mills have now been obscured by modern buildings. Dating of the mollusk-containing soil horizons was by means of numerous Late Roman/Early Byzantine sherds (second–sixth centuries A.D.) concentrated within sediments characterized by pedogenic blocky structure within the mid-lower profile (fig. 2.9). No evidence indicates that soils were deliberately introduced as backfill from elsewhere. This aggradation, at least 3 m in 2,000 years and representing a rate of accumulation of ca. 15 cm per century, clearly attests to the high rates of sediment delivery that must have prevailed during the last 2,000 years of the human record in this region.

Despite the evidence for the trapping of sediment on slopes, within tributary valleys and behind agricultural walls, a significant amount was transported through the system to accumulate on the floodplain of the Orontes River, where it probably contributed to the deep sequence of levee sediments (Wilkinson 2000).

#### DIMINISHING ARCHAEOLOGICAL RECORD: PHYSICAL TRANSFORMATIONS

One major problem that hinders the recognition of archaeological sites and landscape features is that such features are often lost or obscured by physical or cultural processes. Unless we are aware of these processes and how they operated through time, it is often difficult to estimate how much of the archaeological record has been lost. In terms of physical action, two primary processes appear to have reduced the archaeological record of the Amuq region:

- (a) The erosion of sites by rivers in the plain, or by overland flow and minor channels in the uplands.
- (b) The obscuring of sites on valley floors as well as on the plain itself as a result of the deposition of alluvium and colluvium eroded from the surrounding uplands.

It is of course impossible to quantify the losses of the archaeological record, but by conducting geomorphological studies alongside the archaeological survey it has been possible to identify key loci of erosion and sedimentation as well as general areas of site loss. Figure 2.4 shows the general pattern of sedimentation on the plain, which as was pointed out in the 2000 report (Yener et al. 2000b), was remarkably patchy with large areas of deep sedimentation along the rivers and alluvial fans, as well as areas of low or zero sedimentation in parts of the plain. Recognition of this sedimentary patchwork goes some way toward countering Woolley's gloomy assessment that sedimentation made archaeological survey a worthless exercise (Woolley 1953a).

Table 2.2. Sedimentation Recorded at Various Sites

<i>Depositional Environment</i>	<i>Site</i>	<i>Depth of Deposit (meters)</i>	<i>Date (years)</i>	<i>Rate: Meters per Thousand Years</i>
Plain	Dutlu Höyük (AS 200)	0.00	7,000	0.00
Lake	AS 181	0.50	2,000	0.25
Lake	GPS 71 (a)	10.28	26,420	0.39
Orontes floodplain	Atchana drain	3.00	6,224	0.48
Gravel fan	Arpalı pits east	1.00	2,000	0.50
Lake	GPS 71 (b)	13.84	25,720	0.54
Lake	GPS 61	5.00	7,500	0.67
Colluvium	Karaca Kirbet 'Ali (AS 168) (max.)	4.00	4,500	0.89
Orontes floodplain	Tell Habeş (AS 227)	2.75	2,000	1.38
Gravel fan	Arpalı pits west	3.00	2,000	1.50
Colluvium/agricultural	Reyhanlı section	3.50	2,000	1.75
Alluvial plain	AS 271	4.00	2,000	2.00

In other words, sedimentation was by no means uniform across the plain, and instead certain areas such as active alluvial fans, floodplains, and colluvial areas have been aggrading at rates in excess of 1 m per thousand years. On the



other hand, parts of the valley floor or the actual lake basins that are located some distance away from major sedimentary sources have aggraded at much lower rates. Similarly, parts of the Afrin fan complex have experienced relatively slow rates of sedimentation so that as sediments accumulated they have then been progressively transformed into natural soils. In the case of the Çakal Tepe window, exposed sections, stream cuts, and a buried soil beneath the prehistoric site of Dutlu Höyük (AS 200) suggest that sedimentation in this part of the plain has been essentially zero. It is therefore no coincidence that in this area we find the maximum concentration of prehistoric sites, as well as the best examples of small, flat Roman/Byzantine sites, off-site “field scatters,” and also other off-site features such as possible moats and mudbrick extraction pits. Examples of the last two are evident around Tell Hasanuşağı (Yerkuyu, Yurt Höyük) (AS 99) and Çakal Tepe (AS 113) respectively (Wilkinson 2000).

The loss of archaeological sites by burial can considerably bias the archaeological record, and it soon became clear that many sites had indeed been buried. By the 2002 field season the following buried sites had been recognized: Tell Atchana drain site (Amuq Phase F), AS 181 (Amuq Phase G), Karacanık (AS 92; Amuq Phase G), the Arpalı pits site (Hellenistic), Tell Habeş (AS 227; Roman/Late Roman: fig. 2.5), and AS 271 (Roman/Late Roman). These buried sites and other dated archaeological horizons have been used to build up a picture of landscape sedimentation as indicated in table 2.2.

In contrast to sedimentation, riverine erosion is difficult to estimate because the sites are frequently entirely missing, so that one is dealing with negative evidence alone. Nevertheless, it is clear that areas of significant riverine erosion occur along the Orontes River, and to a lesser extent along the Afrin and Kara Su Rivers. Erosion of the uplands frequently leaves “windows” of an archaeological record or sites remaining between loci of erosion where sheet or rill erosion has been concentrated. This type of erosion has been especially severe in the Jebel al-Aqra region where less resistant and erodible marls and other Tertiary sedimentary rocks are drained by deeply incised and actively eroding streams, where extensive upland settlement took place in the Seleucid/Roman and Byzantine periods and initiated a massive phase of hillslope erosion (Casana 2003b). This erosion illustrates the intertwined nature of human and physical processes: settlement extension occurred in response to social, economic, and political factors, which then triggered erosion and valley floor sedimentation, which in turn then resulted in the loss of the archaeological record by erosion on the slopes and burial on the valley floor. As a result, the evidence for the cause of the erosion is frequently lost or obscured. Ultimately, if slopes are sufficiently degraded they become uncultivable with the result that settlement will again retreat because of a lack of soil. Certainly, many parts of the Jebel al-Aqra region do show signs of having experienced massive soil erosion during the last 2,000 years with the result that many of the slopes are now heavily gullied and stripped of soils. Moreover, it should be emphasized that overland flow is not the only form of erosion, and numerous examples of slumps, slope failures, and mass movements have resulted in the present highly degraded landscape of the Jebel al-Aqra.

Soil erosion appears to have been less pronounced in the Amanus Mountains and on the limestone massifs than in the Jebel al-Aqra. Nevertheless, even in these areas a considerable depth of soil cover has been lost since the peak of settlement during the Seleucid, Roman, and Byzantine periods. For example, small exposures of valley edge colluvial soils near limestone foothills adjacent to Bakras Kalesi (AS 247) indicate that the loss of topsoil in the region has been significant. This loss is evident in the form of 90–112 cm of red brown loam containing common angular stones overlying an olive green blocky clay soil. The latter soil contained a good example of a sixth-century A.D. keel-rim bowl of Late Roman C, which demonstrates that the accumulation of the reddish colluvial deposit postdates the Byzantine period. Despite the general lack of deep sedimentary accumulations along the limestone hills, the thin degraded soils on these hills leave little doubt that the agricultural landscape of the Massif Calcaire has been partly stripped of its soil cover over the last two millennia. This has resulted in their present bare and skeletal appearance.

#### DIMINISHING ARCHAEOLOGICAL RECORD: CULTURAL TRANSFORMATIONS

Since the draining of the Lake of Antioch during the 1950s and 1960s the Amuq Valley has witnessed a tremendous growth in the cultivation of cotton. Such a high-value crop, which grows in the spring and summer, depends upon irrigation, which itself requires that the land be flat or nearly so in order to conduct the irrigation water. As a result of this need for flat land, as well as the intrinsically high value of the land itself, we are now witnessing the depressing prospect of large areas of mounds being bulldozed away to increase the land area for this high-value crop (see also *Chapter One: The Amuq Valley Regional Projects*). In addition, because it is difficult to irrigate mounded areas, the land is frequently bulldozed flat with the result that some sites have been removed in their entirety. Because of these actions by landowners a large number of sites have been cut away or damaged. Particularly striking examples of this

damage occur at the site of Karatepe (AS 86) where the Middle and Late Bronze Age lower town has been effectively cut into quadrants by the extension of fields. Similarly, Tell Malta (AS 28) has been cut on all sides and 8 m high Tell Wasfe (AS 31) in the northeast plain has been sliced in two (fig. 2.10). On the other hand, sites such as Tell Kurdu (AS 94) which seem deceptively unchanged, on more detailed investigation turn out to have experienced a remarkable degree of transmogrification by earth-moving activities. This is also the case of Tell ‘Imar al-Jadid al-Sharqi (AS 101), which has been shaved and bulldozed on most sides (fig. 2.11), especially on the north side where this activity has exposed boulders from what may be an outer fortification wall of probably Amuq Phase F date.

Although such damage is deplorable and results in the irreversible loss of much of the archaeological record (fig. 2.12), this problem can also be turned into an archaeological opportunity, and several key damaged Bronze Age sites have been investigated by Timothy P. Harrison to give some informative results (Harrison 2000b). In other words, if damage is occurring then it is essential for the archaeologist to make a record of the damaged areas. Otherwise a double loss occurs: first the site itself, and then the exposed section or the window into the settlement stratigraphy.

Not only are sites being sliced in half or nearly so, but many smaller sites have been effectively flattened by land-leveling programs. Although this process can disperse the mound material and contained artifacts far and wide, it is possible to reconstruct the pre-destruction topography by the judicious use of satellite imagery, specifically that of the CORONA series that dates to the 1960s and early 1970s when site destruction was significantly less than in recent years. An excellent example of this process is illustrated by site AS 333 initially recorded in 2002 (fig. 2.13). Recently, this important mound, possessing a key occupational sequence spanning Amuq Phases E–F, was bulldozed for irrigation purposes. When AS 333 was first visited, it was impossible to determine the extent of damage to the site. Furthermore, a very dense concentration of cultural material was found in fields to the east of the mound (fig. 2.13A), which was originally recorded as a separate site. It is not possible today to determine the original size of either feature; however, analysis of CORONA imagery allowed us to verify that the mound has been cut to nearly half its original size (fig. 2.13B), and that the concentration of cultural material found in surrounding fields is not a separate site, but rather the remains of the mound spread over agricultural fields (fig. 2.13C).

If the destruction of sites is going on today it seems reasonable to assume that similar destruction, albeit at a much lower rate, was also going on in the past, with farmers enlarging their fields at the expense of neighboring mounds, or digging parts of the site away for soil. As a result of such processes one can therefore assume that sites in the lowlands must have suffered gradual attrition through time. Moreover, because mudbrick is normally the construction medium of choice in the lowlands, sites on the plain have a very different appearance than those of the uplands where well-cut stone blocks are employed for building construction. Consequently, following abandonment, sites on the plain will have experienced very different “life cycles,” with the former forming low mounds subject to gradual erosion and localized digging, whereas the latter will remain as proud, upstanding remains unless the constituent stones are removed by local people. The latter process is much more likely to take place near existing habitations than in isolated locations on the summits of the limestone uplands. Hence processes of human destruction will be a function of proximity to existing population centers.

Significant destruction has also been caused by the extension of towns. This is especially the case for Antakya which contains and largely obscures the city of Antioch, and for Reyhanlı/Yenişehir within which are some of the remains of ancient Imma (fig. 2.14; see also *Chapter One: The Amuq Valley Regional Projects*). In Antakya, urban development and the extension of suburbs, industrial estates, and other built up areas have had an enormous impact on the archaeological remains of the Hellenistic, Roman, Byzantine, and Islamic town. As a result, not only is the main area of Roman Antioch now buried by the modern town but also the outer suburbs of the Roman Byzantine town are suffering considerable attrition (Casana 2003a).

The Amuq Valley has long been known as a landscape of tells, but as described below, from the Seleucid period many of the surrounding uplands, upland valleys, and their fringing slopes were brought under cultivation. This process of dispersal of cultivation had probably already started by the Late Bronze Age, as is implied by cuneiform texts from Alalakh Level IV that refer to vineyards and their products (von Dassow 1997: 163). Although grain lands themselves are not stated explicitly, one can assume that these also existed and were on the plains nearest the settlement. Vines, on the other hand, are often confined to the hillslopes, and it is therefore reasonable to infer that the cultivation of hillslopes had already started in the second millennium B.C. Evidence for actual settlement on hillslopes is scant at this time, although it certainly increased considerably during the Seleucid, Roman, and Byzantine periods, as discussed below. As a result of this extension of settlement and cultivation, a significant degree of erosion occurred on the vulnerable slopes. Second, many sites that were once located on the slopes and hilltops have now suffered considerable degradation and erosion by later plowing so that they now consist of little more than dispersed scatters of sherds and

masonry. Erosion has been so intense that in some places the remaining topsoil is now reduced to less than 10 cm (fig. 2.8). Such erosion, despite its destructive effects, has not been uniform over the landscape. Therefore some areas (together with any sites) have been heavily degraded, whereas others remain as relatively intact residuals of former topsoil. As a result of this differential erosion, a good possibility remains that pre-Seleucid sites (if they were ever present) would be preserved, but only in select localities.

In addition to slope erosion caused by overland flow and sheet erosion, the construction of post-Roman field terraces in the fringing uplands appears to have dug away and dispersed the material culture on many sites. This process is particularly evident in the uplands where pre-existing sites are frequently only evident in the form of dispersed scatters of pottery or concentrations thereof scattered within terraced fields. Although such artifacts might be confused with field scatters (see above), the remains of actual habitation sites can be recognized as much denser concentrations of artifacts within the field terraces. In contrast, field scatters take the form of low-density distributions of sherds across large areas (usually over several terraces) and are therefore very difficult to define spatially.

Despite the foregoing pessimistic assessment, in certain parts of the Amuq region it is possible for “landscapes of survival” to remain. These constitute small areas, usually uplands, where later occupation and human activity have been relatively slight with the result that earlier landscape and settlement features remain in fairly good condition.

The best examples of survival are, of course, represented by standing structures. These range from the massive hulk of the Crusader castle of Bakras Kalesi (AS 247), near Beylan, through water mills at various states of repair (Tell Habeş [AS 227] and at Khirbet al-Tahoun [AS 202] near Yenişehir), the Roman aqueducts in Antakya, preserved Early Islamic house foundations at sites in the Amanus foothills near Ceylanlı (AS 287), as well as standing Late Roman/Byzantine buildings within Yenişehir (i.e., ancient Imma). Most of these structures are late (i.e., Medieval or Ottoman), but a few are as early as Roman/Byzantine in date. A more complete treatment of the standing structures in the region is given in Sinclair 1990.

## ENVIRONMENTAL CONTEXT OF PREHISTORIC SETTLEMENT

Information is still insufficient to provide a detailed description of the prehistoric environment of the Amuq Valley. Nevertheless, from borings taken in 1996<sup>15</sup> it is evident that during the Late Pleistocene (i.e., within an estimated time range of 15,000 to 11,000 B.P.) the northern part of the lake basin near Lake Gölbaşı was relatively dry. Following this, water levels appear to have risen, with the result that a lake or marsh formed, after which the northern part of the basin was again dry between roughly the Late Chalcolithic/Early Bronze Age and the first millennium B.C. (Wilkinson et al. 2001: 218). By this time the northern area was sufficiently dry to have developed a soil profile enriched with calcium carbonate over the pre-existing lake sediments (Wilkinson et al. 2001: 218). The lake bed was also colonized by trees (indicated by the carbonized root of a tree recovered from the core GPS 71). As in the main Lake of Antioch basin a “late lake” then developed after the first millennium B.C. and then continued thereafter until it was drained in the twentieth century A.D.

Evidence of moist conditions can also be inferred in the center of the plain, along the extrapolated course of the Afrin River, where a series of pools of water and marshes of uncertain size existed during the early to mid-Holocene (GPS 61: Wilkinson et al. 2001). Although the evidence for such pools remains somewhat murky and our interpretations must remain tentative, core GPS 61, taken through what had been the center of the Lake of Antioch in the twentieth century A.D., provides evidence for sand bodies, which possibly represent lake shoreline deposits, overlain by banded clays of probably lacustrine origin at and slightly later than 7,500 B.P. (uncalibrated but equivalent to ca. 6400 calibrated B.C.). Although it is not clear when these water bodies disappeared, certainly by 3000 B.C. when AS 181 developed, the lake bed was mainly dry. Additional evidence for the presence of a significant body of water in the central plain derives from bones of very large catfish recovered from the Tell Kurdu (AS 94) excavations. The presence of these strongly suggests (not surprisingly) that the occupied areas of the Amuq Phase D/E settlement (i.e., of the late sixth- and early fifth-millennia B.C. date) were sufficiently close to large bodies of water for the inhabitants to catch numerous large catfish. But whether these waters were sluggish rivers, marshes, or more extensive lakes is as yet unclear.

Although the actual course of the Early Holocene Afrin River is not known, gravels along the Afrin drain southwest of Tell Kurdu (AS 94) suggest that a Pleistocene course of the Afrin passed between Tell Kurdu and Tell ‘Imar al-Jadid al-Sharqi (AS 101), and it is therefore quite possible that the Early Holocene river followed this course as well.

---

15. Team directed by Henk Woldring of Groningen University, Netherlands.

The rather ambiguous record from the Lake of Antioch is now complemented by a sequence from the Rouj basin located a short distance to the south of the Amuq in Syria. Here lake beds demonstrate the existence of a Late Pleistocene or Early Holocene saline lake (before 7,000 B.P. uncalibrated) after which a freshwater Early Holocene lake was initiated (start date around 6,800–6,900 B.P. uncalibrated radiocarbon years). This lake then achieved its maximum extent between ca. 3,500 and 500 B.P. (Akahane 2003: 21–22), after which time the lake dwindled in size. Although these fluctuations in lake level are thought by Sadayuki Akahane to have been caused solely by changes in global climate (*ibid.*, p. 22), the significant presence of small pieces of charcoal throughout the dark gray silts (ca. 3500 B.C.) suggest that during at least part of the sequence a significant impact of human activity on the vegetation record probably also occurred, and this in turn could have influenced the amount of runoff reaching the basin.

Because of the meager recovery of pollen from the 1996 cores in the Lake of Antioch basin, little can be said about the vegetation history of the Amuq Valley during the Holocene. Fortunately, recent studies from neighboring regions shed light on the development of the Holocene environment of the Amuq Valley. For example, Gordon Hillman's study of Late Glacial and Early Holocene vegetation in the northwest Levant (Moore et al. 2000: 49–84) places the Ghab and Amuq Valleys within the zone of forest and fairly dense oak-rosacea woodland around 9,000 B.P. (i.e., during the Pre-pottery Neolithic B). This conclusion is not contradicted by the recently analyzed pollen core from the Ghab Valley (Yasuda et al. 2000) that recognizes a maximum development of oak between 12,500 and 9,000 B.P. (Yasuda et al. 2000: zone 2), after which the woodland canopy was opened up considerably as demonstrated by a dramatic decline in deciduous oak pollen and a commensurate increase in charcoal. According to their radiocarbon chronology, by Pre-pottery Neolithic B times the Ghab Plain had experienced a considerable opening up of the woodland cover. In the Amuq Valley, by the time of the ceramic Neolithic (Amuq Phases A–B), when a significant scatter of small settlements already existed, the Amuq Valley must have included significant areas of cleared and settled land. As noted above, the floor of the plain must also have included patches of wetland, marsh, and perhaps even a lake at this time, although by the late fourth and early third millennium B.C. when site AS 181 (fig. 2.4) was occupied the Lake of Antioch itself was either not present or was very restricted in size. Indeed, if the Amuq Valley was anything like the Ghab Plain to the south, it would seem that clearance of woodland started as early as the early Pre-pottery Neolithic B. By around 3000 B.C. (i.e., Amuq Phase G) the Ghab Plain (or its immediate area) appears to have lost much of its deciduous oak woodland. *Olea* (olive) pollen became significant during the Pre-pottery Neolithic A and attained maximum quantities during the Early, Middle, and Late Bronze Age, Iron Age, and Roman periods (Yasuda et al. 2000: 131). Yoshinori Yasuda and colleagues report a large increase in *Typha* representative of reedswamp after ca. 4,910 B.P. (uncalibrated). This increase is interpreted as representing a drop in lake level from an open lake to reedswamp, an interpretation that tallies with the evidence that the Amuq basin was dry during Amuq Phase G times (i.e., at AS 181).

Overall, the Ghab pollen diagram, which is anchored by nine radiocarbon determinations, shows a clear progression from a well-wooded landscape before 10,000 B.P. (uncalibrated), a significant impact of clearance between 10,000 and 5,000 B.P., and then from the Early Bronze Age on a significantly more cultural landscape in which olive culture attained its maximum scale during the second and first millennia B.C. as well as the first millennium A.D. Unlike the Lake Kinneret core in the southern Levant that shows a marked bulge in olive culture during the Roman/Byzantine period, no such peak occurred in the Ghab Valley despite the massive expansion of settlement in the neighboring massifs during the Seleucid, Roman, and Byzantine periods. Why this fails to show up is not clear, but it is quite evident that by the time that Tell Atchana (AS 136) and Tell Ta'ayinat (AS 126) were occupied during the second and first millennia B.C., the landscape must have been significantly altered by the hand of humans. Although it is not possible to reconstruct the Early Holocene paleogeography of the Amuq with any accuracy, it is quite clear that the environment was verdant with an abundance of woodland (especially on the hills and hillslopes), and a patchwork of woodland, settled clearings, and marshes and/or open bodies of water on the plain itself.

## PATTERNS OF SETTLEMENT THROUGH TIME

### *Paleolithic*

In contrast to the upper Orontes Valley in Syria where a long sequence of Paleolithic occupation has been documented (Sanlaville et al. 1993), to the north in the Sakçegözü area where Lower and Middle Paleolithic sites have been recorded (Garrard et al. 1996), and at Üçağızlı Cave on the coast of the Hatay (Khun et al. 1999), the Amuq has produced a relatively meager record of early lithic occupations. Of these cultural records, the closest to the Amuq occurs at the sites of Üçağızlı Cave and Kanal, where the material culture falls in the Upper Paleolithic (ca. 40,000 B.P.), a pe-

riod when the sea level must have been relatively high before its lowest stand during the Late Glacial Maximum (Kayan 1999: fig. 4). Unfortunately the Hatay sequences have only been found in protected caves or in coastal localities, rather than in the form of open air sites that might be recovered by archaeological surveys inland. For example, Epipaleolithic remains at “O’Brien’s Cave” in the Wadi al-Hammam have been confirmed by Isin Yalçinkaya and colleagues (O’Brien 1933; Yalçinkaya et al. 1999).

Nevertheless, recent surveys in 2002 by Merih Erek in conjunction with the Amuq Valley Regional Projects show that certain upland areas exhibit concentrations of Paleolithic material dating back to the Middle and perhaps even the Lower Paleolithic. Most commonly, evidence of Paleolithic human activity is found in the form of stray lithic artifacts scattered on hillslopes of the Jebel al-Aqra and Kurt Dağ ranges, as well as in the foothills of the Amanus Mountains. Only rarely has this “lithic rain” been found at high densities, but at AS 274 lithics occur at a sufficient density to warrant designation as a site. The projects also began a systematic survey of caves throughout the region in hopes of finding more coherent evidence of Paleolithic occupation. Most caves identified to date have either been deeply infilled by later sediments or damaged by their conversion into tombs during the Roman and Late Roman periods. Nevertheless, the presence of stray lithic artifacts throughout upland landscapes, as well as occasional concentrations around both caves and in surface collections, suggests a much greater activity in the Paleolithic than is represented by our survey data.

Perhaps the most coherent evidence of Paleolithic activity is found within the Ilıca Valley, which drains part of the Jebel al-Aqra. At this marginal floodplain location, a large assemblage of Paleolithic flakes was noted in gravels of a Late Pleistocene alluvial fan debouching from the main valley (the Unit 11 gravels; see Yener et al. 2000b: fig. 2a). While the exposed section, located adjacent to an Early Islamic/Ottoman water mill below Tell Habeş (AS 227), was first noted in 1998, high-energy flooding in the spring of 2001 and 2002 exposed a 100 m long section of the Pleistocene deposits (fig. 2.5), allowing a much larger sample of lithics to be collected. In addition, intensive survey recovered a significant number of Paleolithic artifacts scattered on nearby hillsides, especially in collections from Roman and later sites, as at AS 291, AS 292, and AS 294. While the source of the lithics, found both in the section and on hillsides, remains unknown and may be buried below later sediments on the valley floor, a number of infilled caves have been noted in the valley that offer potential sites for future investigations.

#### *Epipaleolithic and Pre-pottery Neolithic*

Occupations pertaining to the transition to agriculture are frustratingly lacking, and during the original Amuq project, pre-pottery Neolithic artifacts were rare. Nevertheless, an Aswad type point was recovered from Tell Dhahab (AS 177), but in an Amuq Phase G context (Braidwood and Braidwood 1960: figs. 246, 347). In contrast to the dearth of Pre-pottery Neolithic B sites in the Amuq, the recognition of at least four Pre-pottery Neolithic B occupations in the area of Sakçegözü (Garrard et al. 1996: 62–71) and significant Pre-pottery Neolithic B occupations at Tell Ain al-Kerkh in the Wadi Rouj (Arimura in Iwasaki and Tsunaki 2003: 75) are noteworthy. This dearth might be due to (a) burial of early sites below later natural sediments, (b) burial below later cultural deposits, particularly large mounds, or (c) the fact that the main occupations of this time period were on the surrounding uplands. In reference to (a), the presence of the Çakal Tepe sedimentary window provides an ideal view into the earlier levels of the plain, but unfortunately, no pre-pottery Neolithic sites were found in this area either; in all other areas, however, the plain surface is buried below sedimentary accumulations and therefore in such places one would expect the pre-pottery Neolithic sites to be obscured. Burial below later occupation layers is probably a significant factor because the numerous large tells in the region could easily have totally obscured early occupations. The pre-pottery Neolithic occupation at Gritille on the Turkish Euphrates River springs to mind as an example of the complete obscuring of Early Neolithic occupation by later occupations (Voigt 1985), and numerous equivalent situations in the Amuq Valley exist where pre-pottery occupations might lie hidden. Interestingly, despite two seasons of intensive survey on the uplands surrounding the plain, we have recovered no examples of pre-pottery Neolithic sites, except perhaps one small upland lithic scatter at site AS 274.

Indirect evidence for significant pre-pottery Neolithic occupation in the region comes from the recently published Ghab Valley pollen core (Yasuda et al. 2000). This evidence shows that in the southern Ghab Valley 60–70 km to the south of the Amuq Valley the pollen of deciduous oak decreased dramatically around the beginning of the Pre-pottery Neolithic B matched by a strong increase in charcoal fragments within the core sediments (Yasuda et al. 2000: 131). Whether this episode represents the oldest record of large-scale anthropogenic forest clearance in the world or not, it appears that the valley floor deciduous oak forest underwent a significant clearance during the Early Holocene. This

evidence for early clearance of valley floor woodland, when viewed together with a considerable degree of evidence for lowland settlement in the Amuq Valley in Amuq Phase A/B times strongly suggests that Early Neolithic communities must have settled on the floor of the plain. Part of the problem of lack of recognition of such early phases of settlement may also lie with the lithic assemblages themselves. Although a range of projectile points (e.g., Byblos points) are known as the primary diagnostic tools for this period, it is possible that where such distinctive lithics are lacking, less diagnostic tools would easily be lost below large occupations. Moreover, in the northern Balikh Valley in Syria, for example, where pre-pottery Neolithic sites are quite common and occur in the form of true mounds, they exhibit rather sparse surface scatters of lithics, with heavily burnt stones being more characteristic. In the Amuq Valley, if such mounds with their sparse lithic scatters and burnt flints were buried below later Bronze Age occupations, it is possible that they could have been missed by the surveys conducted thus far.

#### *Early Prehistoric: Amuq Phases A–D/E*

In addition to normal tells or *höyüks*, the Amuq Valley contains many small prehistoric mounds of around 1 ha area and 1–3 m in height. Tell al-Rasm (AS 80) and Dutlu Höyük (AS 200), predominantly dating to Amuq Phases A–C (i.e., dark-faced burnished ware sites), are typical of these small prehistoric mounds. In addition to forming low mounds, such occupations are likely to form the core of many larger mounds that continued to be occupied into the Bronze Age and later. It is therefore very likely that the number of prehistoric sites indicated in figure 2.15 is likely to be an underestimate of the total number of prehistoric settlements.

In terms of the pattern of settlement, the Amuq sequence commences with the early ceramic phases (fig. 2.15). As defined by Braidwood and Braidwood (1960) settlement starts in Amuq Phase A, although earlier ceramic Neolithic horizons have now been defined at Tell Ain al-Kerkh in the Wadi Rouj just to the south in Syria (Iwasaki et al. 1995). As was noted in Yener et al. 2000a, the major center of prehistoric settlement appears to have been toward the center of the plain. This center is represented by a series of large sites that were occupied according to the following sequence: first by the concentration of settlement at Hasanuşağı (AS 93) which corresponds to Amuq Phases A and B, second by the occupation at Tell Kurdu (AS 94), in the range Amuq Phases C–E, and third by occupation at the 10–15 ha site of Tell ‘Imar al-Jadid al-Sharqi (AS 101; Amuq Phases E–G).

It was evident already in the 2000 report that a marked east–west alignment of early sites occurred along an extrapolated line of the Afrin River, or along the secondary channel known as the Kızıl İrk. This alignment has now been reinforced by the discovery of additional sites at AS 290 (near Çakal Tepe) and AS 333 to the west of Çakal Tepe (figs. 2.13, 2.15) by the analysis of CORONA images. The former site includes a strong assemblage of dark-faced burnished ware, but its chronological range may extend into the pre-Amuq Phase A of Tell al-Kherkh. On the other hand AS 333 was occupied during Amuq Phases E and F and perhaps fills in the gap between the Amuq Phase E and Phase F occupations of Tell Kurdu (AS 94) and Tell ‘Imar al-Jadid al-Sharqi (AS 101).

Intensive sample surveys in the hills around the Amuq have failed thus far to find any evidence for pre-Amuq Phase F occupation, and the only evidence for significant Amuq Phase E settlement in the uplands comes from Karaca Khirbet ‘Ali (AS 168) to the east and a site along the Beylan Pass area (AS 246 [Çakallı Karakol]) to the west.<sup>16</sup> It therefore appears that settlement in the tributary valleys and neighboring uplands had hardly commenced during Amuq Phases A–E. If such settlement had been present, however, the evidence for such occupations may lie buried beneath occasional tells in the upland valleys; alternatively prehistoric settlement, if it occurred on hillslopes, has either been eroded away or obscured by the products of that erosion.

It is probably of some significance that the earliest evidence for occupation in the uplands is at Karaca Khirbet ‘Ali (AS 168) and Çakallı Karakol (AS 246), both of which appear to have been located on route systems. The former site of Karaca Khirbet ‘Ali is located where a long-distance route from inland Syria enters the plain from the east. Conversely the latter site (AS 246) is positioned where a major route would be expected to leave the Amuq leading toward the Beylan Pass to the west. Although Braidwood speculated that a route over the Amanus Mountains in the Beylan Pass must have existed “from earliest times,” until the discovery of this site in the 2002 field season no definitive indicators pointed to settlement along this route before the Seleucid period. Similarly, as a result of the Orontes Delta survey it now appears that settlement along the Orontes Valley downstream of Antakya can be traced back to the earlier Chalcolithic period (OS 47 in *Chapter Three: The Orontes Delta Survey*). From the location of these sites on major exits and entrances to the

16. Painted Chalcolithic pottery from AS 246 includes wares of Ubaid or perhaps Halaf related types.

Amuq Valley it can now be suggested that route systems may have structured settlement as early as the Ubaid period (Amuq Phase E) or somewhat earlier.

Overall a number of different factors must have influenced the distribution of prehistoric settlement on the plain. These included:

- Location of routes through the plain (specifically with respect to major river gaps and passes).
- Alignments of major rivers and water courses.
- Site preservation, specifically the increased likelihood of site survival within certain locations, as was the case within the Çakal Tepe sedimentary window. The absence of long-term sedentary settlement on uplands and in upland valleys may reflect the fact that the uplands surrounding the plain continued to be heavily wooded until the second millennium B.C. In many localities this situation may have prevailed until the Seleucid period, when a major incursion into the wooded uplands took place.

It is difficult to say with confidence whether settlements were distributed within the areas of arable potential and away from marshes, or vice versa, but it is likely that prehistoric communities did benefit economically from being located close to a patchwork of bodies of water and dry cultivable land.

### *Bronze and Iron Age Settlement: Landscape of Tells*

As is the case in many plains in the Near East, the dominant form of ancient settlement in the Amuq Valley appears to be the tell (fig. 2.16). Most take the form of the classic, high, multi-period mound whose truncated conical shape may partly have been determined by an outer wall. This structure must have served not only to keep potential attackers out, but also had the effect of keeping unruly sediments in.

Unfortunately the bulky and permanent nature of tells also provided problems for survey and survey interpretation. During the re-survey of the plain from 1995 to 1998, the team was confronted by a number of problems as follows:

- Many sites had become partly shrouded by a dense mat of grass or trees, and in some cases irrigated crops, particularly cotton. This inhibited the recovery of diagnostic pottery and resulted in rather small collections on some sites.
- Unlike in the semi-arid parts of northern Syria and northern Iraq, where Early and Middle Bronze Age layers crop out on the surface of the tell, in the Amuq such horizons are often buried beneath a thick overburden of Iron Age and later levels. Again this can significantly depress the size of collections from pre-Iron Age levels.
- Some sites have become obscured by the houses of modern villages.

All three factors resulted in the earlier occupation levels being obscured, and inhibited the size of collections. As a result of assiduous collection strategies, it was possible to secure reasonable collections from most sites; nevertheless, the amount of ground cover obscuring buildings and later occupations did raise questions about the validity of some of our counts. Consequently, for this report it was felt that rather than produce a conventional series of period-by-period settlement maps, it would be more realistic to use the combined data sets at hand to identify broad phases in the development of settlement landscapes. Specifically, this entailed recognizing episodes of settlement stability on the one hand, versus periods of settlement flux and dispersal (usually into smaller sites) on the other.

A long tradition for survey reports to present a series of site distribution maps is based upon rigidly defined ceramic types in order to display settlement trends, and such maps have appeared in earlier publications of the Amuq survey, both those of Braidwood (1937) and the Amuq Valley Regional Projects (Yener et al. 2000b). For those periods when settlement was nucleated on tell sites the problems involved in producing individual phase-specific maps are, however, particularly acute owing to the overall long-term stability of settlement at those sites. The situation in which early occupations are deeply buried by later settlements is well illustrated at the large mound of Tell Salihyiah (AS 129), where a large quantity of ceramics were collected. Of these, about 90% of the collection dates to the Iron Age, this being the last major phase of settlement at the site. The historically known Middle and Late Bronze Age occupation at the site is evidenced by less than 2% of the collection, and a small quantity of Early Bronze Age material is similarly in evidence. In fact, only two second-millennium sites in the Amuq Valley appear to be without major Iron Age and later occupations overlying them: one at Tell Atchana (AS 136) and the other at the small site of AS 133.

The problem of site burial is compounded by the fact that ceramics of some phases are much more easily recognized and more visible on the surface, resulting in some phases being more fully represented than others. For example,

during the mid-third-millennium, red-black burnished ware can constitute as much as 60% of the total assemblage, and its bright colors and distinctive surface treatment make it easy to spot and identify with relative certainty. In contrast, during the Late Bronze Age, 80–90% of the assemblage is dominated by plain, sandy, pink to orange buff wares, the so-called “standard wares” of Tell Afis. Many of the types have very long temporal ranges, throughout the second millennium, meaning that to identify a Late Bronze Age occupation requires a large collection of types, preferably including some very rare painted or imported wares. Given the radical difference in overall visibility and ease of identification between the two periods, we must expect that the Late Bronze Age is underrepresented compared to the mid-third millennium.

The diminished visibility of earlier levels could be overcome if adequate large collections were available from all the sites in the Amuq survey. This was not always possible, however, because of the obscuring factors noted above. Finally, many tells are situated in very sensitive areas along the Syrian border and others have had military installations built on top of them, meaning that access has been blocked entirely and no collections have been made. Taken together, the problems of access and visibility have resulted in many tells yielding a relatively meager survey record; as a result the periodizations of such sites are difficult to compare with those of sites that have much larger surface collections.

Despite these difficulties, we are able to make some general observations from the available data (see Casana 2003b). The settlement system appears to have been fairly stable from at least the Early Bronze Age until the Late Iron Age, as most of the largest sites appear to have been occupied continuously through the period, and most small sites were occupied at some time during most major phases. Throughout the Bronze and Iron Ages, the largest site, and probably the capital of the valley, was maintained at either Tell Ta‘yinat (AS 126) or Tell Atchana (AS 136), shifting back and forth between the two mounds over time. These two tells can therefore be thought of representing a single community occupying “twin mounds” only a few hundred meters apart. What is significant is that over the entire Bronze and Iron Age, the largest site maintained the same regional position in the Amuq Valley.

Figure 2.17 shows the size distribution of major and minor tells on the plain as well as within selected tributary valleys; the overall scale of these tells is given by height-to-diameter ratios. Overall, the distinct and separate group of sites with elevations > 20 m and surface areas > ca. 5 ha represents the multi-period mounds. From our preliminary survey collections these would appear to be sites whose mass largely accumulated during the third, second, and first millennia B.C.

Despite the above uncertainties, the survey collections were sufficiently well dated to demonstrate that during the third and second millennia B.C. most inhabitants of the plain as well as the tributary valleys lived within nucleated tell-based communities that were surrounded by open space. As suggested by Bonnie Magness-Gardiner (1994), cuneiform texts from Tell Atchana (AS 136) indicate that houses tended to be situated by other houses, rather than within fields, a point that is backed up by the evidence of both sample and full-coverage surveys. The textual data imply therefore that settlements mainly comprised concentrations of houses that would have given rise to nucleated tell-type settlements rather than being dispersed across the landscape. It is difficult to describe precisely how such tells might have appeared when occupied, but the particularly distinctive site of Tell Hasanuşağı (Yerkuyu, Yurt Höyük; AS 99) allows us to imagine how they might have appeared when occupied. This site, which measures ca. 28 m in height and 350 × 200 m along its long and short axes, has an occupation extending through the third, second, and first millennia B.C. and later. This site’s morphology is well illustrated by the CORONA image that shows a distinctive surrounding moat (fig. 2.18). A remarkably similar site has been recorded on the bronze bands that decorate the Balawat Gates, which document the campaigns of Shalmaneser III through western Syria. On these relief decorations, the local inhabitants of the land of Unqi (i.e., the Amuq) are seen bearing tribute away from an impressively fortified tell site (King 1915). This “settlement of the Unqis” appears to be surrounded by water, which on closer inspection can be seen to form a moat similar to that at Hasanuşağı. The presence of such a moat, although not unique in the region, is certainly unusual, and the relief on the Balawat Gates (fig. 2.19) gives a clear indication of how the sites would have appeared from a distance to be heavily defended. Clearly the presence of the monumental outer wall would not only have contributed to the debris of the mound, but also must have acted as a retaining wall that inhibited the spread of settlement away from the main mound.

The tell sites of the Bronze and Iron Age occur almost exclusively in lowland plains and river valleys of the northern Levant. Typically, when such settlements are found in hilly regions, as in the Jebel al-Aqra, they are confined to the floors of side valleys and are usually located in the widest, most agriculturally productive part of those valleys. Moreover, tells tended to be rather regularly spaced at 2–3 km intervals along the axes of tributary valleys, but they did not occur beyond the point where valleys become deeply dissected. These locational preferences are probably related



to the fact that most settlements were largely self-sufficient agricultural producers (Schloen 2001) so that for each to sustain its population a minimum amount of arable land was required. In fact, the only tell site discovered to date that does not fit this locational pattern is the very unusual site of Çakallı Karakol (AS 246) on the Beylan Pass (see above).

It would be misleading, though, to caricature all Bronze and Iron Age sites on the plain as tells, and the sites on the plain included a range of morphologies. Some, such as Daud Paşa (AS 164), measuring about  $160 \times 90 \times 32$  m high, in the third millennium B.C. expanded beyond the confines of the tell, with the result that small suburbs were recognizable in the form of artifact and building debris scattered through the outlying fields. This settlement distribution is similar to the pattern around the site of Titriş Höyük near Urfa (Algaze et al. 1992) that showed extensive low mounds of foundation stones and ceramics of mid-third-millennium B.C. date around the main tell and its outer town. A lower town of more substantial scale occurred during the Middle and Late Bronze Age at Karatepe (AS 86), although significant parts of this were unfortunately removed as a result of earth-moving activities designed to enlarge the area of irrigated cotton. On the other hand, small single-period settlements of the Bronze Age were exceedingly rare and it appears that most sites of the third and second millennia B.C. were nucleated settlements, a factor that resulted in the development of tells of varying sizes and degrees of prominence. Overall, the multi-period truncated conical tell is particularly characteristic of the Bronze and Iron Age sites in the Amuq Valley. Unlike areas farther east in northern Syria and Iraq, where (at the risk of over simplification) most tells were occupied in the Bronze Age and most Bronze Age sites are tells, in the Amuq Valley tells appear to be generally associated with Bronze and Iron Age occupation. Settlement nucleation started earlier, however, and it is possible to recognize the development of large, nucleated mounds in excess of 10–15 ha as early as the fifth millennium B.C. Tell ‘Imar al-Jadid al-Sharqi (AS 101) and Tell Kurdu (AS 94) are the best examples of large prehistoric nucleated settlements. Because occasional small dispersed settlements also occur at these times (Amuq Phases C–G) these prehistoric settlement patterns cannot be described as fully nucleated. By Amuq Phase E the largest site recognized in the plain after Tell Kurdu was Tell ‘Imar al-Jadid al-Sharqi, located immediately to the south of Tell Kurdu. Tell ‘Imar al-Jadid al-Sharqi appears to have continued as a major center during Amuq Phase F, as well as Phase G, at which time at least one other major settlement existed at Karacank (AS 92; for further details of third-millennium B.C. settlement, see Yener et al. 2000b).

During those periods when settlement occurred predominantly in the form of tells, it appears that most of the community was concentrated within a central settlement, perhaps for reasons of defense or to be close to their kin group or community. In addition, to allow access to communally distributed fields (akin to the *musha‘*-system of the Levant), it may have been necessary for everyone to live within the village. This is because it would have been impossible for any individual to establish a new habitation on the communally managed fields because all fields would have been redistributed to different families every year (as in the *musha‘*-system: see Granott 1952).

If the sites are ordered according to their size, a rank-size curve results as indicated in figure 2.20. At the apex of the settlement hierarchy are the main sites of Tell Atchana (AS 136) and Tell Ta‘yinat (AS 126), below which occurs a series of lesser centers. Excavations at two of these sites, Chatal Höyük (AS 167) and Tell al-Judaidah (AS 176), show that they were almost continuously occupied from the Early Bronze Age through the Iron Age and later (table 2.1). Survey collections from all of the other secondary tells, Bozhöyük (AS 4), Yurt Höyük (Tell Hasanuşağı; AS 99), Karatepe (AS 26), Tell Salihyyah (AS 129), and others, suggest that they also were occupied over the same period. In this way, all the major tells in the Amuq Valley, including the capital and all secondary centers, seem to have formed stable loci of settlement.

At the bottom of the size hierarchy (fig. 2.20) are about ninety other Bronze and Iron Age tells that range in size from about 1 to 5 ha and are typically 2–10 m in height. Not all these sites were occupied continuously for the entire period, and at some sites a considerable degree of abandonment and resettlement is evident. For example, Tell Bahlılah (AS 133) produced a large collection of third- and second-millennium material, but no Iron Age. On the other hand at many large tells for which gaps in occupation are evident from existing survey collections, further intensive and subjective re-collection has yielded evidence of at least some occupation during all of the main phases. For example, at Tarla Höyük (AS 252) initial collection in 2001 produced a strong assemblage of second- and first-millennium materials, but nothing that could be securely dated to the third millennium. When the site was revisited in 2002 and carefully examined, one piece of red-black burnished ware was found, suggesting that the site was occupied during the second quarter of the third millennium B.C.

Frequently the smaller tells often form satellites spaced at regular intervals around larger secondary tells, as is evident in the area of Tell Salihyyah (fig. 2.21). This organization implies some stability in the overall structure of regional settlement in the Bronze and Iron Age, even at the smaller sites. Given these trends in the data, we can infer that most tell sites in the Amuq Valley were occupied at some time during each of the major phases between the Early

Bronze Age and the Iron Age; nevertheless, without additional intensive collection under conditions of minimal surface cover, it is impossible to provide the detailed occupation sequences of such tells.

This tell-based pattern of settlement then started to break down during the Iron Age. For this period, detailed examination of the survey collections by Shin'ichi Nishiyama suggests some degree of dispersal into smaller rural settlements during the Iron Age.<sup>17</sup> Although this was by no means as clear as in areas of Assyrian settlement farther to the east in northern Syria and Iraq, it does appear to represent the initial stages of a process of settlement dispersal that became much more evident in the Amuq during the Seleucid, Roman, Byzantine, and Islamic periods.

#### *Dispersed Settlement of Seleucid and Later Times*

Beginning in the late first millennium B.C., the structure of settlement in the Amuq Valley was radically transformed as the tell sites that had been the exclusive loci of settlement for at least 3,000 years were, in part, abandoned in favor of a much more dispersed pattern of settlement, dominated by large numbers of small sites spread across the plain and into surrounding uplands (fig. 2.22). Between the late first millennium B.C. and the mid-first millennium A.D., settlement in the Amuq Valley reached its highest density, both in terms of the number of settlements as well as the overall occupied area of those sites. During the peak of this phase of settlement in the Late Roman and Early Byzantine periods the region was probably more densely occupied than it is today. The transition to this phase of settlement represents the single most profound transformation in the overall structure of settlement in the region's history. It is somewhat ironic that in his original survey of the plain, Braidwood (1937) found relatively little evidence of settlement in the Late Roman and Early Byzantine periods (Amuq Phases S–T) with the exception of a few large sites such as Tell Sultan (AS 32). He found the paucity of settlement perplexing because considering the size of Antioch in the period, one might have expected very dense occupation of its agricultural hinterland. The more recent results by the Amuq Valley Regional Projects have demonstrated that the low visibility of much Roman and Late Roman settlement to Braidwood was due to the fact that his survey was mainly concerned with recording tell sites, whereas the later periods are dominated instead by hundreds of small, low mounds or flat sites. Many of these settlements are less than one hectare in size with little or no topographic relief, visible today only as scatters of sherds, tile, and stone. The small size and low visibility of these sites makes them far more difficult to locate using low-intensity survey methods and so have been typically underrepresented in large-area, full-coverage surveys like Braidwood's. However, the projects have utilized more intensive survey methods and in so doing has provided a very different picture of Seleucid, Roman, and Late Roman settlement than was previously recognized in the Amuq Valley.

In the plain, high-resolution CORONA satellite imagery has proved to be a valuable tool in locating small, dispersed archaeological settlement sites and other landscape features of this period. For example, in the region around Tell Ta'yinat (AS 126) and Tell Atchana (AS 136) in the southern plain, all Early Bronze Age through Iron Age occupation is concentrated at these two large tell sites, as discussed above. However, examination of a CORONA image of the region reveals the location of many other very small sites in the vicinity (fig. 2.3). To emphasize the difficulty in discovering these kinds of sites without the aid of satellite imagery, several sites, including AS 249, 250, and 251, are within several hundred meters of the two large tells, Tell Ta'yinat and Tell Atchana, both of which were excavated for many years, and yet none of the sites were previously recorded. The earliest of these small sites dates to the Seleucid period (AS 249) and all were occupied during the Roman and Late Roman periods. Examination of CORONA imagery reveals the location of about 100 other similar small sites throughout the Amuq Valley, and while only a sample has been visited, all that have been recorded date to the Seleucid, Roman, and Late Roman/Byzantine periods.

This very characteristic landscape of small, dispersed sites is not unique to the Amuq Valley but rather can be recognized over a wide area of the Levant and neighboring areas. Similar patterns of settlement have been recorded throughout the Levant (Wilkinson 2003), as well as in the Jabbul Plain to the east of Aleppo (Schwartz et al. 2000), the Balikh Valley (Bartl 1996), the nearby limestone hills in southern Syria (Tchalenko 1953–1958; Tate 1997), and the Turkish Euphrates River (Algaze et al. 1994; Wilkinson 1990).

While these small, dispersed sites were very common, not all contemporary occupation was located away from traditional tell sites. Many tells have been found to have significant occupations that continue through the first half of the first millennium A.D. At some sites, such as Tell Habeş (AS 227), the late occupations were large by comparison to earlier Bronze and Iron Age components. However, more typically, Hellenistic through Byzantine occupations were small in

---

17. A report on the Iron Age settlement by Shin'ichi Nishiyama is forthcoming.

comparison to the larger Bronze and Iron Age components at tell sites. The reduced size of late period tell settlement is well illustrated by excavations at Chatal Höyük (AS 167) and Tell al-Judaïdah (AS 176) (Haines 1971), where large walled Iron Age cities were replaced by very small villages in the Roman and Byzantine periods. Surveys of some other major tell sites, such as Tell Salihyyah (AS 129) and Tell Hasanuşağı (Yerkuyu, Yurt Höyük) (AS 99), have sometimes produced some Seleucid through Byzantine pottery, however at these and other major tells the later assemblages are dwarfed by much larger quantities of Iron Age and earlier materials. Such sites probably represent reduced late period occupations like those at Chatal Höyük and Tell al-Judaïdah.

Recent survey work has shown that elsewhere in the Amuq evidence of late period settlement on tells can be even more elusive. It is sometimes the case that no Roman or Byzantine material appears in an initial survey of a given tell site. At any tell that has been intensively surveyed, however, at least some small indication of later settlement has been found. For instance, at Tell Atchana (AS 136) excavations recorded no architectural features dating to after the Late Bronze Age (Woolley 1955) and no later phases were noted by either Braidwood or the Amuq Valley Regional Projects. However, a recent systematic surface collection of the site conducted in preparation for excavations found a dozen Late Roman sherds and roof tiles on the mound (*Chapter Six: Surface Ceramics, Off-Site Survey, and Floodplain Development at Tell Atchana [Alalakh]*). Similarly, at the Chalcolithic site of Tell Kurdu (AS 94), excavations revealed no evidence of later architecture (Yener et al. 2000a). However, several roof tiles and Late Roman sherds were found on the site and in surrounding fields, while excavations recovered one seventh-century A.D. coin. These low-density scatters appear to be common on mounds in the Amuq and at least suggest the presence of isolated farmsteads or buildings on virtually every tell at sometime during the Roman/Byzantine period.

In the highlands surrounding the Amuq Valley the contrast between Bronze and Iron Age settlement and that of the Roman period is even greater. Surveys of selected areas in the Jebel al-Aqra have shown that a rapid movement of settlements into the hills began in the late first millennium B.C. and by the Late Roman period the uplands were densely settled. In stark contrast to the preceding three millennia of occupation that was concentrated at a relatively small number of nucleated tell sites, Seleucid, Roman, and Late Roman settlements were located throughout valley floors, on rolling hillsides, and on highest hilltop locations. In the Jebel al-Aqra the dramatic and sudden movement away from tells can be dated thanks to the availability of fine-grained ceramic typologies for standardized wares of the Seleucid and Roman periods. Analysis of finds shows that occupation at tell sites continued as late as the fifth or even fourth century B.C., but that by the third century B.C. evidence indicates occupation at about half of the upland, dispersed sites (fig. 2.23). By the first or second century A.D., nearly all of the sites indicated in figures 2.22 and 2.23 were occupied (Casana 2003b). The rapid dispersal of settlement into the hills of the Jebel al-Aqra was probably related to an extension of farming in the region, for the production of olive oil, grapes, grains, and other crops destined to be sold at the urban markets of nearby Antioch. In fact, upland farming practices are explicitly mentioned by Libanius, a resident of Antioch, who in A.D. 356 reports:

We have hills either in our own territory or around it; some bisect the plain, others with a broad sweep enclose the entrance and bar it in at the outer limits. Some of them differ in appearance from the level plains for they are raised aloft, yet they vie in fertility with the lands at their feet. Farmers work there, in land no less desirable, driving their plows to the summits. In short, whatever the level plain alone produces elsewhere, here is produced by the mountain districts also (Libanius, *Orations* 11.22).

Unfortunately, because of differences in topography, soil type, and ground cover, archaeological sites in upland areas do not appear on CORONA imagery as they do in the plain, and therefore we have employed more traditional intensive methodologies in those areas (as described above). To date, the survey has only covered about 20–30% of selected valleys in the Jebel al-Aqra, and these areas have been surveyed in only 100 m pedestrian transects. This suggests that while the number and density of settlement shown in figure 2.23b is high, in antiquity there were probably an even greater number of settlements. When seen in relation to the distribution of settlements in the Massif Calcaire of Syria, just to the east of the Jebel al-Aqra, it is clear that the Roman/Byzantine settlements in the Amuq Valley are part of the same settlement system as the so-called “dead cities.” Contrary to many discussions in the past that have treated the dead cities as though they were historically unique and geographically isolated, they are rather simply the best preserved and therefore most obvious features within a much more extensive settled landscape of which the Amuq Valley is a part (Ball 2000: 234–35). Unlike the limestone buildings of the Massif Calcaire, settlements that were located in the lowland plains and the western uplands were constructed primarily of mudbrick and wood and are therefore evidenced today only by scatters of artifacts and building debris.

The Amanus Mountains to the west of the plain present a rather different problem for archaeological survey owing to the rough, rocky terrain and frequent dense forest cover. However, transects have been made into several drainage

systems of the Amanus Mountains including the area around Kisecik to the west of Antioch, the foothill zone around Serinyol, the Bakras-Beylan corridor, the Kırıkhan Valley, and the area north of Ceylanlı (AS 287). In all of these areas the survey documented a similar extension of upland settlement during the Seleucid through Byzantine periods, albeit to a lesser degree than in the Jebel al-Aqra. The distribution of settlements in the Amanus Mountains shows a strong relationship to altitudinal ecological zones as described below.

Although small, dispersed settlements are the most characteristic feature of settlement in the Seleucid, Roman, and Byzantine periods, several large towns and cities were also founded at the beginning of the period and represent a significant movement away from traditional centers of urban life. By far the most significant of these new settlements was the city of Antioch itself. In terms of sheer size, Antioch dwarfs all other sites in the Amuq Valley and indeed is the largest ancient settlement in the northern Levant. The city covered at least 2,100 ha and housed an estimated population of several hundred thousand residents (Downey 1961). The precise size of the ancient city of Antioch is difficult to assess, owing to the fact that much of the Roman/Late Roman levels of the city are covered today by deep alluvial sediments from the Orontes River and by the modern city of Antakya. Nonetheless, the timing of the growth of Antioch is a question of some importance to our understanding of the larger picture of settlement because the city is situated outside the Amuq Valley, on a site chosen for either ideological or strategic reasons, but certainly not for its access to agriculturally productive land, which was extremely limited. This means that all the food necessary to sustain this population must have been imported from the Amuq Valley and elsewhere, and therefore the affect that a city of this magnitude had on settlement throughout the region must not be underestimated. Unfortunately, neither the Princeton-led excavations at the city in the 1930s, nor Braidwood's survey of the plain systematically investigated the true extent of the city. However, in recent years, the growth of modern Antakya has begun to expose large parts of the ancient city and the Amuq Valley Regional Projects have recorded many of the threatened remains in the northern suburbs of ancient Antioch (see above; also Casana 2003a). Results of survey in this area suggest that contrary to earlier, historically-based reconstructions of the growth of the city, the densely settled, urbanized area of Antioch extended as far as the Byzantine city walls as early as the third century B.C. (fig. 2.24C). By the first century A.D., the suburbs of the city extended at least 2 km to the north of the city walls, as is suggested by ceramics from the Roman occupational horizon in this area (fig. 2.24D).

While Antioch was by far the largest settlement in the region, the Amuq Valley Regional Projects have recorded a number of other large towns that were also first occupied around the third century B.C., contemporary with the dispersal of settlement away from tell sites and the foundation of Antioch. Many of these urban centers are known from historical sources, and some have been firmly identified, such as the ancient city of Imma with modern Yenişehir (AS 345), ancient Pagras with modern Bakras, and ancient Gephyra with modern Demir Köprü (AS 297; Sinclair 1990). In other instances a disjuncture exists between the historical and archaeological records. For instance, the location of the first Seleucid capital in the Amuq, Antigonía, has long been an issue of dispute and remains unknown. Suggestions that it was situated on Allah Din Tepe, a series of low hills near the entrance to the Amuq Valley, are not supported by the archaeological data, while other potential sites, such as AS 254, do not fit well with the historical record. In still other cases, sites that were of obvious significance in antiquity and have been documented by the projects are completely unknown in historical sources, as is the case with the large sites at Ceylanlı (AS 273 and AS 287). These large Seleucid/Late Roman towns form an important part of the settlement record in the Amuq Valley, and several cases demonstrate well the complexity of the urban landscapes that surround them.

One of the best-preserved urban landscapes of the Amuq Valley is found at Ceylanlı (AS 287) at the edge of the Amanus Mountains in the northern Amuq Valley. The site is situated at the junction of the traditional north-south road through the Amuq Valley connecting Antioch with Maraş in antiquity, and a traditional road leading west to Alexandretta (Iskenderun) through a small pass in the Amanus Mountains. Previous to investigations by the Amuq Valley Regional Projects, the site was known only from a Roman tomb complex and several inscriptions recorded there in the 1890s (fig. 2.25; Perdrizet and Fossey 1897). More recent investigations have revealed the presence of a very large settlement at the base of the tomb complex (AS 273) that appears to have been founded in the third century B.C. Occupation at the lower city was relatively short-lived, and by the first century B.C. occupation had shifted to a plateau above the valley floor. The later Roman site, currently covered by the modern village of Ceylanlı, is replete with reused basalt column fragments and other monumental architectural pieces that are built into modern houses, clearly illustrating the prominence of the site in antiquity. Additionally, the streets of the village are on a rough grid plan, suggesting that it may have maintained the original Roman plan. Cut into a cliff on the opposite side of a deep valley are the tombs recorded in the nineteenth century, and on top of this mountain the survey found a small Seleucid or Early Roman temple (fig. 2.26). The temple appears to have been demolished in antiquity and a stone fortification

wall was later built around the complex. To the north of the main settlement, the basalt foothills contain the remains of ancient field systems, possibly contemporary with occupation at Ceylanlı, visible today as stone clearance field walls. In this area occasional small settlement sites with preserved architectural foundations, graves, and other features also suggest a well-preserved landscape, unusual in the Amuq Valley. Finally, to the east of Ceylanlı in the Amuq Valley, deep gravel extraction pits have exposed the remains of a field wall and agricultural soil that dates to the Seleucid period or later, buried by up to 4 m of gravel eroded down from the Ceylanlı Valley.

Landscape features of the Roman/Byzantine period were preserved either in small windows of preservation, for example, on rocky hills that had not received much disturbance from agriculture or later settlement, or where the features themselves were sufficiently robust to have survived over the centuries. Excellent examples of the latter type of landscape preservation have been documented in the area of Yenişehir where structures consisting of a series of water mill stumps remained. These features took the form of masonry embankments of roughly cut limestone blocks set in a hard lime mortar. A total of three mills was recorded, and because only the eroded stumps remained, it was necessary to infer the remainder of the structures by analogy with the many remains of such mills known from elsewhere in the Near East (e.g., Harveson 1993). The three mills were constructed in three cycles, each cycle consisting of a 30–40 m long horizontal interval in which a masonry mill penstock was used to raise the water in the inlet channel progressively above the ground surface (figs. 2.27–29). By locating the mills on the edge of a low limestone plateau, a steep slope was conveniently available to generate sufficient hydraulic force to turn a mill wheel. At the end of the penstock, the water would have been directed into a vertical pipe encased in a masonry tower (vertical parallel broken lines in fig. 2.27) so that a standing head of water would have been built up. This head, which ranged between an estimated 7.5 and 8.5 m (i.e., the vertical interval of each cycle on fig. 2.27), would have been sufficient to power a turbine affixed to a vertical axle to which would have been attached a single millstone for each mill. Despite the ruined condition of these towers, it was possible to make a reasonable reconstruction of the mills from the standing masonry (hatched on fig. 2.27). The milling areas were inferred from the presence of shallow oval depressions along the lines of the mill channel. In addition the position of inlet channels positioned roughly along the crest of the penstocks were deduced from the presence of abundant calcium carbonate flow stones precipitated by the lime-rich waters of the inlet channel.

Although it was not possible to date the mills directly, the surrounding land surface was scattered with occasional sherds of Late Roman/Byzantine brittleware pottery. In addition, a large Late Roman/Byzantine site (Khirbet al-Tahoun [AS 202]) was located a few hundred meters to the north and one can suggest that the mills were also both associated with this settlement and of this date. Although the inlet channel could only be traced a few hundred meters to the southeast on the ground, a faint alignment on the CORONA image suggests that the inlet channel was recognizable in the form of an aligned feature trending toward the pools of Imma and nearby Yenişehir (AS 345). Unfortunately, no trace of the channel to the west of the mills remains, but presumably it contributed water to one of the west-flowing channels that led across the plain toward the channel of the Kızıl İrk River (fig. 2.30).

With the exception of a small amount of salvage recording conducted in the Narlıca area and along the Antakya–Reyhanlı road (Casana 2003a), no surveys were undertaken in the area of the ancient city of Antioch. Nevertheless, traces of water supply channels along the Antakya–Reyhanlı road suggest that in addition to receiving a significant amount of its water from the pools of Daphne (6 km to the south), and a secondary source from the stream of Parmenius on the mountain behind Antioch (Downey 1961: 62, 154–55), a relatively minor source was also tapped to the east. The newly recorded channel consisted of a small mortar-lined feature exposed in section by bulldozing activity associated with the construction of a house in Narlıca.<sup>18</sup> The mortar-lined channel, about 50 cm wide and 80 cm deep (fig. 2.31), was located 18–19 m above the level of the Reyhanlı road. The source of water was presumably to the east, and the trajectory of the channel was immediately to the south of a series of Roman, Late Roman, and Early Byzantine buildings that again were exposed by recent bulldozing activity. The date of this channel can only be estimated in the range Roman through Early Islamic. When discovered, it was evident that it had been obscured by 50 cm or so of slope wash so that no sign of the feature on the ground surface would have been observed. Overall, this feature suggests that Antioch also received its supply of water from the northeast as well as from the mountain to the south and Daphne to the southwest. As is evident from the scale of this channel, the source must have been small, but it appears that the flow was fairly reliable and was presumably drawn from a spring located farther to the east along the road to Reyhanlı/Yenişehir (Imma; AS 345) or in one of the valleys immediately to the south (perhaps in the vicinity of Tell Habeş [AS 227]).

18. Record made in September 1998 by Hatice Pamir and Tony J. Wilkinson. Location: 36° 13' 29.6" N and 36° 11' 39.9" E.

These small snapshots of landscape features hardly rival the extensive preserved tracks, fields, olive presses, and other features that enliven the uplands of the Massif Calcaire. Nevertheless, these and other areas (in e.g., the area of Ceylanlı [AS 287]) provide a hint that the Seleucid, Roman, and later landscapes must have been cluttered with numerous types of economic features that contributed to a very busy landscape of water supply lines, communication links, and economic activities, most of which are now lost from view as a result of sustained processes of landscape transformation.

In sum, the Amuq region experienced a massive expansion of settlement over the hills and into the mountains from the third century B.C. Significantly, the upper limit of settlement in the foothills of the Amanus Mountains coincides approximately with the upper limit of settlement in the Jebel al-Aqra range to the southwest of the Amuq Valley. Because the lowest two zones correspond to the ecological band of olive cultivation, it can be argued that the expansion of settlement was, in part, intended to extend the belt of commercial agriculture within that zone where it was economically practicable, although doubtless mining, the settlement of veterans, and other factors must also have contributed to such an expansion.

### *The Islamic Period*

At some point after the sixth century A.D., most of the small, dispersed sites that characterized Seleucid, Roman, and Late Roman settlement in the Amuq were abandoned, as were many of the larger urban sites. The timing, rapidity, and severity of the abandonment are not fully understood, owing to the uncertain dating of the most common ceramics of the Late Roman/Early Islamic transition. Furthermore, a careful and systematic analysis of Islamic materials from all sites in the Amuq Valley has not been undertaken, and therefore our understanding of regional Islamic settlement is limited. However, during the 2002 season the Amuq Valley Regional Projects began analysis of Islamic materials collected between 2000 and 2002 and plan to continue the work in upcoming study seasons.<sup>19</sup> Our best evidence for the abandonment of dispersed sites comes from the Jebel al-Aqra. When we compare the overall number of sites with evidence of Late Roman occupation to those occupied during the ninth to tenth centuries and later, it is evident that approximately two-thirds of these settlements were abandoned at some point in the Early Islamic period. Unfortunately, it is not yet possible to say if these sites were abandoned in the sixth century following the many calamities that befell Antioch, in the seventh century following the Islamic conquest, or if many continued to be occupied through the period as was the case at many of the contemporary dead cities.

Part of the difficulty with an assessment of the Early Islamic and later settlement systems is that in many cases, archaeological remains are likely buried below modern towns and villages in the Amuq Valley. The antiquity of some villages is suggested by the presence of clearly ancient architectural fragments that have been reused in modern buildings, although in some cases these stones may have been taken from other nearby sites. In other instances, such as the towns of Reyhanlı and Yenişehir in the eastern Amuq Valley, it seems likely that occupation has been virtually continuous since at least the Early Islamic period owing to the presence of archaeological materials, mention of them in historical sources, as well as preserved buildings dating to the medieval period (summarized in Sinclair 1990). At the site of Eski Enek (AS 319) in the upper Zengin Valley of the Jebel al-Aqra, nearly continuous occupation over the past 1,400 years can actually be documented archaeologically. The village was only very recently abandoned, probably in the early 1970s, when residents moved to the top of an adjacent ridge in order to allow better access to a paved road. Collection was therefore possible on the site of the abandoned village (while most modern villages have been paved over), and finds included ceramics ranging in date from the Early Islamic period through very recent times.<sup>20</sup> However, in other cases, modern villages may simply have been established more recently on the site of earlier Islamic sites because of their favorable locations. Given these difficulties, a comprehensive analysis of regional settlement in the Amuq Valley subsequent to the seventh century must incorporate a detailed treatment of modern villages in addition to archaeological remains and is therefore beyond the scope of the present study. Nevertheless, archaeological data alone make it clear that many of the small dispersed sites of the Roman period were abandoned during or immediately before the Early Islamic period.

At many of the towns and cities elsewhere in the Amuq Valley, evidence also suggests a relatively widespread abandonment in the Early Islamic period. For example, at the site of Ceylanlı (AS 287), collection recovered a strong

19. Thanks go to Tasha Vorderstrasse and Asa Eger for the analysis of Islamic ceramics in the field in 2002.

20. The site of Eski Enek (AS 319) was visited and collected briefly but holds great potential for an ethnographic/archaeological

study of traditional villages in the region because all the features of an essentially pre-modern village have been preserved, and many of the former residents are still living nearby in modern Enek.

assemblage dating to the Roman through Early Byzantine periods, but no clearly identifiable Early Islamic ceramics were recovered. The fate of Antioch in the Early Islamic period has also been a topic of much debate, but the 1930s excavations and the recent brief visit of the team to its northern suburbs both point to the fact that the city became much smaller in size over the period. However, it would be wrong to characterize the Early and Middle Islamic periods as a time of “collapse” because while many sites were abandoned, other urban sites grew in size and many new and significant sites were founded. For example, at the site of Murat Paşa, probably ancient Meleagrum, occupation reached its maximum in the Early Islamic period. A significant intensification of settlement also appears to have occurred along the channelized course of the Afrin and its subsidiary canal network. Many of the Early and Middle Islamic settlements in the central Amuq Valley must have been located within or on the edge of the extensive marsh that had inundated much of the area by that date (see above). In some cases, it is clear that Islamic settlements were located on top of older Bronze and Iron Age tell sites such as Karatepe (AS 86), which would have formed islands in the marsh as they did in Braidwood’s day.

To parallel the growth of these sites in the central plain, a number of new foundations were discovered in the Early Islamic period, perhaps most notable being the spectacular site of AS 190, a very large settlement in the northern plain on the Kara Su River. At the center of the site is a square, fortified building measuring approximately 120 m on a side, and surrounding the building is an extensive ruin field covering several hectares. The location and monumentality of the site raise the possibility that it is the previously unknown city of Buqa, described by the Islamic geographer Ibn Butlan (in Le Strange 1890).

Beyond these general observations regarding the abandonment of many Roman/Late Roman towns and villages, the reduction in the size of Antioch, and the emergence of several new settlements in the central Amuq Valley, the character of Early Islamic and later settlements in the Amuq Valley remains difficult to assess. Future investigations will undoubtedly be able to improve our understanding of these periods through more detailed analysis of existing survey collections and more systematic study of modern villages within the Amuq region.

## CONCLUSIONS AND FUTURE WORK

The seven field seasons of the field project have resulted in a broader and more detailed understanding of the development of the settlement landscape of the Amuq Valley. Nevertheless, more remains to be done on the chronological sequence of settlement, and such work must await further analysis on the existing pottery collections as well as additional collections from the sites themselves.

In terms of the development of the natural environment, if the evidence for Neolithic clearance from the Ghab Valley core is combined with the evidence for significant Amuq Phase A/B settlement on the floor of the Amuq Valley, it would appear that during the very Early Holocene (i.e., the pre-pottery Neolithic or early ceramic Neolithic) the lowlands probably consisted of a patchwork of settlement, marsh/lake, cleared land, and woodland. In turn, the surrounding uplands probably consisted of more heavily wooded land as suggested by Hillman (in Moore et al. 2000) for the region in general. As noted in the study of the pollen sequence (Yasuda et al. 2000) from the Ghab Valley, the amount of human interference on the vegetation (in the Ghab Valley at least) clearly increased through the Holocene. From the abundant settlement remains (and from the estimated cultivated lands associated with such sites) by the second/first millennium B.C. the plain must have been virtually cleared of deciduous oak woodland, although on the surrounding hills evergreen oak continued and indeed expanded at the expense of the deciduous species (Yasuda et al. 2000: 131). Settlement in the form of tells appears to have been fairly stable for much of the third, second, and perhaps part of the first millennium B.C., and the relative paucity of settlements of these dates in the surrounding uplands argues that most settlement occurred either on the plain itself or within the tributary valleys.

Because settlement does not appear to have spread onto the upland slopes during the third, second, and early first millennium B.C., such areas may plausibly have retained a significant amount of woodland. From the Ghab Valley cores it appears that much of the original forest had been transformed, first by the substitution of evergreen oak for deciduous oak (around 5,000 B.P.) and then by increased olive growth (by the late Early Bronze Age or Middle Bronze Age; Yasuda et al. 2000: fig. 5). Consequently the development of a Mediterranean pattern of vegetation from the reduced woodland cover of the glacial period must have taken place in at least two stages: first the development of a heavily wooded Early Holocene vegetation which included most of the Mediterranean species; second, with the degradation of the Early Holocene woodland and especially the decrease in deciduous oak woodland, certain species became accentuated, specifically species of evergreen oak and domestic olive trees. Following the incorporation of the region into the Seleucid Empire around 300 B.C., settlement extended greatly into the fringing uplands. This incursion ex-

tended to elevations of about 600 m above sea level, and locally up to 1,000 m; the former elevation being close to the present limit of most settlement, and also, not coincidentally, close to the ecological limit of olive cultivation. The interpretation that much of the upland around the Amuq Valley continued to be wooded well into the first millennium B.C. is supported by historical sources that note the presence of a significant woodland cover in the hills near to Antioch (Casana 2003b).

A significant result of the Amuq Valley Regional Projects was to demonstrate the occurrence of a fundamental shift in the pattern of settlement toward the end of the first millennium B.C., and that it reflects major changes in land holdings that were occurring as the area became part of the expanding territorial empires of the Seleucids and Romans, as well as in the agricultural economy of the region (Casana 2003b). These changes in land use and settlement, in turn, appear to have de-stabilized landscapes to such a degree that the quantity and rate of valley floor sedimentation increased significantly, especially within and downstream of areas of sensitive terrain (Yener et al. 2000b). Although parts of the environmental record remain frustratingly elusive, it is clearly evident that by the late first millennium B.C. human activity was playing a fundamental role in the development of the landscape and the local environment. Although details of the history of the Lake of Antioch remain somewhat obscure, as suggested in earlier publications the lake was evidently in place by the late first millennium B.C. (Wilkinson 1997; Yener et al. 2000b). It therefore seems likely that human activity in the form of clearance of woodland, aggradation of sediment on the valley floors, and increased outflow on to the plain from canals may all have contributed to the development of the lake.

With the dramatic dispersal of settlement in the Seleucid, Roman, and Late Roman periods, slopes were cleared and locally destabilized. Not only did this probably increase erosion during normal rainstorms, these lands would have been especially vulnerable during heavy rainstorms that would have resulted in the transport of large amounts of soil from the valley sides down to the floodplains of the streams draining the Jebel al-Aqra. Such erosion of the sheet and gully was almost certainly reinforced by land slides and other forms of mass-movement that are now characteristic processes on the steeper parts of these valleys.

The present brief report and gazetteer hardly do justice to the wealth of archaeological evidence of all classes that are extant in the Amuq Valley and surrounding areas, and numerous questions remain to be tackled. These include issues concerning the evidence for prehistoric occupation on the plain and on the surrounding hills. The unfortunate lack of preservation of pollen in sedimentary cores remains a frustration because one of the initial objectives of the project was to compile a palaeoenvironmental record that would parallel that of the archaeological surveys. Despite the considerable amount of success of the integrated survey and geoarchaeological study of the surrounding foothills, a pollen-based vegetation sequence would clarify the links between expansion of settlement and the accumulation of valley fills. More detailed collection and analysis of existing collections is required, however, if we wish to produce the requisite nuanced pattern of settlement that can provide the appropriate settlement geography for the development of cities at Tell Atchana (AS 136) and Tell Ta'yinat (AS 126) and during the second and first millennia B.C. With the well-developed local sequences that are emerging from both sites it should be possible to produce fairly robust settlement geographies for the key period of development at both sites. A host of geoarchaeological questions remains to be answered, however: Did an abrupt shift in the Orontes River result in a channel flowing between the mounds of Tell Ta'yinat and Tell Atchana? Did an early course of the Afrin River actually flow between Tell Kurdu (AS 94) and Tell 'Imar al-Jadid al-Sharqi (AS 101)? What was the extent of marshland or lake during the earlier Holocene, and when did they dry up? What was the history of canalization of the Afrin River during the last few thousand years? Certainly regarding the latter question we have been able to suggest a series of artificial diversions of this river, which partly account for the enigmatic northern loops of the so-called Eski Afrin channels (Casana 2003b), but precisely how these tie into the historical and archaeological record remains to be rigorously demonstrated.

Despite the rapid strides made in our understanding of the post-Seleucid settlement and landscape it is clear that the Amuq Valley Regional Projects have only managed to sketch the broad structure of settlement. Future research on the Roman, Byzantine, and Islamic periods holds considerable promise, especially by tying the surface record to historical texts as well as to the developmental phases of the city of Antioch, which must have exerted a massive influence on the surrounding plains and uplands.

Of utmost importance however, is the necessity for continued monitoring of sites to ensure that they remain intact in the face of increasing pressures to bulldoze them for the extension of agricultural land and building, as well as to record them if they are damaged. It should be emphasized that this threat extends to both mounded settlements on the plain as well as to surface scatters on both the surrounding hills and on the plains. Both classes of sites are severely threatened, and although a severed tell is obvious to all, the inexorable attrition of upland sites, sadly often diminished to minimal sherd scatters as a result of plow damage and soil erosion, also requires the attention of the vigilant archaeologist.



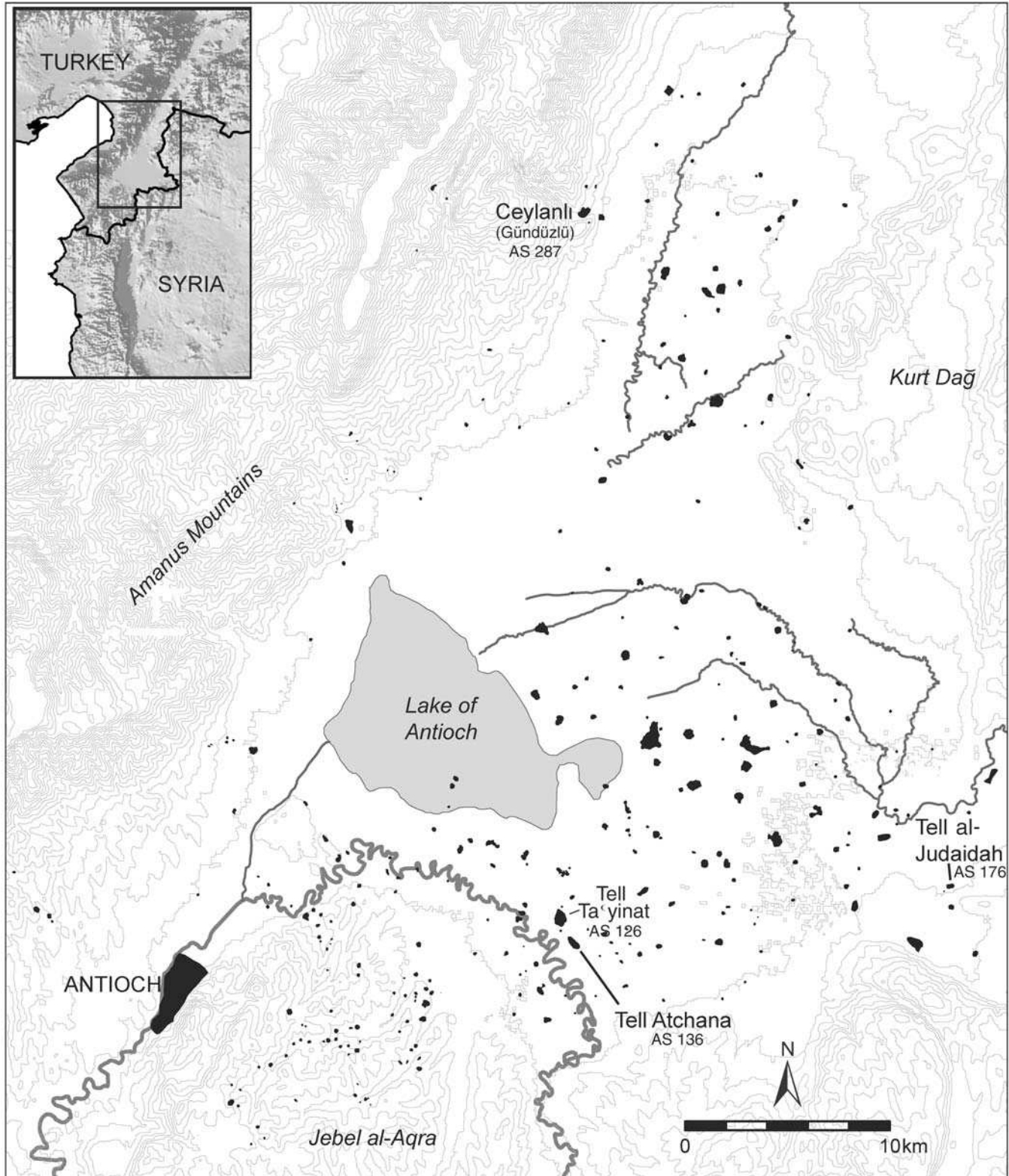


Figure 2.1. Distribution of Archaeological Sites in the Amuq Valley and Immediate Surrounding Areas  
 Sites Recorded by Both the Original Survey of Robert J. Braidwood and  
 the Amuq Valley Regional Projects' Survey

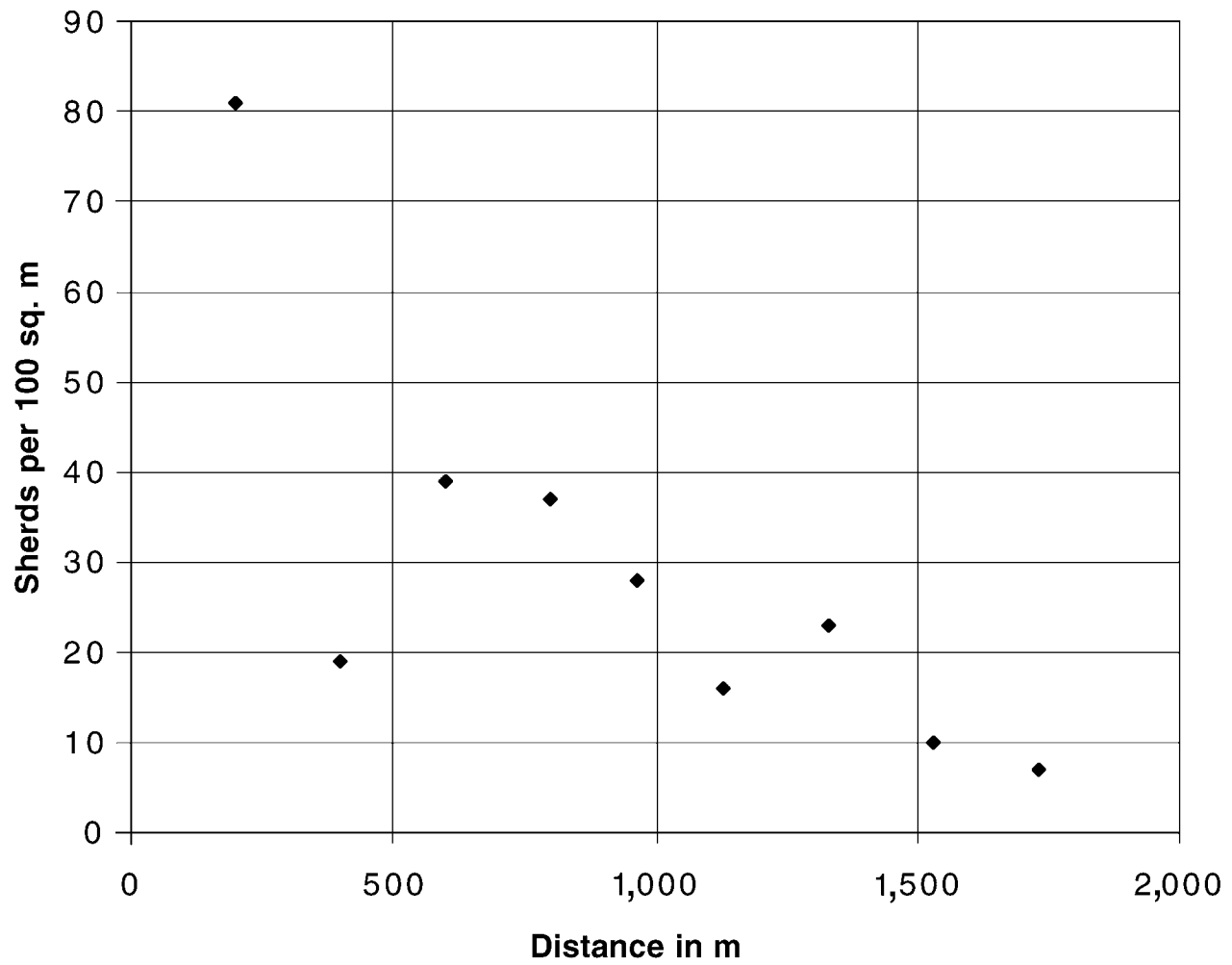


Figure 2.2. Field Scatters Plotted as the Number of Sherds per  $10 \times 10$  m Square for the Area to the Northeast of Tell al-Judaidah (AS 176)



Figure 2.3. CORONA Image Showing Small and Large Sites in the Amuq Valley (December 2, 1970).  
Courtesy of the United States Geological Survey

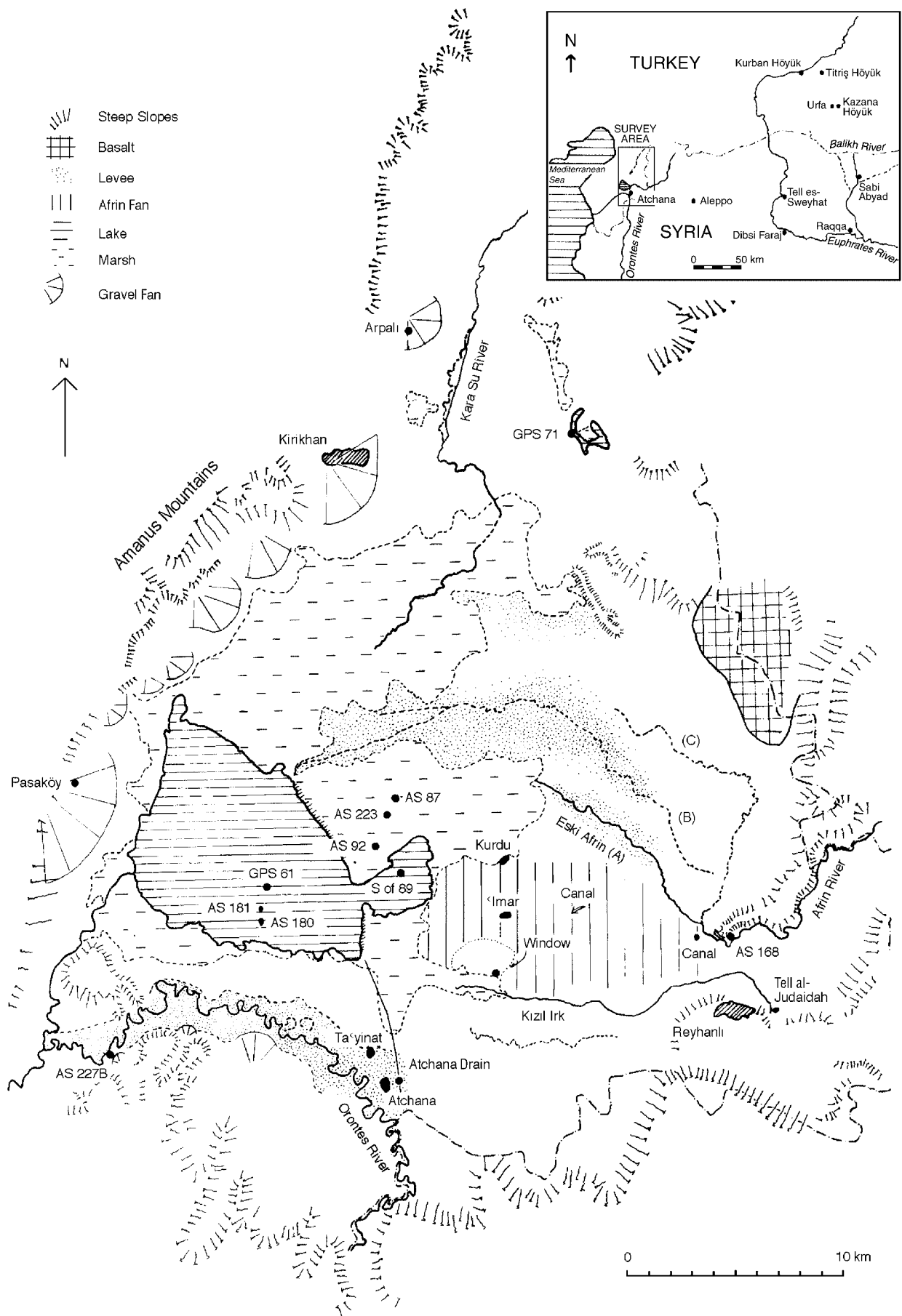
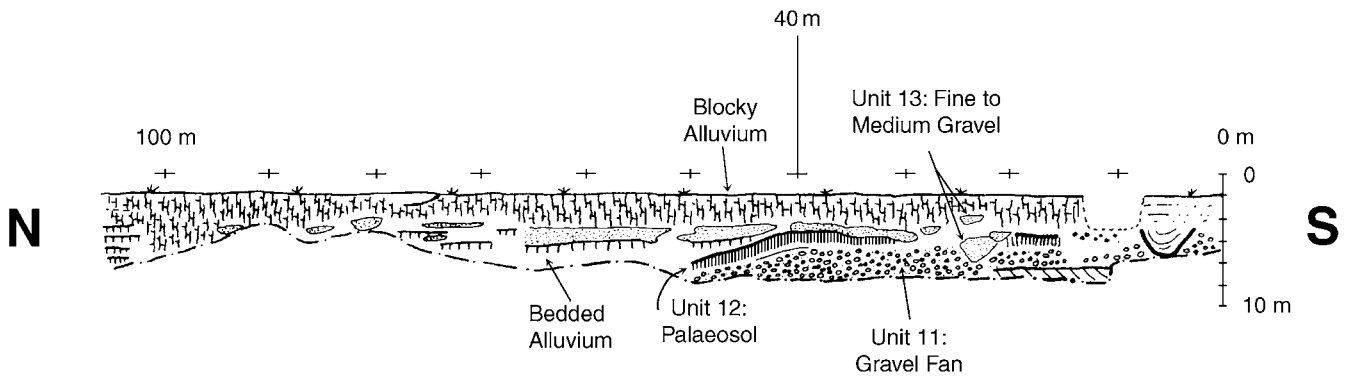
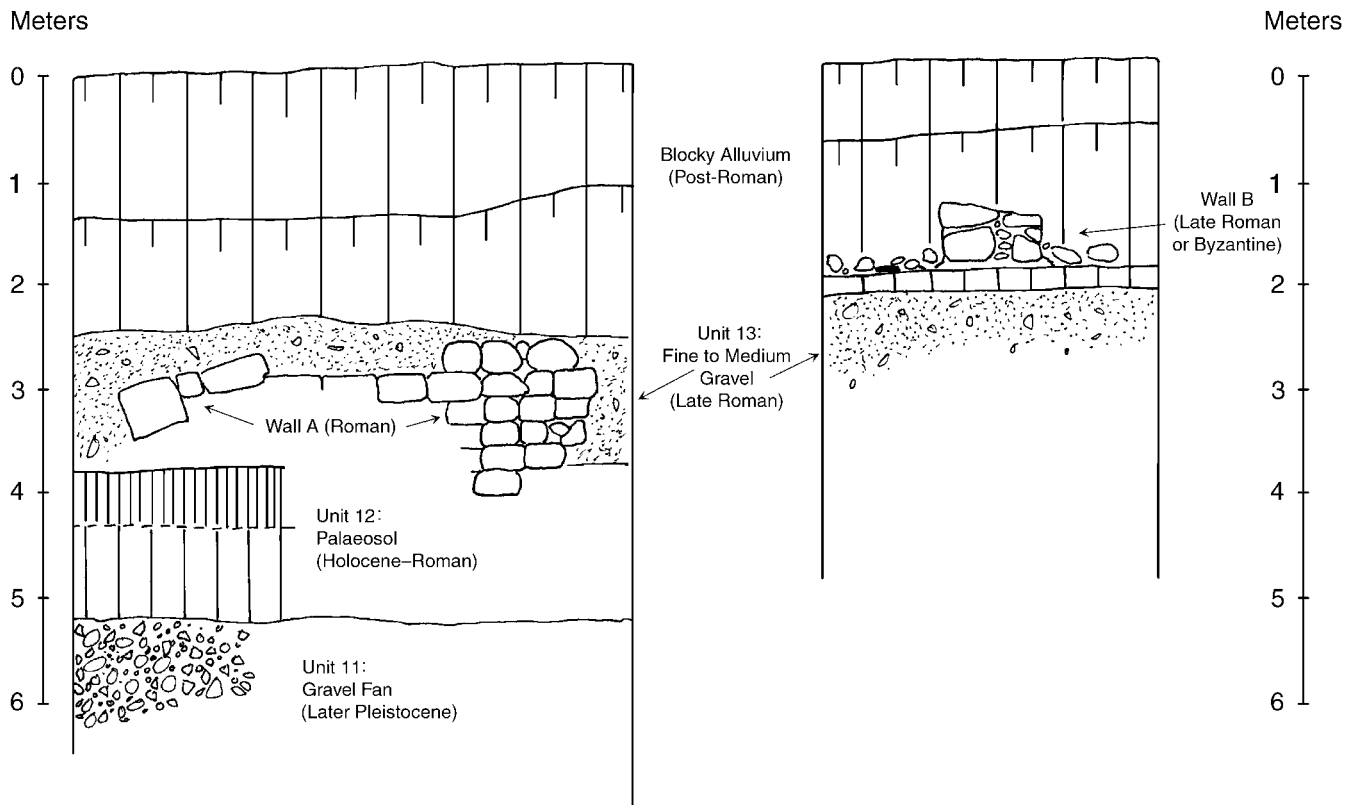


Figure 2.4. Geomorphological Sketch Map of the Amuq Valley and the Main Sedimentary Units Mapped (from Yener et al. 2000b)



a



b

Figure 2.5. (a) North-South Section through the Edge of the Orontes Floodplain at Tell Habes (Sultan Merkezi) (AS 227) Showing the Dark Palaeosol (Unit 12) as It Was Revealed in 1998 and (b) Two Sections Near the 40 m Mark on the 1998 Section as They Were Eroded away in 2000 and 2001 to Reveal Roman Built Structures Encapsulated within the Sedimentary Sequence. Unit 12 Clearly Pre-dates Wall A, whereas Wall B is Stratigraphically Later than Wall A. Unit 13 Can Be Seen to Be Well Stratified between Walls A and B



Figure 2.6. Valley Fill Overlying Roman Building at AS 271 in the Avsuyu Area, View Looking Approximately Northeast



Figure 2.7. Close-up of the Roman Building Shown in Figure 2.6, Showing Stones and Overlying Roof Tiles



Figure 2.8. Heavily Eroded Terrain in the Jebel al-Aqra Area

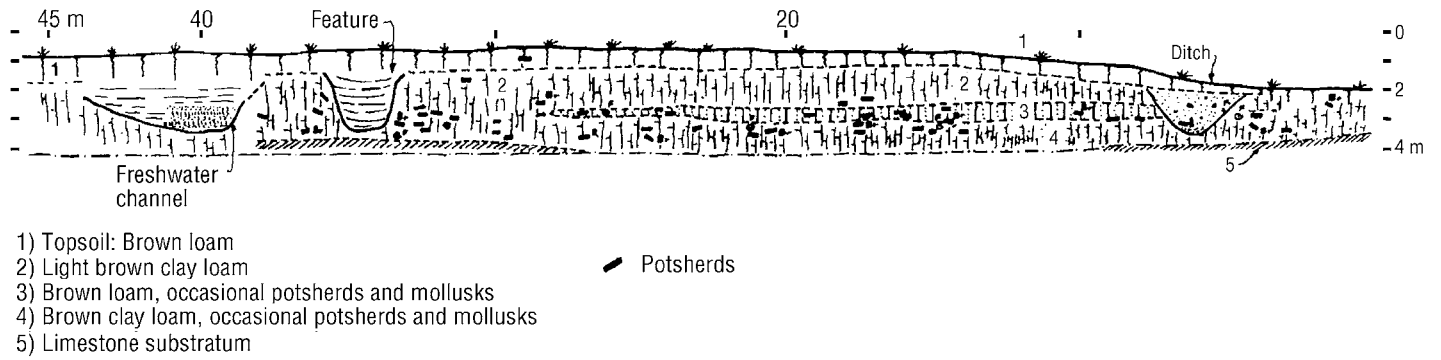


Figure 2.9. Aggraded Fill Behind Relict Terrace Features to the North of Yenişehir (Imma; AS 345). Note the Cut Features of What Appears to Be a Freshwater Irrigation Channel to the Left (from Wilkinson 1999)



Figure 2.10. Tell Wasfe (AS 31) after Being Severed in Two by Earth-moving Machines for the Expansion of Fields, View Looking North (Scott Branting as scale)

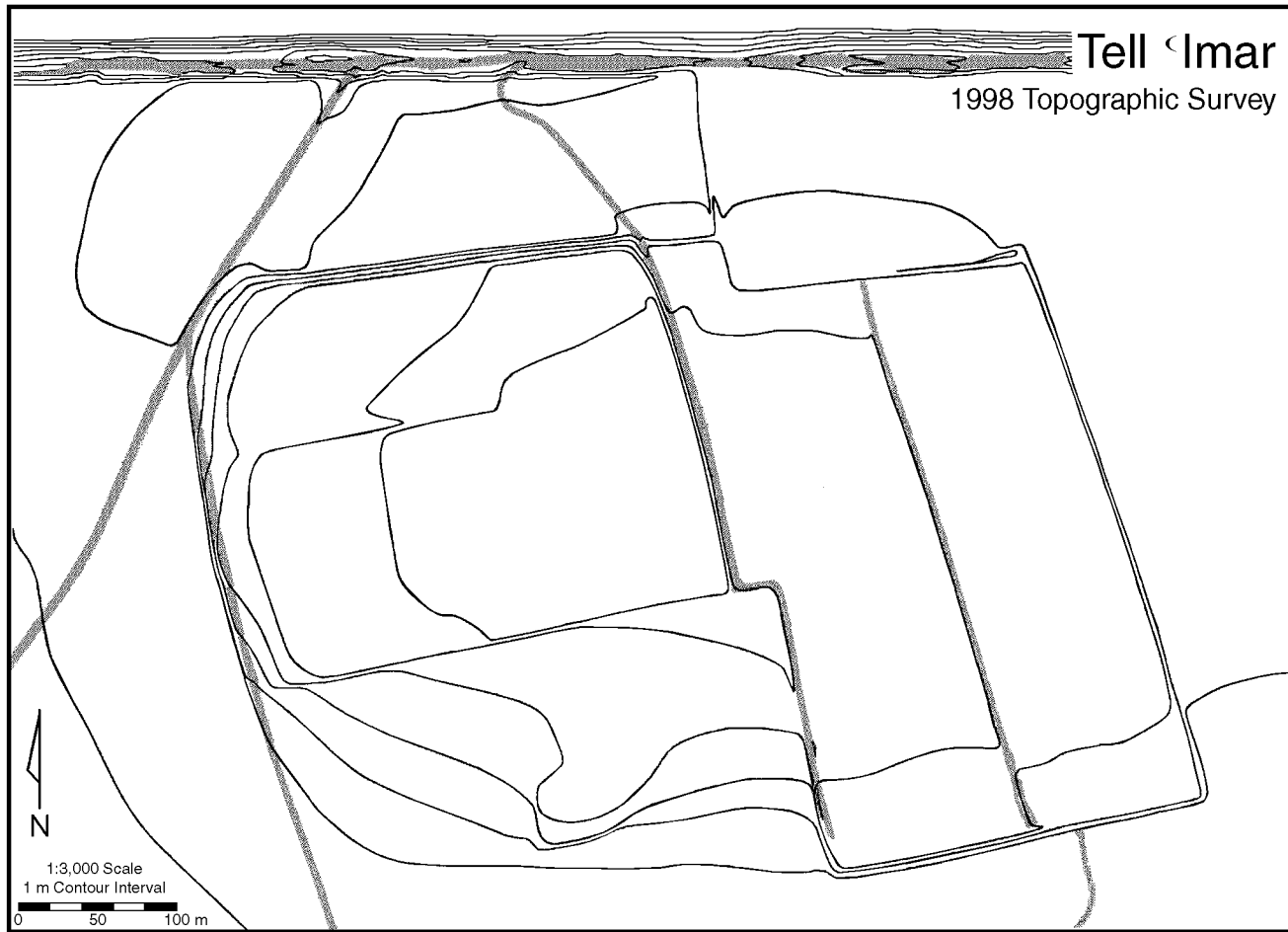


Figure 2.11. Contour Plan of Tell 'Imar al-Jadid al-Sharqi (AS 101). Note that the Remarkably Geometric Configuration of the Mound Has Resulted from Earth-moving Activities. The Main Afrin Drain Flows from East to West in the North. Plan by Paul C. Zimmerman



Figure 2.12. Damaged Site of Tell Dhahab (AS 177) from Tell al-Judaidah (AS 176), View Looking West (1995)



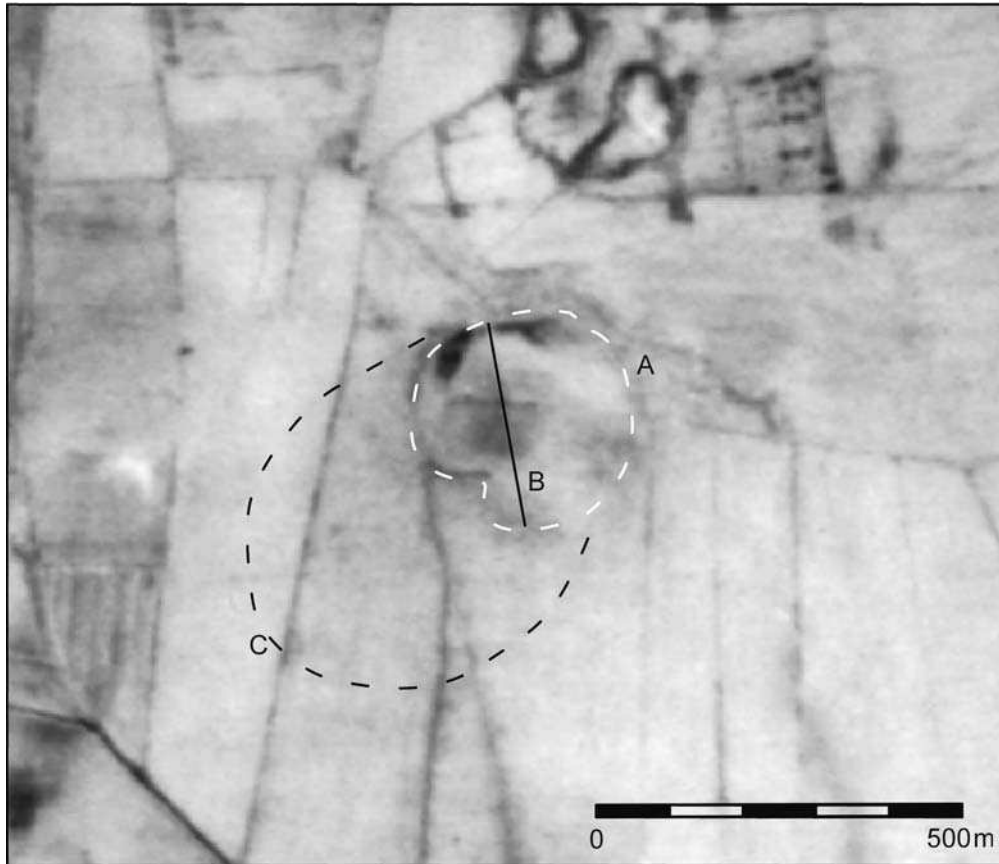


Figure 2.13. CORONA Image of the Area of AS 333 Showing the Landscape Prior to the Destruction of Sites (December 2, 1970). Courtesy of the United States Geological Survey



Figure 2.14. Late Roman/Byzantine Ruins at Yenişehir (Imma; AS 345)

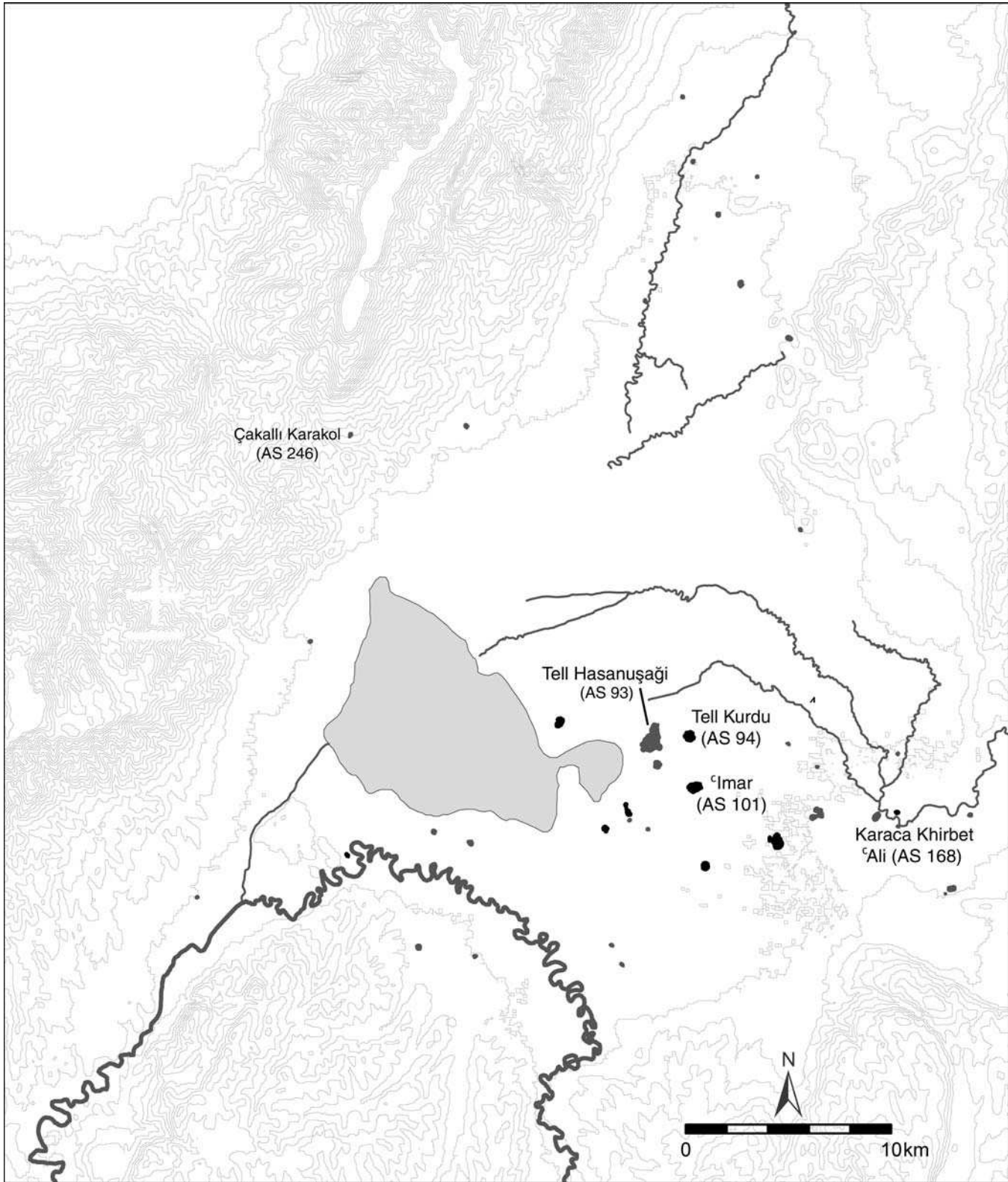


Figure 2.15. Distribution of Prehistoric Sites in the Amuq Valley

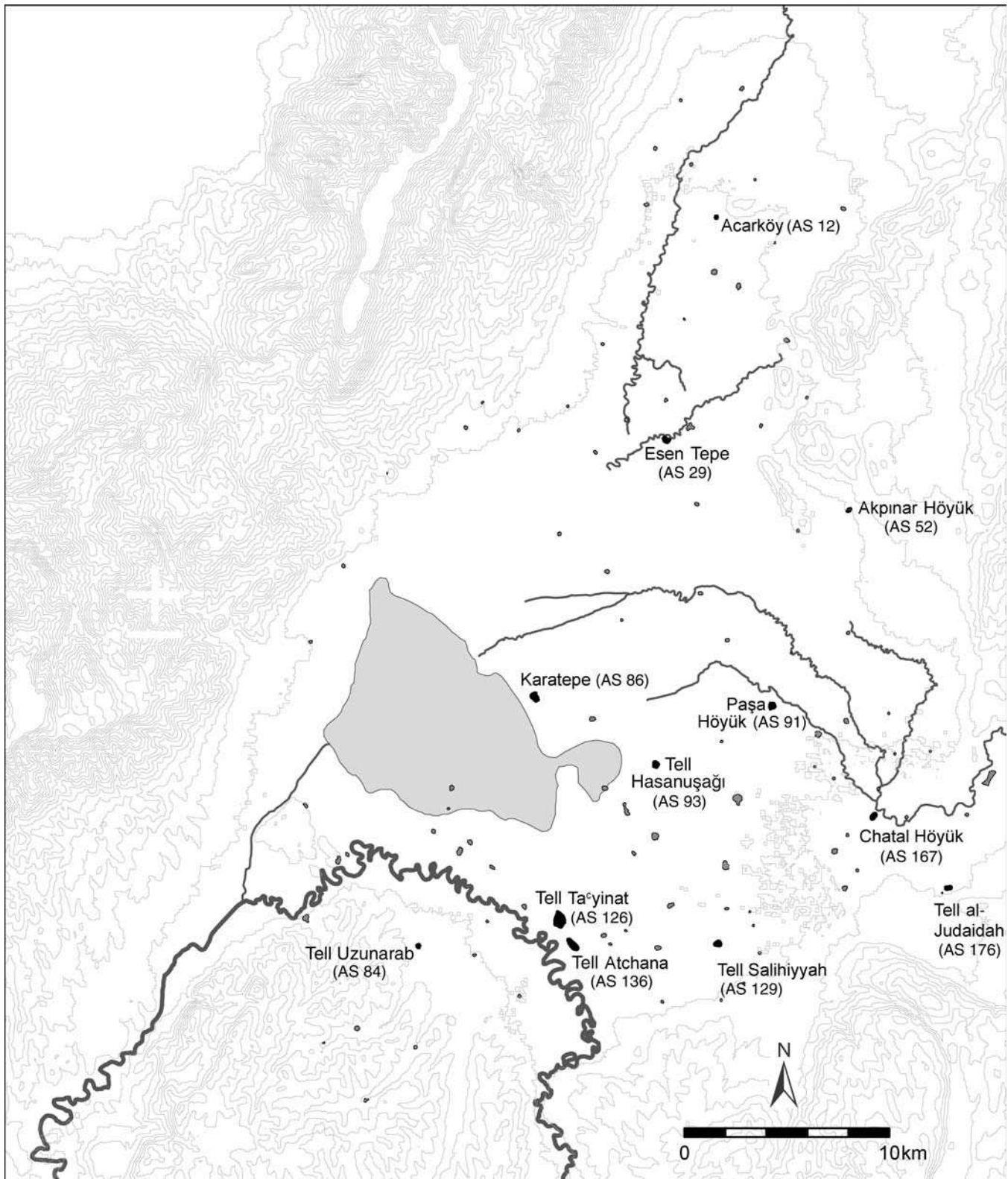


Figure 2.16. Distribution of Major and Minor Tells of the Bronze and Iron Age in the Amuq Valley

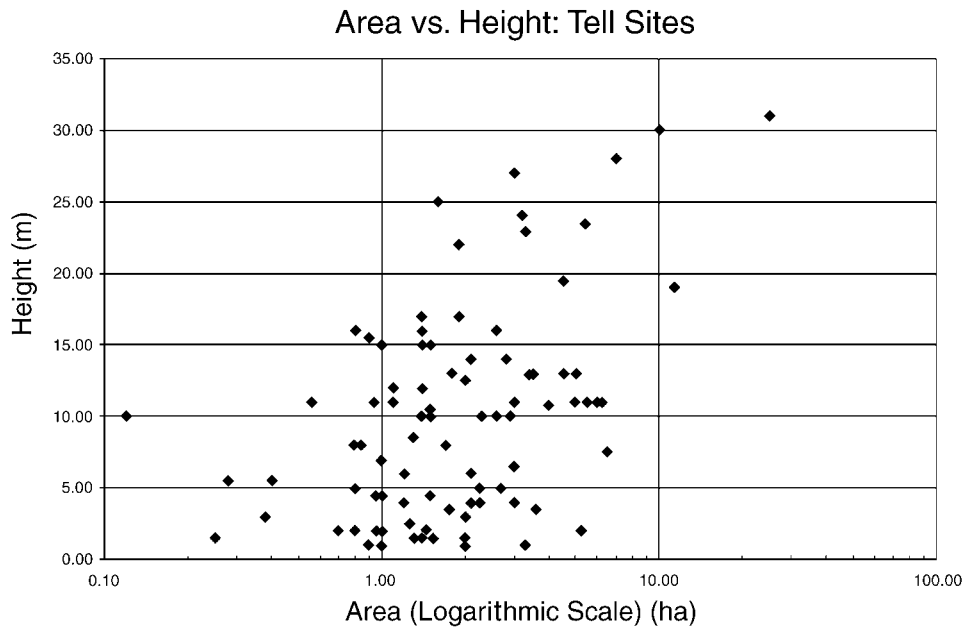


Figure 2.17. Scatter Plot of Tells: Height vs. Long Axis

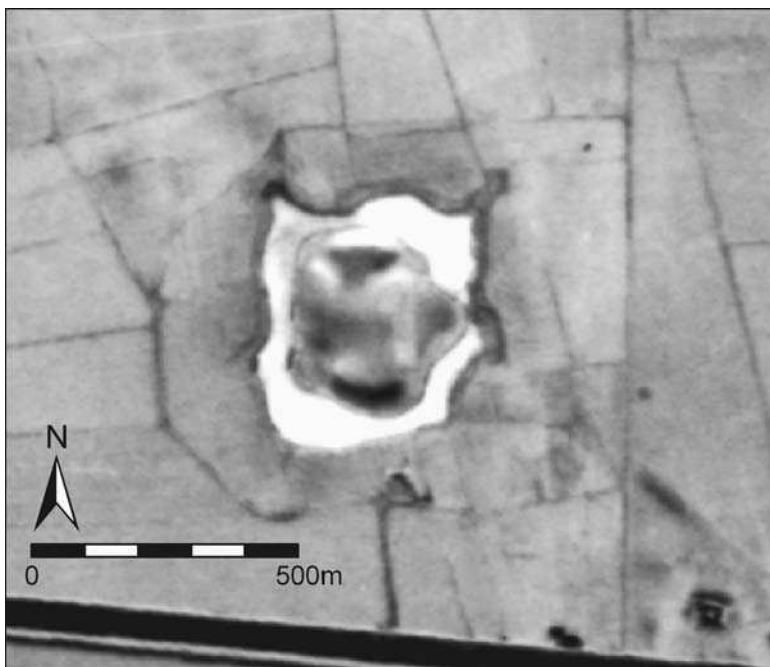


Figure 2.18. CORONA Image of the Mound of Hasanuşağı/Yurt Höyük (AS 99). Courtesy of the United States Geological Survey



Figure 2.19. Unqians Bearing Tribute in a Depiction of a Settlement of the Unqians (Umqians) Surrounded by the Water of a Possible Moat (from the Balawat Gates; See L. W. King 1915, pl. 27)

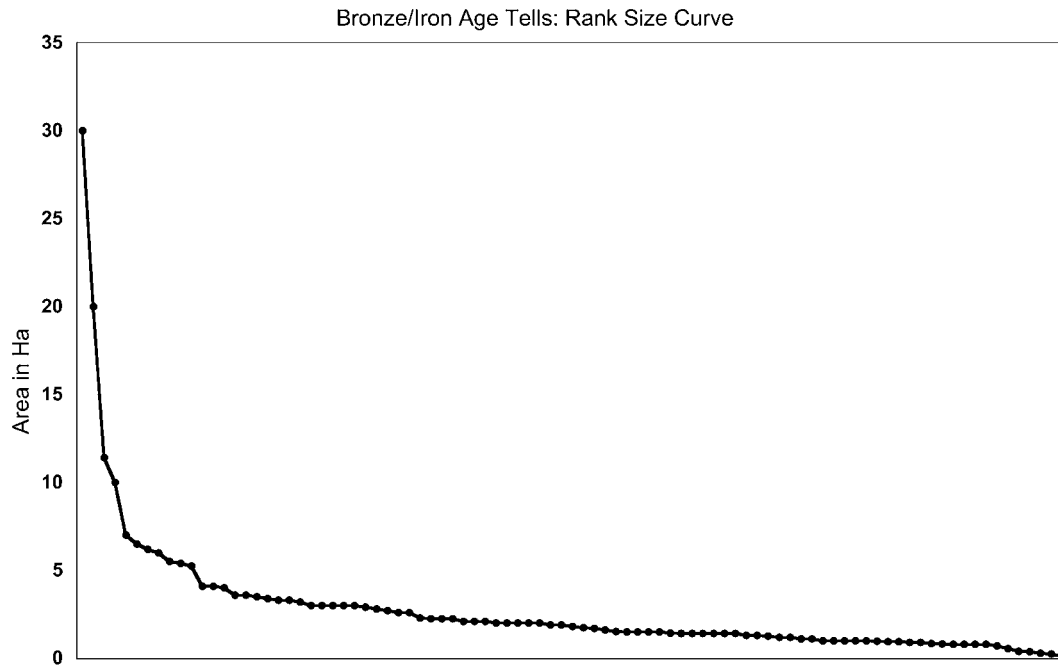


Figure 2.20. Rank Size Plot of Sites in the Amuq Valley

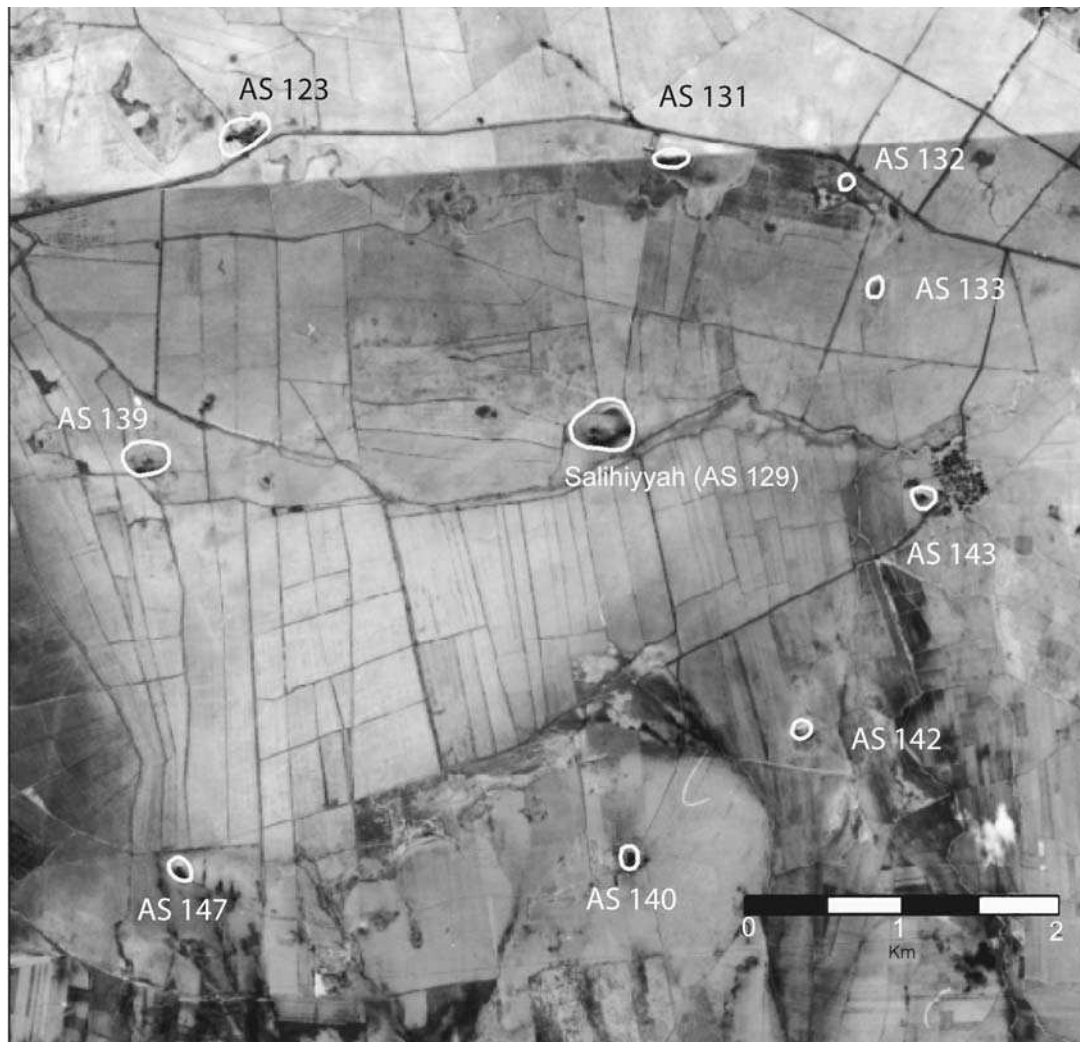


Figure 2.21. Map of Minor Tells in the Area of Tell Salihyiah (AS 129).  
 Courtesy of the United States Geological Survey

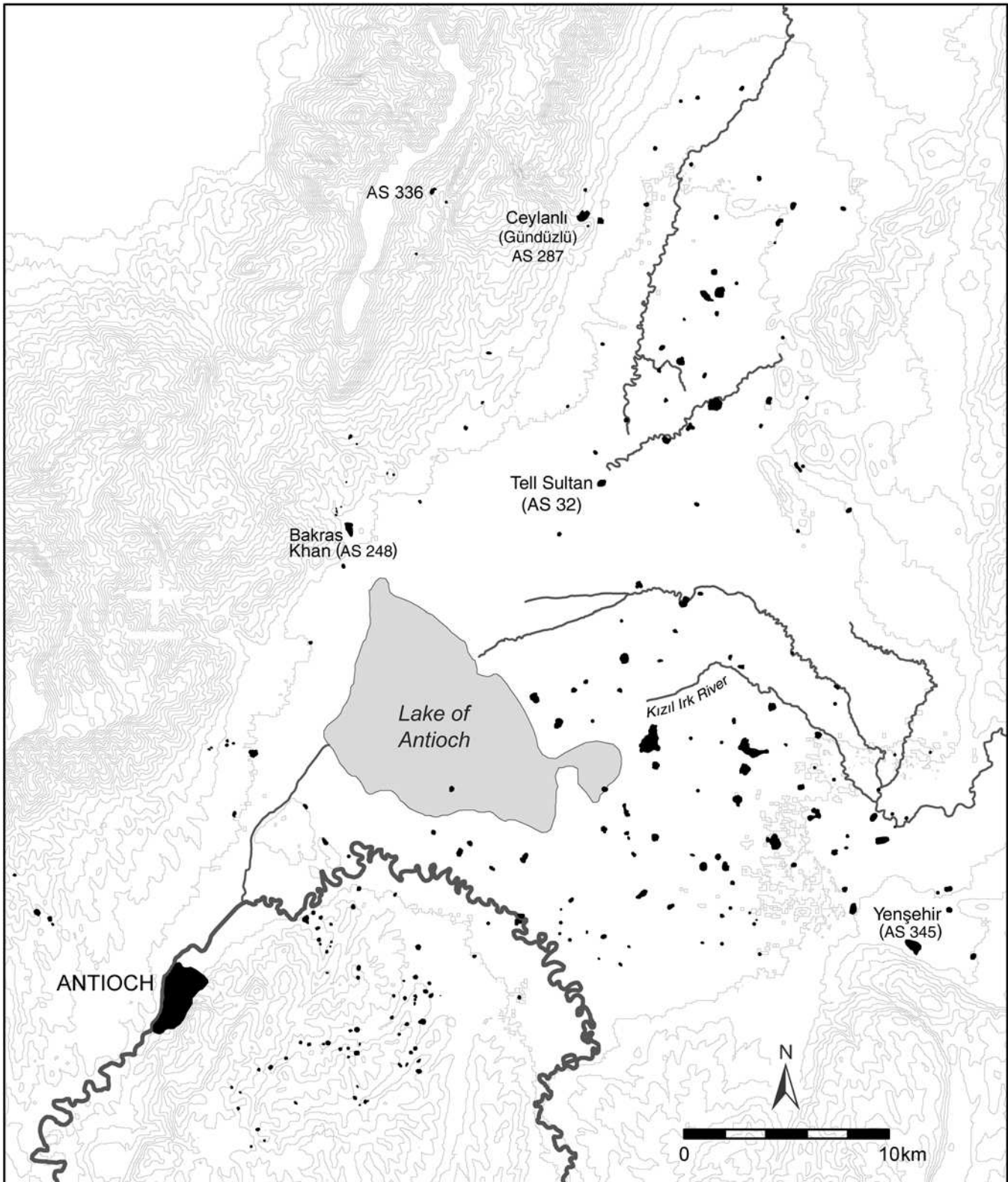
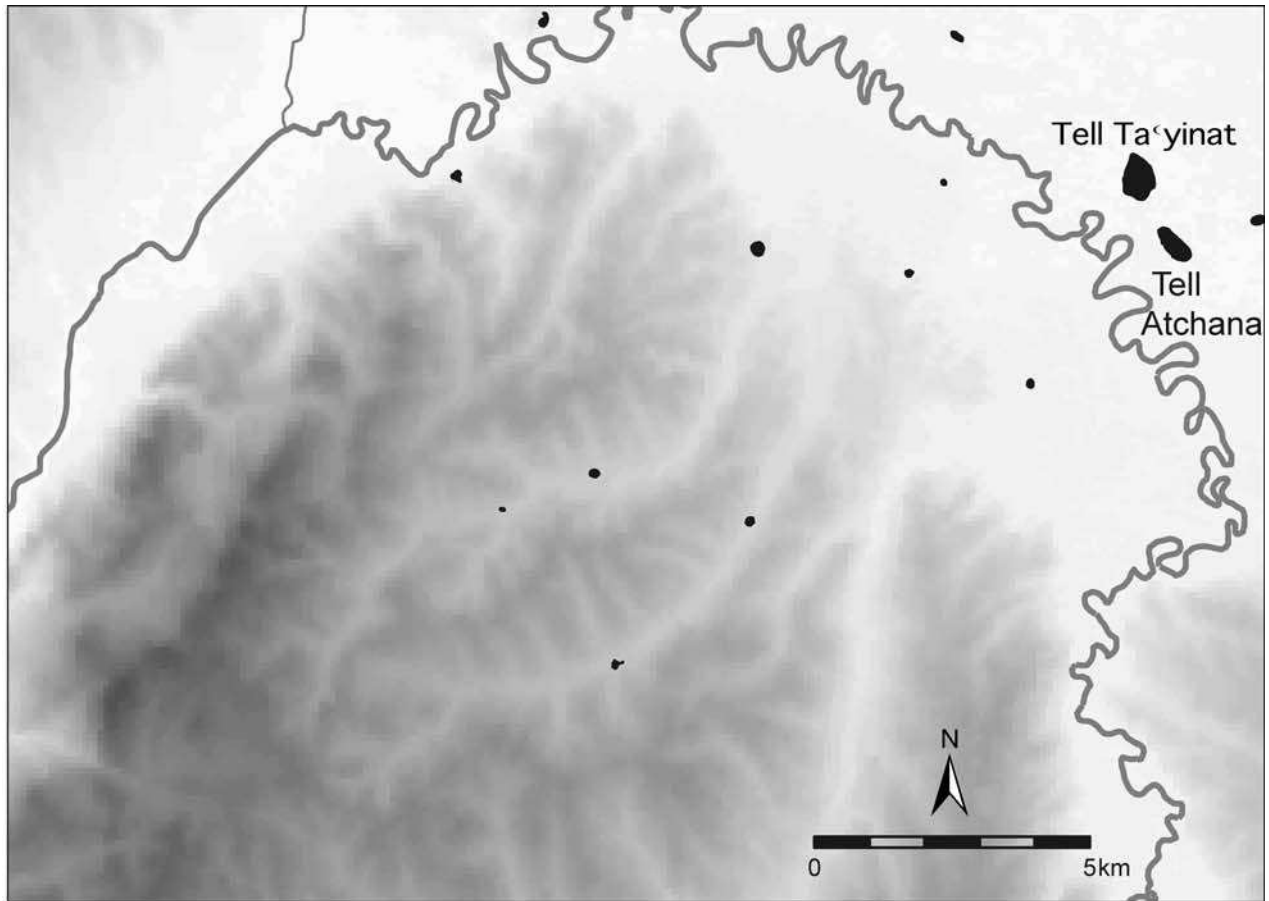
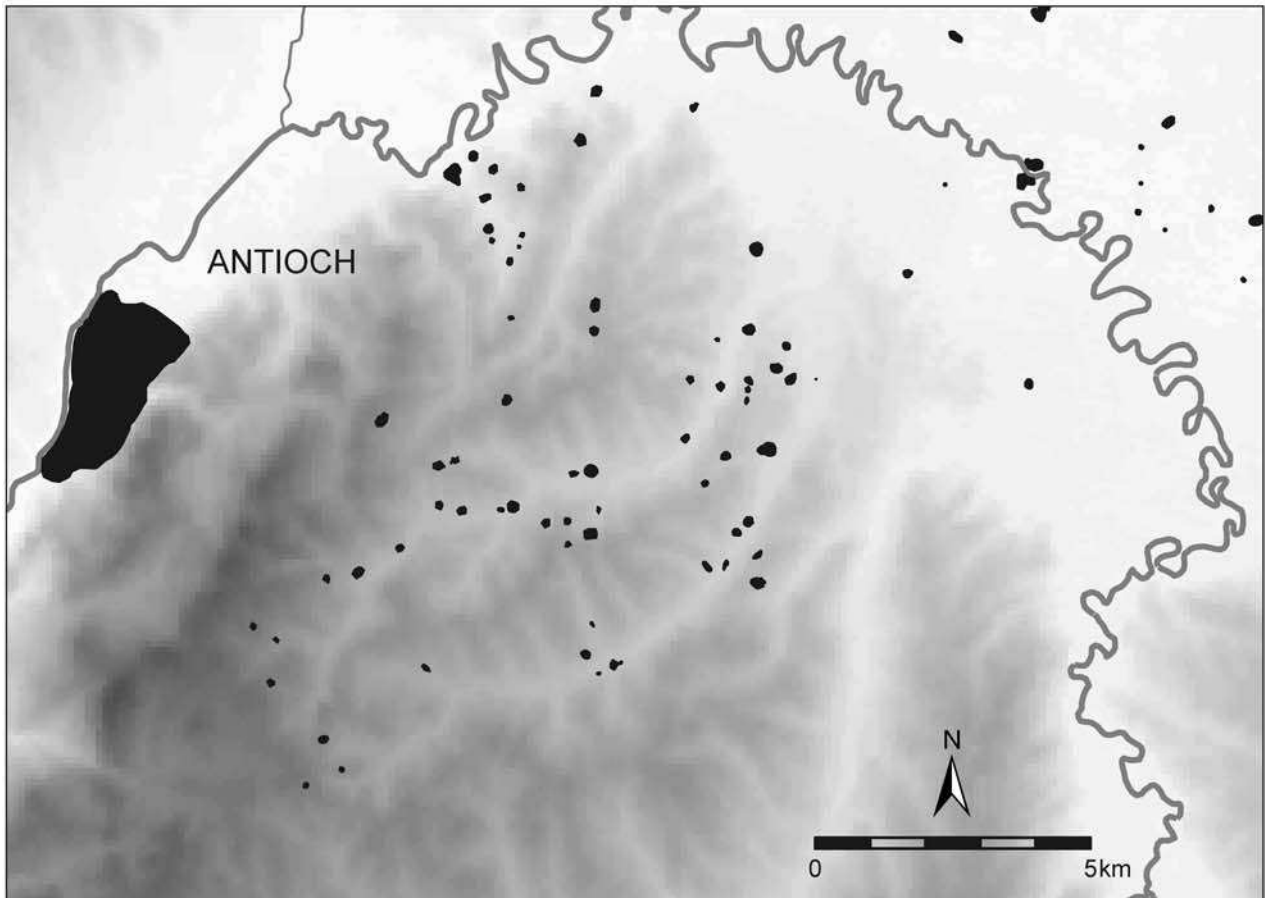


Figure 2.22. Distribution of Hellenistic, Roman, and Byzantine Sites in the Amuq Valley



a



b

Figure 2.23. Distribution of (a) Bronze Age and (b) Hellenistic, Roman, and Byzantine Sites in the Area of Jebel al-Aqra

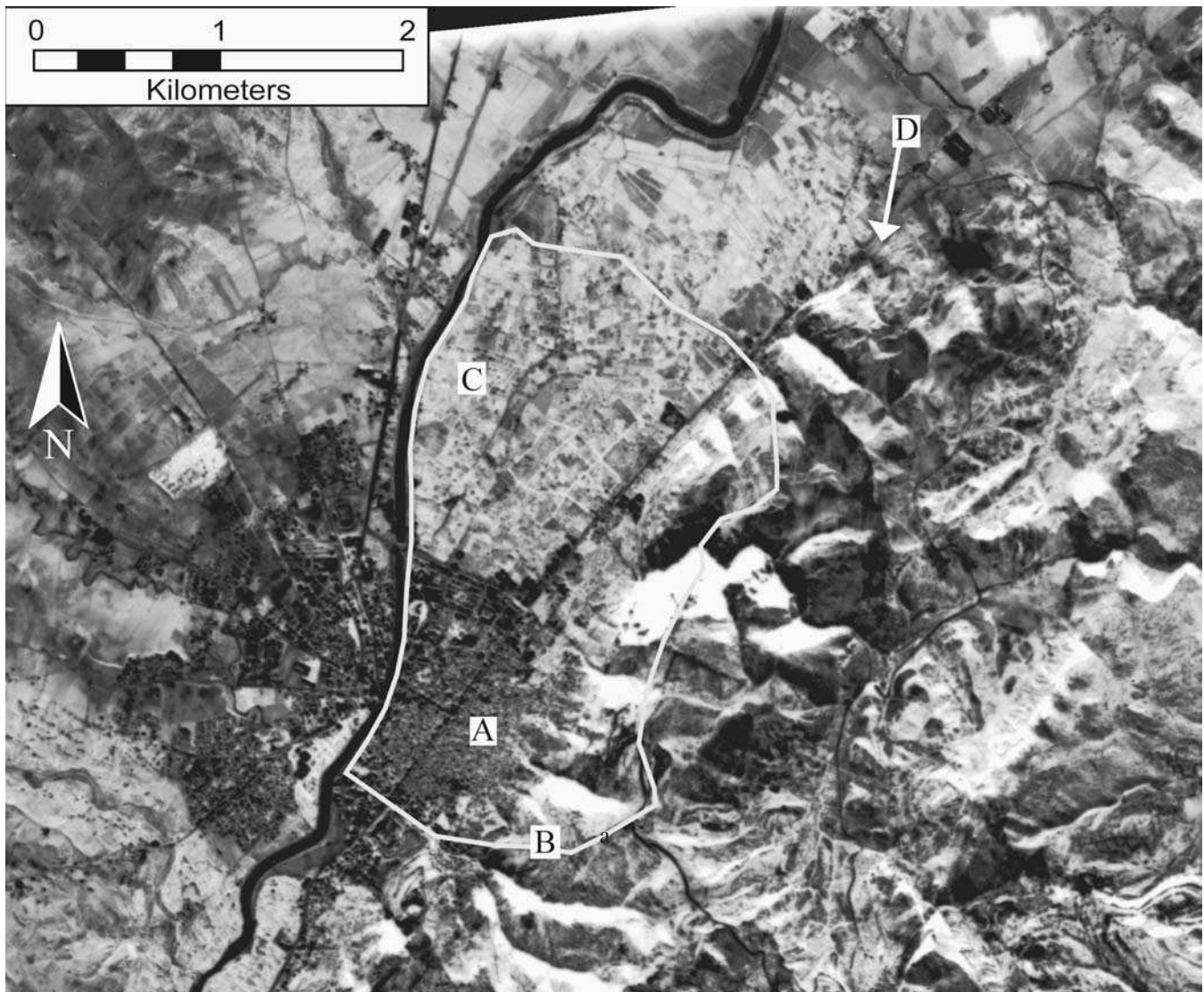


Figure 2.24. CORONA Image of Antakya (Antioch) (December 2, 1970). Features Include (A) Modern Town of Antakya; (B) Approximate Limits of the Late Roman City Wall; (C) Former Island on the Orontes River, Where the Imperial Palace and Other Monuments Were Once Located; and (D) Extent of Suburban Sprawl Documented by the AVRP (see Casana 2003a).  
 Courtesy of the United States Geological Survey



Figure 2.25. Tomb Complex at Ceylanlı (Gündüzlü; AS 287)





Figure 2.26. Hilltop Temple at Ceylanlı Kale (AS 272)

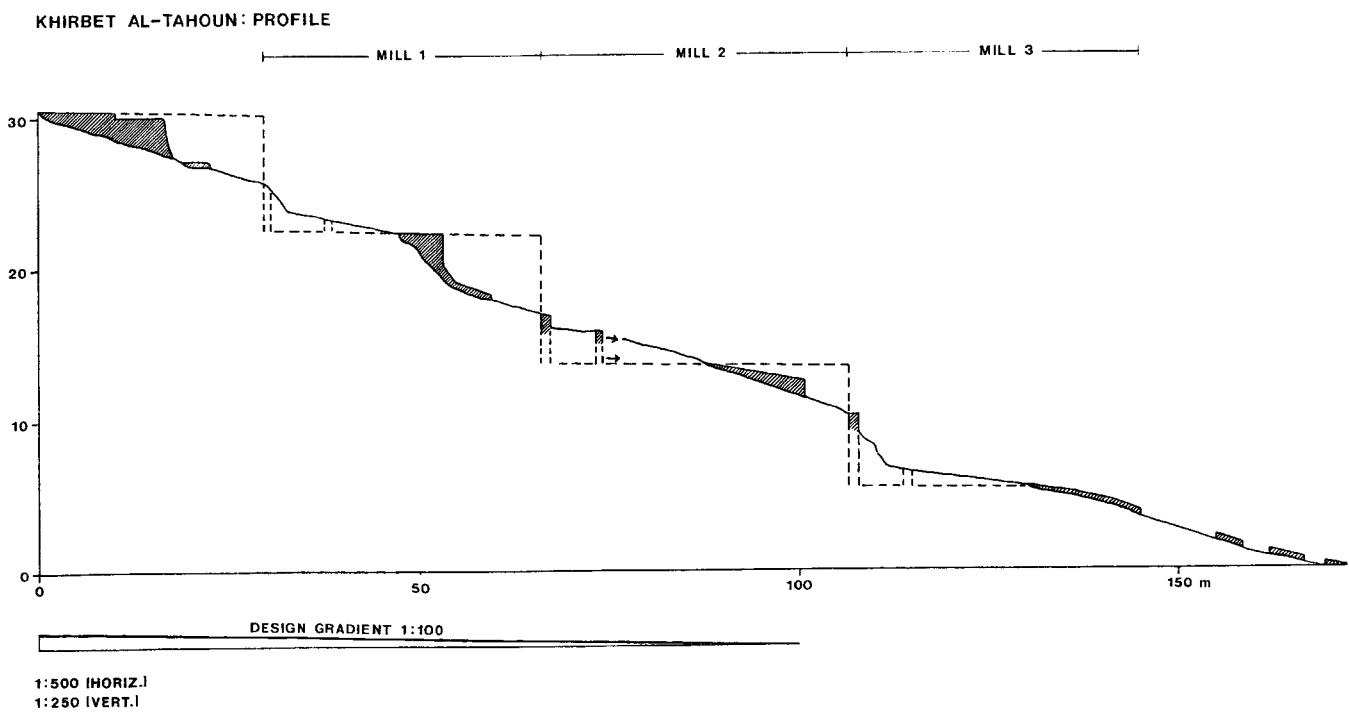


Figure 2.27. Long Profile along the Water Mills at Khirbet al-Tahoun (AS 171) near Yenişehir (Imma; AS 345).  
Drawing by Eleanor Barbanes



Figure 2.28. Masonry Penstock of a Roman/Late Roman Water Mill at Khirbet al-Tahoun (AS 171), Looking Southeast

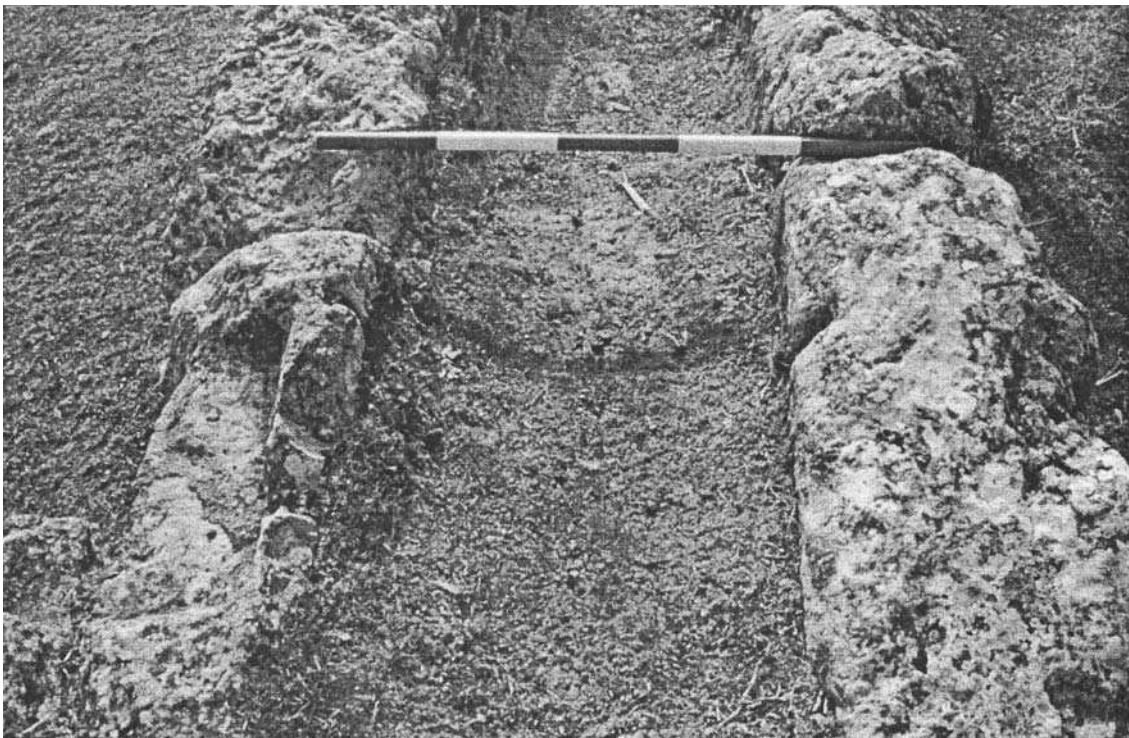


Figure 2.29. Detail of the 30 cm Wide Inlet Channel as It Crosses One of the Masonry Penstocks at Khirbet al-Tahoun (AS 171). Note that Channel Is of Comparable Width to the Water Channel at Narlica

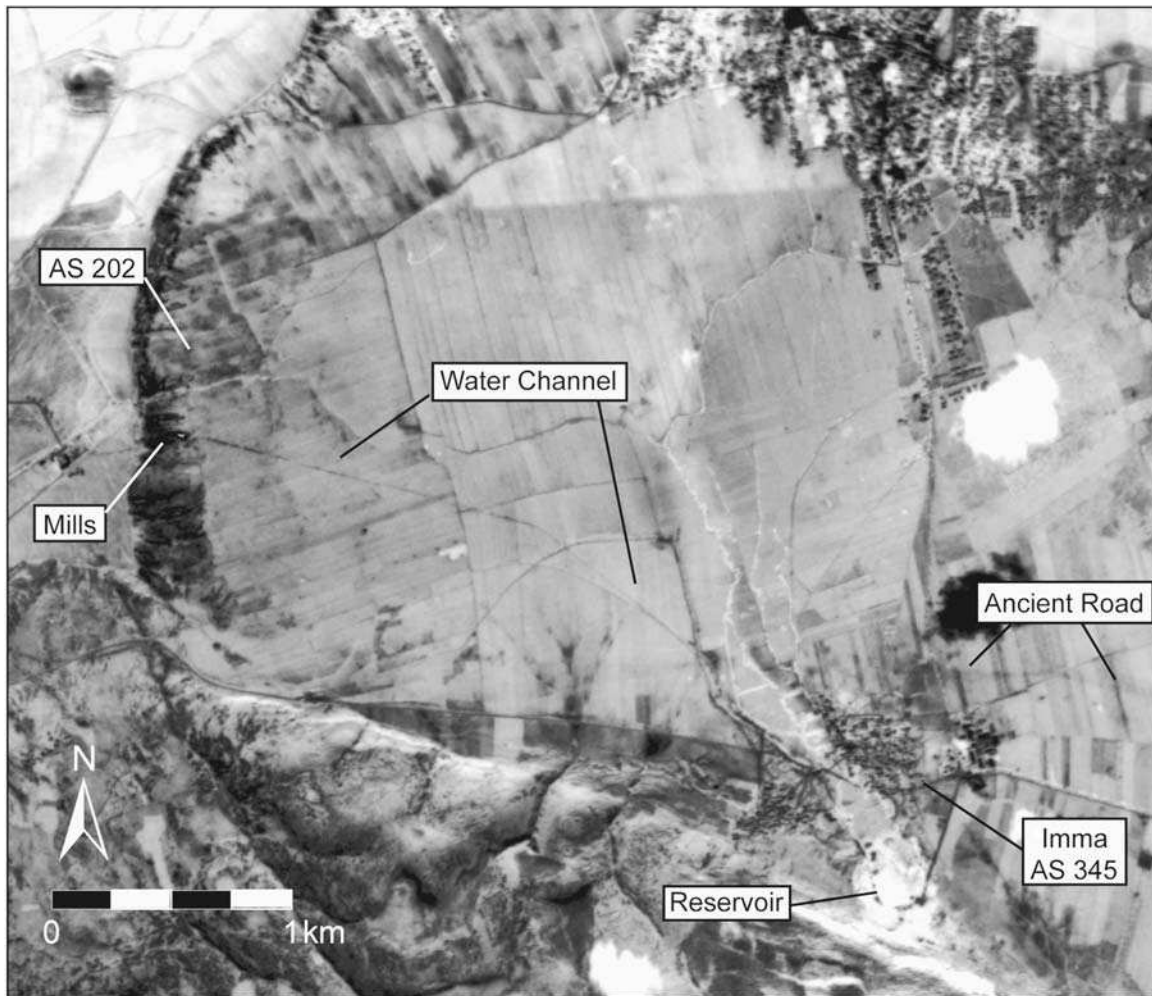


Figure 2.30. CORONA Image of the Yenişehir (Imma; AS 345) Area with Location of Pools, Water Mills, and Inlet Channel. Courtesy of the United States Geological Survey

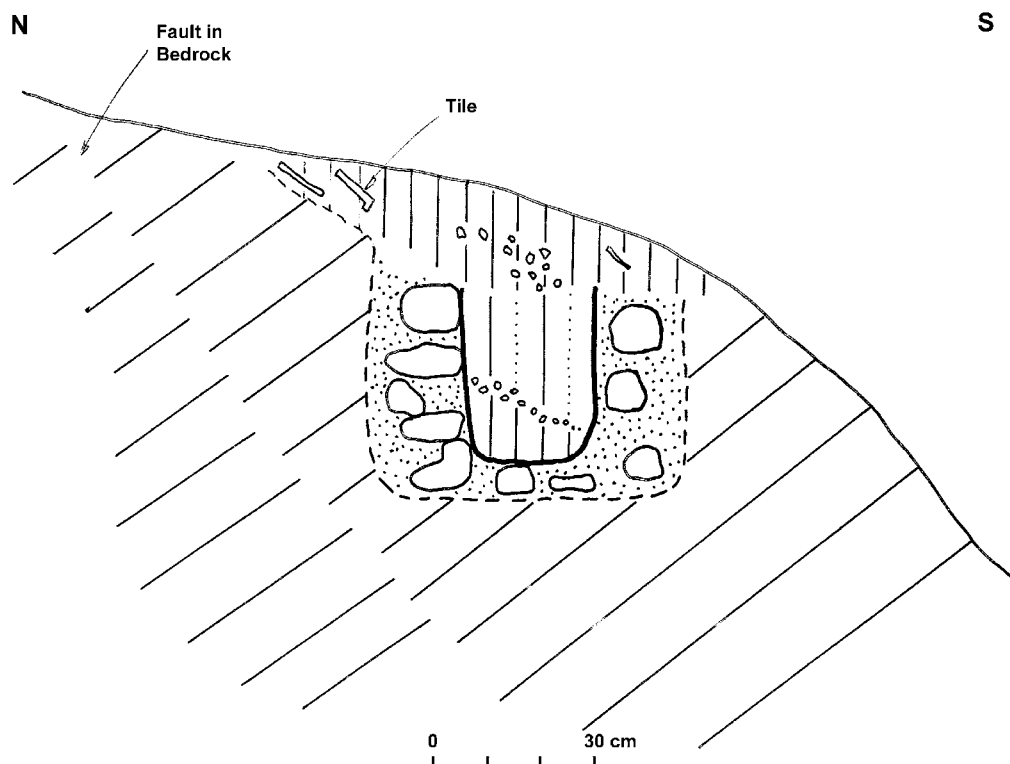


Figure 2.31. Mortar-lined Water-supply Channel near Narlıca, View Looking Southwest (i.e., Downstream toward Antioch)



# CHAPTER THREE

## THE ORONTES DELTA SURVEY

HATICE PAMIR

### INTRODUCTION

The Orontes Delta survey began in 1999 as part of the Amuq Valley Regional Projects, under the auspices of the Oriental Institute of the University of Chicago and the Mustafa Kemal University, Antakya, Turkey. The research has continued as an independent project since 2002. The project was established to trace the long-term historical development of sociocultural interaction in the eastern Mediterranean area, and special emphasis has been given to intensive archaeological and geomorphological survey.

The survey area is located in the delta part of the mouth of the Orontes River, which is now ca. 25 km southwest of Antakya and 40 km west of the Amuq Valley (fig. 3.1). The historical relationship of the Orontes Delta with the Amuq Valley cannot be underestimated. This area has been considered among scholars as being one of the major zones connecting inland Western Asia/Northern Mesopotamia and Northern Syria to the Mediterranean shore (Woolley 1938a: 1; Boardman 1980: 35–56; 1990). As emphasized elsewhere (Braidwood 1937; Alkım 1969: 280; Yener et al. 2000b: 164), the Amuq Valley is the crossroads of overland routes that connect to the Anatolian highlands in the north, northern Syria and Upper Mesopotamia to the east, Palestine and Egypt to the south, and the Mediterranean region to the west. The Orontes Delta is the closest and most easily accessible gateway from the Amuq Valley to the Mediterranean and beyond. Thus, the two areas have to be considered largely as an interacting single historical unit; the archaeological investigation of the Orontes Delta is important for understanding the Amuq Valley and vice versa. Nevertheless, little archaeological work has been carried out in the delta area. Some of the earliest work was conducted by researchers who focused on finds of the Paleolithic period. The first series of research and excavations of Paleolithic caves in the delta area were conducted by Muzaffer Şenyürek and Enver Bostancı (1958). Subsequent archaeological research at the Paleolithic caves in the delta was conducted by A. Minzoni-Déroche (1992), and Işın Yalçınkaya (Yalçınkaya et al. 1999). More recently the Upper Paleolithic cave of Üçağızlı in the delta area has been excavated since 1999 (Dinçer et al. 2000).

The best-known expedition was led by C. Leonard Woolley (1937a, 1938a). Two sites, Sabuniye (OS 12) and al-Mina (OS 11), were excavated in 1936, the latter of which was introduced by Woolley as the first major Greek colony in the Levant. The excavation of al-Mina yielded ten settlement levels that were dated between the second half of the eighth and the end of the fourth centuries B.C. The imported wares, among the other finds from the site, emphasized a strong trading relationship with the Aegean, Cyprus, Egypt, and eastern Mediterranean coastal sites. One of the most impressive finds was an abundance of Greek wares, which fueled the debate over Greek colonization in the Levant (see Boardman 1990). During the Iron Age, al-Mina was probably controlled by the then administrative center of the Amuq Valley, Tell Ta'yinat (AS 126; Saltz 1978; Kearsly 1999). Sabuniye is located ca. 5 km upstream along the Orontes River from al-Mina. The site yielded remarkable examples of imported Cypriot and Mycenaean ceramics in addition to local sherds. Although the site was more appropriate to fulfill Woolley's aim of locating a site that links the Minoan/Aegean and Near Eastern cultures (Woolley 1938a: 1), he abandoned the site after one season. The results from Sabuniye remain largely unpublished until today.

Another major site in the delta area is Seleuceia Pieria (OS 55), which is located ca. 10 km to the northwest of the mouth of the Orontes River. Seleucis I Nicator, who was one of the successors of Alexander the Great, founded Seleuceia as a capital city of the Seleucid Kingdom in 300 B.C. The site has been known from ancient records and also travelers' accounts since the eighteenth century (Pococke 1743–45; Drummond 1754; Carne et al. 1836–1838). During the first decade of the twentieth century, research was activated in the area focusing on the inscriptions and architectural remains of the ancient site (Perdrizet and Fossey 1897; Perdrizet 1898, 1900; Chapot 1902). An important article on architectural remains of the site was published by Victor Chapot (1906). Under the auspices of the Committee for the Excavation of Antioch and Its Vicinity, three field seasons were carried out in Seleuceia Pieria between 1937

and 1939. The results of the excavations revealed that the city was an important port city in the delta that was related to Antioch and areas beyond (Stillwell 1941: 1–34).

Survey strategies and standards in the Near East are rapidly improving with the introduction of intensive and systematic field-walking methods as well as the use of satellite images and GIS (Wilkinson 2000). Nevertheless, many of the areas in western Asia still await detailed investigation and more finely graded local chronologies derived from these new methods. Along with the development of field methodology, the theoretical framework of survey research has been shifted from merely investigating archaeological sites and reconstructing linear historical development to the study of human and environmental interactions in Braudelian terms of *la longue durée* (Knapp 1993, 1997; Levy 1995). The Orontes Delta survey aims to carry out the survey along these lines and also focuses on local cultural-historical development of which so little is known.

The first field season took place between August 18 and September 18, 1999; the second season between July 8 and August 15, 2000, and the third “study” season between August and September 2001. The 1999 season was mainly focused on intensive and systematic investigation of the southern bank of the delta as well as the previously excavated sites of al-Mina (OS 11) and Sabuniye (OS 12). The 2000 season was focused on the northern bank as well as the southern edge of Musa Dağı Mountain including the site of Seleuceia Pieria (OS 55). The first geomorphological investigation was carried out in this season. The 2001 season was spent analyzing surface collections, producing a topographical map of Sabuniye, and additional geomorphological study.

The two intensive field seasons have so far recorded fifty-five sites of which fifty-two are new in the survey area (fig. 3.2). The project is still in progress and the results obtained thus far, as well as their interpretations, are subject to change with future investigations. Nevertheless, it is timely to present the preliminary results of the project in order to comprehend the framework of historical development of the delta area.

## THE NATURAL SETTING

The Orontes Delta (Asi Nehri Deltası) is located in the southernmost part of Turkey on the eastern Mediterranean coast. The Orontes River itself flows north from Lebanon and Syria through the Amanus Mountains and the Amuq Valley before turning southwest and emptying into the Mediterranean Sea. Only a few favorable port areas exist in the northern Levant, of which the Orontes Delta is one. The most famous of these is around Latakia (ancient Laodiceia) where Ras Shamra (Ugarit) and Ras Ibn Hani are located. Other harbors are located in the Tartus-Jeble region and the Ras al-Bassit area in Syria (fig. 3.1).

The delta is triangular, approximately 40 sq. km in area, with the towns of Samandağ, Meydan Köyü, and Çevlik serving as interstices. The length of the shoreline is 15 km from Meydan Köyü to Çevlik (Erol 1963: 8). The delta is surrounded by the Jebel al-Aqra (Kel Dağı Mountain in Turkish) to the south, while Sem’an Dağı Mountain (Mount St. Symeon) is located to the east. The gently higher hills of Musa Dağı Mountain, which according to writers Strabo (*Geography* 16.2.8) and Pliny (*Natural History* 5.18.79 or *Corypheum* in Polybius, *Historie Prote* 5.59) was called *Pieria* in the first and second centuries A.D., are to the north and northwest. Musa Dağı Mountain is the beginning of the Amanus Mountain range. It is the highest peak (1,750 m above sea level) of the al-Ansariye Mountain range. During the Hittite and classical periods Jebel al-Aqra was considered to be the sacred mountain (Schaeffer 1948; Djobadze 1986: 3) called Huzzi or Hazzi Mountain during the Hittite period (Akurgal 1987: 104) and Mount Kasios during the classical period (Salač 1922: 179) respectively. According to the local inhabitants Cyprus is visible from the peak of the Jebel al-Aqra. Woolley (1938a: 2) notes that its peak was visible from Cyprus and that it was the starting point of the delta and the Orontes Valley inland for ancient sailors.

The slopes of the hills surrounding the delta are fully terraced with greenhouses and orchards for agricultural purposes. The main economic source of the delta is agriculture; products include vegetables, vineyards, olive trees, and orchards. Olive oil, grapes, silk production, bay trees, and timber from the forests on the Amanus Mountains are the main trade products. The small modern harbor in Çevlik is the delta’s only port and serves fishermen today.

The delta was shaped and reshaped by the alluvial silting of the Orontes River, as well as by tectonic movements in the area. Coastline changes of the delta by tectonic movements were first investigated by P. A. Pirazzoli and Oğuz Erol in 1992. The changes on the coastline occurred during the Holocene in two different phases. **The coastline was uplifted by the tectonic movements ca. 2,800–2,500 B.P. As a consequence, the southern part of the delta became 1.2 m and the northern part 1.7 m higher than before. A second tectonic movement, which took place at 1,400 B.P. resulted in the rising of the coastline by 0.7–0.8 m. Thus, the delta plain was uplifted a total of around  $\pm 2.0$  m on the south and  $\pm 2.5$  m on the north between 2,800–2,500 and 1,400 B.P. (Pirazzoli et al. 1991).** The effect of this tectonic movement

is most visible at the classical site of Seleuceia Pieria (OS 55). The harbor of the ancient town lies ca. 500 m inland from the coast, and the harbor of Iron Age al-Mina (OS 11) lies 1,800 m inland from the coastline. The dominant wind and sea wave movement of the area brings the sand and sediments from the south to the north of the delta (Admiralty Chart 1976: 13).

The Orontes River makes the delta accessible inland. Regarding the use of the river for sailing inland, the depth of the mouth of the Orontes River varies between 0.9 and 1.8 m. In winter, the water level becomes higher than in summer and small riverboats have been able to sail 4.8 km upriver even in recent times (Admiralty Chart 1976: 100). Several ancient sources state that during certain periods in antiquity, the Orontes River was navigable (Strabo, *Geography* 16.2.7). The Gourub Papyrus mentions the navigability of the Orontes River in 246 B.C. In this record, the fleet of Ptolemaios III sailed upriver to Antioch and anchored there (Holleaux 1942). According to local inhabitants in the beginning of the twentieth century, riverboats were sailing up to Sabuniye (OS 12) and cargo was loaded onto the boats. Today, the water level does not allow sailing on the river inland due to silting from agricultural activities in the Amuq Valley and Syria.

## SURVEY METHODS

The survey methods of the 1999–2001 seasons consisted of both extensive and intensive methods. The former comprises a conventional method of visiting every possible place sites are expected to be with the help of maps (scale 1:25,000) and local informants. The latter method consists of walking over fields in transects, or collecting surface artifacts in sample units (5 × 5 m). Since no site inventory lists existed in the delta area, except for few excavated sites (e.g., al-Mina [OS 11], Sabuniye [OS 12], Seleuceia Pieria [OS 55], and Mağaracık caves), the primary aim of the survey for the first two seasons (1999–2000) was to locate as many sites as possible. In this regard, the area extending from the south bank of the Orontes River to the foothills of Musa Dağ was surveyed in the above extensive method. The total area covered by the survey was approximately 150 sq. km. The intensive method was carried out at a few known sites (al-Mina, Sabuniye, and Seleuceia Pieria) as well as at other areas where such methods were possible to execute.

The Orontes Delta can be separated into the following six micro-geographic sectors chiefly based on geomorphologic sediments and topographic features:

Area 1 — Main delta area from the Mediterranean coast to Samandağ

Area 2 — Northern edge of the foothills of the Jebel al-Aqra

Area 3 — Wadi valleys of the Mutayran and the Hıdırbey Rivers

Area 4 — Southwestern edges of the foothills of Musa Dağı Mountain

Area 5 — Western foothills of Sem'an Dağı Mountain

Area 6 — Low hills where Samandağ is now located.

Area 1 consists of flat alluvial plain, which is the floodplain and levee of the Orontes River. The terrain has an altitude of 3–15 m above sea level. The delta ceases around 7 km from the coastline. Area 2 consists of steep, rocky slopes and spurs with altitudes of 60–70 m. The former is formed with limestone and occasional outcrops of serpentine. Area 3 consists of alluvium sediments delivered by the Mutayran and the Hıdırbey Rivers (altitude ca. 20–30 m). The area contains a small hill (peaks at Kireç Tepe and Niznez Tepe: altitude ca. 130 m), which lies between the two wadi valleys. Area 4 consists of a series of low hills extending from the foothills of Musa Dağı Mountain and small wadi valleys in between the hills. Area 5 is characterized by steep slopes and patches of small terraces at the foothills of Sem'an Dağı Mountain. Finally, Area 6 is formed by a series of undulating low hills (altitude ca. 20–50 m). The majority of low hills are now beneath the modern town of Samandağ.

The majority of the surveyed areas consist of hilly terrain where transect survey is unsuitable. Therefore, we employed a method of foot reconnaissance in areas assumed to have the highest site potential, such as flat spurs and hill-tops. The survey in the highlands was generally limited to altitudes below 100–150 m. For the survey in the delta area (Area 1), we used current field divisions as our survey units and conducted transect field-walking. Maps of 1:25,000 scale were used as our base maps. When a site was identified, the location was recorded using GPS and we made a sketch plan of the site, described the surrounding environment (current land use pattern, vegetation, geomorphologic condition), and collected diagnostic samples (rims, bases, handles, and other decorated sherds). When the site seemed large, or had complex morphology, we divided the site surface into topographic areas, and surface collections were

made in each individual area. Each site was labeled with consecutive site numbers prefixed by OS (Orontes Survey). Besides recording archaeological sites, we also documented locations of possible natural resources, small roads, drainages, and other architectural features not present on the 1:25,000 base map. During the above two seasons, a total of fifty-five sites were recorded, including the known sites of al-Mina (OS 11), Sabuniye (OS 12), and Seleuceia Pieria (OS 55; fig. 3.2).

## ANALYSES OF THE SURVEY RESULTS

The earlier research showed that occupation in the delta area starts from the Paleolithic period. This phase is represented by five Paleolithic sites (Üçağızlı, Merdivenli, Barutlu, Tıkalı, and Kanal caves) of which four sites, Barutlu, Merdivenli, Kanal, and Tıkalı Caves were discovered and published in 1958 by Şenyürek and Bostancı (1958) and by Yalcinkaya in 1999 (Yalcinkaya et al. 1999). Üçağızlı Cave was discovered and first excavated in the 1980s by Minzoni-Déroche (1992). While Merdivenli, Kanal, Tıkalı, and Barutlu Caves are on the northern part of the delta, around and within the site of Seleuceia Pieria (OS 55), Üçağızlı Cave is not on the delta and lies 15 km south of the Orontes River mouth on the lower slopes of the hill that is bounded by the delta on the south at Meydan Köyü (fig. 3.3a). Üçağızlı Cave has been excavated by Erksin Güleç and Steven Kuhn since 1999 and dates to the Upper Paleolithic period (Kuhn et al. 2001). Although the survey did not aim for the Paleolithic sites, their location was recorded for complete archaeological data of the delta. The other known sites on the delta are al-Mina (OS 11) and Sabuniye (OS 12), which were discovered and excavated by Woolley in the 1930s. Small soundings were placed at Seleuceia Pieria by the Committee for the Excavation of Antioch and Its Vicinity between 1937 and 1939.

The survey results between 1999 and 2001 are presented in chronological sequence. The sites are separated into four groups: Neolithic/Early Chalcolithic sites, Bronze Age sites, Iron Age sites, and Hellenistic, Roman, and Islamic sites. The important sites of the delta, al-Mina (OS 11), Sabuniye (OS 12), and Seleuceia Pieria (OS 55), are presented in more detail within their periods.

### THE NEOLITHIC/EARLY CHALCOLITHIC SITES

A single early site dated to the Neolithic or Early Chalcolithic period (OS 47) was discovered on a terrace about 40 m to the northwest of Paleolithic Barutlu Cave (fig. 3.3a). It is of small size and located at the height of 35 m on the flat limestone terraces of the delta. Collection from the site yielded material from Neolithic and Early Chalcolithic to the Islamic period. The chipped stones among the surface collection of OS 47 (fig. 3.3b:1–4) are not of sufficient quantity to give their technological determination. However, one example (fig. 3.3b:3) produced from quartz chalcedony has very fine and shallow retouching, reflecting the skill present in the Chalcolithic period. Those non-functional chipped stone samples are associated with the pre-working phase of the material that is to be produced for different purposes. Samples (fig. 3.3b:1–2) are triangle section proximals of the blades that are recognized from the Neolithic as well as the previous period. The sample seen in figure 3.3b:1 is recognized in the Levantine region as a Canaanite blade. The most important sample of the collection (fig. 3.3b:4) is a bladelet produced from obsidian, the material for which possibly came from obsidian sources in central or eastern Turkey. This possibility demonstrates the connection between Anatolian sources and the Orontes Delta on the northern edge of the Levant. Similar samples from Tell Kurdu (AS 94) come from deposits dating to the Amuq Phase E (Early Chalcolithic; see Bressy, Poupeau, and Yener in prep.).<sup>21</sup> Among the surface finds from OS 47 is a fragment of a stone adze or ax made from cobblestone (fig. 3.3b:5), which was commonly used from the Chalcolithic period to the Iron Age. The location of OS 47 suggests that it may have been related to the Upper Paleolithic Barutlu Cave.

### BRONZE AGE SITES

The Bronze Age sites in the delta are Virşa Tepe (OS 32) and Sabuniye (OS 12; fig. 3.4). Virşa Tepe is strategically located on a hilltop just opposite Sabuniye, overlooking the delta and Mutayran River. Finds include ceramics pulled from sections of building trenches, which date the multi-period site to the Middle or Late Bronze Age through

21. The chipped stones in figure 3.3b:1–4 were analyzed and drawn by Dr. C. M. Erek, Assistant Professor of Prehistory Program, Department of Archaeology at Mustafa Kemal University.



the Islamic period (fig. 3.8:1–3). This site was investigated in 1999 because of a modern cut. When the site was visited during the 2000 field season it had been completely destroyed by modern buildings.

One of the important sites in the delta is Sabuniye (OS 12), which was discovered by C. Leonard Woolley in 1936 but never published in detail. According to Woolley, the site was located three miles (5.5 km) upstream from al-Mina (OS 11) along the Orontes River. Woolley only made a sounding in 1936 and wrote less than a page in his al-Mina excavation report (Woolley 1937a: 11–12, 1938a: 8–9). The site has been forgotten since, and the exact location has been totally lost during the last several decades. During the 1999 season, Sabuniye (OS 12) was rediscovered by the survey team and located on a natural hill close to the Orontes River (fig. 3.5). The site is on the southern prominent point of the natural hill, known as Hisallitepe. Hisallitepe rises in height toward the east and joins Sem'an Dağı. The floodplain, north of the Orontes River, starts from where this hill range ends. The site measures approximately 1.2 ha in size. It is located around 55 m above sea level and 30 m above the present floodplain, which extends to the south and west of the site. To the north of the site lies a second floodplain, created by the Mutayran River. Thus, the site is located at the confluence of two rivers and is surrounded by an extensive floodplain. The western and northern edges of the natural rocky outcrop, on which the mound lies, are very steep and appear to have been artificially cut while the southern slopes rise more gently with terraces. The natural hill joins on the eastern side with the hill ranges of Sem'an Dağı Mountain.

Woolley mentions Sabuniye (OS 12) in his 1936 report and states the following:

The top of the rock had been enclosed by a massive wall of rubble and mudbrick, and the rock face below had been artificially scraped, so that it formed an acropolis likely to be proof against any attack by a barbarian enemy (Woolley 1937a: 11).

Woolley notes that he found Mycenaean sherds dating to the thirteenth and twelfth centuries B.C., white slip “milk bowls” of the fifteenth century, and a cylinder seal from about the eighteenth century. Although Woolley mentions a large collection of ceramic and metal finds, as well as coins from the Byzantine period, he did not publish the collection. Woolley thought that Sabuniye (OS 12) was the place where the merchants at al-Mina (OS 11) had dwelled, and that the relationship between Sabuniye and al-Mina was much like the relationship between Athens and Piraeus (Woolley 1953a). For the purposes of investigating the extent of the site, the following sectors were surveyed using modern field system divisions and setting sample squares within each sector:

1. The summit of Sabuniye (OS 12): northern and southern parts were intensively surveyed. The summit is about 30 m above floodplain, and from it the site has strategic views of the delta, the Mediterranean, and the river gorge inland. It yielded a mixture of finds dating from the Late Bronze/Iron Age to the Islamic period (figs. 3.5:1; 3.12:1, 6–7; 3.11:3, 5; 3.14:2, 4–5; 3.16:2–3).
2. The southern slope rises gently on narrow terraces and constitutes a crescent shape within the range of the natural hill. The area has suffered heavy natural erosion as well as human exploitation. It overlooks the Orontes River gorge and floodplain, which is occupied by modern housing (fig. 3.5:2). The ceramic collection ranges from the Late Bronze Age to the Islamic period (figs. 3.7:2, 9–12; 3.12:2–4, 10; 3.14:1).
3. The western slope rises fairly steeply. The lower part of this site seems to have been modified to have a steep side. The upper part of this side rises gently and contains cultural deposits. The cut on this part, which was made recently by the villagers to form a terrace for a greenhouse, revealed thin cultural deposits (fig. 3.6). A wall that was built using gravel, stones, and mudbrick lies on sandstone bedrock. The sherd collection ranges from Late Bronze Age to the Hellenistic period. The collected sherds from this area show that the earliest occupation seems to be the Late Bronze Age II period (figs. 3.7:1, 3–6, 8; 3.8:4, 6; 3.12:5, 9, 11; 3.11:1–2, 4, 6; 3.14:3, 6, 8).
4. The surrounding floodplain was surveyed to identify the possible extent of the site, such as the lower settlement in parallel to the hill. Intensive surface survey and sample squares (5 × 5 m) were carried out on ten squares on the floodplain and in Sutaşı village, but because of modern occupation and thick alluvial sedimentation of the Orontes River, no ancient settlement was located. The sites belong to recent periods (Ottoman; fig. 3.5:4).
5. The northeast and east surface surveys were carried out on the foothills of Sem'an Dağı Mountain in an area of about 2 sq. km (fig. 3.5:5). These hills have been terraced for agricultural purposes at the present time and were in ancient times as well. Sherd collections from the terraced slopes dates to the Roman/Byzantine and Islamic periods (fig. 3.16:1, 7).

Of the ceramics collected from the Sabuniye (OS 12) survey, thirty-eight were dated to the Late Bronze Age. These can be divided into eight different ware types. As far as the available evidence is concerned, all white slip “milk bowl” sherds belong to white slip II ware, which is characterized by a “lattice” pattern of four parallel lines intersected at right angles by shorter lines. The pattern is painted in a rather cruder manner than the white slip I ware. White slip II ware is generally dated to Late Bronze Age II and the specimens from Sabuniye (OS 12) correspond with the occurrence of base ring II (Courtois and Courtois 1978: 282–91; Courtois 1969; Koehl 1985: 34–37; Todd and Pilides 2001: 37–40; Yon 2001).

In addition to the above-mentioned material, local Iron Age ceramic sherds were recovered from similar contexts (fig. 3.11:1–6). Other small finds include two Bronze Age clay female figurines (fig. 3.8:5–6; Pruß 1996: 91), a blue frit scarab engraved with hieroglyphic script on its base dating to between al-Mina Level 3 and Level 8/9 (fig. 3.8:9; Woolley 1938a: 161), and so-called “Astarte” plaque figurines dating to the late sixth to fourth centuries B.C. (fig. 3.8:7–8; Nishiyama and Yoshizawa 1997; Pruß 1996: 214). A blue frit scarab in the surface collection engraved with hieroglyphic script on its underside is very similar in style and material to al-Mina scarabs from Level 3 and Level 8/9 (fig. 3.8:9; Woolley 1938a: 161). The al-Mina (OS 11) excavation has yielded a great number of blue frit scarabs, most of them small in size and rather roughly engraved, although they have suffered much from the disintegration of the surface and they seemed to be of Naukratite manufacture (Woolley 1938a: 162, pl. 15). Other pottery finds include Attic black- and red-figure wares, Hellenistic and Roman/Byzantine local wares, and Islamic sherds. The finds from Sabuniye (OS 12) suggest that occupation at this site began in the Middle to Late Bronze Ages and continued into the Iron Age. The presence of Attic black- and red-figure wares and the collection of Hellenistic and Roman/Byzantine ceramics suggest that occupation continued on the mound during these periods.

According to the survey results, the delta area was settled on two sites during the Bronze Age. Contrary to the pattern in the Amuq Valley, settlement locations are not usually on the plain but on the slopes or lower hills that surround the delta. A geomorphological survey carried out by Tony Wilkinson focused on the ancient terraces above the present floodplain located to the north of al-Mina (OS 11). One of the tasks was to identify Bronze Age occupation since this area is considered suitable for occupation during that time period. Unfortunately, geoarchaeological research here was unsuccessful due to heavy vegetation and dense modern human exploitation in the survey area. The other reason Bronze Age occupation was difficult to identify may be related to geomorphological conditions as well as heavy sedimentation of the delta area by the Orontes River and eroded soil from the hills; if the floodplain had settlements, these may be under the present sediments.

Geomorphological research was carried out in order to explain the effects of the changing coastline on the settlements of Sabuniye (OS 12) and al-Mina (OS 11). Oğuz Erol and P. A. Pirazzoli (Pirazzoli et al. 1991) investigated shifting shorelines and tectonic movements that occurred 2,800–2,500 B.P., which uplifted the coastline. Ertuğ Öner and Levent Uncu from Ege University, Izmir, conducted coring at the widest point of the Orontes River, near Sabuniye in the delta. A total of three cores were collected; the first core was taken from 500 m to the south of Sabuniye and the other two cores were collected from 200 m and 500 m to the west of Sabuniye respectively. The analyses of core data so far have shown that the area around Sabuniye (OS 12) might have been situated in a marshy or waterlogged environment at some point. Radiocarbon dates will provide an estimate of when this environmental condition occurred and thus when Sabuniye could have functioned as a port.

## IRON AGE SITES

The Iron Age is represented in the delta by five sites; two are the known sites Sabuniye (OS 12) and al-Mina (OS 11) and the others are Virşa Tepe (OS 32), Mezar Tepe (OS 16), and Berraktepe (OS 34; fig. 3.9). Mezar Tepe is located on a small hill on the southern bank of the Orontes River. The hills of the Jebel al-Aqra abruptly rise and are the borderline of the delta south of the Orontes River. The slopes of the hills are fully terraced for agricultural purposes. The site of OS 16 was discovered on the western and southern flanks of the Mezar Tepe. The site of OS 34 is located on the southwest slope (30 m in height) of the low hills of Berraktepe at the same altitude as Samandağ. The summit of the site was bulldozed in recent times, and a settlement was discovered on the southwestern slope of Berraktepe hill. The area is under the orchard and houses of modern occupation. The sherd collection yielded Late Iron Age to Islamic period wares. Except for al-Mina, all sites are on top of the hill or on the slopes of the hills. Only al-Mina is on the floodplain and riverbanks of the Orontes River. All sites can be described as small settlements (smaller than 2 ha).

The well-known site of al-Mina (OS 11) is located on the northwestern bank of the Orontes River. The mound is small and low-lying, situated ca. 250 m from the modern riverbed, and 1.8 km inland from today’s coastline and mouth

of the river. Al-Mina's location along the northern bank of the Orontes River was ideal both for local as well as international trade. Today, orchards, fields, and houses surround the mound. The height of the mound ranges between two and five meters on the east and south sides due to the remnants of large soundings of the 1936 excavations and modern earth-moving for agricultural purposes. The height of the east point of the mound is around 20 m above sea level. The site is oriented northwest–southeast and measures approximately 1.6 ha in size. A shrine on the northern edge of the mound is known as Seyh Yusuf al-Garib Türbesi, which unfortunately occupies the only untouched portion of the mound. A farmhouse occupies the southern part of this summit.

Al-Mina (OS 11) functioned as one of the important trading centers on the eastern Mediterranean between the eighth and fourth centuries B.C. This site was explored, excavated, and quickly published by Woolley (fig. 3.10), who hoped to find traces of cultural connections between the early civilizations of the Aegean and the cultures of the Near East (Woolley 1937b, 1938a–b, 1953a). The results of his excavations and his suggestion that the site was the main center of trade for Greeks in the eastern Mediterranean led to a heated discussion concerning al-Mina and its geopolitical position. This discussion, which centers on whether al-Mina was founded as an emporium by Greek settlers, or was an emporium founded by Phoenicians where Greeks traded as merchants, continues among archaeologists and historians (Boardman 1999; Kearsley 1999; Waldbaum 1997; Graham 1986). Woolley's excavations revealed that the only Iron Age port city on the delta was al-Mina (Woolley 1937b, 1938a). Woolley (1938a: 7–8) claimed that the periods preceding the Iron Age were swept out to the sea by the changing river course, and he considered al-Mina to be the port site for Late Bronze Age Alalakh in the Amuq Valley (*ibid.*, pp. 29–30). In order to clarify such issues, fresh archaeological data must be collected from the site while keeping a regional perspective. The survey at al-Mina was carried out on the following sectors using modern field system divisions and by setting sample squares within each sector. The results of the sectors are the following:

- In sector 1, the survey carried out on and around the mound confirmed the excavation results and attempted to find evidence of Woolley's suggestions about the site's missing Bronze Age. The general surface collection confirmed all the ceramic sequences mentioned in Woolley's excavation report. No finds earlier than the Iron Age were found. The potsherds collected include all the periods specified by John D. Beazley (1939), Martin Robertson (1940), and Joan du Plat Taylor (1959). Research on the local Hellenistic and Roman sherds excavated from al-Mina is ongoing. The 1999 field season yielded a collection of the Hellenistic and Roman period sherds that is the largest in total sherd counts. The Byzantine and Islamic period sherds were collected especially on the western part of the mound, in the modern village known as Liman Mahallesi (figs. 3.11:7–11; 3.12:8, 12; 3.14:7; 3.15:1–7).
- In sector 2, in order to determine the possible extent of occupation areas, fourteen sampling squares (5 × 5 m) were placed on and around the mound. Within these sampling squares, every visible artifact was collected, counted, and recorded. The preliminary results of the intensive sampling suggest that the modern village area had also been settled in antiquity and that the occupation, therefore, extended farther northwest and west than was previously assumed. In the modern village some architectural remains were identified while collecting sherds, one of which is a Corinthian capital dated to the second century A.D. The results of the survey suggest that the size of the site is significantly larger than that specified by Woolley; current investigations show that the mound extends considerably to the north and the west. Despite heavy cultivation around the mound, the results of the sample squares show that high numbers of sherd scatters exist to the east and southeast of the mound, which may indicate that the site extends 10–15 m from the present edge of the mound (fig. 3.10).
- In sector 3, on the southeastern edge of the mound, a relatively long cut was found that revealed a part of the mound accumulation. The cut was approximately 40 m in length and 1.3 m in height. The highest point of the cut was around 3 m below the summit of the mound. Four archaeological strata were identified, two of which from the bottom of the cut revealed Roman/Byzantine and Hellenistic artifacts, respectively (fig. 3.10a).

Overall surface collections yielded local Iron Age and imported sherds from Euboea, Ionia, Athens black- and red-figure wares, Hellenistic and Roman, local Byzantine, and Islamic period sherds. Local Byzantine and Islamic period sherds were collected especially on the western part of the mound, in the modern village known as Liman Mahallesi. The results of survey suggest that Woolley's description of al-Mina (OS 11) was fundamentally accurate, though the size of the present mound is not as specified by him. Current investigations show that the mound extends to the west considerably farther than indicated by Woolley.

## HELLENISTIC, ROMAN, AND ISLAMIC SITES

After the death of Alexander the Great, first Antigonos and then Seleucis I Nicator, who were his generals and successors, wanted to take the eastern regions of his Hellenistic Empire under their control during the last quarter of the fourth century B.C. (Rostovtzeff 1941: 479ff.; Invernizzi 1991: 239ff.). Seleucis I Nicator founded a kingdom as part

of Alexander's imperial heritage, and his dynasty ruled from Sardis (in the west) to Samarkand (in the east) during the third century B.C. (Invernizzi 1991: 240). During the Hellenistic period the region that included Antioch, Seleuceia Pieria (Orontes Delta; OS 55), Apamea (Syria), and Laodiceia ad Mare (Syria) was called "Seleucis" or "the heartland of the kingdom" (Strabo, *Geography* 16.2.4; Sherwin-White and Kuhrt 1993: 402).

The survey team found fifty sites dating to the Hellenistic and Roman periods (fig. 3.13). Major building activities are connected to the Hellenistic period. The most obvious change is the location of the settlements. Hellenistic and Roman sites in the area are mainly on the slopes of the lower hills of the mountains and are mainly small farmhouses or small villages of Seleuceia Pieria (OS 55). The survey focused on sites below 100–150 m in elevation, on the east and west banks of the Orontes River, and on sites in the surrounding hills of the delta. Experimental transects were made in the lower part of the delta, but because of the intensity of modern settlement and the great amount of sedimentation on the plain, no ancient sites were located on the lower parts of the delta itself. Examination of freshly cut irrigation canals in the delta showed at least 2 m of deposited silt, and no traces of settlement were seen. Most of these sites are on the terraced fields just above the delta overlooking the river and the Mediterranean Sea. Continuity of settlement is apparent on the earlier sites of the delta and was not interrupted during the Hellenistic and Roman periods.

During the Hellenistic, Roman, and Islamic periods, the slopes of the hills, which look out onto the Orontes Delta and the river valley, were terraced for agricultural purposes (figs. 3.14:9–11, 13–14; 3.16:4–6, 8). The terrace walls were built using unshaped stones or gravel with mud. The fields are generally 3 m to 5 m in width and 30 m to 50 m in length. Some of the terraced fields are presently planted with olives, figs, and grapevines. The bulk of the sites were Roman/Byzantine period farmhouse settlements and their related rock-cut tombs. The rock-cut tombs were usually constructed with three stone beds (*loculi*) on the north, east, and south sides. They did not have reliefs or inscriptions on them for dating purposes, but according to their typology and related archaeological finds, a Roman/Byzantine period date is suggested. Only one site (OS 15) was found on the delta plain to the south of Sutaşı village, 200 m from today's Orontes riverbed. It is a small site and has very little height. Its surface collection yielded Roman/Byzantine, Islamic, and a few Crusader period sherds (fig. 3.14:12).

The main settlement of the delta area is Seleuceia Pieria (OS 55; fig. 3.17), which extends from the rocky slopes of Musa Dağı Mountain over the floodplain, and is 300 ha in size. Seleuceia Pieria was founded by Seleucis I Nicator about 300 B.C. (Malalas, *Chronographia* 8.12 (199); Strabo, *Geography* 16.2–4/750; Invernizzi 1991). The city was established around a natural lagoon, which served as a natural harbor before Hellenistic times (Honigman 1921: 1184). Strabo (*Geography* 16.2.8) writes that the original name for the site was *hydatoi potamoi* "rivers of water." Polybius (*Historie Prote* 5.59–60:1–2) also describes the city's very important geographic role in eastern Mediterranean trade in Hellenistic times. After Seleucis I Nicator's death and the invasion by the Ptolemies, the residential and administrative center of the kingdom of Seleuceia was transferred to Antioch in the middle of the third century B.C. Seleuceia remained as a holy capital of the Seleucid Dynasty. By the second century A.D., Seleuceia Pieria was one of the two most important ports of the eastern Mediterranean (the other being Alexandria, Egypt). Grain from Roman provinces in Syria and Mesopotamia was transported to Seleuceia Pieria for eventual shipment to Rome (Grant 1969: 301). Seleuceia Pieria was the Roman naval base in control of the sea trade line from the northern Levant to Rome. According to John Malalas, the city was leveled by earthquakes in A.D. 526 and 528 (Malalas, *Chronographia* 17.16 [420]) and subsequently disappeared from the historical record.

In 1933 the Committee for the Excavation of Antioch and Its Vicinity started excavations in Antioch and its environs. Between 1937 and 1939, research and excavation were conducted at Seleuceia Pieria (OS 55). William A. Campbell excavated the Martyrion and the Doric temple, and Richard A. Stillwell excavated the marketplace, fortification walls and gates, and Roman villas with mosaic pavements (Campbell 1941; Campbell and Stillwell 1941; Stillwell 1941: 1–5, 35–54). The expedition's excavations in Antioch and Seleuceia ended at the beginning of the Second World War. The collections from Seleuceia Pieria are mainly in the Princeton University Art Museum and the Hatay Archaeological Museum.

Seleuceia Pieria (OS 55) had two components, a lower town on the plain and an upper town on a rocky hill. Two harbors, in addition to the tunnels and dam system, as well as other ancient remains, are associated with the site. The lower town includes the harbors, the *agora* or marketplace, and other aspects of the economic life of the city, while the upper city was primarily residential (Pamir 2001).

Of the two harbors, the earliest, inner harbor had two piers and was established in the natural lagoon. The inner harbor now lies about 500 m away from the coastline and is completely silted in. Several buildings associated with the use of the harbor have been located, including a granary on the east side of the harbor near the *agora*. The two piers served both as a breakwater and as a part of the defensive plan of the town. These piers were built in the Hellenistic pe-

riod and continued in use through the Roman period, as indicated by certain architectural features of the piers themselves. In the Late Roman period the harbor was closed with a poorly built wall across its entrance, employing gravel, concrete, and reused blocks, which ended its life as a harbor, although it probably still contained water for some time after. A sedimentary balk (about 6.2 m high) lies on the south side of the entrance of the harbor and shows that wind and wave action from the sea also served as a major means of sedimentation. In addition, deposits were borne by small streams and runoff from the surrounding hillsides. The sedimentary balk must be related to the rescue excavation to keep the harbor mouth from silting by the Roman army under Diocletian's rule in A.D. 305 (Libanius, *Orations* 20.18; Downey 1961: 361). This process may have rendered the harbor inaccessible prior to the construction of the Roman wall, although it may still have been a freshwater basin operating as a depot serving the newer, exterior harbor for some time after.

The second, or exterior, harbor was built in A.D. 346 under the rule of the Byzantine emperor Constantius (Libanius, *Orations* 2.263–64; Downey 1961: 361). The south breakwater wall is approximately 120 m long, while the north breakwater wall is approximately 80 m in length. Both walls are about 12 m wide. The walls were built using large blocks held together with iron clamps that are still visible. The two harbors may have operated as a system until the seventh century. The exterior harbor probably served as the primary boarding and ship-loading area. Small boats could then navigate a channel fed by water from the tunnel and dam system linking the exterior and interior harbors to bring supplies to the depot area surrounding the interior harbor.

Related to our work at Seleuceia Pieria (OS 55) was an investigation of the large tunnel and dam system, including the well-known Titus Tunnel to the west of the city. The tunnel, 6.1 m wide by 716.0 m long, was constructed between A.D. 69 and 81 during the rules of Roman Emperors Vespasianus and Titus. It was built both by cutting through rock and by adding ashlar block walls. The inscriptions that the legionaries in the Roman army in Seleuceia left on the tunnel wall reveal that the construction of the tunnel was continued during the second century A.D. (Seyrig 1939). The dam, at the east end or beginning of the tunnel, was constructed of large stone blocks. Behind the dam, a great quantity of sediment has accumulated. The location of the tunnel provides an escape route for a typical water-gathering dam system to intercept and deflect flow from the valley to the northeast. The water was then conveyed down toward the town to the southeast. The tunnel and cutting seem to have been designed to conduct the high flood flows away from the town and toward the coast. In addition, surplus water may have been collected by coastal cisterns. These could then have supplied water for passing ships. The function of the dam and tunnel system was therefore primarily to divert dangerously high floodwaters away from the dam, thereby avoiding a dam burst, and safeguarding the town.

It is possible that springs farther up the valley provided sufficient water for the Hellenistic town, but as a result of the expansion of the town in the Roman period, an additional source of water was required. The construction of the dam and the associated tunnel system would therefore have had the primary function of supplying much needed water to the town, a secondary function of preventing high flows from flooding the town, and a tertiary function of protecting the inner harbor from silting up. Under normal circumstances (i.e., without the dam) at ten to 100 year intervals, high floods would flow down the valley towards the town, but would not cause catastrophic damage. However, the dam probably stored up a much larger volume of water that could have broken the dam and threatened the town below. This surely would have been catastrophic, not only for the inhabitants, but also for their granaries. This, in turn, could have had a substantial impact on the economy of the town.

Subsequent to the destruction of Seleuceia Pieria (OS 55) by earthquakes in A.D. 526 and 528, no historical record exists about the city and the port. The focus of settlement in the plain seems to return to al-Mina (OS 11). There, unlike Seleuceia Pieria, medieval Islamic and Crusader period ceramics were found both in surface survey in 1999 and in the Woolley excavations of 1936.

## CONCLUSIONS

In conclusion, five sites with dates earlier than the classical period were found in the survey area. They were located not in the lowland area, but on the natural hills looking down on the delta. The entire delta area was settled intensively after the Hellenistic period, but the reason for this expansion of early settlements from the foothills to the mountainous area must be sought in the Hellenistic period. The current results indicate that the expansion of settlements and human activities into the hilly area occurred between the Hellenistic and Byzantine periods. However, the local pottery assemblage of these periods is still not fully grasped, let alone its chronology. Thus, we must wait until the pottery chronology is firmly established for a detailed historical picture. At the moment, we have no clear answer to the question of why the delta area was so sparsely occupied during the pre-classical period compared to the hilly area. Two

possible factors affect the identification of these sites in the delta. One is the heavy sedimentation activity of the Orontes River that may have covered these sites. The other is recent human exploitation of the delta. Currently the area is heavily cultivated and densely covered by modern houses, especially around Samandağ. We were only able to identify sporadic Late Roman and Byzantine occupation in this area.

Considering that the delta area was heavily inhabited during the Late Roman and Byzantine periods, the sparse occupation could not have been due to unhealthy conditions. However, since much of the later period sites are located on the highlands, it is probable that the Late Bronze Age and Iron Age sites are located in the lowland areas. Thus, one possibility for the sparse occupation is that the sites are buried under the thick sediments of the Orontes River and its tributaries. It is also due to the recent intensive human alternations of landscape; the delta area has been heavily cultivated and populated in the last half century, which has covered or destroyed much of the sites.

The three sites that are related with trade and harbor activities are Sabuniye (OS 12), al-Mina (OS 11), and Seleuceia, and their counterparts are three sites in the Amuq Valley: Tell Atchana (AS 136), Tell Ta'yinat (AS 126), and Antioch. Understanding the shifting coastal situation and its resulting effects provides essential information on the roles al-Mina and Sabuniye played in antiquity. Sabuniye may have been the port city for Tell Atchana, which was then moved to al-Mina, due to both political and geological reasons. Other research aims are to explore the relationship between Sabuniye and al-Mina as a port city in the delta, and the question of what role trade played between inland cultures. The question of how Cyprus, the Aegean, and other Mediterranean cultures are linked to other Bronze Age sites on the plain and the settlements along the Orontes River to the Amuq Valley is still waiting to be answered. We hope to continue archaeological as well as geomorphological work in this area in the future.

## ACKNOWLEDGMENTS

The Orontes Delta archaeological project was supported by grants from the Mustafa Kemal University Research Foundation and private donors. Further funding was provided by the Amuq Valley Regional Projects through grants from the Institute of Aegean Prehistory. Over the last three seasons the survey team has consisted of Hatice Pamir (project director, Mustafa Kemal University in collaboration with K. Aslıhan Yener, director of Amuq Valley Regional Projects), Shin'ichi Nishiyama (University College, London), Stephen Batiuk (University of Toronto), Tülin Arslanoğlu (Mustafa Kemal University), Tasha Vorderstrasse (University of Chicago), Lisa Ann Miller (University of Chicago), Dilem Karaköse (Mustafa Kemal University), and Özlem Doğan (Mustafa Kemal University). Tony J. Wilkinson (University of Chicago), Eleanor Barbanes (University of Chicago), and Jesse J. Casana (University of Chicago) conducted geomorphological research. The coring work to define the ancient shoreline of the delta area was carried out by Ertuğ Öner (Ege University) and Levent Uncu (Ege University). The pottery was drawn by Shin'ichi Nishiyama with assistance from Dilem Karaköse. The study of the Aegean imported wares was conducted by Robert Koehl (Hunter College, City University of New York). The chipped stones were analyzed and drawn by C. M. Eren (Department of Archaeology, Mustafa Kemal University).

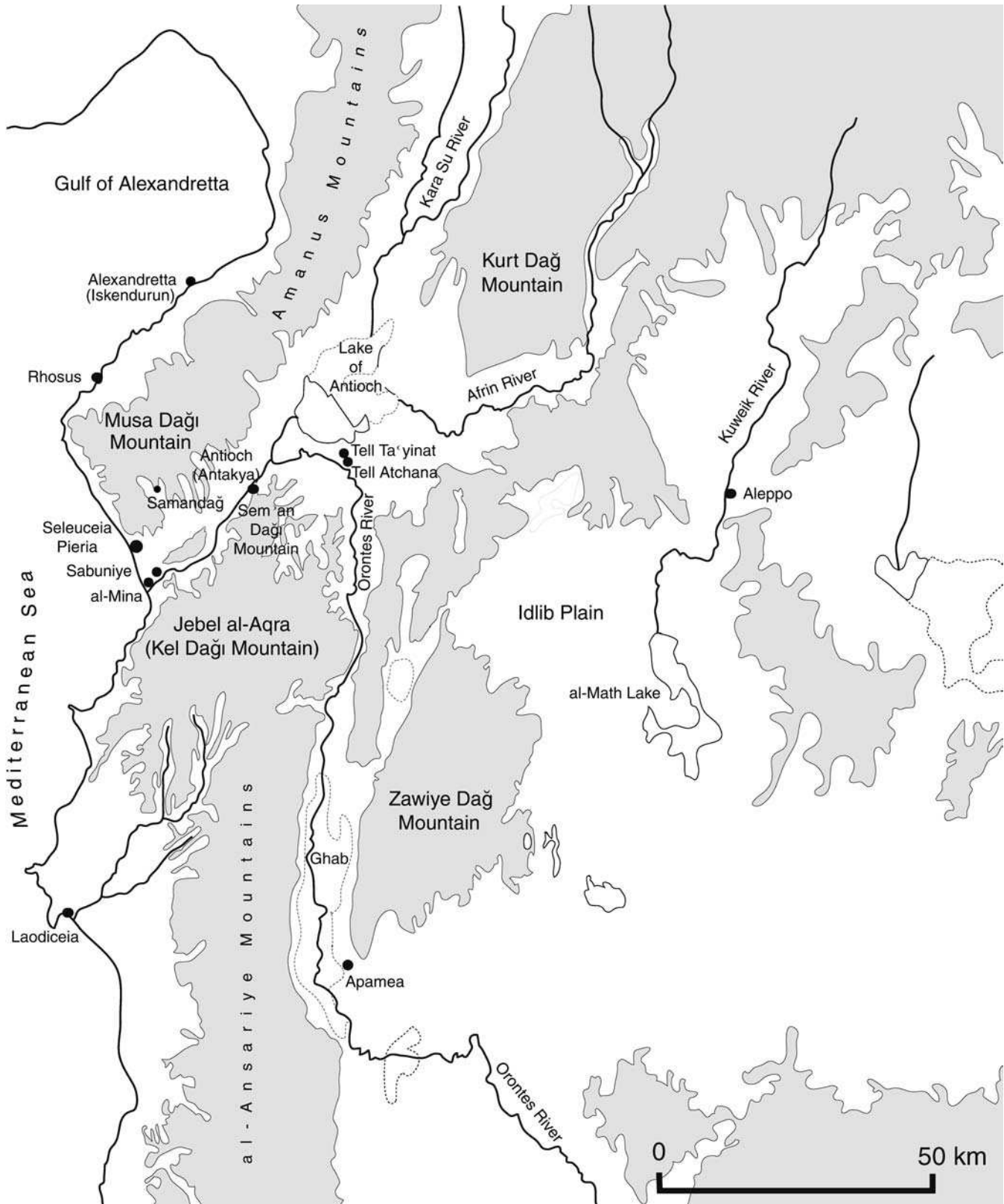


Figure 3.1. Map of the Northern Levant Including the Orontes Delta Area and the Amuq Valley

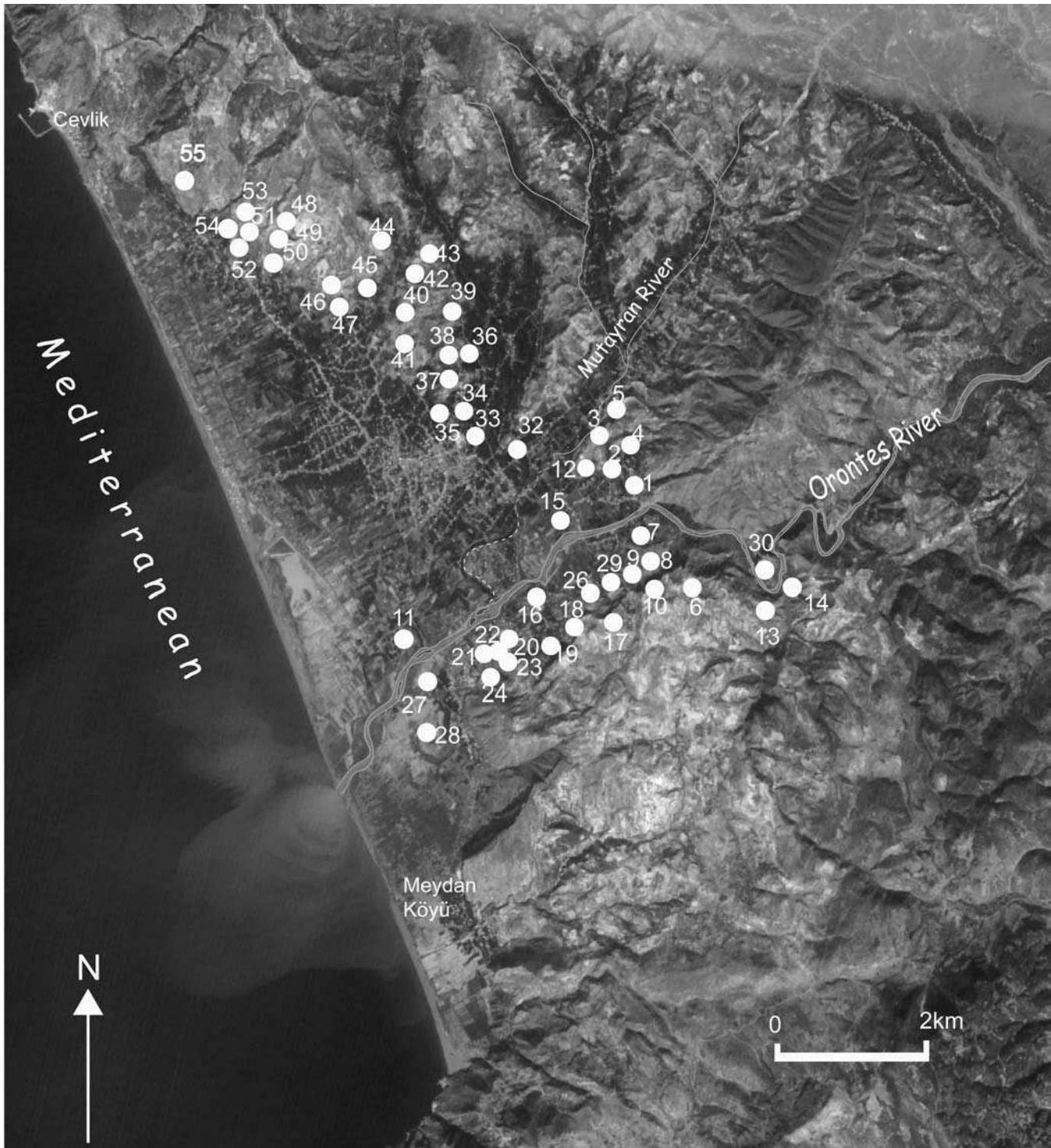


Figure 3.2. Site Distribution in the Orontes Delta, 1999–2001



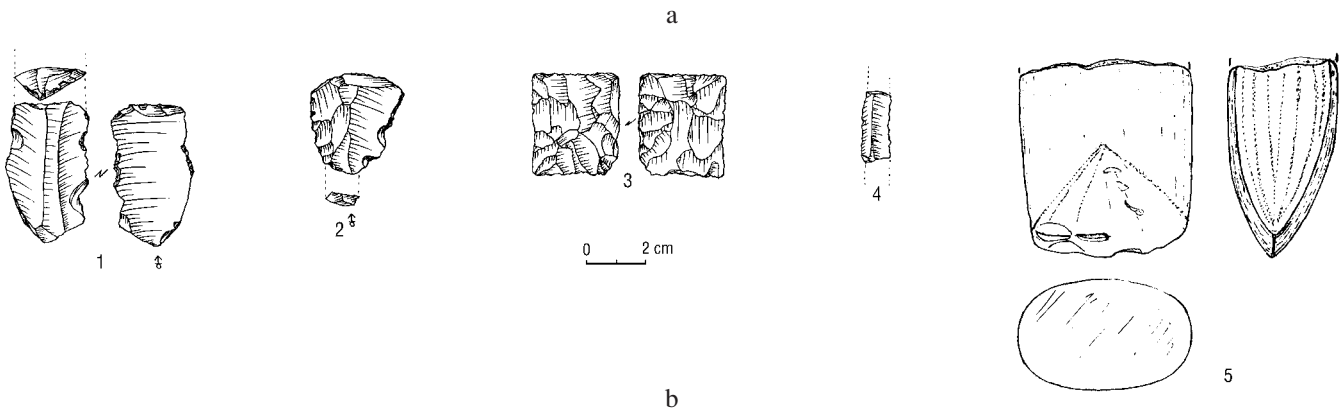
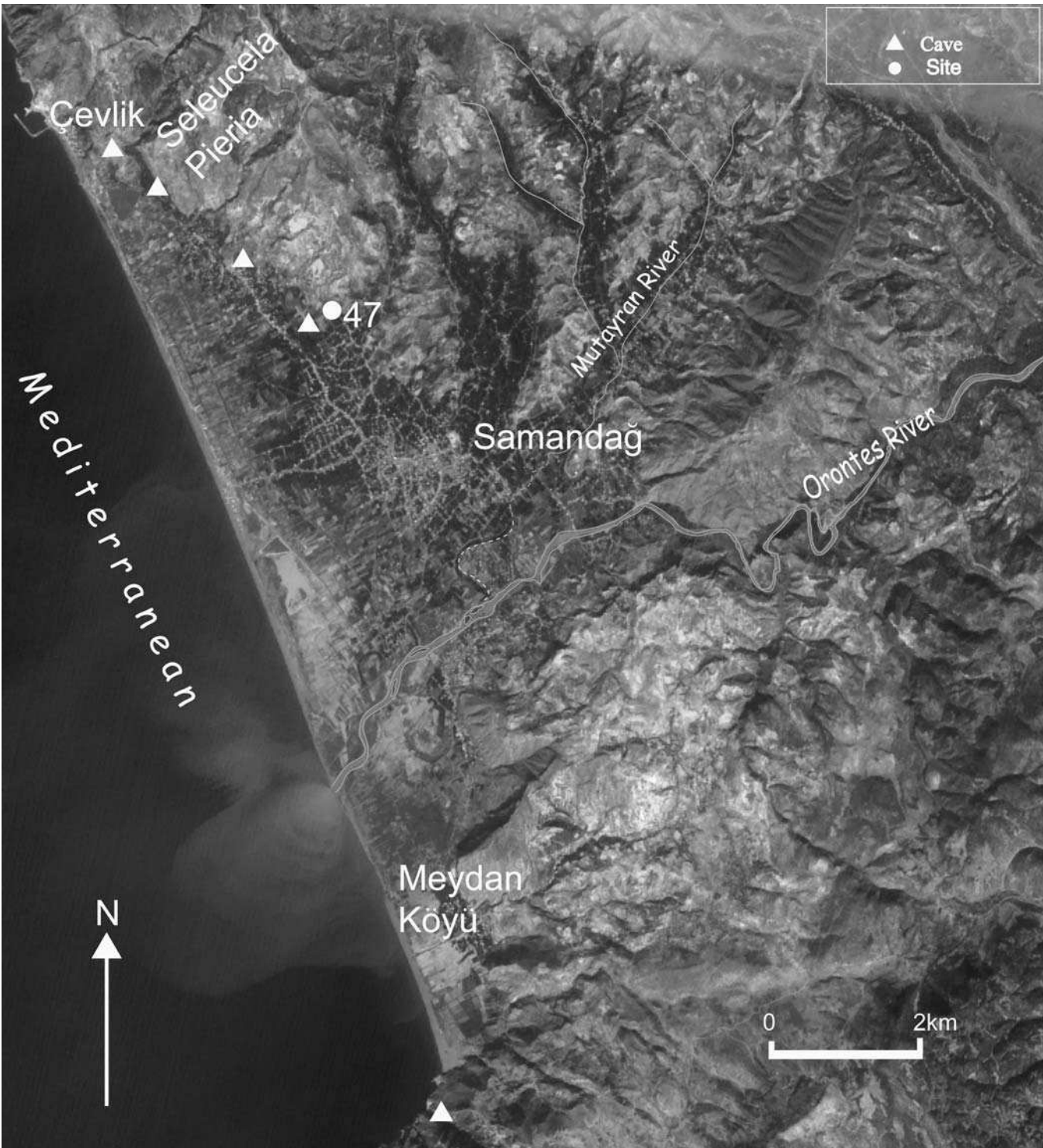


Figure 3.3. (a) Paleolithic and Neolithic/Early Chalcolithic Sites in the Orontes Delta and (b) Surface Finds from OS 47

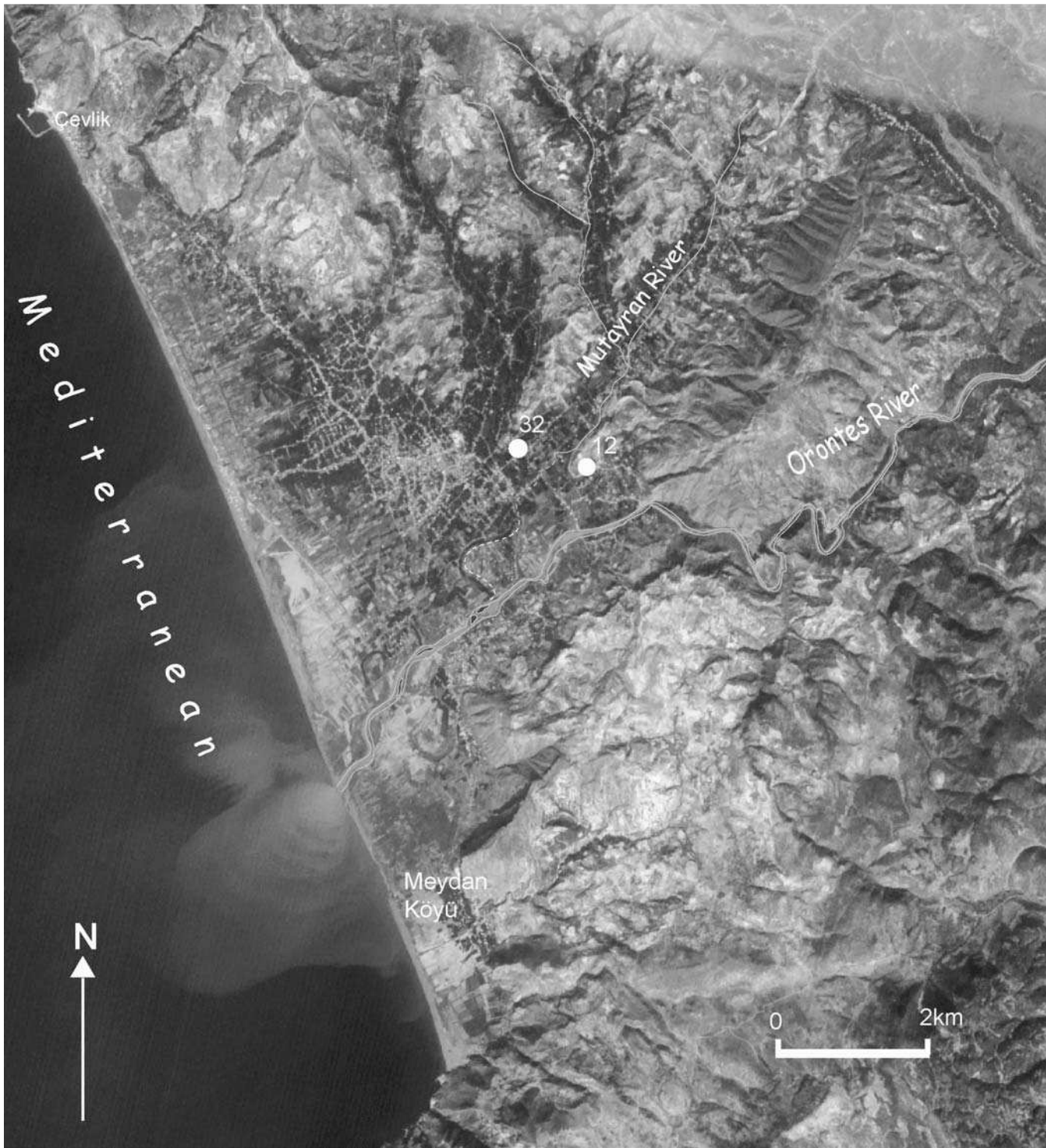


Figure 3.4. Bronze Age Sites in the Orontes Delta

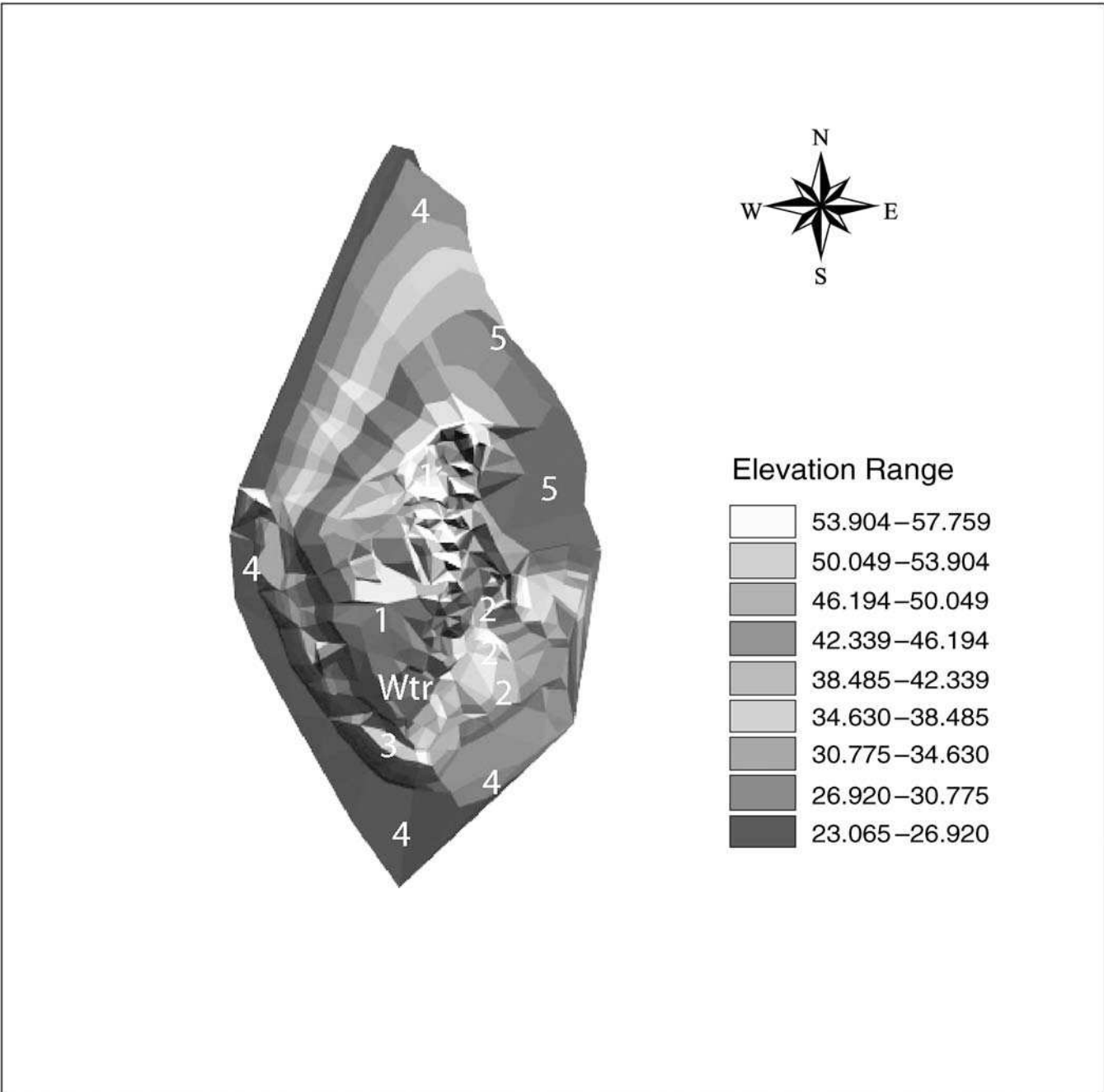


Figure 3.5. Topographical Map of Sabuniye (OS 12) (1, 2, 3, 4, 5 = Surveyed Areas; Wtr = Woolley Trench in 1936).  
 Drawn by Stephen Batiuk

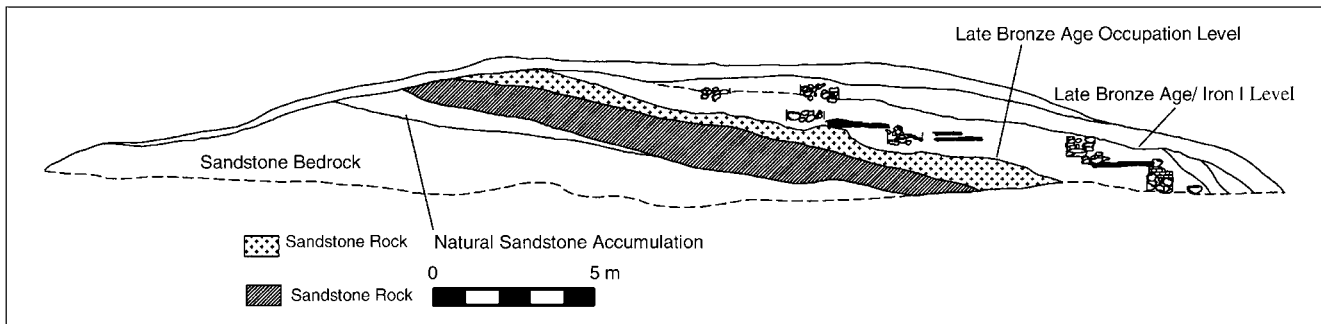


Figure 3.6. Southwest Section of Sabuniye (OS 12), 1999. Drawn by Shin'ichi Nishiyama

Figure 3.7. Late Bronze Age Imported Wares and Iron I Period Pot Stands

<i>No.</i>	<i>Site/ Locus</i>	<i>Form</i>	<i>Surviving Portion</i>	<i>Color</i>	<i>Fabric*</i>	<i>Decoration (slip; paint; surface treatment)</i>	<i>Notes/ Period</i>
1	OS 12/South Section 2	Milk bowl	Rim	Exterior: dark yellow-white Core: gray Interior: slightly yellow	Fine sand with white sand grit	Paint: dark reddish brown Slip: white	Late Cypriot white slip II
2	OS 12/South Slope 1	Milk bowl	Rim	Exterior: dark yellowish white Interior: yellowish white Core: light gray	Fine with whitish sand	Paint: dark grayish brown Slip: white	Late Cypriot white slip II
3	OS 12/South Section	Milk bowl	Rim	Exterior and interior: light gray Core: dark reddish brown	Fine, white sand inclusions	Paint: dark reddish brown Slip: light gray	Late Cypriot white slip II
4	OS 12/South Section 1/2	Milk bowl	Body	Exterior and interior: light gray Core: light gray	Fine, moderate sand, black and white grit	Paint: dark brown Slip: light gray	Late Cypriot white slip II
5	OS 12/South Section 2/1	Closed vessel	Body	Exterior: light gray Core: gray	Fine buff	Paint: very dark brown	Mycenaean IIIA:2–IIIB:1
6	OS 12/South Section 2 19	Open vessel	Body	Exterior: very pale brown Core: light red-pink	Fine buff	Paint: dark reddish brown	Mycenaean IIIA:2(?)
7	OS 12/South Section 2	Closed vessel	Neck	Exterior: dark brown-black Core: reddish yellow	Fine	Paint: white Slip: black	Late Bronze II Cypriot base ring II
8	OS 12/Section 2.70	Juglet	Handle	Exterior: white; Core: light reddish brown	Fine	Slip: white	Late Cypriot white shaved juglet
9	OS 12/South Slope 20	Pot stand	Rim	Exterior: yellowish beige Interior and core: dull orange beige	Abundant white fine sand and mica	Paint: dark reddish brown	Late Bronze/ Early Iron Age
10	OS 12/South Slope 114	Pot stand	Rim	Interior and exterior: orangish brown Core: dark orangish brown	Abundant white gray sand, slight chaff tempered	Wet-smoothed on rim, Paint: dark red	Late Bronze/ Early Iron Age
11	OS 12/South Slope 123	Pot stand	Body	Exterior: orangish brown Interior and core: dark beige brown	Abundant white sand and mica; fine, well levigated clay	Paint: dark red	Late Bronze/ Early Iron Age
12	OS 12/South Slope 122	Pot stand	Body	Exterior: dull orangish brown Interior: dull beige	Abundant white fine sand; some mica	Paint: dark red	Late Bronze/ Early Iron Age

\*Grit = particle size &gt; 0.2 mm; sand = particle size 0.2–2.0 mm; coarse sand = particle size &gt; 2.0 mm

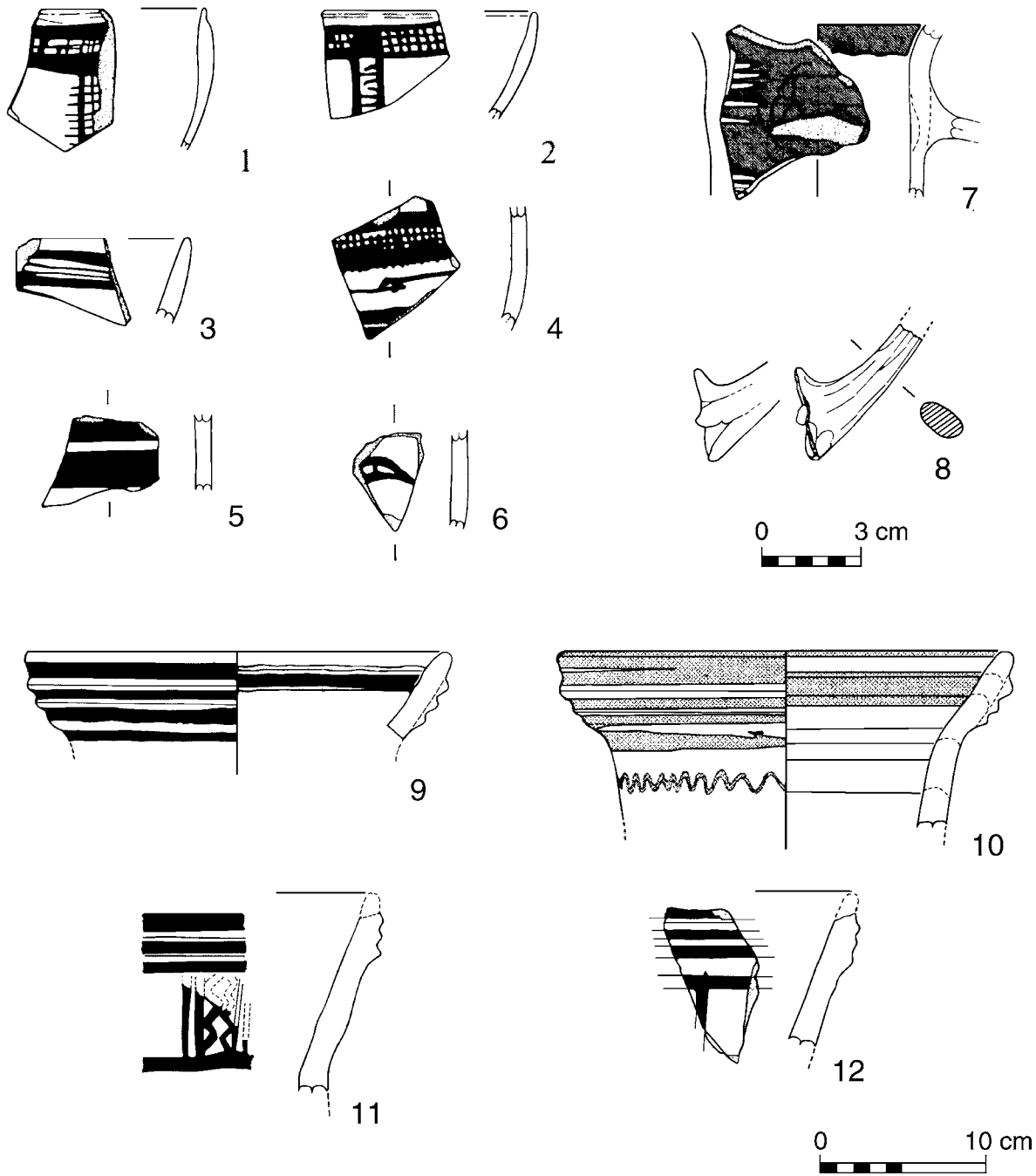


Figure 3.7. Late Bronze Age Imported Wares and Iron I Age Pot Stands. Drawn by Shin'ichi Nishiyama and Robert Koehl

Figure 3.8. Middle/Late Bronze Age and Iron Age Finds

<i>No.</i>	<i>Site/ Locus</i>	<i>Form</i>	<i>Surviving Portion</i>	<i>Color</i>	<i>Fabric*</i>	<i>Decoration (slip; paint; surface treatment)</i>	<i>Notes/ Period</i>
1	OS 32/NW 3	Closed vessel	Rim	Exterior: buff beige Interior and core: orangish beige	Some fine black sand chaff	Burnished on exterior	Late Bronze Age?
2	OS 32/NW 2	Cooking pot	Rim	Exterior: dark grayish brown Interior: dark orangish beige	Abundant white and black sand	—	Middle/Late Bronze Age?
3	OS 32/North Section 1	Cooking pot	Rim	Exterior and interior: dark reddish brown Core: black	Some black and white sand, sparse chaff well-levigated clay	—	Middle/Late Bronze Age?
4	OS 12/South Section 1	Vessel	Handle?	Exterior: whitish buff Core: yellowish buff	Abundant white fine sand, mica, some black sand	Dark brown painted band on exterior and whitish buff slip	Iron Age
5	OS 12/G1	Figurine	Body	Exterior and core: light beige	Rather fine clay with moderate fine white sand	—	Middle/Late Bronze Age
6	OS 12/J2	Figurine	Body	Exterior and core: light gray	Fine clay with abundant fine sand and mica	—	Middle/Late Bronze Age
7	OS 12/SC	Figurine	Body	Exterior: greenish white buff Core: dull beige	Find sand and mica	Red paint/orange-red paint traces	Astarte Plaque/Persian fairly weathered
8	OS 12/SC	Figurine	Body	Exterior: greenish white buff Core: dull beige	Fine sand and slight mica	Traces of red paint	Astarte Plaque/Persian fairly weathered
9	OS 12/SC	Scarab	Complete	Exterior and core: light blue	Frit	Engraved hieroglyphic script underside	Iron Age (Twenty-second– Twenty-third Dynasty)

\*Grit = particle size > 0.2 mm; sand = particle size 0.2–2.0 mm; coarse sand = particle size > 2.0 mm

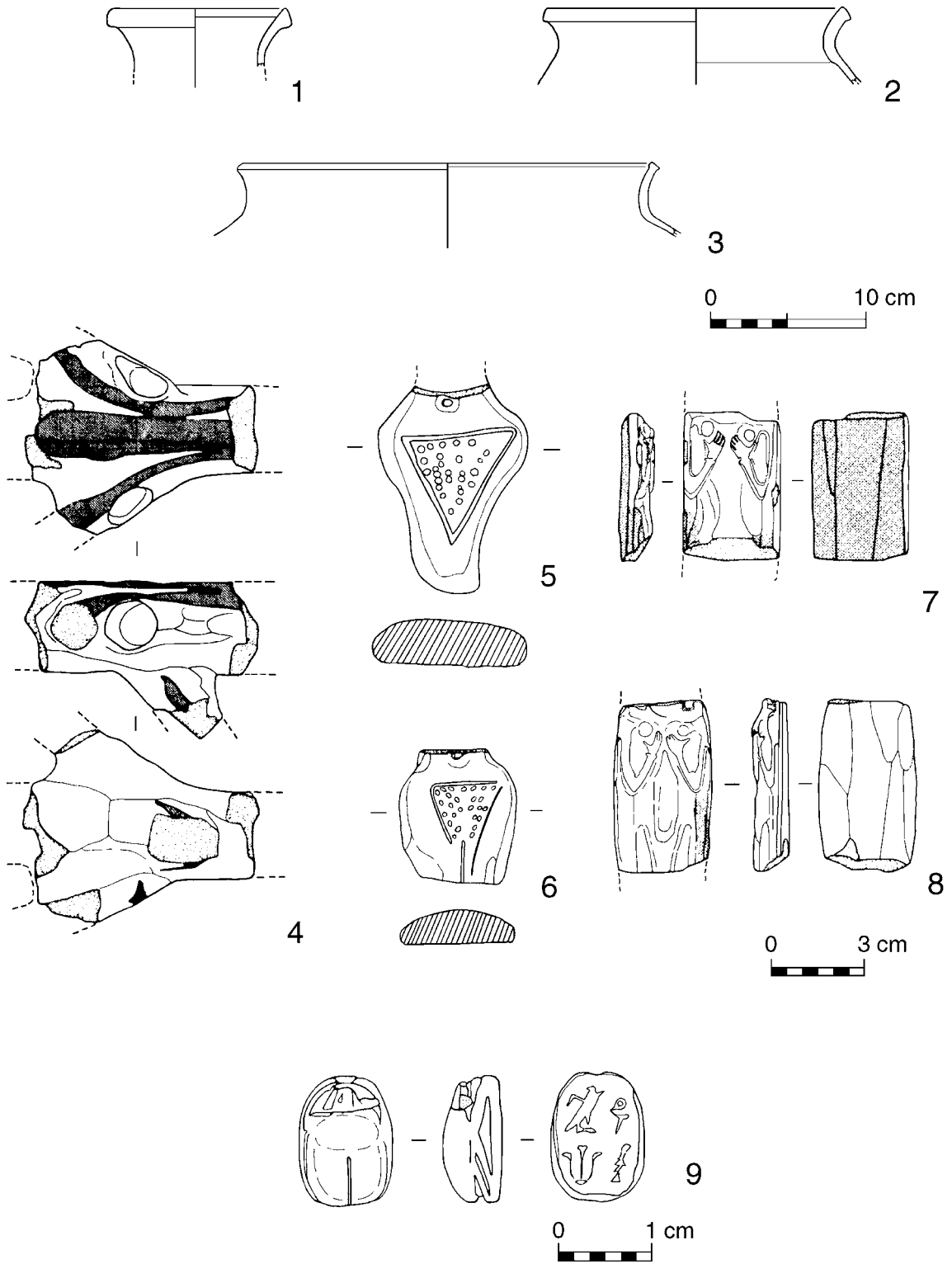


Figure 3.8. Middle/Late Bronze Age and Iron Age Finds. Drawn by Shin'ichi Nishiyama

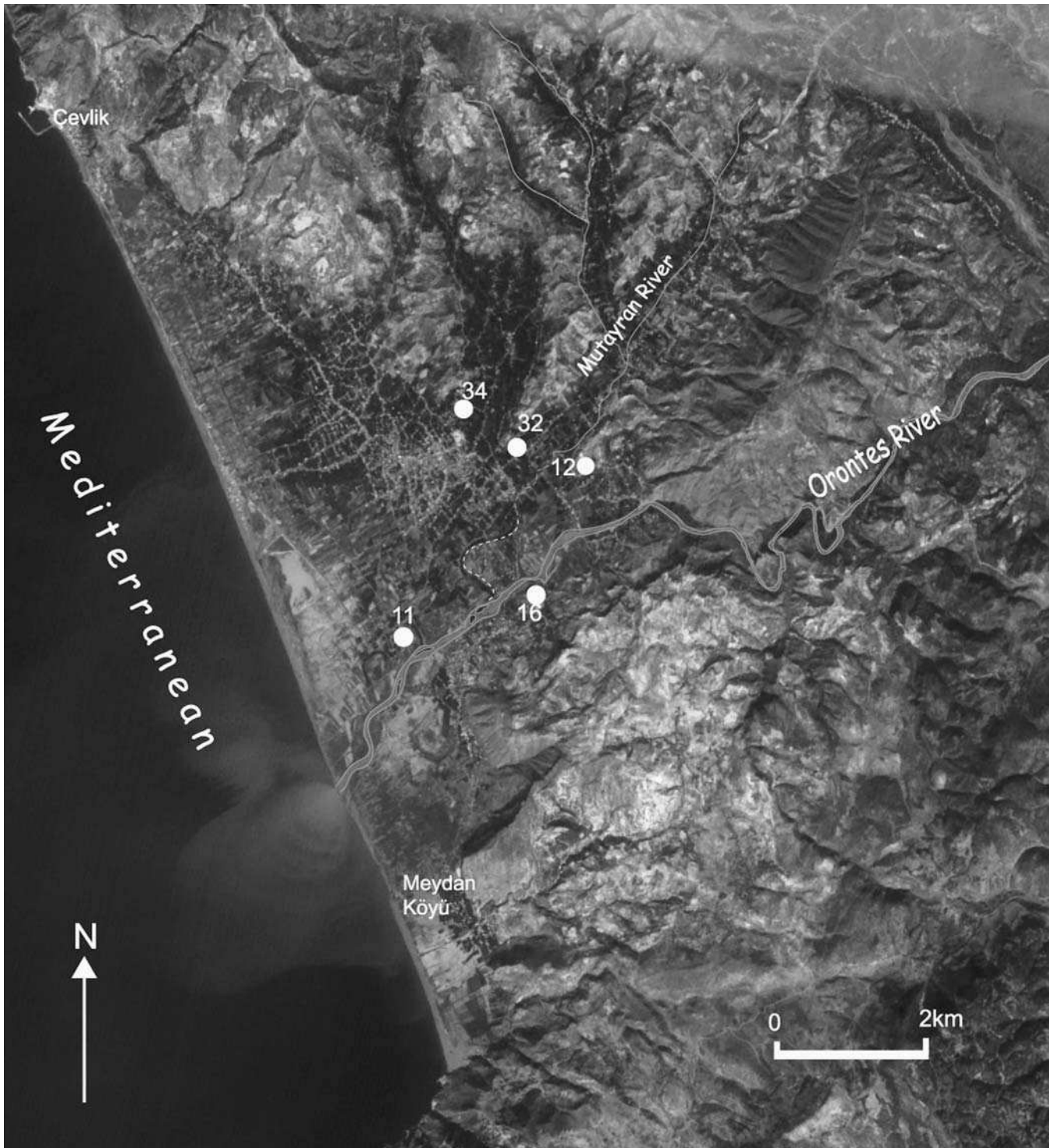
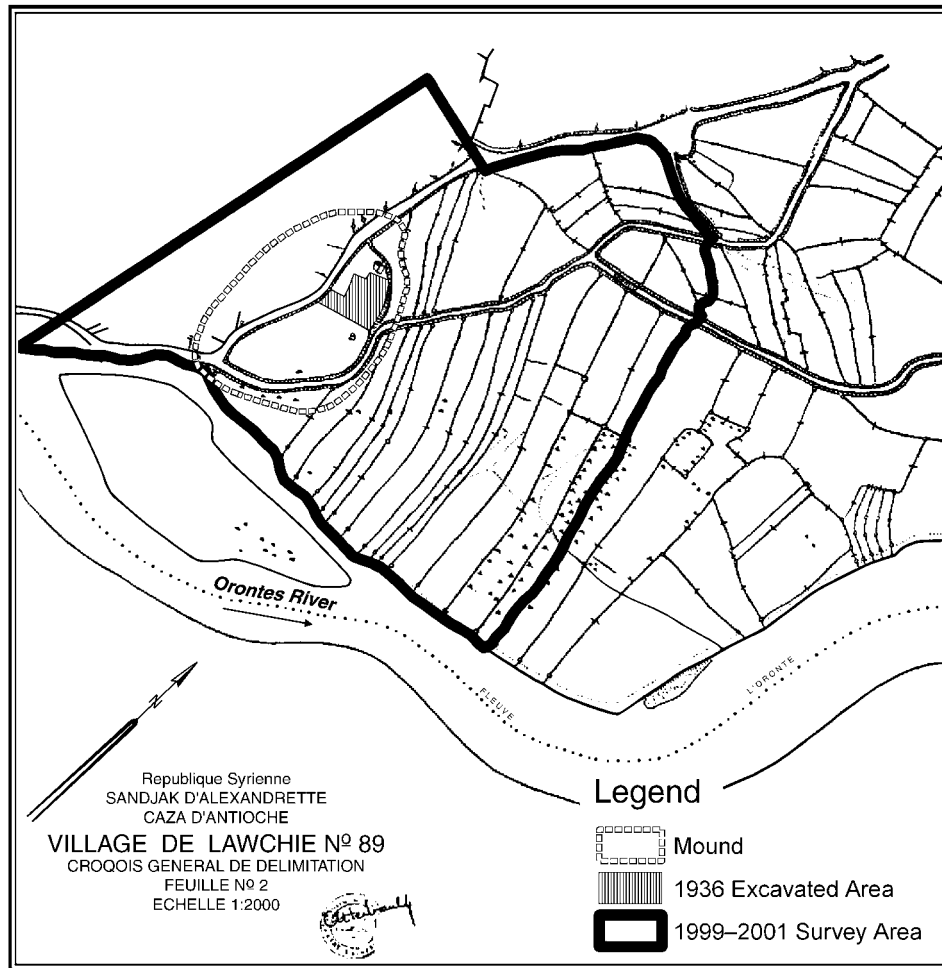
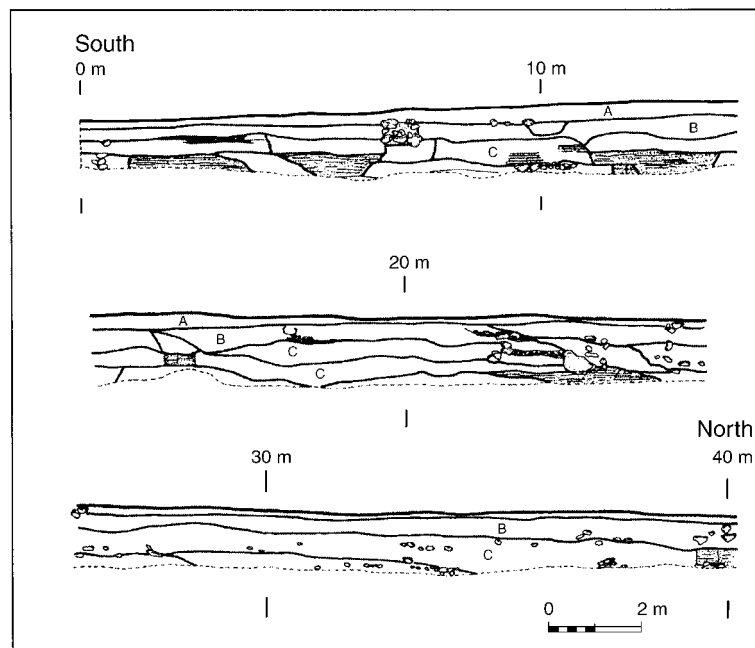


Figure 3.9. Iron Age Sites in the Orontes Delta





a



- A Surface Layer
- B Probably Roman/Byzantine
- C Hellenistic

b

Figure 3.10. (a) Surveyed and Excavated Areas of al-Mina (OS 11) (after Woolley 1938) and (b) East Section of al-Mina (Drawing by Shin'ichi Nishiyama)

Figure 3.11. Iron Age Painted Wares (including Aegeanizing and Cypriot wares) and Attic Black-glazed and Red-figure Wares

No.	Site/ Locus	Form	Surviving Portion	Color	Fabric*	Decoration (slip; paint; surface treatment)	Notes/ Period
1	OS 12/Section 11	Jar	Rim	Exterior and interior: orangish beige	Well-levigated clay, sparse white sand, mica	Paint: dark red	Late Bronze/Iron Age painted ware
2	OS 12/Section 2.25	Deep bowl	Rim	Exterior: pink Core: brown	Medium coarse fine clay	Paint: brown-dark brown	Mycenaean IIIC: Late local imitation of granary style
3	OS 12/F 23	Juglet	Body	Exterior and interior: yellowish buff Core: orangish brown	Sparse very fine; fine black and white sand	Paint: dark brown and light brown	Cypriot bichrome ware
4	OS 12/Section 1	Juglet	Handle	Exterior and interior: dull orange brown Core: dull beige	Abundant black sand, some brown sand	Paint: brown/red and dark brown	Iron Age bichrome ware
5	OS 12/F.27	Closed vessel	Rim	Core: dull light orange Exterior: dull cream	Some red/brown sand, well-levigated clay	Paint: dark brown	Cypriot white painted ware?
6	OS 12/NS Section	Unknown	Body	Exterior: yellowish beige Interior and core: orangish beige	Moderate white fine sand, some mica	Paint: dark brown	Iron Age painted ware
7	OS 11/H2.76	Skyphos brown	Base inclusions	Exterior base: orangish brown glaze Core: orangish beige	Very fine clay, no inclusions	Interior: orangish  Exterior: black glaze	Late Attic black- glazed ware
8	OS 11/A1.16	Bowl	Base	Core: orangish beige	Very fine clay, no inclusions	Interior: dark brown glaze and black glaze Exterior: black glaze	Late Attic red-figure/ early Hellenistic ware
9	OS 11/A 2	Bowl	Base	Core: orangish beige Exterior base: orangish brown	Very fine clay, no inclusions	Interior: metallic black glaze Exterior: dark brown brush painted	Attic black-glazed/ early Hellenistic ware
10	OS 11/H2.49	Krater	Handle	Core: orangish red	Very fine clay, no inclusions	Exterior and interior: black glaze, red figure with floral motifs on orangish red ground	Late Classic II red-figure ware
11	OS 11/A 5	Krater	Rim	Core: orangish red	Very fine clay, no inclusions	Interior and exterior: black glaze, reddish brown motifs on orangish ground	Late Classic II red-figure ware

\*Grit = particle size &gt; 0.2 mm; sand = particle size 0.2–2.0 mm; coarse sand = particle size &gt; 2.0 mm

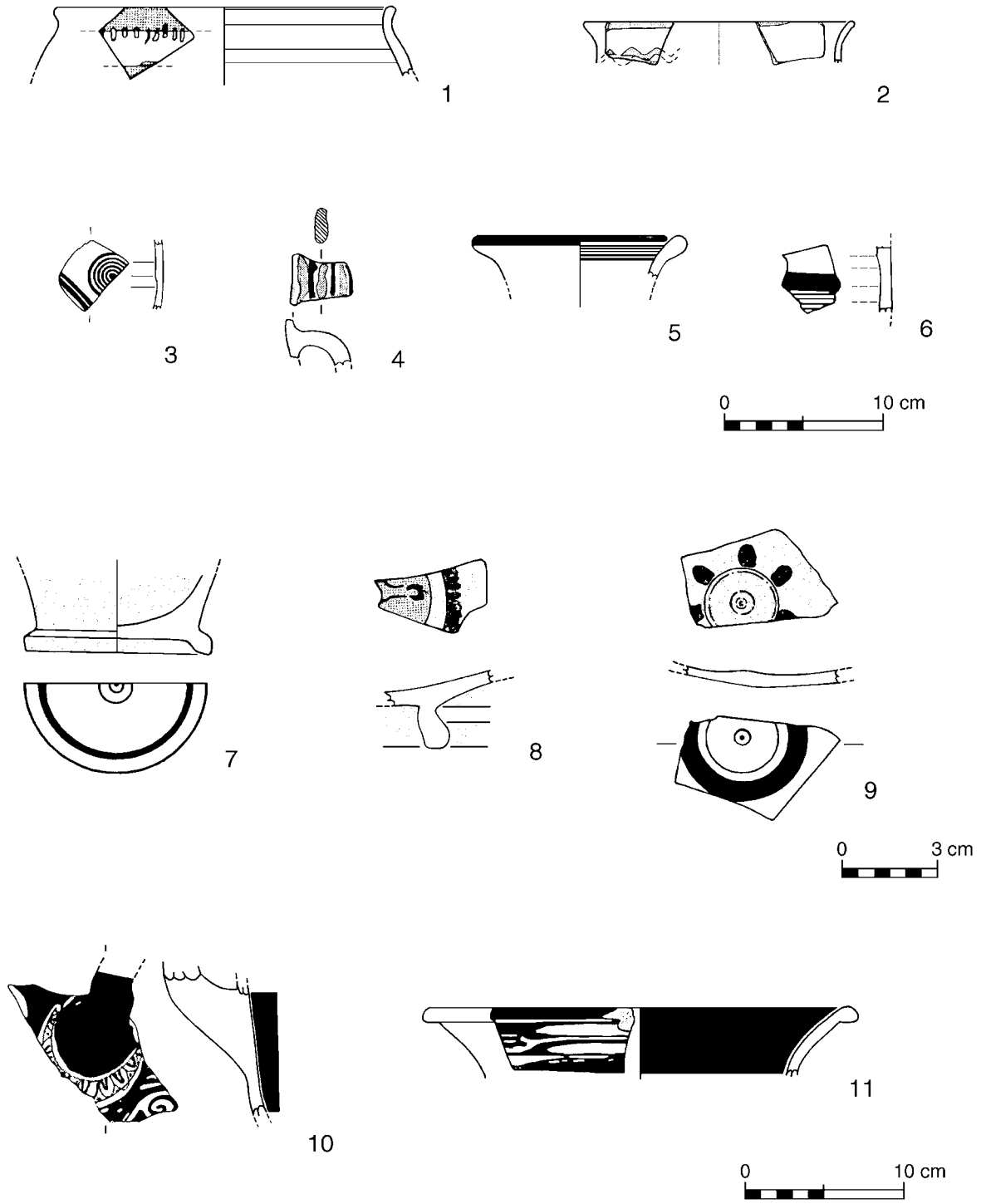


Figure 3.11. Iron Age Painted Wares (including Aegeanizing and Cypriot wares) and Attic Black-glazed and Red-figure Wares. Drawn by Shin'ichi Nishiyama

Figure 3.12. Iron Age Plain, Red-Slipped, and Painted Wares

<i>No.</i>	<i>Site/ Locus</i>	<i>Form</i>	<i>Surviving Portion</i>	<i>Color</i>	<i>Fabric*</i>	<i>Decoration (slip; paint; surface treatment)</i>	<i>Notes/ Period</i>
1	OS 12/F	Bowl	Rim	Exterior and interior: dull beige Core: dark gray brown	Abundant black and white sand, mica	—	Late Bronze–Iron Age
2	OS 12/South Slope 34	Cooking pot	Rim	Exterior: dark brown/dark beige Interior: dark brown Core: brownish black	Abundant mica and some fine black sand	—	Iron Age cooking pot
3	OS 12/A 3	Bowl	Rim	Exterior and interior: dull beige Core: yellowish beige black	Moderate black and white sand, some mica	—	Late Bronze–Iron Age plain ware
4	OS 12/South Slope 23	Jar	Rim	Exterior and interior: dull beige	Abundant black and white grits, mica	—	Iron Age
5	OS 12/Section 1	Open vessel	Rim	Core: dull beige	Well-levigated clay, some mica and sand	Slip: red	Iron Age red slip burnished ware
6	OS 12/F40	Deep bowl	Rim	Exterior: dull beige Interior and core: orange beige	Fine clay with abundant black fine sand	—	Late Iron Age/Hellenistic
7	OS 12/F61	Bowl	Rim	Core: dark yellowish beige	Abundant white sand with some mica	Slip: light red	Iron Age II/III
8	OS 11/H2.60	Amphora	Rim	Exterior: orangish red Interior and core: dull yellowish beige	Abundant fine white sand	Incised mark	Persian
9	OS 12/South Section 4	Jar/Amphora	Rim, body	Interior and exterior: bright orangish beige Core: dark orangish beige	Abundant fine white sand	—	Iron Age II/III
10	OS 12/South Slope 14	Amphora	Rim, neck	Exterior: brown interior and core: dull beige Core: dull yellow beige	Abundant fine sand, some grits	Wet smoothed on rim	Persian/Hellenistic
11	OS 12/Section 1.30	Jar	Short-necked rim	Exterior and interior: light buff Core: grayish brown	Abundant white sand, several gray black grits	Wet smoothed on exterior surface	Iron Age II/III
12	OS 11/A130	Krater	Rim	Exterior and interior: dark red Core: orangish red	Fine clay, abundant white gray sand and mica	Paint: dark brown, dark red, and black	Persian painted ware
13	OS 12/B18	Krater	Rim	Interior: light orangish beige Core: grayish beige	Sparse white, gray fine sand (well levigated)	Slip: greenish buff Paint: dark brown and reddish brown	Cypriot bichrome ware

\*Grit = particle size &gt; 0.2 mm; sand = particle size 0.2–2.0 mm; coarse sand = particle size &gt; 2.0 mm

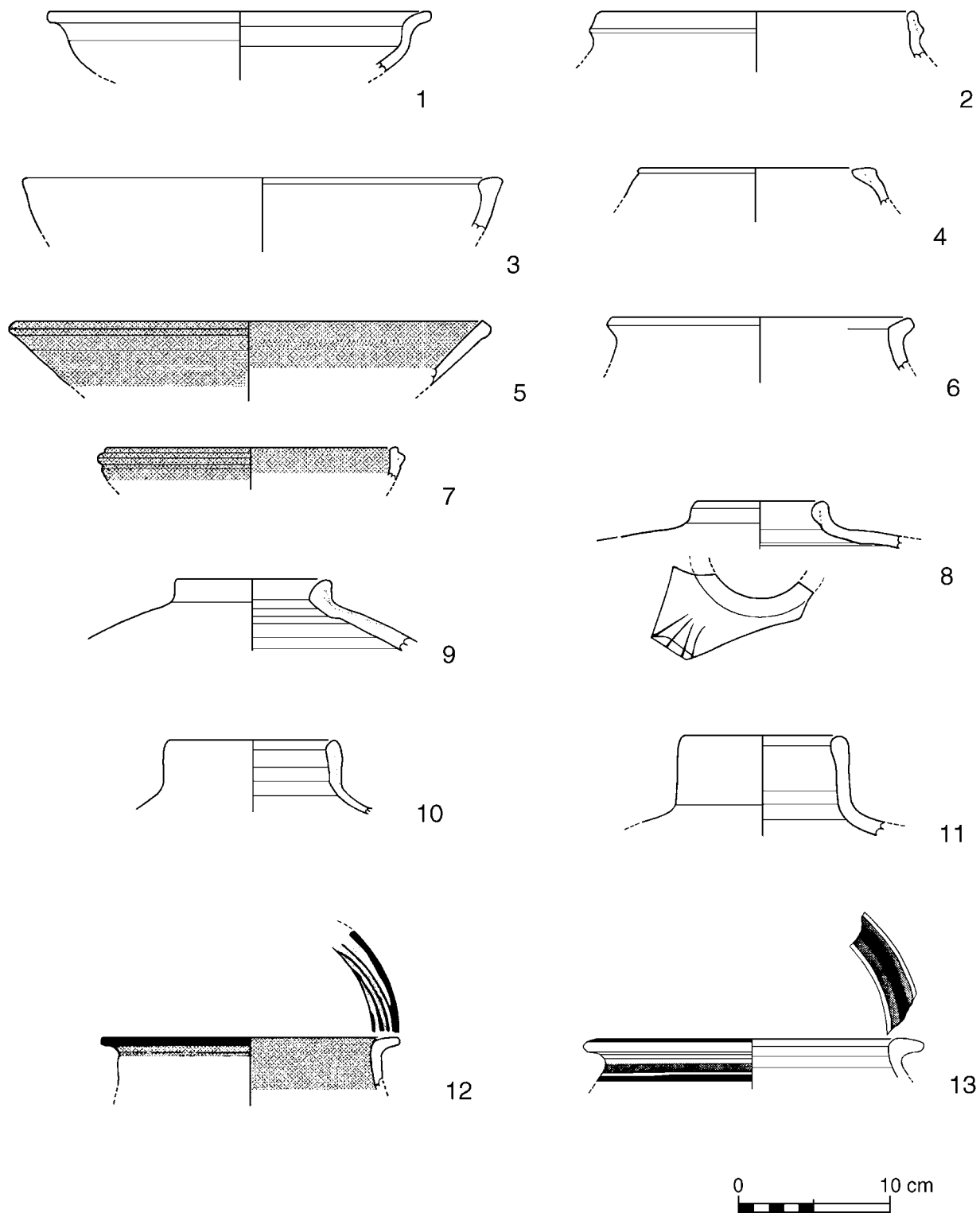


Figure 3.12. Iron Age Plain, Red-Slipped, and Painted Wares. Drawn by Shin'ichi Nishiyama

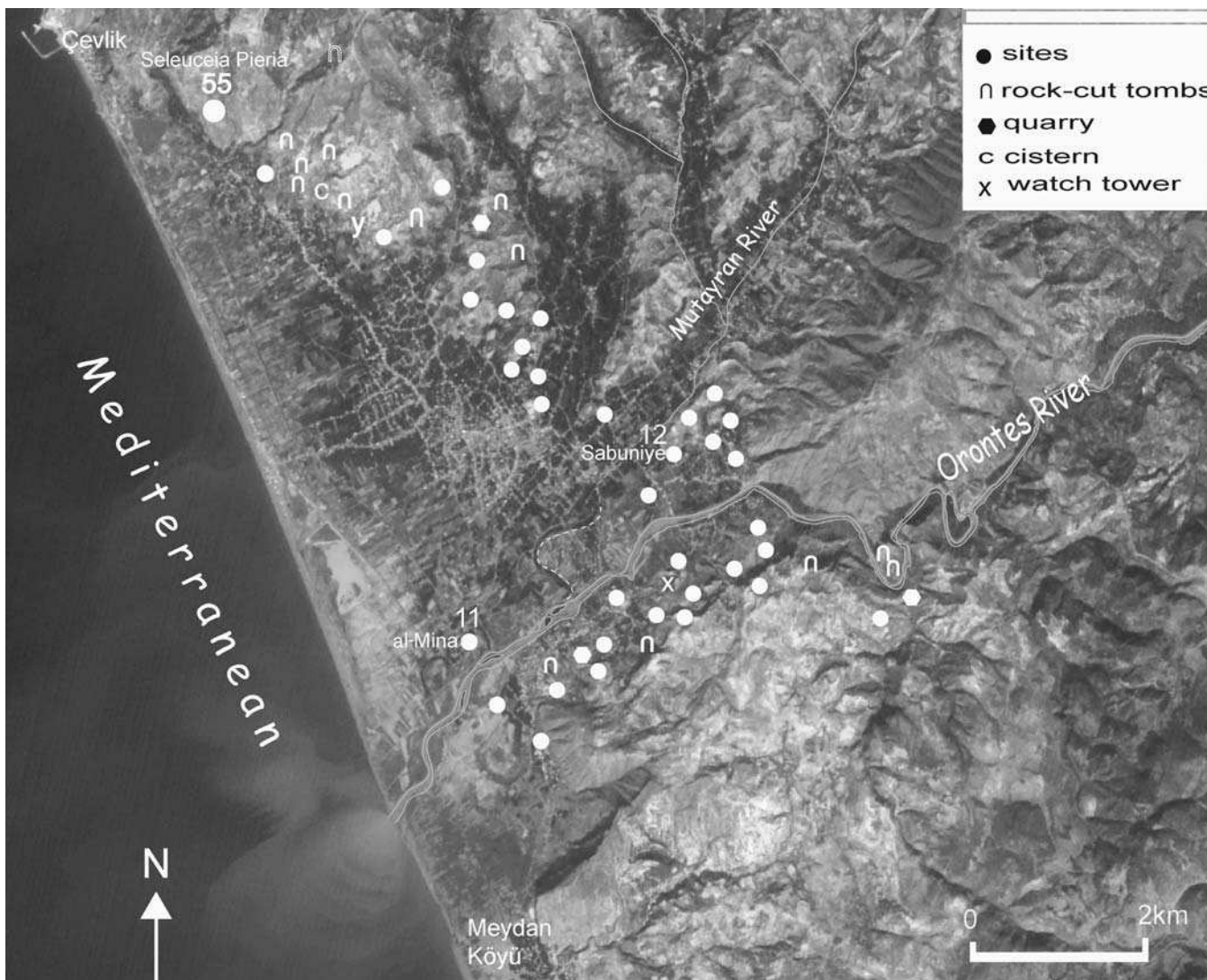


Figure 3.13. Hellenistic, Roman, and Islamic Sites in the Orontes Delta

Figure 3.14. Persian, Hellenistic, and Roman Period Wares

No.	Site/ Locus	Form	Surviving Portion	Color	Fabric*	Decoration (slip; paint; surface treatment)	Notes/ Period
1	OS 12/B 3	Open vessel	Rim	Exterior and interior: dull orange beige Core: light gray	Abundant black and gray sand and mica	Slip on exterior: gray brown	—
2	OS 12/G 13	Open vessel	Rim	Exterior and interior: whitish buff Core: greenish buff	Some white and gray sand	Self slip	Persian/Hellenistic mortar
3	OS 12/Section 2	Open vessel	Rim	Exterior and interior: greenish buff	Abundant fine black and gray sand	—	Hellenistic
4	OS 12/F 43	Open vessel	Rim	Exterior and interior: whitish cream Core: orangish beige	Moderate fine clay with some fine sand and mica	—	Persian/Hellenistic mortar
5	OS 12/F 60	Jug	Rim	Exterior and interior: dark reddish beige Core: grayish brown	Abundant white and black grit, rather coarse clay	—	Persian/Hellenistic plain ware
6	OS 12/Section 3	Amphora	Rim, neck	Exterior and interior: orangish beige	Abundant mica and moderate gray and white sand	—	Hellenistic
7	OS 11/H2.20	Amphora/Jar	Rim, neck	Core: orangish beige	Fine clay with some fine sand	Paint: dark reddish brown Slip: light cream	Persian-necked jar
8	OS 12/Section 27	Bowl	Rim	Core: light yellowish beige	Very fine clay, no inclusions	Paint: dark brown slip	Hellenistic
9	OS 40/A	Cup	Base	Core: orangish brown	Very fine clay, no inclusions	Slip: bright red	Roman terra sigillata

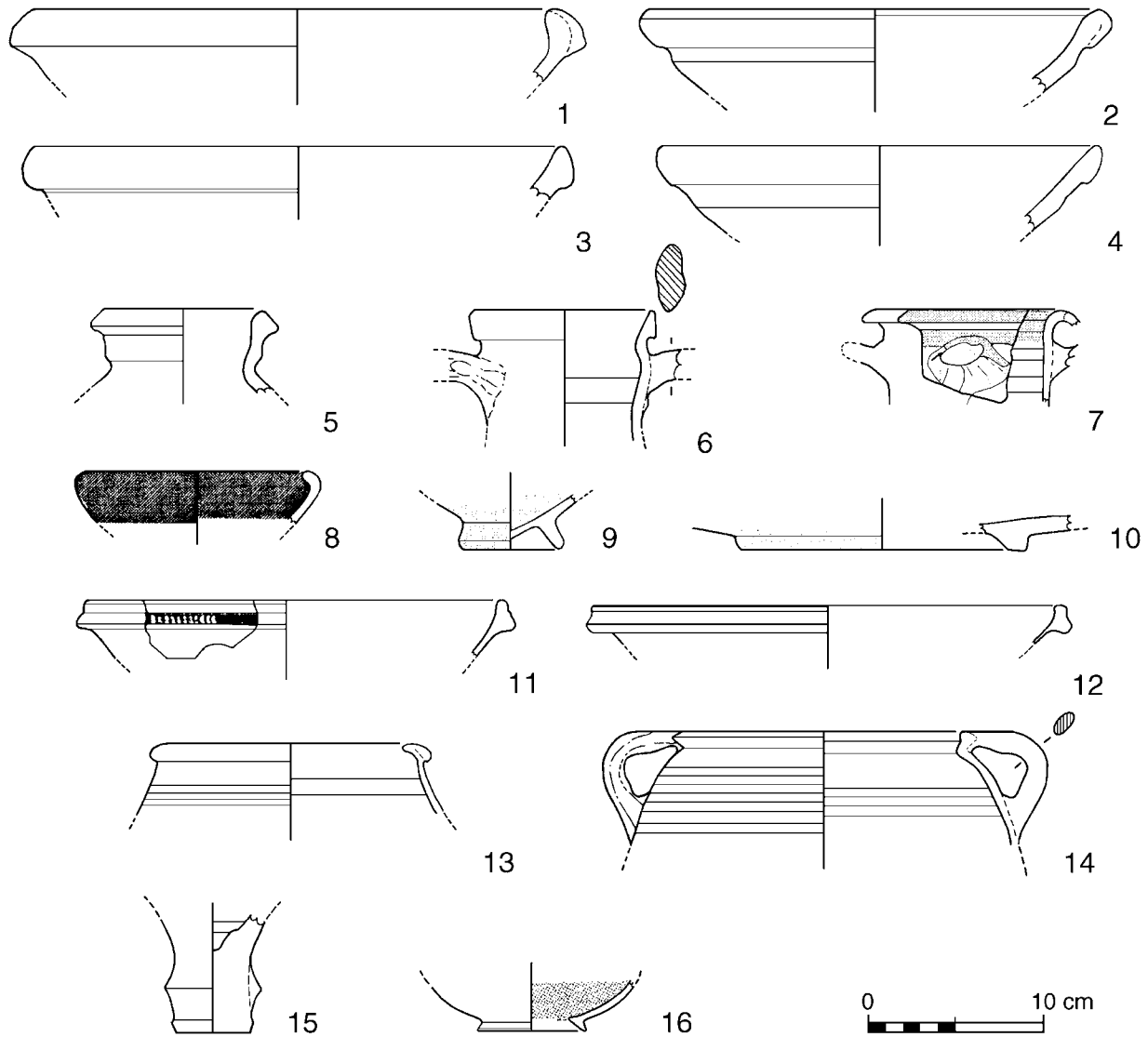


Figure 3.14. Persian, Hellenistic, and Roman Period Wares. Drawn by Shin'ichi Nishiyama

Figure 3.14. Persian, Hellenistic, and Roman Period Wares (*cont.*)

No.	Site/ Locus	Form	Surviving Portion	Color	Fabric*	Decoration (slip; paint; surface treatment)	Notes/ Period
10	OS 37/6	Plate	Base	Core: yellowish beige	Very fine clay, no inclusions	Slip: bright red	Hellenistic
11	OS 40/A	Bowl	Rim	Exterior and interior: light brick red; Core: brick red	Very fine clay with mica and fine sand	Crescent impression on rim	Late Roman
12	OS 15/20	Bowl	Rim	Exterior: dark brown Interior: red brown	Fine clay with some fine white sand	Self-slipped and burnished on exterior	Late Roman B
13	OS 40A/35	Cooking pot	Rim	Exterior, interior and core: brick red	Well-levigated clay, moderate white and black sand	—	Late Roman
14	OS 37/1	Cooking pot	Rim, handle	Exterior and interior: orangish brown Core: gray	Abundant black and gray sand, mica, and white sand	—	Late Roman/Byzantine
15	OS 40/A 91	Amphora	Base	Exterior, interior and Core: light orangish brown	Abundant red grit and some white grit	Surface: whitish orange to dull cream	Hellenistic
16	OS 12/K 1	Cup	Base	Exterior and core: orangish beige	Very fine clay with sparse gray and white fine sand	Interior: dark red brown Exterior: wet smoothed (slightly smoothed/burnished)	Persian/Hellenistic

\*Grit = particle size > 0.2 mm; sand = particle size 0.2–2.0 mm; coarse sand = particle size > 2.0 mm

Figure 3.15. Middle and Late Islamic Period Sherds

<i>No.</i>	<i>Area/ Locus</i>	<i>Form</i>	<i>Surviving Portion</i>	<i>Color</i>	<i>Fabric*</i>	<i>Decoration (slip; paint; surface treatment)</i>	<i>Notes/ Period</i>
1	OS 11/A4	Dish	Rim	Exterior and interior: yellowish glaze Core: brick red	Well-levigated clay with moderate black sand	Paint: brown incised line	Islamic period
2	OS 11/K1	Dish	Body	Exterior: yellow glaze Interior: yellow/brown glaze	Well-levigated clay with moderate black sand	Paint: yellow, green, and dark brown	Islamic period
3	OS 11/—	Lamp	Base	Exterior and interior: orangish brown	Well-levigated clay with abundant white and black grit	—	Islamic period(?)
4	OS 11/N	Bowl	Body	Exterior and core: orangish brown Interior: brown (glazed)	—	Paint: light yellow, yellow, and dark brown	Islamic period
5	OS 11/—	Dish	Base	Exterior: pink beige Interior: dark green Core: orangish brown	Well-levigated clay with no major inclusions visible	Paint: dull cream and dark brown	Islamic period
6	OS 11/N	Bowl	Complete	Exterior and interior: reddish brown	Well-levigated clay with moderate white and gray sand	Three applied bands with finger impressions	Late Islamic period
7	OS 11/N	Dish	Base	Exterior: yellowish cream (unglazed part) Interior: light green	Moderate white sand	Yellowish cream glaze	Late Islamic period

\*Grit = particle size > 0.2 mm; sand = particle size 0.2–2.0 mm; coarse sand = particle size > 2.0 mm



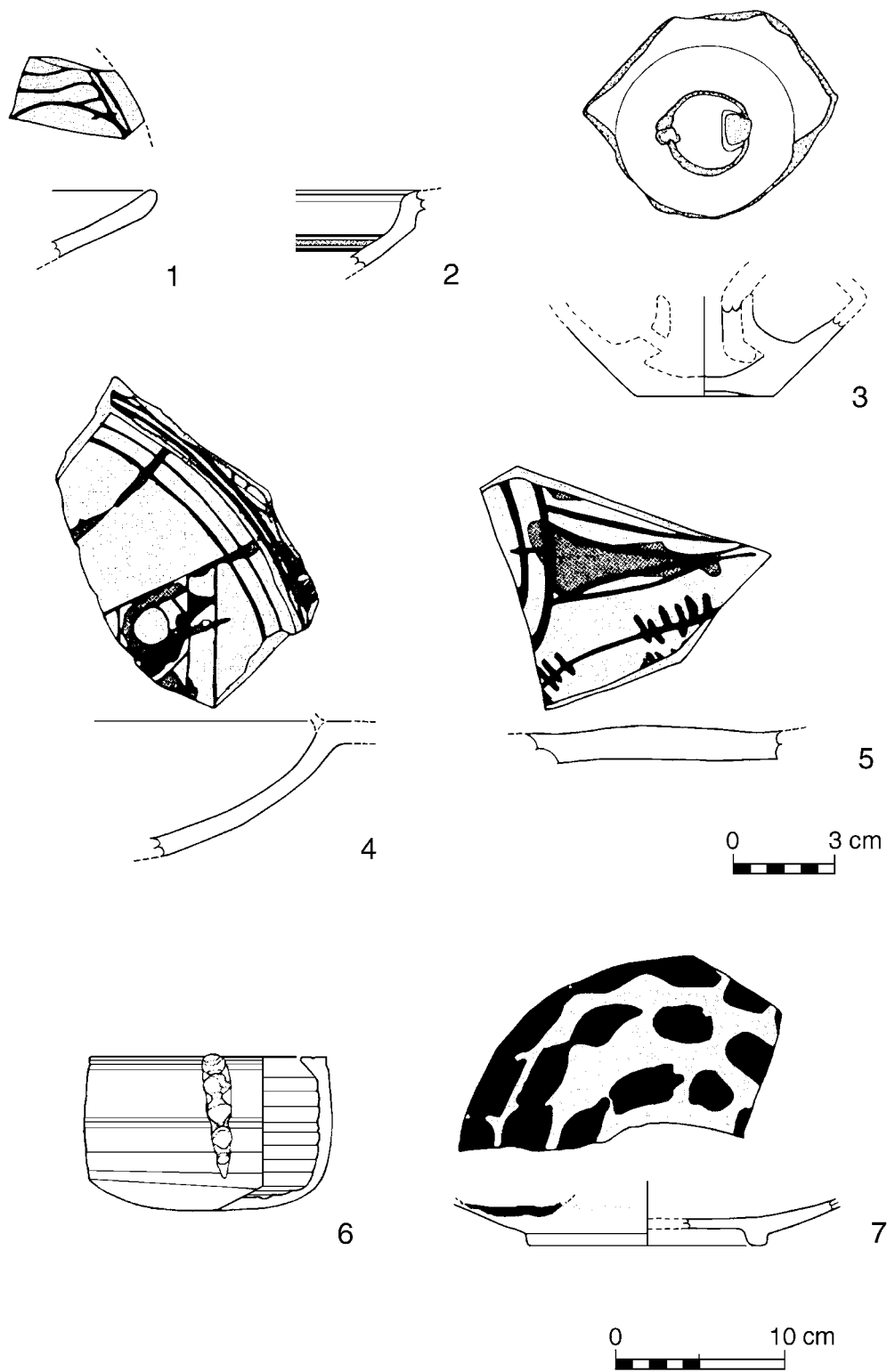


Figure 3.15. Middle and Late Islamic Period Sherds. Drawn by Shin'ichi Nishiyama

Figure 3.16. Byzantine and Islamic Period Sherds

<i>No.</i>	<i>Area/ Locus</i>	<i>Form</i>	<i>Surviving Portion</i>	<i>Color</i>	<i>Fabric*</i>	<i>Decoration (slip; paint; surface treatment)</i>	<i>Notes/ Period</i>
1	OS 12/K	Jar	Rim	Exterior: orangish beige Interior: greenish beige	Abundant white grit and moderate reddish brown sand	—	Islamic period(?)
2	OS 12/F	Jar	Rim	Exterior and interior: dark orangish brown Core: orangish brown	Well-levigated clay with sparse white and gray sand and mica	—	Islamic period
3	OS 12/F32	Jar	Rim	Exterior and interior: dark orangish brown Core: orangish brown	Well-levigated clay with sparse white and gray grit and mica	—	Islamic period
4	OS 3/—	Bowl	Rim	Exterior and interior: dark reddish brown to dark brown	Well-levigated clay with abundant black and gray sand and moderate white grit	—	Byzantine period(?)
5	OS 2/—	Jar	Handle	Exterior and core: brick red	Moderate black and gray sand and white grit	—	Roman/Byzantine
6	OS 2/—	Jar	Handle	Exterior and core: dull yellowish brown	Abundant black grit and mica	—	Roman/Byzantine
7	OS 12/K	Jar/Jug	Base	Exterior and interior: dull beige	Abundant black grit and mica	Incised impression on base	Islamic period
8	OS 3/A	Jar	Rim	Exterior and interior: dark brick red	Abundant black and gray sand and moderate white sand	Incised sign on exterior	Roman/Byzantine

\*Grit = particle size > 0.2 mm; sand = particle size 0.2–2.0 mm; coarse sand = particle size > 2.0 mm

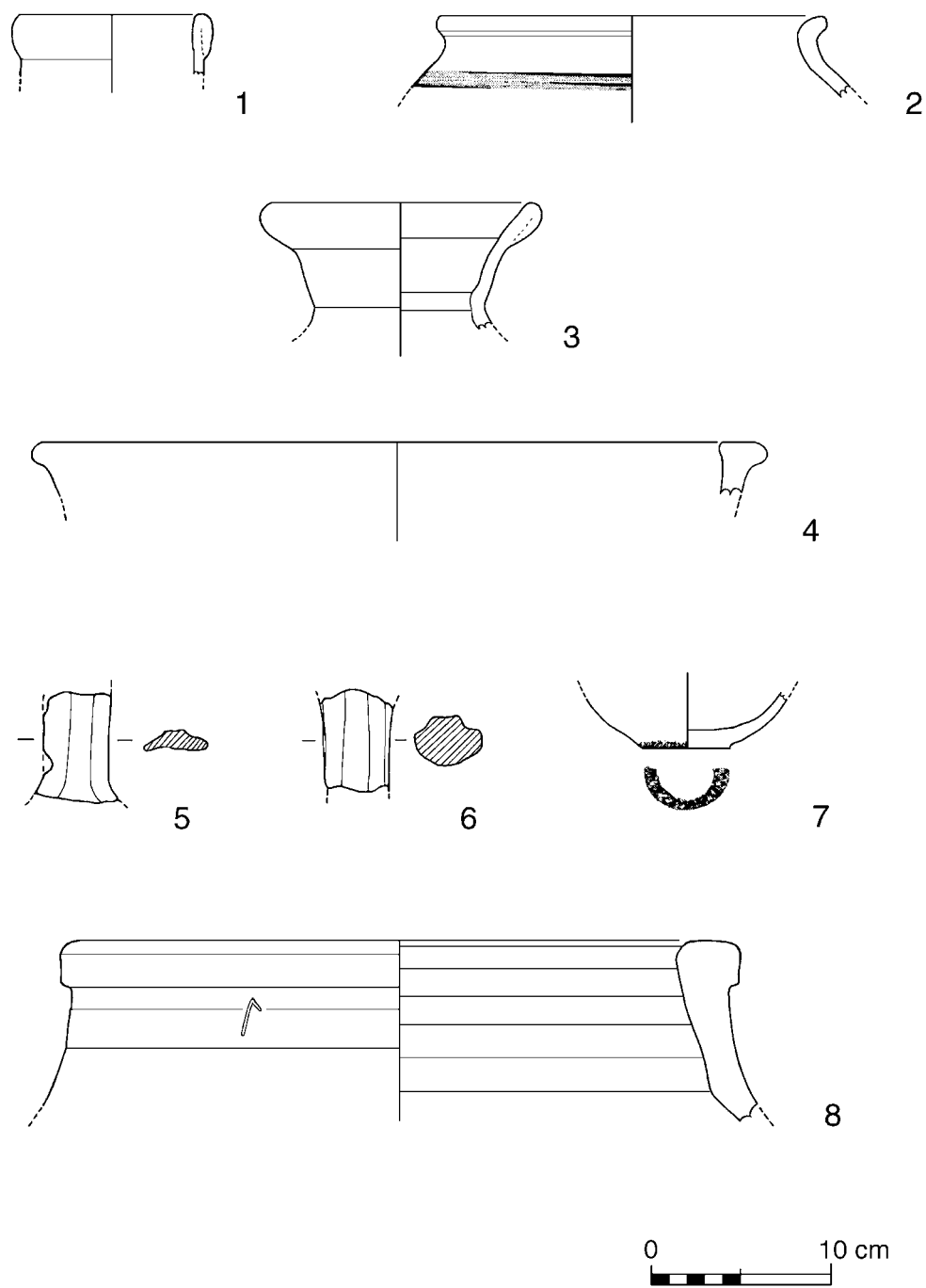


Figure 3.16. Byzantine and Islamic Period Sherds. Drawn by Shin'ichi Nishiyama

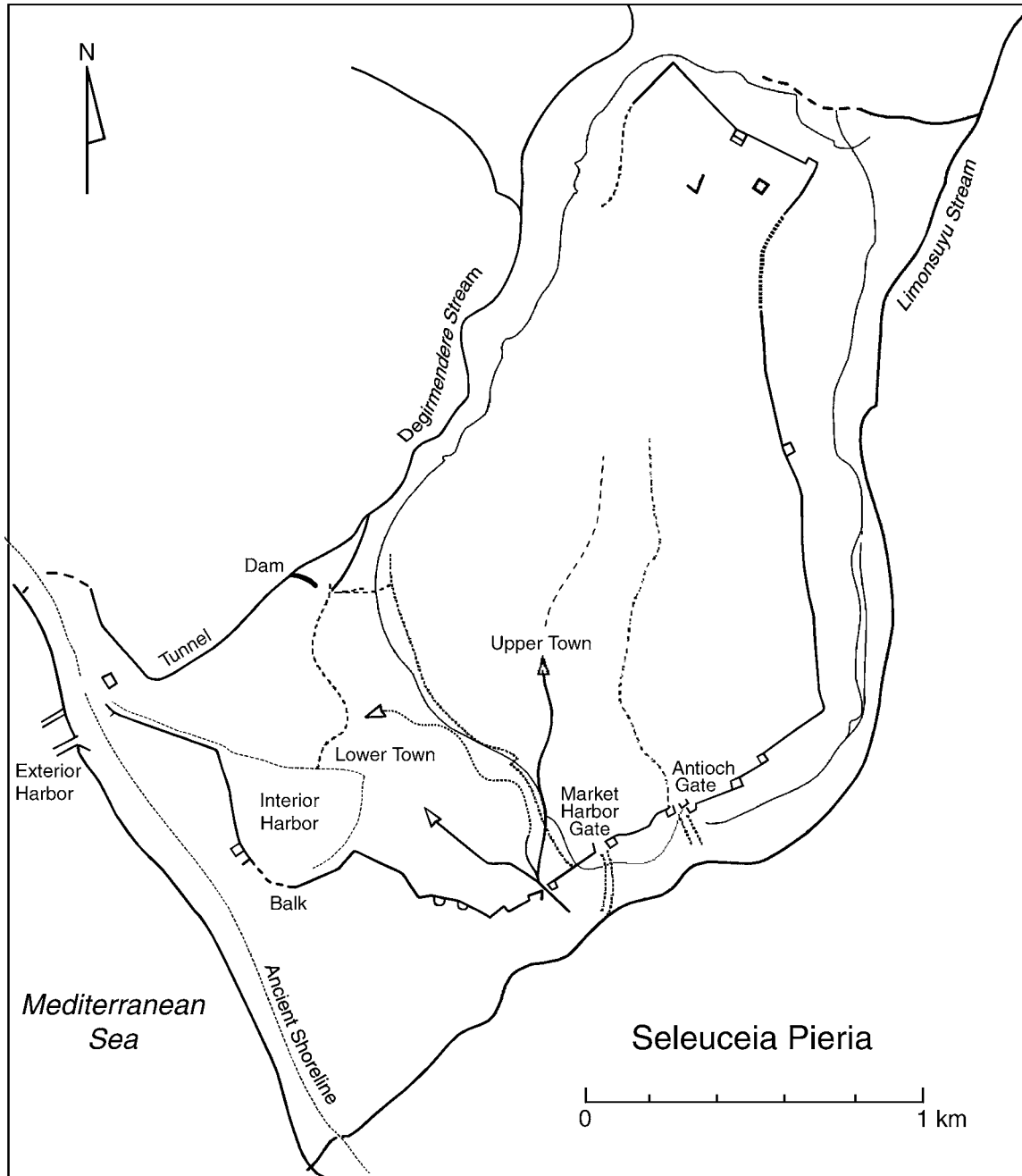


Figure 3.17. Seleuceia Pieria (OS 55) Site Map (after Stillwell 1941, pl. 1)

# CHAPTER FOUR

## ALALAKH SPATIAL ORGANIZATION

KUTLU ASLIHAN YENER

### INTRODUCTION

Tell Atchana (AS 136), ancient Alalakh, by all accounts is considered to be one of the most appealing sites in the Amuq Valley, due in part to the charisma of C. Leonard Woolley and his popular publications of the site. Excavations that took place during the 1930s and 1940s unveiled large expanses of Alalakh, the architectural styles of which hinted at cognitive codes and ritual experiences shared with a number of more powerful neighbors (Woolley 1955). The relatedness of some of this architecture to large regional centers has recently become more apparent due to new finds at Ebla, Tell Qarqur, and Qatna in Syria, and imperial Hittite sites such as Boğazköy, Ortaköy, and Kuşaklı in Turkey. Functioning as the capital of a smaller regional state, Mukish, the broad horizontal exposures at Alalakh have provided evidence of the spatial organization of a city and its material culture during the Middle and Late Bronze Ages.

First surveyed by the Chicago Oriental Institute teams led by Robert J. Braidwood, modern Tell Atchana (AS 136) is located at the center of the valley close to the bend of the Orontes River (Asi Nehri) and now measures 750 × 325 × 9 m (22 ha). Excavations conducted by Woolley and sponsored by the British Museum and the University of Oxford began with a short exploratory season in 1936 and then continued regularly from 1937 to 1939; after a pause during World War II, the excavations resumed from 1946 to 1949. The site (fig. 4.1) was restudied by Amuq Valley Regional Projects' teams starting in 2000 (Yener 2001a–b; Yener et al. 2002; see *Chapter Six: Surface Ceramics, Off-Site Survey, and Floodplain Development at Tell Atchana [Alalakh]*).

Woolley's excavation years also generated crucial information for the formulation of local architectural traditions in the ancient Near East. Especially pertinent are local architectural developments and the nature of some of the broader external influences that informed them. Running commentary throughout this chapter concerning salient features draws parallels to these borrowings, although this is by no means intended to be an exhaustive study of architectural traditions. The obvious emphasis on northern stylistic parallels bears much on my own particularistic view from Anatolia, given relevance by the inclusion of this kingdom into the Hittite Empire.

### AUGMENTING THE ARCHITECTURAL LAYOUT OF LEVELS VII–0

This chapter presents one aspect of the Amuq Valley Regional Project's site-specific investigations at Tell Atchana (AS 136; 36° 19' N, 36° 29' E), one of three sites (with Tell Kurdu [AS 94] and Tell Ta'yinat [AS 126]) targeted for intensive pre-excavation research. The settlement layouts presented here constitute a comprehensive compilation of all available architectural data from Woolley's excavations. Both published and newly obtained archaeological evidence were utilized to create a scale model of the capital, level by level, which spanned most of the second millennium B.C. The reproductions are based on computer scans of architecture from several preliminary reports<sup>22</sup> and the final publication (Woolley 1955). The eight composite, built environments presented here encapsulate the spatial organization of the city and provide a powerful tool with which to resolve many architecture-related questions prior to excavation. This is accomplished by first setting out the historical framework and then reviewing the archaeological evidence and literature.

A number of reasons lie behind this effort to present a layout of architectural ground plans for Alalakh. Regardless of where further excavations may lead, the reconstructions of Levels VII–0 still shed light on how the architectural layouts may be disentangled prior to and during our operations. The reconstructed city plans provide benchmarks for planning the placement of future excavation trenches and upon which a range of other specialized problem-oriented research designs can be based. A critical consideration was to locate trenches A–H, the two deep soundings (temple

---

22. Woolley 1936, 1937a–b, 1938a–b, 1939, 1947a–c, 1948a–b, 1950a–b, 1953a–b.

sounding and palace sounding), Woolley's dumps and dig house, and various sections in exact relationship to published architecture (fig. 4.2). Every effort was made to extrapolate architectural information embedded in the section drawings as well as those mentioned in the text. It is important to emphasize, however, that the published sections appear to be highly stylized versions of the excavation. Here we have published our best estimate to date.<sup>23</sup>

When preliminary GIS-generated topographical maps were superimposed on excavated architecture, it became readily apparent that Woolley's grid system as published contained a number of discrepancies with our measurements. Given the anomalous features that emerged (see details in *Chapter Five: The Tell Atchana Mapping and GIS Project*), the decision was made to use only Woolley's grid for the composite plans in this chapter. For the purposes of this monograph, the architecture was georeferenced according to Woolley's own internal logic and used as the benchmark. These composites are intended to be works-in-progress and will be tested against careful future excavation trenches and plotted according to new georeferenced UTM grids. Therefore the north arrow has been removed from the figures until a corrected grid orientation is established with new data.

A fairly good plan of the spatial organization of Alalakh Levels IV and VII was published by Woolley (1955: pls. 14, 22 respectively), providing a coherent cityscape for those two periods. On the other hand, the ground plans of the buildings for Levels VI, V, III, II, I, and 0 are published as discrete structures, clusters of wall units, and categorized by architectural type throughout the chapters. Substantial evidence about how the architectural units relate to one another was extrapolated from various parts of the final publication and pieced together like a jigsaw puzzle. Thus glimpses can be caught of broader city plans by reconstituting the architecture of the private houses, fortification systems (gates, glacis, and circuit wall), or single buildings (temples, public spaces, and royal residences). Often the salient relationships of walls to buildings were found in the narrative text and derived from grid coordinates published in the figures. Some elevations were discovered written in the figures (see Woolley 1955: fig. 53), and occasionally mentioned in the text, although with far too many exceptions. Important information regarding fragmentary walls, glacis, ramparts, streets, floors, or other features is also apparent in the published sections (Woolley 1955: figs. 2, 18, 43b, 52, 54, 58), although placing the sections in the wider city plans proved quite difficult and thus extrapolating the walls that were in the sections into the architectural record remains quite speculative. Nevertheless, with the use of computer software the glacis, city fortification, and several other building walls mentioned in the text have been entered in our figures in white outline or stippling, which underscores their speculative nature.

Occasional attempts by Woolley (e.g., 1955: fig. 43a) to explore earlier levels by small soundings within rooms of the Level IV palace yielded some disarticulated walls and features, and these are incorporated into the expanded ground plan where feasible. In Woolley's publication a change in the style of rendering the architectural plans was also made, presumably due to the changing architects on the field crew. In some instances the grid squares are identified in the middle of the square line (see Woolley 1955: fig. 33), in others the address appears on the upper left corner of the grid square (Woolley 1955: fig. 65). Matching these different systems proved difficult, although one clue (Woolley 1955: fig. 66) gave us hope for aligning the architecture of the private houses. Where divergences of information exist between the preliminary reports and the final publication, I have tried to note these where relevant; and when possible, a number of these anomalies will be investigated in the future. Indeed, Woolley also acknowledged in footnotes (e.g., Woolley 1955: 179 n. 1; 195 all footnotes) that the final publication often differed from his initial preliminary reports as a result of changes in his understanding of the site in the interim years. This is entirely understandable since a seven year gap existed during and after World War II, including differing museum practices in the newly reinstated Turkish Hatay Museum when excavations were resumed in 1946. During this second phase of excavations, Woolley had to relocate backfilled trenches (Woolley 1953b: 114) and a number of erroneous attributions may have occurred. All in all, his final publication represents the director's ultimate summary comprehension of the site.

## PREVIOUS INVESTIGATIONS AT ALALAKH AND CHRONOLOGY

As the regional capital, Tell Atchana (AS 136), ancient Alalakh, was the most important site in the Amuq Valley (Amik Ovası) roughly during the twentieth to twelfth centuries B.C. The strategic, commanding location of Alalakh astride both land and sea/river routes afforded the site major trade power. Indeed Woolley (1937a, 1953a) indicates his interest in the site when he alludes to its prime location as a link between the southwest Asian mainland, the Aegean,

23. I thank Aaron A. Burke and Stephen Batiuk for their skillful manipulation of the difficult ArcGIS software to reproduce these

images. Their insights were most valuable and whatever mistakes appear here are my own.

and Anatolia. The prevailing pattern of cultural and ethnic diversity is apparent even in antiquity, when the lush, fertile Amuq Valley and Alalakh's desirable location become the backdrop for a kaleidoscope of changing political affiliations — Amorite, Egyptian, Hurro-Mitannian, and Hittite. The fluid, permeable accessibility of these ancient regions and the involved interregional relationships have nurtured an easily definable fusion of influences on the indigenous, northern Levantine/southern Anatolian traditions of architecture and material culture. The considerable interaction between these regions, which reflects the periods of convergence and divergence in the Middle Bronze Age through the Late Bronze Age, has already been researched in detail (see Bryce 1998; Klengel 1992; Mellink 1957, 1962).

The cultural dynamics of the second millennium B.C., which are encapsulated in the pottery sequences for the Middle and Late Bronze Age, are based on materials excavated on the northern part of the mound, although areas were also opened on the central and western edges of the upper mound as well. Some of these long, narrow exploratory trenches (60 m long, 2 m wide) labeled A–G (Woolley 1938b: pl. 2) were later expanded into Woolley's horizontal exposures. While only a small part of the whole site was originally excavated (approximately 15,045 sq. m) in general, the Woolley trenches provided a comprehensive sequence from Level XVII to 0, the late third to the last quarter of the second millennium B.C. Since Levels XVII–VIII, gleaned from two deep soundings, primarily represent earlier Middle Bronze Age stratigraphy and only sparse, individual building plans were recovered, the architectural record defining Alalakh's spatial organization is here restricted to Levels VII through 0. A deep sounding below the courtyard of the Level VII palace went down to the water table and produced levels to XVI; a second sounding in the temple precinct is said to have reached virgin soil<sup>24</sup> with the aid of pumps below Level XVII under the water table.

The earlier excavations yielded extraordinary architectural monuments, a wide diversity of imported preciosities, and extensive royal archives written in Akkadian and Hurrian, as well as inscribed materials in Hittite. The sequence of royal architecture, temples, private houses, and ramparts with impressive gate structures defines the architectural legacy of Alalakh, capital of the Mukish kingdom. Over 550 tablets and fragments have served to augment our impression of a functioning, second-millennium regional center.

In this brief overview of the historical context of ancient Alalakh, the attention afforded to the Hittites is intentionally emphasized. This bow to the northern neighbors is intended to reflect the colorful cultural diversity of this area and to redress the previous exclusively Mesopotamian and Aegean focus of earlier research. Indeed, the rise of large territorial states during the second millennium B.C. marks an important transformation in the Near East. Incorporating smaller and pre-existing regional states, diverse environmental zones, and various routes of communication, these empires emerged as large geographical groupings, several of which, notably the Hittite, engulfed this region of southern Anatolia/northern Levant. Ultimately, however, the Amuq Valley Regional Projects will meticulously document the indigenous local Middle Bronze Age/Late Bronze Age traditions of the Amuq Valley that better define it as a regional kingdom, albeit sandwiched between more powerful, and quintessentially expansionist, neighbors.

In theory, Alalakh also has the dubious distinction of partially providing the basis for the so-called Mesopotamian "Middle Chronology." While the intention here is not to take a stand on the problematic dating of Alalakh, the spatial organization and logic of Alalakh as a functioning city is contingent upon, and in turn reflects, several important historical events. Thus with some reluctance, I briefly touch upon this much debated issue. I take no position in the second-millennium "High/Middle/Low/Ultra-Low" chronological debate (see, e.g., Gasche et al. 1998; Aström 1987; M.-H. Gates 1981, 1987, 2000; Collon 1977, 2000; McClellan 1989; Wiener 2003). Instead, ranges of dating possibilities are given until consensus is reached with excavation and a fine-tuned local sequence is developed.

To summarize the state of our imperfect understanding of its chronological information today, in the nineteenth/ eighteenth through sixteenth centuries B.C., during a period of emerging regional city-states, Alalakh, ruled by Ammitaqum, was vassal to Yarimlim III (Bryce 1998: 76) of the Amorite kingdom of Yamhad (modern Aleppo). The Level VII palace archives yielded 175 tablets spanning two rulers at Alalakh, and coinciding with at least five rulers at Yamhad (about fifty to seventy-five years). Reevaluations of Woolley's excavations and new ceramic findings from Syro-Anatolian sites (D. Stein 1997: 55) suggest that Level VII dates between the late seventeenth and early sixteenth centuries B.C., and according to the "Low" chronologies may have been destroyed in about 1575 or slightly later by Hittite King Hattušili I. However, in a comparative reassessment of Tell Atchana's ceramics, Marlies Heinz (1992) has further collapsed Levels IX–VIII as subphases of VII, which would seem to make the start of Middle Bronze Age IIB levels earlier. This is relevant because of recent dendrochronologically calibrated dates that place Kültepe Ib and

24. Although virgin soil is said to have been reached, excavating in muddy water even with a pump makes conclusions rather indefinite. Since the water table has dropped considerably in several

areas of the Amuq Valley, it may be possible to check this hypothesis.

its synchronisms with Samsi-Adad in the nineteenth/eighteenth century and accords with Alalakh and the so-called “Middle” chronologies. Indeed these recently published radiocarbon “wobble-matching” dates call into question “Low and Ultra Low” chronologies, reintroducing the classic “Middle” chronology (Manning et al. 2001). Thus, the reign of Middle Bronze Age Assyrian King Samsi-Adad is dated between ca. 1832  $\pm$  7/-1 B.C. and 1776  $\pm$  7/-1 B.C., and the debate continues.<sup>25</sup>

Since a paucity of textual materials from Levels VI to V is known, these periods are referred to by Woolley as the “dark ages.” Diana Stein (1997) notes the appearance of Syro-Palestinian wares and Cypriot vessels at Alalakh and Syrian Tell Hadidi and Tell Mumbaqaq during this transition between the Middle Bronze Age IIC and Late Bronze Age I periods (ca. 1575–1460 B.C.).<sup>26</sup> The appearance of these wares is also supported by local ceramic sequences from other sites in the Amuq as well (Braidwood 1937: 6; Swift 1958: 23–24; Verstraete and Wilkinson 2000). Several scholars have used the influx of imports, largely Cypriot wares in Levels VI and V as markers for dating (M.-H. Gates 1981; and restudy of Alalakh Level IV Aegean-related ceramics by Bergoffen 2002).<sup>27</sup> At least they attest to a healthy trade network, and future work at Alalakh will contextualize imports within a finely-tuned local ceramic and radiocarbon sequence. It is important here to belabor the obvious point that imported ceramics are not reliable markers for chronology. Marie-Henriette Gates (1987: 61) correctly notes that “the Alalakh material must suggest a correct chronology rather than be made to coincide with an internal Mesopotamian one,” and indeed this caveat holds true for Cypriot/Aegean chronologies as well.

The main building activity of Levels VI–V included rebuildings of the “fortress” building, while the tripartite “serai [saray] gate” and rooms C1–9 are equated with Level Vb (M.-H. Gates 1981: 4). Furthermore, M.-H. Gates (1981: 35) equates the end of Level VI to Mursili I’s victory over Yamhad in his return trip from destroying Babylon (variously 1499 or 1531 B.C.); and apparently Alalakh was for a brief time an autonomous city.

Major building activity of the Level IV palace was carried out by the short-lived dynasty of Idrimi, who reigned sometime between 1460 and 1420 B.C., and was continued by his son, Niqmepa and grandson Ilim-Ilimma. Further synchronism is provided by an indirect link to the less-known Hittite king Zidanta (D. Stein 1997). The Level IV palace was constructed during the time in which Alalakh became vassal to the Hurro-Mitannians in the fifteenth to fourteenth centuries B.C. (Sasson 1981). This was outlined under the terms of a treaty between Egypt and Mitanni concluded under Amenhotep II and Saustatar, and subsequently renewed under Thutmose IV and Artatama I (D. Redford 1992: 163–69). Again cautiously, ceramic imports from the Mediterranean suggest overlaps with the Amarna and Mycenaean periods (fifteenth to twelfth centuries B.C.). Conventional dating with imported ceramic parallels supports the notion that the destruction of the Level IV palace is dated about 1425 B.C.; although some indications suggest the destruction may date to the campaigns of Hittite Great King Šuppiluliumaš I (1370–1340 B.C.). Some evidence also indicates that King Niqmaddu II of Ugarit, formerly vassal to Egypt, came to Alalakh to pay homage to the Hittite Great King and received new territories that included Alalakh (Bryce 1998: 177–79; van Soldt 1995; Collon 1982).

The period of Hittite overlordship is represented by Levels III–I at Alalakh. Administered by the Hittite viceroy at Carchemish, according to a treaty Alalakh continued as a sub-vassal of Ugarit spanning a chaotic time during which a series of revolts were put down by Šuppiluliumaš’s son, Mursili II, and new treaties were formulated between Hatti and the new Ugarit king, Niqmepa, Niqmaddu’s son (van Soldt 1995; see Ugarit dynastic reassessment in Arnaud 1996). The so-called “fortress” or “fort” at Alalakh was a monumental public building constructed in the style of Hittite palaces and informs on Hittite cultural suzerainty during the last two centuries (fourteenth to twelfth centuries). According to conventional wisdom again, if Level III begins at approximately 1340 B.C. (Bryce 1998), then the dual cella, *bīt hilāni*-style Temple III may have been burnt during rebellions at the end of Šuppiluliumaš’s death (according to Woolley 1955: 396, the style of Temple III is short-lived) and the more “local” style Temple II (Woolley 1955: 78) was reinstated during the continued Hittite suzerainty of Mursili II/Niqmepa of Ugarit. Woolley (1947: 60) originally stated that the Level II temple was “definitely Hittite although not of the *hilani* type.” He later changed his mind and notes that it may represent nationalist revival. Hittite Empire domination ended with the destruction of Level II (ca.

25. For the later Iron Age, see Bruins et al. 2003. These radiocarbon results equally hypothesize earlier dates, but in this case for the Iron Age.

26. The subdivisions Middle Bronze IIC and Late Bronze I are very questionable and I thank the anonymous reviewer for pointing this out.

27. Unfortunately the collections housed in the on-site Woolley dig house depot that contained quantities of these imports were not available to Bergoffen, although preliminary counts were made available by Koehl. The earlier corpus is in the process of being cataloged and integrated into the new excavation finds.



1350/40–1275 B.C.) with dating suggested by the Cypro-Mycenaean pictorial kraters found in the Level III and II temples.

According to Woolley, Level I had a long span of ninety years on the basis of at least two rebuildings of Temple I. The relief of Tudḫaliya, a relative of Mursili II (Niedorf 2002), who perhaps was administrative governor of Mukish, was found reused in a staircase in the Level Ib temple. Woolley attributes this dishonor to the political intrigues involving Alalakh during the turmoil predating the Kadesh treaty between Ramesses II and Ḫattušili III in the late thirteenth century. The final occupation in Level I and its destruction took place during a regional collapse that put an end to both the Hittite Empire and the city of Alalakh. This level is dated to the late thirteenth to early twelfth centuries B.C. on the basis of Late Mycenaean IIIA and B imported pottery. The ephemeral topmost stratum, Level 0, is a short-lived settlement of the twelfth century B.C. (D. Stein 1997) but nevertheless yielded a substantial wall with a massive tower. This cessation of occupation appears to coincide with a region-wide abandonment of settlement sites, although the identification of the ceramics of these strata is preliminary at best (see Wilkinson 2000).

### THE ORIENTAL INSTITUTE EXPEDITION TO ALALAKH (2000–2002)

In order to provide a comprehensive understanding of both the Alalakh architectural and artifactual record and familiarize the team with the stratigraphic sequence of Tell Atchana (AS 136), which would be crucial to subsequent excavation seasons, a number of field investigations were conducted from 2000 through 2002. These three seasons served to consolidate all of the information about Tell Atchana in the field and document the previous excavation finds in the museum prior to the new series of field projects. Only the partial results of intensive topographic surveying and stratigraphic operations, which enabled a rendering of a usable topographical map and a plausible beginning for an architectural composite of the previously excavated buildings, are presented here.

The preliminary pre-excavation investigations at Tell Atchana (AS 136) and the museum served a number of other research agendas, such as creating a database consisting of previously excavated finds stored in the Woolley dig house depot and Antakya Museum depots (Yener 2001a–b). Prior to World War II when the Hatay region was administered as a League of Nations French Mandate for a brief twenty years after the collapse of the Ottoman Empire, excavated finds were evidently divided between the Hatay Archaeological Museum in Antakya and various institutions in the United Kingdom, including the British Museum and University College, London. Some collections also went to the Ashmolean Museum at Oxford, Cyprus, and the Universities of Sydney and Melbourne, Australia, among other places. After Hatay rejoined Turkey in 1938 as its southernmost state, Turkish antiquities regulations required that all finds remain at the Hatay Archaeological Museum. Consequently, the 1946–1949 finds were displayed and stored at the museum and some study collections were housed in the Woolley dig house depot (fig. 4.3a–c).

Field object cards from the Woolley excavations, including photographs and negatives, had been archived in the Rare Books and Manuscripts division of the University College, London. With the kind permission of the university and other institutions involved, these will be documented in a large database file. This work, conducted in 2001 and 2002, consolidates the Turkish collections that are being scanned and photographed. Efforts are being made to make them available through an XML system for Textual and Archaeological Research (XSTAR) database.

However, for the new Tell Atchana teams, one problem still unresolved has been in determining the identity of standing fragmentary walls and their relationships to previously excavated buildings. Unfortunately, locating the field notes, sections, plans, or drawings has proven elusive. The absence of precise locational information was especially consequential during the section cleaning operation in 2001 when a substantial stone wall eroded out of the balk of the deep temple sounding because of unusually heavy rainfall (Yener 2002b). The wall that eroded out of the section gave the opportunity for team members Stephen Batiuk and Toby Hartnell to apply mountain climbing gear to rappel off the side of the deep sounding to scrape it down (fig. 4.5). This fortuitous section cleaning served to unravel issues of chronology and stratigraphy at the site of the temple sounding and provided good Middle Bronze Age radiocarbon/ceramic dating. The wall was tentatively identified as part of the Level IV temple courtyard (fig. 4.4). The results of the section cleaning operations and the database of finds in Turkey, which occupied the bulk of the 2001–2002 seasons, will be published separately in a future report.

During the first Tell Atchana (AS 136) season in 2000, a brief surface survey was initiated in tandem with a photographic inventory of remaining buildings (figs. 4.6–25). The state of the architecture and the status of the site after fifty years of abandonment were documented with copious photographs. With the understanding that any future investigation at Alalakh would involve a substantial conservation effort, a photographic record of the current state of the standing monuments was initiated and placed on the Atchana Web site ([oi.uchicago.edu/OI/PROJ/AMU/Amuq.html](http://oi.uchicago.edu/OI/PROJ/AMU/Amuq.html)).

Effort was made to illustrate the previously excavated rooms from the same directions as published photographs in the original reports. This photographic inventory (Yener 2001a) provided important clues to reconstructing architectural plans and provided a heads-up call for urgent conservation when compared to published photographs. The photographs also served to shed light on how the architecture may be disentangled during the new excavations.

Especially important is a surface find that escaped notice for decades (pl. 8; fig. 4.26). The zoomorphic vessel (museum no. 2268, 878) had been found on the slope of Tell Atchana (AS 136) in 1953 by local village farmers and brought to the Antakya Archaeological Museum. Escaping publication because of the relative backwater nature of Antakya, and the end of excavations at Tell Atchana, the vessel had been displayed for decades in the galleries among other Tell Atchana and Amuq excavation finds.<sup>28</sup> The wheel-made vessel was fabricated with a grit-tempered reddish-buff clay and is lightly burnished, which is partially visible on the surface due to a calcium carbonate encrustation. The single handle loops from the prominent carination and arches over the edge of the slightly everted rim (fig. 4.26). The base consists of an expressively modeled animal head, but since the ears are not preserved, the exact identity of the animal is difficult to ascertain. Much discussion over the type of animal represented was generated among survey team members, with no firm designation decided upon. Other stylistic parallels of animal-headed vessels usually depict a lion, which is a possibility, while the snout suggests the animal may have been part of the ursine family, either a bear or pig. Miss Piggy became its nickname. The bottom of the vessel has no opening, thus it did not function as a libation rhyton but was a cup that could hold liquids. The animal-headed vessel has important similarities to a ritual lion-headed vessel recently excavated from Kültepe (ancient Kanesh) in central Turkey and dated to the Middle Bronze Age/Late Bronze Age transition (Kültepe Ia; Özgüç 2002b: pl. 127:13). Other well-known examples derive from Late Bronze Age Ugarit, other Levantine sites (Zevulun 1987), and recently a beautiful ivory/bone example was found in a tomb at Qatna.

In 2000/2001 two intensive surface surveys were conducted of the crop fields surrounding the site and the southern sector of the mound unexcavated by Woolley (see *Chapter Six: Surface Ceramics, Off-Site Survey, and Floodplain Development at Tell Atchana [Alalakh]*).<sup>29</sup> During the surveys Atchana village farmers would bring personal collections of surface finds that had been plowed up during the years of inactivity at the site. Some of these copper-based metals and clay figurine are on plates 2C, G; 3G. The parallel transect survey of the mound and systematic counts of sherd scatters in fields surrounding the mound revealed denser concentrations of sherds on the north and northeast sides of the mound in an area approximately 100 m out from the site. This sector matches Woolley's observation that an outer town wall may be oriented parallel to that side of the mound. In an evocative footnote in his final publication of Alalakh Woolley (1955) says:

Occasionally, in certain climatic conditions, I fancied that I could see differences of color in soil and crops which seemed to show the line of a rampart running more or less parallel to the northeast slope of the mound and at a distance of about 300 m from it; here there was a certain amount of pottery on the surface and peasants reported that they had found building remains. In other directions nothing of the sort could be distinguished and the only surface find recorded, a small tablet, could easily have come from the mound.

The subsequent examination of CORONA satellite imagery from the early 1960s and 1970s revealed the dense sherd scatter as a dark feature north of the mound itself (fig. 6.4), teasing out the possibility of a "lower town" in the fields below the mound now hidden by alluvial accumulation. However, on closer scrutiny, Jesse J. Casana and Amy Rebecca Gansell suggest that it is off-mound sherd scatter and present alternative mechanisms for the distribution patterns. This conclusion and other hypotheses will be tested against other remote sensing and coring research scheduled in the near future.

---

28. In preparation for the renewal of excavations at Tell Atchana, excavation records housed at the Rare Books and Manuscripts division of the University College, London, were researched. Curiously, hundreds of unpublished photographs on glass plates were located, but none of the field notes were found. The field notes unfortunately appear to be missing, lost, or are rumored to have been burnt by Woolley after the final publication. One file, however, contained several deep sounding sketches and a letter dated 1955 sent to Woolley by the then Antakya Museum director, Ruhi Tekan, encouraging him to resume excavations at Atchana. Two officially-stamped black and white photographs

---

of the vessel from the Hatay Museum were to be the inducement. Unfortunately, Woolley passed away before he could return to Atchana.

29. We were greatly aided by one of Woolley's surviving workers who is now the watchman of one of the properties on the site. Ali Yalçın informed us where Woolley's dumps were located and related several colorful stories as well. We greatly appreciate his efforts to help us, as well as those of the Atchana Köy Muhtar Salih Dönmez, and the property owner, Erkan Mıstıkoğlu.

During the initial survey of the valley, Wilkinson suggested testing for another possibility, a river channel between Tell Ta'yinat (AS 126) and Tell Atchana (AS 136). To investigate the possibility of off-site settlement or the position of a channel of the Orontes River, a geophysical team was invited to conduct remote sensing tests led by Cemil Gürbüz from the Kandilli Observatory at Boğaziçi (Bosphorus) University in Istanbul. Utilizing Geomagnetic field gradient measurements with an EDA Omni Scintrex Envimag Gradiometer, Georadar measurements with RAMAC/GPR, a potential channel (fig. 6.6b) was revealed that may be a riverbed. Furthermore, their investigations confirmed the existence of other subsurface features in the crop fields below the mound and pointed out new areas for potential off-site soundings. If a lower terrace or an Orontes River channel indeed existed, then the site may be potentially more complex than heretofore thought. Certainly a river channel and its lapping, eroding effects would explain the odd lentil shape of the mound today, especially its sharp eastern face. Moreover, the shift of a river channel may have radically altered riverside features such as marketplaces, river ports, or even access to the massive, but seemingly abandoned mound of Tell Ta'yinat about 700 m away. Although previous excavation results suggest that Tell Ta'yinat was unoccupied during the Middle and Late Bronze Ages, tantalizing evidence from unpublished small finds housed in the Oriental Institute Museum indicates that settlement may, nevertheless, partially overlap with Alalakh during this period. Dry land or easy access across a channel between the sites in the subsequent Iron Age would also suggest reasons for the expansion of the recently discovered lower town of Tell Ta'yinat toward the then-abandoned Atchana (fig. 7.11; *Chapter Seven: The Ta'yinat Survey, 1999–2002*). All of these river-specific questions have bearing on the possibilities and magnitude of riverine traffic connecting the Amuq Valley to the Mediterranean Sea. However nebulous these theories may be, some historical information about the navigability of the Orontes River certainly exists in the Islamic period, and perhaps earlier during the Roman period. Continuing research will include cores placed between the two sites in tandem with the determination of the shoreline in the Orontes Delta area.

#### ALALAKH SITE MAPS

During the 2001–2002 seasons a detailed topographic map of Tell Atchana (AS 136) was produced with a Leica Total Station model TCR 305. Digital Elevation Models were created using ArcView GIS 3.2a software. A total of 3,373 points were shot covering almost the entirety of the mound with a heavy concentration in the old excavation areas. The topographical map reveals the exact locations of extant architecture and the bulk of the points were georeferenced according to standing architecture. The existing architecture was digitized and then used to generate a composite series of city plans in 2002. The architectural scans of excavated buildings are plotted here within a larger site layout plan and examinations of internal relationships proceed below from the oldest (Level VII) to the most recent (Level 0) by level (see figs. 4.27–34).

#### *Level VII*

The architectural record of Level VII consists principally of the tripartite city gate, ramparts, temple, and palace (fig. 4.27). However, a partial buttressed fortification wall on the northwest was encountered during the excavations in Square Z8–9 and reproduced in Woolley's Level VII plan (1955: pl. 22). While this may indeed be the continuation of a circuit wall around the site, intriguing evidence from a trial trench in Squares Y8–Z9 hints that this abutting wall may be an earlier precursor of the "fortress" or "castle." Woolley (1955: 133, 153) emphasizes that the northwestern sector of the mound always had a "castle or military-fortress" constructed on an artificial platform dominating the city. Given the problematic nature of the hatching key in Woolley (1955: fig. 58b), I have considered the reconstruction of this wall in Woolley 1955: plate 22 to be correct. However, the northwest/southeast abutting wall, as indicated by the anomalous hatching, is included in white outline.

A few wall fragments and floor reached in a sounding through rooms 4, 11, 12, and 22 in the Level IV palace were assigned by Woolley (1955: fig. 43a) to Level VII. The substantial walls and a pavement located directly west of the Level VII palace in Squares R9 and Q10 may indicate a large paved entrance courtyard and perhaps functionally integral palace rooms here.

The so-called palace of Yarimlim was built in the bend of the mound on a terraced terrain. The grand architectural style represented by the Level VII palace continues the monumental tradition glimpsed in predecessor palatial buildings most notably in Level XII, and especially in terms of their use of columned features (Woolley 1955: fig. 10). An irregular large outer courtyard with a fireplace separates the northwest official part (rooms 1–13) from dwelling units located in the southeast. In construction style, the Level VII palace follows many earlier established conventions, in-

cluding the use of stone foundations and mudbrick superstructure. Columns continue in use as ornamental features to separate rooms (Woolley 1955: fig. 35 rooms 5a and 5b) or as pillars in the center of a large room (room 2). Both the audience chamber and the northern living room were divided by wooden columns on basalt and limestone bases set between two projecting piers, a feature that again occurs in Levels IV–I. Timber appears to be quite liberally used for columns, door and window frames, staircases, at the bases of walls, and within walls as framework (Woolley 1955: fig. 71). The vitrification of the mudbrick walls and excellent preservation after the destructive fire is evidence of this. Timber was also put in as a course at the top of polished basalt orthostats (Woolley 1955: 147), which is a feature typical of this region (Mellink 1957: 397; Duru 2003: pl. 25) and in central Anatolia as well (Özgülç 1999). Woolley has already pointed out the use of wood and other features, which according to him evokes Minoan architecture. This additional correlation with the Aegean region is echoed as well in the Alalakh frescoes, which in style, if not technique, have been compared to Minoan-Cretan style frescoes of architectural and naturalistic designs. Recently the number of stylistic parallels has increased in the eastern Mediterranean with recent paintings discovered at Kabri (Kempinski 1997) and al-Daba‘a in the Nile Delta (Bietak 1997). However, the exact direction of influence and its implications needs chronological confirmation (Niemeyer and Niemeyer 1998).

According to Woolley, the easternmost bank of communicating Palace VII rooms 10, 14, 19, 25, 29, and 33 abutted part of the circuit wall that also functioned as the eastern wall of the palace. Functionally the rooms resemble the independent service wings of a large building complex excavated on the east terrace at Kinet Höyük on the Mediterranean coast (M.-H. Gates 2000: fig. 3), which is dated to the Middle Bronze Age period. Similar service rooms are to be found at contemporary Ebla (Matthiae 1997: fig. 5 palace area Q).

The Level VII temple follows earlier traditions dating back to the third millennium B.C. in its axial plan and continues in the Middle Bronze Age period (see temples at Shechem and Megiddo: Ottosson 1980; Matthiae 1997: fig. 17). A narrow antechamber leads to a square, deep cella with benches and stepped altar of basalt blocks aligned on a central axis with the entrance. An upper story is suggested by the thick walls. The temple is functionally attached to the palace, although its courtyard does not communicate with the palace.

A monumental, tripartite gate provides entrance into the city in the northwest. The Level VII gate consists of a three-compartment entrance framed by lateral towers crowning an earthen rampart or glacis. This gate style resembles traditions established in Early Bronze Age Anatolia; good examples are those at Troy I–V, and this gate style is monumentalized with the numerous examples of tripartite gates at the Hittite capital, Hattuša (modern Boğazköy) dated somewhat later. West of the gate substantial walls were found and may have been part of the buttressed city wall (see especially Woolley 1955: fig. 58, and site map of Level VII on Woolley 1955: pl. 2).

Finally, two silos located to the southeast of the Level VII palace, which had been depicted in the Trench F section (Woolley 1955: fig. 52a–b), are reconstructed here in the city plan. The extensive earthen ramparts are extrapolated from the section as well. Similar imposing ramparts made of mudbrick encircle Ebla and date to the Middle Bronze Age (Matthiae 1997: fig. 3). Massive rampart and glacis walls were part of the fortification systems typical for the Middle Bronze Age in the Levant at sites such as Hazor, Dan, Qatna, and Jericho (Matthiae 1997: 3–4). The precautionary construction of silos was an often-seen natural defensive measure during periods of political disruption, as the destruction of Level VII by Hattušili I certainly indicates. Massive grain silos have recently been excavated at Hattuša and dated later to the end of the Hittite Empire, which was yet another period fraught with turmoil (Seeher 2003: fig. 1).

#### *Level VIA and VIB and Level VA and VB*

The settlement remains that represent Levels VI and V (figs. 4.28–29) were not as well preserved due to trenching from later building activities, although Woolley (1953a: 183) acknowledges the importance of these finds. Encouraged by the challenge, M.-H. Gates (1981: fig. 1) has meticulously reconstructed the representative layout of the architecture for both levels. Only a few suggestions are made here that can add to this effort. On the layout plans, the architecture is illustrated by level for greater clarity and subphases are shown in gray tone.

After the destruction of the Level VII palace, this quadrant was abandoned and filled with numerous trash pits that were dated by Woolley to Levels VI and V. The city wall, which had been part of the east wall of the palace, was modified and continued to function as a defensive wall. This wall is illustrated in figure 4.28, Squares M7–J13, in white outline since it is nowhere illustrated in the final publication. The entire span of the city wall from Squares M7 to J13 is also speculative since the palace sounding section actually does not cross the wall as presented in Woolley’s publication. A pottery depot created by reusing the southeast wing of the Palace VII walls was perhaps a functional part of this sector in Squares K13 through M15 (Woolley 1955: 173–74, fig. 61). According to Woolley, the two su-

perimposed sets of walls represent separate phases of Level VI (A and B), but it is in Level V that a more expanded version of this building is preserved in Squares J13 through M15 (Woolley 1955: fig. 64). Some of the same walls were later reused as Level IV House 39C. Accordingly, this plan has been depicted for both levels. What emerges is a major multi-roomed structure in close proximity to the Level V temple, which may have functional connotations within a broader sacred precinct.

Very little remains of the earlier Level VI temple since it was destroyed during the building of the subsequent temple. A substantial wall and pebble floor extrapolated from the section (Woolley 1955: fig. 29b) is depicted here in Square N13. The Level V temple was built according to the traditional axial plan and is located in the same sacred precinct area as earlier temples. Of interest are the surrounding units or service rooms that appear to border the temple on the northwest/southeast corner and perhaps surrounded it altogether. Similar sacred precincts offsetting the actual temple building from its wider storage units are paralleled at Boğazköy Temple I (Neve 1993: fig. 20).

Additional fragmentary walls, which may be a Level V shrine, according to Woolley (1955: 180), were found in Squares G17 and H18. This small, stone-built shrine set on a clay revetted terrace platform had a paved doorway at the northwest wall corner (Woolley 1955: fig. 63). Another shrine to the west is indicated by partially preserved northeast/southwest platform terrace walls and is conjectured in white outline here. The overall impression of a parallel suite of sanctuaries devoted to indigenous deities is given material expression by a relief-decorated, triangular stela depicting a deity wearing horned, conical headgear found there in the second shrine (Woolley 1955: pl. 44c). Corroborating the linkage in religious iconography, the horned conical headgear (see Carter 1970: 25 and other examples) has strong Hittite/Hurrian connotations. Later parallels to this series of small angular shrines perhaps representing indigenous cult chapels are to be found in the sacred precinct at Temple 5 near the King's Gate in Hattuša (Neve 1993: fig. 99). In Hattuša, Houses A, B, and C were found as a suite enclosed within a temenos wall and suggest that this precinct at Alalakh may also have been devoted to several local deities or perhaps deified kings. Furthermore, the diversity of deities mentioned in texts (see Hurrian pantheon discussed in Wilhelm 1989: 49–76) hints that quite a number of temples may have existed, which are anticipated in the unexcavated sectors of Alalakh.

During the period represented by Levels VI and V, the northern Level VII gate was bricked up (Woolley 1955: 147, 151) and a new dogleg city gate was constructed over it, best preserved in Level V (fig. 4.29). According to M.-H. Gates (1981: 35) little time, perhaps not even a generation, seems to have elapsed between the end of Level VII and the reconstructions. Another major bent-access entrance decorated with engaged columns was constructed at the western entrance in Area H. M.-H. Gates (1981: 8) notes that the adoption of this gate style prevailed only during this period at Alalakh. Stylistic parallels of these traditional defensive gate practices can be found at Kültepe/Kanesh Level 7 palace (Özgüç 1999: plan 6, room 9) and continues back to the sixth millennium B.C. in Anatolia (see, e.g., Mellaart 1975: fig. 66b, Hacilar Level IIa).

What later became known as the “fortress, castle, fort” according to Woolley’s speculation seems to have existed in all periods at Alalakh. While it was not preserved in Level VI, Woolley suggests that it may have followed along the same lines as its predecessor in Level VII, which was not preserved either. Although a royal palace has not as yet been identified for the Level VI period, the conjectured “castle” may have been one of its administrative wings. The subsequent Level V “castle” was a modified version, oriented differently, and may have continued to serve as an administration building. Indeed, as per Woolley’s suggestion fortress room 13 may have been dated to Level V. The change in orientation is apparent in walls and drains that run in a different orientation in the so-called “Barracks Square.” The “stratigraphic limbo” mentioned by M.-H. Gates (1981: 7, n. 26) between the Level VB Fortress and the Level IV castle (and adjacent Level IV palace) is, per her suggestion, here illustrated as one contiguous building for Level V (fig. 4.29), collapsing the phases into one. The subsequent Level IV palace building is conjectured as one large contemporary complex with its administrative wing (fig. 4.30). This intentional oversimplification knowingly sidesteps generational gaps and other puzzling chronological considerations; ultimately the stratigraphic nuances of the separate building subphases (Phases VA, VB, and IV) will need careful and detailed reinvestigation.

The exploratory trenches within the rooms of the Level IV palace revealed fragmentary wall plans, which are difficult to assign since no key is given for the plan (Woolley 1955: fig. 43a–b). However, with the help of the published section it appears that the vertical hatching is Level V and the horizontal is Level VI, while the black is Level VII. With our suggested reconstruction, the Level V walls in Squares S, R9 do fit into the northeastern edge of the presumed Level V Fortress and may be the continuation of a bank of rooms southeast of the dogleg gate entrance (fig. 4.29).

According to Woolley, the western circuit wall emerged in a vertical rubbish pit section set against the inner face of the city wall (Woolley 1955: fig. 58a) and provided information about Phases VIA and VIB (Woolley 1955: fig.

58b). Woolley's figure 58b is confusing and M.-H. Gates (1981: 6, n. 20) correctly notes the mislabeling. A six meter-thick wall, or perhaps buttress that contained a narrow passage, is abutted by narrower casemate walls oriented north-west-southeast toward the interior represented by the VIB wall. A substantial earthen rampart and glacis, which was a paved, sloped surface of mudbrick, existed for both phases of Level VI and was enlarged in Level V. Similar impressive defensive ramparts and glacis systems were well-established features of Late Bronze Age sites along the Levantine coast. A massive defensive rampart at the Sphinx Gate (Yerkapı), which rises in the shape of a pyramid, overlying a postern gate and paved with stones, is the best-preserved example at Boğazköy/Hattuša in Anatolia (Seeher 2002).

#### *Level IV*

The densely packed settlement of Level IV provides the best archaeologically coherent architectural record for inferring spatial organization (fig. 4.30). The layout represents a complex series of subphases and rebuildings of the palace and adjacent annexes at the latest occupation phase of Level IV. A smaller gate in its northeastern side provided entrance into the broader west wing palace courtyard or "Barracks Square." The tripartite southern "serai gate" (Squares T, U11) that opens into the palace courtyard resembles similar inner city gates in contemporary palace precincts in Anatolia and Syria (see, e.g., Mazzoni 1997). The multi-roomed gate with flanking towers and multiple guardrooms, which constitute the western gate in Area H, is a departure from the massive constructions of earlier periods. Here the bent-access gate provides entrance to and from the area where the royal residences are located in the "royal precinct" or "acropolis," that is, the higher, northern summit sector of the site. The orientation does not suggest that it is an "outer" gate, but one that separates this area from the rest of the settlement. Tilmen Höyük in the Gaziantep province provides a Middle Bronze Age parallel with a bent-access gate (Duru 2003: plan, Gate K-5) with its cluster of guardrooms and represents a similar residential gate providing entrance into the inner spaces.

According to contemporary Syro-Anatolian standards, an internal city wall often separates the residence of the king, the main temple, and the administrative archives from the lower town. The lower town settlement in turn is often provided with another perimeter wall, well outside the more elevated royal precinct, and would incorporate the rest of the settlement (see, e.g., Titriş, an Early Bronze Age tripartite city plan: Algaze et al. 1996). A multiple-walled city plan is best exemplified by Hattuša where the king's quarters on Büyükkale are encircled by walls and the rest of the site spreads out into the irregular landscape, well protected by outer casemate city walls. Even earlier, Middle Bronze Age examples exist in neighboring Tilmen Höyük (Duru 2003: plan) to the north, where casemate walls surround the higher royal residences separating it from the rest of the walled settlement.

The main cluster of buildings on this higher "acropolis" constitutes the royal residence of the king; it is a moderate sized, broadroom-plan building oriented northeast-southwest. The distinguishing features of this palace are the ceremonial entrance and its stairs, columned thresholds, and basalt orthostats lining the walls. Axial in plan, the architectural form is considered by many as an antecedent to the *bīt hilāni*-building style because of its columned entrance, portico room (vestibule), and anteroom (rectangular hearth room) with attached side chambers (Woolley 1955: 110–31; Frankfort 1952; for a Middle Bronze Age example at Tilmen, see Duru 2003: plan, Building E). The *bīt hilāni* is an architectural idiom that has excited scholars for ages since this form is believed to have been the antecedent for King Solomon's temple.

Evidence also exists for the use of timber in the Level IV palace building. However, the timber was used only where structurally necessary, unlike the much more extensive use in half-timber construction techniques earlier in the Level VII palace and also seen in forested Anatolia. Stone-rubble foundations continued to be employed as well.

An annex with two ceremonial rooms is approached through columned doorways and may be a later addition by Niqmepa's son, Ilmilimma. Although Woolley (1955: 112) describes it as more modest in scale than its predecessors and says, "the only architectural feature that distinguishes it from the house of a wealthy citizen is the entrance with its flight of steps and columned portico," this statement may be misleading if the so-called "castle," which may have been the rest of the building to the west, was still in use in this level. An example of this style of agglomerated palace is the royal palace at Ugarit with its columned vestibules (Yon 1997: fig. 2), and it may be profoundly associated with this more expansive interpretation of the Level IV palace. Thus this large multi-roomed administrative building, the "castle," may have been the extended "west wing" of the Level IV palace. The building was extended to the west overlying what had previously been the Level VII and VI rampart walls. According to Woolley (1955: 156), the earlier Level VB "fortress" rooms continued to be used in Level IV and formed a single functioning unit with the newly constructed Level IV palace. Furthermore, it is fairly obvious from the orientation of the southernmost wing of the Level

IV palace (rooms C1–9, now dated to Idrimi's reign) that it is indeed a functional unit with the "serai gate" and earlier Level V "castle." Indeed, the higher-placed northwestern sector of the site functioned symbolically as the high citadel and was the central location of governmental power.

Striking resemblances to the so-called Level IV "fortress" west wing palace can be seen in the growing corpus of early Anatolian palaces excavated elsewhere in Turkey. For example, the tradition of a square-shaped building with long narrow banks of rooms surrounding a courtyard can be seen at the Level 7 palace at Kültepe/Kanesh (Özgül 1999). Furthermore, a colonnaded space partially exposed in the palace sounding in Alalakh Level XII echoes earlier parallel architectural forms in common between both areas.

The construction of the differently oriented Level IV palace, presumably by Niqmepa, abruptly reorganized the east-wing palatial structure and gave it a new northeast–southwest orientation, cutting into the courtyard and several rooms. D. Stein (1997: 57) suggests that the separation of the palace from the temple at this stage was a conceptual switch from Level VII and indicated "major social or political change." Of broadroom style (Ottosson 1980: 34), the temple has two rooms, a narrow entrance room, and a cella with a niche. The Level IV temple was situated in the same location (Mazar 1990: 244) as the previous twelve temples, in the northwestern quarter of the site, thereby attesting to the long-term continuity in the location of religious practice. However, the Level IV temple was now seemingly free-standing, set apart from the palatial complexes, but was perhaps functionally closer to the northernmost set of "private houses" (House 39C) that may have served as a temple precinct.

Idrimi's sculptural inscription mentions "Ishtar, lady of Alalakh" (Greenstein and Marcus 1976), prompting Woolley (1955: 33) to posit that the temple was dedicated to this goddess. During the Level III/II occupation, however, the dual cellas and a tablet from Level III mentioning the weather god, Teššup, may indicate that other gods were also worshiped there. Both Idrimi's royal seal (Collon 1975) and the statue inscription (Greenstein and Marcus 1976) also mention the deity IM, and Hebat is mentioned on the statue inscription as well. Certainly the two basalt autochthonic male and female deities found in the Level II west-wing "fortress" room point to older deities.

The so-called private houses, perhaps the "residential" buildings of this level, are represented by four structures, Houses 37 and 39A–C, and were found with fairly well-defined architectural plans (fig. 4.30). The intriguing two-story building House 37 (Woolley 1955: 175–78) contains a communicating bank of storerooms along its southeastern edge; its thick walls and staircase recall the alignment of service rooms in the earlier Level VII palace southern complex that flank the circuit wall. Its regular, well-built architectural plan with rooms at right angles are at odds with the trapezoid-shaped and neighboring houses with irregular walls. It may have had a much larger northwestern extension that was destroyed by the construction of House 39A. House 39A is stratigraphically problematic as is evident from the published plans (Woolley 1955: fig. 63). Woolley explains that a certain amount of modification to the building must have been needed to accommodate neighboring buildings to the east, however, if the plan of House 37 is correctly placed in the grid square and does date to Level IV, then the two buildings overlap in Square F18, suggesting a phase displacement here.

A red-burnished libation vessel AT 37/225 was found in House 37 in a room provided with drains. Fragments of these vessels were found in other rooms of the house as well, suggesting that the building was perhaps associated with a religious function given its ritual-laden contents. Similar arm-shaped libation vessels were found at Temple 12 Hattuša/Boğazköy (Neve 1993: fig. 77); recently very large quantities were excavated, ritually discarded into pools (Seeher 2003: figs. 2, 5).

House 39B is an example of Woolley revising the dating of architectural remains from a previous publication. In Woolley 1948: fig. 1, House 39B is dated to Level III, but he changes his mind in the final publication (1955: fig. 63, n. 1) where it is assigned to Level IV. Together with House 39C, the northeastern rooms were truncated by the trenching of the Level III fortification wall. House 39B overlies the partially preserved Level V shrine and was probably remodeled using the earlier walls and adding rooms 1 and 2.

House 39C is a two-story multi-roomed building situated in proximity to and east of Temple IV in Squares J–M 13–15 (Woolley 1955: fig. 64). While some walls were identified as reuse of earlier walls from Level V, the walls in rooms 1 and 2 were modified and specific to Level IV. The confused nature of the stratigraphy of this area (Woolley 1955: fig. 53) regarding the placement of the building and the fragmentary walls to the northwest makes it difficult to reconstruct the relationship of these installations to the Level IV temple. However, when Woolley (1955: pl. 22) reconstructed a settlement plan of Level IV he included a number of these walls overlying the Level VII palace. The close proximity of this building to Temple IV may indicate its sacred function as part of the temple precinct; however, the disturbed nature of the stratigraphy makes it difficult to identify activity patterns and contents in order to assign functions.

The overall impression of this alignment of houses, where locations were retained in the following periods, recalls installations of similar pattern, which may be service areas for temple/palace personnel or specialized production installations. Other possibilities are planned housing facilities for dependent workers, elite residential units, and family or commercial storage. These functions have also been raised for contemporary Syrian sites such as Emar, Halawa, Hammam al-Turkman VIII, and Tell Umm al-Marra IIB (Curvers and Schwartz 1997). Recent discussions focus on the origin of certain house styles, such as the “front room house,” which is one large rectangular room next to two smaller rectangular rooms (Margueron 1980). Others contest associations with palace-dominated economies and posit implications of the *maryannu* chariot aristocracy, especially with the “central room house” type described as a row of rooms communicating with a central room or other higher status residents (references in Curvers and Schwartz 1997; Schloen 2001; see McClellan 1997 for house typologies and population estimates).

### *Levels III and II*

Excavations of Levels III (fig. 4.31) and II (fig. 4.32) provided a fairly good archaeological record of the northern tip of the city circumscribed by an impressive arc of fortification walls. Five or six partially preserved multi-roomed houses were aligned along a path skirting the northeastern wall. A massive building, the so-called “military fort,” and a temple both occupy locations of earlier administrative and religious structures. The large, multi-cella temple was best preserved in Level III, while only fragmentary walls of the Level II temple were preserved. Along with this continued architectural activity in Alalakh is a simultaneous surge in public programmatic statuary typical of Anatolia.

The “town defenses” are the massive eastern and northeastern circuit wall systems that are perched on the edge of the mound. The circuit wall of Level III is conjectured from Woolley 1955: figures 63–64, and the Trench F section in figure 52 (and thus depicted in white outline in fig. 4.31). I have also conjectured on the basis of seemingly contradictory statements by Woolley (*ibid.*, p. 169 contra p. 144, and fig. 53) that only a small fragment of the east–west wall abutting the fort exists that is actually preserved in Level II. This fragment in Squares O–N8 may or may not be part of the town defenses. An earthen rampart is here depicted as a speculative reconstruction based on Woolley, *ibid.*, figure 58A and stylized figure 58D.

The Level II town wall is a composite of a number of wall fragments depicted in the final publication (e.g., *ibid.*, fig. 52, 65–66, the Trench F section fig. 52). The defensive wall in Level II makes an abrupt right-angle turn (*ibid.*, fig. 53) to the west toward the massive building, the so-called “military fort,” although the nature of this part of the wall in Level III is not clear. Another wall fragment juts out from this building toward the east but does not connect to the other fragment, leaving a gap, perhaps an entrance to this sector. A conjectured second wall skirting the first to the east is derived from Woolley 1955: figure 53 and from the Trench F section. A path between the walls shows up in the section and is here depicted in Square E17.

The impressive “military fort” administrative structure juts out like the bow of a ship where the mound narrows at the tip, and the corner bastion functions as a fortified bulwark, according to the suggested reconstruction by Woolley (1955: fig. 59). This intimidating, monumental building constructed with thick, powerful walls sits on an artificial platform (Woolley 1955: 167–68). The building overlays the Level IV “castle” and Level IV palace and covers a large section of the northwestern quarter of the royal city. Although a military function is posited by Woolley (1955: 153, 133), it may instead have been a multi-story palatial building. The latter interpretation is further substantiated by the ivory finds and painted Nuzi (so-called “Atchana”) wares, which reiterate a function as a major administrative/governmental building. A second story is suggested by the thick walls and small rooms in Squares U–T9, which could function as a stairwell (Woolley 1955: 168 suggests stairways in rooms in Squares V10–11). The foundation was constructed as a v-shaped trench filled with limestone blocks, orthostat fragments, and rubble, and the wall was constructed above in such a way that the top was wider than the foundation. No timber was used and the superstructure was mudbrick. The technique of its construction belies its stylistic similarities to early Anatolian and Hittite royal architecture. According to Rudolf Naumann (1971: 491) the building exhibited Hittite characteristics as suggested by the buttresses facing the courtyard and towers. This is especially apparent in Temples 6 and 7 at Boğazköy (Neve 1993: figs. 49, 51). Further evidence for a Hittite influence can be seen in the wing with “cellar” storage compartments in Squares U/T 12/13, a largish courtyard bounded by banks of rooms and a sturdy, blocky style. These features have functional parallels with the so-called Hittite temple building at Tarsus (Goldman 1950, 1956), “Building A” at the Hittite city of Ortaköy/Şapinuwa (Süel 2002), “Building C” on the acropolis of Kuşaklı/Sarissa (Müller-Karpe 2002), and the Level III monumental palace at Maşat Höyük (Özgüç 2002a).



The Level III temple was a much more substantial building than the “military fort” with thick walls, closely akin to the massive construction style of the palace “fortress.” Several stairwells in the temple point to its having been multi-storied, like the “fortress” building 50 m away. Two Hittite texts (Wiseman 1953: nos. 317, 454) suggest the weather god and the god Umbus were worshipped there. The two angular basalt lion sculptures that were reused in the Level Ib temple probably date to this level, suggested by the association of lions with Hapat/Arinna/Ishtar/Sauska, the consort of the weather god, Teššup. According to Woolley (1955: 82), however, the lions may have come from the Level II temple, implied by their ideal placement in multiple doorways, which narrow as they recede. Lion statues as apotropaic protectors of gates and entrances are characteristic of Anatolian sacred architecture. Earlier Middle Bronze Age Tilmen Höyük yielded two basalt lion statues guarding the gates of the outside fortification walls (Duru 2003: pls. 20, 45). Aside from the well-known lions at the Lion Gate at Hattuša, fragments of lion sculptures were found in Nişantepe, and recumbent lions at Temple 2 (Neve 1993: figs. 175, 112, 116). The lion sculptures of Alalakh are curious in their angular, cubic stylization, which differs from the Hattuša examples. Woolley notes a similarity to the geometric abstraction of the spectacular ram’s head architectural sculpture found in the Level IV palace that is also echoed by Machteld Mellink (1957: 398), who attributes it to “Syrian stylization.” This tradition in inland Syria can be observed in the votive statue of a dignitary from Ebla Temple P2 (Matthiae 1990: fig. 4). Be that as it may, Alalakh lion sculptures do bear an eerie resemblance to the monumental angularity of the Hittite Fasillar sculpture found in southwestern Anatolia and may reflect shared stylistic traditions in sacred architectonic decoration, although the vehicle of transmission is less clear.

Woolley (1955: 78) suggests that the columned entrances of the temples have parallels to later Iron Age *bīt hilāni*-buildings such as in Tell Ta‘yinat (AS 126; Haines 1971), the successor to Alalakh as the capital of the kingdom, then called Unqi (Harrison 2001b). Closer in time are the Late Bronze Age *bīt hilāni*-Building E at Hattuša, Büyükkale (Neve 1987: fig. 18), the Level IV palace (see above), and the palace building at Emar that was under the control of Hittite Great King Mursili II (fourteenth century; Margueron 1995: 127). Henri Frankfort (1952) suggests that the *bīt hilāni* was an indigenous development emerging from the single-columned entrance thresholds as manifested at the Alalakh Level VII palace.

The Level II temple was poorly preserved and the ground plan has been restored by Woolley with many generous interpretations (Woolley 1955: fig. 33). The “plan of existing remains” published by Woolley (*ibid.*, fig. 31) was used to generate the walls in figure 4.32, while the walls depicted on the restored plan are indicated in outline. However, the massive wall in Squares M15–L16, which is there labeled Level II, has also been included although how it relates to the temple remains difficult to unravel. Again, the Level II temple is in close proximity to House 39C and may be functionally related. According to Woolley the architectural plan of this temple harks back to a traditional axial temple plan last seen in Level IV, however, the two cella rooms to the north bring to mind the two chambers thought to be dedicated to Hapat and Teššup at Temple I in Boğazköy/Hattuša. While the plan may reflect older models, a lapis lazuli figurine of a goddess (Woolley 1955: pl. 69L) with its short squat stylization and conical-horned headgear reflects Hittite antecedents. Level III also yielded a clay molded figurine of a horned female deity (Woolley 1955: pl. 54: O) similar to Middle Bronze Age Anatolian antecedents from Karahöyük/Konya and Kültepe/Kanesh (Özgüç 1999). Prestige items such as ivory duck-shaped boxes (see, e.g., Woolley 1955: pl. 75), cylinder seals, as well as copper bun-shaped ingots reflect the global maritime connections exemplified by similar items (Pulak 1988) found in the Uluburun-Kaş shipwrecks.

The Level III/II houses (39C, 38A, 37A–D) were all aligned along a northwest–southeast path that separated them from the circuit wall (Woolley 1955: figs. 64–66). According to Woolley (*ibid.*, 183), the two periods were very difficult to distinguish since the “earlier wall was buried in the debris of the building to which it had belonged and the later builders merely trimmed the top of it and laid their bricks on the flat top.” The plans of buildings that continue into Level II are ambiguous and thus are depicted in outline. The buildings are essentially trapezoidal with mostly irregularly shaped rooms, with the exception of House 39C in Level II. This house is notable in the regularity of its design and row of storage compartments along the side closest to the wall. A marble lamp of Cretan inspiration (Woolley 1955: pl. 79) was found in a pit in this house and speaks of a ritual function for the building. A possible sacred precinct building is strengthened by the proximity to the temples of both Levels III and II. Of particular note in House 37A are the semi-engaged mudbrick columns that flank the entrance. Several disarticulated walls to the northeast of Level III/II temples indicate that another building may have existed there a few meters away from the temples as well.

*Level I*

The layout of the city during Level I again repeats the pattern of a cluster of “private houses” or more likely, administrative or sacred precinct buildings, aligned along the fortification wall (fig. 4.33). Very little is preserved of the fortification wall in this period, aside from the Trench F section and fragments in Squares H15 through A19. A large temple structure is situated to the west of the building complexes. Several disarticulated wall fragments appear to the east and occupy the space where the Level VII palace building once stood (Woolley 1955: figs. 53, 198–200).

The houses of Level I (Houses 37A, 37B, 38A, and 38B) were encountered close to the wall by the eastern slope. Two architectural features distinguish this group of buildings. The first is the trapezoidal layout of Houses 37A and 37B with some of the walls of the rooms at angles less than 90°. Moreover, Houses 38A, 37A, and 37B share the feature of being set apart from the fortification wall, with an intervening path between their northeast side and the wall. A path skirting a similar circuit wall and a bank of buildings is seen in some of the Late Bronze Age settlement configurations in Mersin (Garstang 1953: fig. 151, Level VII) in neighboring Kizzuwatna (Cilicia). House 37A, a multi-roomed unit with a square central hall and subsidiary rooms surrounding it, sat across a narrow street from a smaller building designated 37B. Room 3 in 37A was originally published in more detail (Woolley 1936: fig. 1), but the plan was revised in the final publication (Woolley 1955: fig. 68) when it was realized that it was part of a larger structure.

House 38B was a multi-roomed building with a more regular layout and well-planned rooms. Unfortunately only the eastern half of this building, consisting of a row of rectilinear storage units and appearing to be the east wing of a much larger administrative building, survived. The relationship of this building to the massive stone-built wall with a tower in Squares U11/R9 is unfortunately unclear. This important stone-built fragmentary wall (which is perhaps slightly later than House 38B), replete with three drains and square tower-like buttress, lies to the west and may have been the circuit wall for this much-reduced settlement.

The Level I temple consisted of two subphases, A and B, which represent rebuildings of the structure. The plans are both heavily reconstructed in the final publication (Woolley 1955: fig. 34b–c), therefore, the reconstruction presented here makes use of the “plan of excavated remains” depicted in figure 34a and incorporates both phases into one. In Phase A, a large broad room cella with three niches and an antechamber was entered through a courtyard to the south. A single entrance column stands in the entrance of the antechamber while a double column provides access to the main sanctuary.

The contents of the temples provide an understanding of how these built environments conveyed a shift in power and value in their administration. Most notable was the reuse of two basalt lion blocks that were placed in the platform entrance of Temple Ib flanked by two sharply angular basalt lion statues. Magnus Ottosson (1980: 35) draws parallels to the Late Bronze Age II/III temples and lion orthostat at Hazor. A flight of steps, recalling the Level IV palace, and two limestone door thresholds provided entrance into the inner antechamber and then to the rear room cella. A limestone stela (Woolley 1955: pl. 48) depicting a figure with a spear on the side panel and a royal figure and his wife on the obverse with a hieroglyphic inscription identifying him as “Tudḫaliya” was reused as a step, face down. Woolley (1955: 241) suggests that the relief was produced by a Hittite sculptor, as the style certainly indicates. Recent work on the inscription (Niedorf 2002) has identified this Tudḫaliya as a relative of Muršili II, and most probably a royal administrator representing Hittite overlordship of Alalakh. Again, the relief would possibly date to the Level III temple and if this was part of a ritual procession narrative, then other carved orthostats may have been discarded or reused elsewhere on the site when the Level III temple was demolished. On the other hand, a throne base for Idrimi’s statue, a basalt pedestal, a limestone statue, and other artifacts were found in the temple storerooms. Idrimi’s statue, which had survived for 150 years, several orthostats, and a column drum were found discarded in a pit and covered with bricks. Several repavings of the courtyard mark the final destruction of the temple in ca. 1200 B.C.

*Level 0*

While very little of Level 0 (fig. 4.34) is preserved, nevertheless, two phases of rebuilding have been traced on the uppermost part of the mound (Woolley 1955: fig. 69). One subphase was characterized by a substantially large, stone-built circular tower and an equally large mudbrick wall. Unfortunately, little remains of the building to allow us to conclude whether or not this was a “watch tower” or actually functioned as a larger circuit wall enclosing a smaller, much shrunken final period of settlement at ancient Alalakh.

## CONCLUSION

This chapter has outlined several phases of new work implemented by the Amuq Valley Regional Projects' teams at Tell Atchana (AS 136). A brief summary of three seasons of survey work, pre-excavation mapping, and ongoing finds documentation have been discussed. In addition, this chapter has presented the spatial organization of eight architectural levels of a major regional capital, Alalakh, which flourished during the Middle and Late Bronze Ages. Specifically, the plans represent our understanding of the site prior to the resumption of excavations in the fall of 2003.<sup>30</sup> The earliest reproducible settlement layout, which was based on publications by C. Leonard Woolley, begins with Level VII and concludes with a very small but disturbed Level 0 and its fragmentary walls. The broad, horizontal exposures of the earlier excavations have provided important architectural data enabling us to define urban styles for particular slices of time and hint at some of the conceptual underpinnings that structured dynamic changes of construction through the generations that followed.

Culturally and politically affiliated as a vassal to the Amorite Kingdom of Aleppo during its earliest manifestation, Alalakh became part of the Hurro-Mitannian domains and was subsequently incorporated into the Hittite Empire. But in urban plan, architectural styles, and decoration, the conceptual and material world of the northern Levant/southern Anatolia was dominant. This circumstance is evident in many ways, some discussed above, but some worth mentioning here are a fondness for heavy use of timber and stone-faced wall orthostats. Equally strong, too, is a well-articulated set of relationships of the gods to a special "place," given the continuity of temples in the same location. Yet the location of the temple and palaces should not be treated as a static ideal; changed historical circumstances led to significant changes in Alalakh norms in the areas of religion, royal ideology, and governance. The developments involved were not just "political" and fueled by internal changes in the dynamics of environment, religion, and statehood, but they also illustrate well how concepts of urban planning changed. These monuments represent not only the architectural types that are typical of the Hittite and earlier periods of Syro-Anatolia, but also the types of sculptural display that make reference to local myths, religious traditions, or political status. If viewed as strategies of memory manipulation, these monuments demonstrate how Alalakh competed for regional prominence within different political circumstances and rivalries.

The material expression of culture, especially in the form of temples, palaces and ceremonial gates, ramparts, and other monumental structures communicated clear messages about Alalakh's concept of the cosmos as well as its political relationships to its neighbors. Much of the earlier published discussions of the sculptural and architectural programs focused on iconography that highlighted other regions, including the discussion above that gave special attention to the less-discussed Anatolian affiliations. Not only does this reflect its far-flung interregional connections, but survey and museum study results demonstrate Alalakh's crucial but less-known linkages with its affiliated settlements within the vicinity of the Amuq Valley itself. Yet the degree of connectedness to these sites in terms of material culture is only apparent through little-understood Middle Bronze Age and Late Bronze Age ceramics picked up during survey and the small and as yet unpublished collections from exposures at Chatal Höyük (AS 167) and Tell al-Judaïdah (AS 176). Some tantalizing information is also to be found in place names of villages mentioned in the Level VII and Level IV texts (Magness-Gardiner 1994), most of which are, as yet, unidentified. It is evident that excavations in these "suburbs," that is, the satellite towns, will ultimately lead to significant changes in our perception of kingship in this region, and the centrality of Alalakh itself.

The associations of Alalakh with the architectural and other iconographic traditions of Anatolia during the Middle Bronze Age/Late Bronze Age seem to indicate earlier connectedness with this region even before the Hittite imperial annexation, although this is still not well defined. In this regard it is tempting to investigate new cuneiform writing styles that entered into Anatolia during the Old Hittite period and some tablets from the Kültepe Ib period, which are said to be more "Syrian" than Old Assyrian. Tablets from Tell Atchana Level VII fall into this category.<sup>31</sup> In light of the traditions of artistic, cultural, and perhaps political practice it is evident that the city of Alalakh was especially adept at civic myth making and breaking through public art and architecture. All of the architecture of the capital exhibits a fluidity and adaptability that allowed foreign influences to overwhelm but never entirely subsume the continuity within its indigenous northern Levantine/southern Anatolian traditions. Although the details of the variety of functional and stylistic variations in architectural plan are considerably different from level to level, the spatial organization of Alalakh demonstrates that those influences were incorporated into the local, multi-ethnic culture in similar ways and with resilience through time.

30. The new excavations have called into question the dating and attributions of Level VII-0 houses. These and other adjustments to Woolley's sequences will appear in future volumes.

31. I thank Theo van den Hout for pointing out the stylistic similarities.

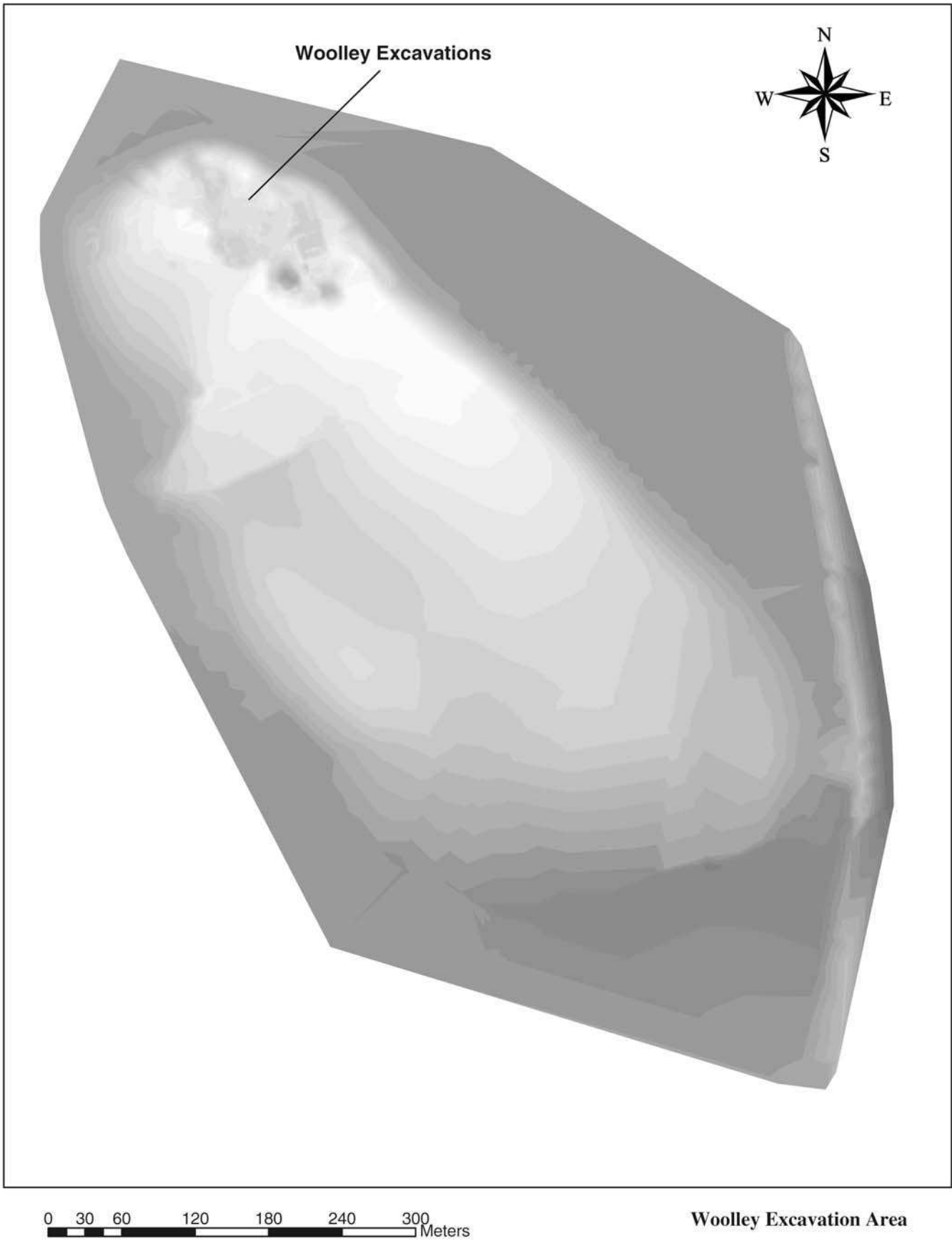


Figure 4.1. Topographic Map of Tell Atchana (Alalakh; AS 136). Courtesy of Aaron A. Burke and Stephen Batiuk

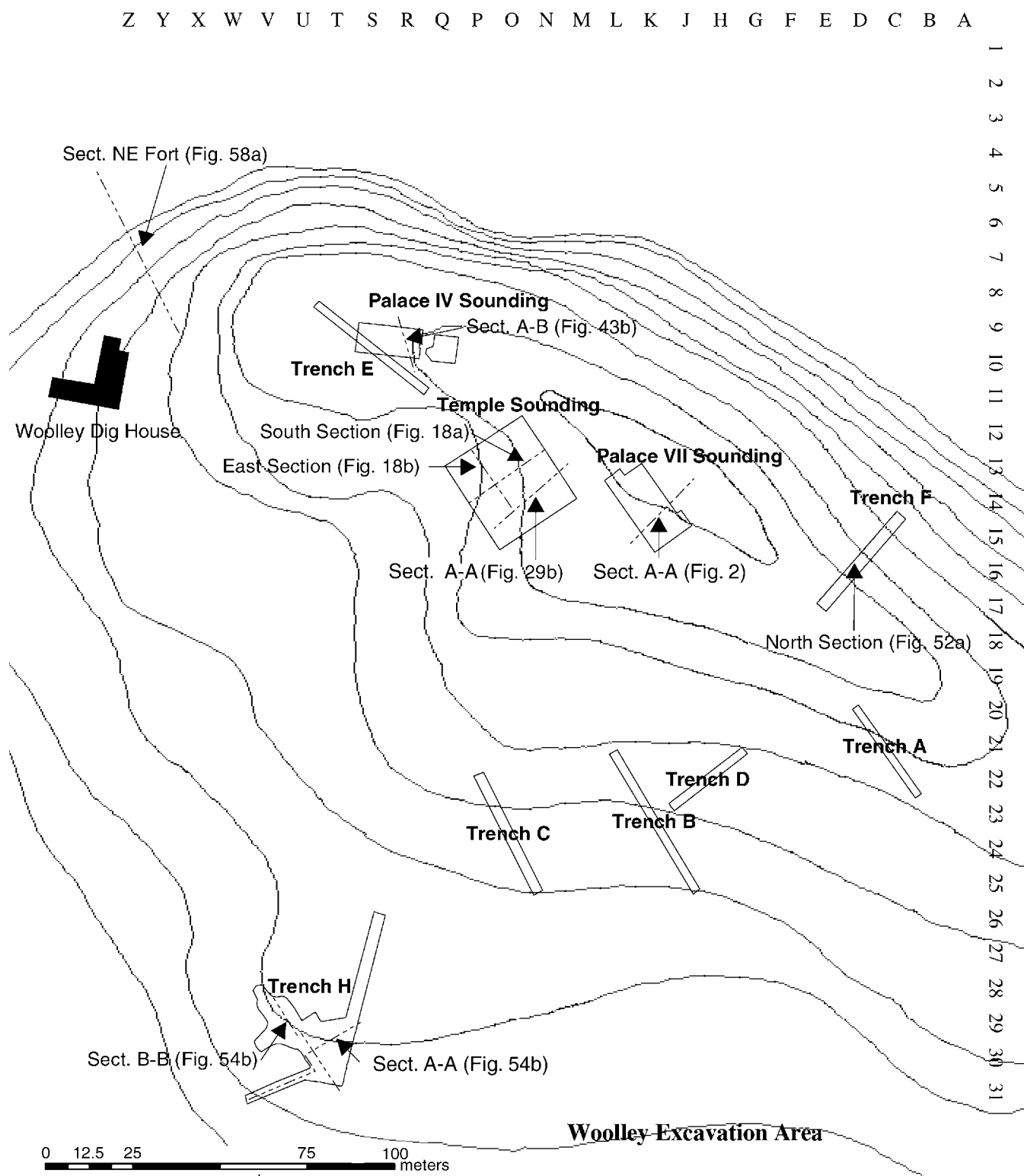


Figure 4.2. Topographic Map Showing Woolley's Excavation Trenches at Tell Atchana (Alalakh; AS 136).  
Courtesy of Aaron A. Burke (All References Refer to Woolley 1955)



a



b



c



d

Figure 4.3. (a–c) Woolley's Dig House on Tell Atchana (Alalakh; AS 136) and (d) Basalt Artifacts in Backyard of Woolley's Dig House. Photographs by K. Aslıhan Yener

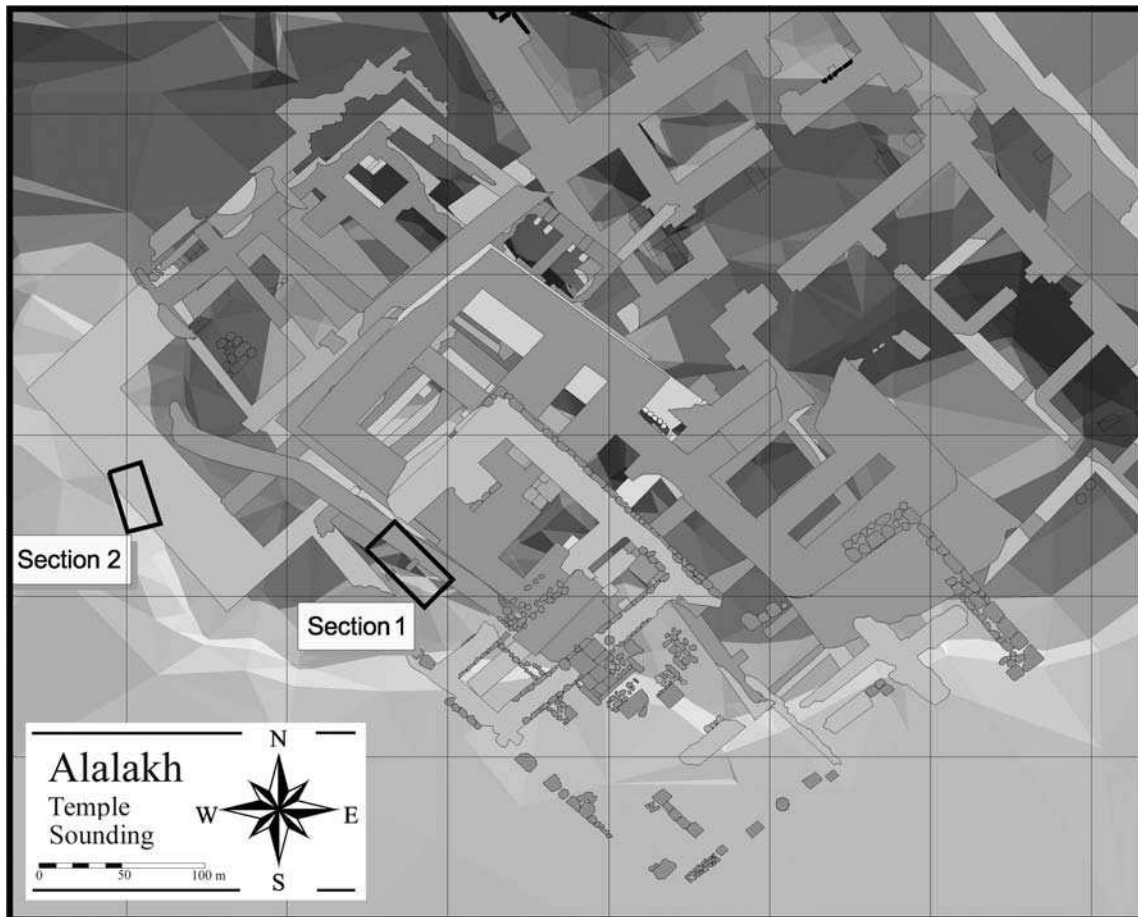


Figure 4.4. Woolley's Temple Soundings Showing Location of 2002 Sections. Tell Atchana (Alalakh; AS 136). Courtesy of Stephen Batiuk



Figure 4.5. Section Cleaning Operations 2002: Stephen Batiuk Rappelling Off the Edge of Woolley's Temple Sounding. Tell Atchana (Alalakh; AS 136). Photograph by K. Aslihan Yener



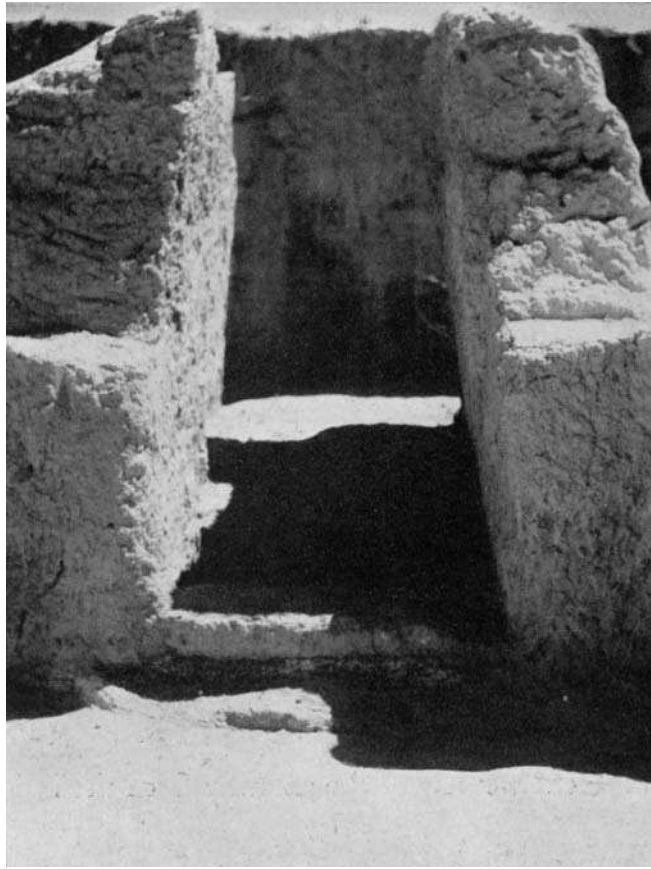
a



b

Figure 4.6. Level VII City Gate and Door of the Sentry-box at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 29b) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)



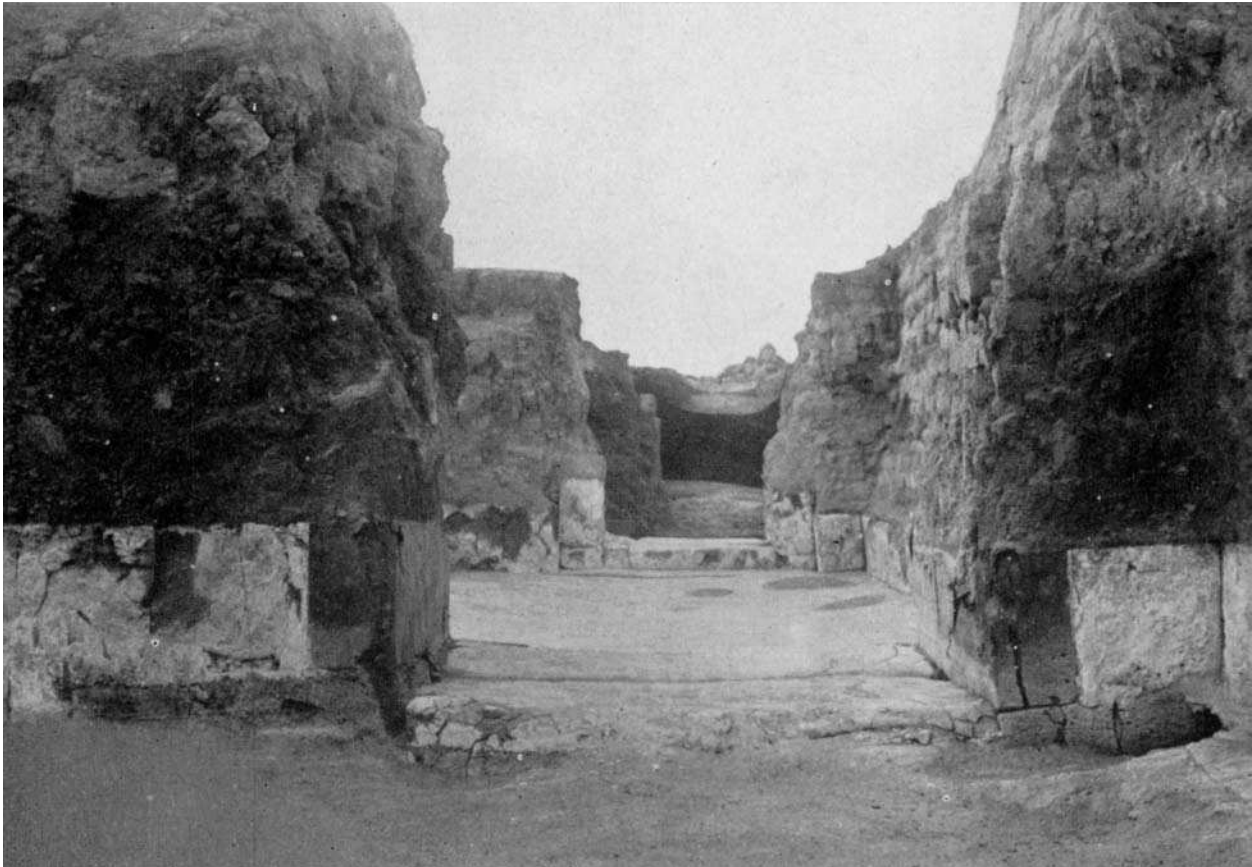


a



b

Figure 4.7. Guard Chamber at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 30a) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)



a



b

Figure 4.8. View from the Courtyard across Room 8 to the Staircase at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 15b) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)



a



b

Figure 4.9. Cement Threshold between Rooms 5 and 5a at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 15a) and (b) Present (Courtesy of Simrit Dhesei and Jesse J. Casana, 2000)



a



b

Figure 4.10. Entrance-room (7) from the Outside, Yarimlim's Palace at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 13c) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)

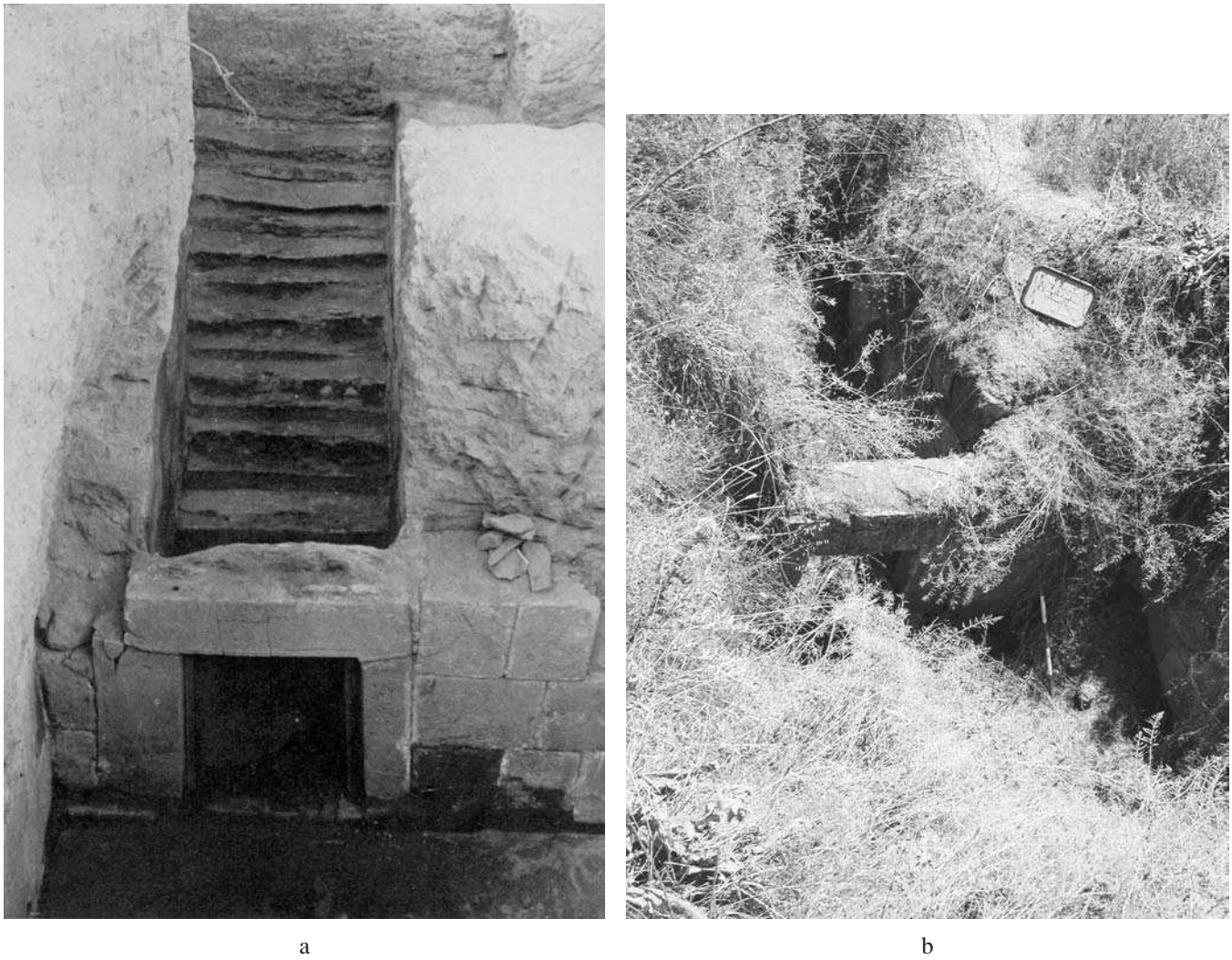
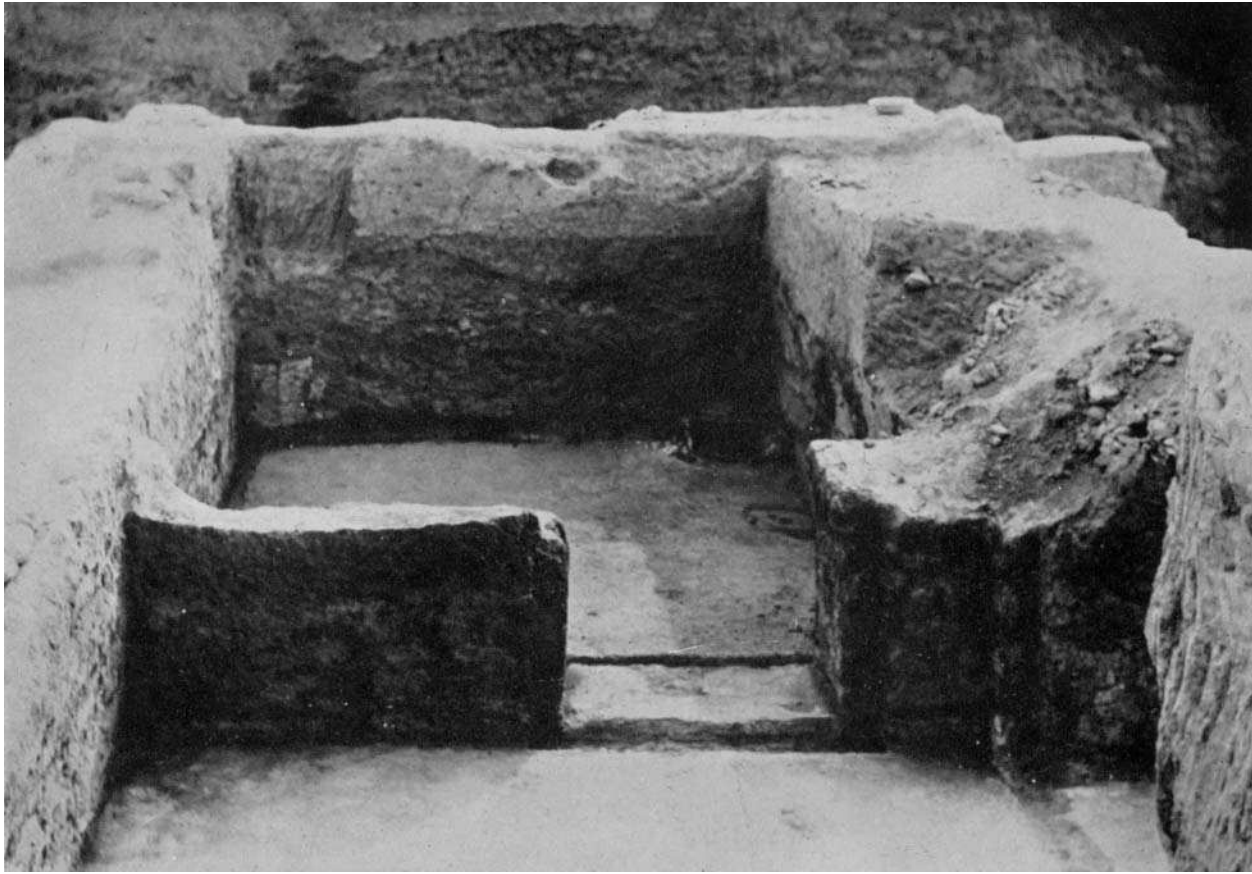


Figure 4.11. Staircase and Shaft below Room 17 at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 20a) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)



a



b

Figure 4.12. Room 15 at Tell Atchana (Alalakh; AS 136), Seen from Room 16; the Bath and Drain Intake Are in the Background: (a) Past (Woolley 1955: pl. 19a) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)



a



b

Figure 4.13. Room 10, Staircase at Tell Atchana (Alalakh; AS 136); the First Flight of the Winding Staircase and Steps Leading to Passage 14: (a) Past (Woolley 1955: pl. 17b) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)



a



b

Figure 4.14. View from Room 2 across Room 13 to Room 22 at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 24b) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)





a



b

Figure 4.15. Forecourt and Façade at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 24a) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)



a



b

Figure 4.16. Domestic Wing at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 23b) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)

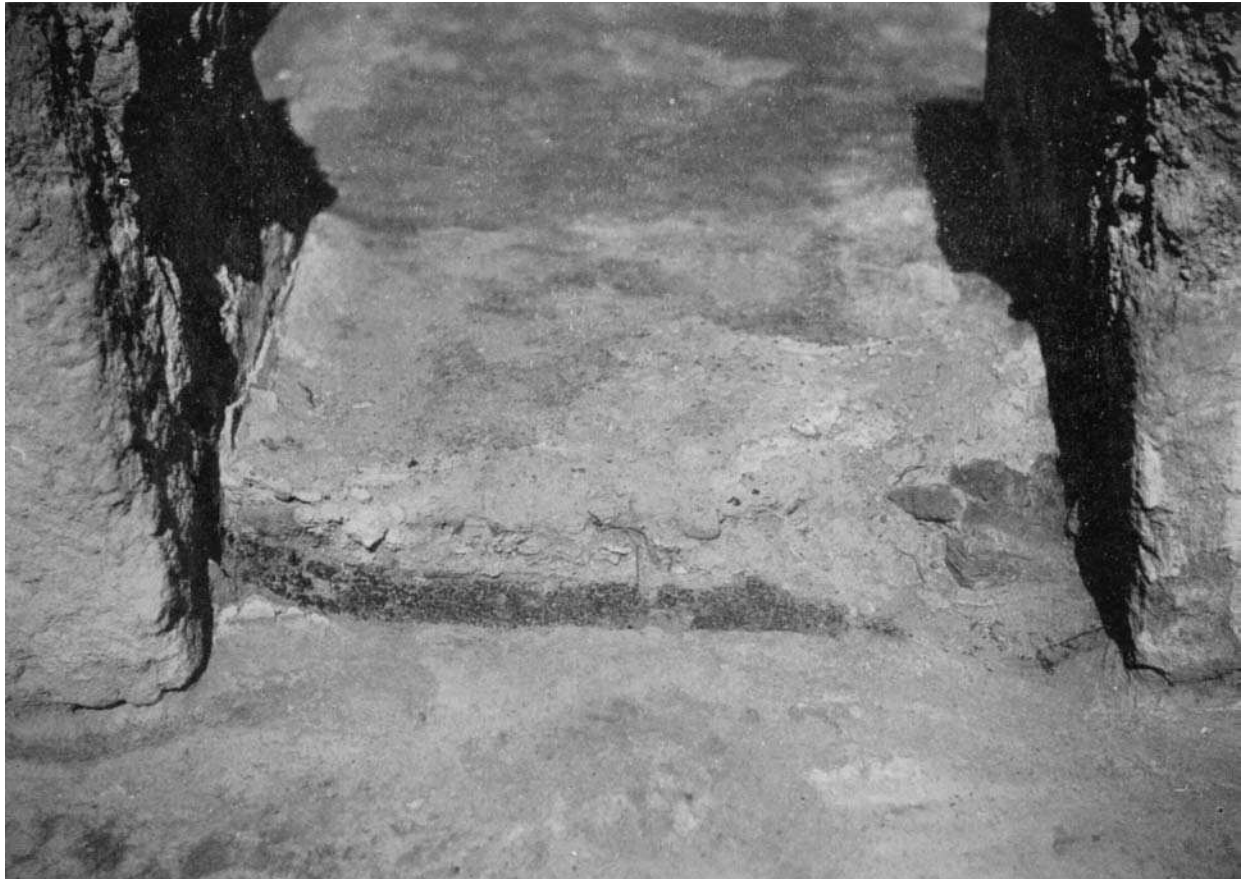


a



b

Figure 4.17. Room 9 (Bath) at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 26a) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)



a



b

Figure 4.18. Room 9 (doorway) Showing Wooden Sill-edge and the Packing of the Raised Threshold at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 25b) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)

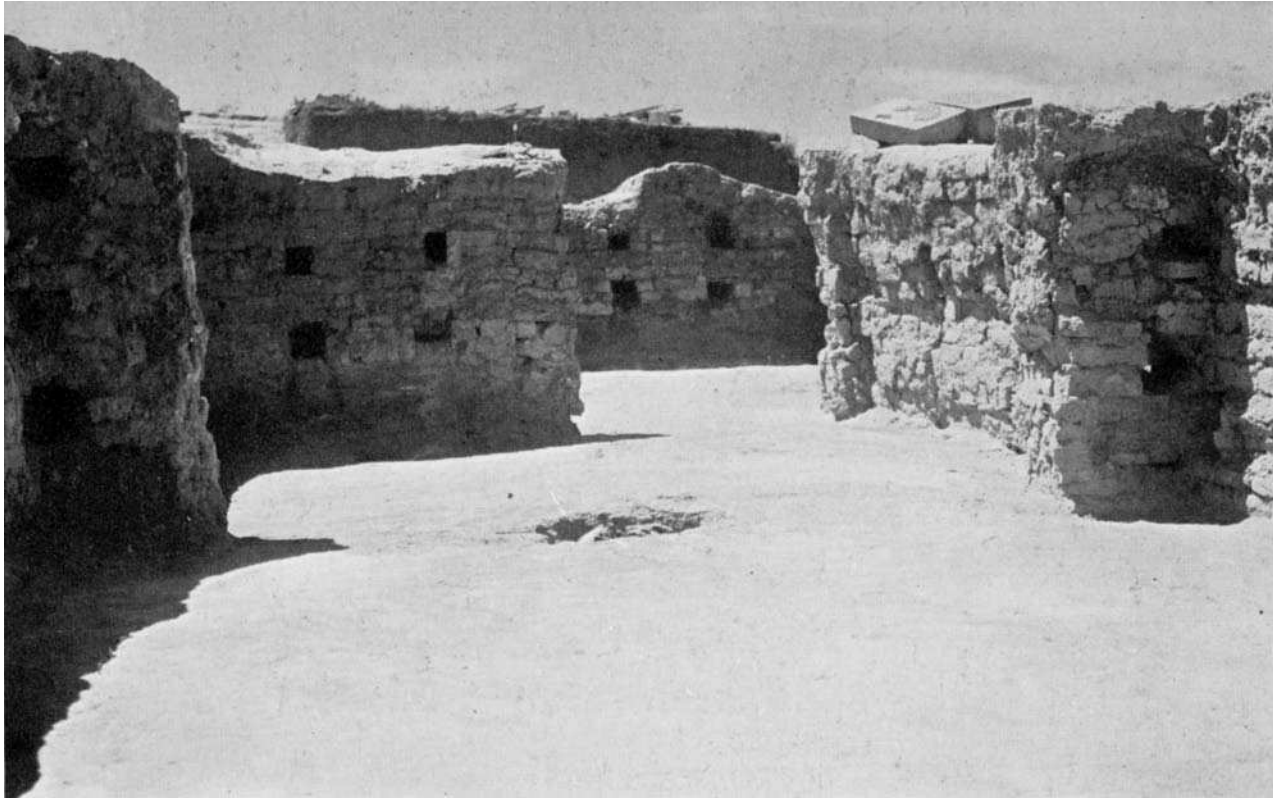


a



b

Figure 4.19. Room 5 (Lavatory) at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 25a) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)



a



b

Figure 4.20. Room 28, with Sunken Column-base, at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 27a) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)

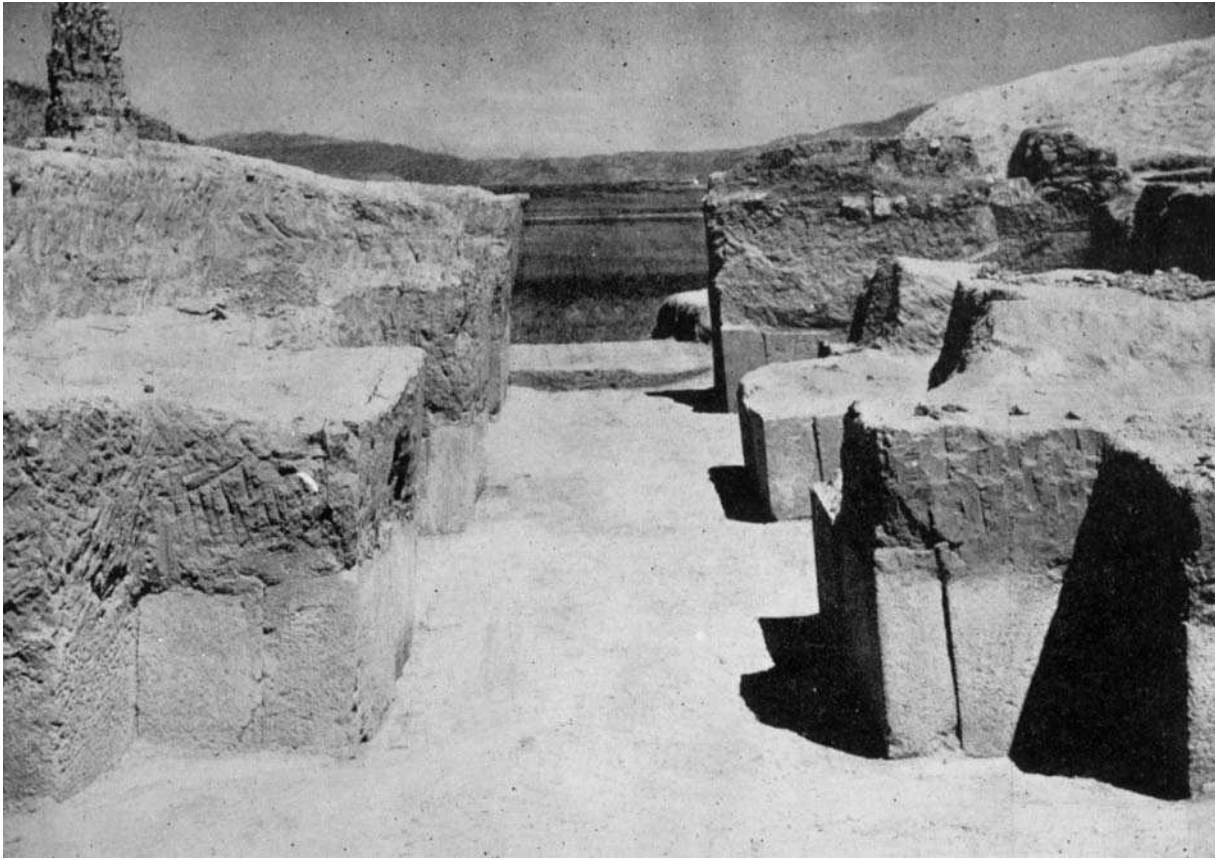


a



b

Figure 4.21. Room 27, Seen from Above, Showing the Stair Newel and the Cupboard Below the Stairs, at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 26b) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)



a



b

Figure 4.22. General View of Gateway from Inside at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 29a) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)





a



b

Figure 4.23. Room 35 (Cellar) at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 28b) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)



a



b

Figure 4.24. Room 33 (Archive), with Cemented Shelf around the Walls for Storing Tablets, at Tell Atchana (Alalakh; AS 136): Past (Woolley 1955: pl. 28a) and Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)



a



b

Figure 4.25. Room 32, Showing the Half-timber Construction of the Wall, at Tell Atchana (Alalakh; AS 136): (a) Past (Woolley 1955: pl. 27b) and (b) Present (Courtesy of Simrit Dhesi and Jesse J. Casana, 2000)

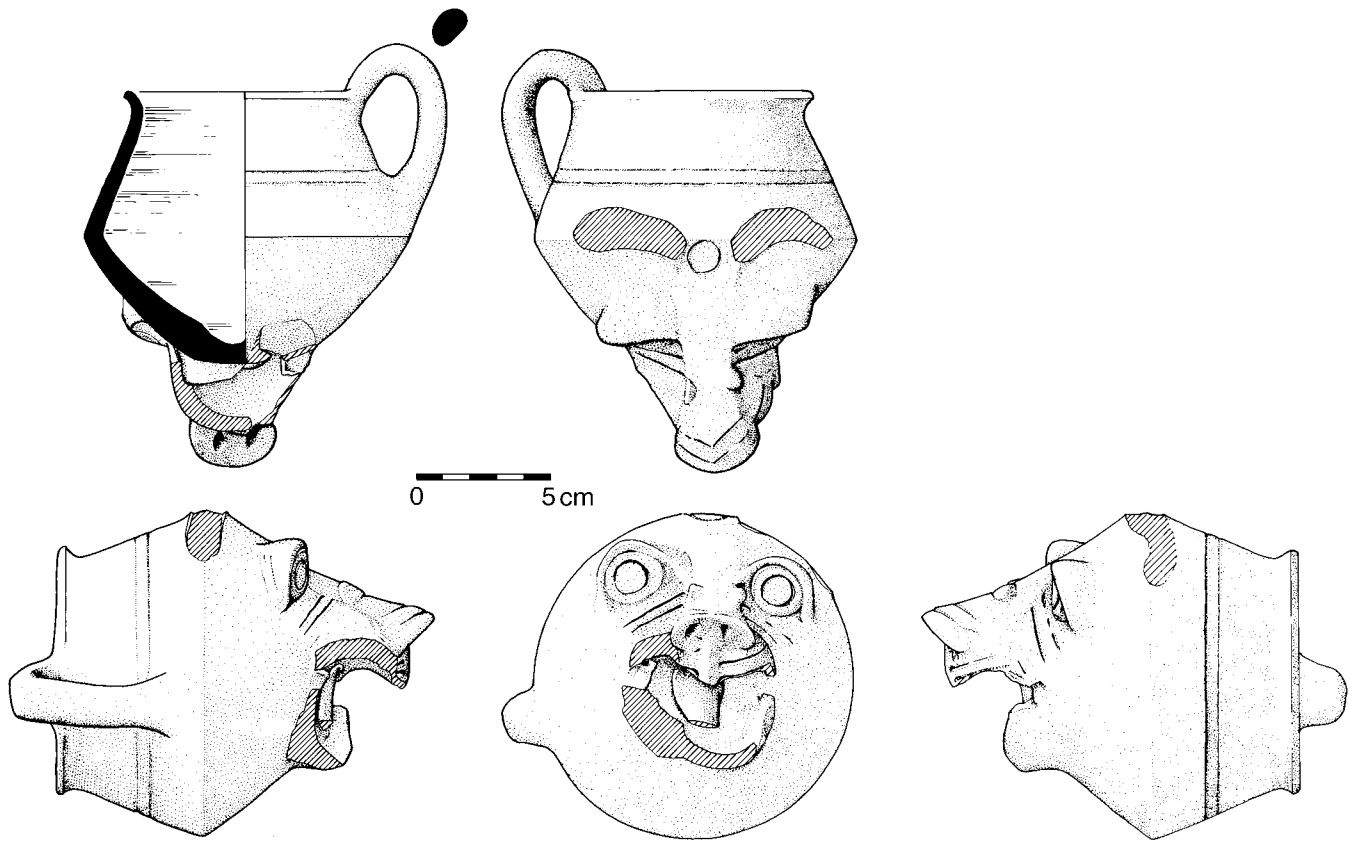


Figure 4.26. Animal-headed Vessel from Tell Atchana (Alalakh; AS 136). Illustration by Brenda Craddock

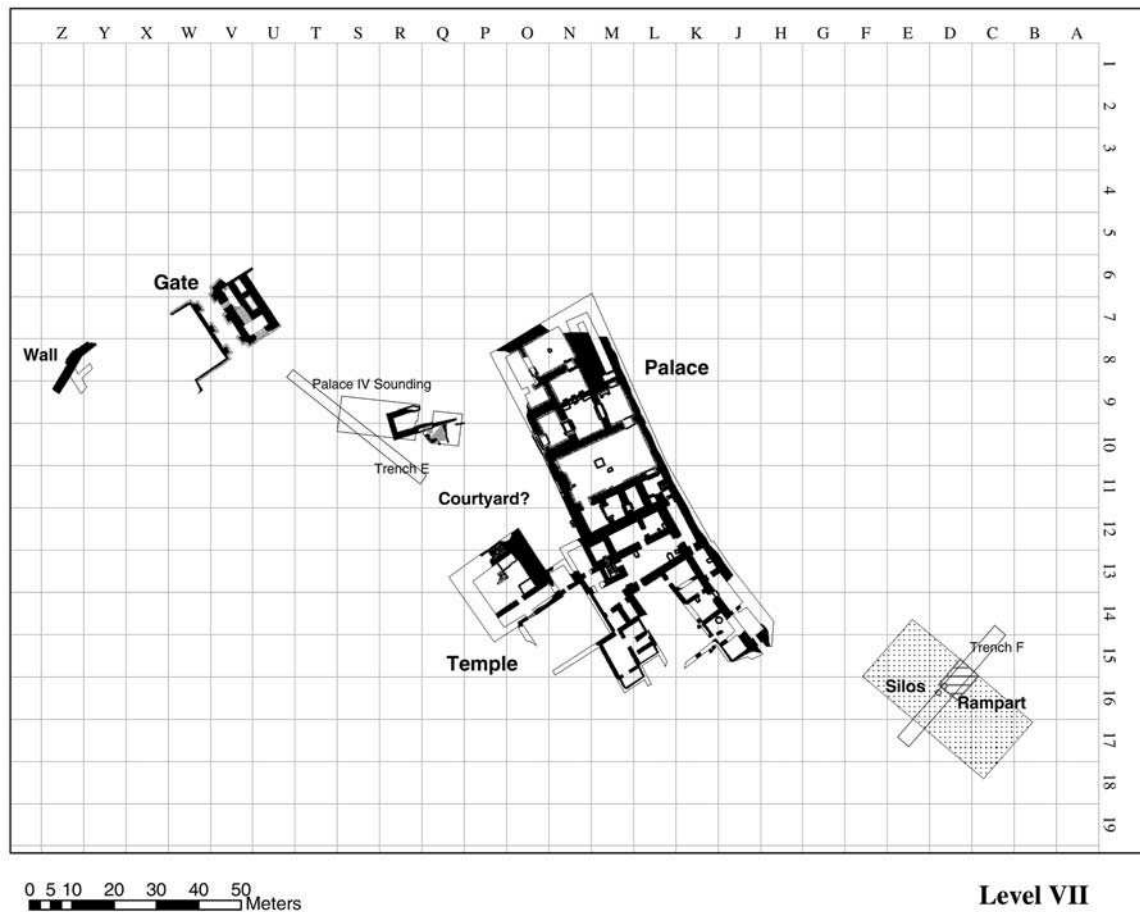


Figure 4.27. Architectural Layout of Level VII, Tell Atchana (Alalakh; AS 136). Illustration by Aaron A. Burke

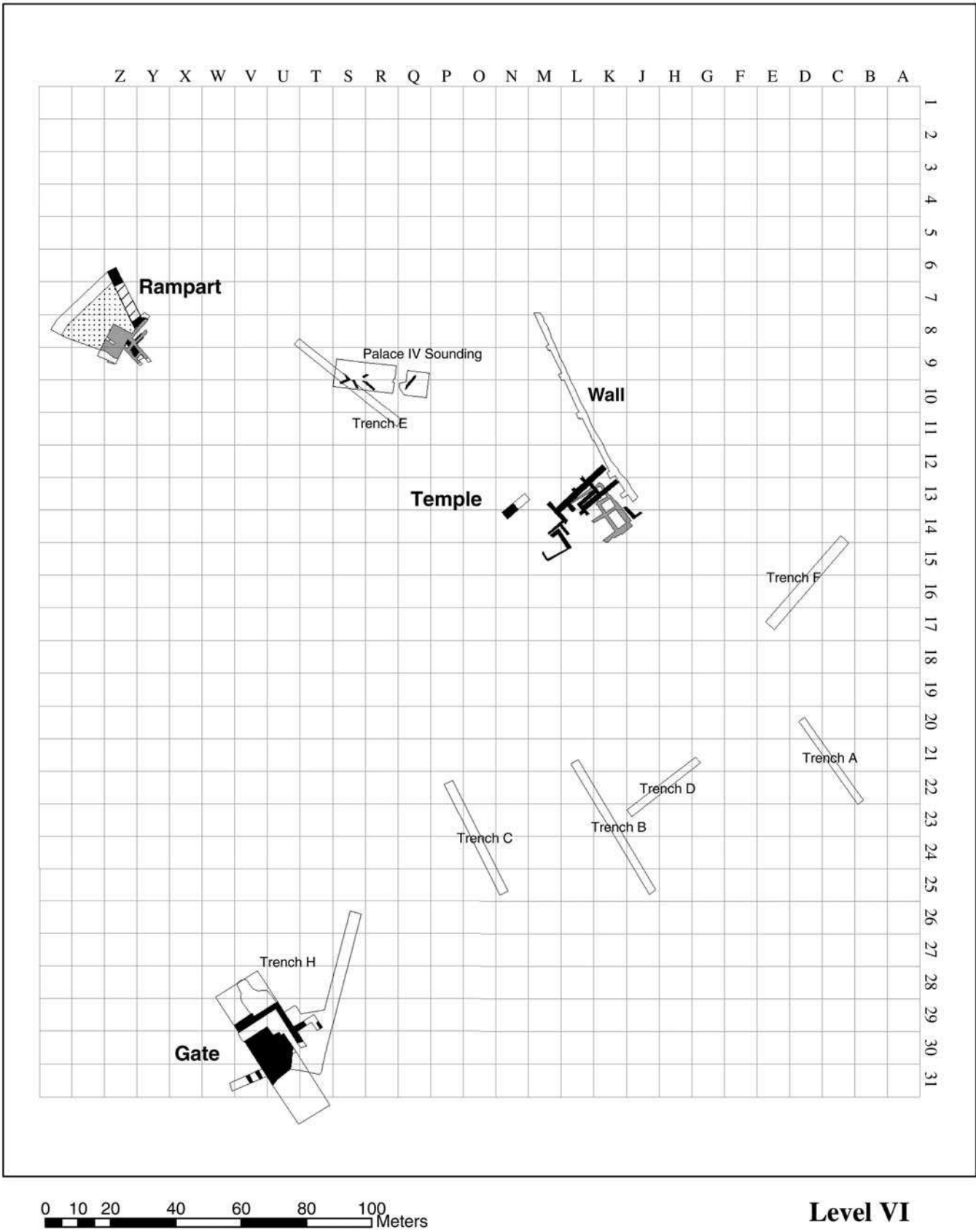


Figure 4.28. Architectural Layout of Level VI. Tell Atchana (Alalakh; AS 136). Illustration by Aaron A. Burke

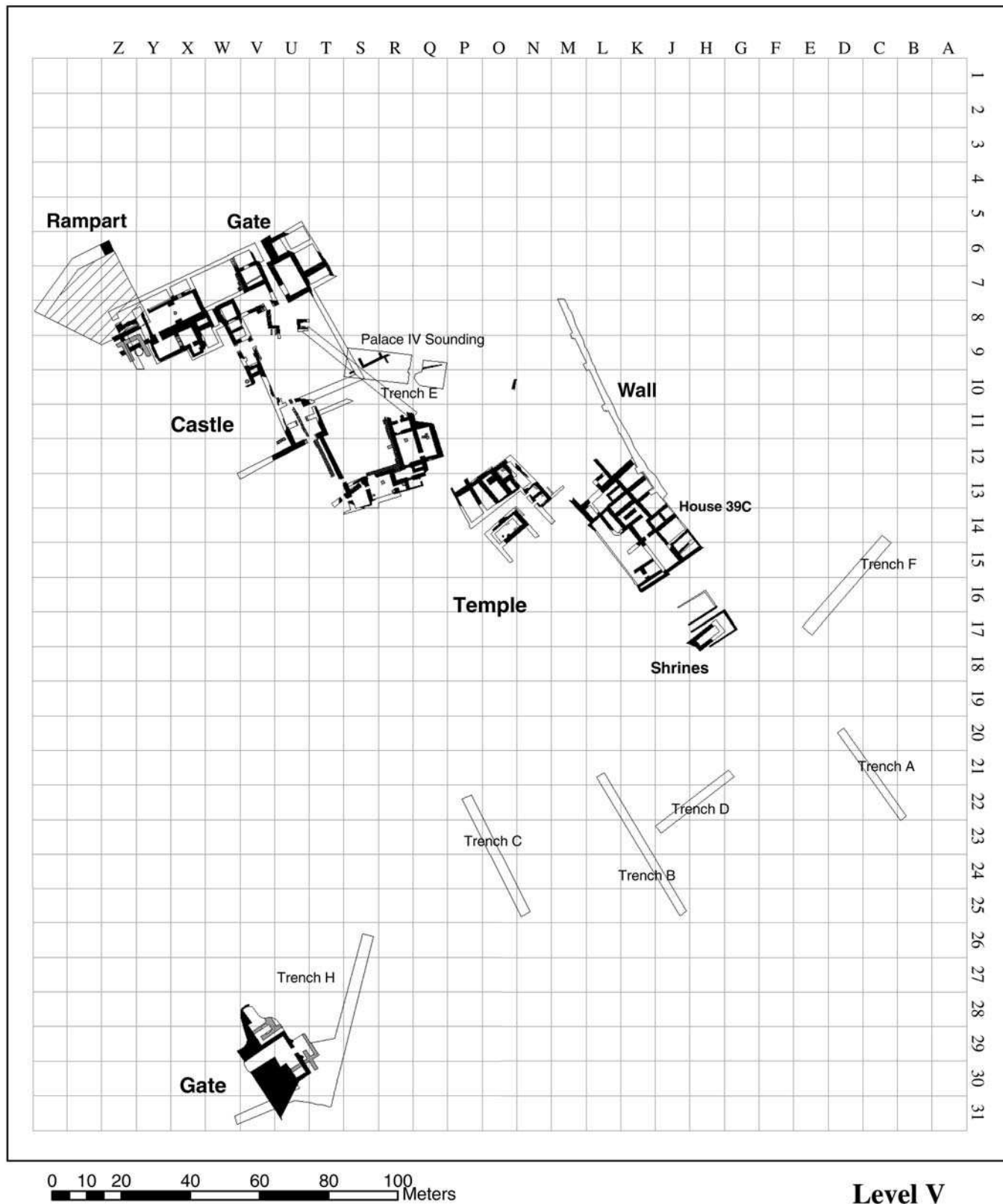
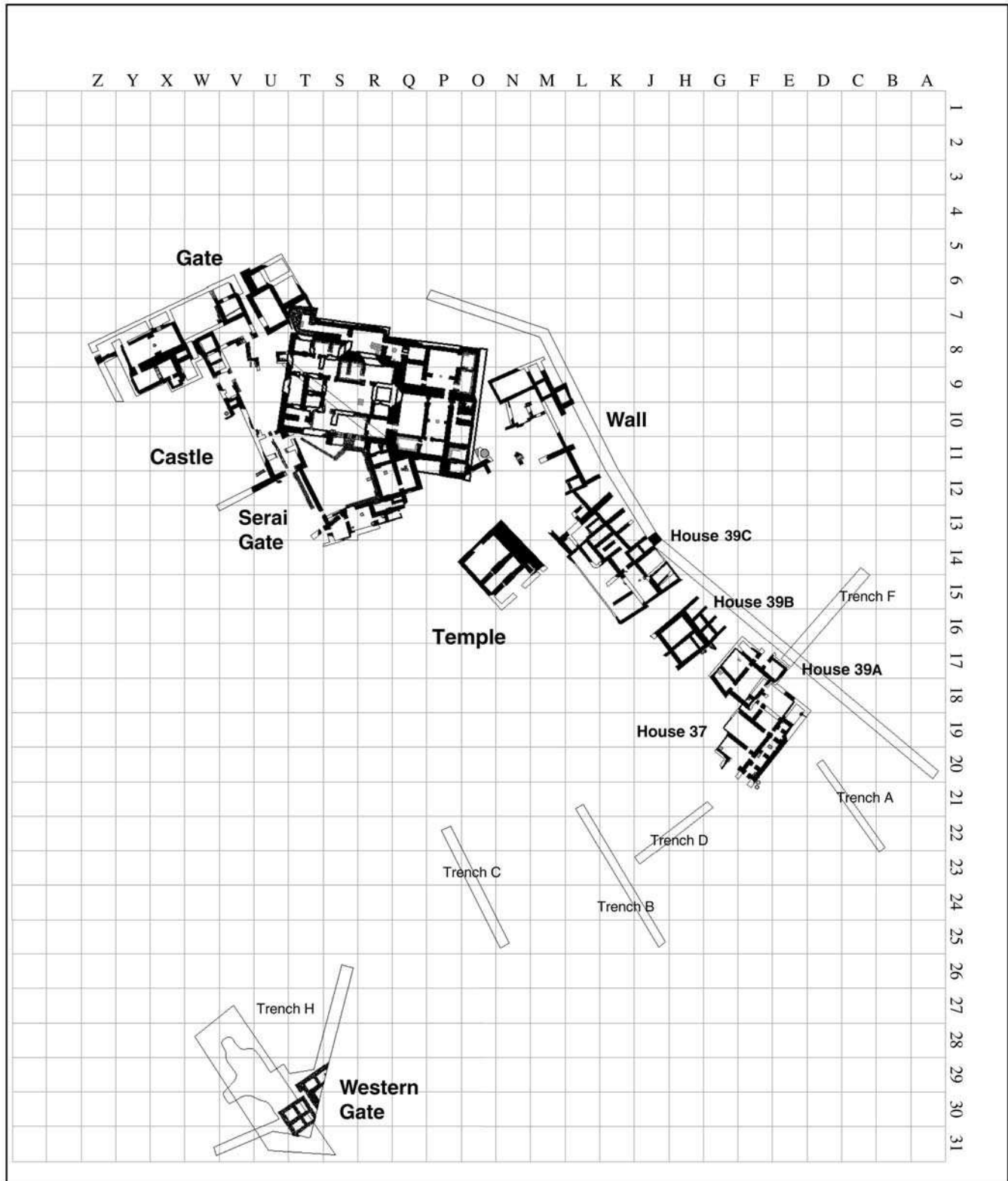


Figure 4.29. Architectural Layout of Level V. Tell Atchana (Alalakh; AS 136). Illustration by Aaron A. Burke



0 5 10 20 30 40 50 Meters

**Level IV**

Figure 4.30. Architectural Layout of Level IV. Tell Atchana (Alalakh; AS 136). Illustration by Aaron A. Burke

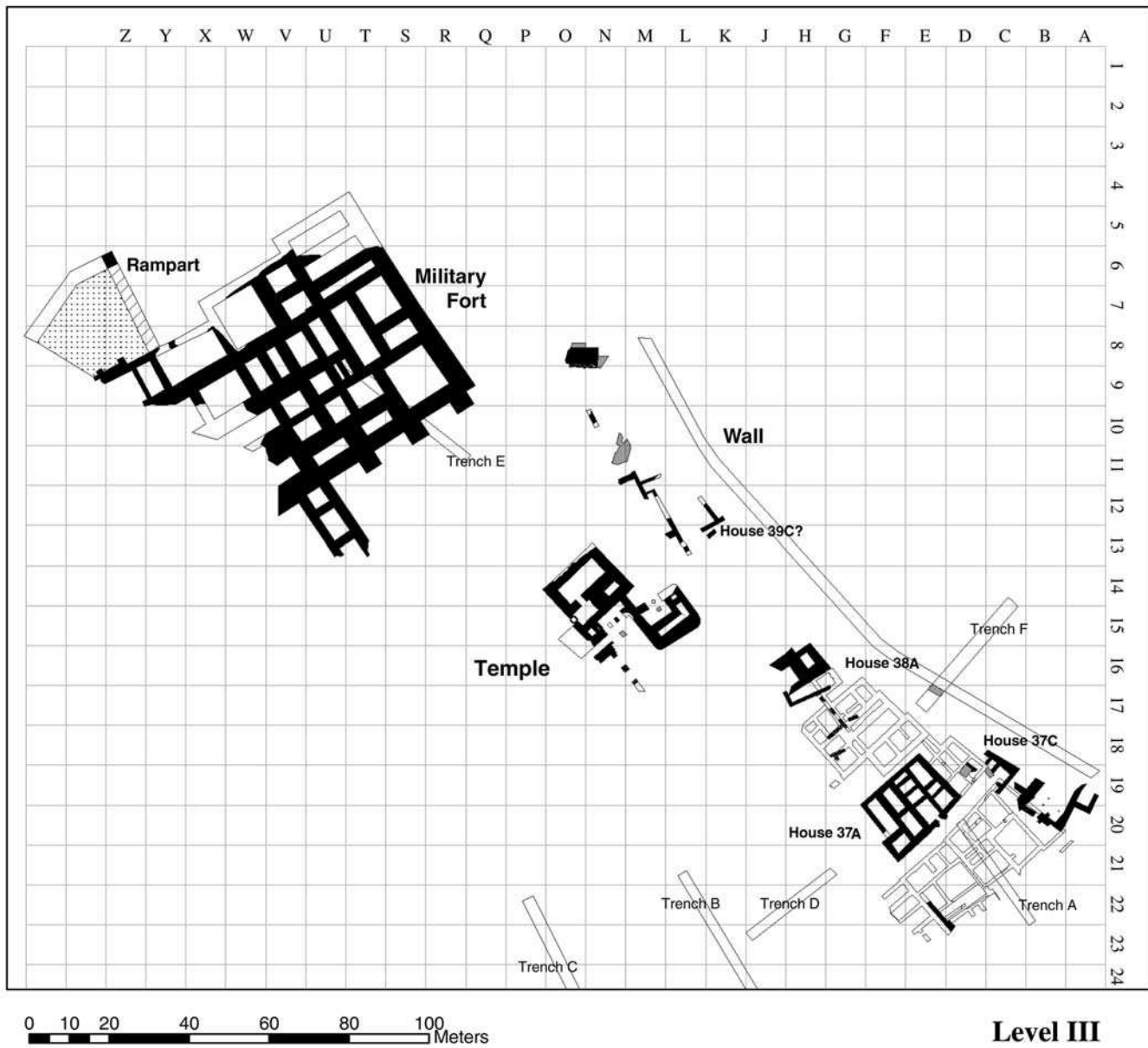


Figure 4.31. Architectural Layout of Level III. Tell Atchana (Alalakh; AS 136). Illustration by Aaron A. Burke



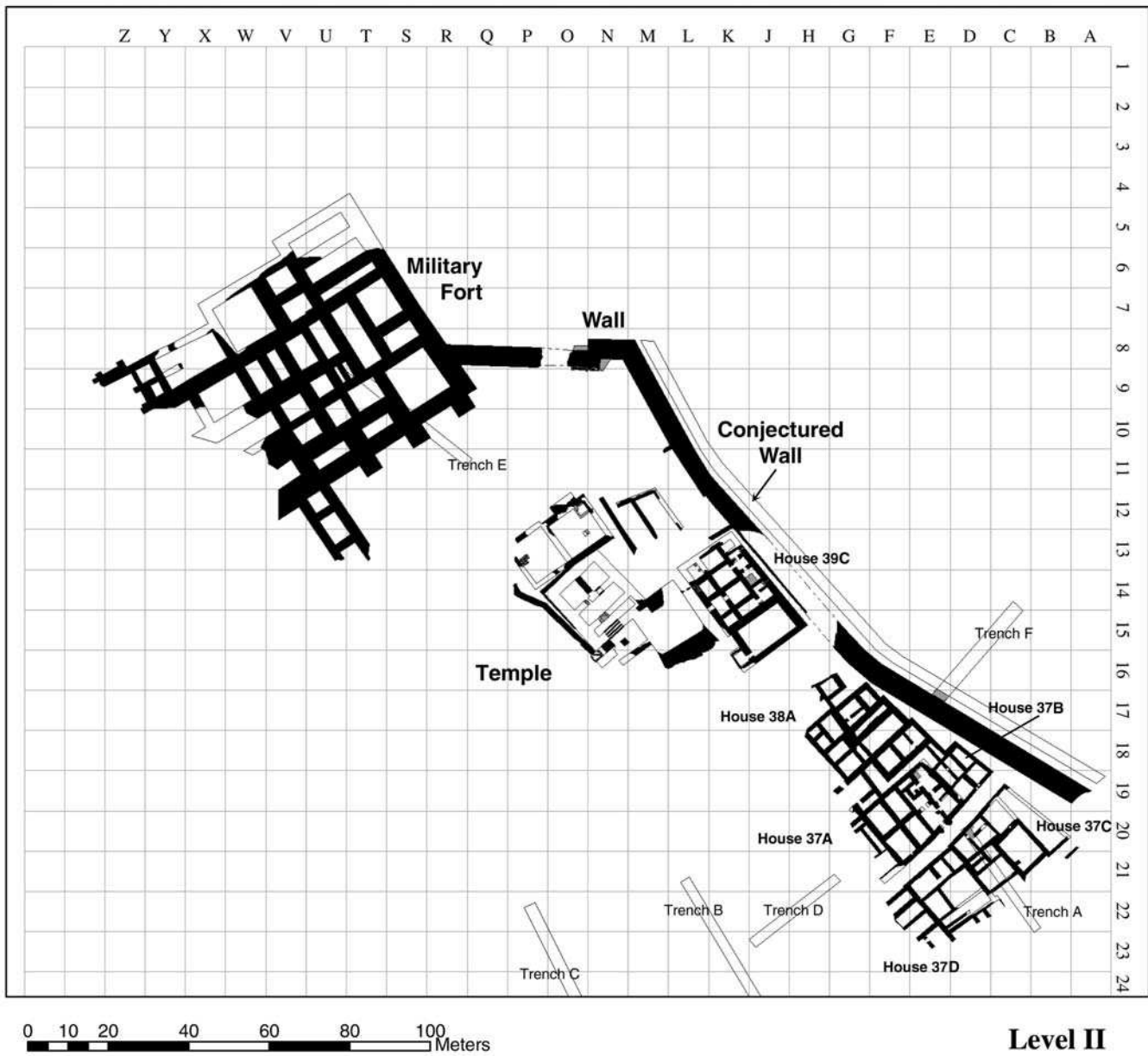


Figure 4.32. Architectural Layout of Level II. Tell Atchana (Alalakh; AS 136). Illustration by Aaron A. Burke

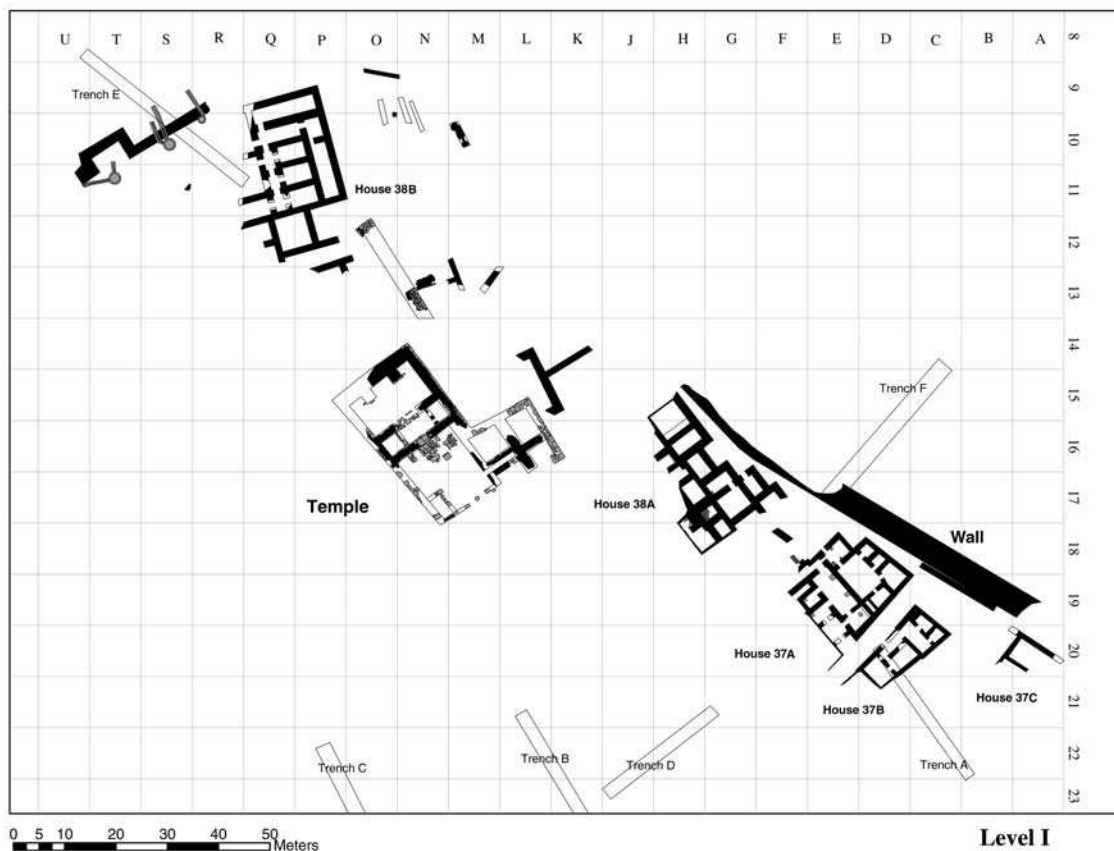


Figure 4.33. Architectural Layout of Level I. Tell Atchana (Alalakh; AS 136).  
Illustration by Aaron A. Burke

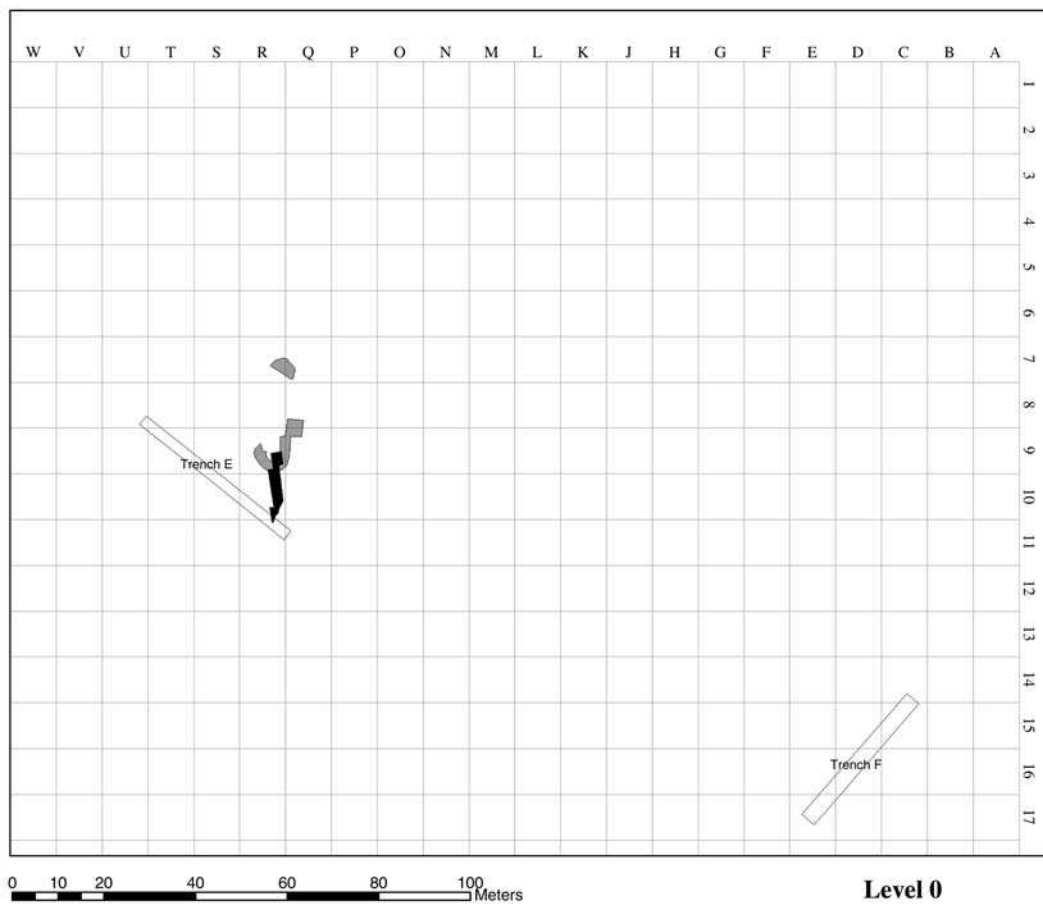


Figure 4.34. Architectural Layout of Level 0. Tell Atchana (Alalakh; AS 136).  
Illustration by Aaron A. Burke

# CHAPTER FIVE

## THE TELL ATCHANA MAPPING AND GIS PROJECT

STEPHEN BATIUK AND AARON A. BURKE

### OBJECTIVES

In an effort to exhaust the plans published in Woolley's volume on Alalakh, and in order to facilitate the consultation by the Oriental Institute Expedition to Tell Atchana (AS 136), in 2002 complete "cityscape" plans for Level VII through Level 0 — the only levels with sufficient architecture worth this effort — were produced using GIS software (for completed plans, see *Chapter Four: Alalakh Spatial Organization*). This strategy would, first, make possible detailed renderings of complete city plans for these levels, insofar as the plans, sections, and textual descriptions permitted. While Woolley had in part already achieved this for Levels VII and IV (see Woolley 1955, pls. 14, 22), because these plans are drawn at so small a scale they are too schematic and are therefore of limited use. The second reason for this undertaking was ultimately to enable spatial location of Woolley's excavations within the UTM coordinate system. This could be done after digitizing all of Woolley's architecture (with respect to his grid system) by establishing the location and orientation of his grid with reference to remains of Level VII architecture, such as the six-pier gate and the "Yarimlim" palace (the Level VII temple was obliterated by the Temple Site sounding), and the Level IV Niqmepa palace.

### PROBLEMS

Although Woolley frequently demonstrated that his methods were advanced for the time in which he worked, and it is frequently frowned upon to engage in the criticism of work by pioneers in the field of archaeology, a number of problems inherent to Woolley's plans are worth cataloging. These problems made it particularly difficult to achieve our objectives and they serve as the basis for understanding that the "cityscapes" presented in this volume should be considered preliminary drafts (see *Chapter One: The Amuq Valley Regional Projects*, figs. 7–14) as they will probably be improved during the course of the Oriental Institute's excavations, particularly with respect to projected features, such as the various city walls (fig. 5.1).

Perhaps our greatest concern in the process of digitizing Woolley's data was the orientation of Woolley's grid with respect to true north. Almost every plan published in the final report provides the misleading information that the grid was aligned to true, and in some cases, magnetic north. But as figure 5.1 illustrates, the excavation grid as originally laid out appears to have been rotated at least 5° east of north based on the French cadastral map of 1930. The existence of this rotation appears to be confirmed when these features are superimposed on rectified CORONA satellite imagery (fig. 5.2). Despite this error we have detected no inconsistencies in Woolley's grid during the course of his excavations (i.e., the grid appears to have remained firmly in place throughout the excavations). Before suggesting an exact deviation of Woolley's grid from true north it will be necessary to locate prominent, surviving architectural features within the UTM coordinate system using GPS data during a future season. In light of this, and in order not to propagate false information, we have decided for the time being to omit references to true north in the plans of Tell Atchana (AS 136) published herein. Once the correct orientation has been established, all issues concerning the rectification of Woolley's grid with the UTM coordinate system can be addressed.

Among other problems encountered while digitizing Woolley's architectural features were the following: (1) Uniform adherence to stylistic conventions is lacking, which affects both the accuracy and clarity of presentation of Woolley's plans and sections (e.g., Woolley 1955: fig. 58b). (2) Errors were made in stylistic conventions (e.g., some floors are represented so as to suggest that they were composed of mudbrick, while other floors not made of mudbrick are also indicated with the same convention; hatching styles also sometimes occur on the plans but are not included in the key; see *ibid.*, figs. 43a, 53, 58). (3) Critical errors were made in the representation and the location of fragments of architecture that are intended to serve as points of reference. For example, the northwest corner of the Level VII palace, which was represented in outline in the plan of the Level IV palace in Square P8 (*ibid.*, fig. 44), is incorrectly ori-

ented (cf. *ibid.*, fig. 35). (4) In some plans references to or indications of the grid are completely lacking (e.g., *ibid.*, figs. 19, 21f., etc.). These plans are mostly from the 1939 and later seasons. (5) The locations of sections that are essential to the placement of features, which lack grid references in plans (e.g., *ibid.*, figs. 19, 21f., 25), are often represented by lines that wander from plan to plan without any indication of which is to be identified as the correct position of the section drawing (e.g., cf. *ibid.*, figs. 3–5, 8, 10, 12, 14, 17). The locations of other sections are sometimes also not indicated (e.g., fig. 18a–b). (6) Labels for features, particularly city walls, are frequently lacking and are uncertain despite textual references (especially with respect to the city walls of Levels IV through II: *ibid.*, figs. 62, 65–68, etc.). (7) Phasing determinations were not always consistent within levels (cf. XIIa above XIIb in *ibid.*, fig. 10, and VIb above VIa in *ibid.*, fig. 58a). (8) Elevations are omitted on all but one plan (see *ibid.*, fig. 53). (9) Perhaps the most significant observation next to the false indications of north is that on numerous occasions the squares in the excavation grid were mislabeled. This mislabeling has resulted in the placement of certain structures, particularly the houses, 10 m to the west in Woolley's plans (e.g., *ibid.*, figs. 17, 55, 62, 65, 67f.). This error can be confirmed by a reference to a grave (ATG 37/33) that is said to be located in Square F21 (*ibid.*, p. 212) but appears in figure 62 in Square G21. No other listed graves in this area occur in the plans and it is therefore fortuitous that this grave was included among those Woolley published. Plans with incorrect grid references appear to be restricted to the period between April 1937 and 1938. (That these errors were not recognized by the architects during subsequent seasons is a further witness to the deterioration in the quality of work by the architects of later seasons, all of whom have suspiciously managed to remain anonymous.) A summary of the observations listed here concerning inconsistencies, inaccuracies, and errors observed during our consultation of these plans is presented in table 5.1.

Table 5.1. Observations Regarding Figures Used for ArcGIS Mapping of Alalakh from Woolley 1955

	<i>Description</i>	<i>Year</i>	<i>Scale</i>	<i>Levels</i>	<i>Comments</i>
Fig. 2:	Section A-A of the palace sounding	—	1:200	I–II, IV–XVII	North section; see fig. 12 for location; no Level III features
Fig. 3:	Levels XVI–XV in K14–15	—	1:200	XV–XVI	Location of Section A-A in fig. 3 is corroborated by position in figs. 4–5, 8, 10, and 12; but cf. figs. 14 and 17
Fig. 4:	Level XIV in K14–15	—	1:200	XIV	—
Fig. 5:	Level XIII in K14–15	—	1:200	XIII	—
Fig. 8:	Level XIIc in K14–15	—	1:200	XIIc	—
Fig. 9a:	Section of Level XII columns in K14	—	1:200	XII–XIV	North section
Fig. 9b:	Section of column B in K14	—	1:200	XII–XIV	West section
Fig. 10:	Levels XIIa–b in K14–15	—	1:200	XIIa–b	—
Fig. 12:	Level XI in K14–15	—	1:200	XI	Used to draw outline of deep sounding
Fig. 13:	Section of wall-footings in Level XI	—	1:200	XI	Schematic cross section
Fig. 14:	Level X in K14–15	—	1:200	X	Grid mislabeled: square designations are located on upper right corner; cf. location of Section A-A with that in figs. 3ff.
Fig. 17:	Level IX in K14–15 with Level V tombs	—	1:400	V, IX	Grid mislabeled: square designations are located on upper right corner; quality of illustration is poorer than Woolley 1950b, fig. 9; cf. location of Section A-A with that in figs. 3ff.
Fig. 18a:	Section of temple sounding	—	1:200	VII–XVI	South section
Fig. 18b:	Section of temple sounding	—	1:200	VII–XVI	East section

Table 5.1. Observations Regarding Figures Used for ArcGIS Mapping of Alalakh from Woolley 1955 (*cont.*)

<i>Description</i>	<i>Year</i>	<i>Scale</i>	<i>Levels</i>	<i>Comments</i>
Fig. 19: Level XVI temple	—	1:200	XV–XVI	Includes Level XV additions
Fig. 20: Section of construction	—	?	XVI	Location of Level XVI Temple uncertain
Fig. 21: Level XIV temple	—	1:200	XIV	—
Fig. 22: Level XII temple	—	1:200	XII	—
Fig. 23a: Section of stairs in Level XII temple	—	1:78	XII	East section
Fig. 23b: Section of stairs in Level XII temple	—	1:78	XII	West section
Fig. 24: Section of “glacis” of Level XII temple	—	?	XII, XIV	—
Fig. 25: Timbers of Level X and XI temples	—	1:200	X–XI	—
Fig. 26: Platform basin of Level IX temple	—	1:50	IX	—
Fig. 27: Timbers of Level VIII temple	—	1:200	VII–VIII	Outline of Level VII temple visible
Fig. 29a: Level V temple	—	1:400	V	—
Fig. 29b: Section A-A of Level V temple	—	1:200	III–VII	North section; see fig. 29a for location
Fig. 30: Level IV temple	—	1:400	IV	—
Fig. 31: Level V, 3–2 temples	1946	1:400	II–III, V	All Level V features are in fig. 29a
Fig. 32: Restored plan of Level III temple	1946	1:400	III	—
Fig. 33: Restored plan of Level II temple	1946	1:400	II	—
Fig. 34a: Level I temple	1946	1:400	I	—
Fig. 34b: Level I temple, Phase A	1946	1:400	I	—
Fig. 34c: Level I temple, Phase B	1946	1:400	I	—
Fig. 35: Level VII palace	1946	1:400	V–VII	Dotted lines inside the main chamber of temple are outlines of Level VIII temple walls (see fig. 27); east wall of Level VII palace in room 29 was reused in Levels VI–V (p. 137) (Woolley 1955)
Fig. 36: Section of Room 17 Level VII palace	—	1:100	VII	West section
Fig. 37: Room 4 of Level VII palace	—	?	VII	—
Fig. 41: Section of Room 10 in Level VII palace	—	?	VII	Schematic
Fig. 43a: Sounding in floor of Level IV palace	—	1:200	IV–VII	Location of Section A-B; Rooms 4, 11, and 12 vertical hatch (Level V); horizontal hatch (Level VI); solid (Level VII)
Fig. 43b: Section A-B in Level IV	—	?	IV–VII	East section; see fig. 43a for palace sounding location
Fig. 44: Level IV palace	1938	—	IV–V	Serai gate of Level IV Fortress and all similarly aligned structures must also be included in Level V plan (p. 151; Woolley 1955). Note that the outlines of neither the Level VII palace in Square P8 nor that of the Levels II–III fort align with the respective plans of these structures
Fig. 45: Level IV palace restored	1938	1:400	IV–V	Location of Sections A-A and B-B indicated

Table 5.1. Observations Regarding Figures Used for ArcGIS Mapping of Alalakh from Woolley 1955 (*cont.*)

	<i>Description</i>	<i>Year</i>	<i>Scale</i>	<i>Levels</i>	<i>Comments</i>
Fig. 46:	Section of Level IV palace entrance	1937	1:200	IV	Section A-A looking north; Section B-B looking east; see fig. 45 for location of sections A-A and B-B
Fig. 50:	Level IV palace, Room 3C	—	1:100	IV	—
Fig. 52a:	Section of Trench F	1937	1:250	II–IV, V–VI	North section; for date, see p. 144; silos in Level VII with rampart; town wall in Level II
Fig. 52b:	Schematic section in Trench F	1937	1:250		North section schematic
Fig. 53:	Architecture of Levels V–I	—	1:400	I–V	Remains of Level V temple near northeast town wall in Square N13 do not align with fig. 29a (deviation of about 6°); also Level II–III city wall does not actually end in J–K13 (see fig. 65 for continuation); some inaccuracies with features in southwest part of plan; uncertainty regarding the phases of some features for which shading does not match key (e.g., vertical hatched wall in K–L12)
Fig. 54a:	Site H	1938	1:400	IV–VI	Outline of Site H; see for location of Sections A-A and B-B
Fig. 54b:	Sections B-B and A-A in Site H	1938	1:300	IV–VI	See fig. 54a for location of sections
Fig. 54c:	Level VI in Site H	1938	1:400	VI	—
Fig. 54d:	Level V in Site H	1938	1:400	V	—
Fig. 55:	Level VII gate	1938	1:200	VII	Grid mislabeled: square designations are located on upper right corner
Fig. 57:	Level IV castle	1938	1:400	IV	—
Fig. 58a:	Section of northeast front of fort	—	1:400?	I–VII	West section; for approximate location of section, see solid line fig. 58d
Fig. 58b:	Levels VIa–b in Z8–9	—	1:400	VI	—
Fig. 58c:	Levels Va–IV in Z8–9	—	1:400	IV–V	—
Fig. 58d:	Plan and section of Levels III–22	—	1:400	II–III	Section located to right of in Z8–9 drawing is the West section. The straight solid line running perpendicular to the fortifications is the location of the section
Fig. 59:	Level III–II fort restored	—	1:400	II–III	—
Fig. 60:	Levels III–I in T10	1937	1:400	I–III	—
Fig. 61:	Level VIa–b houses	—	1:400	VI	Solid (Level VIa, later); hatched (Level VIb, earlier)

Table 5.1. Observations Regarding Figures Used for ArcGIS Mapping of Alalakh from Woolley 1955 (*cont.*)

	<i>Description</i>	<i>Year</i>	<i>Scale</i>	<i>Levels</i>	<i>Comments</i>
Fig. 62:	House 37 in Level IV	April 1937	1:400	IV	Grid mislabeled: square designations are located on upper right corner
Fig. 63:	Houses 39A and B in Level IV	1939	1:400	II–V	Houses totally rephased with respect to Woolley 1948b, fig. 1
Fig. 64:	House 39C in Level IV	—	1:400	IV	—
Fig. 65:	Houses in Levels III–II	April 1937	1:400	II–III	Grid mislabeled: square designations are located on upper right corner
Fig. 66:	House 39C in Level II	1939	1:400	I–II	—
Fig. 67:	Level I House 38A; Level II wall	—	1:400	I–II	Grid mislabeled: square designations are located on upper right corner; columns skip letter “F”
Fig. 68:	Houses 37A and 37B in Level I	April 1937	1:300	I–II	Grid mislabeled: square designations are located on upper right corner
Fig. 69:	House 38B in Level I	1938	<1:400	I	—
Pl. 14:	Level VII general plan	?	1:2000	VII	—
Pl. 22:	Level IV general plan	?	1:2000	IV	Used for the general locations of trenches; this plan is not very accurate (see Trench H; cf. fig. 54a)

The use of Woolley’s plans has also been complicated by the fact that some of these plans are modified versions of plans published in the preliminary reports (e.g., cf. pls. 3f. in Woolley 1938b with figs. 68 and 65 in Woolley 1955). Wall projections and the indications of floors and doorways have been altered since their first publication. It is also perhaps noteworthy that it was during the production of the preliminary plans in 1937 and 1938 that most of the grid labeling errors noted above occurred. Because the dates written on the final versions of these plans remain unchanged, it is not possible to know when these alterations were made or by whom. In order to be able to confirm our results, it would be convenient if it were possible to determine the precise reasons for the errors we have observed, but no single explanation suffices. Perhaps they are in part due to changes in the architect staff. Woolley only reports that Arthur F. Gott served as architect in 1937 and Ralph Lavers in 1938 (1955: 2). Beyond this no references to architects are given in subsequent seasons and no clarification of this issue is provided in the preliminary reports. Also, no mention of the work involved in the surveying and production of the topographic map is presented in the final publication (pls. 12, 22). The map was probably completed prior to the most extensive excavations on the mound, but perhaps not until after 1937, as suggested by the incomplete contour plan of Tell Atchana (AS 136) published by Woolley in 1938 (see pl. 2 in Woolley 1938b). In all likelihood the British, like the Americans excavating at Tell Ta‘yinat (AS 126) across the road, obtained their topographic map from the 1:10,000 maps of the *Regisseur des Travaux du Cadastre et d’Amélioration Agricole des États de Syrie, du Liban, et des Alaouites* (see Braidwood 1937: 2, n. 1).

## METHOD

Aside from the difficulties encountered while using Woolley’s plans and sections, our approach for the production of the composite plans published in this volume was simple and straightforward and can be easily replicated with similar records from other former excavations. For all our digitizing (i.e., digital mapping) we used ArcGIS 8.2 software. We began by using the overall plans of Tell Atchana (AS 136; Woolley 1955, pls. 14, 22) to digitize Woolley’s complete grid, the site’s contours, and the excavation areas. We then georeferenced raster images of each of Woolley’s plans that featured sufficient information to do so (i.e., we located images of Woolley’s plans within the digital version of his grid using the software in order to digitize all of the features present in these plans). For most plans this was

straightforward and involved pegging three or more intersections of grid lines in an image with the corresponding locations in the grid to georeference the image correctly. When this did not achieve sufficiently accurate results across a broad area (e.g., an area 30 m or more wide or long), then plans were georeferenced and digitized square by square to maintain accuracy. In a few instances where grid references were lacking, the process was slightly more complicated, but it involved basically the same technique. Established points located on the architecture itself (e.g., corners of buildings and rooms) were substituted for grid points for georeferencing a given plan. For example, it was possible to locate the remains of the Level VIII temple in *ibid.*, figure 27, which lacked any grid references, by using the corners of the outline of the Level VII temple to georeference the image. A similar procedure was also used to digitize features that did not appear on any plans but were found in sections. For example, the section of the northwest fortifications in *ibid.*, figure 58a, could be georeferenced along the line indicating the section's location in *ibid.*, figure 58d. We presume that this is the most likely place for this section and that the section is not schematic. We then scaled the image by pegging it to architectural features that had already been digitized, such as the Level Va–b walls in *ibid.*, figure 58c. This made it possible to digitize the remains of the Level I town wall that was represented in *ibid.*, figure 58a, but did not occur in any plans of the northwest fortifications.

With respect to the use of section drawings from Woolley's publications it is worth noting that most of his sections appear to have been schematic to a certain degree. This is true for both of the sections of the temple sounding (*ibid.*, figs. 18a–b), the palace sounding (*ibid.*, fig. 2), and the section through the northwest fortifications (*ibid.*, fig. 58a). Nevertheless, with a bit of "wobble-matching" it is possible to locate the sections with a relative degree of accuracy based on the established location of architectural features from Levels VII through I that are also visible in the sections. By these means it was possible to locate the temple sounding sections (*ibid.*, fig. 18a–b) with respect to the Level VII temple walls, thus establishing the maximal extent of the sounding and ultimately enabling the location of the earlier temples (fig. 5.3).

## CONCLUSIONS

Having completed this process using the available excavation records from Woolley's expedition, we now have at our disposal scalable plans, which once correctly located within the UTM coordinate system, will allow the Oriental Institute expedition to locate its trenches precisely within and around the areas already excavated by Woolley. We should note that while ArcGIS has proved helpful in this process, this software remains inadequate to serve the complete record-keeping needs of this expedition. For this reason, once Woolley's excavation areas have been geographically situated, the shape files that were used to produce our composite plans will be moved to INFRA (Integrated Facility for Research in Archaeology) software developed for archaeological record keeping by J. David and Sandra Schloen of the Oriental Institute. INFRA software will allow complete and seamless integration of all our records in digital form, in addition to the records and planned features of Woolley's excavations. It is our hope that, although we have here attempted an exhaustive culling of information from Woolley's plans and sections, in the future we may be able to continue to glean a better understanding of what Woolley observed during the course of his excavations. Future work at the site, consisting of excavations, intensive cleaning, and the articulation of existing architectural units, can only help in the enhancing of our understanding of the previously excavated architecture.



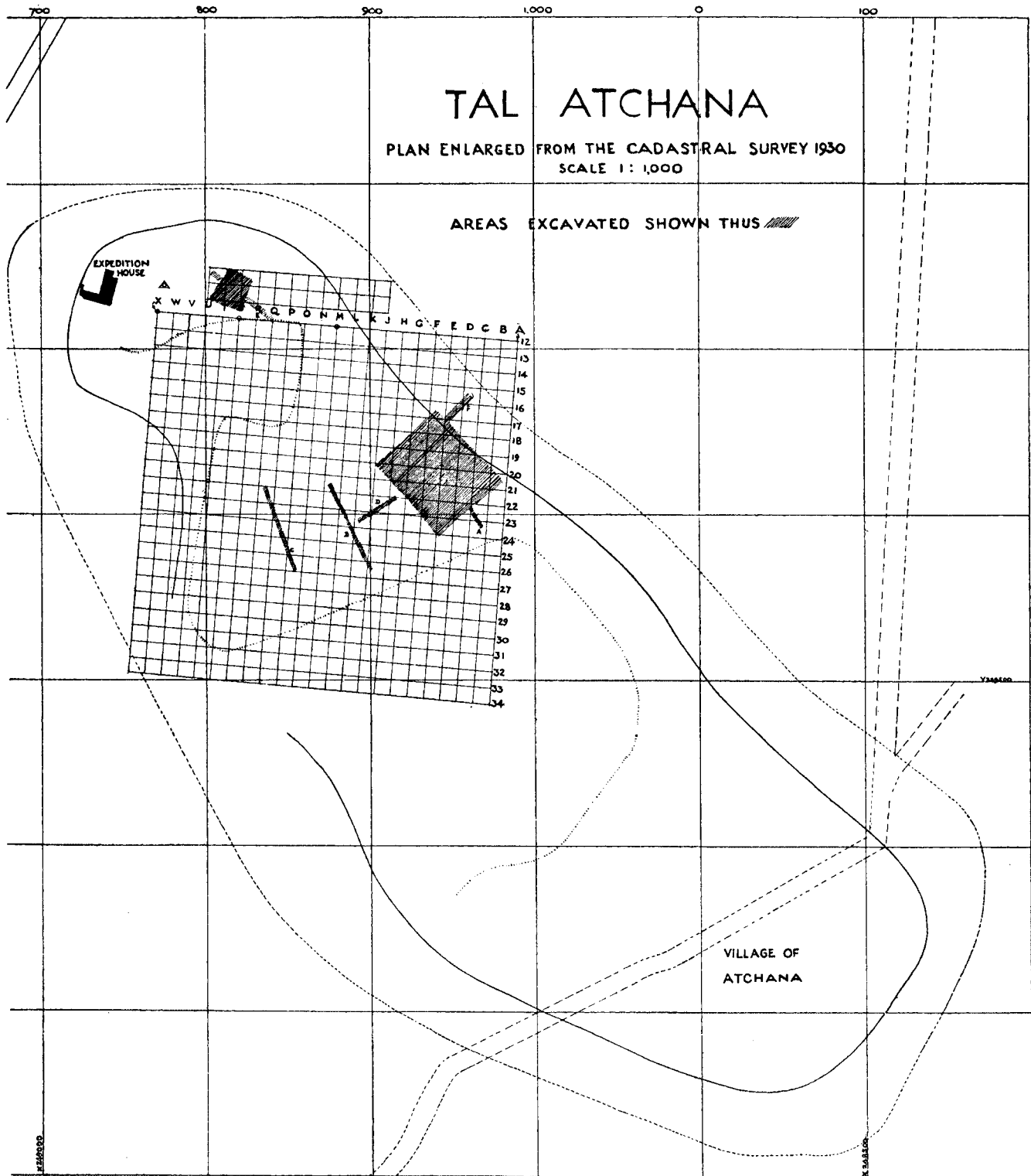


Figure 5.1. Plan of Areas Excavated by Woolley at Tell Atchana (Alalakh; AS 136) in 1937 Showing Alignment of Grid to French Cadastral Survey of 1930 (see Woolley 1938b: pl. 2)

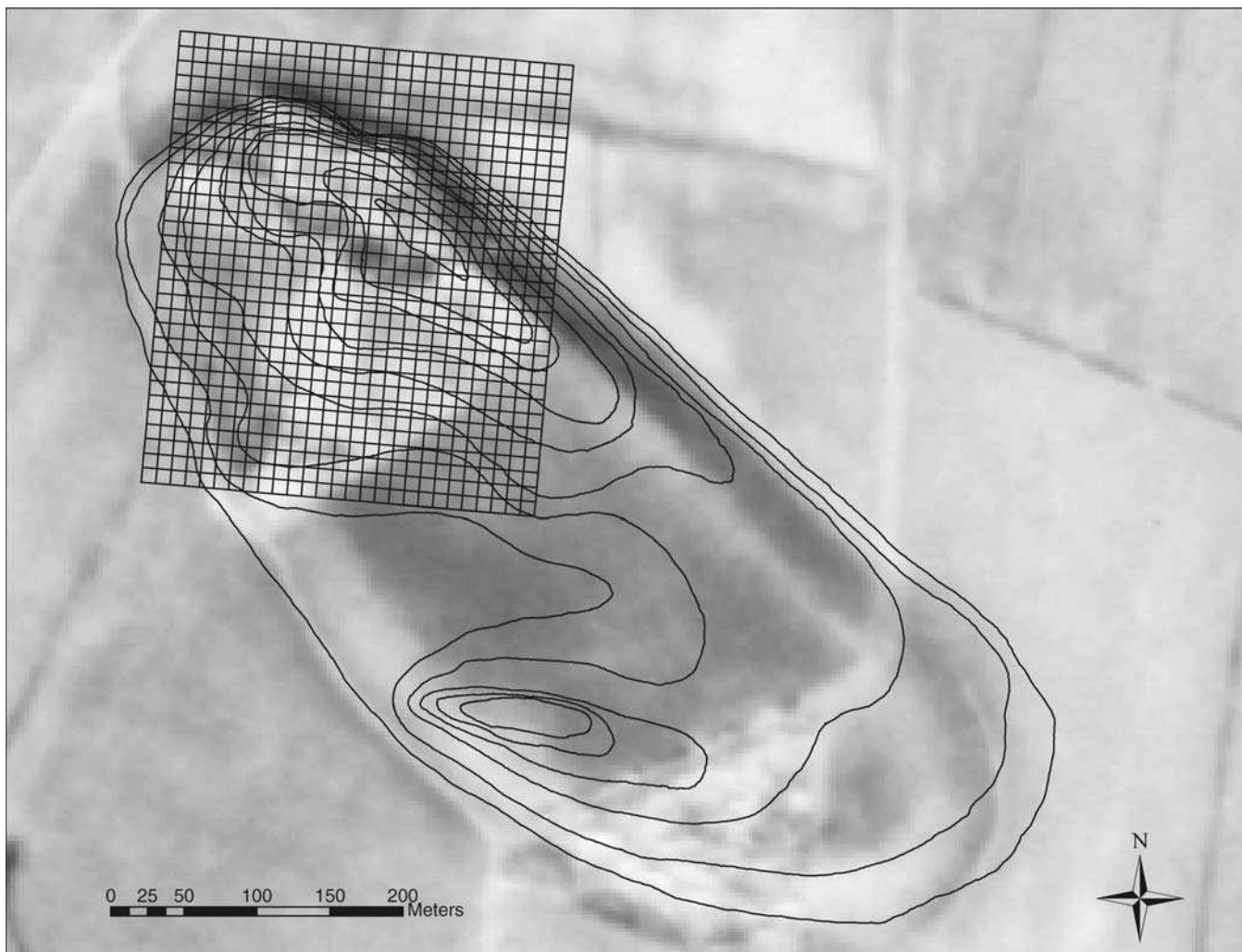


Figure 5.2. Excavation Grid and Atchana Contours at Tell Atchana (Alalakh; AS 136) Mapped by Woolley Superimposed on CORONA Satellite Imagery after Being Rotated 5°. Courtesy of Jesse J. Casana

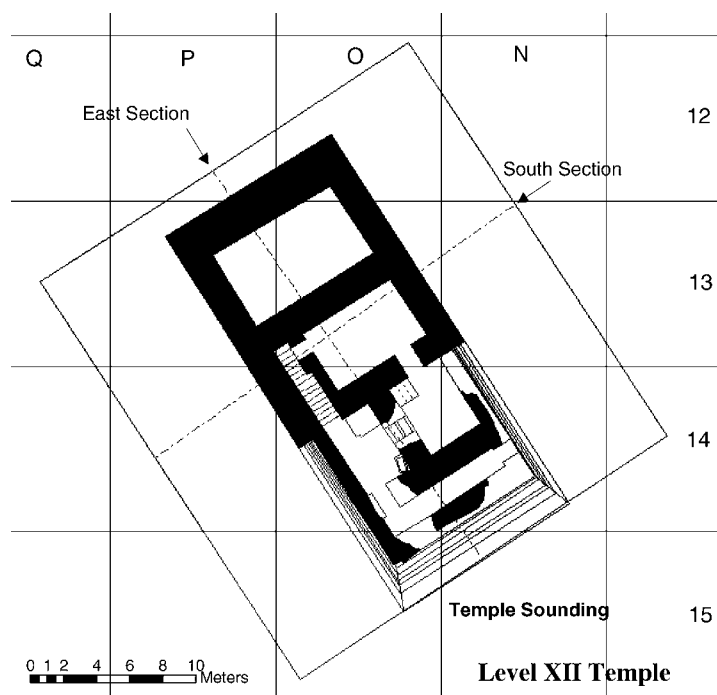


Figure 5.3. Level XII Temple at Tell Atchana (Alalakh; AS 136) Showing Extent of Temple Sounding and Approximate Placement of Sections

# CHAPTER SIX

## SURFACE CERAMICS, OFF-SITE SURVEY, AND FLOODPLAIN DEVELOPMENT AT TELL ATCHANA (ALALAKH)

JESSE J. CASANA AND AMY REBECCA GANSELL

### INTRODUCTION

In the summer of 2000, the Amuq Valley Regional Projects undertook an intensive surface survey of Tell Atchana (AS 136) and the surrounding plain in preparation for planned excavations at the site.<sup>32</sup> The main objective of the project was to determine the latest period of site occupation through a spatially controlled collection of surface artifacts. We hoped to establish whether the entirety of the large tell was occupied through the end of the Late Bronze Age (ca. 1100 B.C.), as was demonstrated to have been the case on the northern end of the mound through C. Leonard Woolley's 1936–1949 excavations (Woolley 1955). In addition, we sought to identify any subsequent occupation levels. Topographic mapping of the tell, both by Woolley and the Amuq Valley Regional Projects (see *Chapter Four: Alalakh Spatial Organization*), reveals that while the highest part of the tell was within Woolley's excavated concession, a secondary rise is present on the unexcavated southern portion of the site (fig. 6.1). This southern rise and adjacent areas were targeted in our investigations.

The secondary goals of the surface survey were to seek evidence of a lower town in the area surrounding Tell Atchana (AS 136) through a systematic mapping of artifact scatters in outlying fields and to document the history of local floodplain development through geomorphological investigations, exploratory subsurface geophysical prospection, and the analysis of CORONA satellite imagery. These efforts have enabled us to verify the extent of the preserved ancient occupation at Tell Atchana and to reconstruct the development of the Orontes River floodplain as it relates to settlement on the tell and at surrounding sites.

### ON-SITE SURFACE COLLECTION

#### SPATIAL DISTRIBUTION OF SURFACE MATERIAL

In an effort to determine the latest phase of occupation at Tell Atchana (AS 136), ceramic evidence was collected from a sample of all accessible areas on the mound, which at present are rather limited. The southern end of the tell is completely obscured by a modern village, while the northern portion is cut by many of Woolley's excavation trenches, covered by his backfill piles, and is the site of an unoccupied farmhouse surrounded by a dense stand of pine trees. Therefore, surface survey was only conducted over approximately the central one-third of the mound, between the modern village and Woolley's concession (Fields 1 and 2; fig. 6.1). The position of collection units in this area, which today is used for cereal cultivation, was determined by groundcover conditions at the time of the survey.

Table 6.1. Sherd Counts and Weights in Selected On-site Collection Units

Area	2A	2B	2C	2D	2E	2F	2G	2H
<i>Sherd Count</i>	230	51	92	85	146	191	92	46
<i>Sherd Weight (kg)</i>	16.25	1.93	3.52	4.55	6.97	9.23	3.51	1.45
<i>Weight/Count</i>	0.058	0.037	0.038	0.054	0.047	0.048	0.038	0.031

32. The 2000 field season at Tell Atchana was conducted under the direction of K. Aslihan Yener as part of the larger Amuq Valley Regional Projects. On-site fieldwork and mapping was directed by Simrit Dhesi and Jesse J. Casana, and team members included Stephen Batiuk, Ceilia Bergoffen, and Heather Snow. Analy-

sis of collections was undertaken as part of the 2001 season by Jesse J. Casana and Amy R. Gansell. Geomorphological studies in the vicinity of Tell Atchana were conducted by Tony J. Wilkinson in 1996, geophysical investigations in the fields north of the site were performed by Cemil Gürbüz and a team from

Within Field 2, a striking difference in the quantity and condition of sherds can be observed among collection units. Table 6.1 lists the total number of sherds, the total weight of the sherds, and the count-to-weight ratio for the individual collection units.<sup>33</sup> Collection Unit 2A produced by far the largest sherds and the greatest number of artifacts of all the areas. The unit is immediately adjacent to Field 1, which has been disturbed by a 1 m deep bulldozer cut on its long axis. The comparable quantity and quality of surface ceramics found in Units 1A, 1C, and 2A is undoubtedly a product of upper strata having been removed by bulldozing across all of these units. Unit 2H, located just north of the modern village, produced the smallest number of ceramics and sherds of the smallest size. Because the slope of the mound is rather gentle in this area, the surface has probably undergone less erosion than other parts of the site, thereby exposing fewer ancient artifacts. The opposite phenomenon may explain the high sherd count reported from Unit 2F at the summit of the southern rise. Here the relatively steep slope of the mound has likely contributed to more severe erosion, resulting in the exposure of better preserved and more ancient strata.

Of the material from Field 2, the ceramics from collection Unit 2F, located at the summit of the southern portion of the mound, included the highest proportion of both fine wares and burnt pottery. This unit produced several examples of luxury ceramics, including a fragment of Nuzi ware (fig. 6.2:1), two local painted brown-on-buff sherds, a pinched-spouted pitcher fragment (fig. 6.2:7), and several local fine ware pieces. A total of eighteen highly burned sherds were collected from Unit 2F, compared with only two from Unit 2D, three from Unit 2C, and one from Unit 2B. Additionally, two whole, hard-fired mudbricks were found on the surface of Unit 2F. The raised topography, relative abundance of fine wares, evidence of burning, and building materials all signal the presence of a large, possibly elite or public building near the surface, likely dated to near the end of the Late Bronze Age.

#### DATING OF THE BRONZE AGE SURFACE MATERIAL

The dating and chronological interpretation of the material from the surface survey of Tell Atchana (AS 136), which ideally would rely on comparison with a well-established, local ceramic sequence, is hampered by a dearth of published second-millennium B.C. ceramics from the Amuq Valley. Surveys have benefited tremendously from Robert and Linda Braidwood's publication of the Oriental Institute Syro-Hittite Expedition's excavated material from the ceramic Neolithic through Early Bronze Age phases (Amuq Phases A–J; Braidwood and Braidwood 1960). Unfortunately, the excavated second- and first-millennia B.C. materials (Amuq Phases K–O) have received only preliminary attention (Swift 1958), and few finds from local sites yielding relevant stratified ceramics, such as Chatal Höyük (AS 167) and Tell al-Judaïdah (AS 176), have been published. The Oriental Institute does possess a study collection of second-millennium B.C. Amuq ceramics (Amuq Phases K–M) from Chatal Höyük and Tell al-Judaïdah, which was consulted in the course of the present analysis, but because this material represents a selective sample of excavated finds, it is not possible to make quantitative assessments of the frequency of individual types within various phases.

In addition to comparison with the Oriental Institute study collection, the Tell Atchana (AS 136) survey materials were considered in relation to Woolley's published typology of excavated ceramics from the site (Woolley 1955). Although helpful, due to the nature of his analysis and publication, Woolley's typology of excavated ceramics is not an adequate comparative source for the evaluation of the survey material. Based primarily on whole pots and vessels for which a full profile could be reconstructed, his typology potentially underrepresents the chronological range of many specific types. For example, despite the large number of vessels considered (over 1,600), if the initial and/or terminal stages of a typological form were marked by the production of only a few vessels that did not survive in an adequately preserved condition, the presence of these forms outside the periods of their widespread production would not have been documented. Also, although Woolley provided raw numbers of the full-profile forms recovered and acknowledged that different stratigraphic levels produced highly variable densities of finds, he did not identify the relative popularity of the various forms within strata. Attempts to amend Woolley's typology have thus far yielded largely unsatisfactory results due to the incomplete documentation of data and questionable stratigraphic distinctions on which any analysis of the excavated Tell Atchana ceramics must depend (e.g., McClellan 1989; Heinz 1992).

---

Boğaziçi University in 2000, and satellite imagery-based analyses were undertaken by Jesse J. Casana at the Oriental Institute's Center for Archaeology of the Middle East Landscapes (CAM-EL). This report would not have been possible without the hard work and dedication of these many individuals.

---

33. Collection Units 2A, 2B, 2C, and 2D were twice the area (50 × 30 m each) of Units 2E, 2F, 2G, and 2H (25 × 30 m each). For the purpose of presenting general trends, the count and weight totals for Units 2A–2D have been divided in half, and these numbers are represented in the table.

Woolley also reported that although over 350 types of local pottery were originally distinguished, through an “arbitrary suppression of minor characteristics of individual vases,” variants of basic vessels were grouped together in a condensed list of 168 types for publication purposes (Woolley 1955: 320–21). Without knowledge of the ranges of Woolley’s 168 archetypes, it is difficult to group these “variants” with his published examples. Furthermore, having drawn over 500 (unpublished) rim fragments and observing few meaningful patterns, Woolley disregarded rim form as a useful diagnostic criterion, pointing out that the “human element” of pottery production may result in formal differences that are misleading and typologically insignificant. He then opted to derive his typology of Tell Atchana ceramics from complete pots, “without having recourse to the dubious assistance of fragments” (Woolley 1955: 321). Considering the above, the problem of relating our collection of “fragments,” dominated by rim sherds, to his typology is clear.

Another difficulty encountered in the analysis of the 2000 Tell Atchana survey ceramics is the marked disparity between the character of the pottery published from Woolley’s excavations and our finds. Most of Woolley’s diagnostics are relatively fine local wares and imported painted types. Although central to discussions of Tell Atchana’s chronology (e.g., Smith 1940; Woolley 1955; Kantor 1956; Kempinski 1983; McClellan 1989; M.-H. Gates 1981, 1987), these finds appear to be more representative of the palace and temple contexts Woolley excavated than of the site as a whole. Remarkably few of Woolley’s types can be identified within the survey collection, which is dominated by plain and coarse wares.

Comparison of the Tell Atchana (AS 136) survey material to the Amuq Valley wares in the Oriental Institute study collection indicates that the vast majority of the survey finds have a chronological range correlating to Amuq Phases K–M. Because this sequence spans most of the second millennium B.C., it is not helpful in providing specific evidence to associate potentially the surface collection with stratigraphic or architectural phases of the site. Nonetheless, the bulk of the surface collection is typified by ceramics that can be generally dated to the mid-/late second millennium B.C., including large grooved-rim storage jars (fig. 6.3a:1), plain, incised, collared-rim jars and jugs (fig. 6.3a:2–5), a variety of small bowls and cups (fig. 6.3b:1–7), including an example with a partially preserved stirrup handle (fig. 6.3b:8), and a large collection of platters and shallow bowls (fig. 6.3c). Some types in the latter group, notably internally beaded shallow bowl rims (fig. 6.3c:3), correspond to forms, which although attested across the Amuq Phases K–M sequence, occur much more frequently in Amuq Phase M. Given the relatively high percentage of platter rims of this type, it seems likely that the survey material is predominantly representative of a later second-millennium B.C. culture.

Despite difficulties in associating the bulk of the surface collection with specific types of known chronological ranges, a small number of more diagnostic sherds can be related to the types published by Woolley. These clearly identifiable diagnostic survey pieces are listed below according to collection unit (“Type” numbers are those published by Woolley) and a selection of the luxury wares are illustrated in figure 6.2.

Unit 1A:	3	Type 3b, red-painted shallow bowl rim fragments
	1	Type 118a, pedestal base
	2	Cypriot white slip body sherds
	1 or 2	Mycenaean-style painted body sherds
Unit 1C:	2	Type 3b, red-painted shallow bowl rims
	1	Mycenaean-painted body sherd
Unit 2A:	2	Type 3b, red-painted shallow bowl rim fragments
	1	Type 11, plain closed bowl rim fragment
	1	Type 94, red-striped rim fragment
	1	Type 165b, strainer fragment
	1	Nuzi ware body sherd <sup>34</sup>
Unit 2B:	1	Type 3b, red-painted shallow bowl rim fragment
Unit 2C:	1	Type 165b, strainer fragment
Unit 2D:	1	Type 3b, red-painted shallow bowl base
	1	Type 62b, jar handle
	1 or 2	Type 84c, pot stands
	1	Possible Type 122, pedestal base

34. Woolley referred to site-specific variants of this general ceramic type as “Atchana ware” (Woolley 1955: 38; D. Stein 1984).

Unit 2E:	1	Type 3b, red-painted shallow bowl rim fragment
Unit 2F:	1	Type 4c, solid foot of vase
	1	Type 68/69, pinched-spout pitcher rim fragment
	1	Type 84, ring-base pot stand
	1	possible Type 118, deep bowl rim fragment
	2	local painted brown-on-buff body sherds
	1	Nuzi ware body sherd
Unit 2G:	2	Type 3b, red-painted shallow bowl rim fragments
Unit 2H:	1	Mycenaean-style painted body sherd

Each of the above finds is compared in table 6.2 with the chronological ranges of the corresponding full-profile vessels excavated by Woolley (1955: 332–40). All of the diagnostic survey sherds correspond to types attested in Tell Atchana Levels I–V, and several of these types, including Types 4c, 62b, 84, and 165b, were reported in these levels exclusively. The pinched-spout pitcher rim fragment (Unit 2F) can be linked to either Type 68 or 69 (distinguishable only by base form), both of which are first attested in Level V. The association of the diagnostic types from Field 2 with types derived primarily from Levels I–V in the survey assemblage signals a Late Bronze Age occupation on the unexcavated southern rise potentially continuing into Level I. To summarize, while the survey collection contains a mix of Middle and Late Bronze Age wares, it appears to be dominated by materials dating to the later second millennium B.C. Most notably, the surface collection contains no material that can be attributed to phases earlier than the second millennium B.C. and only a very small scatter of later materials (see below), indicating that the entire mound was occupied exclusively during the Middle and Late Bronze Age as has been generally assumed.

Table 6.2. Chronological Range of Diagnostic Types Found in the On-site Surface Survey of Tell Atchana (AS 136) According to Woolley (1955)

<i>Woolley's Type #:</i>																	
	3b	4c	5	11	14a	62b	68/69	84	84c	102b	118a	122	146	165b	Atchana Ware	Cypriot White Slip	Aegean Painted
<i>Number of Examples in On-site Surface Collection:</i>																	
	1	1?	1?	2	9	1	1	1	1	1	1	1	1	3	1	2	2
<i>Number of Examples from On-site Excavation Levels at Tell Atchana:</i>																	
I	1	—	—	2	1	—	11	1	—	—	—	—	—	—	—	—	X*
II	—	1	—	2	—	2	13	3	2	—	—	1	1	—	X	X	X
III	1	—	—	2	—	—	4	3	3	2	—	—	—	—	X	X	X
IV	82	4	—	3	—	1	20	1	—	3	4	2	1	1	X	X	X
V	2	—	26	1	—	—	6	—	—	—	—	1	3	—	—	X	X
VI	—	—	7	1	—	—	—	—	—	1	1	—	—	—	—	—	—
VII	8	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
VIII	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IX	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—

\*X = present in trace amounts only

Comparison of the Tell Atchana (AS 136) surface collection to other excavated assemblages is problematic because the chronology of Middle and Late Bronze Age plain and coarse wares in the Amuq Valley and adjacent regions is not completely understood. How underdeveloped the second-millennium B.C. ceramic sequence is for the northern Levant has been indicated by the discovery of a sealed Middle Bronze II destruction deposit containing a large number of whole storage jars and other vessels at the site of Kinet Höyük, to the west of Tell Atchana on the Cilician coast (Gates 2000). This assemblage contained various vessel types previously argued to have been chronologically diagnostic of different phases within the Middle and Late Bronze Age. While the vast majority of the surface collection from Tell Atchana is securely datable to the Middle or Late Bronze Age, without a refined local pottery sequence,

most of the material cannot yet be dated more precisely. Ongoing excavations and forthcoming publications of materials from Kinet Höyük, Tell Qarqur in the Ghab Valley of Syria (Dornemann 2000), and Tell Afis to the southeast of the Amuq in Syria (Mazzoni 2000), all have the potential to improve our understanding of this important ceramic sequence, as do planned excavations at Tell Atchana itself.

## ROMAN, LATE ROMAN, AND ISLAMIC CERAMIC EVIDENCE

Evidence of at least some Roman and Late Roman settlement exists on virtually all mounded sites in the Amuq Valley (*Chapter Two: Settlement and Landscapes in the Amuq Region*; Casana 2003a), and Tell Atchana (AS 136) is no different. The surface survey of Tell Atchana produced a small quantity of Late Roman artifacts, but as at many sites, the evidence is sparse, consisting of two roof tiles, two brittleware handles, one pithos rim, and one piece of corrugated red brittleware. All Late Roman finds come from Units 2B, 2C, and 2D, suggesting that if a small settlement had existed on the mound, it was either located on the southeastern part of the tell, further evidence of which may extend beneath the modern village, or was removed by Woolley's excavations on the northern part of the mound. However, so little evidence is known for post-Bronze Age occupation that these finds are probably the vestiges of little more than an isolated farmstead or hamlet.

## OFF-SITE SURFACE COLLECTION

During the 2000 survey season, off-site investigations were conducted in the fields surrounding the mound of Tell Atchana (AS 136) in order to determine whether a lower town once occupied the site. Lower towns are common at large Bronze and Iron Age sites in the greater Amuq region (such as Tell Ta'yinat [AS 126], Carchemish, and Titriş Höyük), and Woolley believed that a similar feature may have existed at Tell Atchana. He observed slight differences in the color of the soil and crops about 300 m northeast of the mound and received reports from local villagers that ancient building materials had been found in this area (Woolley 1955: 132, n. 2). Although he did not pursue any excavations there, Woolley tentatively interpreted the discolored land as evidence of a rampart, which he suggested may have been constructed to defend a settlement on the plain. However, our off-site collections and geomorphological investigations of the floodplain surrounding Tell Atchana suggest that this feature, still visible today, is more likely an ancient levee deposit (see below), not evidence of a lower town.

As a first order of investigation, the density of the artifact scatter in the surrounding fields was documented. Surveyors spaced at 10 m intervals undertook pedestrian transects through fields. Any visible sherds or other artifacts were counted by each surveyor and tallied at each 100 m transect leg. Existing field systems were used as the boundaries of survey areas, and in order to maintain comparability, only those fields with equivalent surface visibility were surveyed.<sup>35</sup>

The survey found no surface evidence of a lower town in any of the fields because artifact density off the main mound is, in general, very low. The surface artifacts that were recorded are best interpreted as field scatter rather than *in situ* remains of an occupation. The highest surface artifact density around Tell Atchana (AS 136) was approximately 20–30 sherds per 100 sq. m, while a recent surface survey conducted in the confirmed area of the lower town at nearby Tell Ta'yinat (AS 126) revealed a sherd density of 200–300 sherds per 100 sq. m (*Chapter Seven: The Ta'yinat Survey, 1999–2002*). Moreover, the lower town at Tell Ta'yinat is clearly visible on CORONA imagery (fig. 6.9) and is slightly raised above the surrounding plain level. Sherd density in the fields surrounding Tell Atchana is also significantly lower than off-site sherd scatters elsewhere in the Amuq, where scatters are generally between 40–60 sherds per 100 sq. m (see *Chapter Two: Settlement and Landscapes in the Amuq Region*). The low density of surface artifacts around Tell Atchana is most likely due to active sedimentation by the Orontes River (see below).

Despite the generally low density of the off-site surface artifact scatter, our survey did reveal a slightly higher density of sherds extending to the northeast of the tell (fig. 6.4), and a portion of this area was targeted for collection. Sample squares (25 × 30 m each) were laid along modern furrows in each of the highest density fields. All ceramics visible within the squares were collected, and collection continued radiating out from the tell until artifact density

35. Most fields included in the off-site survey were under recently planted cotton, allowing reasonably good surface visibility. Two additional fields were fallow but had comparable visibility to those that were planted. The results from these fallow fields

were virtually identical to those from the adjacent cotton fields. Two other fields were omitted from the analysis because they were covered with recently cut straw that almost entirely obscured the ground surface.

dropped to near zero. These ceramics help to date the artifact scatter and support the proposal that these sherds are unlikely to be evidence of a Bronze Age lower town.

In terms of count-to-weight ratio, the off-site ceramic assemblage is markedly different from that collected on the tell. As is to be expected of plow-zone field scatters, the sherds were small and highly abraded due to centuries of continuous plowing, and the material recovered from the outer fields contains very few identifiable diagnostic types. In addition, the collection includes a relatively high proportion of Seleucid, Roman, and Late Roman material. Of the 312 diagnostic sherds that were collected off-site, only about thirty examples are identifiable as second-millennium B.C. types, while fourteen sherds are identifiable as Roman or Late Roman types.<sup>36</sup> Examples of diagnostic pieces from each period are outlined below:

*Second-Millennium B.C. Diagnostics*

- 1 Red-burnished ware body sherd
- 1 Comb-incised body sherd
- 6 Type 3b shallow bowl rim fragments
- 3 Carinated cup rim fragments
- 1 Pedestal base
- 1 Miniature ring-base fragment

*Late Hellenistic/Roman/Late Roman Diagnostics (see Appendix A: Site Gazetteer)*

- 2 Brown-slip incurved rim fragments
- 1 Eastern terra sigillata-A body sherd
- 12 Red brittleware sherds including four corrugated body sherds, three ring-bases, four strap handles, and one small jar rim fragment
- 1 Incised orange brittleware body sherd

Clearly the field scatter assemblage consists of a mixture of Bronze Age and post-Iron Age material. The later material may reflect an occupation of the plain during the Roman or Late Roman period and/or may be partially derived from the erosion of upper strata off the tell. It is more likely, however, that the field scatter primarily reflects the intensive agricultural practices of farmers living on the mound in classical antiquity. The Bronze Age material from the tell may have been mixed with their refuse and manure, then spread on the surrounding fields as fertilizer (Wilkinson 1982). The higher-density concentration of material to the northeast of the mound may also be related to patterns of sedimentation on the floodplain. During peak floods of the nearby Orontes River, water sweeps across the relatively flat floodplain. A large mound like Tell Atchana (AS 136) serves as a barrier to the floodwaters and causes a decrease in the water's flow velocity on the far side of the mound, resulting in the formation of a slackwater deposit. Here, sherds eroded from the tell and larger suspended sediment would likely be deposited with greater frequency than on the surrounding plain, creating a "sedimentary shadow." Such sedimentary features appear on CORONA satellite imagery as dark areas of alluvial deposits behind both Tell Atchana and Tell Ta'yinat (AS 126), precisely in the areas of highest sherd density. At Tell Atchana the "shadow" also corresponds to the discoloration visible on the ground.

## FLOODPLAIN DEVELOPMENT

Woolley's deep sounding at Tell Atchana (AS 136) revealed occupational strata several meters below the surface of the modern floodplain, indicating that the plain has aggraded significantly since the second millennium B.C. In previous seasons, the Amuq Valley Regional Projects investigated the floodplain history in the region of Atchana and identified sedimentary strata in a long section exposed in a major irrigation canal located east of Atchana, referred to as the Atchana drain (fig. 6.5; Wilkinson 2000). The strata visible in the drain section can be securely dated by their ceramic inclusions and carbon-14 analysis of their organic remains (fig. 6.6). The lowest layer, Unit B7, contains the remains of a Chalcolithic occupation with abundant pottery dated to the fifth millennium B.C. Following a period of

36. It should be noted, however, that Roman and Late Roman sherds are easily recognizable by their color and material. These fea-

tures endure in conditions that erase Bronze Age diagnostic details.



aggradation during the mid-Holocene, the floodplain experienced a prolonged period of stability that lasted throughout much of the Bronze and Iron Ages, evidenced by Units A5–6. This buried land surface represents the level of the floodplain during the main period of occupation at Atchana, indicating that the Bronze Age plain surface is now buried by at least 3 m of sediment. During the Late Roman period, a rapid increase in the rate of aggradation on the floodplain was likely to have been caused by a sharp increase in the magnitude of floods and the sedimentary load of the Orontes River. This phase of rapid aggradation resulted in the deposition of a deep layer of post-Roman sedimentation over much of the Orontes floodplain, including the entire vicinity of Atchana (see *Chapter Two: Settlement and Landscapes in the Amuq Region*). Following a period of floodplain stability associated with the medieval period, an increase in sediment deposition occurred for the last time in relatively recent history, probably during the Ottoman period (fourteenth–nineteenth centuries A.D.). The deep alluvial cover over the Bronze Age plain surface, documented both by Woolley’s sounding and the recent examination of the Atchana drain, probably accounts for the relative paucity of surface material in most areas that were surveyed.

The history of aggradation in the vicinity of Tell Atchana (AS 136) is also illuminated through a series of geophysical investigations undertaken during the 2000 season in fields adjacent to the tell (fig. 6.5).<sup>37</sup> In a ground-penetrating radar image produced as part of this study, the sedimentary units that were recorded in the Atchana drain appear with relative clarity, as does the slope of the mound itself (fig. 6.7A). At a level deeper than any stratum visible in the Atchana drain, geophysical investigations have also revealed the presence of a hard, dense feature at about 6 m below the surface (fig. 6.7B). Based on its depth and character, this is probably a Pleistocene gravel deposit. However, the most significant feature to be identified is a deep, diagonal crosscut anomaly that is best interpreted as a relict Orontes River channel (fig. 6.7C). The presence of the channel feature indicates that at some point in the past the Orontes River flowed between Tell Ta’yinat (AS 126) and Tell Atchana, rather than about a kilometer to the west of the tells as it does today.

The paleo-channel can be dated by comparison to the local sedimentary record preserved in the Atchana drain (fig. 6.8). The channel clearly cuts into, and therefore postdates, sedimentary units that have been securely dated to the Late Roman/Early Byzantine period (see above). The top of the channel is unclear on the geophysical plot but is presumably buried near the ground surface, although it was no longer visible on the surface at the time of the first systematic mapping in the early 1900s. This evidence points to a channel that functioned into the medieval or Ottoman period; however, it is not possible to determine how early the river began flowing in this location.

The presence of a paleo-channel between Tell Ta’yinat (AS 126) and Tell Atchana (AS 136) is further supported by CORONA satellite imagery showing numerous relict Orontes River meanders to the east of the mound, very near the location of the geophysical plot (fig. 6.9). If an Iron Age river flowed between the two mounds, it may account for the anomalous site of Tell Ta’yinat al-Saghir (AS 127), a small mound about 200 m to the south of Tell Ta’yinat. Excavations in the 1930s revealed that this is not a tell *per se*, but an artificially constructed mound of sandy, riverine sediment that the excavators suggested may have been dredged from the Orontes River (Haines 1971). The construction of this hill makes much more sense when one considers that the Orontes River would have flowed immediately adjacent to it in the Iron Age.

The movement of the Orontes River across the floodplain probably had a strong influence on the development of settlements in the area. The river is prone to frequent avulsions during which it abandons one channel and suddenly forms a new one, often some distance away. The abrupt repositioning of the river may partially account for the unusual movement of occupation from Tell Ta’yinat (AS 126) in the Early Bronze Age, to Tell Atchana (AS 136) in the Middle and Late Bronze Age, and back to Tell Ta’yinat in the Iron Age. It is possible that the preferred location of settlement was not just at the river crossing, where both mounds lie, but specifically on the northern bank, which would have provided easier access to the plain and its agricultural products. These hypotheses require further investigation, and plans are being made to conduct coring of the floodplain between the two sites in order to locate the paleo-channel conclusively and hopefully extract possible dating evidence.

37. Geophysical investigations were undertaken by Cemil Gürbüz and a team from Boğaziçi University in 2000. A selected number

of geo-radar plots from their work are reprinted here with permission.

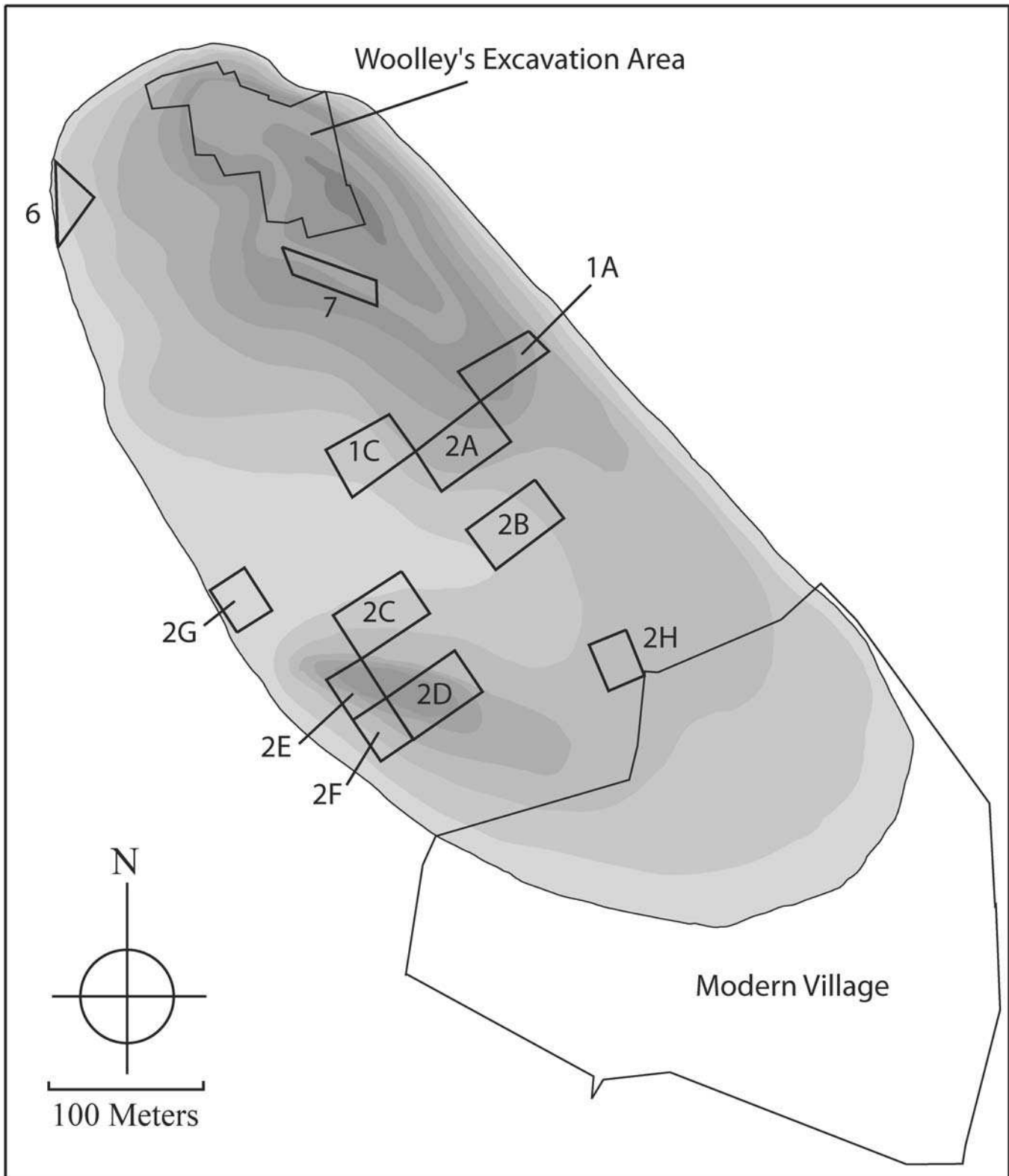


Figure 6.1. Tell Atchana (Alalakh; AS 136) with On-site Collection Units

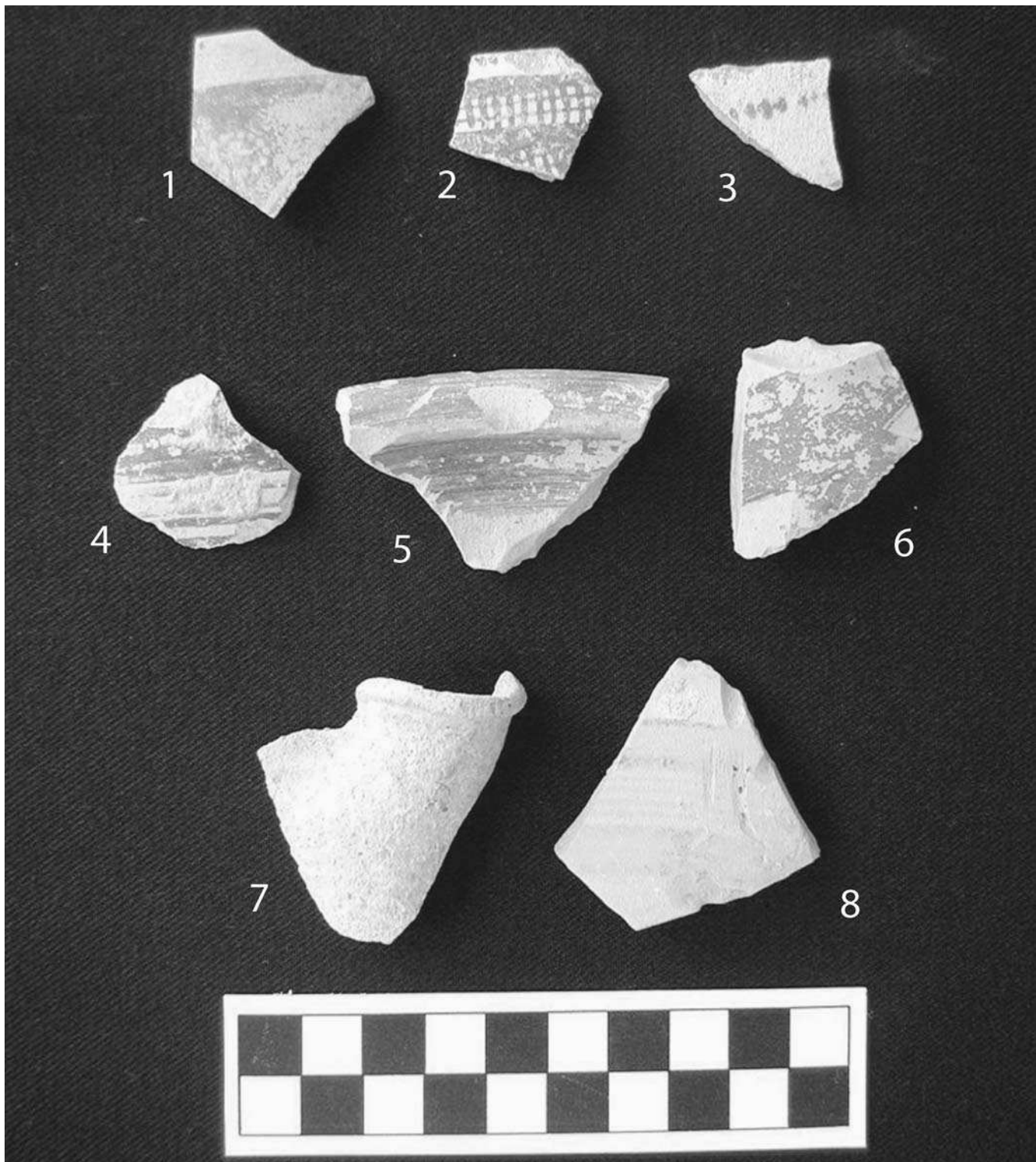


Figure 6.2. On-site Tell Atchana (Alalakh; AS 136) Surface Ceramics: Mid-/Late Second Millennium B.C. Imported, Painted, and Fine Wares from Surface Collection

1	AS 136.2F.2	Nuzi ware; white detail on dark red; body sherd
2	AS 136.1A.14	Cypriot white slip II; dark brown pattern on white; body sherd
3	AS 136.1A.8	Cypriot white slip; reddish brown detail on white; body sherd
4	AS 136.1A.15	Mycenaean style; dark red burnished; body sherd with horizontal ridge
5	AS 136.7A.10	Local style; brownish red burnished; rim fragment, diameter 22 cm
6	AS 136.1A.2	Local style; red pattern on buff plain ware; body sherd
7	AS 136.2F.3	Local style; light orange to buff plain ware; fine pinched-spout fragment, Type 68–69
8	AS 136.1C.7	Mycenaean style; orangish red burnished; body sherd

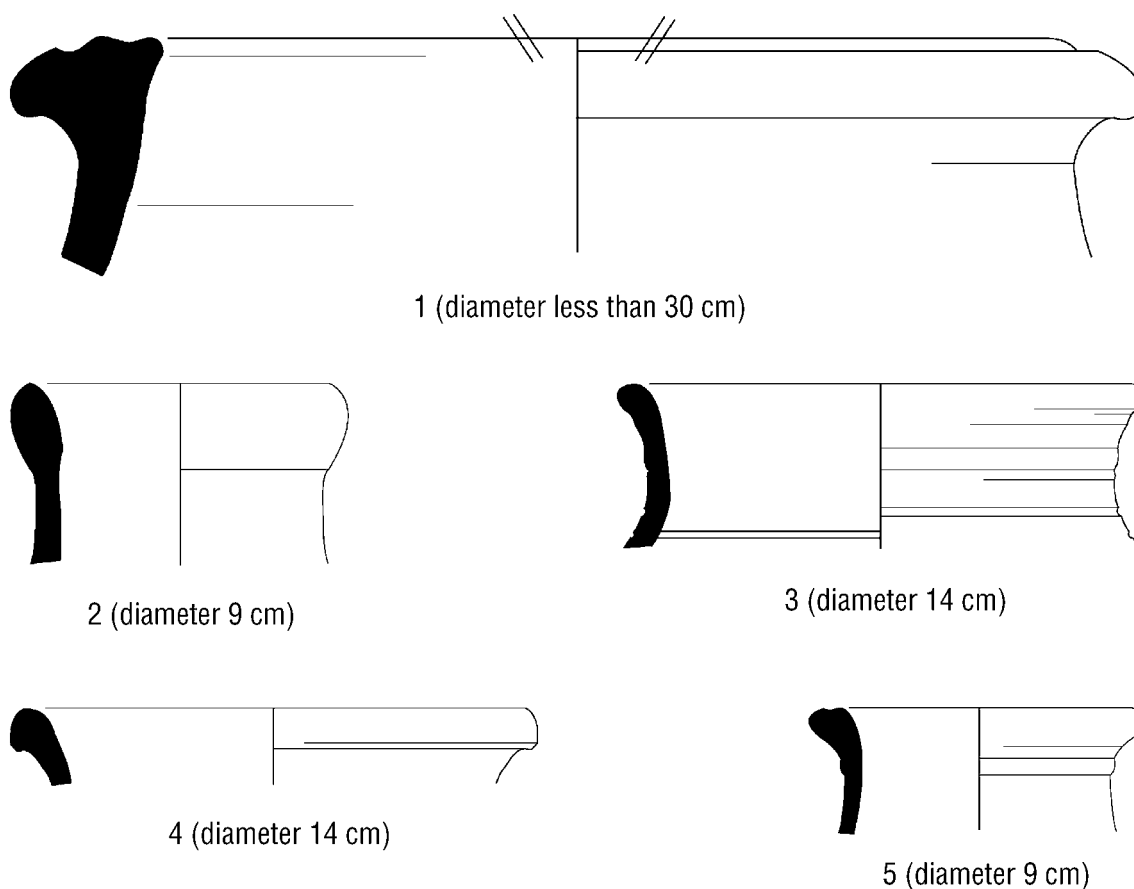


Figure 6.3a. On-site Tell Atchana (Alalakh; AS 136) Surface Ceramics: Storage and Narrow-necked Jars and Jugs; Mid-/Late Second Millennium B.C. Scales ca. 1:2 (1) and 1:2 (2–5)

1	AS 136.7A.13	Exterior surface color light orange; matrix color light yellowish brown with gray core, inclusions of medium black and brown grit and sparse chalk. Diameter less than 30 cm
2	AS 136.2A.27	Exterior surface color brownish yellow; matrix color medium to dark gray, inclusions of fine chalk and holes from incinerated organic material. Diameter 9 cm
3	AS 136.2A.26	Exterior surface color very light brown; matrix color light yellowish brown, sparse inclusions of fine dark brown grit and chalk. Diameter 14 cm
4	AS 136.4A.3	Exterior surface color buff; matrix color buff, inclusions of very fine white grit and fine brown and black grit. Diameter 14 cm
5	AS 136.2A.28	Exterior surface color very light yellow; matrix color light yellowish brown, inclusions of very fine red and black sand. Diameter 9 cm

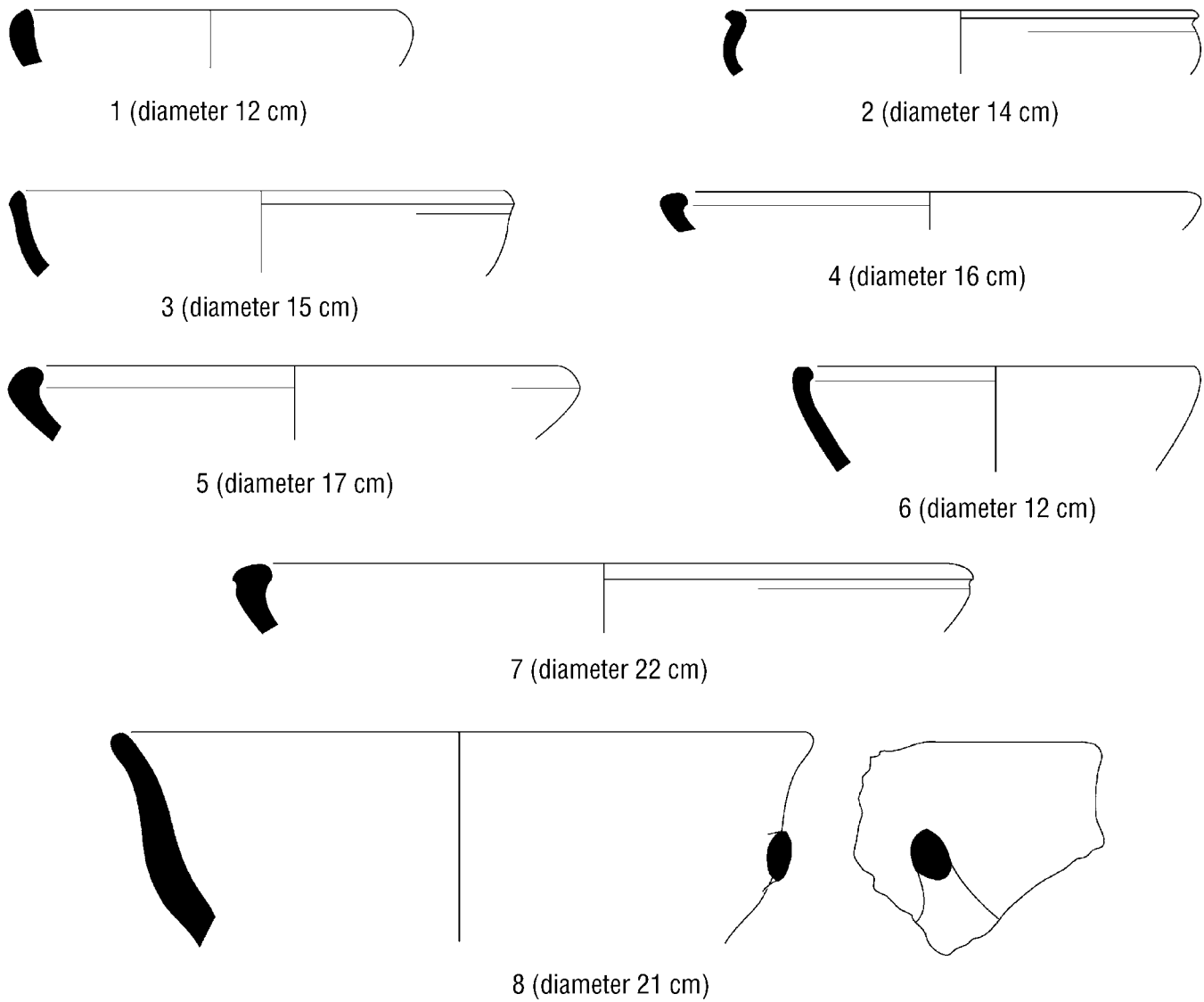


Figure 6.3b. On-site Tell Atchana (Alalakh; AS 136) Surface Ceramics: Small Bowls and Cups; Mid-/Late Second Millennium B.C. Scale 1:2

1	AS 136.6A.4	Exterior surface color brown slip; matrix color orange with light yellowish brown core, inclusions of fine sand and straw. Diameter 12 cm
2	AS 136.6A.5	Exterior surface color pinkish orange; matrix color orange with light yellowish brown core, inclusions of medium white and brown grit and sand. Diameter 14 cm
3	AS 136.6A.6	Exterior surface color orange to buff; matrix color orange, inclusions of medium straw and sand. Diameter 15 cm
4	AS 136.4A.7	Exterior surface color pinkish buff; matrix color pinkish buff, dense inclusions of fine white and black grit and sand. Diameter 16 cm
5	AS 136.4A.6	Exterior surface color light greenish gray; matrix color greenish gray, inclusions of fine white and black grit and sand. Diameter 17 cm
6	AS 136.4A.5	Exterior surface color dark pink to pinkish buff; matrix color pink to buff, dense inclusions of fine white, brown, and black grit and sand. Diameter 12 cm
7	AS 136.4A.4	Exterior surface color buff; matrix color buff, inclusions of fine white and brown grit and sand. Diameter 22 cm
8	AS 136.2A.16	Exterior surface color light orangish brown; matrix orange, dense inclusions to medium black and red grit and fine chalk. Diameter 21 cm

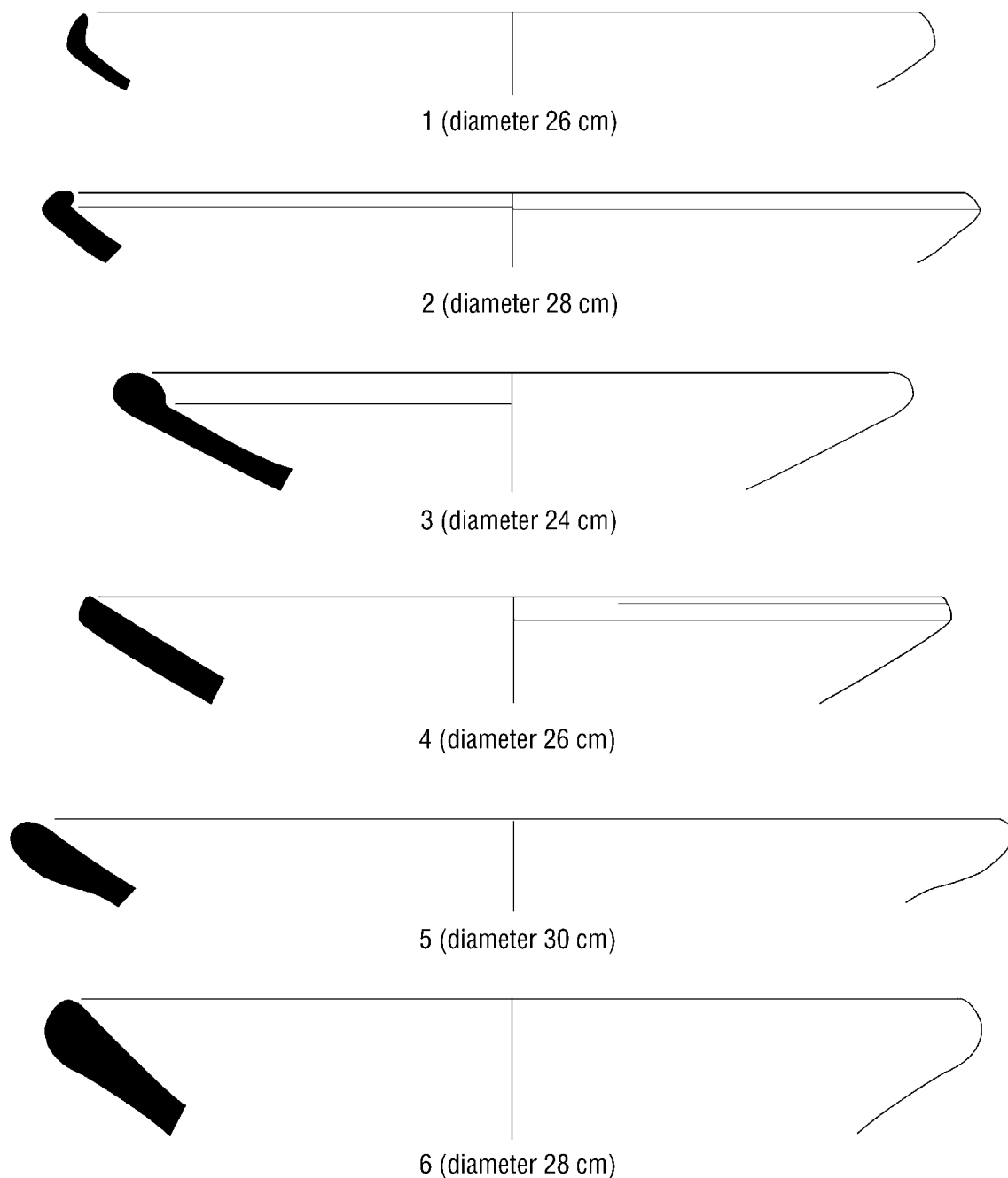


Figure 6.3c. On-site Tell Atchana (Alalakh; AS 136) Surface Ceramics: Platters and Shallow Bowls; Mid-/Late Second Millennium B.C. Scale 1:2

1	AS 136.2C.12	Exterior surface color pinkish orange; matrix color light yellowish brown, inclusions of fine white, brown, and gray grit. Diameter 26 cm
2	AS 136.2C.15	Exterior surface color orange to light yellowish brown; matrix color light yellowish brown, inclusions of coarse white mineral and medium brown grit and sand. Diameter 28 cm
3	AS 136.2F.5	Exterior surface color orange to pink; matrix color orange to pink with brown core, inclusions of fine to medium gray and black grit and coarse sand. Diameter 24 cm
4	AS 136.2A.33	Exterior surface color light brownish pink; matrix color light pinkish brown with yellowish brown core, sparse inclusions of medium black, red, and brown grit and chalk. Diameter 26 cm
5	AS 136.2C.16	Exterior surface color orange; matrix color orange with brown core, inclusions of medium white, dark red, brown, and light brown grit and coarse sand. Diameter 30 cm
6	AS 136.2A.32	Exterior surface color light yellow; matrix color light yellowish brown, sparse inclusions of fine brown grit and blackened holes from incinerated organic matter. Diameter 28 cm

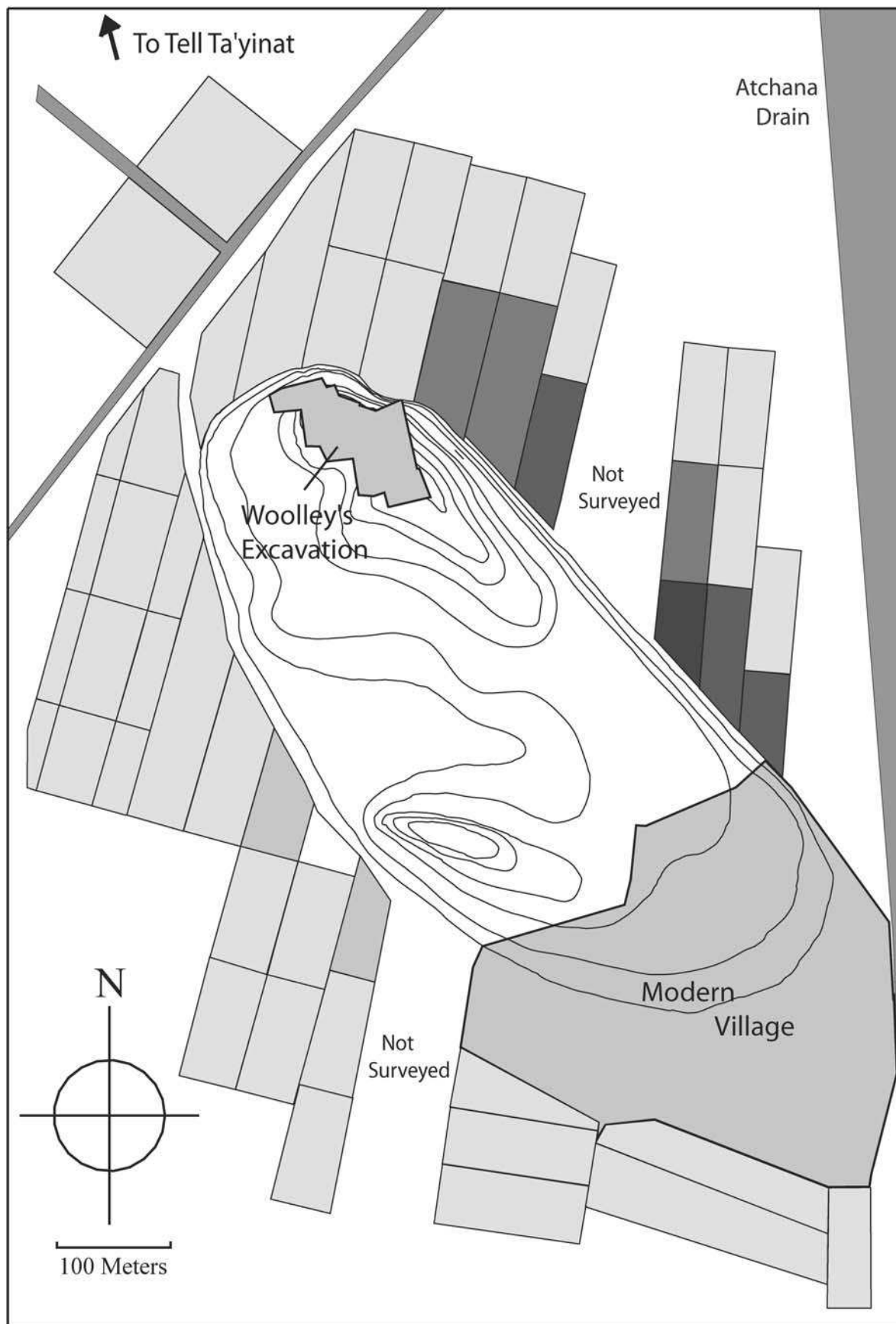


Figure 6.4. Sherd Density Map of Fields Surrounding Tell Atchana (Alalakh; AS 136)

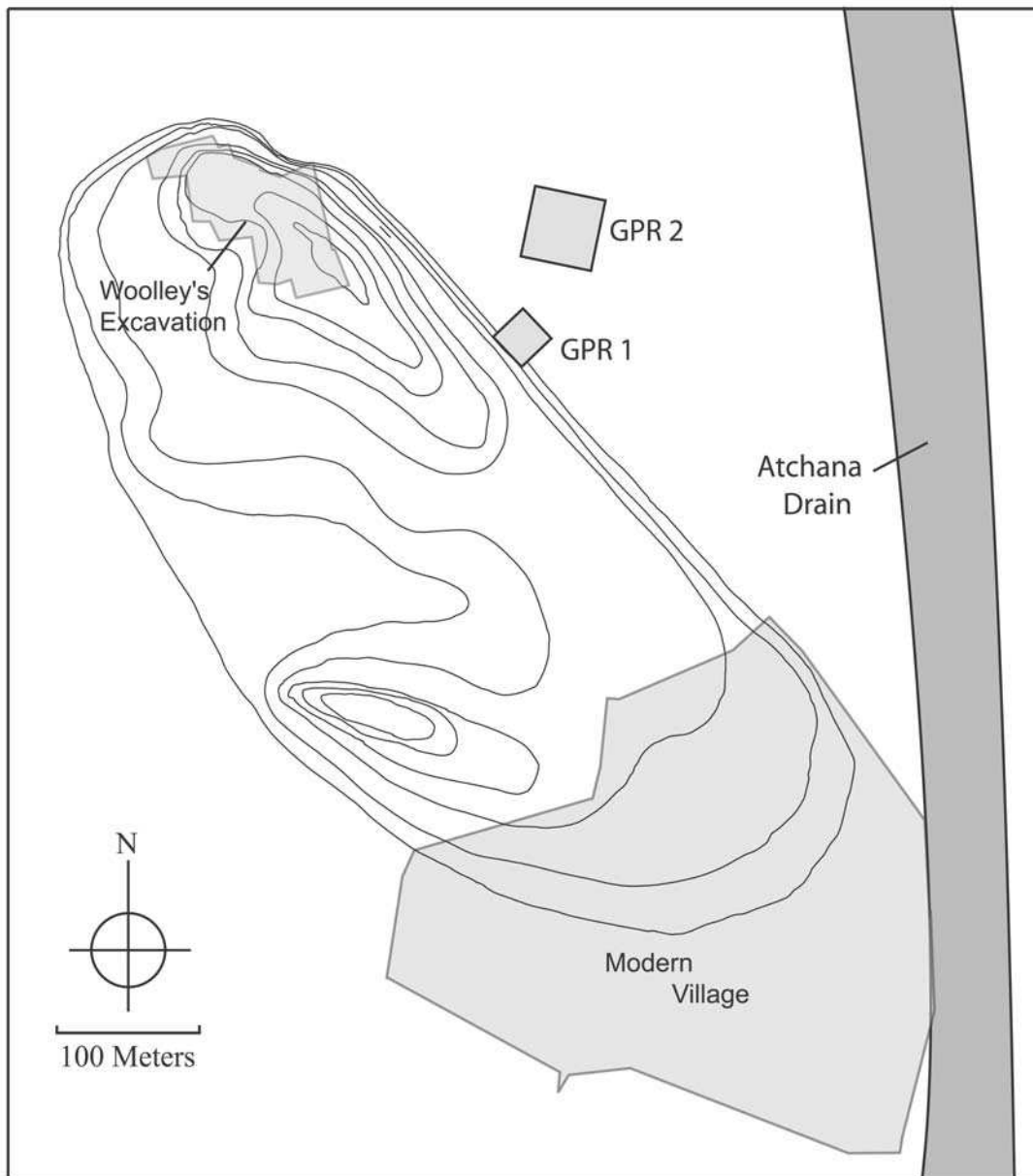


Figure 6.5. Location of Geophysical Plots, Atchana Drain, and Woolley's Excavation Area at Tell Atchana (Alalakh; AS 136), All Used in Reconstruction of Floodplain Development



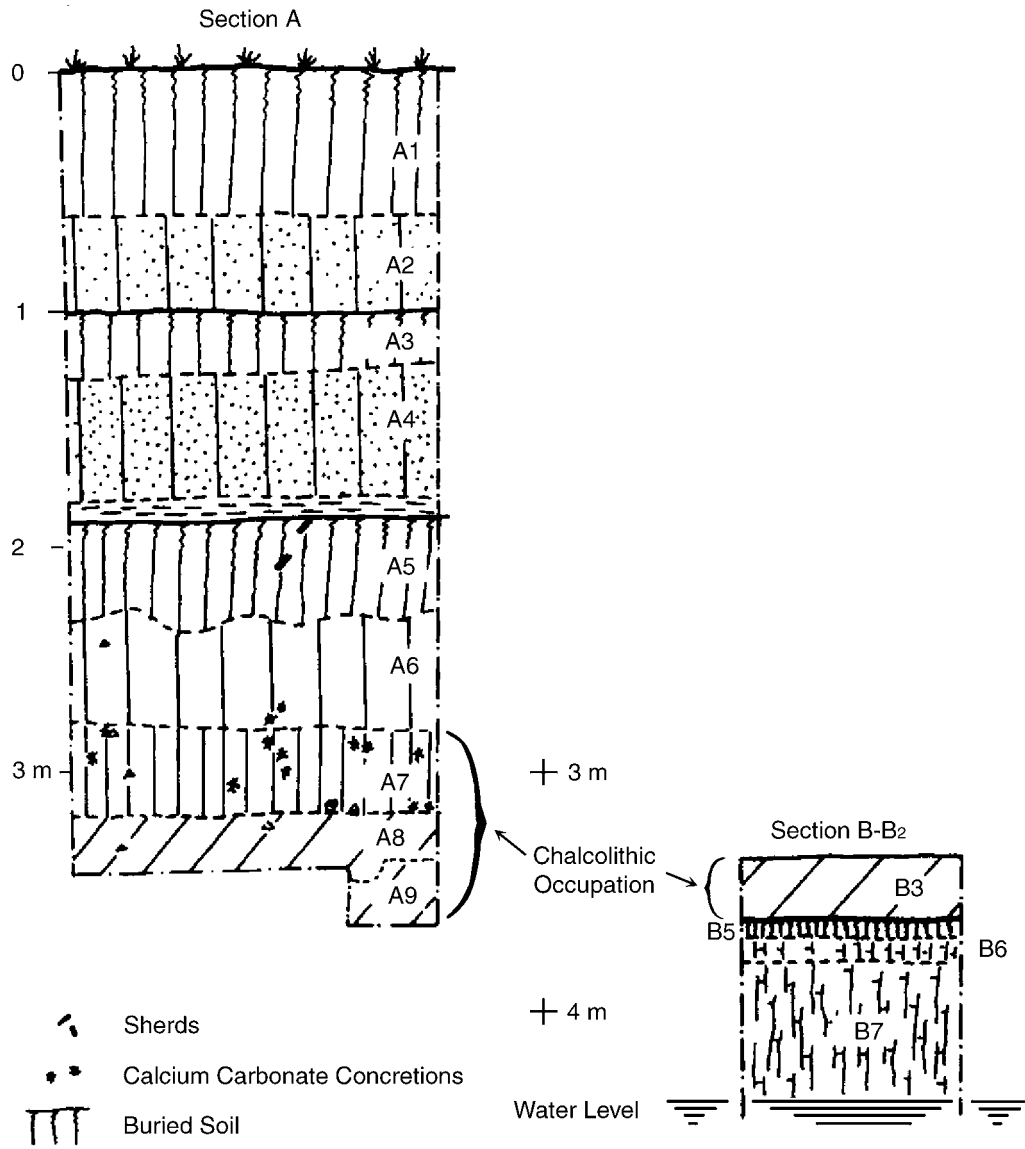


Figure 6.6. Sedimentary Record Preserved in the Atchana Drain. After Wilkinson 2000

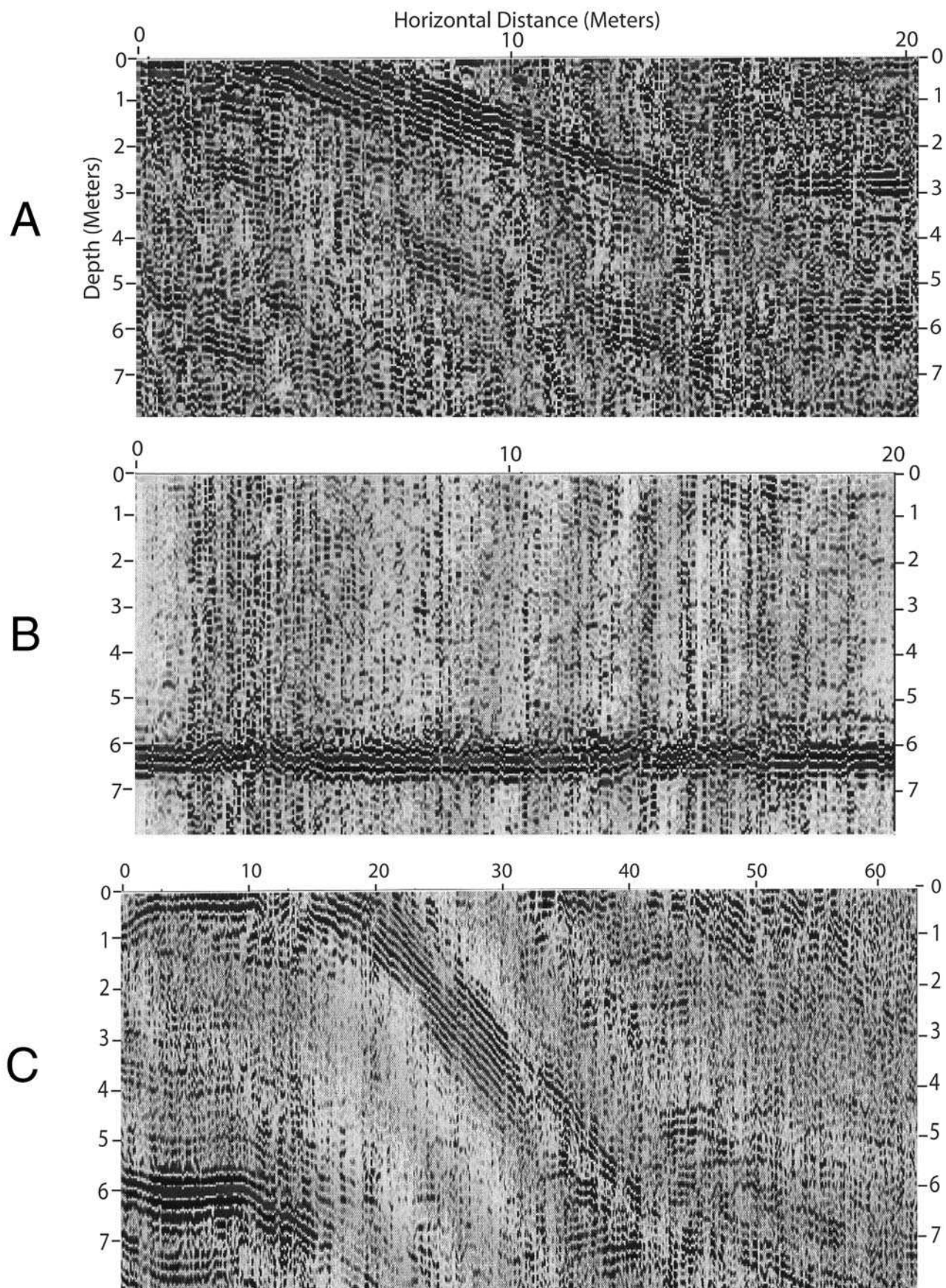


Figure 6.7. Three Ground-penetrating Radar Images (for Locations, See fig. 6.5): (A) Radar Image from GPR 1 Reveals the Slope of the Mound at Tell Atchana (Alalakh; AS 136) and the Bronze Age Land Surface, Now Buried 2.5 m Below the Modern Floodplain; (B) Radar Image from GPR 1 Shows a Strong Anomaly at 6.0 m Depth, Probably an Ancient Land Surface; and (C) Radar Image from GPR 2 Reveals the Edge of What May Be a Relict Orontes River Channel

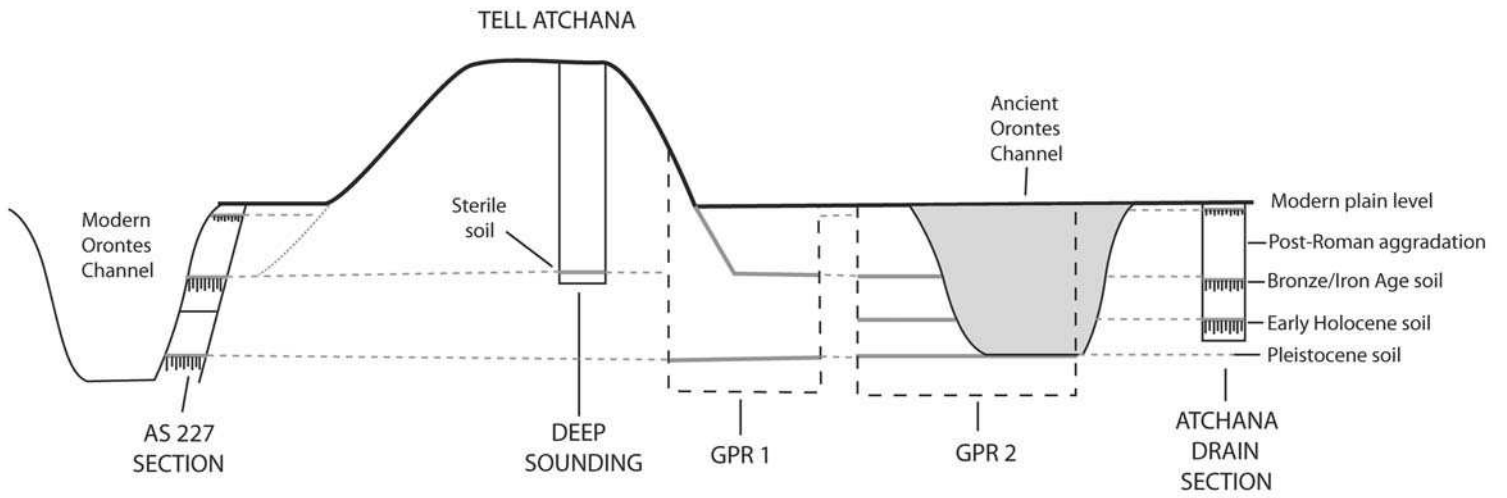


Figure 6.8. Schematic Reconstruction of Floodplain Development on the Orontes River Floodplain Surrounding Tell Atchana (Alalakh; AS 136)



Figure 6.9. CORONA Image of Tell Atchana (Alalakh; AS 136)/Tell Ta'yinat (AS 126) Area. Arrow Points to Ancient River Meander



# CHAPTER SEVEN

## THE TA‘YINAT SURVEY, 1999–2002

STEPHEN BATIUK, TIMOTHY P. HARRISON, AND LAURENCE PAVLISH

### INTRODUCTION

Tell Ta‘yinat (AS 126) forms a large, low-lying mound 1.5 km east of Demir Köprü on the northern bend of the Orontes River at the point where it turns west and winds around the southern edge of the Amuq Valley (fig. 7.1). Tell Ta‘yinat was the scene of large-scale excavations in the 1930s, conducted as part of the University of Chicago’s Syro-Hittite Expedition, which revealed a lengthy occupational history dating to the Early Bronze and Iron Age periods. This archaeological record and the available documentary evidence indicate that the site preserves the remains of ancient Kunulua, capital of the Neo-Hittite/Aramean Kingdom of Patina/Unqi. Since the results of the Chicago excavations remain largely unpublished, the Ta‘yinat survey was initiated in part with the aim of producing a final report that integrates the results of this earlier research effort.

The Ta‘yinat survey was conceived within the broader research framework of the Amuq Valley Regional Projects, which has been systematically investigating the archaeology of the Amuq Valley in southeastern Turkey since 1995. From its inception this explicitly regional project has employed a multi-scalar approach, conducting both trans-regional and site-specific field investigations in the effort to create a more comprehensive record of the economic and sociocultural history of the first sedentary communities to emerge in this part of the ancient Near Eastern world.

As part of this effort, the Amuq Valley Regional Projects have documented a distinct change in settlement on the Amuq Valley that occurred toward the end of the fourth millennium B.C. (Yener et al. 2000b: 183–84). Throughout most of the fourth millennium (particularly Amuq Phase G), settlements appear to have been concentrated primarily in the central part of the plain, forming a loosely integrated pattern. After a (possible) hiatus, a decisive shift is evident in the early part of the third millennium (corresponding with Amuq Phase H) toward the southern fringes of the plain, with Tell Ta‘yinat (AS 126) emerging as the largest settlement in the region at approximately 20 ha. Its position along the main east–west route linking inland Syria with the Mediterranean coast suggests a corresponding shift in the economic and political organization of the region. In addition to the introduction of red-black burnished ware, Amuq Phase H witnessed the emergence of a dense configuration of small (1–2 ha) sites, replacing the dispersed pattern of moderately-sized Amuq Phase G settlements that had preceded it. These sites were heavily concentrated in the southern part of the plain and at all the principal entry points into the valley.

However, several questions remain concerning the historical development of the Amuq region. Was this settlement shift part of an indigenous urbanization process, or the result of a large-scale migration associated with the introduction of the distinctive red-black burnished ware tradition that fundamentally transformed the social and cultural landscape of the plain during this period? Did a corresponding economic shift take place from the predominantly localized production and consumption of agricultural goods to more extensive, inter-regional networks that facilitated the commercial exchange of agricultural surplus as well as non-agricultural products? Furthermore, what role did these communities play in the extraction, processing, and distribution of the metals and other natural resources available in the mineral-rich mountains that surround the plain? The renewed investigations at Tell Ta‘yinat (AS 126) were initiated as part of the broader effort to create a regional database capable of facilitating the detailed comparative analyses necessary to address these research questions and thereby achieve greater insight into the historical development of the first state-ordered societies to emerge in this part of the ancient Near East.

The large-scale excavations of the original Chicago Expedition also produced substantial exposures of cultural strata dating to the Iron Age. Preliminary indications suggest that the site expanded considerably during the early phases of the Iron Age II period (specifically Amuq Phase Ob, ca. 900–800 B.C.), corresponding with an urbanization process that saw the region transformed into a small Neo-Hittite/Aramean state. Contemporary Neo-Assyrian sources, as well as epigraphic evidence recovered during these excavations, identify Iron Age Tell Ta‘yinat (AS 126) with Kunulua, capital of the Kingdom of Patina/Unqi. The Iron Age levels at Tell Ta‘yinat, therefore, also offer an opportu-

nity to correlate archaeological remains with the historical development of one of the small territorial nation-states that emerged along the eastern Mediterranean seaboard during the first millennium B.C.

Due to the considerable size and importance of Tell Ta'yinat (AS 126), the survey was conceived and initiated as part of a long-term project, committed to fully and systematically documenting the archaeological record preserved at the site. Given the extensive architectural remains preserved on the site, conservation will also play a central role in this project. Furthermore, these remains will be linked to the original Chicago excavations, with the aim of producing a comprehensive final report that integrates the results of both projects.

## PREVIOUS INVESTIGATIONS AT TELL TA'YINAT

### THE SYRO-HITTITE EXPEDITION

Large-scale excavations were conducted by the University of Chicago at Tell Ta'yinat (AS 126) over four field seasons between 1935 and 1938 as part of the Syro-Hittite Expedition. The excavations focused primarily on the west central part of the upper mound, although areas were also opened on the eastern and southern edges of the upper mound and in the lower city (see fig. 7.2). In all, the excavations achieved large horizontal exposures of five distinct architectural phases, or "building periods," dating to the Iron Age II period (Amuq Phase O, ca. 950–550 B.C.; Haines 1971: 64–66). A series of isolated soundings (see particularly T 4 and T 8 in fig. 7.2) below the earliest Amuq Phase O floors produced remains dating to the third millennium (primarily Amuq Phases I–J, but also H; Braidwood and Braidwood 1960: 13–14), indicating that a lengthy period of abandonment occurred between the Early Bronze and Iron Age settlements at the site.

Remains of the First Building Period were exposed primarily in the West Central Area and included two large structures (Buildings XIII and XIV) apparently arranged around an open courtyard (fig. 7.2). The northernmost of the two, Building XIII, preserved the distinctive ground plan of a north Syrian *bīt ḫilāni* (Haines 1971: 38–40, 64). During the Second Building Period, these two structures were leveled and an entirely new complex of buildings erected in their place, including the most famous of Tell Ta'yinat's *bīt ḫilāni*-palaces, Building I, with its adjacent *megaron*-style temple (Building II). Building I, along with a northern annex (Building VI) and a second *bīt ḫilāni* (Building IV), faced on to a paved central courtyard (Courtyard VIII; fig. 7.3). A paved street linked the courtyard to a large gate (Gateway XII) that provided access from the lower city. A second gate (Gateway VII) on the eastern edge of the upper mound and two gates in the lower city (Gateways III and XI) were also assigned to this building phase (Haines 1971: 64–65).

Renovations to the buildings in the West Central Area accounted for most of the activity assigned to the Third Building Period. The fragmentary remains of a large structure (Building IX) resembling an Assyrian courtyard-style building were uncovered on the knoll at the southern end of the mound (fig. 7.2) and tentatively assigned by the excavators to this phase as well. The Fourth Building Period witnessed the continued occupation of the *bīt ḫilāni* in the West Central Area but saw the abandonment of the temple (Building II). A series of poorly-preserved structures confined to the highest parts of the upper mound (e.g., Building X) were assigned to the Fifth (and final) Building Period (Haines 1971: 65–66).

In the absence of a more complete report, Gustavus Swift (1958) provides a preliminary study of the second- and first-millennium pottery (Amuq Phases K through O) gathered by the Chicago Expedition. Amuq Phase O, corresponding to the Iron Age II period, was marked by the widespread presence of red-slipped burnished ware. Although common painted and simple wares continued (with some modification) from the Early Iron Age (Amuq Phase N), according to Swift (1958: 124–26), the appearance of red-slipped burnished ware coincided with the earliest levels of Amuq Phase O, making it the primary marker for the start of the phase.

Drawing primarily on the artifactual evidence recovered from the Iron Age levels at Chatal Höyük (AS 167), Tell al-Judaidah (AS 176), and Tell Ta'yinat (AS 126), Swift proposed subdividing the Amuq Phase O sequence into four stages, which he labeled Stages Oa–Od, with ceramic imports and key historical events providing a chronological framework. Each stage also coincided with changes in the surface treatment of red-slipped burnished ware. Hand burnishing occurred exclusively in Stage Oa (ca. 950–900 B.C.). Wheel burnishing was introduced in Stage Ob (ca. 900–800 B.C.) and then became the primary surface treatment in Stages Oc (ca. 800–725 B.C.) and Od (ca. 725–550 B.C.; Swift 1958: 139–41, table 11). Sherds of eighth-century Attic geometric pottery were recovered from Stage Oc levels, while Corinthian ware, Attic black-figure ware, and Assyrian palace ware were found exclusively in Stage Od (Swift 1958: 154–55). Since a stratigraphic phasing of the excavations had not been completed by the time of his study, Swift was not able to correlate his analysis with the architectural sequence later published by Richard Haines.

The Chicago excavations also produced an extensive corpus of Akkadian, Aramaic, and Neo-Hittite (or Luwian) inscriptions. Luwian hieroglyphic inscriptions account for the largest number, a total of eighty-five fragments, thirty-two of which have been shown to come from seven distinct monumental inscriptions (Gelb 1939: 38–40). One of these, the so-called Halparuntas inscription, is comprised of six basalt fragments from part of a colossal statue of an enthroned figure. Although the precise provenience of the statue remains unclear,<sup>38</sup> the inscription makes reference to *Halpa<sup>pa</sup>-runta-a-s(a)*, very possibly the same Neo-Hittite ruler who is listed as having paid tribute to Shalmaneser III in the mid-ninth century (see further discussion below).

If this historical correlation is correct, it provides a possible date for the remainder of the Luwian hieroglyphic inscriptions found at the site and raises the possibility of isolating the building period, and cultural horizon, in which these monumental objects were erected. With only a few exceptions, all of the fragments appear to have been found in the fill or foundation trenches of structures dating to the Second Building Period (Gelb 1939: 39–40; Haines 1971: 66); in other words, in secondary and tertiary contexts. Moreover, all but one of the inscriptions (an altar piece in obvious secondary reuse in Building II) clearly had been smashed and destroyed intentionally before being discarded. The Halparuntas inscription, therefore, would appear to date the Luwian epigraphic remains at Tell Ta‘yinat (AS 126) to the mid-ninth century or earlier, while their *stratigraphic* context places this material in the First Building Period.

A number of pottery sherds and small stone artifacts inscribed in Aramaic were uncovered during the Oriental Institute excavations at Tell Ta‘yinat (AS 126). While this material remains unpublished, one inscription has received some attention. Fragments of a small bowl of “late Phase O ware” were found inscribed with the word KNLH (or KNLYH), tantalizingly similar linguistically to Kunulua, capital of the Kingdom of Patina/Unqi. The paleography of the inscription suggests a seventh-century date (Swift 1958: 191–92). It is not clear whether this is the same Aramaic-inscribed sherd reported by Haines to have been found on Floor 2 of Building I in the West Central Area (1971: 66). If so, this inscription would place the Third Building Period in Swift’s Od sub-phase and further confirm the historical identification of the site.

Cuneiform inscriptions recovered during the course of the excavations included four small monument fragments, five tablets, and a stone cylinder seal. The most informative Neo-Assyrian text, however, is a dedication, “for the life of Tiglath-pileser, King of Assyria,” carved on an ornamental copper disk found in the vicinity of Building I and assigned by the excavators to its second level (or Floor 2; Swift 1958: 183–84; Brinkman 1977: 62). Despite its uncertain stratigraphic context, this votive would seem to corroborate the dating of the Third Building Period, linking its founding levels to the beginning of Subphase Od and placing the Second Building Period squarely within Subphase Oc (ca. 800–725 B.C.).

Six limestone orthostats, carved in the Assyrian provincial style, were found reused in the uppermost layer (of three layers) of pavement in Gateway VII (McEwan 1937: fig. 10; Haines 1971: 60–61). They therefore probably date to the Third Building Period or later. A seventh orthostat, carved with a scene of a mounted charioteer riding over a fallen human figure, is reported to have been found at Tell Ta‘yinat (AS 126) in 1896 (Braidwood 1937: 33; Orthmann 1971: 83) but remains unprovenanced. Finally, a bronze statuette was also attributed by the excavators to the Neo-Assyrian phase of occupation at the site (McEwan 1937: fig. 9).

## HISTORICAL REFERENCES TO IRON AGE TELL TA‘YINAT

The earliest references to the Amuq region during the Iron Age are preserved in the Neo-Assyrian royal annals (for a more thorough review of these sources, see Harrison 2001b). The earliest reference dates to the reign of Ashurnasirpal II and occurs as part of a description of a campaign conducted in ca. 870 B.C. to subdue a series of kingdoms in northwest Syria, including the Kingdom of Patina and its capital Kunulua (Grayson 1991: 216–19, text A.0.101.1, column iii, lines 55–92a). The account also includes a detailed itinerary of the campaign route that clearly situates the Kingdom of Patina in the Amuq Valley and its capital on the southern edge of the plain just north of the Orontes River, leaving little doubt that Kunulua should be associated with Iron Age Tell Ta‘yinat (AS 126; cf. Hawkins 1982: 389, n. 139; Liverani 1992: 74–75) and not Tell ‘Ain Dara (contra Orthmann 1971: 198, n. 21; 1993: 251, n. 42) or other sites that have been proposed.<sup>39</sup>

38. Gelb (1939: 39) locates it near the “East Gate” but does not specify whether he is referring to the upper or lower city, while Haines (1971: 41) states that it was found “in the debris” of Courtyard VIII in the West Central Area.

39. Other earlier candidates have included Tell Jindaris/Jinderez Tepe (AS 58; Olmstead 1918: 248, n. 67; Braidwood 1937: 25, n. 3), Chatal Höyük (AS 167; Gelb 1935: 189), and Tell Kuna‘na (Elliger 1947: 71), located near the Afrin River.

Shalmaneser III continued the aggressive expansionist policy of his father, launching the first of a series of campaigns against western Syria in 858 B.C. (Grayson 1996: text A.0.102.2, column i, line 41b–column ii, line 10a; see also text A.0.102.3). In the years following these campaigns, his official annals report that he received tribute from several rulers of Patina, including Qalparunda (Grayson 1996: text A.0.102.1.92b–95; text A.0.102.2, column ii, line 21; Hawkins 1982: 391–92; 1995: 94–95), corroborating the Luwian form of this ruler’s name preserved in the hieroglyphic inscription from Tell Ta‘yinat (AS 126) mentioned above (Gelb 1939: 39). References to the Kingdom of Patina also appear in a number of inscriptions that date to the reign of Shalmaneser. Interestingly, in some of these inscriptions the designation “Unqi” occurs in place of Patina (Harrison 2001b: 118–19).

The latter decades of the ninth century correspond with a temporary decline in Assyrian power. Consequently, the official records are silent regarding political developments in western Syria. However, the reign of Adad-narari III (810–783 B.C.) saw a limited resurgence that resulted in a number of campaigns against coalitions of Syrian states. The first of these, in 805/804, was directed against an alliance led by Atarshumki, King of Arpad, and appears to have included the Kingdom of Patina/Unqi (Hawkins 1982: 399–400; Weippert 1992: 56–57).

A boundary stela found along the Orontes River to the southwest of Antakya hints at a decisive downturn in the political independence of Patina/Unqi. The inscription describes the transfer of the city of Nahlasi along with all its lands and settlements to Atarshumki of Arpad, apparently at the expense of Zakkur of Hamath, and the realignment of the border between the two kingdoms to the Orontes River (Donbaz 1990; Grayson 1996: text A.0.104.2). This action appears to have taken place during the campaign of 796 B.C. and therefore may be associated with the events recorded on the Zakkur Stela (cf. Donner and Röllig 1976: no. 202). In the inscription, Zakkur accuses Bar-Hadad of Damascus of having induced a coalition of northern kingdoms, including “*mq*,” clearly the Aramaic equivalent to the Akkadian Unqi, to attack Lu‘ash, the northern province of Hamath (Hawkins 1982: 400, 403–04; Weippert 1992: 58–59; Dion 1997: 128–29).

Whatever the broader geo-political ramifications of these events (see further in Dion 1995; 1997: 201–02; Harrison 2001b: 120–21), it is clear that a decisive shift had occurred in the political fortunes of the Kingdom of Patina/Unqi by the end of the century. Whether we assume that the Antakya stela was found near its original location (cf. Weippert 1992: 58, n. 97) or was transported down the Orontes River from a point upstream, perhaps as far south as Jisr al-Shughur (cf. Hawkins 1995: 96), the basic result was the same. At the very least, the territorial extent of Patina/Unqi had been reduced considerably, and the kingdom may even have lost its political independence altogether. With the start of the eighth century, therefore, it seems reasonable to conclude that Aramaean Bit-Agusi had successfully extended its influence, if not outright control, over the former Neo-Hittite Kingdom.

Two Aramaic inscriptions discovered at sites in the Aegean may also refer to the Amuq region during this period. Both were found carved on bronze equestrian harness trappings evidently taken as booty “from *mq*.” One was recovered from the site of Eretria (Carbonnet 1986) and the other from the Heraion on Samos (Kyrieleis and Rollig 1988). Both inscriptions, which have been dated paleographically to the ninth century, also make reference to Hazael and “the year that our lord [i.e., Hazael] crossed the river” (Bron and Lemaire 1989; Eph‘al and Naveh 1989). Intriguingly, a similar bronze frontlet was uncovered in Room L of Building I at Tell Ta‘yinat (AS 126). Although its precise stratigraphic context remains unclear, the iconography of the frontlet suggests a date in the late eighth or seventh century B.C. (Kantor 1962).

Following the reign of Adad-narari III, Assyrian references to the region fall silent again until active contact was resumed by Tiglath-pileser III. The kingdom and region were now referred to exclusively as Unqi. In 738 B.C., as part of his second western campaign, we are told that Tiglath-pileser seized a rebellious Unqi, destroyed Kunulua, and disposed of its king Tutammu and deported many of its citizens. He then rebuilt the capital, settling it with people displaced from elsewhere in the Assyrian Empire, and created the province of Kullani (Tadmor 1994: Annal 25:3–12; Hawkins 1974: 81–83; idem 1982: 410–11; Weippert 1982: 395–96). The region appears to have remained under Assyrian administrative control until the collapse of the empire, receiving only passing mention during the reigns of Sennacherib, when the provincial governor served as eponym (in 684 B.C.), Esarhaddon, and Ashurbanipal (Hawkins 1982: 425; 1980–83; Millard 1994: 51).

## THE TA‘YINAT SURVEY

The survey of Tell Ta‘yinat (AS 126) was initiated in 1999 and conducted as part of the field season, which took place between August 11 and August 25 (for a more detailed report of the 1999 season, see Harrison and Batiuk



2001).<sup>40</sup> The primary objectives of the 1999 survey at Tell Ta'yinat were to determine the spatial extent of the ancient settlement and to assess the feasibility of conducting further explorations at the site. Although the presence of dense cotton coverage prevented a conventional surface survey of the site, the survey team was able to conduct a reasonably intensive investigation over a four-day period, surveying both the upper mound and lower settlement. A detailed topographic map of Tell Ta'yinat was created during the 2001 field season (see further in Yener et al. 2002). Finally, in 2002 a geomagnetic remote sensing survey of the lower mound was initiated as part of the newly launched Ta'yinat Archaeological Project (TAP).<sup>41</sup>

These brief preliminary field seasons have allowed the creation of a detailed base map delineating the topographic and cultural parameters of the ancient settlement that have confirmed Tell Ta'yinat's position as the predominant settlement on the plain throughout much of the third and first millennia B.C. The Ta'yinat survey has also confirmed that much of the site remains intact and accessible for archaeological exploration despite intensive agricultural cultivation and modern development and therefore warrants further attention as part of the ongoing effort to document the cultural history of the Amuq Valley during the Bronze and Iron Ages.

### SITE TOPOGRAPHY

More than 1,500 readings (including their *x*, *y*, and *z* coordinates) were collected with the aid of a Total Station surveying instrument during the 2001 field season. These were then used to create a computerized base map (in ArcView GIS) of the entire site (fig. 7.4). The mapping survey revealed that Tell Ta'yinat (AS 126) is comprised of two distinct topographic units, an elongated upper mound and a sprawling lower settlement. The upper mound sits just north of the modern Antakya-Reyhanlı road and measures approximately 400 m (east–west) by 500 m (north–south), or 20 ha in size. The lower settlement, which is now largely buried beneath the alluvium of the Orontes floodplain, extends to the north, east, and southeast in a broad curving arc that encircles the upper mound.

A CORONA satellite image, obtained following the 2000 field season,<sup>42</sup> confirms the settlement pattern delineated by the topographic survey. When the topographic map was laid over a georeferenced digital copy of the CORONA image, a clearly discernible “shadow” outlining the lower mound emerged (fig. 7.5). A number of other intriguing anomalies are also discernible on the CORONA image, including a linear feature (a possible fortification wall?) that appears to enclose the northern and western sectors of the lower settlement.

The results of the surface survey (see further description below) provide further confirmation of the spatial parameters of the lower settlement delineated by the topographic survey and CORONA satellite image (fig. 7.6). Sherd density distributions indicate that the lower settlement extended north from the upper mound for approximately 200 m and to the east for approximately 100 m, with a small protrusion extending to the southeast. The measurements suggested by these layered data extend the composite size of both upper and lower mounds at Tell Ta'yinat (AS 126) to 500 × 700 m, or an area encompassing approximately 35 ha. These measurements differ slightly from those of the original excavators, who estimated the size of the site at 500 × 620 m (Haines 1971: 37), but match the figures recording during the Braidwood survey (Braidwood and Braidwood 1960: 13).

### GEOMAGNETIC REMOTE SENSING SURVEY

Given the considerable size of Tell Ta'yinat, its complex settlement history, and the extensive excavations conducted previously at the site, a remote sensing survey was considered the most prudent and effective way to assess the archaeological potential of the various components of the site. When combined with the results of the topographic and surface surveys, these layered data will permit focused investigations of those areas of the site, such as the West Central Area, which to date have indicated the greatest archaeological potential.

The primary goal of the 2002 field season was to conduct a preliminary pilot study and determine the most effective remote sensing method (and strategy) to use in the field at Tell Ta'yinat (AS 126) before embarking on a more comprehensive survey of the site. As a relatively low-cost yet effective (and widely used) remote-sensing technique,

40. The survey team consisted of Timothy Harrison, Stephen Batiuk, Kubra Ensert, Sarah Graff, and Heather Snow. The Ministry of Culture was represented by Hamdi Ekiz of the Museum of Anatolian Civilization in Ankara.

41. The TAP field season was conducted between May 20 and June 11. The research team consisted of Timothy Harrison, Laurence Pavlish, Stephen Batiuk, James Osborne, and Heather Snow.

Laurence Pavlish conducted the geomagnetometry survey with the assistance of Stephen Batiuk. Mr. Okan Cinemre of the Museum of Anatolian Civilization in Ankara served as government representative for the Directorate of Monuments and Museums.

42. The author wishes to thank Jesse J. Casana, who first drew our attention to the CORONA image of Tell Ta'yinat and generously shared a georeferenced electronic copy of this image.

magnetometry was our first choice for the pilot study. Our primary concern was whether we would be able to isolate the magnetic lateral contrast created by settlement structures against the background noise of local geophysical conditions. Accordingly, a 7 ha area in the northeast sector of the lower settlement was marked off and mapped by pacing east–west transects spaced approximately 1 m apart (fig. 7.7), carrying a hand-held magnetometer. To provide a control, a second magnetometer was set up as a base station. In all, more than 600 pedestrian transects were completed, and more than 195,000 magnetic readings recorded, with a coverage density of approximately one reading every 0.5 m.

Although a comprehensive analysis of these data is still in progress, a number of preliminary observations can be made. Most importantly, the magnetometer succeeded in recording numerous magnetic anomalies that appear to represent artificial, rather than natural, sub-surface features. Furthermore, when the magnetic data are plotted spatially, these anomalies consistently translate into sharply delineated angular structures. Four magnetic anomalies are highlighted as examples in figures 7.8 and 7.9. In each case, the anomaly preserves a series of rectilinear features that appear to form a coherent structure or set of structures (see further detail in fig. 7.10). When georeferenced with the site base map, the anomalies also appear to form a composite plan with a shared gradient and orientation toward the northeast (fig. 7.11). While additional analysis is still needed to clarify the precise nature and function of these anomalies, it nevertheless seems clear that they represent the product of human activity and very likely delineate part of the lower (or outer) settlement of Tell Ta‘yinat (AS 126).

## THE SURFACE SURVEY

### *Sampling Strategy and Recovery Methods*

A preliminary reconnaissance survey was conducted during the 1999 field season to relocate the original excavation units of the Chicago Expedition and determine whether any architecture uncovered during these excavations remained *in situ*. This effort produced a number of important discoveries. Only Field IX, located on a knoll at the southern end of the upper mound (see fig. 7.2), was found to be inaccessible, a large cotton processing facility having been constructed over this part of the site in the 1950s. At the lower southern edge of the upper mound, in a drainage canal that borders the northern shoulder of the Antakya-Reyhanlı road, we discovered the doorposts that had flanked the entrance to Gateway III (cf. Haines 1971: 58–59, pl. 111). Both posts, carved from blocks of basalt, were found protruding vertically from the ground and appeared to be in their original position. This discovery permitted us to georeference the plan of the gateway produced by the Chicago Expedition and to link it to our GIS-formatted base map (fig. 7.12). Elevation readings taken from the top of the doorposts also permitted us to calibrate our absolute elevations with those recorded by the Chicago Expedition. In addition to Gateway III, isolated concentrations of basalt ashlar were found in a number of places along the western edge of the upper mound, clearly having been collected from elsewhere on the site. A collection of cut limestone boulders was also observed near the northwest corner of the lower mound.

Given the considerable size of the site, and the constraints imposed by cultivation and modern development, it was deemed necessary to adopt an opportunistic sampling strategy for the surface survey. Despite dense cotton cover, however, the survey team was able to achieve reasonably intensive coverage of both the upper and lower mounds. In order to distinguish between these two areas, sampling units were subdivided into “fields” (upper mound) and “sectors” (lower settlement; fig. 7.13). Each sampling unit was then traversed by means of pedestrian transects (or passes) spaced apart at 10 m intervals. All visible cultural material encountered along each transect (ceramic or otherwise) was collected and counted every 10 m. The diagnostic material recovered from each of these spatial units was then bagged and retained for further analysis. Three “fields” (A, B, and C) were laid out on the upper mound in the vicinity of the West Central Area and sampled according to this recovery procedure. This process was then repeated in the lower settlement, which was subdivided into four “sectors” (north, east, south, and west). A single pass, comprised of a series of connecting transects (A through G), was also conducted around the base of the upper mound. The spatial data produced by this sampling effort was subsequently tabulated and entered into a relational database.

### *Settlement Patterns*

Although analysis of these data is still in progress, our findings indicate that the third-millennium settlement (specifically Amuq Phases H through J) almost certainly extended across the entire upper mound. In particular, the surface survey produced significant quantities of red-black burnished ware (fig. 7.14:10–17), typically associated with the introduction of Amuq Phase H, along the edges and around the base of the upper mound. The survey also produced significant concentrations of buff-colored simple wares (fig. 7.14:18–19), part of a long ceramic tradition that character-

izes the Amuq Phases H and I/J sequence, on the summit of the upper mound in the general vicinity of the West Central Area. Based on our calibrated elevation readings, the current surface level of the West Central Area appears to be only slightly higher than the elevations assigned to third-millennium levels in the deep soundings excavated by the Braidwood team (particularly in T 4 and T 8; see Braidwood and Braidwood 1960: 13–14, figs. 10–11). This concentration of late third-millennium pottery, therefore, may be an indication that a substantial portion of the third-millennium settlement remains largely undisturbed, yet accessible just below the surface in this area of the upper mound, having been exposed by the removal of the Iron Age levels uncovered during the Chicago excavations.

In contrast to the upper mound, the lower settlement appears to have been occupied only during the Iron Age II period, or more specifically Amuq Phase O, reaching its greatest extent sometime in the late ninth or eighth century B.C., most likely during the Second Building Period described earlier. The surface survey recovered large quantities of red-slipped burnished ware pottery throughout the lower settlement (fig. 7.14:1–9), particularly the wheel-burnished tradition, which according to the Swift sequence was introduced in the ninth century (Stage Ob) and became the predominant surface treatment in the eighth and seventh centuries (Stages Oc and Od; Swift 1958: 139–41). It is possible that the lower settlement reached as far south as Tell Ta'yinat al-Saghir (AS 127), although dense cotton coverage prevented our survey from determining this for certain. The results of the surface survey thus confirm a settlement pattern at Tell Ta'yinat (AS 126) that has also been observed at other Iron Age sites in the region, including Carchemish and Tell Afis (Mazzoni 1995: 183–89; see also 1994), and perhaps now also Tell 'Ain Dara (Stone and Zimansky 1999: 2–4).

### *Miscellaneous Finds*

The survey also produced a variety of isolated surface finds, including fragments of building material (both stone and mudbrick), a carved stone fragment (fig. 7.15:1), possibly a piece of furniture, a rectangular, four-footed basalt bowl (fig. 7.15:2), several stone spindle whorls, and numerous clay loom weights.

The most remarkable find, however, was the corner fragment of a basalt stela, carved with several Luwian (or Neo-Hittite) hieroglyphic signs (fig. 7.15:3), which was brought to the attention of the survey by a local farmer. A preliminary analysis has suggested the possibility that this fragment may form the corner piece of one of the inscriptions recovered by the Chicago Expedition, specifically the Tell Ta'yinat 2 Inscription (J. D. Hawkins, pers. comm., February 7, 2001; for a reconstruction and further description of this document, see Hawkins 2000: 366–75).

During the course of the geomagnetic survey, a number of additional surface finds were discovered by the survey team or brought to their attention by local farmers, including a second Luwian hieroglyphic inscription, carved on a partially preserved limestone stela (fig. 7.15:4), and an Iron Age stamp seal (fig. 7.15:5). One of the team members also discovered a bronze coin in the course of pacing the agricultural fields immediately to the north of the site.

## SUMMARY OBSERVATIONS

Although preliminary, the results of the Ta'yinat survey have confirmed the regional importance of the site during the third and first millennia B.C. Moreover, in keeping with the broader research objectives of the regional fieldwork effort, particularly the goal to achieve greater insight into the historical development of the first state-ordered societies to emerge in this part of the ancient Near East, it is clear that Tell Ta'yinat (AS 126) should continue to be a central focus of this ongoing effort. The Ta'yinat survey has also demonstrated that considerable portions of the site remain intact and accessible for exploration. Indeed, the destructive impact of ongoing agricultural cultivation gives urgency to the need for a more systematic investigation and documentation of the archaeological remains preserved at the site.

As both the regional settlement pattern data and the results of the survey indicate (cf. Yener et al. 2000b: 183–84; Harrison 2000a; Harrison and Batiuk 2001), it is clear that Tell Ta'yinat (AS 126) was not only the largest settlement on the Amuq Valley during the third millennium B.C., but it played a central role in the expanding commercial and political networks that emerged during this period. This development no doubt was the product of a complex process of social and economic transformation, set in motion by forces with cultural roots in the preceding fourth millennium (primarily Amuq Phase G, but beginning perhaps already in Phase F).

This largely indigenous cultural transformation was further complicated with the introduction of red-black burnished ware. The spatial distribution of this distinctive ceramic tradition has often been attributed to the southward migration of a single cultural group that reached as far south as Palestine (Esse and Hopke 1984; but see Philip 1999; Philip and Millard 2000). Rare at Cilician sites (cf. Mellink 1992; 1994), but well represented in the Amuq (primarily

Phase H; Hood 1951; Braidwood and Braidwood 1960: 358–68), red-black burnished ware can be traced to earlier traditions in northeastern Anatolia, particularly in the Kur and Araxes Valleys of Transcaucasia (cf. Sagona 1984; 2000). Concurrent with this balkanized and fluid cultural landscape is evidence for a sharp rise in metal production and a fundamental reorganization of this important industry (Palmieri et al. 1993; Yener 2000b).

The historically attested rise of Ebla as a third-millennium power in northern Syria also raises questions concerning Tell Ta‘yinat’s possible political role in the region during this period. Contemporary textual sources, for example, suggest that Alalakh, referred to as *A-la-la-hu*, was a dependency of Ebla. During the Ur III period, *Mu-ki-iš* and Ebla are mentioned as vassals of Ur. During the second millennium B.C., we know that the capital of the Kingdom of Mukish was Alalakh and that it was located at Tell Atchana (AS 136), as the archives excavated at that site clearly attest (Yener et al. 1996: 53–54; Yener et al. 2000b). Some doubt has been expressed, however, whether Tell Atchana was already inhabited in the third millennium (cf. Braidwood and Braidwood 1960: 523), despite Woolley’s claim that it was (1955: 6–10). Although certainly speculative at this point, it is tempting to associate these third-millennium references with the site of Tell Ta‘yinat.

During the Iron Age, as we have seen, historical sources indicate that a decisive shift occurred in the political fortunes of the region in the latter part of the ninth century, while the archaeological record suggests a corresponding transformation of the cultural landscape. Regional survey data, for example, reveal an urbanization process that culminated with the re-emergence of Tell Ta‘yinat (AS 126) as the dominant settlement on the plain (Harrison 2001b: 122–24). Both the Chicago excavations and the Ta‘yinat survey, meanwhile, substantiate the explosive growth of Tell Ta‘yinat in the early Iron Age II period, with the settlement reaching at least 35 ha in size during the Second Building Period, when occupation expanded off the upper mound and into the lower city. The epigraphic and artifactual evidence assign this phase in the settlement history of the site to the late ninth and eighth centuries B.C., while confirming its historical identification with Kunulua, capital of the Kingdom of Patina/Unqi.

## ACKNOWLEDGMENTS

The authors wish to extend our sincere thanks to the Ministry of Culture’s General Directorate of Monuments and Museums for permitting us to initiate our investigations at Tell Ta‘yinat, and to the Antakya Archaeological Museum and Mustafa Kemal University for their help facilitating the various stages of fieldwork described here. We also wish to thank K. Aslihan Yener for inviting us to participate in the Amuq Valley Regional Projects, and Hatice Pamir for her help and patient introduction to the complexities of conducting fieldwork in the Hatay. Mr. Stuart Hughes and the staff of the Canadian Embassy in Ankara have provided invaluable help navigating the various government offices and ministries involved with coordinating archaeological research in Turkey. Finally, we wish to express our gratitude to the Curtiss T. & Mary G. Brennan Foundation for graciously providing the start-up funds needed to initiate these investigations, and to the Office of Research and International Programs at the University of Toronto for providing the matching funds needed to secure this initial seed funding. Funding for the 2002 field season was made possible by a research grant from the Social Science and Humanities Research Council of Canada.

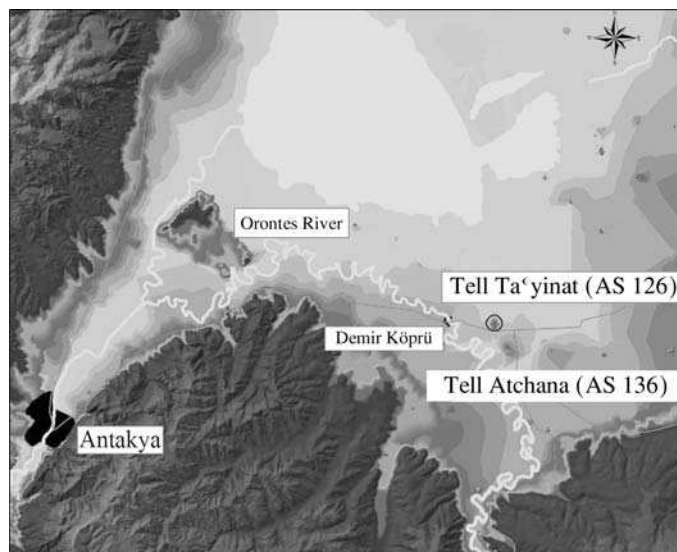


Figure 7.1. Map of the Amuq Valley in the Hatay Region, Showing the Location of Tell Ta‘yinat (AS 126)

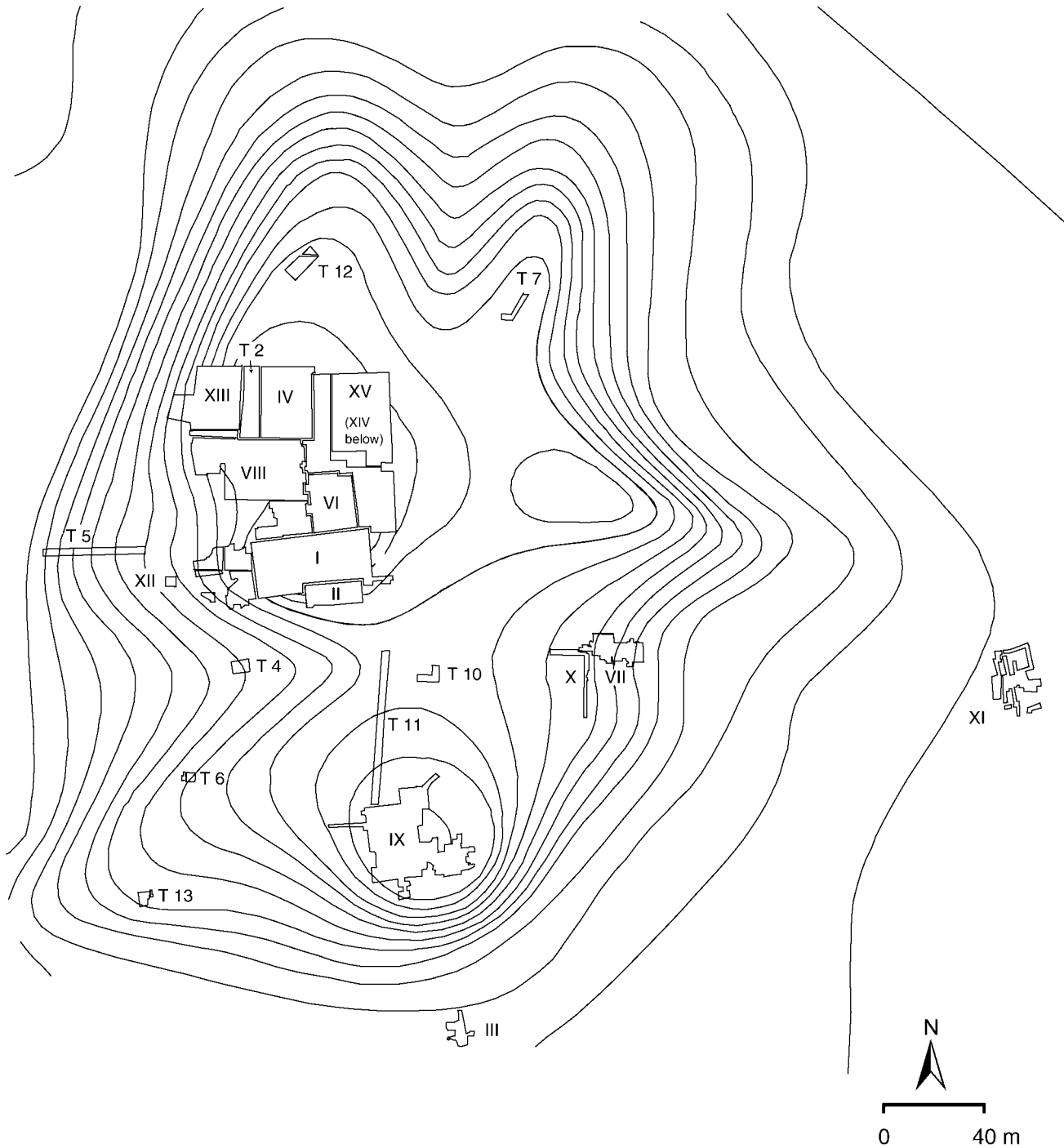


Figure 7.2. Topographic Map of Tell Ta'yinat (AS 126) with Excavated Areas (T 2, 4-7, 10-13) and Building Units (Buildings I-II, IV, VI, IX-X, XIII-XIV; Courtyard VIII; Gateways III, VII, XI-XII; and Platform XV) Indicated. Adapted from Haines 1971: pl. 93

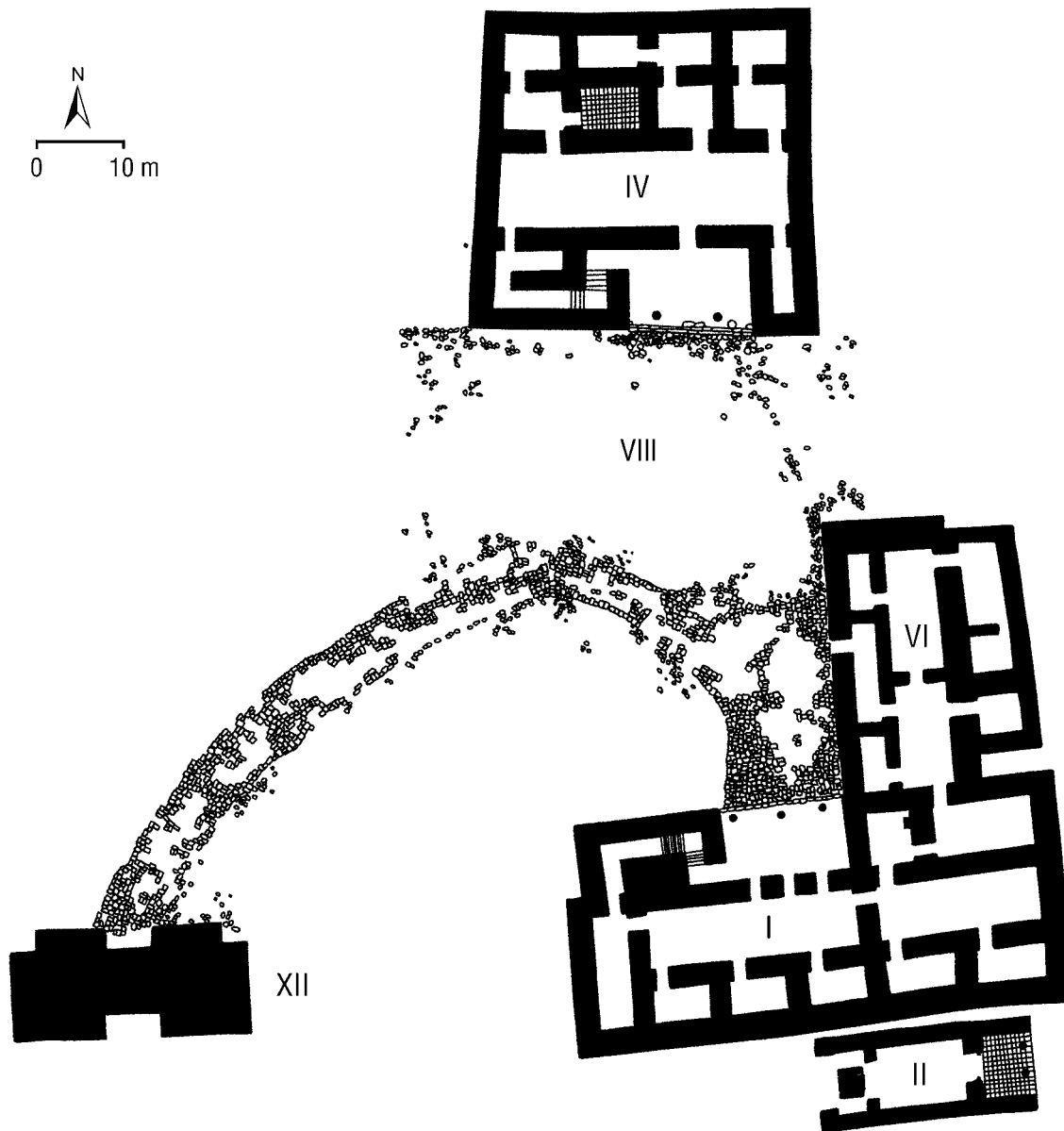


Figure 7.3. Plan of the West Central Area at Tell Ta'yinat (AS 126) Showing Architecture Assigned to the Second Building Period (Adapted from Haines 1971: pl. 106): Buildings I, II, IV, and VI; Courtyard VIII; and Gateway XII

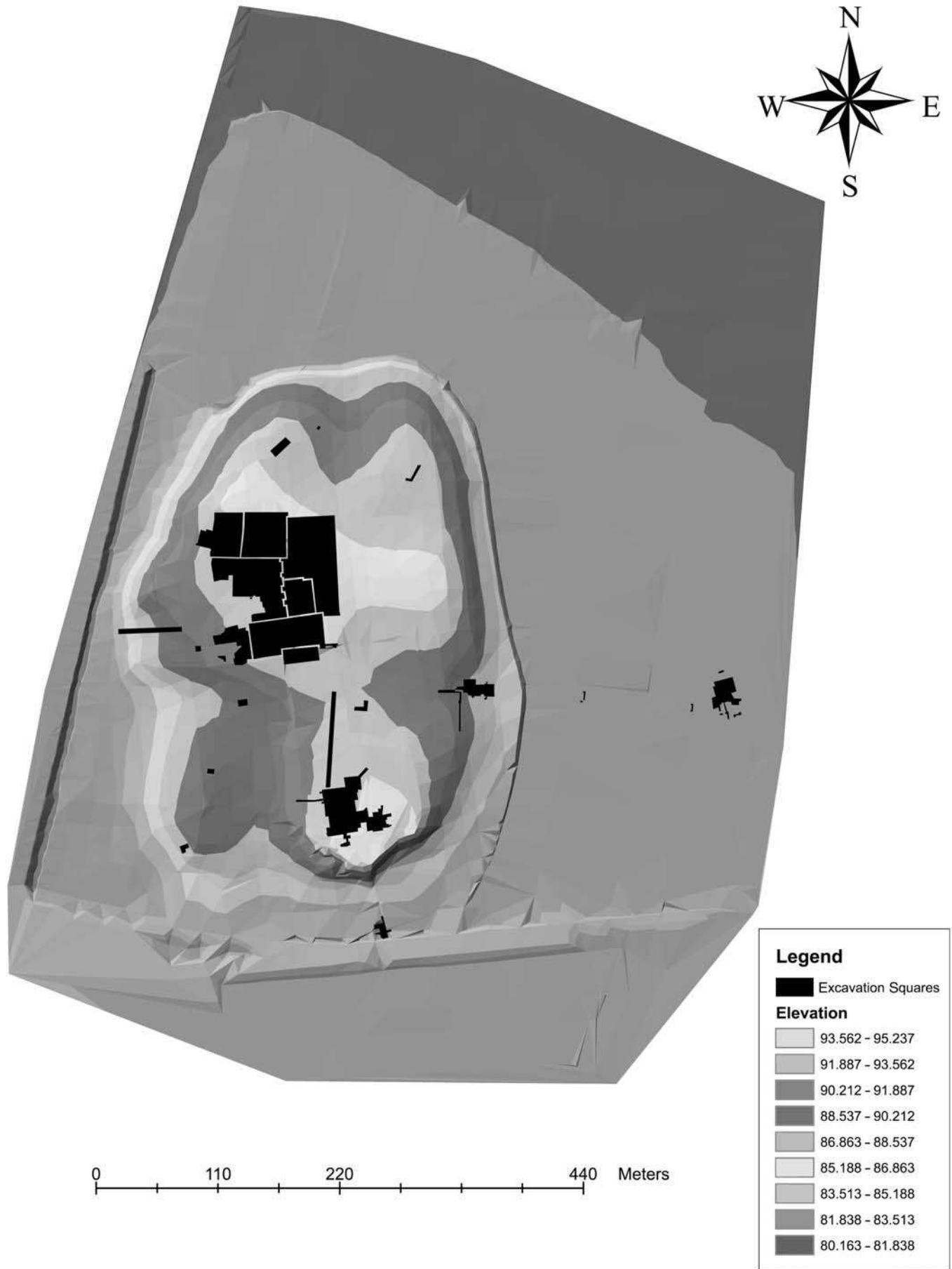


Figure 7.4. Topographic Map of Tell Ta'yinat (AS 126)



Figure 7.5. Topographic Map of Tell Ta'yinat (AS 126) Overlaid on a CORONA Satellite Image of the Site



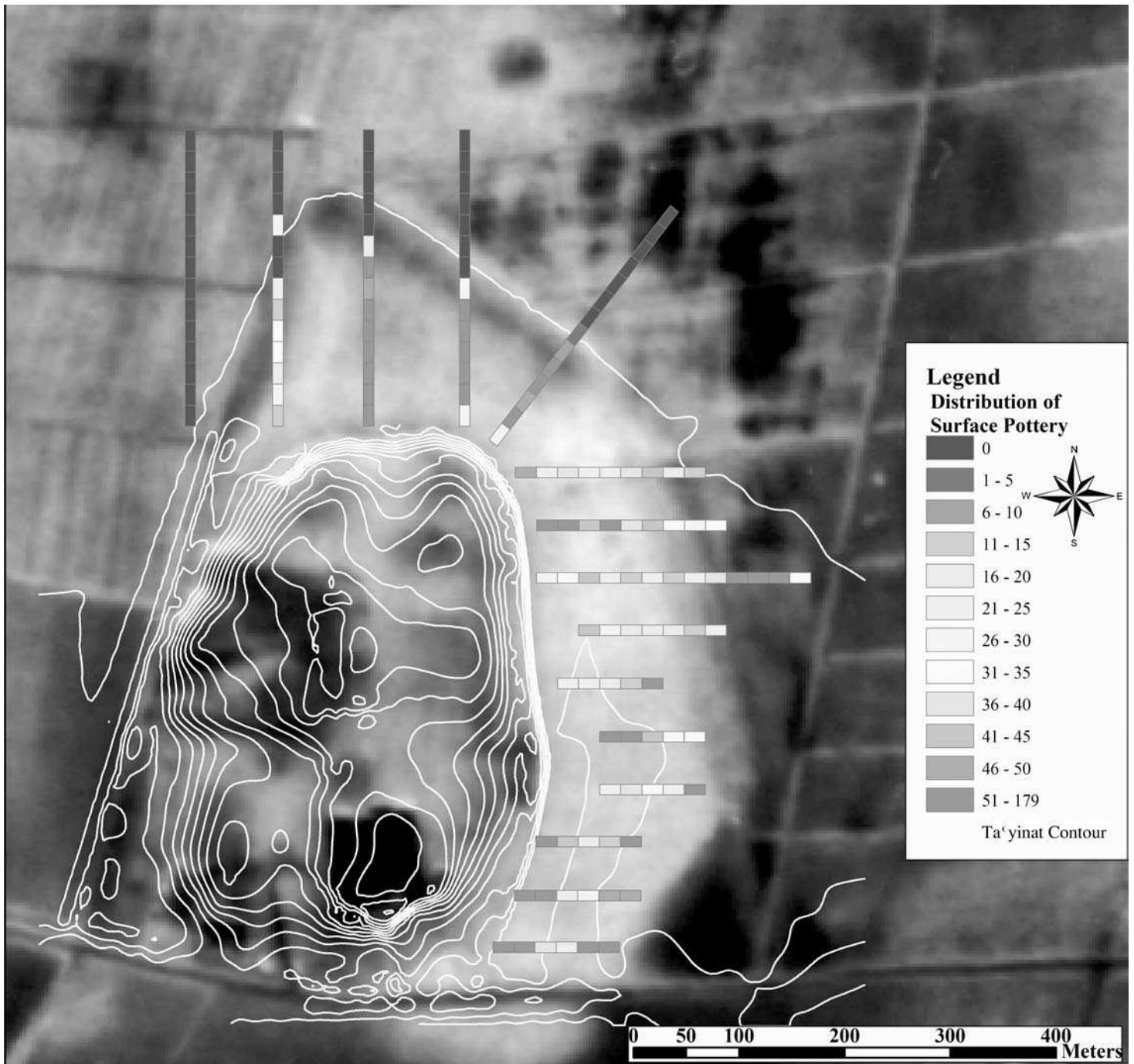


Figure 7.6. Composite Plan of Tell Ta'yinat (AS 126), Including a Density Distribution of Surface Pottery, Delineating the Extent of the Lower Settlement

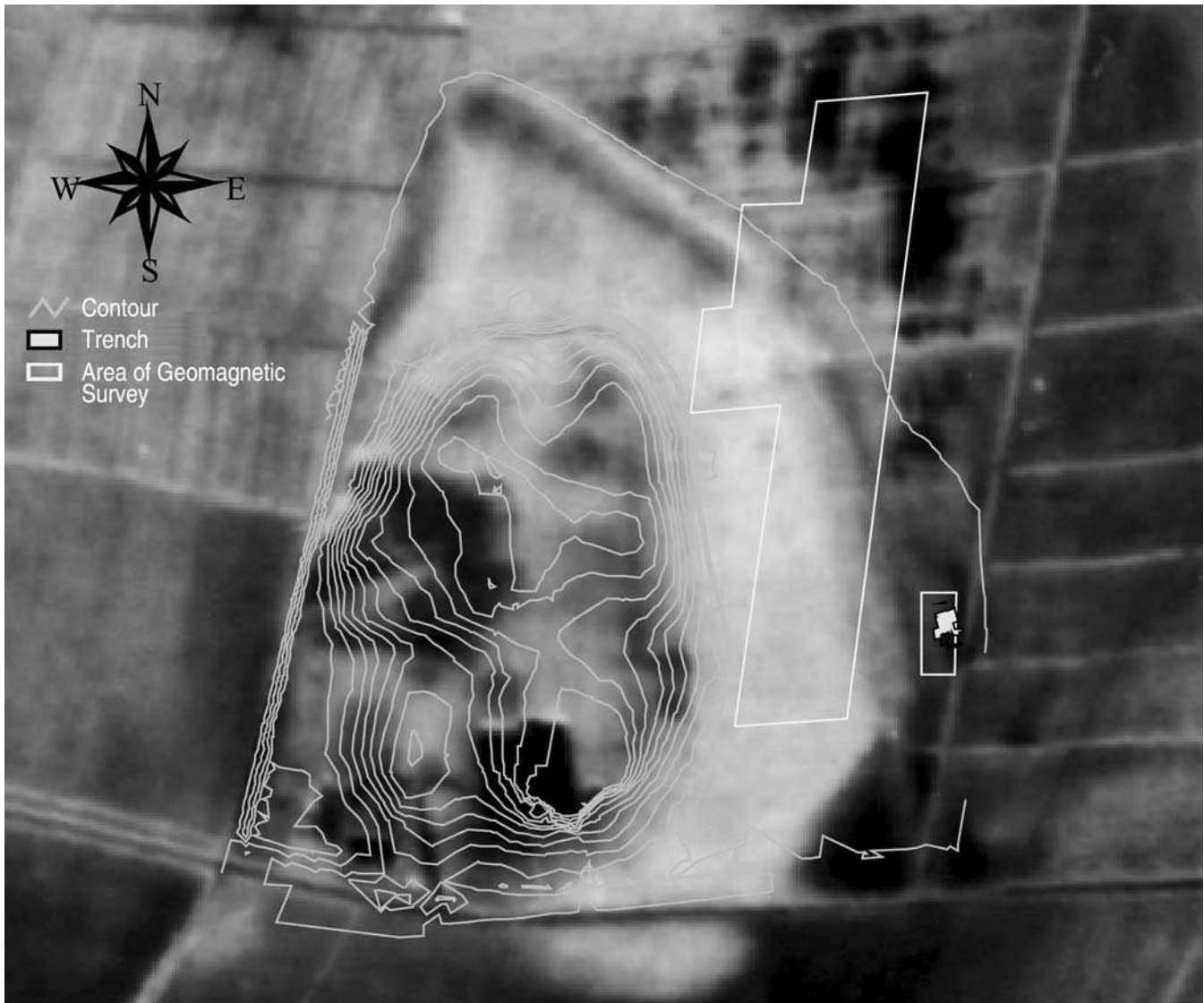


Figure 7.7. Contour Map of Tell Ta'yinat (AS 126) Showing the Area of the 2002 Geomagnetic Survey

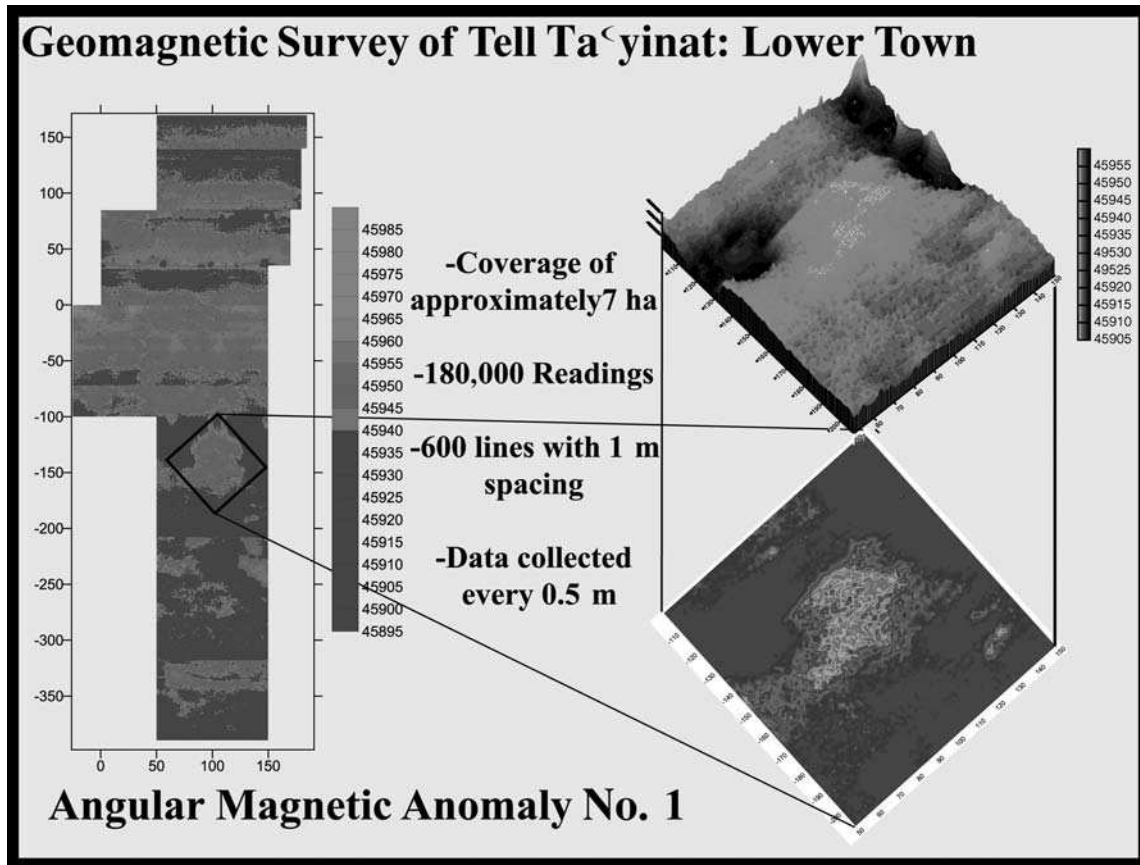


Figure 7.8. Geomagnetic Survey of Tell Ta'yinat (AS 126), Lower Town, with a Highlight of Angular Magnetic Anomaly No. 1. Coverage of Approximately 7 ha, 180,000 Readings, 600 Lines with 1.0 m Spacing, Data Collected Every 0.5 m

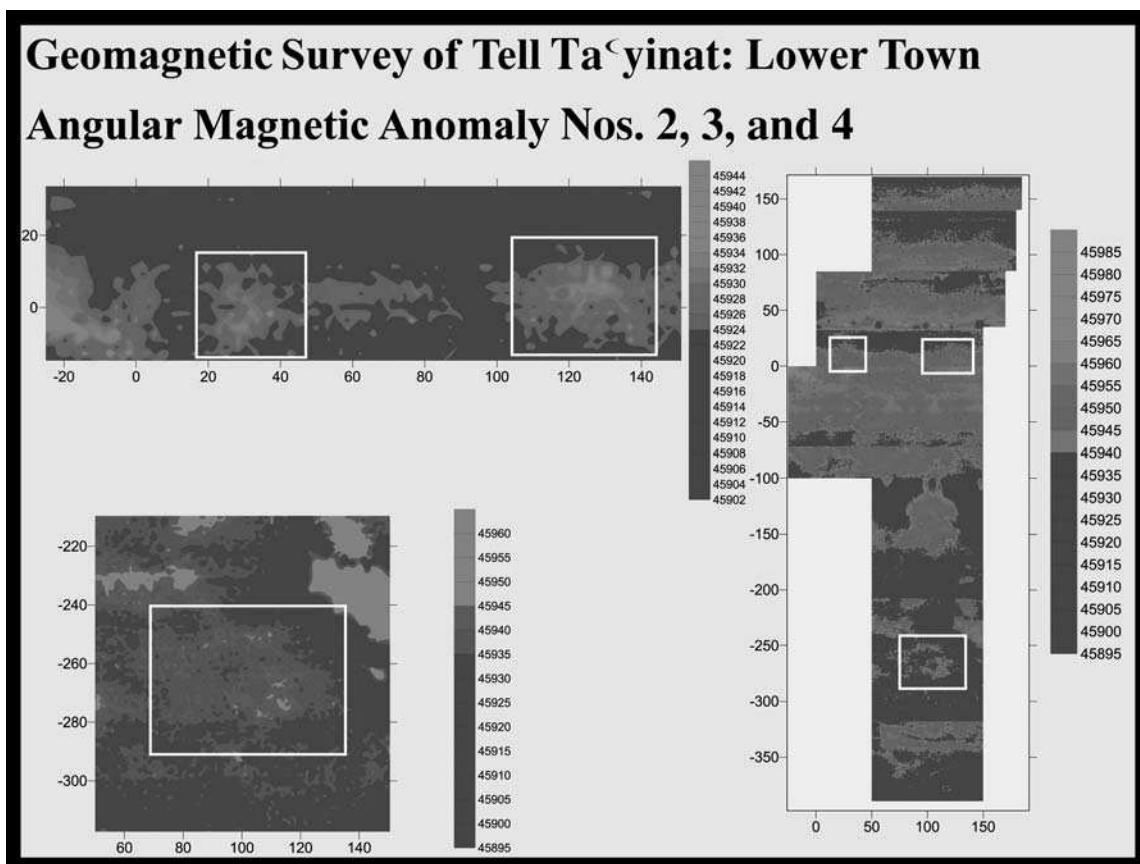


Figure 7.9. Geomagnetic Survey of Tell Ta'yinat (AS 126), Lower Town, with Highlights of Magnetic Anomalies Nos. 2, 3, and 4

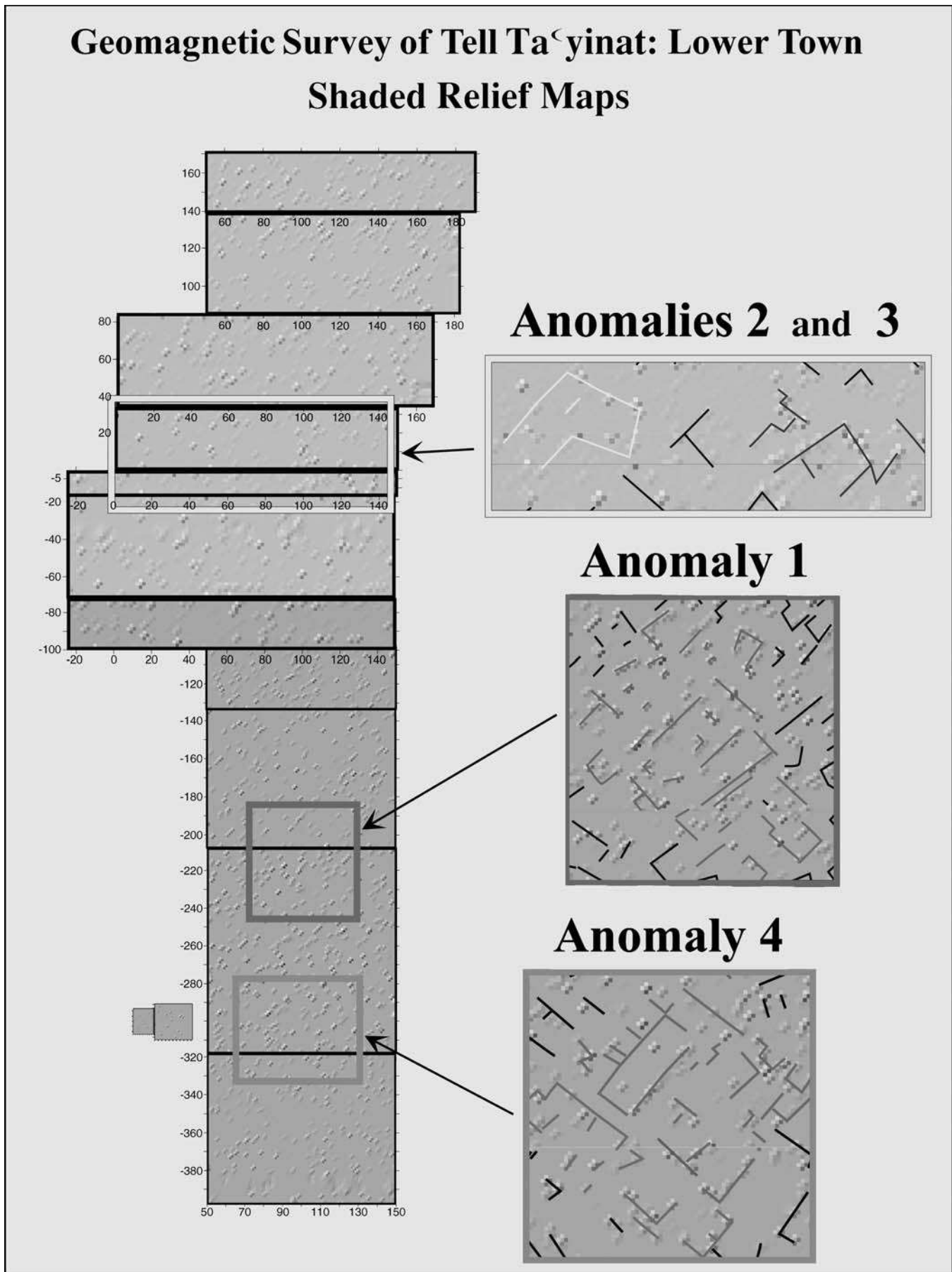


Figure 7.10. Geomagnetic Survey of Tell Ta'yinat (AS 126) with Outlines Tracing the Linear Features Associated with Anomalies Nos. 1-4

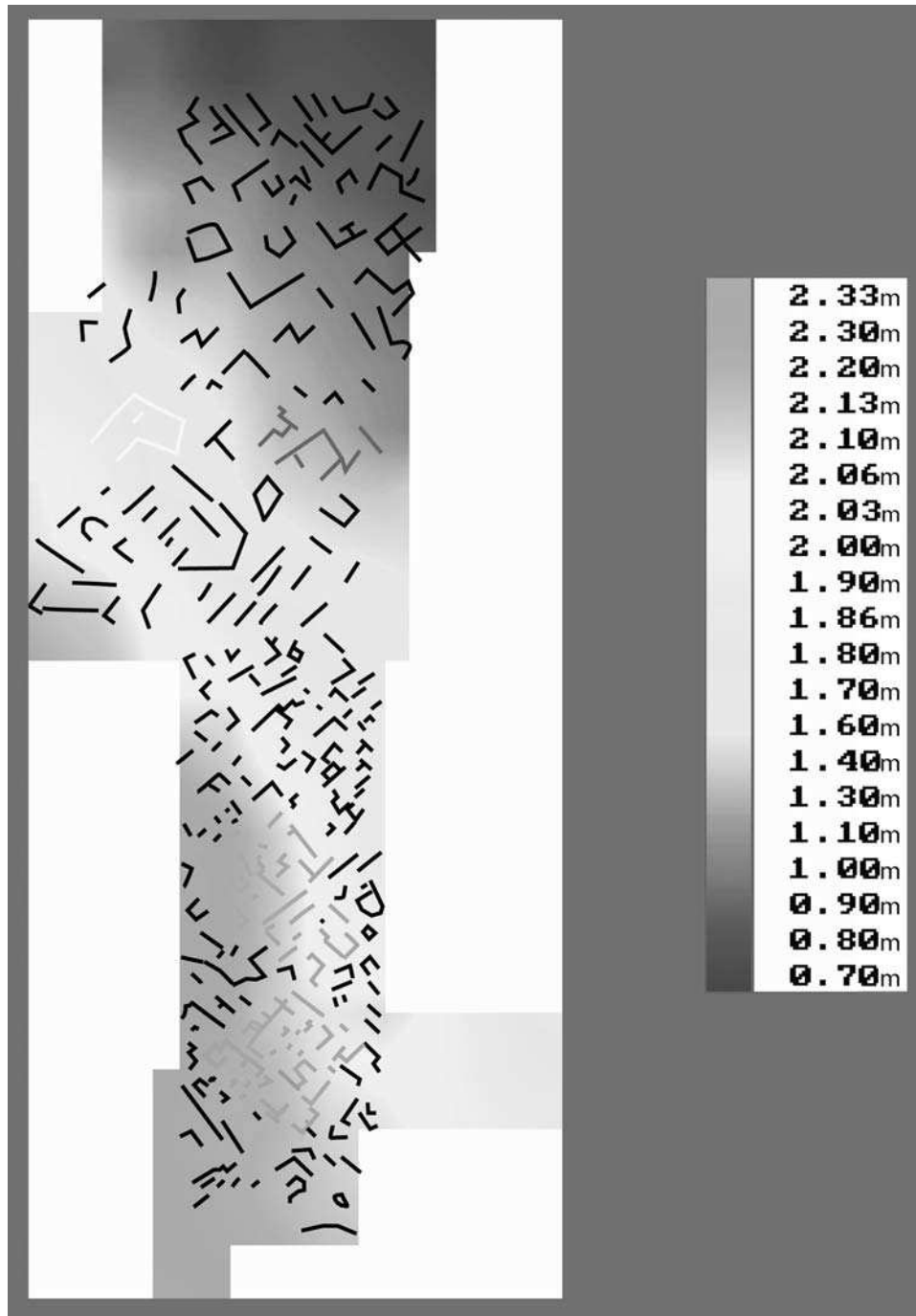


Figure 7.11. Microgradient Topographic Map of the Tell Ta'yinat (AS 126) Lower Settlement, Showing the Composite Plan and Orientation of the Linear Features Delineated by the Geomagnetic Survey

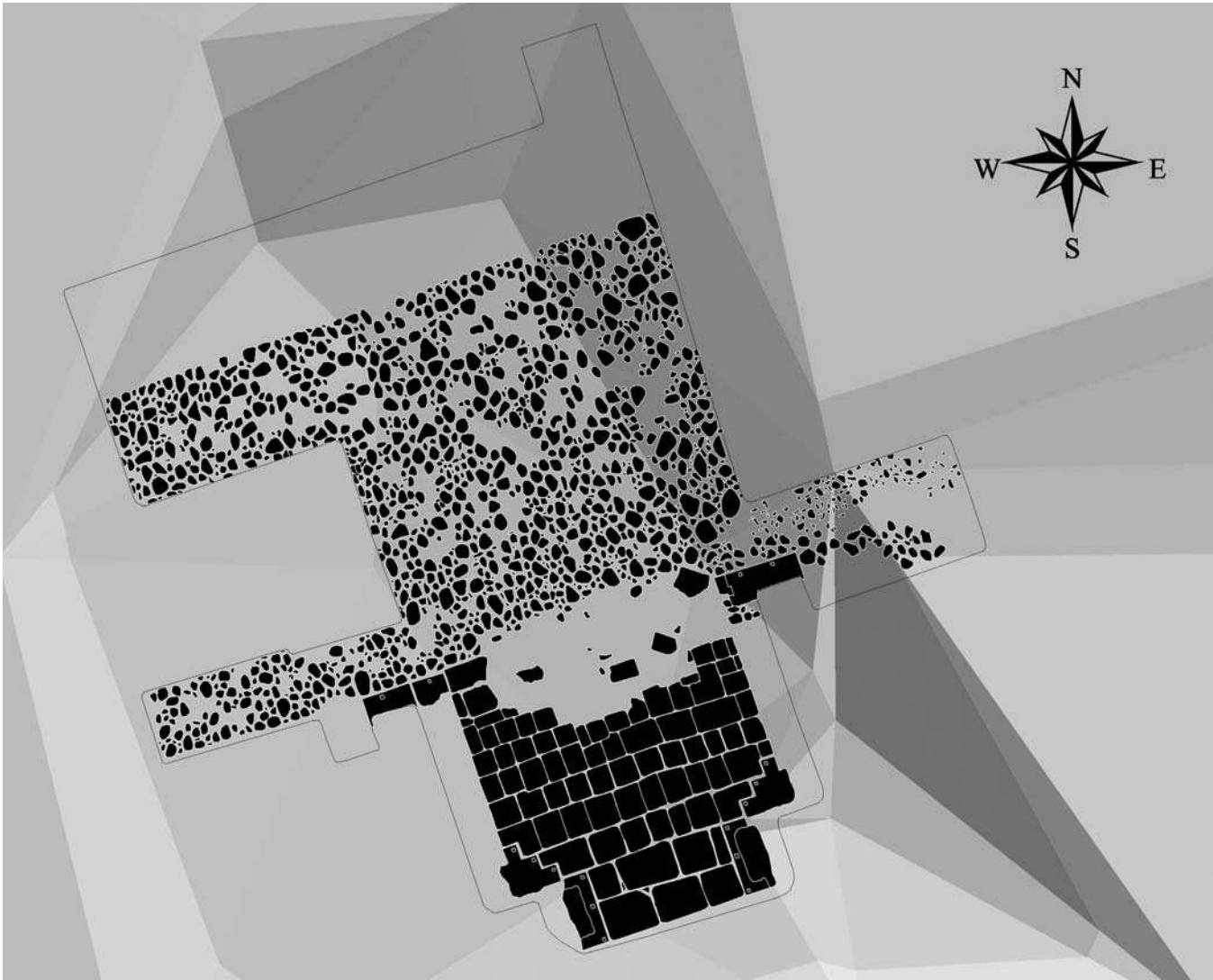


Figure 7.12. Plan of Gateway III at Tell Ta'yinat (AS 126) Overlaid on the Topographic Base Map

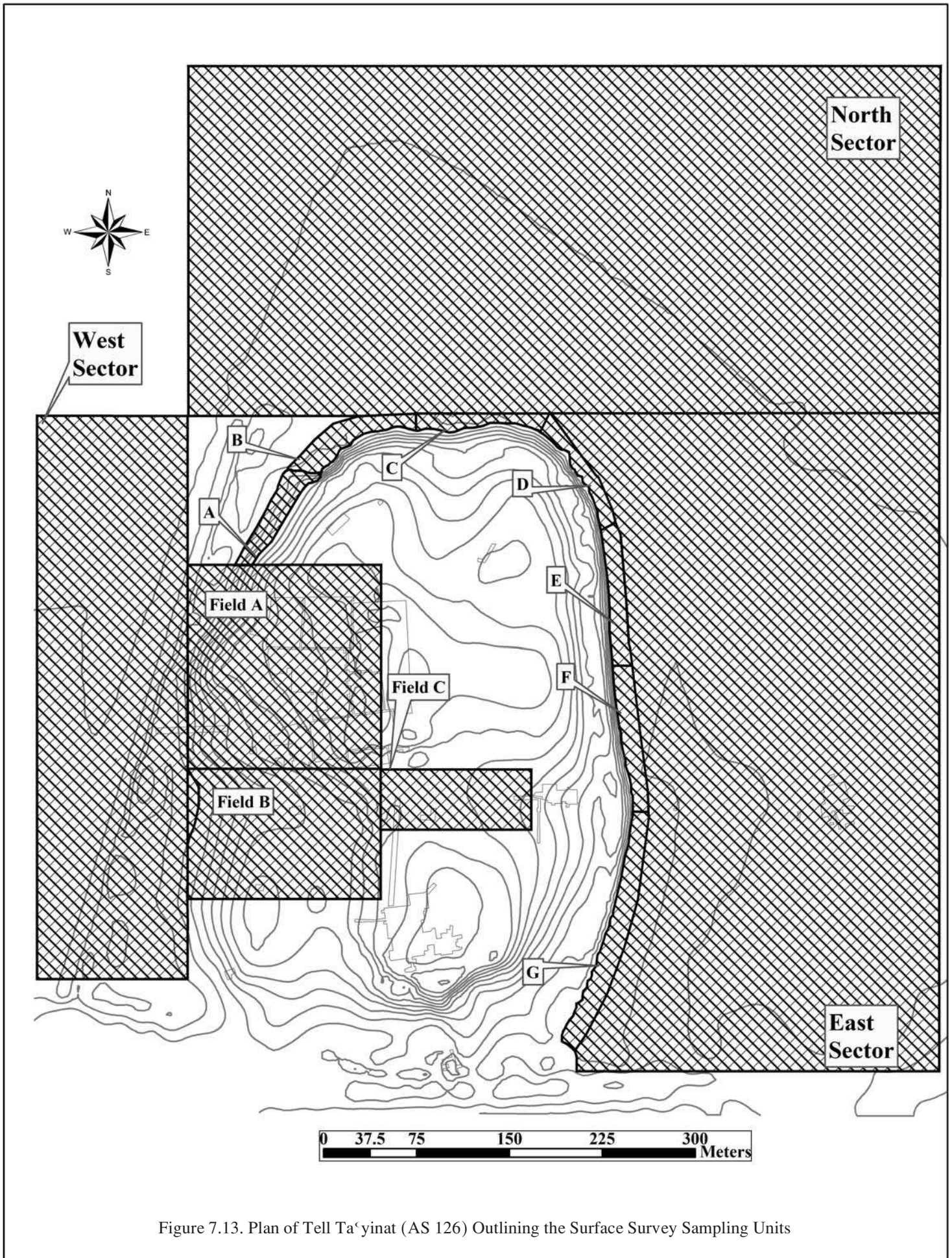


Figure 7.13. Plan of Tell Ta'yinat (AS 126) Outlining the Surface Survey Sampling Units

Figure 7.14. Surface Pottery from Tell Ta'yinat (AS 126), Including Red-slipped Burnished Ware, Red-black Burnished Ware, and Simple Ware

No.	Sherd No.	Dia- meter	Exterior Color	Interior Color	Exterior Margin	Interior Margin	Core	Firing	Manu- facture	Ware Type*	Amuq Phase
1	AS_126_99_1	30 cm	2.5YR 5/8	2.5YR 5/8	—	—	10YR 7/4	Oxidation	Wheel-made	RSB	O
2	AS_126_99_2	15 cm	2.5YR 5/8	2.5YR 5/8	7.5YR 6/4	7.5YR 6/4	7.5Y 5/0	Underfired	Wheel-made	RSB	O
3	AS_126_99_3	21 cm	2.5YR 4/4	5YR 4/4	—	—	7.5YR 6/6	Oxidation	Wheel-made	RSB	O
4	AS_126_99_4	27 cm	2.5YR 5/6	2.5YR 5/6	7.5YR 6/4	7.5YR 6/4	7.5YR 6/0	Underfired	Wheel-made	RSB	O
5	AS_126_99_5	25 cm	2.5YR 5/6	2.5YR 5/6	10YR 6/3	10YR 6/3	10YR 5/1	Underfired	Wheel-made	RSB	O
6	AS_126_99_6	35 cm	2.5YR 5/6	2.5YR 5/6	—	—	10YR 6/4	Oxidation	Wheel-made	RSB	O
7	AS_126_99_7	30 cm	2.5YR 5/6	2.5YR 5/6	10YR B6/4	10YR 6/4	10YR 4/1	Underfired	Wheel-made	RSB	O
8	AS_126_99_8	30 cm	2.5YR 5/6	2.5YR 5/6	—	—	10YR 6/3	Oxidation	Wheel-made	RSB	O
9	AS_126_99_9	30 cm	2.5YR 6/6	2.5YR 6/6	—	—	10YR 7/4	Oxidation	Wheel-made	RSB	O
10	AS_126_99_TB 1	25 cm	2.5YR 5/8	2.5YR 5/8	7.5YR 6/4	7.5YR 6/4	5Y 3/1	Underfired	Handmade	RBBW	H/I
11	AS_126_99_TB 2	25 cm	10R 5/6	10R 5/6	—	—	10YR 6/4	Oxidation	Handmade	RBBW	H/I
12	AS_126_99_TB 3	24 cm	2.5YR 5/8	2.5YR 5/8	—	—	7.5YR 6/4	Oxidation	Handmade	RBBW	H/I
13	AS_126_99_TB 4	30 cm	2.5YR 4/6	2.5YR 4/6	7.5YR 6/8	7.5YR 6/8	5Y 3/1	Underfired	Handmade	RBBW	H/I
14	AS_126_99_TB 7	15 cm	2.5YR 4/6	2.5YR 4/6	7.5YR 6/4	7.5YR 6/4	2.5Y 4/1	Underfired	Handmade	RBBW	H/I
15	AS_126_99_TB 5	35 cm	2.5Y 2.5/1	2.5YR 6/6	5Y 4/1	10YR 6/4	—	Underfired	Handmade	RBBW	H/I
16	AS_126_99_TB 8	8 cm	10R 5/6	10R 5/6	10YR 6/6	10YR 6/6	5Y 3/1	Underfired	Handmade	RBBW	H/I
17	AS_126_99_TB 9	25 cm	10R 5/8	10R 5/6	7.5YR 6/4	7.5YR 6/4	7.5YR 5/1	Underfired	Handmade	RBBW	H/I
18	AS_126_99_TB 6	8 cm	10YR 8/2	10YR 8/2	—	—	10YR 8/2	Oxidation	Wheel-made	Simple ware	I/J
19	AS_126_99_N3 1	7 cm	5Y 7/3	5Y 7/2	—	—	5Y 6/4	Oxidation	Wheel-made	Simple ware	I/J

\*RSB = red-slipped burnished ware; RBBW = red-black burnished ware.



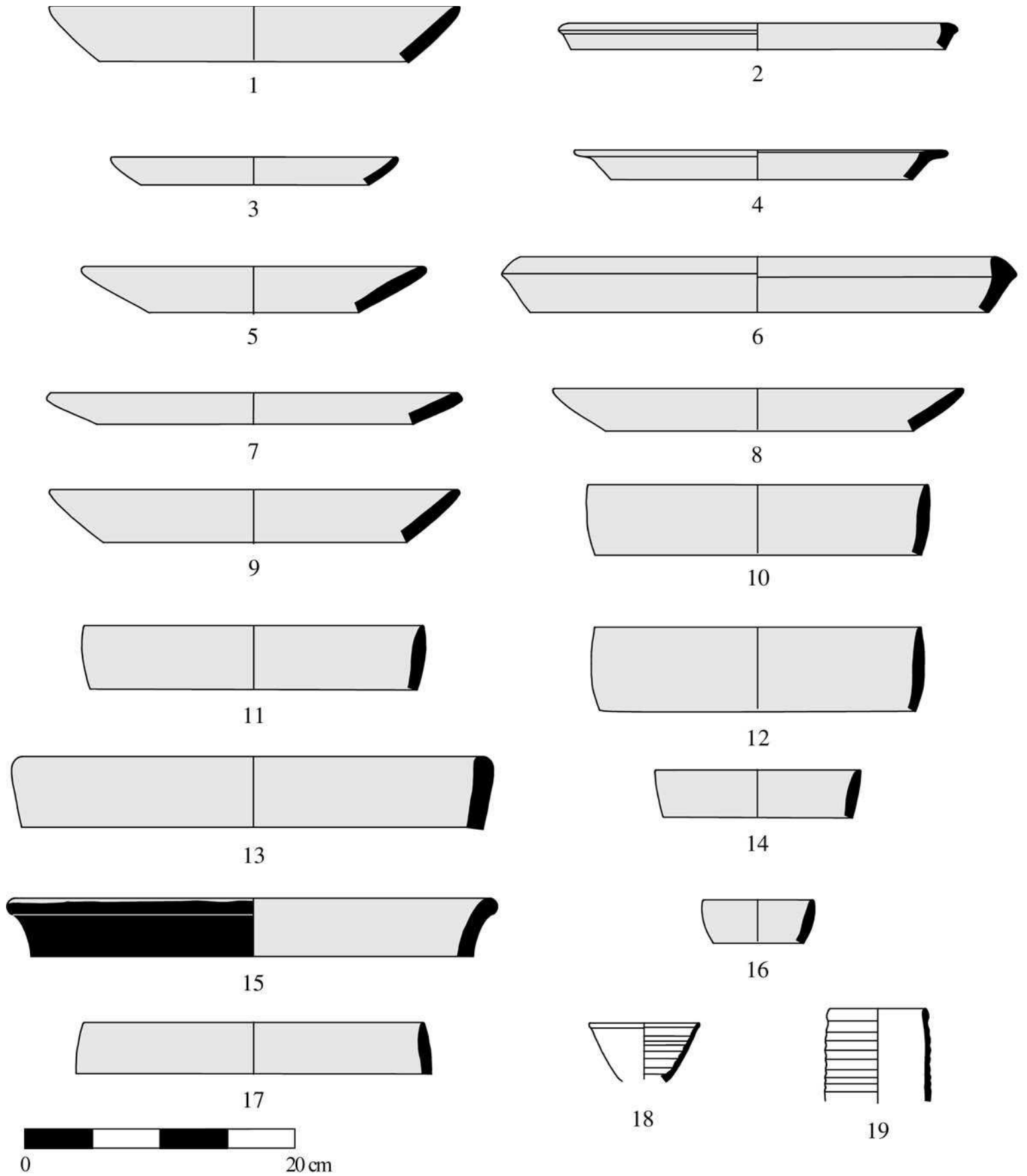


Figure 7.14. Surface Pottery from Tell Ta'yinat (AS 126), Including Red-slipped Burnished Ware (nos. 1-9), Red-black Burnished Ware (nos. 10-17), and Simple Ware (nos. 18-19)

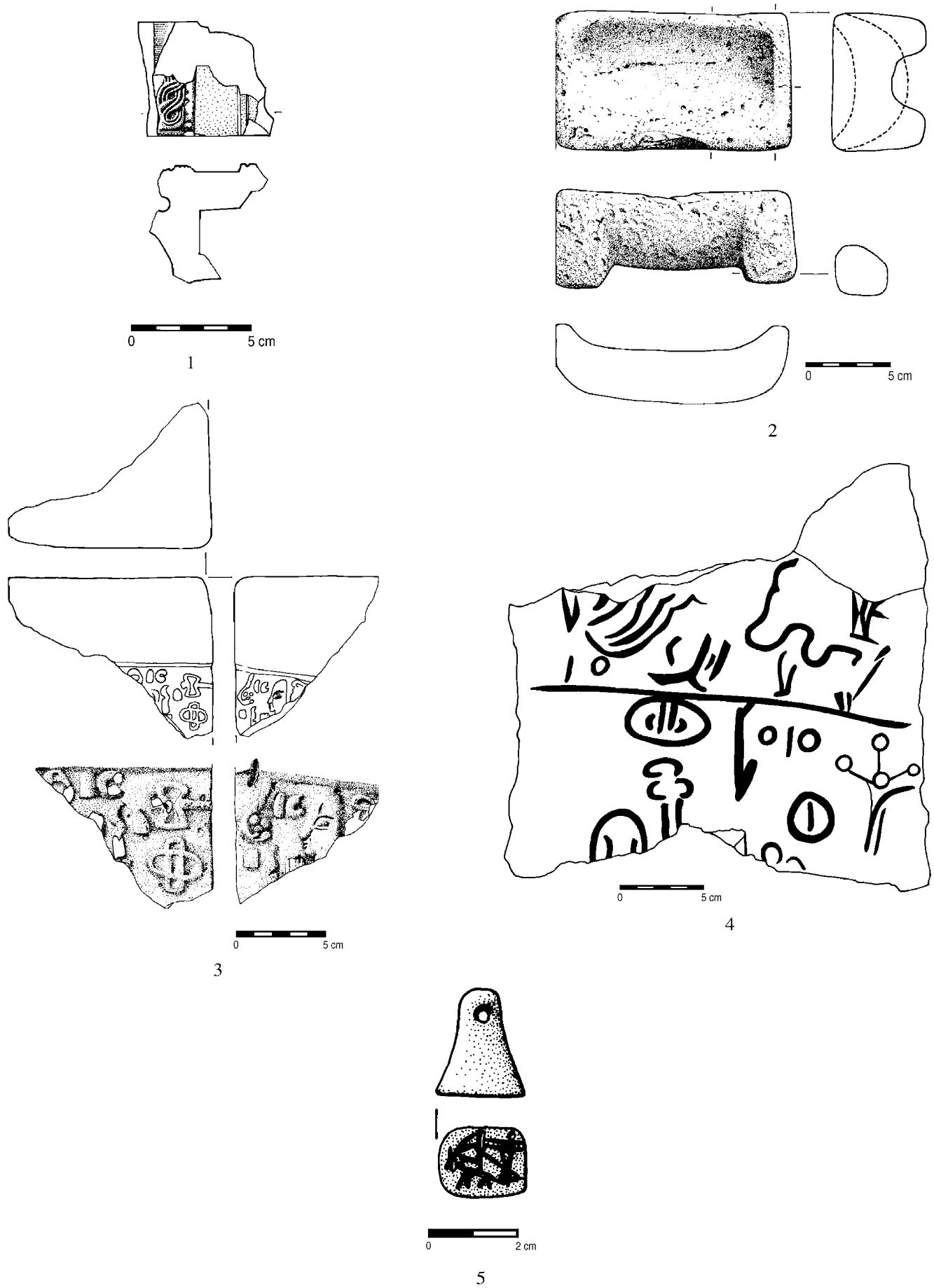


Figure 7.15. Miscellaneous Surface Finds from Tell Ta'yinat (AS 126)

## CHAPTER EIGHT

# CONCLUSIONS

KUTLU ASLIHAN YENER

### THE AMUQ VALLEY AND ITS WIDER CONTEXT

With the foregoing chapters on the site-specific investigations, intensive surface surveys, geoarchaeological work, archaeological surveys, and small finds as a background, it is now possible to correlate the results of the different aspects of the Amuq Valley Regional Projects. Updating the earlier work of the Oriental Institute and British investigators at Tell Atchana (AS 136) and its hinterlands, the newly reactivated projects have generated a first phase of preliminary information. Stressing the need for a vertical integration of information within a broad regional laboratory, research at its onset was divided into separate but interactive tiers: the regional, site, and artifactual data. This volume reviews the regional surveys. Occasionally, when pertinent, preliminary results from the analyses of other categories of inscriptional information, historical and chronological discussions, and artifactual data are also included, insofar as available at the present stage of analysis.<sup>43</sup> As the first volume of an investigative series planned for ongoing surveys and excavations, a foundational assessment of the settlement landscapes, the results of the preliminary site work, and a brief evaluation of their significance in terms of wider regional developments are offered here. The chapters presented herein draw together several threads reflecting distinct strategies behind the Oriental Institute's Amuq Valley Regional Projects and Mustafa Kemal University's Orontes Delta survey and document a number of observations that are different from earlier work. A final synthesis, however, must await the full publication of all the pertinent data, much of which is undergoing analysis.

My introduction (*Chapter One: The Amuq Valley Regional Projects*) reviews the significance of the Amuq Valley (Plain of Antioch), previous investigations in the state of Hatay in southern Turkey, and the goals and objectives of the Oriental Institute's Amuq Valley Regional Projects. Tony J. Wilkinson and Jesse J. Casana present data from the archaeological, geoarchaeological, and settlement surveys in the Amuq Valley (*Chapter Two: Settlement and Landscapes in the Amuq Region* and *Appendix A: Gazetteer of Sites*). Hatice Pamir concentrates on related and relevant information from the surveys of the Orontes Delta and the intensive surface survey of three sites, al-Mina (OS 11), Sabuniye (OS 12), and Seleuceia Pieria (OS 55; *Chapter Three: The Orontes Delta Survey*). Stephen Batiuk, Aaron A. Burke, Jesse J. Casana, Amy R. Gansell, Timothy P. Harrison, and I present preliminary assessments of Tell Atchana and Tell Ta'yinat (AS 136 and 126; *Chapter Four: Alalakh Spatial Organization; Chapter Five: The Tell Atchana Mapping and GIS Project; Chapter Six: Surface Ceramics, Off-site Survey, and Floodplain Development at Tell Atchana [Alalakh]; and Chapter Seven: The Ta'yinat Survey, 1999–2002*) in preparation for the resumption of archaeological excavations at these sites, and ceramic collections from them are discussed. Finally, other artifacts found during the surveys are presented (*Appendix B: Scarab*).

As Wilkinson and Casana argue, the geoarchaeological work accomplished to date in the Amuq Valley provides strong hints of mid-Holocene landscape conditions, specifically the probable existence of an early lake or string of pools and marshes followed by periods of drying and then sedimentary infilling creating Lake Antioch (Amik Gölü). Aside from the fluctuations of human settlement within the valley itself, these hints have important implications for the Orontes River regime as well as the infilling of the delta and the relocation of the harbors through time. Taking the shoreline models of Troy into consideration, and contrary to Woolley, we have predicted that the harbor moved downstream from Sabuniye (OS 12) to al-Mina (OS 11) and then on to Seleuceia Pieria (OS 55). Since one of the principle goals of the interlinked Orontes Delta and the Amuq Valley surveys was to investigate the reciprocal relationship of coastal and inland territorial states, the data from both surveys have furnished information about access to the Mediterranean Sea for the landlocked Amuq and northern Syria. Pamir discusses classical references that mention sailing upstream from the Mediterranean to Antioch and possibly beyond into the Amuq Valley. Complementary information on

---

43. Preliminary results of the regional survey and geomorphology program, as well as of categories of artifactual and economic

---

data not treated in this volume, have already appeared (Wilkinson 1997, 1999, 2000).

the Amuq sedimentary sequences has been forthcoming from cores around the Orontes Delta that will be published in another volume. Dated by combinations of pottery in section and radiocarbon dates, when finalized, this sedimentary data will eventually clarify the obsolescence of the Late Bronze Age port site of (possibly) Sabuniye, then in succession, the ports of al-Mina and Seleuceia Pieria, impacting inland trade relationships and important socio-political configurations.

During the Braidwood surveys of the 1930s the Amuq uplands were not investigated because the expedition only focused on the mounded sites in the valley. Similarly, only mounds in the Orontes Delta region were subsequently targeted for excavation by Woolley. The visible ruins of classical sites such as Seleuceia Pieria (OS 55) in the delta and Antioch at the western edge of the Amuq were also given early attention. During our surveys, the upland areas were partially investigated since most of these regions were off limits for border security reasons, but intensive high-altitude surveys are planned for the future. Settlement trends obviously indicate that valley bottoms represented the bulk of the settlements for most periods excluding the Hellenistic and later periods. Still, the amount of information that is missing in the archaeological record on the various populations, such as nomads and transhumant pastoralists, as well as special function activities, such as forestry, mining, and quarrying, is enormous. The hilltops around Mount Silpius (Habib Neccar Dağ), Harbiye (classical Daphne), the summits of the Orontes River terraces (monastery of St. Simeon), the Amanus Mountains, Jebel al-Aqra (Kel Dağ Mountain), and other high elevation locations are candidates for future investigations.

#### PALEOLITHIC AND AMUQ PHASES A–D/E (NEOLITHIC–UBAID)

By far the greatest concentration of Paleolithic sites and Epipaleolithic stations in Hatay had been investigated in the Mediterranean coastal corridor near the mouth of the Orontes River. These early studies anticipated the results of another more recent excavation at Üçağızlı Cave dating to the Upper Paleolithic near the Syrian border. Although in 2002 Merih Ereğ noted patchy evidence of Paleolithic settlement along the hillsides of the Amanus Mountains, intensive surveys have not as yet been initiated here. Isın Yalçınkaya and her team briefly visited O'Brien's Cave in the Wadi al-Hammam (Amuq Valley), first reported in 1933, and noted that it was an important Epipaleolithic site. Given the north Levantine Rift corridor that runs through the Amuq connecting east African sites with Eurasian Paleolithic stations, these sites would have bearing on the migrations occurring before and after the Holocene.

The beginnings of Amuq Phase A and the aceramic Neolithic (Pre-Pottery Neolithic A and Pre-Pottery Neolithic B) also need to be elucidated beyond the limited information available from former excavations.<sup>44</sup> It has generally been difficult to locate these sites along the Orontes Delta as well, due to the uplifting of the shoreline, alluviation, and rise of sea level since the last glaciation. This pattern of buried sites is reflected farther south along the Mediterranean coast where some prehistoric sites are thought to be submerged in tens of meters of water. In addition, the dense vegetation cover and irregular terrain made intensive surveying quite difficult in the uplands. One clearly early prehistoric site (OS 47) was located on a terrace overlooking the Orontes Delta. In the Amuq, Wilkinson and Casana have demonstrated that the use of CORONA images has increased the level of site detection despite alluvial deposition in the valley that has obscured other non-mound and low mound sites. They conclude that by Amuq Phase A/B sites had already moved into the floor of the plain as exemplified by the discovery of the small Neolithic site of Dutlu Höyük (AS 200). Half of this site had been removed by bulldozers and masses of pottery were strewn over the ground, enhancing our knowledge of this period. Another factor hampering the study of this period was the nature of the water table in the Amuq Valley. In the 1930s, excavation at Tell al-Judaidah (AS 176) was hampered by the water table encountered in Level 14. A similar problem existed at Tell Atchana (AS 136) where pumps were used to reach virgin soil. With great difficulty working through mud, Woolley may have indeed reached sterile soil as he published in 1955, however, fourth-millennium B.C. sherds found in the adjacent drainage canal may indicate earlier levels or a nearby Chalcolithic site. If this is the case, then it would partly explain why the settlers of the late third-millennium B.C. city at Tell Ta'yinat (AS 126) chose Tell Atchana as a relocation site. Relocation to a "mounded" site was more attractive than pitching houses on a plain level precariously prone to flooding. Chance finds and out-of-context stamp seals found at Tell Kurdu (AS 94; see pl. 1) indicate that at least Amuq Phase B levels exist at the site, although neither earlier nor more recent excavations have been able to reach the lowest levels of the site due to the water table. Today the water

44. Encountered at Dhahab, Wadi al-Hammam/O'Brien's Cave; Judaidah JK3 Phase B, period XIV are levels 24 debris, 24, 25 debris; Phase A, period XIV levels 25–28.

table in the Amuq has slipped down to 700 m in some places; while unfortunate for local water supplies, it will facilitate excavation into the primary pre-Amuq Phase A strata.

With the Neolithic comes more evidence of wider networks of commodity exchange and connectivity with far-flung regions. Mesopotamian myths attest that the Amuq supplied other regions, such as Mesopotamia and perhaps Egypt, with cedar, metal, stone, and minerals from the Amanus Mountains in the late third and early second millennium B.C. (see Yener et al. 1996; for the veracity of Mesopotamian legends, see van de Mierop 1999). But it is important to point out that some networks were established even earlier in the Neolithic period. The earliest evidence of exchange appears in Amuq Phase A/B and areas to the south along the Mediterranean coast, which were provisioned with obsidian from central and eastern Anatolian obsidian flows. Through instrumental analyses, the exchange network of obsidian delineated a path reaching south to Jericho in the southern Levant, suggesting that the Amuq may have acted as the conduit (Cann and Renfrew 1964; Renfrew and Dixon 1976). Recently obtained results from Tell Kurdu (AS 94) show that during the span of the Ubaid and Halaf periods, the site was supplied from the Göllüdağ source in the central Anatolian plateau and various flows in the Bingöl region (B. Cressy et al. in preparation). Coincident with these obsidian supply systems and perhaps profoundly related is the spatial extent of dark-faced burnished wares and their variants. Although these wider networks of interaction are linked by obsidian and ceramics, as yet none of the special symbolic imagery often associated with the aceramic and Neolithic in Anatolia and best exemplified at Çatalhöyük (Konya) have been found in the Amuq. This may be a function of the archaeological record, and broader exposures of Amuq Phase A/B levels will elucidate the nature of settlement during the flourish of early domestication of plants and animals in this area.

More information about settlement is forthcoming for the subsequent Chalcolithic, Halaf, and Ubaid periods. From 5700 B.C. until the beginning of the Early Bronze Age, ca. 3000 B.C., the largest sites in the Amuq appear to have been Tell Kurdu (AS 94; Amuq Phases C–E) and neighboring Tell ‘Imar al-Jadid al-Sharqi (AS 101; Amuq Phases E–G) located near the center of the valley. The settlement patterns suggest a two-level hierarchy, the second level being represented by 1 ha sites. Excavations at Tell al-Judaidah (AS 176)<sup>45</sup> yielded complementary Chalcolithic material culture from Amuq Phases C to E. Tell Kurdu was one of the three sites selected for the resumption of excavations by the Amuq Valley Regional Projects. This unusually large 15 ha site was previously excavated by Oriental Institute teams in a rapid two-week season in 1938 (Braidwood and Braidwood 1960), and new operations were resumed in 1996 (Yener et al. 2000a–b). During the recent work Amuq Phase E (or Ubaid-related, ca. 4800–4400/4300 B.C.), Amuq Phase D (ca. 5200–4800 B.C.), and a late phase of Amuq Phase C (or Halaf-related, ca. 5700–5200 B.C.) levels were exposed. The Halaf- and Ubaid-related assemblages from Tell Kurdu have important ramifications in as yet unspecified relationships to Mesopotamia and the Tigris-Euphrates basin sites in east Syria. Since earth-moving activities have destroyed the upper levels of the site, large horizontal exposures have furnished important information on the usually overlooked, local expressions of this massive and important center.

For the subsequent phases of the Chalcolithic, the Braidwoods (1960: 203–04) early on suggested that Tell Kurdu (AS 94) may not contain the entire sequence of Ubaid-related materials since painted sherds on the surface of Karaca Khirbet ‘Ali (AS 168) did not fit Amuq Phases D, E, or F, and that strata representing this period may lie elsewhere. Part of the answer may lie in the excavations at Tell es-Sheik (AS 135), which revealed Ubaid-related ceramics in the upper levels. Nearby Tabarat al-Akrad (AS 182) in the earliest levels also yielded Ubaid-related painted wares along with local flint-scraped Coba bowls. The related large site mentioned below, Tell ‘Imar al-Jadid al-Sharqi (AS 101), located 0.2 km to the south of Tell Kurdu, will ultimately provide information about these critical transition levels when urban transformations were occurring when excavated.

#### AMUQ PHASES F–J (LATE FOURTH TO THE END OF THE THIRD MILLENNIUM B.C.)

The Uruk period (Amuq Phases F/G) has been given much attention in regards to the development of complex state societies and urbanization in southwestern Asia. Unfortunately, however, recent discussions of societal development have generally focused on the presence of non-local, intrusive assemblages such as Uruk-related ceramics. Given the prime location of impressively large, “chaff-faced” Amuq Phase F sites (i.e., Tell ‘Imar al-Jadid al-Sharqi [AS 101], 22 ha), as well as the immense Halaf/Ubaid site (Tell Kurdu [AS 94], 15 ha), it is hoped that future research will contextualize intrusive elements within much undervalued local developments. Having said this, the presence of Meso-

45. Judaidah First Mixed Range materials are found in levels 22, 23 debris, 23; Amuq Phases E–C, periods “provincial” and “true” Halaf.

potamian, Uruk-related assemblages has been well documented in the Amuq Valley (see *Chapter Two: Settlement and Landscapes in the Amuq Region*). These intrusive cultural components signal in questions of “colonial” enclaves (Algaze 1993) recently a topic of much debate (see G. Stein 1999). In Guillermo Algaze’s (1993) provocative view, Uruk-related sites were established in the Amuq to obtain essential raw materials and high-status materials that were lacking in southern Mesopotamia. While these enclaves initially stimulated the local economies, the onset of the Early Bronze Age shows a clear trend toward simpler sociopolitical formations and a decline into small, scattered settlements.

Nevertheless, Algaze (1993) points out indicators of continuing interregional trade in this area and notes a substantial accumulation of wealth in metals at smaller sites in the Turkish Euphrates area during this period. According to Algaze this contradicts expectations about social complexity derived entirely from the small-scale and dispersed settlement structure of the area at the time. Indeed, this suggestion is appealing and may have bearing on areas of Turkey such as the Amuq, which border areas of complex mineralization. The Amuq evidence indicates that although site size is relatively small in comparison with contemporary Mesopotamia, local exploitation and extraction systems display innovative techniques such as new alloying with tin, technological know-how, and organizational skills, both before and after an Uruk intrusion. To cite only one example, during the survey an early trend toward production of metal beyond trinkets and jewelry was found in a destroyed section of a large Late Neolithic site in the Amuq (Tell al-Rasm AS 80) in the form of a multi-faceted mold. The inference made here is that the Amuq economy was basically provisioned by the generous production of staple foods as exemplified by the large grain storage facilities at Tell Kurdu (AS 94), but reinforced perhaps by wealth (fiscal or social) generated by metalworking and other technologically specialized craft production as best seen at metallurgically precocious Tell al-Judaidah (AS 176) — a strategy that would hedge against crop failure.

The original Oriental Institute activities exposed only small expanses of Uruk-related sites such as Tell al-Judaidah (AS 176), which is situated strategically just at the entrance of the eastward passage leading to the Cilvegözü (Bab al-Hawa) Syrian border crossing. During the 1995 salvage operations, a large mudbrick wall 1.6 m wide and a corner of a storage complex were exposed (Reichel and Friedman 1996; Edens 2000), which may have housed the administrative center of the Amuq Phase G settlement, and reflects an indirect and fairly late echo outside the greater Uruk zone. As indicative of resilient Amuq socioeconomic systems mentioned in *Chapter One: The Amuq Valley Regional Projects*, these specialized economies emerged before the Uruk intrusive elements appear (see Yener 2000b) and endured after the collapse of the political structures that engendered them. Trade and exchange systems that distributed the products of this industry as such had many outlets; in the case of the Amuq sites, multiple intra-valley sites and maritime interconnections were in the forefront (for the concept of early development of port power, see Stager 2001).

Further excavation at sites in levels dated to these Uruk-related periods underrepresented by the recently targeted sites would help to clarify the gap between the Tell Kurdu (AS 94) and Tell Ta’yinat sequence (Amuq Phases F–G). At Tell al-Judaidah (AS 176), lengthy occupational sequences obscure access to these earlier cultural levels. For this reason, the damaged site of Tell ‘Imar al-Jadid al-Sharqi (AS 101) is attractive because of its Uruk-related surface finds and the possibility of conducting large horizontal exposures at that horizon. Tell ‘Imar al-Jadid al-Sharqi is another Chalcolithic site (as mentioned above) and is mostly invisible except for “generic” Amuq Phase F ceramics in section; it was discovered during environmental research at the Atchana drainage canal (Wilkinson 2000). This location is also favorable for broad horizontal exposures once the top alluvial deposition is removed.

Another cultural horizon found in the Amuq Valley sites represents a wide extension of a northeastern (Caucasus) cultural continuum that forms the counterpart of the Syro-Mesopotamian cultural world. Recently, much new discussion has been generated about fine-tuning chronologies relevant for this Transcaucasian culture and the nature of the excavated evidence (Philip 1999; Philip and Millard 2000). Characterized in the archaeological record with a distinct red-black burnished ware, the assemblage appears most prominently in Amuq Phase H (ca. early to mid-third millennium B.C.). A highly decorative ceramic with a particular method of manufacture (Braidwood and Braidwood 1960: 358–68), it is often found with relief ornamentation and has its earlier counterparts in northeastern Turkey and the Kura and Araxes Valleys of Transcaucasia. Representing either a migrating group, a specific exchange of pottery, locally produced wares (Burney 1989; Sagona 1984, 2000), or all of the above, the wares are notably absent at Cilician sites (Mellink 1962) but present at Amuq sites (see *Chapter Two: Settlement and Landscapes in the Amuq Region*). Without interpreting any of the contentious ethnic and linguistic components of the Transcaucasian culture, other aspects of the general assemblages include new building forms, different alloying techniques (see Palmieri et al. 1993), and elaborate decorated hearths. Early efforts at instrumental analysis of sherds from the Amuq such as that by Douglas Esse and P. K. Hopke (1984) suggest that two separate potters’ workshops at Tell Ta’yinat (AS 126)<sup>46</sup> and Tell

al-Judaidah (AS 176)/Tell Dhahab (AS 177) were producing this ware locally. Although based on too few samples to be statistically reliable for interregional correlations, the analysis of Amuq sherds does demonstrate internally coherent results and implies that local clay sources were being used (for recent technical analysis, see Batiuk 2000); undoubtedly, this does not obviate movement of peoples bringing their technological styles with them.

The end of the Early Bronze Age (Amuq Phases I–J) was characterized by dramatic technological, political, and economic changes on both regional and interregional scales. One of these was the abandonment of large numbers of sites. A number of controversial factors have been suggested for the Syro-Anatolian region including massive disruptions from migrations of “Indo-european”-speaking populations. However, to restate the obvious, equating pots with people has been a much-abused and hazardous method of positing movements of people and is best left alone. In addition, to tweak the ethnicity and linguistic controversy further, arguably good evidence suggests that migrations are highly complex and multi-directional, that is, sometimes populations actually backtrack, confounding archaeologists even more. To make matters worse, some populations may have actually been there all along but have been undetected by linguists (Renfrew 1990).

The transformations in the late third-millennium cultural landscape were, according to James Mellaart (1975), a catastrophe of such magnitude as to remain unparalleled until the end of the Bronze Age (ca. 1200 B.C.) in Anatolia. A large number of Early Bronze Age settlements were abandoned in the Konya and Cilician plains; in the small sites, which continued to be inhabited specifically in Thrace, a new handmade ware with a banded relief decoration made its appearance. Burial mounds (*kurgans*) proliferated including examples similar to mounds in Bulgaria. Recently, a large distribution of dolmens (over 144; see Kızılkaya Tepesi, AS 207), standing stones in circular arrangements, and other ceremonially built burial sites were investigated in the uplands of the Amuq by Yükmén (2000). Although difficult to date precisely, these special burial sites have connectivity to similar examples dated from the Chalcolithic through the Bronze Age spanning the southern Levant/northeast Turkey as well as Syria (Epstein 1985; Porter 2001).

Recently environmental studies in North Syria have resulted in another much-discussed explanation for dramatic population shifts. The researchers who carried out these studies propose an abrupt climatic change which may have caused the abandonment of Tell Leilan and the regional desertion that followed, as well as the collapse of many large territorial states, including the Akkadian Empire based in southern Mesopotamia (Weiss et al. 1993). Furthermore, seemingly synchronous collapse in adjacent and far-flung regions accompanied by environmental information from other areas indicates that the impact of the abrupt climatic change was extensive (but see Courty 1998; Algaze et al. 1991). Whether the effect was as widespread as suggested and triggered a massive chain reaction of socio-historical events, it is, nevertheless, true that settlement landscapes did undergo transformations at this time. Perhaps, as suggested by Algaze (Algaze et al. 1991), urban densities in one region were often affected at the expense of neighboring areas.

It is evident that similar adjustments occurred in the Amuq Valley during this time. Within the valley bottom sites, after a hiatus of perhaps a few centuries, the main settlement of the plain shifted toward the southern fringes of the plain where Tell Ta‘yinat (AS 126) and Tell Atchana (Alalakh; AS 136) grew up nearer to the main east–west route linking the Aleppo region with the Mediterranean coast (see other environmental and settlement changes in the Amuq in *Chapter Two: Settlement and Landscapes in the Amuq Region*). It is our contention that the shift in the center of the Amuq Valley to Alalakh and Tell Ta‘yinat at the junction of east–west and north–south routes likely reflects the importance of commercial and political traffic for the economies of the late third/early second millennium and later periods. The alternating nature of occupation between these “twin” or mega-urban-center sites may result from periodic environmental events or socioeconomic factors. The exact correlations with the environmental and social collapse scenarios of Syria will be investigated in the future.

#### AMUQ PHASES K–O (MIDDLE/LATE BRONZE–IRON AGES, CA. 2000–SEVENTH CENTURY B.C.)

The rise of the city of Alalakh in the early second millennium (Amuq Phases K–M) reflects profound changes in this area of the Near East, partly revealed by the rich epigraphic corpus from the site. Two deep soundings, the first in the courtyard of the Level VII palace belonging to Yarimlim, a contemporary of Hammurapi of Babylon, and the second, the so-called temple sounding, provided the basis for the Middle and Late Bronze Age sequence. Comparable lev-

---

46. Derived from sherds excavated at Tell Ta‘yinat Amuq Phase I Levels 2–5; Amuq Phase H levels 6–9.

els are forthcoming from the as yet unpublished sequences from Chatal Höyük (AS 167) and Tell al-Judaidah (AS 176; Swift 1958). Even though textual sources from Tell Atchana (Alalakh; AS 136) indicate that large numbers of settlements (presumably in the Amuq and hinterlands) were part of the city-state system of Alalakh (Gaál 1982–1984; Magness-Gardiner 1994), nevertheless, not all of the sites have been identifiable during survey. The small site totals for these periods are disadvantaged by the lack of information from unexplored highland regions and valley alluviation. Equally disadvantageous is the difficulty in distinguishing the ceramic diagnostics for the Middle and Late Bronze Ages during the Tell Atchana survey as discussed in *Chapter Six: Surface Ceramics, Off-Site Survey, and Floodplain Development at Tell Atchana (Alalakh)*. Targeting the refinement of second-millennium B.C. chronologies is an important goal of the new round of excavations at Tell Atchana.

The early second-millennium B.C. Assyrian trading colony system was a thread that wove settlements together from Assur in northern Mesopotamia to Kültepe/Kanesh in central Anatolia. This sophisticated interregional exchange network seemingly veers away from the Amuq Valley and bypasses it through the north (Larsen 1976). However, little discussed in the literature are finds from Ugarit and farther south in the southern Levant, which do suggest some level of interregional connectivity with the Old Assyrian trading colony system. It is also entirely possible that some networks established in the preceding periods, such as the obsidian exchange system, were at least maintained and possibly strengthened. The intensive efforts of the team to document finds from Alalakh and contemporary second-millennium B.C. finds from Chatal Höyük (AS 167) and Tell al-Judaidah (AS 176) noted the presence of obsidian tools and the existence of an obsidian vase maker's shop (Woolley 1955: 109, 293) in even these late periods. Given the obsidian blocks and northern Levantine-style luxury products discovered in Acemhöyük and Kültepe in central Anatolia, this relationship needs to be explored more fully. Future source analyses of these later obsidian technologies will enable us to pinpoint the direction of traffic through this area. Surely the Amuq conduit, that is, the African/Levantine Rift Valley inland trade network did indeed operate from the Paleolithic periods connecting central Anatolia with the southern Levant, but it may well have continued in the Middle Bronze Age.

Approaching the problem through the perspective of maritime commerce, according to Lawrence Stager (2001) stylistic similarities indicate that the imported shoe-shaped vessel and Kültepe II-style seal found at Ashkelon were perhaps part of a Mediterranean seaward network. Working together with Robert Ballard and his submersible robots, Stager explored offshore wrecks for further information of this activity. Farther north on the Turkish coast, similar offshore work is proceeding near Kinet Höyük. Our research indicates that the Mediterranean outlet during the Middle/Late Bronze Age may have been the port at Sabuniye (OS 12). Recently rediscovered by Pamir (*Chapter Three: The Orontes Delta Survey*) on top of Hisalli Tepe overlooking the Orontes River as it enters into the gorge toward Antakya, Sabuniye has been surveyed for future excavation. As an upriver conduit from the coast, Alalakh may have functioned as transit station and exacted a share from caravans and river trade onward to inland sites in Syria and back.

Some fairly compelling evidence for Mediterranean linkages to inland Amuq sites exists at Alalakh itself. Although the synchronous periods dating to the Assyrian trading colonies have only been exposed in narrow deep soundings, nevertheless, an important public building with columned courtyard with intriguing architectural links to Middle Bronze Age Anatolia was found in the administrative sector of the summit (*Chapter Four: Alalakh Spatial Organization*). Furthermore, a ceremonial animal-headed cup found on the surface of the site (fig. 4.26, pl. 8; Yener 2002b) draws ritual parallels with lion-headed vessels at Ugarit (Zevulun 1987) and Kültepe/Kanesh Ia (Özgüç 2002b: 127, no. 13). Much has already been discussed about the paintings from Tell Atchana (AS 136) and their Aegean, eastern Mediterranean, and Nile Delta relationships (Woolley 1955: 228–34, pls. 36–39; Niemeier and Niemeier 1998). Indeed, Alalakh Level VII palace walls yielded painting fragments that revealed iconographic similarities to Minoan frescoes, and according to reconstructions of the fragments, the presence of double axes, bulls, and the wing of a griffin; however, the exact nature of the Aegean interaction is unclear (Cline 1994). Compounding the problem even further is the issue of chronological ambiguity, making the Alalakh frescoes appear much earlier than their Aegean counterparts (see *Chapter One: The Amuq Valley Regional Projects* and *Chapter Four: Alalakh Spatial Organization*), although this too is hotly debated. The eastern Mediterranean internationalism of these frescoes is also reflected in the motifs depicted on other media during this time. To list only a few from Alalakh Level VII, seal impressions depict scenes festooned with running spirals, Egyptian *ankh*-symbols, guilloches, and bull-leaping festivities. Turning again to the often neglected north, some of this iconography links Alalakh with central Anatolian sites such as Kanesh, Acemhöyük, Karahöyük/Konya, and Hüseyindede, which in turn have assemblages that are reminiscent of Aegean Minoan styles as well (Collon 1975). At other Amuq sites such as AS 86, a seal (pl. 1F) found on survey depicts skeletal figures walking in a row that has far-flung parallels at Kültepe, Alalakh, and north Syrian sites such as Ebla (for the cursive style, see Mazzoni 1975, 1979). These powerful iconographic symbols from the Amuq reflect a complex



ethnic, religious, and political structure during a period of intense colonial and diplomatic encounters. The overall impression of this material culture evidence and textual information from the Amuq sites echoes the ideological importance of elite trade and alliances made by these small regional states.

After a long period of disruptive events and impending danger from an expansive Egypt, the Amuq regional state, Mukish, entered into various alliances with the Hurro-Mitannian Empire. Finally, with the territorial dominance of the Hittites, the political landscape of this region was significantly altered during the Late Bronze Age and incorporated into the Hittite Empire. *Chapter Four: Alalakh Spatial Organization* outlines the changes in the architectural norms and public symbols as evidenced in the iconography of Alalakh. Accordingly, the local architectural idiom of a *bīt hilāni*-style Level IV palace is replaced by the Hittite style “military fort” palace. Other symbolic processes of Hittite legitimization include the architectonic lion sculptures, small ritual finds, as well as architectural styles of temples from Levels II and III that reflect strong archaeological cognates of incorporation into Hittite suzerainty. Downstream on the Orontes coast, territorial hegemony favoring the Hittites is also evident in a seal from the Late Bronze Age port, Sabuniye (OS 12; Collon 1982: no. 114), which is clearly cut in a Hittite style.

Moreover, epigraphic documents from Alalakh provide real insight into exchange within the evolving Near Eastern imperial state systems. The material evidence indicates a complex relationship (Kantor 1947), but mechanisms that specify the relations between particular material similarities, and particular change in ideology and organization, are so far lacking (C. Gates 1995). Part of these similarities can be explained by commodity exchange. Exotic items such as ivory, metal, precious stones, and ceramics were found in major public buildings of Alalakh and testify to a particularly lively interregional trade (see Liverani 1990 for the connotations of this trade). Maritime commerce between various coastal regions — perhaps including Alalakh — is indicated by the Cape Gelidonya/Uluburun-Kaş shipwrecks, particularly their cargo of stylistically comparable ivory toiletries, jewelry, and metals (see Bass et al. 1989). Prestige items from Egypt, as well as Aegean-style ceramics, perhaps represent the distribution of imported commodities and the maintenance of new value systems through elite households. Alalakh is an ideal example of a large settlement underwritten, at least in part, by wealth generated from prestige metal production, trade, and perhaps tribute.

The prevailing pattern of this Late Bronze Age trade extends to quite distant areas. Previous work over the last half century has delineated the relationships of the Amuq assemblages to the Aegean world. Alalakh Levels V–IV (Amuq Phase M) is part of a complex interaction network as seen in the distribution of Cypriot and Tell al-Yahudiyah wares from the Levant, Ugarit, Egypt, and Cyprus.<sup>47</sup> Cypriot bichrome wares are found in Alalakh Levels VI–V, continuing with the subsequent finds of Cypriot milk bowls and base ring wares, shedding some light on Aegean questions regarding Mycenaean and Cypriot imports in the eastern Mediterranean (M.-H. Gates 1981; Mellink 1957; McClellan 1989). Cypriot and Aegean ceramic types appear at other Amuq sites as well. Swift’s study (1958: 23–24) and the new surveys (see Verstraete and Wilkinson 2000) suggest that Chatal Höyük (AS 167) and Tell al-Judaidah (AS 176) have definite Cypriot imports such as white slip II ware milk bowls, jugs (*bilbils*), base ring I ware, black polished ware, and monochrome ware. While these Aegean-related materials connote important international relationships, nevertheless, an even more dramatic problem derives from the much discussed issues of “colonization” (see Bennet and Davis 1999). Instead of the question of whether Aegean immigrants were in the Amuq, the more compelling inquiry would be to investigate reasons behind why Alalakh and other sites in the Amuq became interested in “Aegean” imports and imitated Aegean products.<sup>48</sup> We will investigate the social significance of these goods in the context of their places of consumption, a question the new excavations will seek to elucidate. With these and other much disputed issues enumerated above, clearly a series of focused workshops integrating Aegean, north and south Levantine, as well as Anatolian specialists would shed light on how these interactions may be disentangled.

Turning attention to the metallurgical paradigm and the site-specific tier of investigations, in 2001 the team rediscovered finds stored in Woolley’s on-site dig house depot, which yielded among numerous bags of sherds, multi-faceted molds, copper ingots, and lead artifacts. A surprising amount of metallurgical residues had been excavated at Alalakh, such as lumps of copper, slag, and crucible fragments (Woolley 1955: 272–387), as well as artifacts of gold, silver, lead, and copper within and in the vicinity of the palace. Substantial evidence of craft production was clearly associated with the domain and geography of the palace and the so-called private houses nearby. The appearance of copper-tin bronze and other valuables suggests the existence of a developing or thriving production system for exchange

47. The overuse of imports for dating purposes has also clouded chronological issues as discussed in *Chapter Four: Alalakh Spatial Organization*.

48. It is also important to note that Aegean-related styles found in the Amuq may have come from Cyprus, the southern Cilician coast of Turkey, or farther south in the Levant.

in the eastern Mediterranean. Clearly, the combined products of these urban workshops have presented an opportunity to define the strategies of organizing a craft industry of this quality and the extent to which they are administered centrally through the capital, Alalakh.

Since Woolley excavated only the northern third of the mound, the unexcavated sectors of the mound were targeted for excavation by the new Oriental Institute Expedition to Alalakh. *Chapter Four: Alalakh Spatial Organization* presents a summary of the pre-excavation activities and the architectural layouts of Alalakh from Levels VII to 0 as originally published by Woolley. *Chapter Five: The Tell Atchana Mapping and GIS Project* discusses the intricacies of recent field mapping in comparison to site plans published earlier. Jesse J. Casana and Amy Rebecca Gansell present the results of the surface survey at Tell Atchana and the concentrations of materials on and off the mound in *Chapter Six: Surface Ceramics, Off-Site Survey, and Floodplain Development at Tell Atchana (Alalakh)*. This new information will help determine the periods of occupation throughout the extent of the saddle-shaped mound, especially its latest period of occupation (Level 0, Amuq Phase M/possibly N), which was minimally preserved.

At the end of the Late Bronze Age another much-discussed disruption of settlement occurred throughout the Near East that also affected the Amuq area. Along with the Amuq, the Cilician coast and the site of Tarsus were no longer outposts of Hittite rule; in fact, the Hittite imperial center collapsed. Recorded in patchy textual documents from Ugarit, Egypt, and other neighboring regions, evidence of looting and conflagration at the beginning of the twelfth century are attributed to campaigns of various Sea Peoples (Gitin, Mazar, and Stern 1998). Whether the Hittite Empire, and by extension its vassal, Alalakh, succumbed to a number of dynastic squabbles, environmental mismanagement, or were rendered weak from constant attacks, in their place small states called the Neo-Hittite kingdoms appeared in the archaeological record. These include the excavated sites of Tell Ta'yinat (AS 126), Tell al-Judaidah (AS 176), and Chatal Höyük (AS 167) in the Amuq Valley.

At Tell Ta'yinat (AS 126), a dynastic continuity of the Hittite Great Kings is evident by the use of Luwian hieroglyphs, which was maintained for official inscriptions (Harrison 2001a–b; Hawkins 2000). As at Tell 'Ain Dara (AS 62), the capital Kunulua (Tell Ta'yinat) launched prestigious monumental building programs. During the course of the 1999 investigations, a basalt fragment containing a Luwian hieroglyphic inscription from the Iron Age was discovered at the garden of a farm house on Tell Ta'yinat al-Saghir (AS 127), the site opposite Tell Ta'yinat. Another limestone fragment was discovered during the survey in the 2002 season, adding to the growing corpus of inscriptions and architectural decorations from this capital city (Hawkins 2000; Gelb 1939; Kantor 1962; Orthmann 1971). The fragmentation of the Bronze Age imperial system and the emergence of territorial Iron Age kingdoms in the ninth century B.C. contextualized the newly reactivated Tell Ta'yinat work as presented in *Chapter Six: Surface Ceramics, Off-Site Survey, and Floodplain Development at Tell Atchana (Alalakh)*. Both the original Braidwood (1937) and the new surveys yield complementary data about site distributions which document the change that occurred during Amuq Phase M (Late Bronze Age), Amuq Phase N (Early Iron Age, ca. 1200–1000 B.C.), and Amuq Phase O (Iron Age, ca. 1000–500 B.C.). First of all, the capital, Kunulua (Tell Ta'yinat) reached thirty-five hectares during the Second Building Period and the new surveys have revealed an important lower town with remote sensing devices. While settlement clearly continued from Amuq Phases N to O, a majority of the sites are now small in size (less than 3 ha; see details in Harrison 2001a–b).

Possibly significantly linked by trade, if not by sociopolitical affiliations to Tell Ta'yinat (AS 126), is the Iron Age site of al-Mina (OS 11) and its hinterland in the Orontes Delta. A seal from al-Mina cut in the style of the Assyrian-dominated Levant shows a mélange of influences including Egypt and Assur, as well as local (Collon 1982: no. 120). Several new Iron Age sites were also discovered by the survey team on the opposite shore of the Orontes River overlooking al-Mina, such as Mezar Tepe (OS 16). Given the possibility of changing river courses, understanding the actual layout of the settlement lends urgency to the geomorphological reconstruction of this vital port area.

#### AMUQ PHASES P–V (HELLENISTIC–PRESENT)

This concluding section on the classical and Islamic periods is unfortunately short, given the long span of time and the massive archaeological record it represents. Nevertheless a few observations are offered here.

The earliest mention of Antioch and its hinterlands is the background for a multitude of engaging classical legends. All these legendary histories formed a “perceived” origin for the diversity of ethnic and religious populations of the Amuq during the classical periods. Accordingly, the Argives under Triptolemus searched for the wandering Io, who had come to Mount Silpius (behind Antioch) and had been so amazed with the beauty of the place that they gave up their search and settled on the mountain. The massive shape of Mount Silpius towers above Antioch to elevations of

500 m and in antiquity a journey to the top and back could be accomplished in one day. Legend has it that they were joined by nobles from Crete under the leadership of Kasos, who later married the daughter of Salaminus, king of Cyprus. Then came the children of Herakles [Hercules] driven into exile by Eurystheus.

More credible histories note that Alexander the Great defeated the Persians at the battle of Issus in 333 B.C. Alexander drank the water of one of the local springs and declared that it was sweeter than his mother's milk. During the Roman period, the pre-eminent site within the Amuq Valley was Imma, located at modern Yenişehir, the site of a small lake. The Roman and Byzantine periods in Antioch, and the massive port city of Seleuceia Pieria (OS 55), are two of the well-known sites in a region that boasted a total population of over a million people (Downey 1961; Cahen 1940; Demir 1996). Histories note the numerous visitors who came from the Greco-Roman world to attend the quadrennial Olympic Games of Antioch during the reigns of Augustus (23 B.C.–A.D. 14) and Claudius (A.D. 41–54). By the medieval period, during the reign of Byzantine emperor Theodosius the Great (A.D. 379–395), the games at Antioch had become almost more famous than the original Olympiad games in Greece.

Because it was located in one of the three most important cities of the medieval period, the Patriarchy of Antioch exerted influence over far-flung regions including Europe and impacted the development of Christianity. The city of Antioch was exceedingly influential during the early Christian periods, as it was during the Crusades and Islamic periods. Rumored to be the place where the word "Christian" was first coined (Acts 11:26), the city today boasts important monuments dating to the early Christian period as well as to the later conflicts of the Crusaders. It is important to point out the urgency of excavating the site of Antioch before the modern city of Antakya obliterates the ancient remains.

In the hinterlands of Antioch, surveys by Wilkinson, Casana, and Pamir show common threads of evidence reflecting the movement of populations into the uplands from the Hellenistic through the Islamic periods. Environmental change, erosion of uplands, and massive cutting of the forests are part of this transformation. Aside from historical events, related to this change is a vastly reduced visibility of smaller classical sites in the lowlands. This upland migration during the Hellenistic period and after was perhaps also associated with changes of the Orontes River and shoreline silting. According to finds enumerated in *Chapter Two: Settlement and Landscapes in the Amuq Region*, changes in the environment impeding the detection of sites were also evident in the Amuq Valley. Sampling programs in the form of transects in the Amuq show that a thin layer of sherds that appear across the ground surface and several undetected sites were found by the use of CORONA images. Traces of canals were also recorded, and more are to be expected. Although these hitherto undetected sites in the Amuq were farmsteads of Roman and Early Byzantine/Early Islamic date, they must all have influenced the development of the landscape and therefore form an important component of the study. Further processing of survey data will help isolate whether factors such as the growth of the Lake of Antioch, riverine flooding, or economic changes were influential to such shifts of settlement.

## FUTURE GOALS

The regional surveys will continue, providing data for a second phase of studies, and will initiate investigations in unexplored regions and search for settlements in the uplands. These surveys will include the highlands of the Amanus Mountains and hillsides around the Orontes Delta. Geoarchaeological research certainly continues to enhance our understanding of the timing and intensity of soil erosion in these uplands as an inroad to human activity and/or climatic fluctuations. Several periods, such as the aceramic and Epipaleolithic, are still underrepresented in the Amuq and must be investigated in the foothills of the mountains encircling the valley.

For other periods of high population density in valley bottoms, such as the third and second millennia B.C., attempts will be made to find traces of (transhumant) pastoralist settlement and to record evidence for extraction of ores or stones such as serpentinite, along with any associated dating evidence for these activities. Our preliminary reconnaissance of the mining regions in the Amanus Mountains, which began in conjunction with the Turkish MTA (the Mineral and Research Institute General Directorate), discovered gallery entrances where veins of arsenopyrites occurred in conjunction with chalcopyrite, which presented intriguing implications for the appearance and production of the very early arsenical bronzes (Amuq Phase F) found at previous excavations at Amuq sites. Future archaeometallurgy surveys will blanket these important zones of mineralization with a hope to locate miners' villages and other special processing sites akin to the Göltepe village in the Taurus Mountains.

Certainly the previous excavations at Alalakh and decades of literature on the topic of Middle Bronze Age/Late Bronze Age trade have produced glimpses of wider interregional exchange systems. At best, earlier research served to intensify the mythological status of the site. Indeed, during this period, globalization and international relations pro-

vided the backdrop for the appearance of imports and preciosities in the context of the Amuq regional state. These are some of the singular reflections of a successful valley-wide economic system based on trade and wealth finance. Specifically, future investigations will target the relationships of Tell Atchana (Alalakh; AS 136) and Tell Ta'yinat (AS 126) with the ports of Sabuniye (OS 12) and al-Mina (OS 11) respectively. Our collaborating partners working in the Orontes Delta are scheduled to explore the settlement in the river terraces from the delta to Antakya itself. (About 20 km are still unexplored.) Furthermore, the material culture and archival information from Alalakh and Tell Ta'yinat, as well as micro-scale studies, will elucidate sociopolitical and patrimonial kinship structures of these sites. With an aim to coordinate and share information, terminology, and database operations, the excavations of Tell Kurdu, Tell Atchana, and Tell Ta'yinat coupled with ongoing surveys has opened up hitherto untested potentials for monitoring change through time in a bounded geographical space.

In conclusion, the Amuq Valley has been an ideal location to track a number of factors playing important roles in a nexus of settlement and emergent states. These regional capitals have exhibited a capacity for adaptability that allowed outside influences to be absorbed but never entirely replaced an indigenous northern Levantine/southern Anatolian tradition. Although the details of the variety of functional and stylistic variations in material culture, as well as the ideological aspects, are considerably different from level to level, the Amuq sites demonstrate that those influences were incorporated into the local expressions. Representing a dynamic and constantly changing relationship with the diverse environment, these settlements document a resiliency and a successful survival strategy over millennia of human history. The unique regional laboratory of the Amuq Valley has provided us with the opportunity of outlining these sometimes dramatic and more often subtle transformations.

# APPENDIX A

## GAZETTEER OF SITES

JESSE J. CASANA AND TONY J. WILKINSON

### POTTERY ASSESSMENTS

This gazetteer of sites<sup>49</sup> is intended to provide an interim summary of basic site descriptions. Where site locations are uncertain, as when, for example, a site identified by Braidwood (AS 1–178) is now thought to be under a modern village, or if it lies outside the boundaries of Quadrants 1–8 (figs. A.1–A.9), no position is indicated. The appended pottery drawings (figs. A.10–A.22) are for illustrative purposes only and have been inserted to provide a preliminary impression of the collected ceramics prior to formal processing; the drawings are grouped into broad chronological classes as indicated.<sup>50</sup>

All ceramic dates are generic assessments based upon brief inspections in the field and short studies in the field laboratory; the dates must therefore be regarded as preliminary and approximate. For the later periods we have chosen the terms: Hellenistic (300–100 B.C.), Roman (100 B.C.–A.D. 330), Late Roman (A.D. 330–ca. 600), Early Islamic (seventh–tenth centuries A.D.), Middle Islamic (eleventh–thirteenth centuries A.D.), and Late Islamic (post-thirteenth century A.D.). “Late Antique” refers to a period of transition between the Late Roman and Early Islamic periods and includes the earlier Byzantine period (fourth–seventh centuries A.D.). “Recent Arab” and “Late Islamic (Ottoman)” designate the Ottoman period (sixteenth–twentieth centuries A.D.). The following ware types are associated with selected Amuq phases:

#### *Pottery Types Associated with Selected Amuq Phases*

Dark-faced burnished ware	Amuq Phases A–E
Chaff-faced simple ware	Amuq Phase F (Late Chalcolithic)
Plain simple ware (fig. A.10)	Amuq Phases G–J (Early Bronze Age)
Red-black burnished ware (fig. A.11)	Amuq Phase H/I (Early Bronze Age)
White-slipped ware	Amuq Phase M (Late Bronze Age)
Red-slipped burnished ware (A.14)	Amuq Phase O (Iron Age)
Terra sigillata ware (fig. A.18)	Amuq Phase R (Roman)
Brittleware (fig. A.20)	Amuq Phases R–T (Late Antique [Late Roman–Early Islamic])
Late Roman C ware	Amuq Phases S–T (Late Roman)

### GAZETTEER OF SITES

#### AS 2

#### **Boklukaya**

AREA:	Not measured	HEIGHT: 1 m	ILLUSTRATION: —
AVRP DATE:	Some Roman/Byzantine material, but in general indeterminable		
BRAIDWOOD DATE:	Possibly Middle Bronze Age		
DESCRIPTION:	Small site on a natural outcrop within village of Demrek Göl Mahallesi, located beyond the area of figures A.2–3 (but see Yener et al. 2000b: fig. 3). Pottery was very sparse be-		

49. Note that at the time of the original survey by Robert J. Braidwood, the Amuq area fell within the former French administered Syrian Mandate. Today, therefore, many of the sites that were originally recorded lie within the Republic of Syria; these and other sites — either not recognized or inaccessible for various reasons — are omitted from this list of sites. Several highland sites mentioned in *Chapter Two: Settlement and Landscapes in the Amuq Region* and included on the overall site locator map are also omitted and will be published in a separate volume devoted to the uplands and mountains.

50. Since 1995 a large number of people have worked for the Amuq archaeological survey, and the assessments of pottery types contained in the following list reflects analysis by many different fieldworkers: Tülin Arslanoğlu, Steven Batiuk, Scott Branting, Jesse J. Casana, Simrit Dhesi, Ben Diebold, Asa Eger, Kubra Ensert, Merih Ereğ, Elizabeth Friedman, Andrea de Giorgi, Timothy P. Harrison, Jerry Lyon, Shin'ichi Nishiyama, Hatice Pamir, Clemens Reichel, Jan Verstraete, Tasha Vorderstrasse, Tony J. Wilkinson, Alexandra Witsell, K. Aslıhan Yener, and Bakiye Yükmén.

cause most of the site is below the houses of the village and therefore of indeterminable size. A local villager reports finds of Roman pots and coins. The site is difficult to reconcile with the description in Braidwood, so its identification is therefore tentative.

### AS 3 **Kirmitli Höyük (Kiremitli, Sayılık)**

AREA: 140 × 60 m                      HEIGHT: 8 m                      ILLUSTRATION: Fig. A.3  
 AVRP DATE: Abundant pottery includes probable prehistoric painted wares, also second- and first-millennia B.C. types. Roman terra sigillata ware is rare to absent  
 BRAIDWOOD DATE: Hellenistic/Roman, possibly Early Iron Age, possibly Middle Bronze Age, and possibly Late Chalcolithic  
 DESCRIPTION: An oval mound with a rounded profile and stony surface, which is partly plowed. Large stones and pottery are common (more than twenty count), and the pottery is moderately visible.

### AS 4 **Bozhöyük**

AREA: 150 × 40 m                      HEIGHT: 40 m                      ILLUSTRATION: Fig. A.3  
 AVRP DATE: A: Late to Early Bronze Age, possibly Prehistoric, Hellenistic, Islamic, Roman; B: Mainly small sherds of terra sigillata and brittleware; C: Roman/Late Roman, roof tiles common  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman, Early Iron Age  
 DESCRIPTION: A high, very prominent mound with a rounded shoulder to the south and a lower town to the east (C). The tell (A) has very steep slopes and is heavily vegetated; collection was from small bare patches of soil exposed on the slopes and three or four recent robber pits. The lower town comprises two components: a rounded shoulder to the south (B), heavily vegetated but with an alignment of large basalt stones from an individual building of estimated 1 ha area; a lower town (C) at the base of the tell, mainly to the east but with a small area to the west. In this area were abundant large basalt blocks, one or two wall alignments, and one doorway. Its extent is approximately 1 ha.

### AS 5 **Güzelce**

AREA: 170 × 120 m                      HEIGHT: 18.5 m                      ILLUSTRATION: Fig. A.2  
 AVRP DATE: Early Bronze Age (red-black burnished ware, plain simple ware), second millennium, Hellenistic, Roman, Late Antique, Islamic (one glazed)  
 BRAIDWOOD DATE: Roman/Hellenistic and possibly Early Bronze Age/Middle Bronze Age  
 DESCRIPTION: A medium-sized prominent mound that is uncultivated but covered with shrubs, weeds, and many stones which are 50–60 cm at maximum. Pottery is not particularly common and diagnostic forms seem quite rare.

### AS 6 **Yassiyurt (Sivrice)**

AREA: 90 × 90 m                      HEIGHT: 16 m                      ILLUSTRATION: Fig. A.3  
 AVRP DATE: A wide range of pottery types including dark-faced burnished ware, some painted Chalcolithic, possible Late Chalcolithic, and some second/first-millennium types; also white-slipped ware (II BS), and rare Roman and later types, scarab (pl. 1H, *Appendix B: Scarab*)  
 BRAIDWOOD DATE: Roman, Late Bronze Age

DESCRIPTION: A high prominent mound with numerous surface stones from wall foundations and occasional outcropping foundation lines. Pottery is common over the entire surface.

NOTE: Braidwood's description "valley is arable here" is inappropriate to the site, but this clearly appears to be AS 6.

**AS 7****Yusuflu**

AREA: 35 × 35 m                      HEIGHT: 16.5 m                      ILLUSTRATION: Fig. A.3

AVRP DATE: Some Roman material, but full periodization is difficult. 2002 collection: Roman terra sigillata ware, Late Antique brittleware, rare second millennium

BRAIDWOOD DATE: Hellenistic/Roman, probably Middle Bronze Age, and possibly Late Chalcolithic

DESCRIPTION: A small but very prominent mound, now heavily excavated and cut into by houses of the village. Some of these cuts are very deep and one on the north side immediately behind a village house includes Late Chalcolithic pottery. An abandoned mudbrick building is on top of the mound.

**AS 8****Arpali**

AREA: 150 × 100 m                      HEIGHT: 15 m                      ILLUSTRATION: Fig. A.2

AVRP DATE: Roman, Hellenistic, possibly Early Bronze Age

BRAIDWOOD DATE: Hellenistic/Roman, Early Bronze Age

DESCRIPTION: A medium-sized mound of which the south end is covered by a village. All slopes are gentle except at the north and northwest sides, which are steep, terraced, and planted with cyprus trees. The top is heavily overgrown. A cut of ca. 14 m is at the east side where many roof tiles, sherds, and a fragment of a stone column were found.

**AS 9****Dana Höyük**

AREA: 110 × 90 m                      HEIGHT: 7 m                      ILLUSTRATION: Fig. A.5

AVRP DATE: Appears to be an excellent collection of third- and especially second-millennium ware, with a small amount of Roman. 2002 collection: Excellent third millennium and second millennium confirmed, Roman/Hellenistic terra sigillata ware, Late Antique, Islamic (glazed)

BRAIDWOOD DATE: Possibly Late Chalcolithic, Early Bronze Age, Middle Bronze Age, probably Hellenistic/Roman

DESCRIPTION: A medium-sized rounded mound. The southern two-thirds of the mound — although previously plowed — is not plowed today but is heavily washed with high pottery visibility. The northern third is plowed today but again washed with moderate visibility. Pottery is therefore very visible over the entire mound, especially the southern two-thirds.

**AS 10****Balama (Ain al-Samah)**

AREA: 150 × 125 m                      HEIGHT: 17 m                      ILLUSTRATION: Fig. A.5

AVRP DATE: Very small collection: Rare second millennium, Iron Age (including red-slipped burnished ware), Roman terra sigillata ware

BRAIDWOOD DATE: Early Bronze Age, possibly Middle Bronze Age, Iron Age, Roman/Hellenistic

DESCRIPTION: A high and fairly large mound; the northwest and northeast slopes are very steep and composed of narrow terraces with eucalyptus trees while the southeast and southwest slopes incline gradually and gently. At the north corner of the summit is the foundation of a building. The slopes are covered with grain, making visibility poor.

- AS 11** **Paşaköy**  
 AREA: 150 × 60 m HEIGHT: 15.5 m ILLUSTRATION: Figs. A.4–5  
 AVRP DATE: Late Chalcolithic, Early Bronze Age (plain simple ware and red-black burnished ware), a good collection of Middle Bronze Age–Late Bronze Age; also Early Iron Age, Iron Age, possible Hellenistic, Roman, Late Roman/Late Antique  
 BRAIDWOOD DATE: Early Bronze Age, Middle Bronze Age, Hellenistic, Roman, Medieval-Arab  
 DESCRIPTION: A fairly large mound with a round top and a terrace at the southwest side. The slopes are steep at the north and northeast sides and gradually incline at the west and south sides. Part of the west slope is covered by a cemetery; a slight cut was made at the southwest side.
- AS 12** **Acarköy (Halılağa Höyük)**  
 AREA: 225 × 145 m HEIGHT: 22.9 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: A cut at the west side reveals a succession from Late Chalcolithic on the north side of the cut, above which, especially on the southeast, are Amuq Phases G and H, above which are Amuq Phase H/I and perhaps the Middle Bronze Age. The top of the mound is Roman/Islamic. 1998 collection: Late Chalcolithic, Amuq Phases F/G to H, I; possible Middle Bronze Age; Roman; second millennium present in small quantity; Also some Late Antique brittleware; one Early Chalcolithic dark-faced burnished ware  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman, Early Bronze Age  
 DESCRIPTION: A large, prominent, steep mound with a massive cut on the west side. The cut, according to villagers, was made by the Devlet Suyu (local water authority) but is evidently also of more recent date. The top of the mound is covered in weeds but was also plowed in the past. A cut area in the west (Area B) reveals a considerable sequence of stratified levels with large foundations of boulders, a mudbrick wall, some mudbricks apparently burnt red. These are predominantly of Early Bronze Age (Amuq Phases G–I) date. A depression at the north side of the summit may represent the north gate.
- AS 13** **Çatal Tepe**  
 AREA: 150 × 150 m HEIGHT: 12.5 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Roman, Late Roman, Islamic  
 DESCRIPTION: A natural bluff with two summits, of which the northeast summit (covered with cotton) is lower than the southwest summit (which is covered with basalt). It is 3.5 km southeast of Yalanköz. A small site — possibly a house — is located on the southwest summit.
- AS 14** **Ilıkpınar Höyük (Hâkhor, Tell Hammam al-Gharb)**  
 AREA: 150 × 100 m; lower town may be significantly larger but not yet field-checked ILLUSTRATION: Fig. A.2  
 HEIGHT: —  
 AVRP DATE: Not visited  
 BRAIDWOOD DATE: Early Bronze Age (Amuq Phases G–I), Medieval-Arab  
 DESCRIPTION: This site was not located in the field but is clearly visible on CORONA imagery. It is described by Braidwood as being a steep and high mound. The mounded part of the site is very clear, and it appears to have a rather extensive lower town, partly covered by a modern village.



- AS 15** **Koyuncu Höyük (Tell Mahmutlu)**  
 AREA: 150 × 90 m                      HEIGHT: 25 m                      ILLUSTRATION: Fig. A.2  
 AVRP DATE: Early Bronze Age (red-black burnished ware and plain simple ware), Rare second millennium, Iron Age, and Early Iron Age (some painted and red-slipped burnished ware), Hellenistic, Roman terra sigillata ware  
 BRAIDWOOD DATE: Hellenistic/Roman, probably Iron Age, Early Iron Age, possibly Early Bronze Age  
 DESCRIPTION: A very steep-sided mound the slopes of which are heavily grassed. The top has been plowed and south-facing slopes have also been partly plowed down the center. Pottery is very sparse on all grassy slopes, but slightly more common on the plowed top. The best collection came from cut B at the east end.
- AS 16A** **Çataltepe (Umm al-A'zum)**  
 AREA: 100 × 100 m                      HEIGHT: 4.5 m                      ILLUSTRATION: Fig. A.3  
 AVRP DATE: Collected by three people for about twenty minutes, and sampling suggests the presence of a range of second- or first-millennium B.C. sherds present, plus a minor Roman/Late Roman presence. 2002 collection: good second millennium; good Iron Age; Late Antique  
 BRAIDWOOD DATE: Early Iron Age, Late Bronze Age  
 DESCRIPTION: A small mound at the northeast end of the Çataltepe cluster. The site did not initially appear to be the period VI site described by Braidwood, but sampling suggested that it is. It is surrounded by cotton fields. The mound has been cut by a few plunder pits on top and a bulldozed cut (several years old) remains on the east and south sides. A few roof tiles are scattered on the surface.
- AS 17** **Soğuksu Höyük**  
 AREA: 170 × 150 m                      HEIGHT: 22 m                      ILLUSTRATION: Fig. A.5  
 AVRP DATE: A good range of Hellenistic, Roman, and second/first-millennium wares. The village yielded two band-painted small-necked jars, also decorated spindle whorls of Early Bronze Age date or earlier  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman, possibly Early Iron Age, possibly Early Bronze Age, possibly Late Chalcolithic  
 DESCRIPTION: A medium-sized prominent mound, which although surrounded on three sides by houses of the village has extensive areas of open site available for collection. The steep north-facing slope has abundant stones on the surface that include serpentinite in various forms, but none worked. The north-facing slope has a clean surface. The top of the mound is under cereals and thus has moderate visibility but is obscured to the east. The site is cut by village houses on the southeast, south, and southwest sides. A villager reported a large basalt trough (105 × 80 × 30 cm) of indeterminable date.
- AS 18** **Güzel Höyük**  
 AREA: 100 × 100 m                      HEIGHT: 4.5 m                      ILLUSTRATION: Fig. A.5  
 AVRP DATE: A small collection but strong second millennium and one Roman terra sigillata ware. No clear Early Bronze Age  
 BRAIDWOOD DATE: Plentiful Middle Bronze Age, probably Early Bronze Age  
 DESCRIPTION: A low rounded mound amidst cotton fields. The northeast half is covered with scrub and consequently has low visibility, while the southwest side is only sparsely covered. The mound has been cut at the east side.

**AS 19****Tell Karadurmuşlu**

AREA: 60 × 30 m                      HEIGHT: 20 m                      ILLUSTRATION: Figs. A.2, A.5  
 AVR P DATE: Very small collection includes possible second millennium, one Iron Age red-slipped burnished ware, Hellenistic-Roman terra sigillata ware, Early Islamic  
 BRAIDWOOD DATE: Medieval-Arab, Roman-Hellenistic, Late Iron Age, Middle Bronze Age  
 DESCRIPTION: A high and steep mound of which the north part (A) is ca. 2 m higher than the south part (B). An erosion fan can be seen at the northwest side of the north part. The south part is eroded and in terraces. The mound is heavily cut on all sides and stands in the center of the village.

**AS 20****Ali Bey Höyük**

AREA: 200 × 150 m                      HEIGHT: 4 m                      ILLUSTRATION: Figs. A.2, A.5  
 AVR P DATE: Mainly Roman pottery; one lamp. Earlier material (Middle to Late Bronze Age) appears to be very sparse even within the cut. 2002 collection: no clear second millennium. Includes common Late Roman/Late Antique  
 BRAIDWOOD DATE: Medieval-Arab, Late Roman, possibly Middle Bronze Age  
 DESCRIPTION: A moderately low mound almost totally obscured by the modern village; however, about 50 m of the north end of the mound projects beyond the village and was collected in 1996. Part of this is covered by weeds and another part contains a cut 2.5 m deep; this appears quite old but exhibits well-developed horizontally stratified ash and other layers. The cut measures ca. 20 × 20 m.

**AS 21****Tell Torun Anablı (Torun Höyük)**

AREA: 150 × 85 m                      HEIGHT: 6.5 m                      ILLUSTRATION: Figs. A.2–3  
 AVR P DATE: Roman (few terra sigillata ware), many Early Islamic, moderate Middle Islamic, possible Late Roman (field), few Roman (terra sigillata ware), few Late Roman (brittleware), few glazed Islamic, one Islamic incised body sherd, and one modern sherd  
 BRAIDWOOD DATE: Medieval-Arab, possibly Hellenistic  
 DESCRIPTION: A moderately low oval mound cut by a 2.5 m high section along the south side, and a slightly lower cut to the north. The south part of the mound is under tents, and a dirt track runs along the side east–west. The remainder of the mound is under prickly shrubs with some cotton to the north. A second apparently smaller mound to the northeast has been cut to the north. This was not collected as a separate area, first because pottery on both mounds was rather sparse, and second because it is possible that the northeast mound (lower than 1 m) was bulldozed from the north part of the main site. Pottery was fairly scarce, even along the cuts.

**AS 22****Çolaktepe (Tell Kilise)**

AREA: 140 × 80 m                      HEIGHT: 11 m                      ILLUSTRATION: Figs. A.2–3  
 AVR P DATE: —  
 BRAIDWOOD DATE: Roman, possibly Hellenistic, probably Iron Age  
 DESCRIPTION: A medium-sized mound that is high and steep at the north and northwest sides. The south and southeast slopes are gently terraced at the south and east sides. The top is heavily overgrown. Vegetation burnt off at the northwest side reveals many pits (possibly illegal digging). A concentration of roof tiles and blocks were revealed by recent plow furrows on the south terrace.

- AS 23** **Çiloğlan**  
 AREA: 120 × 120 m HEIGHT: 7 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Small number of Roman sherds  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman  
 DESCRIPTION: A moderate-sized rounded mound below the cemetery and partly within the village. The surface is totally obscured over most of the site and virtually no pottery is visible but a few roof tiles of Roman/Late Roman date, including some very large tiles. The main part of the village is to the south and west.
- AS 24** **Çiloğlan Iskân (Yolaşan)**  
 AREA: 100 × 100 m HEIGHT: 3 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: —  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic  
 DESCRIPTION: A small low mound now entirely contained within the village of Iskan. It was not collected or measured because it is almost totally obscured by the village.
- AS 25** **Murat Paşa**  
 AREA: 120 × 100+ m HEIGHT: 8 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Possible Iron Age; Roman (terra sigillata ware); Early and Middle Islamic; brittlewares, but few Late Roman diagnostics  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman  
 DESCRIPTION: A mound comprising several meters (in places) of occupation deposits over a basalt hill on the edge of the floodplain. Well-dressed ashlar stones robbed from buildings within the site are now used in garden walls and other boundaries. These include a large basalt Islamic inscription 1.31 × 0.70 (inscription face in two registers) × 0.44 cm high; GPS north 36° 28' 48.8" east 036° 27' 17.2". This is a monumental inscription (see pl. 6B) of either Early or Middle Islamic date, reported to the museum. The north bridge of Murat Paşa was built in three phases: (1) small dressed limestone blocks; (2) the second phase was built against this to the west with large reused basalt blocks like those of main site; (3) small cream/orange sandy limestones with small bosses and an Islamic inscription of ca. A.H. 1275. Phase 1 includes one large possibly embossed basalt block, and this probably postdates the Middle Islamic phase of the main site. The south bridge, which is large and still in use, includes some large basalt blocks, but the plan of this bridge was not studied.
- AS 26** **Ada Tepe (Tell Abu Shair)**  
 AREA: 200 × 140 m HEIGHT: Ca. 5 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Mainly Roman, Late Roman, and Byzantine but with a significant possible prehistoric (A-B-C) non-painted assemblage; Roman; Late Roman; Islamic; one possible Middle Bronze Age body sherd; possible prehistoric  
 BRAIDWOOD DATE: Hellenistic/Roman  
 DESCRIPTION: A low rounded mound on a limestone outcrop. Occupation deposits may only be 3–5 m deep although the debris-covered slopes are much deeper. The site is covered by numerous angular stones and occasional quern fragments (including one complete saddle quern). The surface is moderately clean under grazed cereals. One or two modern buildings have left foundation traces on the summit and west slope. Pottery is occasional.

- AS 27** **Kırkhız Pınar (now Baş Pınar)**  
 AREA: 150 × 150 m HEIGHT: 27 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Islamic, Roman, some second/first millennium, few red-black burnished ware. 2002 collection: Also some Late Antique  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman, possibly Middle Bronze Age, Early Bronze Age  
 DESCRIPTION: A small, very prominent tell with steep sides, especially the northwest, north, and northeast sides. Most of the slopes and the summit are obscured by weeds and shrubs, especially on the north-facing slope. However, bare patches on the south-facing slope make sampling easier. A mix of cotton, vegetables, and other crops covers the valley floor. Collecting conditions are difficult owing to ground cover.
- AS 28** **Tell Malta (Matta)**  
 AREA: 240 × 150 m HEIGHT: 3.5 m ILLUSTRATION: Fig. A.5  
 AVRP DATE: 1998 collection: Middle Bronze Age/Late Bronze Age carinated vessels, Roman/Byzantine  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman, Iron Age, Early Iron Age, possibly Late Bronze Age, Early Bronze Age, possibly Late Chalcolithic  
 DESCRIPTION: A large mound that is heavily bulldozed. The topsoil has been removed, and the south part is cut deeper than the north part. All sides of the mound are cut and the west part of the north side has been cut up to 6 m. A terrace has been cut out at the west side and soil spread out over the surrounding fields; some soil was pushed to the edge of the top.  
 NOTE: Visited in 1995. At that time the north and east sides had been cut, but not as much bulldozing of the top had taken place, and the top of the mound was occupied by the tents of cotton pickers.
- AS 29** **Esen Tepe (al-Kanisah)**  
 AREA: 400 × 300 m HEIGHT: 10 m ILLUSTRATION: Figs. A.5–6  
 AVRP DATE: Predominantly late (Roman–Byzantine–Early Islamic)  
 BRAIDWOOD DATE: Late Roman, Hellenistic/Roman, possibly Middle Bronze Age, possibly Late Chalcolithic, Chalcolithic  
 DESCRIPTION: A low double mound; the northern, more prominent mound (A) is surrounded by a massively built stronghold of indeterminable (but old) date constructed of rough-cut basalt stone in cream mortar. Behind this to the west are related buildings, which may be the church (Arabic: *kanisah*). The south edge is marked by steep slopes overlooking the canal. A low cut of recent date has been made at the northern extremity of the site.
- AS 30** **Tabarat Kızılkaya (Kubbece)**  
 AREA: 120 × 100 m HEIGHT: — ILLUSTRATION: Fig. A.6  
 AVRP DATE: Not visited  
 BRAIDWOOD DATE: Meaningless  
 DESCRIPTION: This site was not located in the field but is very clearly visible on CORONA imagery. It is described by Braidwood as a small and low mound.

- AS 31**                      **Tell Wasfe (Döşhasan)**  
 AREA:                      70 × 40+ m                      HEIGHT:    8 m                      ILLUSTRATION:            Fig. A.6  
 AVRP DATE:                Early Bronze Age (Amuq Phase H/I) and perhaps some G/H in lower north cut; perhaps also some Neolithic (Amuq Phase A/B); Roman  
 BRAIDWOOD DATE:        Hellenistic/Roman  
 DESCRIPTION:             The site has been cut virtually in half so that the east side up to a small group of houses is now missing. Bulldozing has revealed a clean vertical section (65 m north–south and 7 m high); in section mudbrick walls, floors, and stratigraphy are all clearly outlined. The site is also cut.
- AS 32**                      **Tell Sultan (Telli Sultan)**  
 AREA:                      380 × 320 m                      HEIGHT:    5.5 m                      ILLUSTRATION:            Fig. A.5  
 AVRP DATE:                Appears to be uniformly Hellenistic, Roman, Early Islamic  
 BRAIDWOOD DATE:        Medieval-Arab, Late Roman, possibly Hellenistic  
 DESCRIPTION:             A very extensive but broad and rather low site. Pottery and Roman roof tiles are common over the entire site except on the steeper north-facing slopes. The top of the mound in Area B appears to have been graded down to occupation levels (i.e., about 50 cm), and a low cut, ca. 1 m high, is bulldozed out of the east edge of the site. An area of vitrified kiln waste occurs within B near the mound summit.
- AS 33**                      **Tell Firka (Tell Firqah, Tell Firgah)**  
 AREA:                      48 × 90 m                      HEIGHT:    0.5 m                      ILLUSTRATION:            Fig. A.6  
 AVRP DATE:                —  
 BRAIDWOOD DATE:        Medieval-Arab, Late Roman, Iron Age, possibly Middle Bronze Age  
 DESCRIPTION:             A low mound of which only the part below the road is preserved. The mound is heavily cut on all sides.
- AS 35**                      **Baldıran (Bokluca, Balderan)**  
 AREA:                      200 × 140 m                      HEIGHT:    14 m                      ILLUSTRATION:            Fig. A.6  
 AVRP DATE:                Roman is common on top of mound, also various second-millennium wares. 2002 collection: Amuq Phase G (plain simple ware), some second millennium, rare Iron Age, Roman terra sigillata ware, a good assemblage of Late Antique brittleware, and several pithoi  
 BRAIDWOOD DATE:        Medieval-Arab, Roman, possibly Iron Age, Early Bronze Age  
 DESCRIPTION:             An elongate mound oriented east–west. Much is obscured by village houses, conifer woodland, and a cemetery (to the west). In general the slopes are steep and heavily vegetated; pottery is therefore sparse or unavailable over most of the site, but cuts at C and B permit reasonable collecting. Another cut in the southeast yielded only a small collection of sherds. The west cut (C) included some floors, mudbrick walls, and stone foundations; this was toward the base of the mound and was ca. 2 m high.

- AS 36** **Tell Kızılkaya (Gavurköy)**  
 AREA: 100 × 80 m HEIGHT: 16 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: Good range of Roman terra sigillata ware, also Hellenistic, and some Late Antique. Iron Age (two red-slipped burnished wares, and several plain wares), and possibly second millennium (one possible Syrian bottle)  
 BRAIDWOOD DATE: Medieval-Arab, Roman, probably Hellenistic, Iron Age, possibly Early Iron Age, probably Middle Bronze Age, possibly Late Chalcolithic  
 DESCRIPTION: A medium-sized mound with steep slopes except at the southwest side. The mound is surrounded by plowed fields and has a cemetery on top. A high cut (up to 5 m) is at the north side. The remains of walls are visible at the southwest side, and a terrace is at the south side.

- AS 36D** **Tell Kızılkaya**  
 AREA: 50 × 40 m HEIGHT: Indeterminate ILLUSTRATION: Fig. A.6  
 AVRP DATE: Mainly prehistoric burnished wares in date range Amuq Phases A–C, one bichrome body sherd (Amuq Phases A–B), some dark-faced burnished ware, some red-black burnished ware and simple ware, and one possible Middle Bronze Age body sherd  
 DESCRIPTION: An area of shallow slope wash with deposits of gray ashy soil (D) on lower limestone slopes to the southeast of the main tell. Sherds are common in a shallow cut that follows the contours of a limestone slope. Sherds were collected both from the cut and from upcast immediately downslope. A smaller cut upslope has little material and is cut along the junction between the plain and limestone; therefore, the site seems to be a restricted area.

- AS 37** **Yanık Tepe (Tabarat Baytarlı)**  
 AREA: 200 × 100 m HEIGHT: 3 m ILLUSTRATION: Fig. A.5  
 AVRP DATE: No collection  
 BRAIDWOOD DATE: Possibly Late Bronze Age and recent Arab  
 DESCRIPTION: Site totally obscured by modern village.

- AS 38** **Cincik Tepesi**  
 AREA: 200 × 100 m HEIGHT: 1 m ILLUSTRATION: Fig. A.5  
 AVRP DATE: A: Mainly Roman, Late Roman, and some Early Islamic; B: Islamic  
 BRAIDWOOD DATE: Medieval-Arab  
 DESCRIPTION: A flat field of pale gray soil with a scatter of pot sherds, stones, and tile fragments (A). Toward the cemetery near a bridge over the canal is group of cut limestone blocks (one said to have come from the site which was recently bulldozed). 300–400 m to the east fields have been bulldozed into 1 m high terrace; this appears to be the remains of the original levee which has a thin veneer of occupation upon it in the form of some vitrified clay from a tile kiln. A cemetery (B) is by the road, not mentioned by Braidwood; this low mound, 100 m diameter, 1 m high, was collected in 1995 as AS 38. One or two columns and capitals were incorporated into the cemetery.

- AS 40** **Tell Baytarlı (Topraklı)**  
 AREA: 130 × 100 m HEIGHT: 8.5 m ILLUSTRATION: Fig. A.5  
 AVRP DATE: Middle Bronze Age, Late Bronze Age, and Early Iron Age, Cypriot white-slipped ware II; 2002 collection: Also some Roman/Late Roman  
 BRAIDWOOD DATE: Late Bronze Age, probably Middle Bronze Age  
 DESCRIPTION: A medium-high rounded mound with gentle slopes at the east and south sides. It is covered by cotton and has no apparent cuts.
- AS 41** **Kiremitlik**  
 AREA: 500 × 500 m HEIGHT: 4 m ILLUSTRATION: Fig. A.5  
 AVRP DATE: Small collection of mainly Late Roman/Late Antique, one Roman terra sigillata ware, no clear earlier material  
 BRAIDWOOD DATE: Roman/Hellenistic, probably Middle Bronze Age  
 DESCRIPTION: A low mound covered by a modern village. Survey was done in villagers' gardens. Locals say that they find coins and other antiquities after it has rained. They showed us a terra sigillata lamp and gave us a coin. Many Roman roof tiles are visible in the gardens.
- AS 42** **Çingilloğlu Höyük (Akkuyu)**  
 AREA: 200 × 100 m HEIGHT: Indeterminate ILLUSTRATION: Fig. A.6  
 AVRP DATE: Late Roman, Islamic  
 BRAIDWOOD DATE: Meaningless  
 DESCRIPTION: Roman/Late Roman material, roof tiles, and other debris resulting from bulldozing of archaeological site were found. This included abundant roof tiles but little pottery. In the northwest part of site a ca. 2 m long limestone block remains in place.
- AS 44** **Tabarat Hacı Hasan**  
 AREA: 120 × 100 m HEIGHT: — ILLUSTRATION: Fig. A.6  
 AVRP DATE: Not visited  
 BRAIDWOOD DATE: Medieval-Arab  
 DESCRIPTION: The site was not located in the field but is clearly visible on CORONA imagery.
- AS 45** **Killik Tepe (Tabarat ᵀArab Ahmad)**  
 AREA: 100 × 180 m (measured on imagery) ILLUSTRATION: Fig. A.6  
 HEIGHT: 1.5 m  
 AVRP DATE: No collection  
 BRAIDWOOD DATE: Possibly Middle Bronze Age  
 DESCRIPTION: A low, small mound with gently rising slopes, totally covered by a gendarmerie post.

- AS 46** **Gökçeoğlu**  
 AREA: 70 × 40 m HEIGHT: 5.5 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: Second millennium; Iron Age (including red-slipped burnished ware); Late Antique  
 BRAIDWOOD DATE: Medieval-Arab, possibly Middle Bronze Age  
 DESCRIPTION: A small medium-high mound. Slopes are steep at the northeast and northwest sides and are more gently inclined at the southeast side. The southwest slope is partly covered by a cemetery. A large cut is visible at the northwest side and a smaller one at the northeast side.
- AS 50** **Killik Tepe (Büyük Tepe)**  
 AREA: 110 × 190 m (measured on imagery) HEIGHT: 2 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: —  
 BRAIDWOOD DATE: Roman, possibly Chalcolithic  
 DESCRIPTION: A low rounded mound that is mainly under a gendarmerie post and trees. Some confusion exists as to which site this is, but as it is of the two Killik Tepe mounds and is located to the northwest, this seems the best contender for Büyük Tepe of Braidwood.
- AS 51** **Killik Tepe**  
 AREA: 150 × 90 m HEIGHT: 2 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: Late Roman and some Islamic-related ware: few Late Roman, some Islamic, Hellenistic black glazed  
 BRAIDWOOD DATE: Medieval-Arab  
 DESCRIPTION: An elongate low mound immediately south of Kumlu-Reyhanlı road and southeast of AS 50; at present there is a TIGEM station (i.e., an agricultural department experimental farm center). It is mainly under trees and has been plowed around the perimeter. Roman/Late Roman roof tiles are common, and sherds are only occasionally evident owing to the trees, other ground cover, and buildings. Kiln slag was found on the east end of the site.
- AS 52** **Akpınar Höyük**  
 AREA: 230 × 140 m HEIGHT: 24 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: Good collection of Early Bronze Age including red-black burnished ware, Hama J goblets, plain simple ware, and caliciform ware; three to four pieces of second millennium; Early Iron Age, and Iron Age; abundant Roman terra sigillata ware; Late Antique brittleware and Byzantine pithos; possibly Early Islamic; Good collection of Middle/Late Islamic (Ottoman) including two possibly Ottoman pipes  
 BRAIDWOOD DATE: Possibly Late Chalcolithic, Early Bronze Age, Middle Bronze Age, probably Early Iron Age, Iron Age, and Hellenistic/Roman  
 DESCRIPTION: A large steep-sided oval mound sampled as three areas. The top of the mound is occasionally plowed and on the north and northeast side recent cuts have been made with mechanical shovels (Area C). The main cuts along ca. 50–80 m of the northwest slope are up to 4 m high and expose soil wash layers and layers of bright orange burnt mudbrick; these yielded consistent assemblages of Early Bronze Age pottery, Hama J goblets, and fragments of red-black burnished ware. This also appears to be the date of exposed deposits in a recent cut near the village. Both cuts appear to go down to close to plain level.



- AS 54A** **Yeni Yapane (Yeniyapan)**  
 AREA: 200 × 100 m ILLUSTRATION: Fig. A.6  
 HEIGHT: Indeterminate due to bulldozing  
 AVR P DATE: Late Roman, Byzantine, Early Islamic  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman  
 DESCRIPTION: Now bulldozed flat, today the site is plowed and surrounded by cotton fields. Local people at the site said the mound was bulldozed fifteen or sixteen years ago, and in the village people said the mound was bulldozed one or two years ago; the latter seems more likely. The site forms a low terrace of 1–2 ha. Dressed limestone and basalt blocks remain around the edge, as well as a column base, one door lintel 1.25 m long, and a second door lintel 2 m long.
- AS 54B** **Yeni Yapane (Yeniyapan)**  
 AREA: 175 × 110 m HEIGHT: 3 m ILLUSTRATION: Fig. A.6  
 AVR P DATE: Possible Late Roman; indeterminate  
 BRAIDWOOD DATE: Medieval-Arab  
 DESCRIPTION: Totally covered by grass and scrub; therefore the surface is virtually obscured. A few Late Roman tiles were found.
- AS 55** **Tell Kurcoğlu (Tell Kırcaoğlu)**  
 AREA: 170 × 150 m HEIGHT: 16 m ILLUSTRATION: Fig. A.6  
 AVR P DATE: Small collection contains rare second millennium, Early Iron Age, Iron Age, Hellenistic, Roman, Late Antique  
 BRAIDWOOD DATE: Hellenistic, Iron Age, Early Iron Age, Middle Bronze Age, possibly Early Bronze Age, possibly Late Chalcolithic  
 DESCRIPTION: An oval-shaped mound with two ravine-like depressions at the north side. The mound is steep except at the south side where a cemetery is located. The mound is sparsely covered with scrub, has a terrace at northeast side, and a small cut at the east and south sides. (See Braidwood 1937: 25 for an Iron Age relief and inscription possibly from this site.)
- AS 73** **Çamurlu (Tell Jabur, Tell Çamurliye)**  
 AREA: 200 × 40 m HEIGHT: 22 m ILLUSTRATION: Fig. A.7  
 AVR P DATE: Small collection but second millennium predominates. Also some Roman (terra sigillata ware): one Late Roman C and several Late Antique brittleware, and one red-slipped burnished ware (possibly Iron Age)  
 BRAIDWOOD DATE: Middle Bronze Age  
 DESCRIPTION: An oval mound with steep north and northeast sides, a gently sloping east side, and a low cut (up to 0.5 m) at the west side. Many pebbles were found on the mound.
- AS 74** **Mut Höyük**  
 AREA: 75 × 50 m HEIGHT: 3 m ILLUSTRATION: Fig. A.8  
 AVR P DATE: Small collection of indeterminate date  
 BRAIDWOOD DATE: Iron Age  
 DESCRIPTION: A low and fairly small mound covered completely by the village of Tell el-Dis. According to the villagers the mound was higher in the past; they also mentioned that they find antiquities when they are digging in their gardens.

- AS 75** **Tell Kecebey**  
 AREA: 125 × 95 m HEIGHT: 22 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Chalcolithic, Early Bronze Age, second millennium, Iron Age, Hellenistic  
 BRAIDWOOD DATE: Iron Age, Early Iron Age, Late Bronze Age  
 DESCRIPTION: An elongate mound oriented east–west with steep slopes except at the south side, which gently slants downward. The surface is ca. 1.5 m lower than in the past (as indicated by the benchmark). A drain cuts the west and north slopes, the mound is moderately damaged, and bulldozer cuts are on the west and east sides.
- AS 76** **Tell Mısır (Miri, Tell Misri)**  
 AREA: 100 × 120 m HEIGHT: 4 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Abundant red-burnished wares presumably Amuq Phase H/I, but also perhaps some earlier as well; dark-faced burnished ware (one or two?); Amuq Phase F (copper pin; see pl. 2A); and a small amount of Roman. 1998 collection: possible Amuq Phases G, H (red-black-burnished ware), Roman/Byzantine  
 BRAIDWOOD DATE: Hellenistic/Roman, Early Bronze Age, possibly Late Chalcolithic  
 DESCRIPTION: The site is now heavily bulldozed and cut on all four sides, thereby producing a square. This change appears to have taken place in 1996 or 1997 because the previous year the site appeared undamaged. Late Roman roof tiles litter the southwest slope. A deep 2.5 m cut along the east side exposed well-stratified horizontal cultural deposits and apparently other archaeological features. Abundant large sherds are located around the site perimeter and on top of the mound; some evidence indicates that bulldozed cultural deposits were smeared over the top of the site.  
 NOTE: The dimensions are for the intact part of site; the original site was probably in the range of 150–200 m diameter.
- AS 77** **Tell ḌAnbar**  
 AREA: 350 × 150 m HEIGHT: 2 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Roman and Late Roman  
 BRAIDWOOD DATE: Medieval-Arab, Early Bronze Age  
 DESCRIPTION: Originally a long elongate mound, but in 1996 found to be totally bulldozed so that only a single standing north–south section remains. The remains of the site could only be roughly estimated in the field to 290 m north–south and larger than 50 m east–west; the only trace of the site is a 2 m high section that remains along a north–south ditch or field boundary. All that remains of the site is a gray area of soil scattered with Roman roof tiles, occasional stones, and other occupation material. A pile of stones and roof tiles probably comes from this site.
- AS 80** **Tell al-Rasm**  
 AREA: 170 × 90 m HEIGHT: 1.5 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Black burnished ware, dark-faced burnished ware, prehistoric bichrome (i.e., mainly Amuq Phases B and C), Amuq Phases E–F abundant along cut, third millennium. Simple ware (possible Middle Bronze Age), one terra sigillata ware, and a mold from early cut (see pl. 2B).  
 BRAIDWOOD DATE: Possibly Late Chalcolithic

DESCRIPTION: A low elongate mound that has been plowed over. The northern 50 m seem to have been bulldozed away up to a vertical section 90 m long. The ghost of a bulldozed mound is still evident as a pale brown soil mark in contrast to the adjacent dark gray alluvium.

**AS 81** **Yeşilova (Tell Damalka al-Qibli)**

AREA: Not measured ILLUSTRATION: Fig. A.8  
 HEIGHT: 36 m (height of natural hill; depth of cultural deposits is unknown)  
 AVRP DATE: —  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic, Middle Bronze Age, probably Early Bronze Age  
 DESCRIPTION: The site is situated on a natural hill with two summits: Tell Kisap (the lower one) is medium high and very steep at the south side; a low depression separates it from the Büyük Tepe, which is higher and also very steep at the south side. Scattered cut blocks are found on the summit, along with one possible column fragment. A local shepherd recalled Braidwood visiting the site. Cut blocks lie around the hill and in the Orontes River. The site is undamaged.

**AS 84** **Tell Uzunarab (Bozhöyük)**

AREA: 300 × 180 m HEIGHT: 23.5 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Large collection contains abundant Early Iron Age and Iron Age, common second millennium, Early Bronze Age (red-black burnished ware, plain simple ware); earlier and later materials appear rare to absent  
 BRAIDWOOD DATE: Medieval-Arab, Roman, Hellenistic, Iron Age, probably Early Iron Age, Middle Bronze Age, Early Bronze Age, possibly Late Chalcolithic  
 DESCRIPTION: A high mound with steep slopes except at the west side; at the south end is an isolated hillock while the north side slopes upward. The northwest side contains a cut, recently made and about 2–3 m high. It is possible that the top surface at the west side of the summit has been removed.

**AS 85** **Tell Mudanbo (Madenboyu)**

AREA: 150 × 150 m HEIGHT: 4 m ILLUSTRATION: —  
 AVRP DATE: —  
 BRAIDWOOD DATE: Medieval-Arab, Roman/Hellenistic, possibly Middle Bronze Age, possibly Late Chalcolithic  
 DESCRIPTION: Site not found, perhaps because it was covered by the village of Madenboyu.

**AS 86** **Karatepe**

AREA: 350 × 325 m HEIGHT: 13 m ILLUSTRATION: Fig. A.5  
 AVRP DATE: Large collection contains abundant Early Iron Age and Iron Age, common second millennium, Early Bronze Age (red-black burnished ware, plain simple ware); later materials are very rare  
 BRAIDWOOD DATE: Medieval-Arab, Middle Bronze Age, Early Bronze Age  
 DESCRIPTION: A large and fairly high mound with a terrace at the northeast end. It is steep at the southeast and northwest sides. A cemetery was found on top, and a camp in the north cut; a bulldozer has removed a substantial part of the mound. Local villagers living on the tell have a collection of bronze artifacts including a second-millennium B.C. spearhead and pin, as well as a seal of Kültepe 1b (see pls. 1F, 2D left, 2D right). The lower town to the northeast has been heavily cut into quadrants by bulldozing and showed diagnostics of a Middle Bronze Age date.

- AS 87**                                      **Hardallı Tepe**
- AREA:                                      120 × 190 m                                      HEIGHT: 2 m                                      ILLUSTRATION: Fig. A.5
- AVRP DATE:                                      Exclusively Late Hellenistic to Late Roman, Early Islamic uncertain. Few Hellenistic-Roman, many Late Roman, possible Islamic
- BRAIDWOOD DATE:                                      Late Roman and Roman
- DESCRIPTION:                                      A low rounded mound which was fallow, but being plowed at the time of our visit. The plow has gone clearly into a building structure. Roof tiles are common, and abundant pottery includes terra sigillata incurved rim bowls and Late Roman C ware.
- AS 88**                                      **Körtepe (Kumtepe)**
- AREA:                                      130 × 100 m                                      HEIGHT: 2 m                                      ILLUSTRATION: Fig. A.5
- AVRP DATE:                                      Abundant Roman terra sigillata ware over entire site. Collection also includes incurved rim bowl and other Hellenistic shapes
- BRAIDWOOD DATE:                                      Medieval-Arab, possibly Iron Age
- DESCRIPTION:                                      A low rounded mound, fifty percent of which is obscured by a cemetery. The lower and middle slopes are under thin cotton that does not obscure the surface, allowing moderately good visibility. One roof tile was found on the surface.
- AS 89**                                      **Boztepe**
- AREA:                                      150 × 140 m                                      HEIGHT: 6 m                                      ILLUSTRATION: Fig. A.5
- AVRP DATE:                                      Main mound: Early Bronze Age (red-black burnished ware), Middle Bronze Age wares common, Middle Bronze Age–Late Bronze Age (incurving rim platters), Late Bronze Age–Iron Age (lipless rim of shallow plate), Iron Age (red-slipped burnished ware); Small adjacent mound C: Middle Bronze Age various second-millennium wares and Iron Age; large basalt stone with geometric grooved ornament, possibly from Iron Age decorative relief
- BRAIDWOOD DATE:                                      Iron Age, Early Iron Age, Late Bronze Age or Middle Bronze Age, Middle Bronze Age, possibly Early Bronze Age
- DESCRIPTION:                                      A round-oval mound with gentle slopes on the east and south and steeper slopes north and west. The mound has been cut by a bulldozer at the north and west sides. Two depressions are in the top of the mound. Note that this is the description of the mound before the bulldozing mentioned below (1995). On September 8, 1996, a representative and gendarmes noted the start of bulldozing on top of the mound. This bulldozing was probably done by large scrape-graders that took soil in 30 m wide north–south strips and dumped it on fields to the south. In addition, a moderately high cut was made at the west end and lower cuts were made on the north and south sides.
- AS 91**                                      **Paşa Höyük**
- AREA:                                      250 × 150 m                                      HEIGHT: 17 m                                      ILLUSTRATION: Fig. A.6
- AVRP DATE:                                      Roman and Hellenistic on main mound plus some earlier material; Early/Middle Islamic on B
- BRAIDWOOD DATE:                                      Roman, Hellenistic, possibly Early Bronze Age
- DESCRIPTION:                                      A large mound with a very steep northeast-facing slope having a cemetery just to the west of the summit. The mound is generally unplowed. The bare area to the south of the tarmac road (to Paşaköy [AS 11]) appears to comprise a lower town of mainly Islamic

date; terra sigillata ware pottery is common over the entire mound surface. Collection was concentrated on the steep northeast-facing slopes where the potential for collection of the earlier pre-Roman level was greatest.

- AS 92**                                    **Karacanlık (Karacanlık)**
- AREA:                                    400 × 250 m                                    HEIGHT:    5 m                                    ILLUSTRATION:    Fig. A.5
- AVRP DATE:                                    Early Bronze Age (especially Amuq Phase G), Late Roman
- BRAIDWOOD DATE:    Recent Ottoman, Late Chalcolithic
- DESCRIPTION:                                    A large, extensive low site originally measured as above, and possibly extended by the cultural deposits exposed in B at the east end of the site. However, under the village (approximately fifty years old) sufficient space between houses allows one to see that early occupation appears to be extensive. Collection from cotton fields in the east part of the site is consistently Early Bronze Age and probably largely Amuq Phase G. Some Late Roman roof tiles are on top of the site, and an early Early Bronze Age copper/bronze flat ax shown by a villager was recommended to go to the museum. Similar early Early Bronze Age wares are also coming out of the west end of the site from cotton fields along the road.
- 
- AS 93**                                    **Hasanuşağı**
- AREA:                                    220 × 110 m                                    HEIGHT:    2.5 m                                    ILLUSTRATION:    Fig. A.5
- AVRP DATE:                                    Mixed group of late pottery, mainly from A; in addition abundant lithics (flint and chert blades, etc.) and small single rims in Amuq Phases A–B range, or slightly earlier; also two polished axes
- BRAIDWOOD DATE:    Medieval-Arab, Hellenistic/Roman, probably Chalcolithic
- DESCRIPTION:                                    Although originally three (or more) mounds, today the only conspicuous mound is the extreme low mound with dimensions given here. At the time of collection the main north part of mound was under cotton, therefore collection was from the clean fields to the east (A) and north (B). The south part of the site is under the *çiftlik* (farm) but most of the information came from the fields on A and B; in general the south part of site has a scatter of Roman/Late Roman.
- 
- AS 94**                                    **Tell Kurdu**
- AREA:                                    400 × 400 m                                    HEIGHT:    3.5 m                                    ILLUSTRATION:    Fig. A.6
- AVRP DATE:                                    Mainly Amuq Phases D–E, but Amuq Phases A–C and G are also present (pl. 1G)
- BRAIDWOOD DATE:    Recent Ottoman, Roman, Late Chalcolithic, Chalcolithic
- DESCRIPTION:                                    A low rounded mound. A large cut (100 × 100 m wide and 2–3 m deep) in the southeast quadrant exposes a fairly complete prehistoric sequence. The remainder of the site has also been heavily landscaped by bulldozing since the original Chicago excavations. The main part of the site was under cotton in 1995, and under excavation by K. A. Yener in 1996–1999 and R. Özbal and F. Gerritsen in 2001.

- AS 95** **Karahöyük**  
 AREA: 120 × 120 m HEIGHT: 16 m ILLUSTRATION: Fig. A.6  
 AVR P DATE: Some third millennium B.C., painted Iron Age, Roman-Hellenistic, and one or two possibly Late Chalcolithic  
 BRAIDWOOD DATE: Hellenistic/Roman, Iron Age, Early Iron Age  
 DESCRIPTION: A prominent steep-sided mound within a village of the same name, with the main residential area of the village located to the north and east. The mound has a steep north-facing slope and is under moderate vegetation on the south, east, and north slopes; the west-facing slope is highly eroded thereby exposing abundant pottery. Two medium-sized pits have been exposed on the south slope. The low elongate spur of the site extends to the south under a small conifer plantation. A shallow enclosed depression is found to the southwest of the site; a villager reports that the site was plundered in 1996/97.
- AS 96** **Tarfah Höyük**  
 AREA: 120 × 80 m HEIGHT: 2 m ILLUSTRATION: Fig. A.6  
 AVR P DATE: Roman/Late Roman-Early Byzantine; Halaf reported by Braidwood, but not noted  
 BRAIDWOOD DATE: Medieval-Arab, possibly Chalcolithic  
 DESCRIPTION: A small rounded site, now almost completely under the village of Tarfah. According to one villager this site was formerly higher, therefore at that time it would have been closer to Braidwood's description for Tell Tarfah. Plowing and minor disturbances around the site perimeter yielded a significant number of Roman/Late Roman wares and three cut stones within the village, two of vesicular basalt (1 × 1 × 1 m) and one of tufa.
- AS 99** **Tell Hasanuşağı (Yerkuyu, Yurt Höyük)**  
 AREA: 350 × 200 m HEIGHT: 28 m ILLUSTRATION: Fig. A.5  
 AVR P DATE: Abundant Iron Age, Early Iron Age, occasional second millennium, rare Early Bronze Age (includes red-black burnished ware, plain simple ware, reserved slip), Hellenistic, Roman terra sigillata ware, Late Antique  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic, Iron Age, Early Iron Age, Late Bronze Age or Middle Bronze Age, Early Bronze Age, Chalcolithic  
 DESCRIPTION: A large, high mound with three ravine-like depressions and four low summits. The east one is highest. There is a low terrace (the lower town) at the east side of the mound, and a bulldozer cut at the north base of the mound exposing 1.0–1.5 m high section. A deep depression surrounding the main mound fills seasonally with water and is possibly the remains of an ancient moat (fig. 2.18). A large quantity of metallic slag was found on site (pl. 2F).
- AS 100** **Ömercedit / ʿImar al-Jadid al-Gharbi (Kıztepe)**  
 AREA: 74 × 49 m HEIGHT: 1.5 m ILLUSTRATION: Fig. A.9  
 AVR P DATE: —  
 BRAIDWOOD DATE: Medieval-Arab, Late Chalcolithic  
 DESCRIPTION: A small, low mound with trees at the northwest side. There are cuts at northeast, southeast, and southwest sides, along with a deep recent bulldozer cut at the northwest side. A fair amount of recent roof tiles were found in the southeast part.

- AS 101** **Tell ʿImar al-Jadid al-Sharqi**  
 AREA: 500 × 350 m HEIGHT: 3.5 m ILLUSTRATION: Figs. A.6, A.9  
 AVRP DATE: Although Braidwood dated the site to Medieval-Arab, detailed examination in 1995 and subsequent seasons showed the site to be Ubaid, Late Chalcolithic (Amuq Phase F), and Early Bronze Age (Amuq Phase G); this important site may therefore follow on from the occupation of Tell Kurdu. There were a few Late Roman/Byzantine sherds at the north-west corner. 1998 collection: Amuq Phase F/G, Roman/Byzantine, possible Islamic  
 BRAIDWOOD DATE: Medieval-Arab  
 DESCRIPTION: A large low site, now heavily bulldozed into a series of terraced fields. Large sub-rounded stones, mainly limestone, outcrop along the north side of site; these have been exposed by bulldozing and may represent part of a city wall. The west end of the site was also cut to leave a high vertical section. A clump of trees can be seen in the southwest part of the mound, and the west end shows horizontal ash layers with Amuq Phase F/G sherds in a horizontal position (see fig. 2.11).
- AS 102** **Baştepe (Baş Köy)**  
 AREA: 100 × 150 m HEIGHT: 1.5 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: Roman (terra sigillata ware), Late Roman, Early Islamic  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman  
 DESCRIPTION: Two low mounds. The northeast one is under the *çiftlik* of Baş Köy and could not be collected; the southwest, although much disturbed by recent occupation (now ruined) was collected. Occasional roof tiles were found, but most of the mound top was obscured by vegetation and the ruins of recent buildings, therefore most collection happened at the outer fringes of the site below the cotton.
- AS 103** **Tabarat Mastepe**  
 AREA: Ca. 150 × 100 m, plus possible lower settlement extending 200 m to south ILLUSTRATION: Fig. A.6  
 HEIGHT: —  
 AVRP DATE: Not visited  
 BRAIDWOOD DATE: Middle Bronze Age, possibly Late Bronze Age, possibly Early Iron Age, Hellenistic/Roman, Medieval-Arab  
 DESCRIPTION: Braidwood describes the site as a small low mound, although CORONA imagery suggests the presence of a slightly larger lower settlement surrounding the mound itself.  
 NOTE: Braidwood's AS 103, Tabarat Mastepe, has not yet been visited. AS 161 was originally recorded as AS 103 in 1996, although subsequent analysis has clarified the error (see details in the listing for AS 161). The true AS 103 is visible on CORONA imagery, about 1 km to the west of AS 161.
- AS 104** **Tell al-Terzi (Terzi Höyük)**  
 AREA: 250 × 200 m HEIGHT: 13 m ILLUSTRATION: Figs. A.5, A.8  
 AVRP DATE: 1995 collection: Hellenistic-Roman (terra sigillata ware), possible Iron Age, Middle Bronze Age, Early Bronze Age (red-black burnished ware)  
 BRAIDWOOD DATE: Roman, Hellenistic, Iron Age, Early Iron age, Middle Bronze Age, Early Bronze Age  
 DESCRIPTION: A prominent tell on a flat plain, covered by the modern village of Terzi Höyük.

**AS 105****Tutlu Höyük**

AREA: 100 × 80 m                      HEIGHT: 8 m                      ILLUSTRATION: Fig. A.8

AVRP DATE: Late Islamic (Ottoman) on mound summit; Amuq Phases G, H, I, and perhaps earlier on much of south and east part of mound; also around north end. Also some suspected second- and first-millennia B.C. 1998 collection: possible Amuq Phase G, Amuq Phase H/I, Roman/Byzantine, Late Islamic (Ottoman). 2002 collection: small quantity of second millennium, one Iron Age red-slipped burnished ware, good Late Antique, Middle/Late Islamic (Ottoman) abundant in C; Area D is uniformly Late Chalcolithic

BRAIDWOOD DATE: Arab and Early Bronze Age

DESCRIPTION: A moderate-sized tell now heavily cut so that only the roughly square top, containing a cemetery, is preserved. The top of the mound is scarred by deep bulldozer cuts on the south, east, and north sides; this cutting has resulted in terraces being produced to the south and west. The biggest cut is a 3–4 m cut between Areas A and B, and there is a lower cut between B and C. The cut between A and B has Amuq Phases G and H/I cropping out. In addition, a very low area covered with numerous sherd outcrops is a possible lower town. A shallow enclosed depression is to southwest. A long mounded area (D) extends north of the mound for several hundred meters, much of which is covered by a farmhouse.

**AS 106****Harab Ali Höyük**

AREA: 150 × 140 m                      HEIGHT: 4 m                      ILLUSTRATION: Fig. A.9

AVRP DATE: Sparse Roman-Islamic and common earlier sherds of possibly Iron Age date

BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman, Iron Age

DESCRIPTION: A moderate-sized site with a lower town extending to the north and a shallow enclosed depression to the east (still visible in 1997). The site was cut 3 m to the west, 2 m to the north, and double cut to the south. It has a moderate slope to the east. The top of the mound comprises a mosaic of red-brown, pale gray, and other colors, which suggests that the top of the site has also been bulldozed, a point supported by the large pottery sherds on the surface. Large dressed limestone blocks on track ca. 100 m to the south may also have come from the site. Broken building stones and cultural deposits are also visible on the mound top.

**AS 107****Hürriyet Tepe (Tabarat Hürriyet)**

AREA: Unknown                      HEIGHT: 1.5 m                      ILLUSTRATION: Figs. A.6, A.9

AVRP DATE: No collection

BRAIDWOOD DATE: Medieval-Arab, Roman/Hellenistic

DESCRIPTION: A small low site of ca. 1 ha within, beneath, and obscured by a village. One dressed stone block was seen in a mudbrick building.

NOTE: This site was originally recorded as AS 161, and Braidwood's AS 161 was recorded as AS 107 in 1997. See the detailed explanation in the record for AS 161.

**AS 108A****Üçtepe**

AREA: 150 × 60 m                      HEIGHT: 6 m                      ILLUSTRATION: Fig. A.9

AVRP DATE: A: Roman, Hellenistic

BRAIDWOOD DATE: Hellenistic/Roman, possibly Iron Age

DESCRIPTION: The northernmost of three mounds; to the north a cut 3 m high obliterates the south quarter. Cotton was grown on the top of the mound, which is also extensively disturbed.



- AS 108B**                      **Üçtepe**  
 AREA:                      200 × 100 m                      HEIGHT:    2.5 m                      ILLUSTRATION:              Fig. A.9  
 AVRP DATE:                B: Late Roman, Byzantine, Early/Middle Islamic or Medieval  
 BRAIDWOOD DATE:        Medieval-Arab, Hellenistic/Roman  
 DESCRIPTION:              The easternmost of three mounds; a low elongate mound ca. 200 m long, bare, with a cemetery in the center.
- AS 108C**                      **Üçtepe**  
 AREA:                      150 × 150 m                      HEIGHT:    5 m                      ILLUSTRATION:              Fig. A.9  
 AVRP DATE:                C: Possible Late Chalcolithic, one or two late third-millennium sherds, one sherd of dark-faced burnished ware, one stone ax (pl. 7C)  
 BRAIDWOOD DATE:        Late Chalcolithic  
 DESCRIPTION:              Southwest mound of three mounds. It is roughly circular with a grove of coniferous trees on top. It has a low cut to the north. Most of the site shows little pottery, so most of the collection is from the cut.
- AS 108D**                      **Üçtepe**  
 AREA:                      150 × 60 m                      HEIGHT:    6 m                      ILLUSTRATION:              Fig. A.9  
 AVRP DATE:                Iron Age  
 BRAIDWOOD DATE:        Hellenistic/Roman, possibly Iron Age  
 DESCRIPTION:              The north mound is cut in the south, 3 m deep.
- AS 109**                      **Tell Ibrahimiyah**  
 AREA:                      (A) 250 × 180 m; (B) 100 × 70 m                      ILLUSTRATION:              Fig. A.8  
 HEIGHT:                    —  
 AVRP DATE:                Not visited  
 BRAIDWOOD DATE:        Late Roman, possibly Early Bronze Age  
 DESCRIPTION:              The site was not located in the field but is clearly visible on CORONA imagery. Braidwood describes the mound as medium sized and low. The two main parts of the site include a larger area (A) and a smaller area to the east (B).
- AS 110**                      **Tell al-Far (Tell Far, Sicaz Tepe, Sıçantarla)**  
 AREA:                      200 × 250 m (measured on imagery)                      ILLUSTRATION:              Fig. A.8  
 HEIGHT:                    2.5 m  
 AVRP DATE:                Few Hellenistic, occasional Roman, common Late Roman/Byzantine; only one sherd of Islamic  
 BRAIDWOOD DATE:        Late Roman  
 DESCRIPTION:              A low rounded mound. A *çiftlik* is on top of the mound but approximately fifty percent remains exposed for sampling. It is partly plowed and was well washed from recent rain. Abundant roof tiles, drain fragments, etc. were visible, and in the village one conical basalt quern (Roman) was seen. Perhaps this site was abandoned at a stage when the marsh of lake level had expanded to such a degree that the area was uninhabitable.

- AS 111** **Tallat**  
 AREA: 600 × 300 m (total area covered by small site cluster) ILLUSTRATION: Fig. A.8  
 HEIGHT: —  
 AVRP DATE: Not visited  
 BRAIDWOOD DATE: Hellenistic, Roman, Medieval-Arab  
 DESCRIPTION: This site was not located in the field but is clearly visible on CORONA imagery. According to Braidwood the site consists of three small mounds, and the imagery also suggests that AS 111 is a complex cluster of small sites. The largest mound, at the northwest end of the cluster, measures ca. 170 × 120 m, and at least five distinct smaller areas of ancient settlement appear to extend about 500 m to the southeast.
- AS 112** **Çolaktepe (Akgöl Çiftlik)**  
 AREA: 150 × 100 m HEIGHT: 4.5 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Terra sigillata ware and Late Roman ware, some Hellenistic–Roman terra sigillata ware, few Late Roman  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman, Early Bronze Age  
 DESCRIPTION: A low rounded mound covered with shrubby vegetation and weeds and mainly obscured by them. Many large dressed limestone blocks are spread over the mound surface and some have been recently robbed out. In the nearby *çiftlik* numerous remains of Roman occupation, such as a large pithos rim and base, a circular donkey mill made out of basalt, and other artifacts, are scattered through cotton fields between the *çiftlik* and the site. On AS 112 pottery visibility was low owing to ground cover.
- AS 113** **Çakal Tepe (Tell Habish)**  
 AREA: 300 × 150 m HEIGHT: 13 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Hellenistic, Roman, and Late Roman  
 BRAIDWOOD DATE: Medieval-Arab, Late Roman, Roman, Hellenistic  
 DESCRIPTION: A large mound with gentle slopes except at the east side; on this slope is a concentration of cut blocks (walls), roof tiles, and sherds. Braidwood cites remains of possibly Late Roman date. The top is covered by grass and a farm, and at the east side is a cut in which collection was done.
- AS 114** **Küçük Avara (Turhan Bey Çiftlik)**  
 AREA: 100 × 150 m HEIGHT: 1 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: Small collection: small Late Roman/Late Antique component, dark-faced burnished ware, possible red-black burnished ware, red-black burnished ware, and few Late Roman  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic, possibly Late Chalcolithic  
 DESCRIPTION: A very small low mound, now virtually destroyed by the modern *çiftlik*. A cut is located on the east side and most of the remainder has been built over. A small part of the site is evident to the east within plowed fields and pottery is also visible on the soils of irrigated gardens to the north. Two Late Roman/Byzantine sarcophagi within the *çiftlik* are presumably from the site.

- AS 115** **Tabarat Büyük Avara (Çukur)**  
 AREA: 200 × 80 m HEIGHT: 4.5 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: Mainly Roman; two Roman roof tile fragments discarded. Mainly Roman-Late Roman, and one Islamic glazed sherd  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman  
 DESCRIPTION: This long low mound 0.3 km southwest of Büyük Avara has gentle slopes at the south, west, and north sides but is steep at the east side. It has a cemetery on the top and is completely overgrown. Immediately south of the mound is a concentration of roof tiles and pottery. Approximately 50 m east of AS 115 is a cut with a high concentration of roof tiles and also some cut blocks.
- AS 116** **Büyük Avara**  
 AREA: 220 × 250 m HEIGHT: 11 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: Small amount of Late Roman, a large prehistoric component which includes painted ware and open bowls, one sherd of possible painted second-millennium ware, possible Halaf, Ubaid-like, third millennium, Middle Bronze Age, possible Iron Age, and Islamic  
 BRAIDWOOD DATE: Medieval-Arab, Late Chalcolithic  
 DESCRIPTION: A moderately large tell with a low, rounded profile. It sits on the north side of the village, which appears to have been built on the lower mounding to the south and southeast. The site is mainly covered by low scrub that gently obscures the surface; most pottery therefore is from the north lower slopes, from fields (the remainder of the site is uncultivated), and from two or three low cuts. Note that the north-south dimension is based on a 150 m semi-axis. Pottery is generally rare on the upper slopes and occasional on the lower slopes. It is also rare in area D, which includes a flat area to the east of the site. An almost complete Early Islamic cream ware handled jar in the village is said to have come from fields between AS 115 and AS 116.
- AS 117** **Tell Karataş**  
 AREA: 140 × 40 m HEIGHT: 11 m ILLUSTRATION: Figs. A.8, A.9  
 AVRP DATE: —  
 BRAIDWOOD DATE: Hellenistic/Roman, possibly Early Iron Age, probably Chalcolithic  
 DESCRIPTION: The mound is cut in two parts: the west part is the largest and is fairly steep at the north and northwest sides. At the west side the mound is covered by a cemetery. The east part of the mound is smaller and its north side is covered by a cemetery. The northeast side of the west part is heavily damaged. Cut blocks are visible all around the mound in the fields.
- AS 119** **Kokaz (Göktepe, Safsafa)**  
 AREA: 150 × 150 m HEIGHT: 3 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: A: Roman, Late Roman; B: Roman, Late Roman, Hellenistic, Amuq Phase G; C: Amuq Phase G, Amuq Phases A–C uncertain  
 BRAIDWOOD DATE: Recent Arab, Hellenistic/Roman  
 DESCRIPTION: A low rounded mound with one modern building on top at the north side. That the site has been heavily bulldozed is suggested by 20–30 limestone cut blocks, presumably bulldozed from a Hellenistic-Roman building. The site is plowed on the east and south sides. The presence of large sherds, virtually complete pots, burnt mudbrick, and ash (not burnt

cereals from fields) suggests that the site is either being very heavily plowed or that Roman levels have been bulldozed down to earlier levels. In the field west and southwest of the site predominantly Roman/Hellenistic pottery and Roman roof tiles were found. The east part of the site has predominantly earlier wares (Amuq Phases A–C or G, but no painted wares); this subdivision may be artificial and a result of bulldozing.

**AS 120****Tell Mirmiran (Tell Anbar)**

AREA: 225 × 160 m                      HEIGHT: 3.5 m                      ILLUSTRATION: Fig. A.8  
 AVR P DATE: A: Iron Age, possibly Late Bronze Age, and possibly Early Bronze Age; B: Hellenistic, Late Roman/Byzantine, Early/Middle Islamic (pl. 3E)  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman, Iron Age, Early Iron Age, possibly Late Bronze Age  
 DESCRIPTION: A long low mound that is heavily damaged: the northeast part has been removed, the north and northwest ends of the slopes have been cut, and a trench has been cut right through (north–south).

**AS 122****Horlak Atika (Tell Khorlak)**

AREA: 400 × 100 m                      HEIGHT: 4 m                      ILLUSTRATION: Fig. A.8  
 AVR P DATE: A: Excellent collection of Early Islamic glazed, brittle- and molded ware; B: Nice collection of Roman and Late Roman, including Late Roman C; C: Roman and Late Roman  
 BRAIDWOOD DATE: Recent Arab, Medieval-Arab  
 DESCRIPTION: A low elongate mound oriented east–west, now partly damaged by extension of irrigated fields at the west end and along the north side. Much of the mound is obscured by wild vegetation and planted corn. The two ceramic collections were obtained from a plowed field to the east and Area B, an area disturbed and washed by cotton irrigation to the north. Cut limestone blocks litter the mound surface and vitrified waste from a possibly Islamic tile kiln litters the east end.

**AS 123****Siçanlı**

AREA: 150 × 100 m                      HEIGHT: 10 m                      ILLUSTRATION: Figs. A.8–9  
 AVR P DATE: Roman, possible Middle Bronze Age; 2002 collection: very small collection predominantly second millennium, one Late Antique brittleware, and other indeterminate  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic, possibly Middle Bronze Age  
 DESCRIPTION: The mound is covered by a village at the north and west sides and by a gendarmerie post at the south side. It is high and steep with a cemetery on top. The cut at the north side is approximately 2–3 m high and is ca. 14 m wide. The mound is heavily overgrown. We made a short visit under the guidance of a gendarme.

**AS 124****Tell Keleş**

AREA: 180 × 150 m                      HEIGHT: 46 m                      ILLUSTRATION: Fig. A.9  
 AVR P DATE: Late Chalcolithic (two chaff-faced bowls), Early Bronze Age (red-black burnished ware, plain simple ware, cooking pots, reserved slip, and one stump-based cup), second-millennium plain wares, Iron Age (red-slipped burnished ware), Hellenistic, Roman (abundant terra sigillata ware), and a small amount of Late Antique (pl. 1C, 3D, 7B)  
 BRAIDWOOD DATE: Medieval-Arab, Roman, Hellenistic, Iron Age, possibly Middle Bronze Age

DESCRIPTION: A high mound with a steep west side and a more gradually sloping south slope. The summit is covered with pistachio trees and the slopes with olive trees and grapes. The mound is surrounded by cut blocks. At the southwest side, in the middle of the cotton fields, is a channel cut through a cemetery. Also visible is a concentration of cut blocks.

**AS 125****Saçaklı**

AREA: 120 × 120 m                      HEIGHT: 2 m                      ILLUSTRATION: Fig. A.8

AVRP DATE: —

BRAIDWOOD DATE: Recent Arab, possibly Early Iron Age, possibly Early Bronze Age

DESCRIPTION: A small rounded site below and obscured by the village of Saçaklı. On a small area of the site in the northeast a section is exposed. This area is partly vegetated and partly covered by effluent from a cow shed.

**AS 126****Tell Ta'ṣinat**

AREA: 536 × 270 m                      HEIGHT: 14 m                      ILLUSTRATION: Fig. A.8

AVRP DATE: Early Bronze Age, Early Iron Age, Iron Age

BRAIDWOOD DATE: Early Bronze Age, Iron Age

DESCRIPTION: A low but very large mound excavated by the Chicago Syrian Hittite Expedition. A cotton factory is on top and the remaining part is covered by cotton. At the southeast and west sides are plowed fields. Some minor cuts are around the perimeter and south end under the cotton factory. See *Chapter Seven: The Ta'ṣinat Survey, 1999–2002*.

**AS 127****Tell Ta'ṣinat al-Saghir (Küçük Ta'ṣinat)**

AREA: 70 × 70 m                      HEIGHT: 3.5 m                      ILLUSTRATION: Fig. A.8

AVRP DATE: Mainly sand-tempered wares of Hellenistic, perhaps Late Iron Age and Middle to Late Islamic (Ottoman) date, Hellenistic-Roman, and one red-slipped possible Iron Age rim

BRAIDWOOD DATE: —

DESCRIPTION: A small but moderately prominent site now mainly obscured by the *çiftlik*. Although no pottery is visible around the perimeter and an east cut is obscured by garbage; moderate quantities of pottery were evident in the garden within the *çiftlik*.

**AS 128A****Tulul Salihyyah al-Saghir**

AREA: 100 × 70 m                      HEIGHT: 2 m                      ILLUSTRATION: Fig. A.9

AVRP DATE: Early Islamic, Late Roman, and Hellenistic

BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman

DESCRIPTION: As described by Braidwood, this site comprises two mounds of which AS 128A is the southern one, heavily cut on the north side. In addition, an east–west drain cuts into the lower layer of the site. On the south side of the south mound ten to twelve large dressed limestone blocks appear to have been bulldozed where cotton fields have been extended at the south side of the site.

- AS 128B** **Tulul Salihyyah al-Saghir (North)**  
 AREA: 100 × ? m HEIGHT: 2 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: Red-black burnished ware (Amuq Phase H/I), Early/Middle Islamic, two or three Hellenistic, also a stamp seal (possibly Amuq Phase F/G/H; pl. 1B), some red-black burnished ware, few Islamic, one classical/Hellenistic black-glazed body sherd, and few Late Roman  
 BRAIDWOOD DATE: Roman/Hellenistic, Early Bronze Age  
 DESCRIPTION: As described by Braidwood this site comprises two mounds of which AS 128B is the northern one. It is a low rounded mound that appears to be intact. Today it is used for a camp of cotton pickers, but no permanent habitation was noted. In 1998 it was covered with cotton.
- AS 129** **Tell Salihyyah**  
 AREA: 250 × 180 m HEIGHT: 19 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: Islamic, Roman; 2002 collection: abundant Iron Age and Early Iron Age including one Cypro-Phoenician black on red, some second millennium, occasional Early Bronze Age, and a good range of Islamic wares  
 BRAIDWOOD DATE: Iron Age, Early Iron Age, possibly Middle Bronze Age, Early Bronze Age  
 DESCRIPTION: A high mound steep on all sides except the northwest, which slopes gently downward. The mound consists of two peaks divided by a low saddle; the east peak is the highest. A broad valley cutting the mound on the southeast and northwest sides may indicate the former location of gates.
- AS 130** **Tabarat Algana**  
 AREA: 85 × 50 m HEIGHT: 3.8 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: Hellenistic incurved rim bowl, other Hellenistic sherds, Roman, Late Roman/Early Byzantine  
 BRAIDWOOD DATE: Medieval-Arab and Hellenistic/Roman  
 DESCRIPTION: Originally a low rounded mound ca. 4 m high, but today heavily bulldozed so that the south and east sides have been lost and only the northwest quadrant remains. Along the east–west cut a group of ten to twelve cut limestone blocks and one or two roof tiles indicate where a Hellenistic building had been. Six tesserae (four cemented) were found in a field surface immediately northwest of site. Roof tiles are moderately common.
- AS 131** **Tell Algana**  
 AREA: 230 × 150 m HEIGHT: 13 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: Iron Age with limited Hellenistic  
 BRAIDWOOD DATE: Probably Hellenistic and Iron Age  
 DESCRIPTION: A high tell with a very steep north-facing slope having a watch tower on top. It has a large hole dug in the top and a major cut has been bulldozed at the west end. Pottery is moderately common over the mound, which had been plowed. Traces of modern pottery and tile/brick over the summit and south-facing slopes appear to be the remains of a khan and small village reported by Braidwood.

- AS 132** **Tabarat Jalil**  
 AREA: 140 × 90 m HEIGHT: 2.5 m ILLUSTRATION: Fig. A.9  
 AVR P DATE: Rare abraded second millennium, a good collection of Late Iron Age (possibly Persian), abundant Hellenistic and Roman terra sigillata ware, Late Roman C and Late Antique, Early Islamic  
 BRAIDWOOD DATE: Medieval-Arab, Roman/Hellenistic, possibly Middle Bronze Age  
 DESCRIPTION: A low rounded mound with a small shrine on the summit enclosed by a wall of cement blocks. The mound had been plowed, but remains were moderately visible owing to abundant overnight rain.
- AS 133** **Tell Bahlilah**  
 AREA: 140 × 90 m HEIGHT: 2.5 m ILLUSTRATION: Fig. A.9  
 AVR P DATE: Initial inspection shows abundant later Early Bronze Age and Middle Bronze Age wares on the north up to virtually the summit; also Hellenistic and Roman. 2002 collection: no clear Iron Age material. Excellent second-millennium and Early Bronze Age collection includes one unusual imported painted sherd with parallel at Atchana IV  
 BRAIDWOOD DATE: Possibly Iron Age, Middle Bronze Age, Early Bronze Age  
 DESCRIPTION: A moderately prominent mound with a survey station on the summit. It has a steep north-facing slope that is mainly unplowed. Elsewhere the surface condition ranges from bare to obscured, but a sufficient bare or clean surface was exposed to provide a good collection. Two or three robbing or soil pits were seen; one on the summit revealed distinct stone building foundations.
- AS 134** **Halak Tepe (Halaq)**  
 AREA: 100 × 50 m HEIGHT: 26 m ILLUSTRATION: Fig. A.8  
 AVR P DATE: Amuq Phase F (chaff-faced simple ware), Amuq Phase G (plain simple ware), possibly H/I red-black burnished ware; a good second-millennium collection including one Amuq Phase K cup and several Late Bronze Age platters, Iron Age, Roman terra sigillata ware, Late Roman C, and Late Antique (one pithos rim)  
 BRAIDWOOD DATE: Medieval-Arab, Roman, Iron Age, Middle Bronze Age  
 DESCRIPTION: A mound with steep north and northeast sides. The south side climbs gradually. The southwest side has been bulldozed. Pine trees were growing on the north and northeast sides, and the summit is partly covered with cotton.
- AS 135** **Tulail al-Sharqi (Tell es-Sheikh)**  
 AREA: 100 × 70 m HEIGHT: 2 m ILLUSTRATION: Fig. A.8  
 AVR P DATE: Halaf and Ubaid: Amuq Phases C and D  
 BRAIDWOOD DATE: Iron Age, possibly Late Bronze Age  
 DESCRIPTION: A low mound from which the topsoil has been removed. By 1996 the site had been bulldozed flat to form a field of about 1 ha so that apparently perhaps only the lower 1 m of occupation remained. The mound is bisected by a modern track and surrounded by cotton fields. The site was excavated by Woolley in 1947 (Woolley 1953: 24–30; see also French 1985; 1990; Aruz 1992).

- AS 136** **Tell Atchana (Alalakh)**  
 AREA: 640 × 200 m HEIGHT: 9 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Middle Bronze Age, Late Bronze Age (pls. 2C, G; 3G; 8A), very rare Late Antique in 2000 survey  
 BRAIDWOOD DATE: Late Bronze Age  
 DESCRIPTION: A long low mound consisting of the site of ancient Alalakh with a modern village at the southwest end. The northwest end of the site is a steep slope, while the southeast slope gradually inclines upwards. Originally excavated by Woolley. For detailed descriptions, see *Chapter Four: Alalakh Spatial Organization* and *Chapter Six: Surface Ceramics, Off-Site Survey, and Floodplain Development at Tell Atchana (Alalakh)*.
- AS 137** **Tell Akrad**  
 AREA: 150 × 220 m (measured on imagery) ILLUSTRATION: Fig. A.8  
 HEIGHT: 5 m  
 AVRP DATE: Mainly Chalcolithic-Early Bronze Age, little Roman pottery at north side, few Roman and Islamic roof tiles some red-black burnished ware, one possible Islamic handle, and some Roman common ware  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman  
 DESCRIPTION: A low medium-sized mound with a *çiftlik* on top that obscures the complete summit. A large cut was made at the south side. The mound is heavily damaged.  
 NOTE: Not to be confused with Tabarat al-Akrad (AS 182).
- AS 138** **Tell Saluq**  
 AREA: 175 × 100 m HEIGHT: 13 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Large assemblage of Early Bronze Age (pl. 1A), Early Iron Age (one painted Aegean ware), few Islamic third-millennium simple ware, much Early Bronze Age (red-black burnished ware), one bichrome prehistoric body sherd, some Ubaid-like, possible dark-faced burnished ware, Middle Bronze Age, one body sherd of possible (east) Iron Age, pilgrim flask, few Late Roman, and some glazed Islamic  
 BRAIDWOOD DATE: Early Bronze Age  
 DESCRIPTION: A small prominent site — clearly a real tell — with a low bench (Area C) around most of the perimeter. The bench has been cut by an irrigation channel on the west and north sides. The mound is partly covered by shrubs but large parts of the mound are bare and especially the west and south slopes are covered by a dense litter of sherds (Area A).
- AS 139** **Götübüyük Höyük**  
 AREA: 250 × 200 m HEIGHT: 11 m ILLUSTRATION: Figs. A.8–9  
 AVRP DATE: —  
 BRAIDWOOD DATE: Possibly Early Iron Age, Early Bronze Age  
 DESCRIPTION: A large rounded mound with large parts of its surface obscured or inaccessible for collection. The top is partly covered by trees and vegetation, the south-facing slopes are steep and well vegetated, the north-facing slopes are gentler and plowed (sampled as A). A west cut, 3 m high, provided a second small sample and is located at the west end of the site. This showed stratified *in situ* occupation deposits of probable third-millennium B.C. date.



- AS 143** **Beşarslan (Tell Hamda)**  
 AREA: 180 × 100 m HEIGHT: 5 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: Roman, Hellenistic, some second/first millennium B.C. sherds, Amuq Phase G. Few red-black burnished ware, Early Bronze Age simple ware, few Middle Bronze Age, Late Bronze Age/Iron Age rim, Iron Age (Achaemenid/Persian), Hellenistic, Roman, and one Roman/Late Roman pithos rim  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman, Middle Bronze Age, possibly Late Chalcolithic  
 DESCRIPTION: A moderately low rounded mound at the southwest end of the village, now called Beşarslan. The site is mainly under the *karakol* (police station) but an extensive cut (3 m and more deep) on the east side of the tell has exposed a considerable thickness of deposits. Pottery is moderately common in the cuts but no outcropping buildings are visible. A second smaller mound appears to be within the village to the north.
- AS 144** **Bohşin (Bakhshin)**  
 AREA: Unknown HEIGHT: — ILLUSTRATION: Fig. A.8  
 AVRP DATE: Not collected  
 BRAIDWOOD DATE: Early Bronze Age, Late Bronze Age, Hellenistic, Roman, Medieval-Arab  
 DESCRIPTION: The site has not been formally investigated, but today it is completely covered by the village of Bohşin. The center of the village has many reused ancient architectural fragments, and several large pieces of ashlar masonry were found along the road. AS 288, several hundred meters to the northwest, was originally thought to be AS 144, but examination of both maps and imagery makes the identification of both sites secure.
- AS 147** **Tell Selam**  
 AREA: 120 × 150 m (measured on imagery) ILLUSTRATION: Figs. A.8–9  
 HEIGHT: 10 m  
 AVRP DATE: Not collected  
 BRAIDWOOD DATE: Middle Bronze Age, Early Bronze Age  
 DESCRIPTION: A small but prominent mound located a short distance (ca. 800 m) north of the border within the restricted zone. It was visited for permission to collect, but permission was not forthcoming. Most of the site is heavily vegetated. A small *karakol* of the border guard on the south-facing slope has resulted in three small cuts being made into the mound and part of it being obscured by buildings. The cuts show stratified cultural deposits, the upper cut near the summit showing an exposure of red-brown burnt mudbrick. It is anticipated that pottery will be poorly visible on the mound but in fields to the west a moderate density halo of sherds is evident.
- AS 150** **Tell Saye (Tell Asir)**  
 AREA: Not recorded HEIGHT: Not recorded ILLUSTRATION: —  
 AVRP DATE: Islamic, Roman, Hellenistic, Early Bronze Age  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic, possibly Early Iron Age, Middle Bronze Age  
 DESCRIPTION: A high, steep, and large mound. Site location not known but it was reported to the team by the Antakya Museum.

- AS 151** **Karataş (Nejar/Necar Tepe)**  
 AREA: 300 × 215 m HEIGHT: 7.5 m ILLUSTRATION: Fig. A.6  
 AVR P DATE: The mound is dominated by high quality Roman/Hellenistic wares, especially good terra sigillata and other quality wares, and one or two possibly Early Iron Age types including a Late Bronze Age/Early Iron Age platter  
 BRAIDWOOD DATE: Medieval-Arab, Roman, possibly Late Bronze Age  
 DESCRIPTION: A large rounded mound, but not very prominent. It is unplowed with scrubby surface vegetation. A cut on the west side 1.5–2.0 m high has removed a small part of the lower mound (A). Otherwise the only low cut was made on the south side. Roman roof tiles are common over the entire site. A few black/green basalt stones occur on the surface, of which the largest is ca. 1 m across.
- AS 152** **Ayrancı Doğu (Ayrancı Şarki)**  
 AREA: 120 × 120 m HEIGHT: 12 m ILLUSTRATION: Fig. A.6  
 AVR P DATE: Very small collection with Iron Age and Early Iron Age  
 BRAIDWOOD DATE: Iron Age, Early Iron Age, possibly Late Bronze Age  
 DESCRIPTION: A small but high mound. The mound has steep slopes except at the south side, which gently slopes downward, and is covered by a cemetery. A large bulldozer cut was made at the southwest side.
- AS 156** **Tell Mastepe (Mastepe)**  
 AREA: 260 × 240 m HEIGHT: 11 m ILLUSTRATION: Fig. A.6  
 AVR P DATE: A: Amuq Phase H/I red-black burnished ware and Roman/Hellenistic; B: Amuq Phase G types; 1998 collection: also possibly Iron Age II in A  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman, Early Bronze Age, Late Chalcolithic  
 DESCRIPTION: This site is composed of two main areas: a higher tell (A) partly covered by a cemetery, and a lower town (B) extending to the southwest. In the south part of B is a small hamlet or farmstead. The site is relatively undamaged except for a low cut on the northeast side. The area that is not under the cemetery or farmstead is plowed and under cereals; roughly dressed stones in the cemetery appear to come from an earlier building, and architectural dressed stone appears to come from a Roman structure.
- AS 157** **Ayrancı (Büyük Ayrancı, Batı Ayrancı)**  
 AREA: Unknown HEIGHT: — ILLUSTRATION: Fig. A.6  
 AVR P DATE: Not collected  
 BRAIDWOOD DATE: Medieval-Arab, possibly Hellenistic-Roman  
 DESCRIPTION: This site has not been formally investigated but is completely obscured by the modern village.
- AS 158** **Yazı Höyük (Tell Acarköy)**  
 AREA: 110 × 85 m HEIGHT: 11 m ILLUSTRATION: Fig. A.6  
 AVR P DATE: Roman, Hellenistic, Early Iron Age, possibly Aegean and Middle Bronze Age: one possible dark-faced burnished ware  
 BRAIDWOOD DATE: Hellenistic/Roman, Iron Age, Early Iron Age, probably Middle Bronze Age, possibly Late Chalcolithic

DESCRIPTION: A small prominent mound with a steep north-facing slope. It had been plowed and under cereals in the previous year. Fragments of Roman roof tiles are common. One mosaic tessera was found. A small 1 m high cut was made on the east side of the mound. Contra Braidwood, this site is not “fairly low.”

**AS 159** **Zoba Höyük**

AREA: 120 × 100 m (measured on imagery) ILLUSTRATION: Fig. A.6  
 HEIGHT: Obscured by village  
 AVR P DATE: —  
 BRAIDWOOD DATE: Hellenistic  
 DESCRIPTION: Although the site was not visible it is either in the village or (according to local people) on a hill to the southeast. Some inscribed stones and claw-hammered dressed stones were seen in the village, as well as hewn limestone. The likely location of the site recorded by Braidwood is visible on CORONA imagery and therefore is probably under the modern village.

**AS 161** **Kokarkuyu (Tell Qukhar, Tell Hürriyet)**

AREA: 140 × 100 m HEIGHT: 1.5 m ILLUSTRATION: Fig. A.6  
 AVR P DATE: 1996 collection: Chalcolithic painted cups (Amuq Phase E), rare second millennium, Iron Age, Hellenistic, common Roman terra sigillata ware, and Late Antique; 1997 collection: Late Chalcolithic (chaff-faced simple ware), second millennium including Late Bronze Age painted platter, Hellenistic black-glazed, Roman terra sigillata ware, Late Antique brittleware, and Early Islamic  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic-Roman  
 DESCRIPTION: A low mound trimmed on all four sides but most severely at the southwest and northwest sides. A drain running northeast–southwest and 1.5 m deep divides the mound into two parts. The top, now under cotton, may also have been bulldozed. One or two cut limestone blocks are visible around the edge, and Roman-Byzantine roof tiles are common. The heavy damage to the site in recent years has undoubtedly brought much earlier remains to the surface than were noted by Braidwood in the 1930s.  
 NOTE: This site was originally recorded as AS 103 in 1996 and again as AS 107 in 1997, but GPS points taken during both visits, as well as the identical descriptions and closely overlapping ceramic collections, demonstrate that these are indeed the same site. Furthermore, examination of CORONA imagery and 1:25,000 maps of the area, as well as comparison of the various survey records, makes it clear that the site recorded as both AS 103 and AS 107 was in fact the site recorded by Braidwood as AS 161. In keeping with our effort to maintain Braidwood’s original numbering system, we have elected to designate this site AS 161. However, we had recorded another site in the vicinity as AS 161, a small tell which today is covered by the village of Hürriyet. It now appears likely that the village of Hürriyet (originally our AS 161) can be equated with Braidwood’s AS 107, Tabarat Hürriyet. Part of the confusion was due to the fact that in his original publication Braidwood mis-plotted the location of AS 107, showing it about 2 km to the south. Analysis of CORONA imagery has aided us in resolving the problem and also suggests the location of two as-yet unrecorded Braidwood sites in the same vicinity, AS 103 and AS 97 (see fig. A.6 for location of AS 103).

- AS 162** **Dağlağan (Dağılğan/Hanımın Çiftliği)**  
 AREA: 90 × 90 m HEIGHT: 1.5 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: No collection  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman, Middle Bronze Age  
 DESCRIPTION: A low mound surrounded by a drain and covered by the house of Nigar Hanım in the *çiftlik*. A bulldozer took a substantial part of the southwest corner. Many roof tiles are visible.
- AS 163** **Tell Müşrefe (Mürefe)**  
 AREA: 120 × 100 m HEIGHT: 6 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: Islamic, Roman, Hellenistic, Early Iron Age  
 BRAIDWOOD DATE: Hellenistic/Roman, possibly Late Bronze Age  
 DESCRIPTION: A low rounded mound dominated and obscured by an enclosed cemetery. The remainder of the mound outside the cemetery shows traces of plowing. A low bulldozer cut on the south and east sides ca. 1 m high exposed about twelve dressed limestone blocks plus a stone watering trough; these were associated with Roman roof tiles. Within the cemetery is a single doric capital and reused pillar drums. The cemetery is not mentioned by Braidwood, therefore it is apparently recent in date.
- AS 164** **Tell Davutpaşa (Daud Paşa)**  
 AREA: 160 × 90 m HEIGHT: 32 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: In the lower town to the south: red-black burnished ware and other Early Bronze Age wares; some Roman material in the village. For date of main tell occupations, see Braidwood's assessment below  
 BRAIDWOOD DATE: Medieval-Arab, Iron Age, Early Iron Age, Middle Bronze Age, Early Bronze Age, Late Chalcolithic, Chalcolithic  
 DESCRIPTION: A high and steep mound. The slopes are steep except at the south side which is less steep. At the south side there is a low terrace with a cemetery. A moat or ditch is visible at the southeast part of the summit. Two possible erosion gullies and a substantial bulldozer cut are located at the northeast side. A lower town covers the fields to the north and south of AS 164. A series of low mounds ca. 50 m in diameter and 1 m high are visible in the plowed soil, as well as occasional limestone blocks from building foundations.
- AS 165** **Tell Ghazi Haji Mursal**  
 AREA: 200 × 180 m HEIGHT: — ILLUSTRATION: Fig. A.9  
 AVRP DATE: Roman/Late Roman  
 BRAIDWOOD DATE: Late Roman, Hellenistic/Roman, Early Bronze Age  
 DESCRIPTION: This site has now been entirely flattened and bulldozed for cotton fields; the only evidence of the site is a very dense scatter of pottery (mainly Roman) evident between rows of cotton and along a single irrigation ditch running through the cotton. From the scatter along the ditch it was possible to make a sufficiently large collection to demonstrate a Roman/Late Roman date for the site. No Early Bronze Age sherds were found, however.

- AS 166** **Putoğlu (Üçtepe)**  
 AREA: 150 × 140 m HEIGHT: 14 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: A small collection with abundant Early Bronze Age wares (red-black burnished ware, plain simple ware), second millennium, Late Antique  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic, Middle Bronze Age, Early Bronze Age  
 DESCRIPTION: A rounded mound ca. 4–5 km northwest of Reyhanlı and ca. 2 km southwest of AS 167. The south side is higher and covered by trees. A “chamber tomb” is cut into the southeast slope; the cut is approximately 6 m deep.
- AS 167** **Chatal Höyük**  
 AREA: 400 × 250 m HEIGHT: 30 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: Islamic, Roman, Early Iron Age, possibly Aegean, Middle Bronze Age, Early Bronze Age  
 BRAIDWOOD DATE: Medieval-Arab, Late Roman, Roman, Hellenistic, Iron Age, Early Iron Age, Late Bronze Age, Middle Bronze Age, Early Bronze Age, possible Chalcolithic  
 DESCRIPTION: A large, high, and prominent mound surrounded by cotton fields. Trenches of the 1930s Oriental Institute excavations are eroded but still visible. The summit is partly plowed, and a large cut at the northeast side exposed cultural horizons. For details of the main sequence, see Braidwood and Braidwood 1960; Haines 1971.
- AS 168** **Karaca Khirbet ‘Ali**  
 AREA: 200 × 100 m HEIGHT: — ILLUSTRATION: Fig. A.9  
 AVRP DATE: Ubaid and some Early Bronze Age. Some third-millennium, dark-faced burnished ware, some Ubaid-like, few red-black burnished ware, one Byzantine platter; 2000 collection contains predominantly Ubaid wares, occasional Early Bronze Age  
 BRAIDWOOD DATE: Early Bronze Age, Late Chalcolithic, Ubaid  
 DESCRIPTION: An extensive site covering perhaps 200 × 100 m over the slopes of a hill. The visit in 1998 was restricted by cotton but artifacts were common on hillslopes. On the upper slopes cultural deposits are 1 m deep or greater and sherds are large. Therefore despite considerable erosion a large amount of the site does remain.
- AS 169** **Tell Qinanah**  
 AREA: 75 × 50 m HEIGHT: 19.5 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: —  
 BRAIDWOOD DATE: Late Roman, Hellenistic, Iron Age (pl. 3F), Early Bronze Age, possibly Chalcolithic  
 DESCRIPTION: A medium-sized mound that is located on a foothill. All slopes are steep except the north one, which slopes down gently. The north slope is littered with pottery and several cuts were made into the slope, especially at the north and northeast sides. A few blocks are in a line on the north slope.
- AS 170** **Gazi Tayfur Çiftlik (Tell Ghazi)**  
 AREA: Unknown ILLUSTRATION: Fig. A.9  
 HEIGHT: 10 m (but most of this is a natural hill)  
 AVRP DATE: One roof tile; indeterminate; few Late Roman, few Islamic, few modern  
 BRAIDWOOD DATE: Probably recent Arab, Hellenistic/Roman

DESCRIPTION: The hill has a *çiftlik* on top. The “site” is not a conventional hill, but a natural outcrop. The surface is covered by cobbles of conglomerate and the artifacts all appear to be stray. However, an additional group was found on the southwest slopes that may indicate other occupation there. Essentially, however, we have no good evidence that the bulk of the hill is a site.

**AS 171****Khirbet al-Tahoun**

AREA: 120 × 75 m HEIGHT: 1 m ILLUSTRATION: Fig. A.9

AVRP DATE: A: terra sigillata ware and brittleware common; B: One or two painted ware; otherwise bowls of Late Chalcolithic (Amuq Phase E/F) date

BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman

DESCRIPTION: A very low mound with a dense to very dense concentration of broken tile and kiln slag toward south end of the site. Vitriified kiln waste forms a significant part of the surface material on this part of the site. (The diameter of the kiln tile waste is ca. 50 m.) In addition, several examples of vitrified drain pipes were recovered. The site is slightly trimmed by the Afrin River to the north. The north part of site has no tile or waste, but domestic pottery is common; this is presumably the living area of the site. A prehistoric sherd outcrop is located in a small area at the north end of the site.

**AS 172****Tell Qirmidah (Tell Kirmit)**

AREA: 100 × 100 m HEIGHT: 0 m ILLUSTRATION: Fig. A.9

AVRP DATE: Insufficient remains to support Braidwood’s dating; in addition some Early Chalcolithic occupation may have been present to judge from the flints and pottery

BRAIDWOOD DATE: Middle Bronze Age, possibly Early Bronze Age, Late Chalcolithic

DESCRIPTION: The site has been recently bulldozed flat. The bulldozed area showed a scatter of abundant heat-crackled river pebbles, occasional flints, flint cores, and some coarse pottery of Amuq Phase A/B type.

**AS 173****Tell Ermeneia (Tell Shair Askar, Tell Sabi)**

AREA: 160 × 90 m HEIGHT: 17 m ILLUSTRATION: Fig. A.9

AVRP DATE: A: Early Bronze Age (red-black burnished ware), Middle Bronze Age, possible Roman, Byzantine, or Islamic (two vitrified sherds and one waster; pl. 2E); B: Early Bronze Age (red-black burnished ware), Middle Bronze Age. 2002 collection: Early Bronze Age includes red-black burnished ware, plain simple ware, and reserved slip; Roman terra sigillata ware; Late Antique brittlewares; Early Islamic in small quantity; good second millennium with several probably Late Bronze Age platters

BRAIDWOOD DATE: Middle Bronze Age, Early Bronze Age

DESCRIPTION: A large mound with two summits, east and west. The mounds are separated by a slight depression. A low terrace is located at the south side, and a cut was made along the south edge of the terrace and its southeast side.

**AS 174****Tell Abdal**

AREA: 125 × 90 m HEIGHT: 12 m ILLUSTRATION: Fig. A.9

AVRP DATE: Early Bronze Age, second millennium, Iron Age (pl. 3A–B)

BRAIDWOOD DATE: Iron Age, Middle Bronze Age

DESCRIPTION: A high oval-shaped mound with gently sloping sides except at the northeast side. The mound is cut all around at the base; it is cut highest at the southwest side. The summit is pitted and a modern cemetery at its west side.

- AS 176** **Tell al-Judaidah**  
 AREA: 270 × 110 m                      HEIGHT: 27 m                      ILLUSTRATION: Fig. A.9  
 AVR P DATE: Late Roman, Roman, Hellenistic, Iron Age, Early Iron Age, Late Bronze Age, Middle Bronze Age, Early Bronze Age, Late Chalcolithic, Chalcolithic, Neolithic  
 BRAIDWOOD DATE: Late Roman, Roman, Hellenistic, Iron Age, Early Iron Age, Late Bronze Age (pl. 3H), Middle Bronze Age, Early Bronze Age, Late Chalcolithic, Chalcolithic  
 DESCRIPTION: A high and large mound. The north and east slopes are steep, while the west and south sides are more gently sloped. A spring is located just south of the mound. Trenches of old Oriental Institute excavations are still visible (but badly eroded). The summit has been plowed. A concentration of pebbles is located at the westernmost side of the summit, and a deep cut (in the shape of chamber tomb) at the northwest side. The northeast, east, and southeast sides of the mound are severely damaged. It is also cut on south and southwest side. A salvage operation was conducted in 1995 (Friedman and Reichel 1996; Edens 2000).
- AS 177** **Tell Dhahab (Altın Tepe)**  
 AREA: 40+ × 60 × 30+ m                      HEIGHT: 10 m                      ILLUSTRATION: Fig. A.9  
 AVR P DATE: Amuq Phase H (red-black burnished ware), G, F, and A (dark-faced burnished ware, washed impressed ware)  
 BRAIDWOOD DATE: Early Bronze Age, Chalcolithic  
 DESCRIPTION: A small but high mound excavated by the Chicago Syrian Hittite Expedition in the 1930s. It has been heavily damaged by bulldozing at the west and north sides. At least one-half of the site has now been removed exposing a clear stratigraphic profile. There are at least four architectural phases. The site seems to have slowly shifted southward over time so that the earliest phases are highest along the northern slope of the mound (Harrison 2000b: 194–95).
- AS 178** **Hasan Bellu Höyük (Tabarat Hassan Bellu)**  
 AREA: 100 × 80 m                      HEIGHT: 2 m                      ILLUSTRATION: Fig. A.6  
 AVR P DATE: Hellenistic, Roman, some Islamic/Medieval  
 BRAIDWOOD DATE: Medieval-Arab, Hellenistic/Roman, possibly Early Iron Age, possibly Late Chalcolithic  
 DESCRIPTION: A small, low mound immediately south of the road to Zoba Höyük (AS 159). It is trimmed by the road on the north side. There is a clean surface of burnt cereals — partly plowed — in the southwest. Pottery visibility is excellent except where the burnt cereals make dark pottery obscure.
- AS 179** **Baytarlı (see AS 257)**  
 AREA: Unknown                      HEIGHT: Unknown                      ILLUSTRATION: Fig. A.5  
 AVR P DATE: Bright green and yellow glazed ceramics of Middle/Late Islamic (Ottoman) date; also combed-incised ware (Islamic), Islamic glass bracelet  
 DESCRIPTION: The site was originally recorded in 1995, and upon the first visit appeared to be a flat bulldozed scatter of occasional foundation stones, bone, and pottery. A revisit to the area in 2002 recorded a much larger Islamic site nearby (AS 257) and it therefore appears likely that AS 179 is a small, outlying component of AS 257.

- AS 180** **Tell Hijar**  
 AREA: 220 × 150 m                      HEIGHT: 1 m                      ILLUSTRATION: Figs. A.5, A.8  
 AVRP DATE: Third millennium (pls. 4A, 5A–B), Early Bronze Age (red-black burnished ware), Middle Bronze Age, mid-second millennium, Hellenistic  
 DESCRIPTION: A site within the limits of the former Lake of Antioch. It is a very low and flat mound with numerous limestone — and occasional basalt — stones (up to 1 m high). It is partly covered by valley floor sediments and surrounded by cotton fields that cover the east part of the site. Area A is uncultivated. The site has been washed by the former lake which has resulted in a cover of freshwater gastropods. It was also eroded by the former lake (Wilkinson 2000; Verstraete and Wilkinson 2000).
- AS 181** —  
 AREA: 200 × 100 m                      HEIGHT: 0 m                      ILLUSTRATION: Figs. A.5, A.8  
 AVRP DATE: Amuq Phase G  
 DESCRIPTION: A site within the limits of the former Lake of Antioch. The flat site is visible as a sherd scatter — moderately dense and unabraded — along a shallow drain within cotton fields. Section cleaning in 1996 showed a sequence of early Early Bronze Age cultural deposits covered by deposits of the former lake (Wilkinson 2000).
- AS 182** **Tabarat al-Akrad (Tell al-Hayey)**  
 AREA: 120 × 80 m                      HEIGHT: 2 m                      ILLUSTRATION: Fig. A.8  
 AVRP DATE: Possibly Chalcolithic, Early Bronze Age (red-black burnished ware), perhaps Late Bronze Age/Middle Bronze Age red-black burnished ware, few third-millennium lipless rims, two possible Islamic sherds. According to Sinclair Hood (1951): Late Chalcolithic, Uruk related, Amuq Phase H/I (Early Bronze Age)  
 DESCRIPTION: A low rounded mound that is totally under cotton, but sparse growth allowed a reasonable sample of pottery to be collected. Two gullies resulting from erosion by irrigation water provided an increased sample of pottery; these gullies exposed calcium carbonate (CaCO<sub>3</sub>) concretions in occupation deposit on top of the mound and gray brown at the base of the slope. The remainder of the tell is comprised of grayish ashy soil in gullies. It was originally excavated by Hood (1951).
- AS 183** **Ingeban**  
 AREA: 50 × 40 m                      HEIGHT: 1.5 m                      ILLUSTRATION: Fig. A.6  
 AVRP DATE: Indeterminate, but one or two tile fragments of greenish fabric appear Islamic rather than Roman-Byzantine  
 DESCRIPTION: A very small mound of brown silty clay similar to that of the plain. Pottery is very sparse. There are one or two fragments of basalt quern stones. Modern brick is quite common, but no house foundations are visible; house contours are marked by a line of ten to twelve pine trees on top of the mound. There are low 1 m cuts on the west and north sides. This appears to be a very small site, but evidence of occupation seems virtually absent.



- AS 184** **Gökçeoğlu (Gökçolu)**  
 AREA: 50 × 50 m HEIGHT: 1 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: Only a brief visit was made, but the site appears to be Islamic  
 DESCRIPTION: The site is now bulldozed flat to form a low terrace with terrace scarp to north. In general it appears as a flattened area of gray soil with a scatter of gravel. Sherds are moderately common and several cut limestone blocks remain along the edge of the bulldozed area. There appears to be a small settlement resting upon the gravel of a levee of the ancient Nahr al-Afrin. Therefore the canal is earlier than the site, but even this date is not very secure.
- AS 185A** **Muharrem (Uzun Kelli)**  
 AREA: 180 × 145 m HEIGHT: 3.70 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: Pottery types appear mainly Early Islamic, possibly Middle Islamic  
 DESCRIPTION: AS 185A is the southeast mound, virtually unoccupied except for a small enclosed garden. Occasional sherds were observed on the surface, but no cultivation, only scrub.
- AS 185B** **Muharrem (Uzun Kelli)**  
 AREA: 140 × 140 m HEIGHT: — ILLUSTRATION: Fig. A.6  
 AVRP DATE: Pottery appears to be mainly Early Islamic, possibly Middle Islamic  
 DESCRIPTION: AS 185B is the northwest mound, mainly built on by a school, but the mound extends to the south and north of the school enclosure wall. A low cut is present along the southeast side. A few cut limestone blocks have been left on the surface in the southwest, as well as part of one ancient basalt grinder.
- AS 186** **Kemalağa Çiftliği (Kemal Akpınar Çiftliği)**  
 AREA: 140 × 100 m HEIGHT: 1.60 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: Middle Bronze Age types frequent; perhaps also Early Bronze Age, Late Bronze Age, Roman  
 DESCRIPTION: An elongate mound oriented east–west, now with the east part removed for enlargement of the cotton fields so that the site remains only 90 m long east–west. Sherds are common over the surface of the mound and are very common on the bulldozed surface. Within the bulldozed area a beige gray ashy patch was exposed that includes one possible kiln waster. A cut 1.5 m high is also visible. The western mound is under cereals and dominated by prosopis shrubs. The mound is surrounded by cotton fields.
- AS 187** **Hisarlık Tepesi (Hösürlük Tepesi)**  
 AREA: 175 × 100 m HEIGHT: 3.5 m ILLUSTRATION: Fig. A.5  
 AVRP DATE: Early Bronze Age uncertain, Middle Bronze Age, first millennium B.C., large quantities of Roman; significant amount of Early Islamic  
 DESCRIPTION: A small but moderately prominent mound projecting above cotton fields. The highest part of the mound (3.5 m high) is covered with shrub, weeds, and some remaining cereal; this is surrounded by a lower bench of shelly gray soils that stands above the cotton fields and appears to be originally flooded. This was recently under cereals. The lower slopes of the site lie within cotton fields. Pottery is quite common over most of the site and locally is very common. A local man said that when a pump was installed to the northeast of the site it penetrated a sherd-rich layer at 10–12 m.

NOTE: This appears to have been a small site located on the edge of the Karasu floodplain. By analogy with Tell Hajar it can be suggested that the site was established on relatively dry land (in this case the dry floodplain) and that as water levels rose, the site may have eventually become an island within a marsh and lake (see also Tell Sultan [AS 32]).

**AS 188** **Domuz Höyük (Küçük Bozhöyük)**  
 AREA: 65 × 65 m HEIGHT: 5.5 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Uncertain, but clearly not Roman/Hellenistic or later  
 DESCRIPTION: A rounded mound, rather small, surmounted by a single tree. It has been occasionally plowed and is surrounded by cotton fields. Sherds are occasionally visible.

**AS 189** **Tınc Höyük**  
 AREA: 100 × 100 m HEIGHT: 15 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Only visited briefly but the site includes a long range of occupation, including probable prehistoric  
 DESCRIPTION: A prominent conical mound visible from the main road. To the east on a lower cobble fan is a lower town represented by a scatter of pottery covering ca. 1 ha; there is no obvious mounding in this area. For location, see Yener et al. 2000b: fig. 3.

**AS 190** **Kirmitli (2)**  
 AREA: 300 × 300 m HEIGHT: 2 m ILLUSTRATION: Figs. A.2–3  
 AVRP DATE: Early Islamic, primarily ninth–tenth centuries  
 DESCRIPTION: The site comprises (A) a 70 × 70 m square enclosure of stone walls and presumably rooms, surrounding a square enclosure; (B) a lower town consisting of a low building mound of stones to the east and northeast, the walls of which are of large cobbles and the total extent of which is about 1 ha; (C) a flat area to the south of A comprising an open courtyard, numerous columns of basalt up to a maximum length of 2 m; (D) a more general scatter of walls and building debris to the west of A including a square tower-like structure; (E) common tiles, rare pottery. The site appears to be a small town with a possible khan (A) and a possible mosque (C), which probably developed on a halting place along the Antioch (Antakya)–Maraş road.

**AS 191** **Boklu Tepe**  
 AREA: 140 × 120 m HEIGHT: 3.20 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Mainly Roman, Middle-Late Islamic (Ottoman)  
 DESCRIPTION: A low rounded mound, plowed, with prosopis and other weeds common. Occasional roof tiles and a small fragment of basalt were observed on the surface, along with occasional surface pottery.

**AS 192** **Abalaklı (2)**  
 AREA: 240 × ca. 200 m HEIGHT: 2 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Good Roman and Late Roman assemblage; one or two may be second millennium B.C.  
 DESCRIPTION: An extensive and low mound within an area of cotton fields and also mainly covered by cotton. The northeast quadrant of the site is plowed and the southwest quadrant is heavily bulldozed down to the level of the fields.

- AS 193** **Abalaklı Höyük**  
 AREA: 250 × 220 m (measured on imagery) ILLUSTRATION: Fig. A.3  
 HEIGHT: 8 m  
 AVRP DATE: Only Roman material was observed, but judging from its height of ca. 8 m it is likely that earlier levels are present, but obscured  
 DESCRIPTION: A moderately prominent mound now mainly obscured by a cemetery and a plantation of trees. The cemetery includes two columns and several other cut stones. The site is too obscured for collection within the cemetery, but to the east part of the mound projects beyond the cemetery into cotton fields.
- AS 194** **Çağıl Tepe**  
 AREA: 200 × 200 m HEIGHT: 2 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Roman/Late Roman  
 DESCRIPTION: An extensive but very low site. It is now partly bulldozed and covered by cotton and corn fields, therefore it is difficult to measure accurately. Along irrigation channels within the cereal, pottery, roof tiles, and querns are quite common, and cut blocks of limestone are occasional.
- AS 195** **Atçı Tepe**  
 AREA: 175 × 175 m HEIGHT: 6.5 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Small number of possibly painted Chalcolithic, four to five Late Chalcolithic bowls, about ten Amuq Phase F chaff-tempered wares, small number of Amuq Phase G wares, pedestal base, bowls with internal bead, small number of mid-/late third-millennium wares, common second-millennium/Middle Bronze Age wares, Roman/ Late Roman sparse or virtually absent  
 DESCRIPTION: A rounded mound of moderate height. The site is plowed and covered with prosopis plants and other shrubs. Pottery is moderately common, as are fragments of basalt from outcrops to the east; this appears to be the site of mainly Amuq Phases F, G, and possibly H date, with some second-millennium B.C. wares.
- AS 196** **Gölbaşı Höyük**  
 AREA: 250 × 150 m HEIGHT: 13 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Approximately six or seven Chalcolithic bowls, ten Amuq Phase F chaff-faced wares; about fifteen Amuq Phase G cooking pots and pedestalled base; a number of possibly second-millennium wares; only one Late Islamic (Ottoman) piece  
 DESCRIPTION: An extensive flat-topped mound with steep sides and the abandoned village of Gölbaşı on the south-facing slopes. There is a cemetery on the top north side of the mound. The surface is bare with occasional shrubs. Over most of the site pottery is fairly scarce but some shows up around the steep slopes within the upcast of the cemetery, and especially on the east-facing slope where the north–south trench remains.
- AS 197** —  
 AREA: 100 × 80 m HEIGHT: 0.5 m ILLUSTRATION: Figs. A.7–8  
 AVRP DATE: One black gloss ring base, Hellenistic-Roman ring base, Roman brittleware, flanged bowls, fine wares are relatively scarce, Hellenistic-Roman  
 DESCRIPTION: A very low site made evident by abundant surface stones of basalt and limestone to 20–30 cm diameter commonly concentrated on the field boundary. Roof tiles are common on

the surface, and Roman drain fragments are occasional. Occasional sherds are visible. From the west the site is evident as a very low rise or terrace mainly under harvested cereals, but extending into neighboring fields (plowed to south, cotton to north) where a scatter of sherds and tiles is also moderately dense. This represents a small village or hamlet.

**AS 198**

—  
 AREA: 220 × 90 m (measured on imagery) ILLUSTRATION: Figs. A.5–6  
 HEIGHT: 2 m  
 AVRP DATE: Mainly Hellenistic-Roman  
 DESCRIPTION: A low rounded mound ca. 200 m north of Kumlu road. Roof tiles, both pale brown and reddish, are common and pottery is moderately common. The site provided a large assemblage of Hellenistic and Roman pottery.

**AS 199**

—  
 AREA: 80 × 80 m HEIGHT: 0.75 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: Hellenistic/Roman/Byzantine  
 DESCRIPTION: A very low elongate mound ca. 200–300 m south of the Reyhanlı road with a small abandoned building on top. It has been plowed but visibility was moderately good owing to overnight and morning rain.

**AS 200****Dutlu Höyük**

AREA: 120 × 40+ m HEIGHT: 2.5 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Commonly dark-faced burnished ware of Amuq Phases A or B  
 DESCRIPTION: A small rounded mound of estimated area 1.0–1.5 ha. A small farmstead on the top and remainder of the mound is obscured by trees or other vegetation. The site is cut at the west end and apparently roughly one-third of the site has been bulldozed in order to enlarge the neighboring field; this has resulted in a cut ca. 2.5 m high. The resultant area of bulldozed site (40 m east–west × 120 m north–south) has a very dense scatter of large sherds consistently of primarily dark-faced burnished ware (Amuq Phases A and B). A 10–15 m wide strip of orange (east–west) through the center of the cleared area is burnt mudbrick (one large fragment of which was examined). Near the south end of the bulldozed section evidence of serpentinite working occurs in the form of a few chips of flaked and chipped serpentinite. From the soil section at the north end it seems that the site does not go much deeper than the present ground surface.

**AS 201**

—  
 AREA: 100 × 200 m HEIGHT: 1 m ILLUSTRATION: Fig. A.9  
 AVRP DATE: Mainly Roman/Late Roman; one sherd of Early Bronze Age red-black burnished ware  
 DESCRIPTION: A small low mound, now cut on the east side of the track (north–south) leading south from Haji Mursal Çiftlik. Large dressed limestones that now occur along the side of the dirt track clearly come from this site. A field extending to the east of the cut is unplowed and has abundant pottery and building debris. The field on top of the site is under cotton.

**AS 202****Khirbet al-Tahoun**

AREA: 300 × 150 m HEIGHT: 0.5 m ILLUSTRATION: Fig. A.9

AVRP DATE: A: Byzantine/Early Islamic wares, brittleware and grooved-lip amphorae; B: Early Byzantine keel-rim bowls of Late Roman C common, three terra sigillata ware, one Early Islamic brittleware, but mainly Early Byzantine; C: Mainly brick red areas of generic Roman/Late Roman/Byzantine type with range of brittleware forms (these are essentially brick red brittlewares), some Byzantine-possible Early Islamic lug handles (brittleware) and hole-mouth forms, one cream yellow Early Islamic base; all generally very battered

DESCRIPTION: The site consists of dense scatters of tile and ceramics, mainly now within plowed fields. The scatter includes occasional fragments of dressed stone, and pottery is common. Immediately south of the site is a line of three masonry water mills almost certainly Roman, and in use for a long time; they occur in a series down the limestone slope. The site is virtually flat except for Area A which is a low mound (80 m north–south × 70 m east–west and 0.5 m high). Note that field scatters in the area are dense but significantly less than the on-site scatter.

**AS 203****Tabarat Jaffar (Cafer)**

AREA: 200 × 100 m HEIGHT: 2 m ILLUSTRATION: Fig. A.8

AVRP DATE: Hellenistic and Roman; Late Roman and Byzantine brittlewares appear absent

DESCRIPTION: An elongate mound with the east end truncated by the north–south Atchana drain. It has been recently plowed. Artifact visibility is low, but tile is common on the surface.

**AS 204****Harranköy**

AREA: 250 m diameter HEIGHT: 3.70 m ILLUSTRATION: Fig. A.9

AVRP DATE: Roman, Byzantine

DESCRIPTION: This site, located on a bedrock outcrop, is a possible industrial complex. A new road cuts through it. Connected circular basins have been cut into the site. The first basin has a diameter of 1.00 m and is 1.20 m deep, and the second one has a diameter of 1.70 m and is 0.24 m deep. The first has a south–north orientation and the second has an east–west orientation. These are possibly tombs or an olive press.

**AS 205****Cudeidah**

AREA: 500 × 200 m HEIGHT: 4 m ILLUSTRATION: Fig. A.9

AVRP DATE: Roman

DESCRIPTION: An extensive but diffuse site within the area of a garbage dump and partly in a fig, olive, and fruit tree grove. It had been freshly plowed at the time of the visit. Nine tombs were cut into the limestone bedrock (eight opened and one not opened). The tomb consists of two parts: a narrow rectangular room (0.60 × 1.00 × 0.81 m high) opens to the surface; from here a narrow passageway leads to a second “room” which is larger. The dimensions of the second room could not be measured, but it is deeper than the first room. In the east part of the site a limestone ridge along a north–south axis is partly “cut in.” The white remains of limestone (possibly a building) were seen in a plowed field in the south part of the site. This is possibly a quarry reused as a cemetery.

**AS 206****Kastal Çiftliği**

AREA: 500 × 100 m HEIGHT: 20–40 m above plain ILLUSTRATION: Fig. A.6

AVRP DATE: Hellenistic/Roman, Late Roman, Islamic, modern

DESCRIPTION: A complex consisting of a structure with two corners within an Islamic cemetery, four single-chamber tombs, a wall, a cistern cut into the rock, and a cluster of three possible tombs.

- AS 207** **Kızılkaya Tepesi**  
 AREA: 2500 × 600 m (total extent of dolmen field) ILLUSTRATION: Fig. A.6  
 HEIGHT: 0 m  
 AVRP DATE: Not collected  
 DESCRIPTION: Field of approximately 144 dolmens on top of the limestone ridge of Kızılkaya Tepesi. This was also surveyed by Bakiye Yukmen (see Yukmen 2000).
- AS 208** **Temel Kızılkaya**  
 AREA: Overall area 250 × 250 m ILLUSTRATION: Fig. A.6  
 HEIGHT: 62 m (above plain level)  
 AVRP DATE: Early Bronze Age , Middle Bronze Age  
 DESCRIPTION: The main part of the site consists of a large building made of massive limestone blocks, weathered and roughly dressed. The building is 16.4 × ca. 62.0 m. The building, which is partly robbed of stones, is associated with Early and Middle Bronze Age pottery. It is southeast of the dolmen field (AS 207) and surrounded by “tombs” or “cisterns”; ten caves are located at the base of the southeast slope. The architectural style is clearly not Roman/Byzantine and the pottery is both Early Bronze Age (including red-black burnished ware) and Middle Bronze Age. This building appears to be a large structure or fort of Early Bronze Age/Middle Bronze Age date.
- AS 209** **Kızılkaya: Reşaoğulları Çiftlik**  
 AREA: 54 × 40 m HEIGHT: 0 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: No pottery was found during the first visit. During the second visit six to eight sherds were found, but these were insufficient to provide a positive date: second millennium (one), Seleucid (two of which are incurved-rim bowls); one glazed plate (Islamic), Islamic, and possible Late Roman  
 DESCRIPTION: Three lines of large sandy limestone blocks and boulders form a rough square. The southeast side is not preserved; it either eroded away or never existed. Only one course of stones is preserved *in situ*, and no pottery was found within the walls. Note that the walls are massively constructed (2.5 m wide), with large roughly cut outer and inner corners. Although the southeast side of the structure is missing, faint traces not enclosed by the gully are still visible. A second visit confirmed that pottery is virtually absent. However, the feature is clearly ancient, both from its dressing technique and the weathering of the stones.
- AS 210** **Aygiroğlu**  
 AREA: 150 × 200 m HEIGHT: 6 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Roman–Islamic  
 DESCRIPTION: A building complex with at least one important public building. At least two building phases are apparent. The building walls are made of ashlar masonry; no “clamps” are visible. There are three courses extant. In the second phase use was made of roughly square-sided stone. In the southwest and west of center some small, shallow holes in the ground were possibly postholes or used for grinding.

- AS 211** **Göktepe**  
 AREA: 250 × 150 m HEIGHT: 23 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Mainly Late Roman–Islamic; scant Roman  
 DESCRIPTION: This site is a natural bluff within the Karasu Valley. A village is located at the south side of the mound and an Islamic cemetery (out of use) at the east side of the summit. Most pottery comes from the east slope.
- AS 213** **Höyük Tepe**  
 AREA: 250 × 150 m HEIGHT: 14.80 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Islamic  
 DESCRIPTION: A natural bluff with two summits having steep sides except at the saddle between the two summits, which is covered with a cemetery. It is located 3.5 km southeast of Yalanköz. Most pottery comes from a field at the south side of the mound.
- AS 214** **Eskideğirmen Tepe**  
 AREA: 100 × 80 m HEIGHT: 5 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: (A) One classical/Hellenistic black-glazed body sherd; (B) few Roman and Late Roman; (C) Middle Bronze Age, possibly Iron Age, Roman, Islamic; (D) Middle Bronze Age, Middle Bronze Age–Late Bronze Age, Hellenistic/Roman black glazed; one Islamic. Village: possibly Late Roman  
 DESCRIPTION: A fairly low and oval-shaped mound surrounded by cotton fields and covered by scrub. There are five illegally dug holes on the mound and the ruins of a building of the nineteenth century A.D. at north side of mound.
- AS 215** **Sekizevler (Asgündür)**  
 AREA: 65 × 50 m HEIGHT: 29 m ILLUSTRATION: Fig. A.3  
 AVRP DATE: Islamic, Roman/Byzantine, Hellenistic/Roman, Achaemenid, Iron Age (red-slipped burnished ware), possibly Late Bronze Age, Middle Bronze Age, one half second millennium, Early Bronze Age (red-black burnished ware and Early Bronze Age IVb), third millennium, Amuq Phases A–B  
 DESCRIPTION: A high and prominent mound ca. 1 km southeast of Yalanköy. The west and south slopes are gentle, while the north and east sides are steep. An out of use cemetery is on the south part of the top, and stone foundations of houses are spread over almost the entire summit, south, and west slopes. An unfinished sarcophagus lid is sticking out of a tumble of stones on the south slope.
- AS 216** **Anneplihöyük (Annepli)**  
 AREA: 80 × 50 m HEIGHT: 5.5 m ILLUSTRATION: —  
 AVRP DATE: Possibly Hellenistic/Roman, possibly Middle Bronze Age, Early Bronze Age  
 DESCRIPTION: A moderately low mound covered with shrubs. There are many pits at the east and west sides of the mound and a low cut at the west side. Many roof tiles are visible in the north-west corner of the mound.  
 AS 216 may be the same site recorded as AS 16A. The precise location of Braidwood's AS 16 is unknown because the area contains several small mounds forming a complex site cluster. The two numbers assigned to sites in this area, AS 16A and AS

216, were recorded in different seasons, and the inaccuracy of GPS points prior to 2000 makes it difficult to determine whether they are the same site.

- AS 217** —
- AREA: 20 × 5 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.9
- AVRP DATE: Probably Roman
- DESCRIPTION: Flat site, possibly bulldozed. It is bisected by an irrigation channel southwest of Büyük Avara (AS 116); this is indicated by a high concentration of roof tiles.
- 
- AS 218**                      **Küçük Avara (South Çiftlik)**
- AREA: 130 × 130 m                      HEIGHT: 1.5 m                      ILLUSTRATION: Fig. A.9
- AVRP DATE: 1996 collection: a good collection of painted Chalcolithic wares (Halaf/Ubaid types), but no bichrome wares evident; also present probably Late Chalcolithic; Amuq Phase F chaff-faced wares; possibly Amuq Phase G; also Hellenistic/Roman. 1998 collection: much dark-faced burnished ware (Amuq Phases A–C); some Halaf; also Amuq Phase G and possibly F; some dark-faced burnished ware, many Amuq Phases F–G rims
- DESCRIPTION: A low rounded mound covered by the *çiftlik* of the local landowner. Although it is mainly obscured by the villa, the southern 50 m of the site (which includes the lower wash slopes) remains exposed. It was plowed at the time of the survey. Pottery is fairly common and consists of large sherds. One cut for garden drainage is ca. 1.5 m deep but shows relatively little stratification. However, deep plowing appears to bring up both ash layers and pottery.
- 
- AS 219**                      **Çakal Tepe (East)**
- AREA: 85 × 77 m                      HEIGHT: 2.5 m                      ILLUSTRATION: Figs. A.8–9
- AVRP DATE: Mainly Late Ubaid/Early Late Chalcolithic with common open chaffy bowl and three or four painted wares; Chalcolithic, Ubaid-like
- DESCRIPTION: A site that has bulldozed cuts on the north and east sides. Fortunately the site has been partly left in place because it has a cemetery on top. On the plowed field to the east the “ghost” of the site can be distinguished as a gray soil mark beyond which come the gray brown soils of the plain. The top of the site is covered by shrub and weed vegetation and most of the collection comes from the cuts.
- NOTE: To the west — between AS 219 and Çakal Tepe — are low satellite mounds with occasional evidence of Late Antique settlement.
- 
- AS 220**                      **Akgöl Çiftlik**
- AREA: 50 × 50 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.8
- AVRP DATE: Roman/Late Roman, Late Roman
- DESCRIPTION: This virtually flat site was discovered as a result of the transect survey. On the plowed and diced field the site is evident as a scatter of tile fragments. In the field boundary and scrub to the north numerous large limestone stones have been piled up; these include occasional cut stones (some with claw marks) that appear to be from a small Roman site. Sherd scatter is sparse and difficult to distinguish from the “background noise.”



- AS 221** **Tell Wuzwuz**  
 AREA: 40 × 40 m HEIGHT: 1.5 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Iron Age; Late Bronze Age/Iron Age, but mainly Iron Age  
 DESCRIPTION: A small, low mound 300 m south of Tayfur Sökmen village and the Antakya road with a house on top. Pottery is plentiful, especially at the west side.
- AS 222** **Konut Köy / Vesvese Köyü**  
 AREA: 70 × 100 m HEIGHT: 1.25 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Roman terra sigillata ware, Late Roman/Early Byzantine brittleware  
 DESCRIPTION: A very small low mound now surmounted by a diesel pump for the irrigation of cotton. Parts of the site have clearly been destroyed by bulldozing and large blocks of dressed limestone are evident both to the east and to the north of the site. The site is mainly covered by cotton and other vegetation. Pottery is not very visible, but there are numerous roof tiles of Roman/Late Roman date.
- AS 223** **Su Tepe**  
 AREA: 200 × 170 m HEIGHT: 2.5 m ILLUSTRATION: Fig. A.5  
 AVRP DATE: Roman and Late Roman, including Late Roman C; Roman, Late Roman  
 DESCRIPTION: A medium-sized but low mound mainly under a village, but in the northwest corner and south there is sufficient open space to permit collection. A large trench in the south part of the site gave an excellent window into the sedimentary overlap of marsh clay over Late Roman levels. A tile pavement appears to be exposed in the south part of the site, and roof and floor tiles are common over the site.
- AS 224** **Kocakışla**  
 AREA: 300 × 200 m HEIGHT: 4.5 m ILLUSTRATION: Fig. A.6  
 AVRP DATE: Islamic and Roman roof tiles; Early and Late Islamic (Ottoman) pottery. Given the fact that no Roman pottery was observed during a fairly long visit it seems likely that the Roman tiles were robbed out from another site and that AS 224 is exclusively Islamic; few Late Roman or Islamic  
 DESCRIPTION: A double-mounded, elongate mound with the southwest peak smaller than the northeast one; both are the same height. Roof tiles and only occasional pottery of poor quality were visible on both peaks. The south side of the site is completely covered with cotton, while the north side is covered with straw and shrubs offering some visibility. The northeast mound has been cut by a bulldozer.
- AS 226** **Yıldızlı (Üzümdallı)**  
 AREA: 200 × 100 m HEIGHT: 0 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Roman, Late Roman, Islamic  
 DESCRIPTION: The site is on a flat bench overlooking a “gateway” (pass) to a side valley. A concentration of stones was at the north side of B. Almost no tesserae were found in B, but they occur plentifully in A. Roof tiles (Roman and Islamic) are abundant. Artifacts on the northwest slope are probably washed down from the site. On the upper slopes sherds were only occasionally found, but they were well represented on the lower slopes.

**AS 227****Tell Habeş (Sultan Merkezi)**

AREA: 160 × 180 m                      HEIGHT: 10 m                      ILLUSTRATION: Fig. A.7

AVRP DATE: A: Few Roman, mainly Late Roman; B: Roman, Late Roman C/North: Hellenistic black glazed, Roman, possible Islamic, C/South: classical/Hellenistic *lekythos* (oil flask), Hellenistic black glazed, Roman; D: Late Roman, possible Islamic; E: Hellenistic black glazed, Roman, Late Roman; F: few Late Roman. 2002 collection: Collection contains predominately Seleucid, Roman, and Late Roman, also small quantity of Early Bronze Age (red-black burnished ware, one cooking pot); Middle Bronze Age/Late Bronze Age; Iron Age (painted and red-slipped burnished ware); several Late Iron Age/Persian wares; also contains one Middle Paleolithic tool

DESCRIPTION: This site is comprised of six areas: (A) A water mill penstock that is almost complete. According to the local guard this was in use until sixty years ago. Architecturally the infilled arches are originally Late Roman and the upper stonework Byzantine. (B) A deep section through the floodplain (see *Chapter Two: Settlement and Landscapes in the Amuq Region*, fig. 2.5, and Wilkinson 2000). (C) A tell to the southwest of the mill and immediately south of the Reyhanlı road. Large ashlar masonry is exposed *in situ* at three places on the mound summit. Pottery is dense over most of the site. A spring-fed pond and mill-regulator are located to the northeast of the tell by the road. Additional outlying areas are to the north (area A to the east of the mill, and area D to the west of the mill). Area D has a sparse to moderate scatter of occupation debris and also a stone with a cross carved in relief, presumably from an early Christian church or other structure. Other lower town areas are to the west and south of the road.

**AS 228****Eski Mezarlık**

AREA: 20 × 10 m                      HEIGHT: 1.5 m                      ILLUSTRATION: Fig. A.8

AVRP DATE: Hellenistic/Roman, Islamic

DESCRIPTION: The site sits on top of a spur overlooking a passage to the Amuq Valley. The site is cut on all sides. A thick layer of stones and pebbles is visible in the section. There is no pottery on the top, but a heavy concentration on the northwest slope.

**AS 229****Doğan Çırçır Fabrikası**

AREA: 100 × 60 m                      HEIGHT: 4 m                      ILLUSTRATION: Fig. A.8

AVRP DATE: Hellenistic/Roman, Roman, Late Roman, Islamic

DESCRIPTION: The site is a low mound that is cut at the north, east, and west sides. On top of the mound is a building that almost completely covers the summit. The east side is very low. Immediately south of the building are a number of cut blocks. The north section reveals a low mound of white sand covered by a ca. 0.5 m deep layer of roof tiles. Collection was done on the west and north sides. In front of the north side were tomb-like holes.

**AS 230****Mağaranın Kilisesi**

AREA: 75 × 75 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.2

AVRP DATE: Possible Roman, Late Roman

DESCRIPTION: A flat site on the edge of a spur with steep east and west sides. Some roof tiles were found.

- AS 231** **Ahmet Şahbaz Çiftliği**  
 AREA: 225 × 90 m HEIGHT: 0 m ILLUSTRATION: Fig. A.8  
 AVRP DATE: Late Roman, Roman, Hellenistic, Iron Age, possible Late Bronze Age, possible Middle Bronze Age, Early Bronze Age, early third millennium, possible Late Neolithic; mainly prehistoric  
 DESCRIPTION: The site is located in a flat field and is either a plowed out sherd scatter or consists of soil brought from somewhere else. It was unclear whether the site continued east of the ditch because the ditch was very overgrown and the field next to it was covered with corn allowing zero visibility.
- AS 233** **Küçük Haji Aşlı Köy**  
 AREA: 100 × 100 m HEIGHT: 3 m ILLUSTRATION: Figs. A.2–3  
 AVRP DATE: Roman, possible Islamic  
 DESCRIPTION: A low rounded mound within this village, which according to local people is a very old village. The site is entirely built over and obscured although a few Roman and possible Islamic roof tiles are evident on the surface.
- AS 234** **Uluca-Tarlası**  
 AREA: 120 × 50 m HEIGHT: 0.5 m ILLUSTRATION: Figs. A.7–8  
 AVRP DATE: Roman/Late Roman, Roman, few Late Roman  
 DESCRIPTION: A small virtually flat site. Pottery and red sandy roof tiles are common. Land is used for squash and tobacco. There is moderately good visibility of the surface; the main sherd scatter is at the north end.
- AS 235** **Uluca East**  
 AREA: 50 × 30 m HEIGHT: 0 m ILLUSTRATION: Figs. A.7–8  
 AVRP DATE: Two Roman terra sigillata ware, one stamped tile, two pithos rims, other Roman  
 DESCRIPTION: The site consists only of a scatter of tile and stones; the north–south dimensions are blurred by the downslope creep of site material. Tiles are mainly red and gritty. Eight plain tesserae were also recovered. For location, see Yener et al. 2000b: fig. 3.
- AS 236** **Uluca North**  
 AREA: 45 × 45 m HEIGHT: 0 m ILLUSTRATION: Figs. A.7–8  
 AVRP DATE: (A) range Hellenistic-Roman-Islamic, but few of each; Hellenistic black glazed, few Roman, few Late Roman, one Islamic body sherd; (B) Late Roman plus, Islamic impressed; (C) brittleware, but pottery sparse, two sherds; possible Roman, possible Late Roman  
 DESCRIPTION: The site consists of three scatters of building debris including well-dressed limestone blocks, some marble, and tesserae (including a coherent chunk of mosaic pavement from C to the northeast). Area C has less pottery, but ashlar blocks are *in situ* in a north–south ditch. The scatter of site material appears in three distinct scatters within plowed fields.
- AS 237** **Zeytin Altı (Uluca)**  
 AREA: 70 × 70 m HEIGHT: 0.70 m ILLUSTRATION: Fig. A.7  
 AVRP DATE: Excellent Late Roman assemblage; few Roman, many Late Roman  
 DESCRIPTION: This is a dense scatter of limestone, tiles, tesserae (occasional), and other building debris. A large group of robbed stones forms a mound within the site that forms a slight terrace on the hillslope. Roof tiles and pottery are common over the entire site.

- AS 238** **Serinyol Kale**  
 AREA: 30 × 34 m ILLUSTRATION: Fig. A.4  
 HEIGHT: Unknown depth of cultural deposits below preserved architecture  
 AVRP DATE: (Amuq Phases G or F?), Roman, Early Islamic, Middle/Late Islamic (Ottoman)  
 DESCRIPTION: The center of the site is dominated by a *kale*, a built structure of stone with a vaulted roof. Dimensions are 9.3 × 9.3 m within a square platform 30 × 34 m. The platform is a terraced wall which presumably constituted a larger structure either surrounding the central structure or upon which such a structure rested.
- AS 239** **Serinyol Kale Çiftlik**  
 AREA: 50 × 50 m HEIGHT: 0 m ILLUSTRATION: Fig. A.4  
 AVRP DATE: Late Roman, Byzantine  
 DESCRIPTION: Stones, rubble, occasional tile, and sparse pottery are visible about 400 m northwest of Serinyol Kale (AS 238), within a *çiftlik* and orchard. One large perforated stone is visible on the slopes.
- AS 240** **Khirbet Alahan**  
 AREA: 130 × 140 m HEIGHT: 0.5 m ILLUSTRATION: Fig. A.4  
 AVRP DATE: Roman, Late Roman  
 DESCRIPTION: A virtually flat site with tile and pottery common on the surface. Occasional large stones were plowed out from wall foundations. In the southern part of the site, building debris is scattered all over the surface. The entire site is plowed, and the center of the site is roughly marked by an electrical pylon.
- AS 241** —  
 AREA: 50 × 20 m HEIGHT: 0 m ILLUSTRATION: Fig. A.4  
 AVRP DATE: Hellenistic, Late Roman  
 DESCRIPTION: A small Roman site near a dirt farm track. The site is a scatter of tile and pottery on the northeast-facing slope within an olive orchard. Tile and rubble are locally abundant, but pottery is fairly sparse.
- AS 242** —  
 AREA: 200 × 100 m HEIGHT: 0 m ILLUSTRATION: Fig. A.4  
 AVRP DATE: Hellenistic, Roman  
 DESCRIPTION: A moderate-sized site on the south side of the wadi within olive orchards and plowed, terraced fields.
- AS 243** —  
 AREA: 80 × 130 m HEIGHT: 0 m ILLUSTRATION: Fig. A.4  
 AVRP DATE: Late Roman, Byzantine, Early Islamic  
 DESCRIPTION: A low site with locally dense scatters of tile and building rubble. Pottery, especially large bowls, is moderately common. The site forms two distinct scatters, possibly on upper and lower terraces. One large chunk of rough tessellated floor was found.

**AS 244**

—

AREA: 40 × 20 m HEIGHT: 0 m ILLUSTRATION: Fig. A.5

AVRP DATE: Roman/possible Late Roman, but mostly indeterminate sherds

DESCRIPTION: The site consists of a scatter of rectilinear blocks on the summit of a hill overlooking the entrance to the Beylan Pass in the Amanus foothills. The buildings may have been small, and sub-square, but they were robbed out in antiquity. Three to four individual buildings appear to be in the main group and also one or two in a second group. Pottery is sparse but is sufficient to suggest *in situ* occupation; no querns, door sockets, or other indications are apparent.

**AS 245**

—

AREA: 100 × 100 m HEIGHT: 0 m ILLUSTRATION: Fig. A.5

AVRP DATE: Hellenistic, Roman

DESCRIPTION: A scatter of rubble in gray soil to the west of a small quarry area. Pottery is scattered occasionally over the small site area. Quarries to the east consist of occasional rectilinear cuts for the removal of blocks, and a slight bevel on the rock face to indicate different levels of stone removal. A tomb cut into the rock face has a slightly carved entrance. Roof tiles are occasional.

**AS 246****Çakallı Karakol**

AREA: 280 × 150 m ILLUSTRATION: Fig. A.5

HEIGHT: Ca. 2–3 m of cultural deposits appear likely

AVRP DATE: Early Chalcolithic (Amuq Phase E painted wares; pl. 1D), Late Chalcolithic, Early Bronze Age (red-black burnished ware), Middle Bronze Age/Late Bronze Age, Iron Age, Seleucid, Roman, Late Roman, Early Islamic, Middle Islamic/Crusader, Late Islamic (Ottoman), early modern

DESCRIPTION: A large mounded tell site, situated on a hill above a spring. The top of the site is located 50 m to the north of the old Beylan Pass road and extends beyond road to south, while the road continues to the northwest of the site. Abundant rubble and occasional tiles and sherds cover the entire site. Remains of a mandate period police station (*karakol*) are situated on top of the site.

**AS 247****Bakras Kalesi (Bağras, Pagras, Pagrae)**

AREA: 100 × 80 m ILLUSTRATION: Fig. A.4

HEIGHT: Walls remain to height &gt; 3 m

AVRP DATE: Late Neolithic, abundant Middle and Late Islamic (Ottoman) glazed wares

DESCRIPTION: This is a large, impressive fortress sited on a natural fortified eminence with very well-preserved walls. The fort has been recorded in detail by French scholars and also treated by Sinclair (1990: 266–71). The standing walls are Crusader (Templars from A.D. 1153), or result from Mamluk or Cilician Armenian rebuilding; they include halls, a court, a chapel, and other structures. The site has a long history of occupation dating back to the Roman period, as recorded in historical sources. Inside the fort, fragments of terra sigillata have been found very rarely, although these may be secondarily deposited with building materials. The remaining extensive lower town to the south is cut by a modern track. There is also a lower town to the north; both of these are previously unrecorded. The lower town is outside the fort walls but evident as gray deposits with abundant rubble. Some standing architectural remains in the lower town include an apparent gate structure and a *hammam* (bath house).

- AS 248** **Bakras Khan (Han Karamurt [Sinclair 1990])**  
 AREA: 300 × 150 m                      HEIGHT: Ca. 1 m                      ILLUSTRATION: Fig. A.5  
 AVRP DATE: Hellenistic, Roman, Late Roman, Early Islamic, Middle Islamic, Late Islamic (Ottoman)  
 DESCRIPTION: A large fort or caravanserai with a well-built stone enclosure wall. East of the main building complex were remains of several buildings and a large interior space, including some well-preserved walls. The low mounding of extensive occupation extends to the south and southeast of the site for approximately 200 m. Villagers from houses about 50 m to the west of Bakras Khan report discovering remains of a *hammam* while digging foundation trenches and produced a fragment of mosaic flooring said to be from the structure. Collection over the entire site indicates that the large part of the settlement to the south is primarily Hellenistic, Roman, and Late Roman in date, while Early Islamic and later materials are found mainly in the vicinity of Bakras Khan itself (see Casana 2003).
- AS 249** —  
 AREA: 100 × 100 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.8  
 AVRP DATE: Hellenistic, Roman, Late Roman  
 DESCRIPTION: A dense sherd scatter with many large stones, including some quern stones. A drainage ditch cuts the southern end of the site.
- AS 250** —  
 AREA: 50 m × unknown dimension                      ILLUSTRATION: Fig. A.8  
 HEIGHT: Unknown  
 AVRP DATE: Roman, Late Roman  
 DESCRIPTION: A buried site is attested in the irrigation ditch upcast. All fields surrounding the canal upcast are virtually devoid of artifacts, while a dense scatter of sherds, stones, and roof tiles cover a 50 m section of the upcast soil. Because the site is located on the Orontes River floodplain, it appears likely that most of the site has been buried by river sediments.
- AS 251** —  
 AREA: 100 × 100 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.8  
 AVRP DATE: Late Roman, Byzantine, Early Islamic  
 DESCRIPTION: A flat, dense scatter of sherds, tiles, and stones. Several high-density clusters of stones within the site may be plowed-out buildings.
- AS 254** —  
 AREA: 300+ × 300+ m                      HEIGHT: 0.5 m                      ILLUSTRATION: Fig. A.6  
 AVRP DATE: Hellenistic (abundant), Roman, Late Roman  
 DESCRIPTION: A large, low site in the central plain. The entire site is under irrigated cultivation. Most of site is flat, but two slightly mounded areas on the southwest and northwest appear to relate to two main areas of the site. Several large limestone ashlar blocks are in evidence.

- AS 255** **Atçitepe**  
 AREA: 260 × 150 m                      HEIGHT: >1 m                      ILLUSTRATION: Fig. A.6  
 AVRP DATE: Islamic (abundant), Late Roman, Byzantine  
 DESCRIPTION: A small mound now under trees with a small farmstead on the east side. The site extends as a lobe towards the southeast. The west side of the site is terminated by a low cut ca. 1 m high. Ash and charcoal debris continues in the field to the west. The cut contains common Late Antique roof tiles.
- AS 256** —  
 AREA: 150 × 100 m                      HEIGHT: 2.5 m                      ILLUSTRATION: Fig. A.5  
 AVRP DATE: Early Islamic  
 DESCRIPTION: A small site built on a lobe extending south of the relic Afrin canal, to the west of Baytarlı (AS 179). The site may be slightly mounded but appears to overlay canal upcast several meters above the surrounding plain.
- AS 257** — (see also AS 179)  
 AREA: 700 × 500 m                      HEIGHT: 1 m                      ILLUSTRATION: Fig. A.5  
 AVRP DATE: Early Islamic, Middle Islamic  
 DESCRIPTION: A large, slightly mounded site separated by the Afrin canal. Many large, cut limestone and one basalt block have been thrown into the modern canal bed. There is evidence on the satellite imagery for an ancient canal at approximately the same location. The site consists of a low mounded feature to the north of a canal (A); a low, flat sherd scatter to the south; and a southern mounded feature (B). Area A is heavily disturbed but has abundant ceramics and tiles. Area B has many tiles and large cut blocks visible in the modern canal section. The site area appears exaggerated by earth-moving activities.
- AS 271** —  
 AREA: 10 m × unknown dimension                      ILLUSTRATION: Fig. A.8  
 HEIGHT: 0.5 m (height of preserved wall)  
 AVRP DATE: Roman  
 DESCRIPTION: A Roman building of roughly-hewn limestone blocks exposed in a stream channel section, buried beneath 3.5 meters of alluvial silt. Cleaning of the section and of the building revealed that the exposed portion was a corner and was built on a slope, possibly down to an earlier stream, suggesting it may have been a mill. The top of the preserved wall is sealed by collapsed roof tile fragments and several pot sherds.
- AS 272** **Ceylanlı Kale**  
 AREA: 30 × 20 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.2  
 AVRP DATE: Hellenistic, Roman, later occupation (clear from the construction of walls but difficult to date — possibly Crusader)  
 DESCRIPTION: The site consists of a small Hellenistic temple, only the foundations of which are preserved, surrounded by a later fortification wall. The temple structure (measuring 6 × 6 m) has been recently damaged by digging and the toppling of stones. The surrounding later walls are built of roughly-shaped blocks and incorporate occasional pieces of earlier temple. Occasional sherds and tiles are evident in the central part of the complex. Surrounding rocks have been quarried for stone, some areas cleared (possibly for other structures), and several small postholes were cut into rock throughout the complex. One

small cistern is at the west edge of the complex. Several temple stones have been moved to the edge of the modern road leading to the site, about 150 m away.

**AS 273**

—

AREA: 350 × 400 m                      HEIGHT: 1 m                      ILLUSTRATION: Fig. A.2

AVRP DATE: Mainly Hellenistic, some Roman, Late Roman

DESCRIPTION: A very large low site consisting of an extensive area covered with highly abraded sherds and on which building stones are common. The architectural features on the main part of the site are visible from the mountain top above the site. The site is below a rock-cut tomb complex of the “Five Brothers,” dated by inscription to A.D. 156, and adjacent the small stream draining the Ceylanlı Valley. Most of the site is Hellenistic, but a small later Late Roman/Early Byzantine component is confined primarily to the western side of the site. A large water mill (Islamic or Ottoman) cuts through the center of the site.

**AS 287****Ceylanlı (Gündüzlü)**

AREA: Unknown                      HEIGHT: Unknown                      ILLUSTRATION: Fig. A.2

AVRP DATE: Roman, Late Roman, Byzantine

DESCRIPTION: A large site below the modern village of Ceylanlı, on a high plateau above the Ceylanlı Valley. Most of the site is obscured today, but many column fragments and other basalt architectural pieces are incorporated into modern buildings. Sherd scatter is evident in many gardens and vacant lots in town. The street plan is orthogonal, possibly reflecting the original Roman plan. It was recorded by French archaeologists in the 1890s and 1920s. Several inscriptions from the site are now in the Antakya Museum. Occupation may relate to a Roman tomb complex opposite the site. The size of the ancient site is difficult to assess, but judging from the distribution of archaeological remains it likely covered several hectares.

**AS 288****Telhöyük Tepe**

AREA: 150 × 150 m (measured on imagery)                      ILLUSTRATION: Fig. A.8

HEIGHT: Ca. 3 m

AVRP DATE: Early Islamic and Middle Islamic in quantity on top. Also Early Bronze Age and possibly Iron Age, but a very small collection

DESCRIPTION: A medium-sized mound heavily damaged by recent bulldozing and the construction of a factory on top of the site. It was originally thought by the Antakya Museum to be Braidwood’s AS 144 and was visited very briefly to assess damage. Consulting imagery and maps, it is clear that AS 144 is actually located at the village of Bohşin to the south, and that this site was unrecorded by Braidwood.

**AS 289****Tofaş Tepe**

AREA: Unknown                      HEIGHT: Unknown                      ILLUSTRATION: Fig. A.7

AVRP DATE: Predominantly Late Neolithic (Amuq Phases B–C), some Early Islamic

DESCRIPTION: This site is located to the east of the Antakya-Kırıkhan road and is completely covered by a modern Tofaş service station. Inside the main wall of the station compound, a small landscaped strip of soil 3 × 50 m contains common cultural material. Outside the complex to the east open fields contain relatively dense field scatter. Several large basalt millstones are reused as signpost weights. It is impossible to determine the original size of the site. It was recorded by Rana Özbal and Fokke Gerritsen.



- AS 290** —
- AREA: 150 × 150 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.8
- AVRP DATE: Abundant Neolithic (Amuq Phase A–B–C; pl. 1E), very sparse later material of Hellenistic (pl. 3C)/Late Roman date
- DESCRIPTION: The site is located in the Çakal Tepe sedimentary window, several hundred meters south of Dutlu Höyük (AS 200). It is virtually flat and about 100–150 m in diameter, although it was under cotton at the time of our visit so this was difficult to determine. The site was discovered on CORONA imagery and is clearly visible when the fields are clean.
- AS 292** To be published in a forthcoming volume
- AS 297** **Demir Köprü (Jisr Hadid; Ancient Gephyra)**
- AREA: Unknown                      HEIGHT: Unknown                      ILLUSTRATION: Fig. A.8
- AVRP DATE: Late Roman, Early/Middle/Late Islamic (Ottoman)
- DESCRIPTION: While the site is historically known and renowned for its Ottoman period bridge, it had never before been recorded by the survey. It is completely covered by the modern town of Demir Köprü, but on CORONA imagery the location of the ancient, mounded site is clearly visible. A brief visit by the team made a small collection. Adjacent to the ancient site, the foundations of the original Roman bridge are clearly visible. The site itself is slightly mounded, but its dimensions are impossible to determine owing to modern buildings to the west of the available collection area. It appears from imagery that a significant part of the ancient site is accessible in a field behind the main road, but conditions were poor when visited. The site may extend across the river as well (see Gelb 1939).
- AS 325** —
- AREA: 30 × 30 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.5
- AVRP DATE: Roman, Late Roman
- DESCRIPTION: A small, low density scatter of sherds, tiles, stones, and occasional floor tesserae in the Bakras Valley of the Amanus Mountains.
- AS 326** —
- AREA: 30 × 20 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.5
- AVRP DATE: Late Roman, Early Islamic
- DESCRIPTION: A very small site adjacent to the modern road at the base of the Bakras Valley. It has a low density sherd and tile scatter, similar to AS 325.
- AS 327** —
- AREA: 70 × 50 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.5
- AVRP DATE: Hellenistic, Roman, Late Roman/Early Byzantine, Early Islamic
- DESCRIPTION: A dense scatter of tiles, sherds, and stones at the base of the Bakras Valley in the Amanus Mountains, with an adjacent limestone outcrop. The east end of the site is partially obscured by a modern house.

- AS 328** —
- AREA: 50 × 50 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.5
- AVRP DATE: Roman, Late Roman/Early Byzantine, Early Islamic, Middle Islamic
- DESCRIPTION: A moderately dense concentration of cultural material between a stream bed, modern road, and ancient water mill ruin near the mouth of the Bakras Valley. Most of the standing mill construction is likely Islamic/Ottoman in date but has possibly earlier foundations and is almost certainly contemporary with at least the latest phases of the site. The water chamber is constructed of cut stones. To the east, the site may continue but is obscured by a modern schoolhouse.
- AS 329** —
- AREA: 30 × 30 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.5
- AVRP DATE: Early Byzantine/Early Islamic
- DESCRIPTION: A very low density concentration of sherds and some tile between the Bakras and Belan Valleys in the Amanus Mountains. Several cut building stones are in the area as well, suggesting more than field scatter, although there is perhaps only one isolated building.
- AS 331** —
- AREA: 50 × 50 m                      HEIGHT: 0 m                      ILLUSTRATION: Fig. A.5
- AVRP DATE: Roman, Late Roman
- DESCRIPTION: A small site to the southeast of Çakallı Karakol (AS 246) on the Beylan Pass with occasional to common pottery. Occasional large stones, possibly building debris, but these are easily confused with the background noise of limestone rubble eroding out of the upper Pleistocene terrace.
- AS 333** —
- AREA: 150 × 200 m                      HEIGHT: 3 m                      ILLUSTRATION: Fig. A.8
- AVRP DATE: Mid-/Late Chalcolithic; predominantly Amuq Phase E/F transition. Some small indication of Iron Age (including Neo-Assyrian bowl), Hellenistic black-glazed ware, and Late Roman/Early Byzantine brittlewares
- DESCRIPTION: A moderately prominent mound to the west of Çakal Tepe (AS 113) and south of Tell al-Terzi (AS 104). The site is in heavily irrigated fields and has been severely damaged by bulldozing and irrigation ditches. The mound is cut nearly in half on the north and west sides, and to a lesser degree on the east side, and site material has been spread over the fields. The top of the mound is under vegetable cultivation. The mound and surrounding fields are covered by a relatively dense concentration of sherds and occasional basalt quern stones. The collection contains very abundant chaff-tempered pottery, including many simple bowls of Amuq Phase E/F transition. There are also occasional Amuq Phase E painted wares and dark-faced burnished ware.
- AS 335** **Dalyan Höyük**
- AREA: 100 × 80 m                      HEIGHT: 1.5 m                      ILLUSTRATION: Fig. A.7
- AVRP DATE: Roman, Late Roman/Early Byzantine, Early Islamic
- DESCRIPTION: This site is on the edge of the Daliyan village near the modern Antakya-Kırıkhan road. It is a low mound with common stones on the surface as well as rubble. Two column drums have been erected at the entrance to a modern house that occupies the east side of the mound, and one column base is on the mound. Pottery and tiles are common on the surface.



blocks (fig. 2:14). It is a very well-preserved building with a square plan, measuring about  $50 \times 50$  m. Four large towers at each corner have interior vaulted arches; the north-west tower has a modern house built on top of it. On the exposed east side of the building is a large stone glacis. A field near the building complex is strewn with massive limestone blocks, and other ancient architectural fragments were found commonly throughout the modern town. It is thought to be a church converted to a fort (Sinclair 1990: 295–06).

**AS 346****Beyazid-i Bestami (Trabzon, Trabesac, Darbsac, or Darb es-Sak; Ancient Darbasak)**

AREA:	Not measured	HEIGHT:	—	ILLUSTRATION:	Fig. A.2
AVRP DATE:	Crusader, Late Islamic (Ottoman)				
DESCRIPTION:	A large castle and extensive lower town on a high natural rock outcrop in the Amanus foothill zone north of Kırıkhan. The site clearly has many phases, but modern buildings related to a popular shrine obscure much of the castle itself. Slopes below the outcrop appear to have an extensive lower town, but they were not visited. The site is thought to be ancient Darbasak, known from Islamic accounts. No collection was made on the visit, but some pottery of Crusader/Late Islamic (Ottoman) is visible on the surface (noted in Sinclair 1990: 297).				

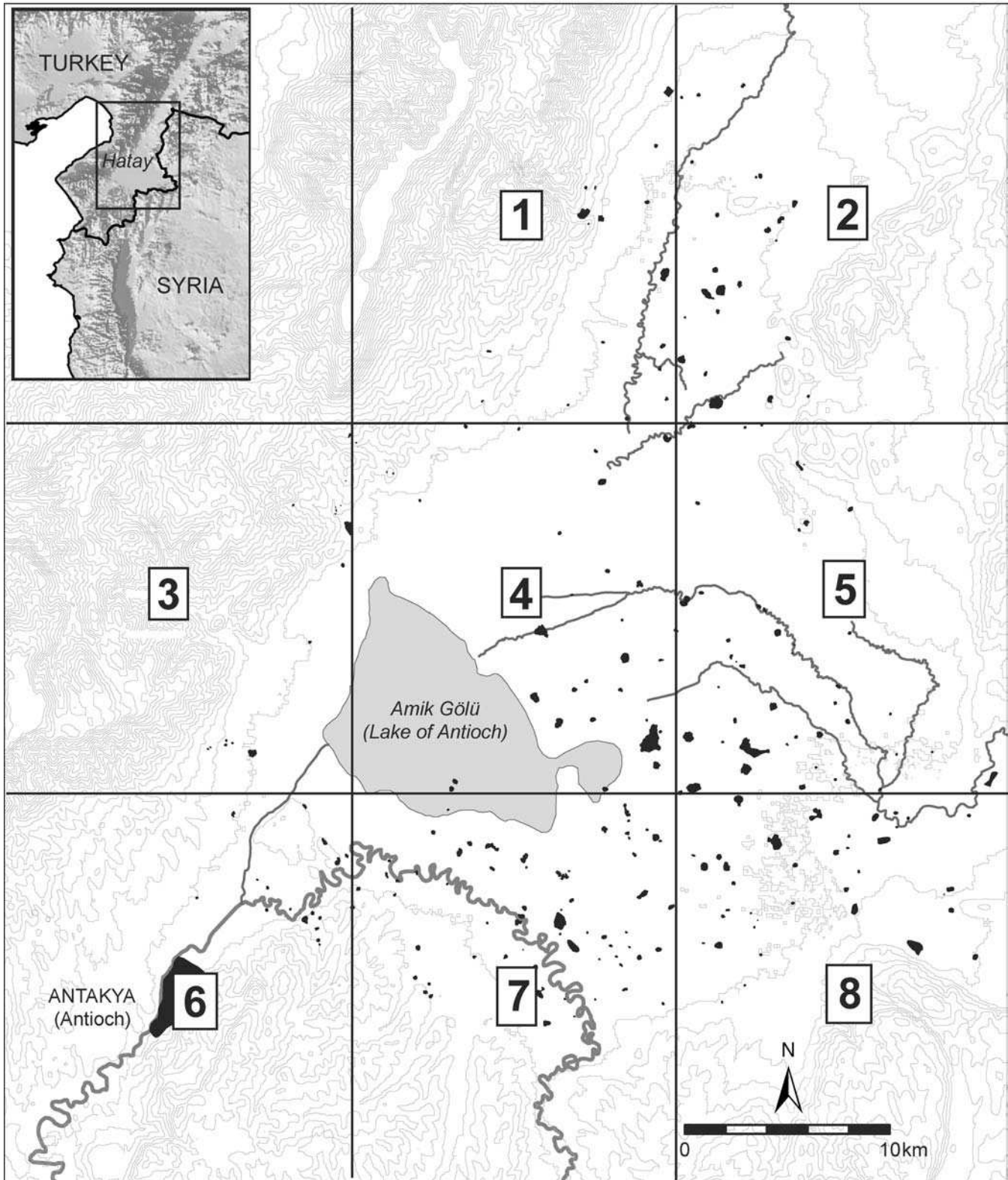


Figure A.1. Key to Maps of Quadrants 1–8 (Figs. A.2–9) Indicating Amuq Survey (AS) Sites in the Amuq Valley, Turkey

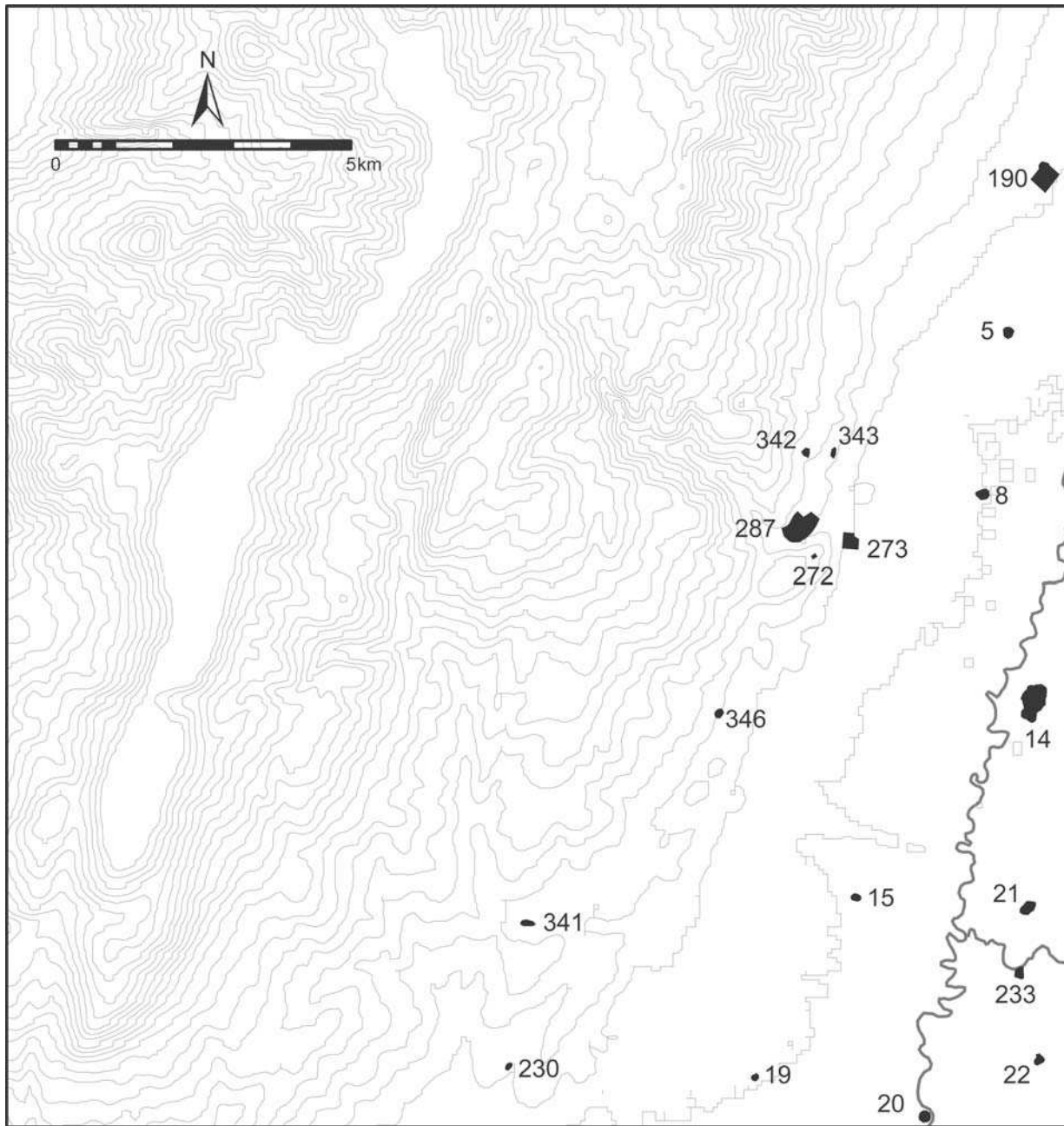


Figure A.2. Map of Quadrant 1 in the Amuq Valley, Turkey, with Amuq Survey (AS) Site Numbers Indicated

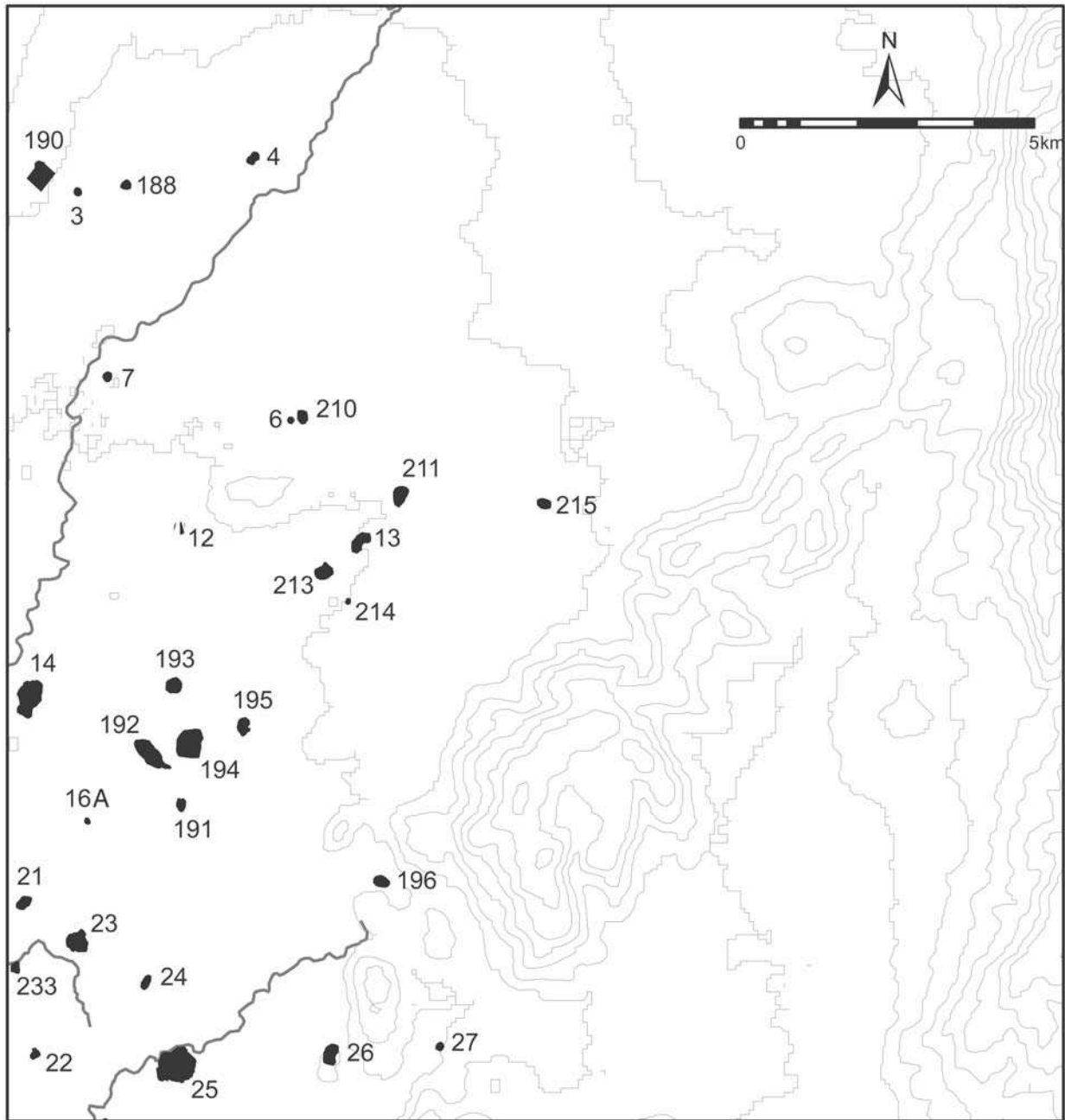


Figure A.3. Map of Quadrant 2 in the Amuq Valley, Turkey, with Amuq Survey (AS) Site Numbers Indicated

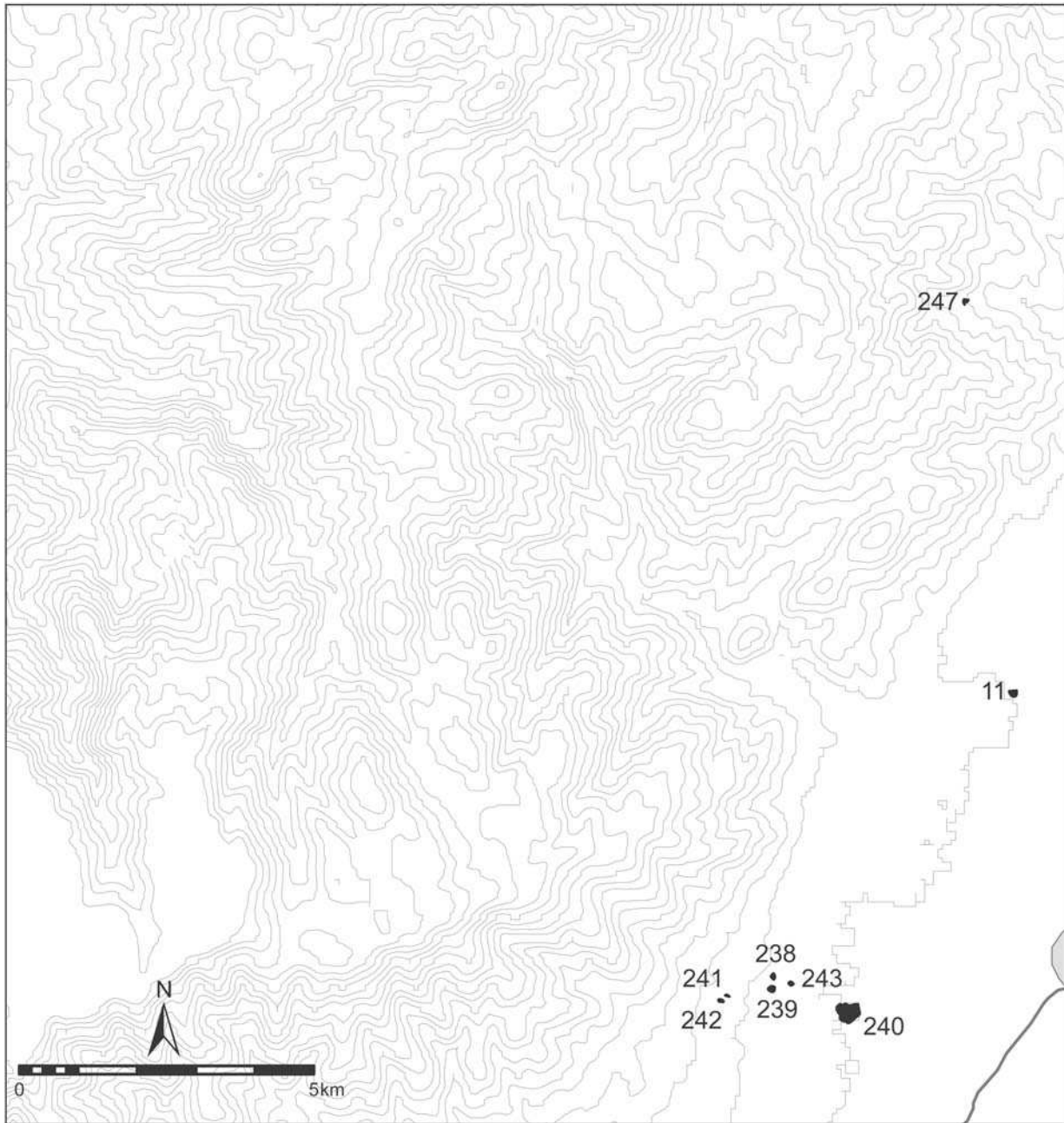


Figure A.4. Map of Quadrant 3 in the Amuq Valley, Turkey, with Amuq Survey (AS) Site Numbers Indicated



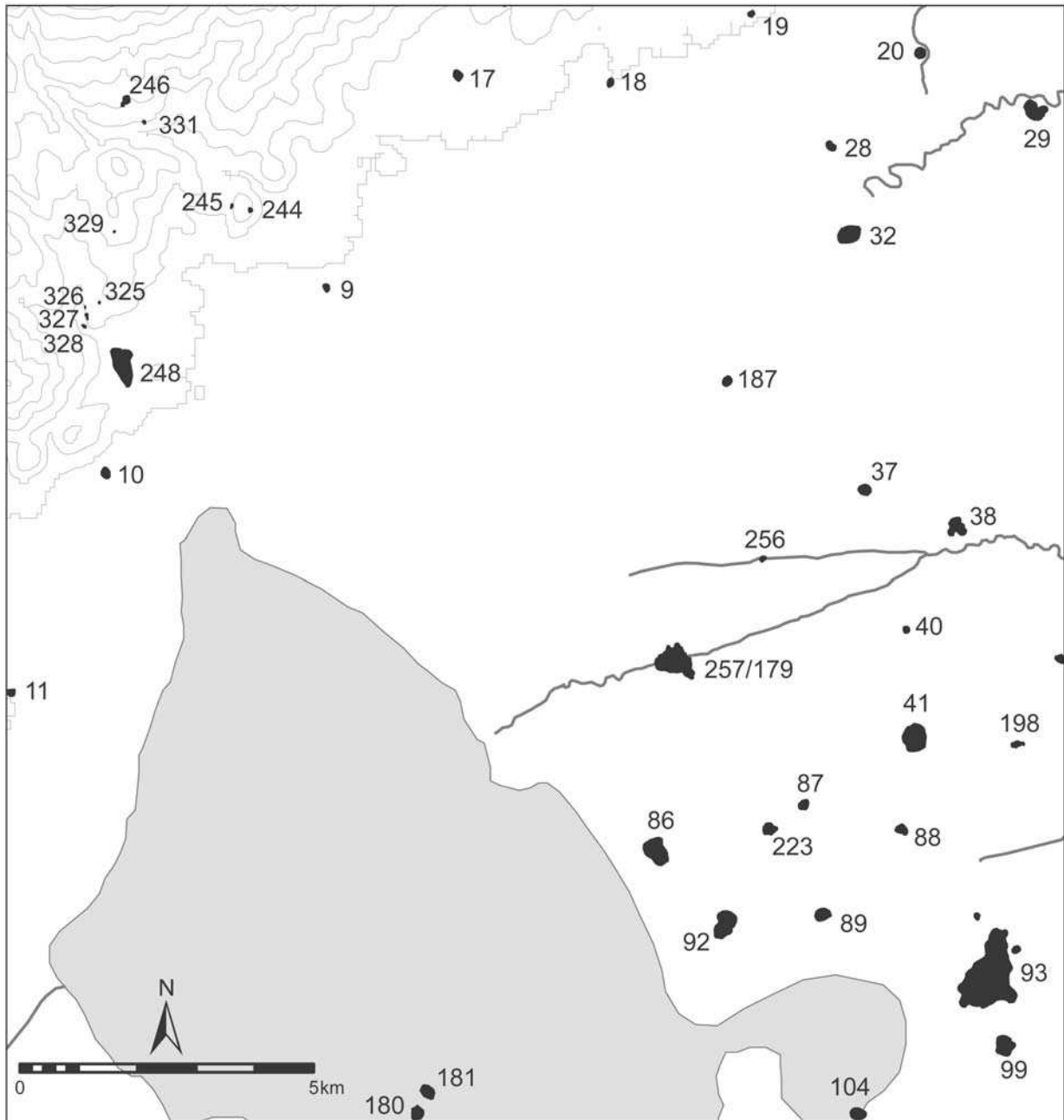


Figure A.5. Map of Quadrant 4 in the Amuq Valley, Turkey, with Amuq Survey (AS) Site Numbers Indicated

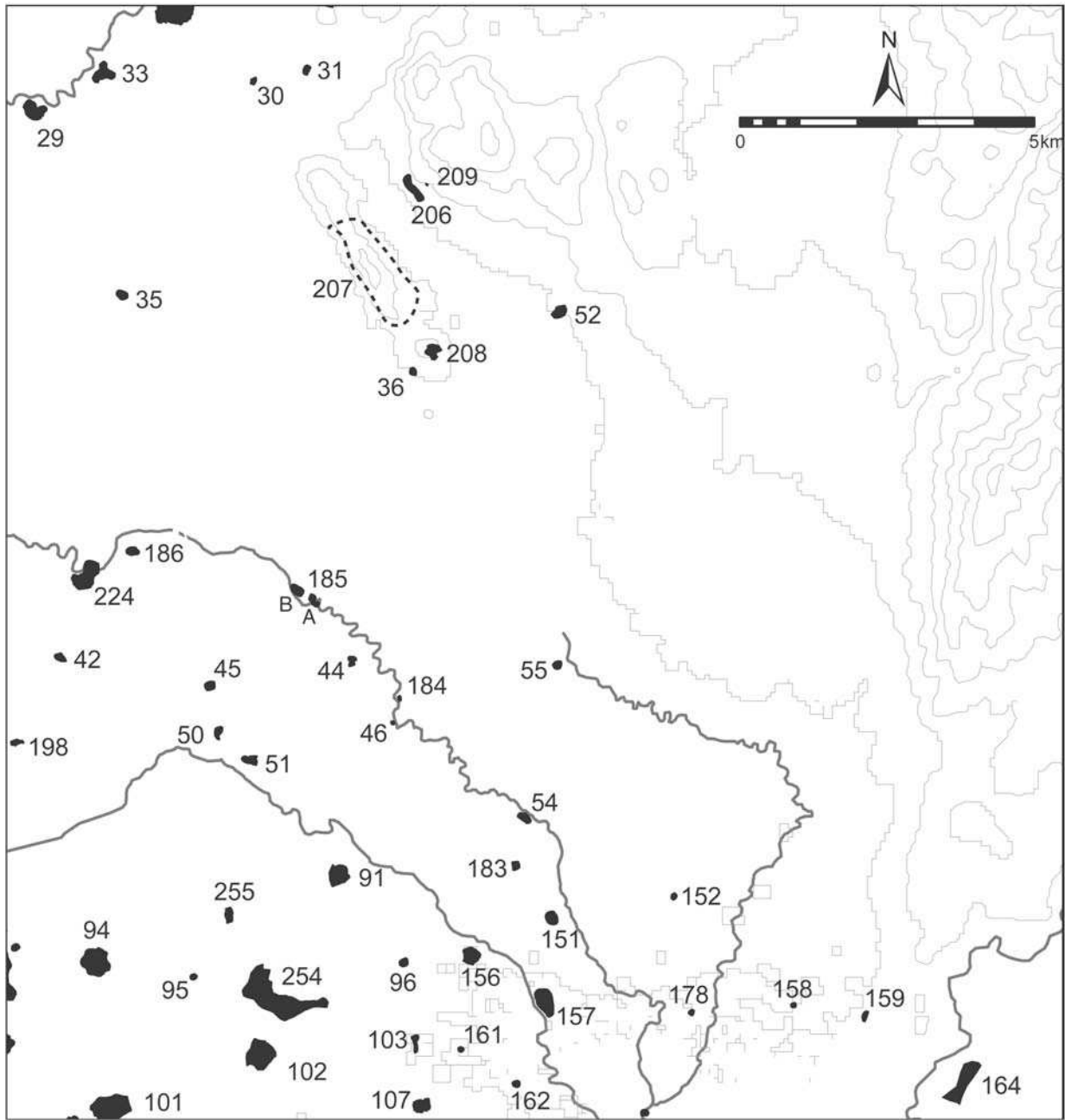


Figure A.6. Map of Quadrant 5 in the Amuq Valley, Turkey, with Amuq Survey (AS) Site Numbers Indicated

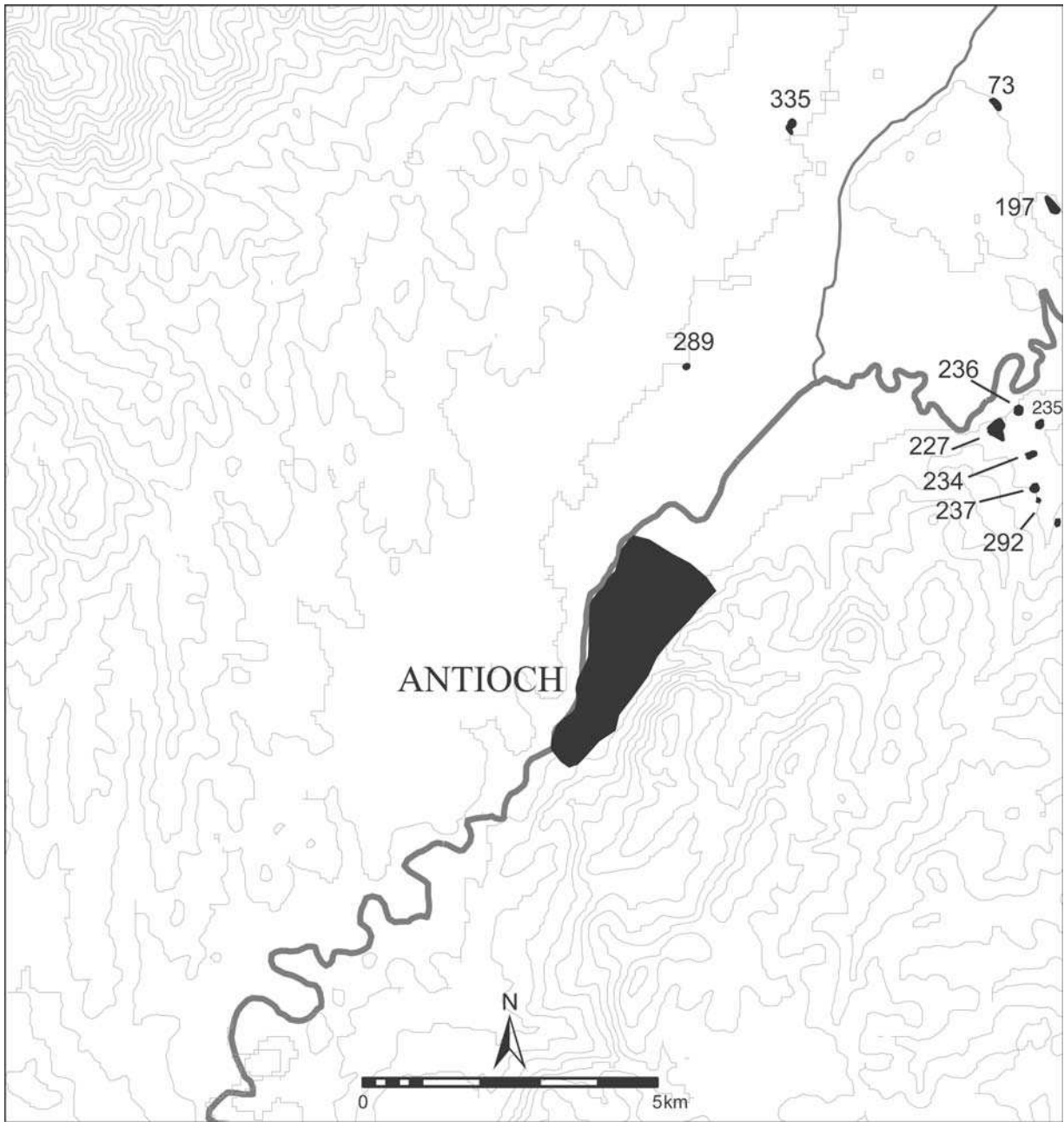


Figure A.7. Map of Quadrant 6 in the Amuq Valley, Turkey, with Amuq Survey (AS) Site Numbers Indicated

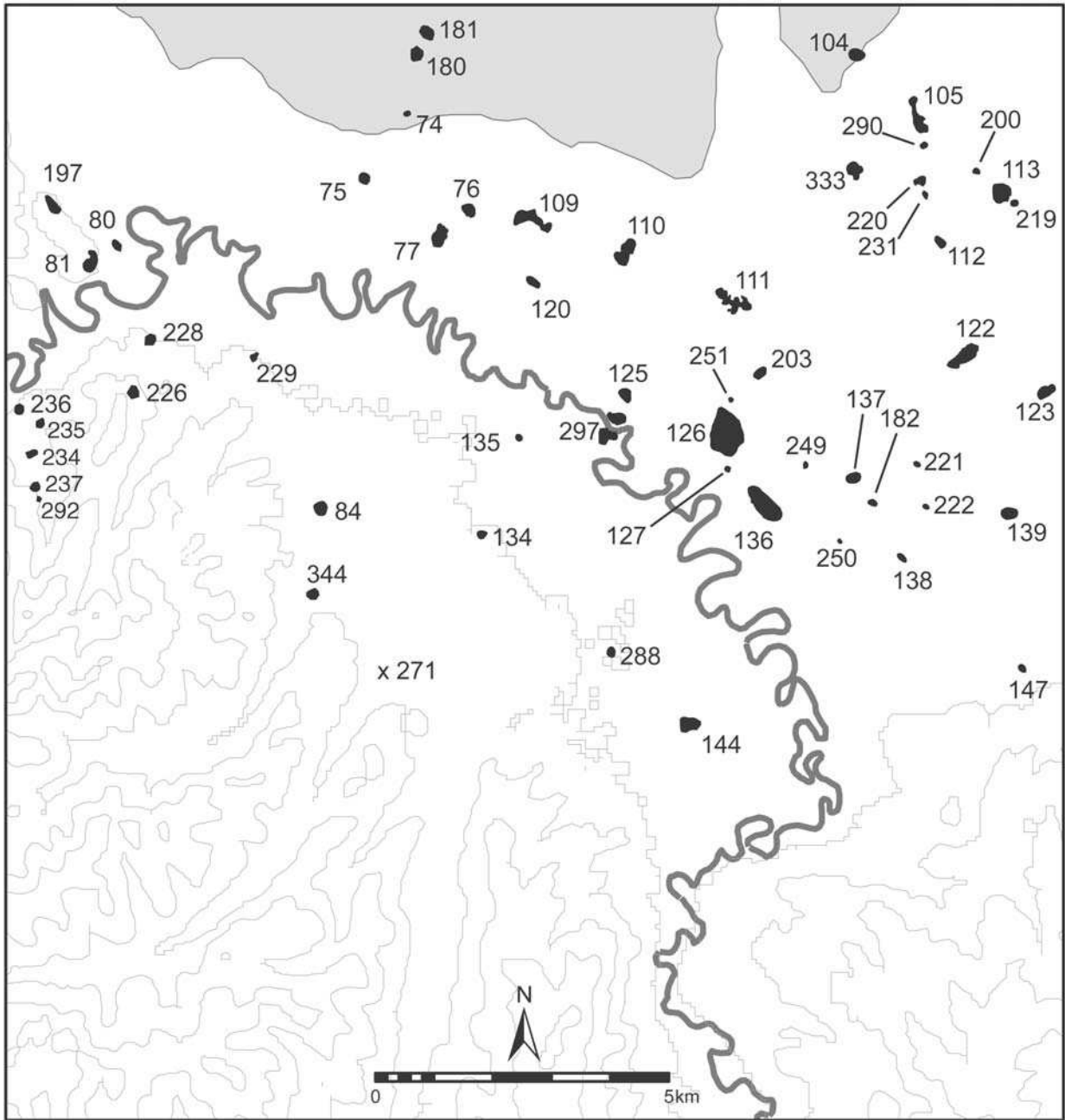


Figure A.8. Map of Quadrant 7 in the Amuq Valley, Turkey, with Amuq Survey (AS) Site Numbers Indicated

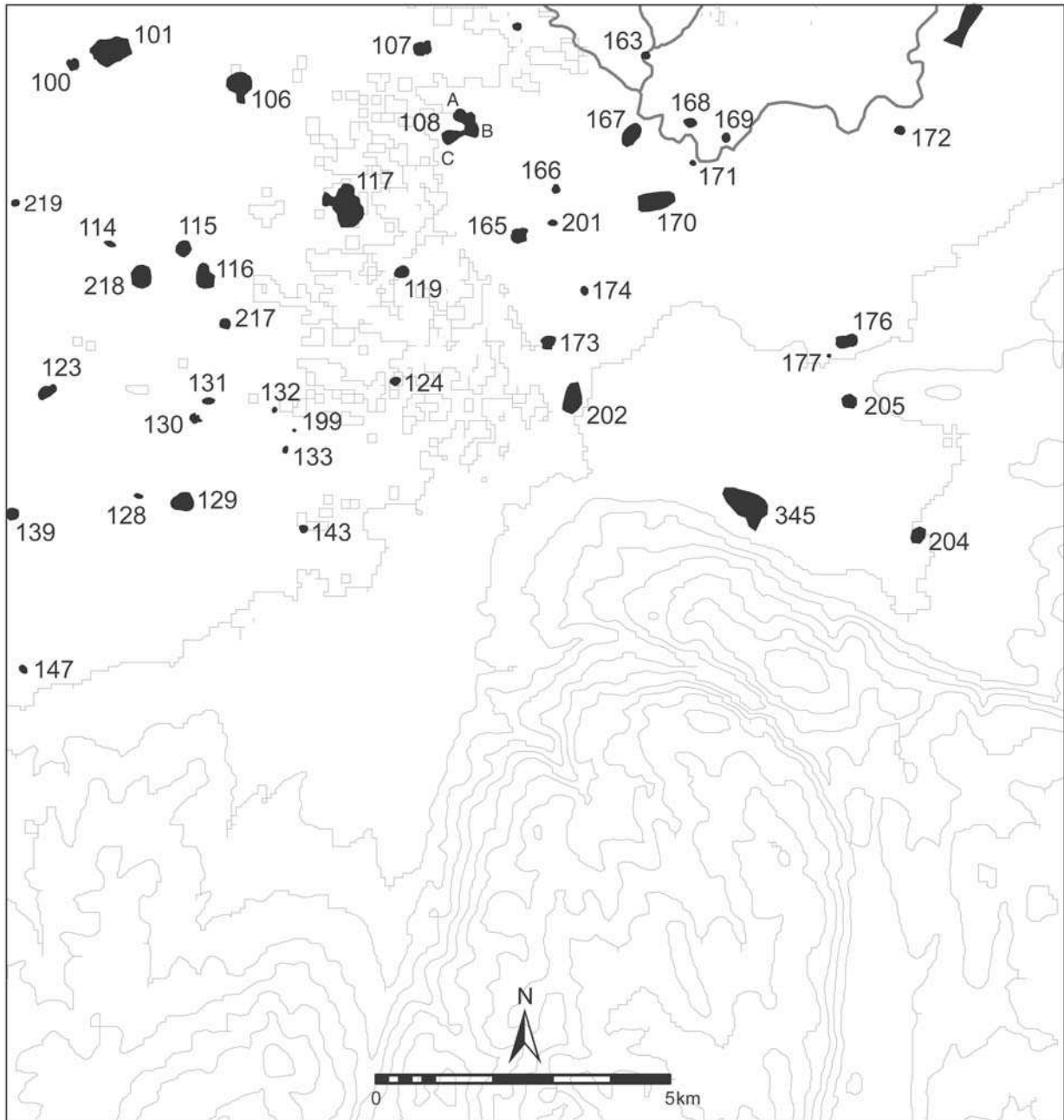


Figure A.9. Map of Quadrant 8 in the Amuq Valley, Turkey, with Amuq Survey (AS) Site Numbers Indicated

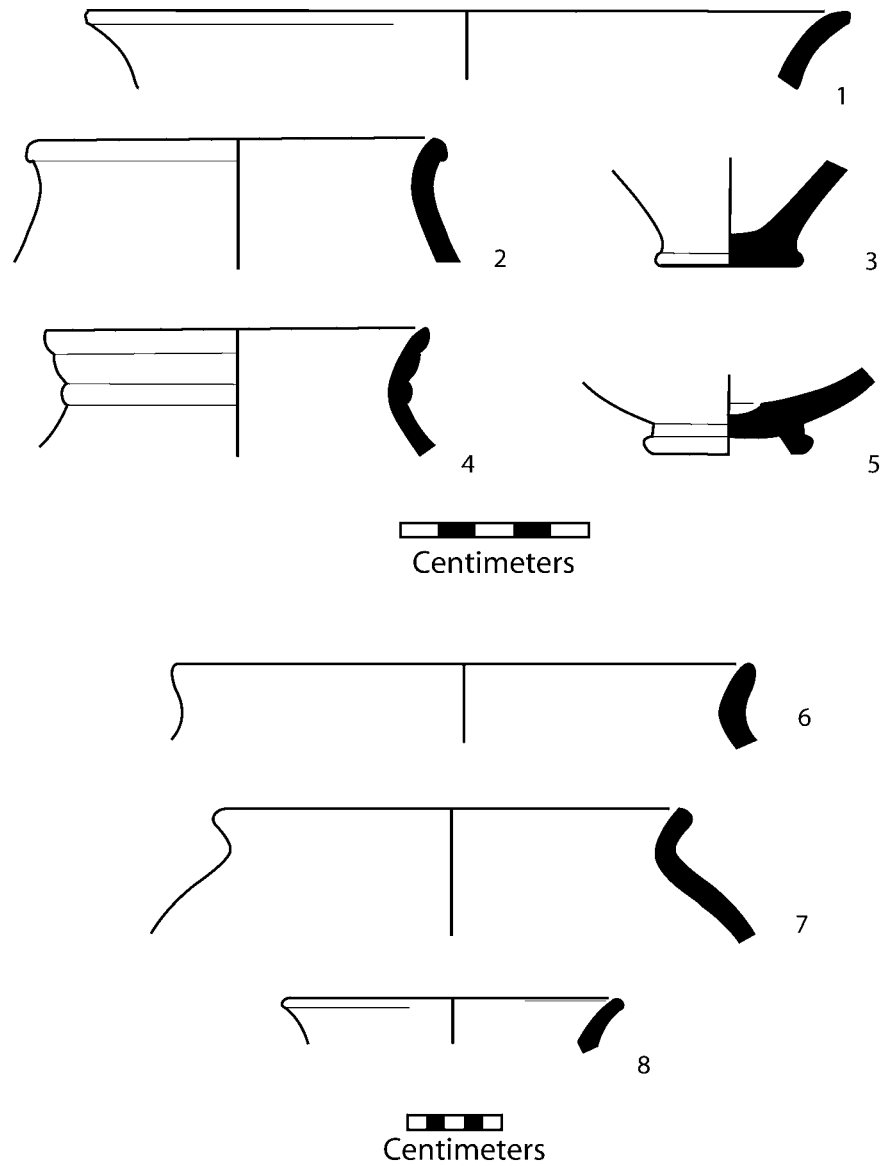


Figure A.10. Illustrative Drawings of (1–5) Plain Simple Ware (Amuq Phases G–J; Early Bronze Age) and (6–8) Cooking Pots (Amuq Phase G; Early Bronze Age). Scales (1–5) 1:2 and (6–8) 1:4

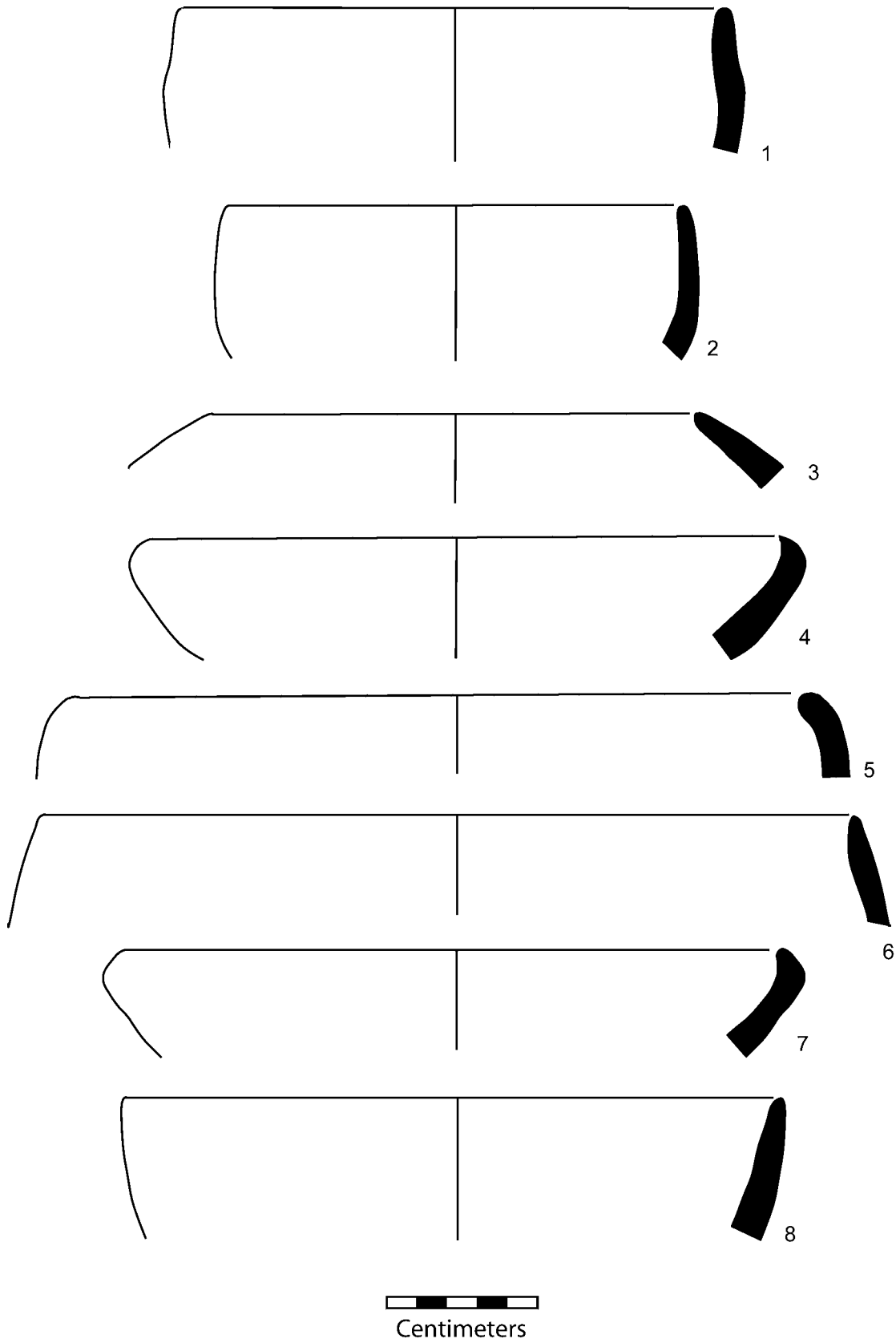


Figure A.11. Illustrative Drawings of (1–8) Red-black Burnished Ware (Amuq Phase H/I; Early Bronze Age). Scale 1:2

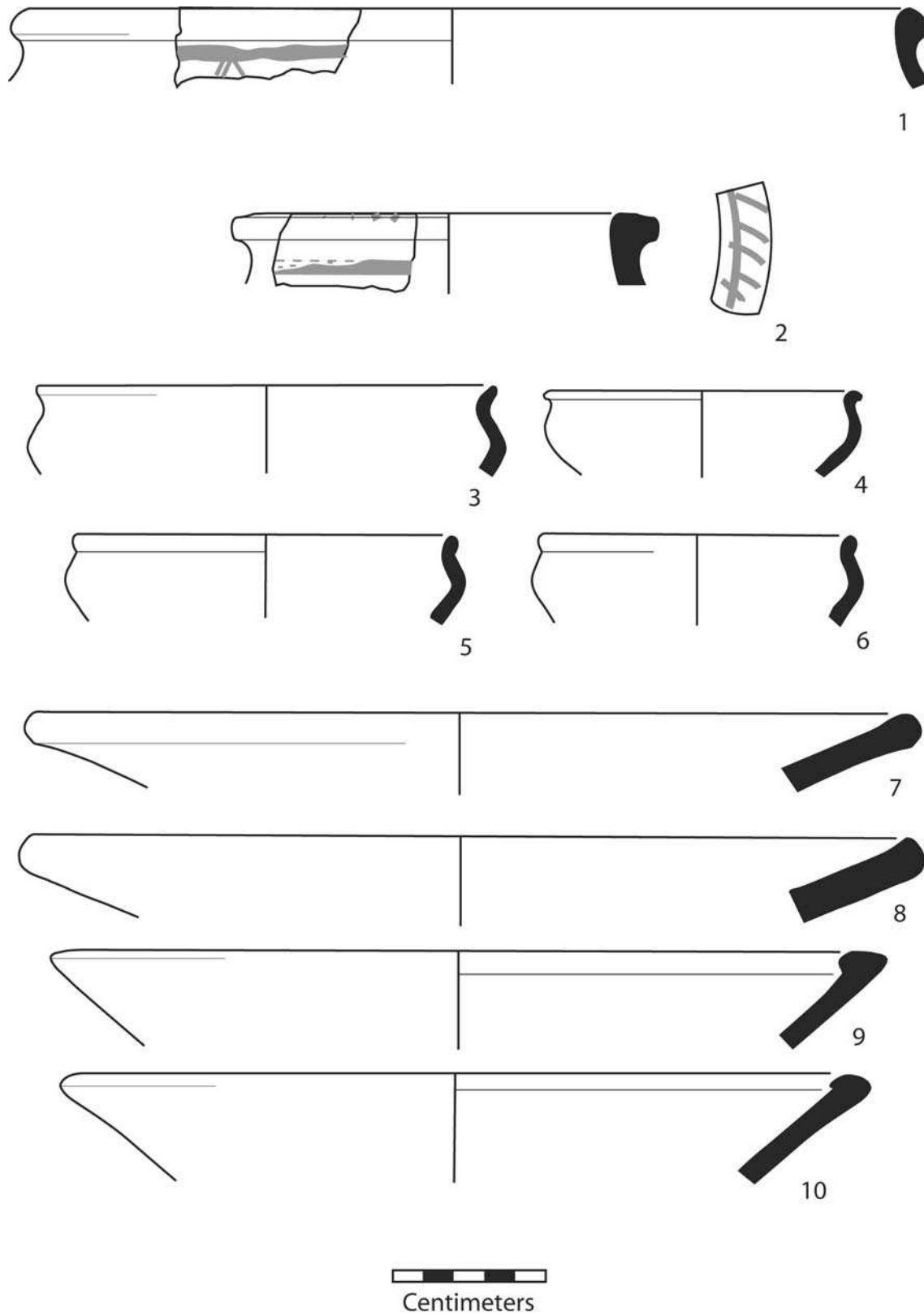


Figure A.12. Illustrative Drawings of (1–2) Painted Jars (Middle/Late Bronze Age), (3–6) Carinated Cups (Middle/Late Bronze Age), and (7–10) Platters or Shallow Open Bowls (Middle/Late Bronze Age). Scale 1:2



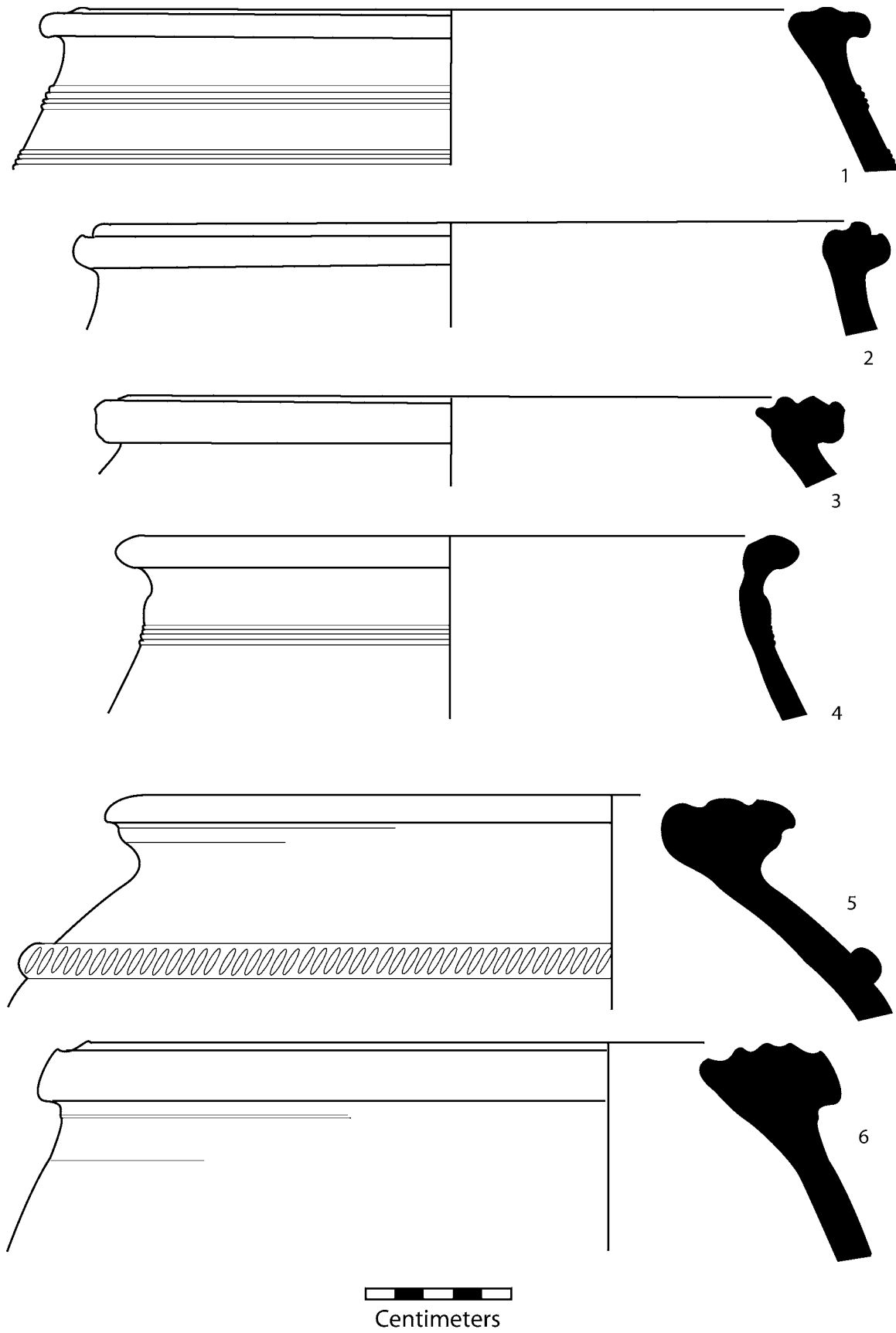


Figure A.13. Illustrative Drawings of (1-4) Jars (Middle/Late Bronze Age) and (5-6) Pithoi (Middle/Late Bronze Age).  
Scale 1:2

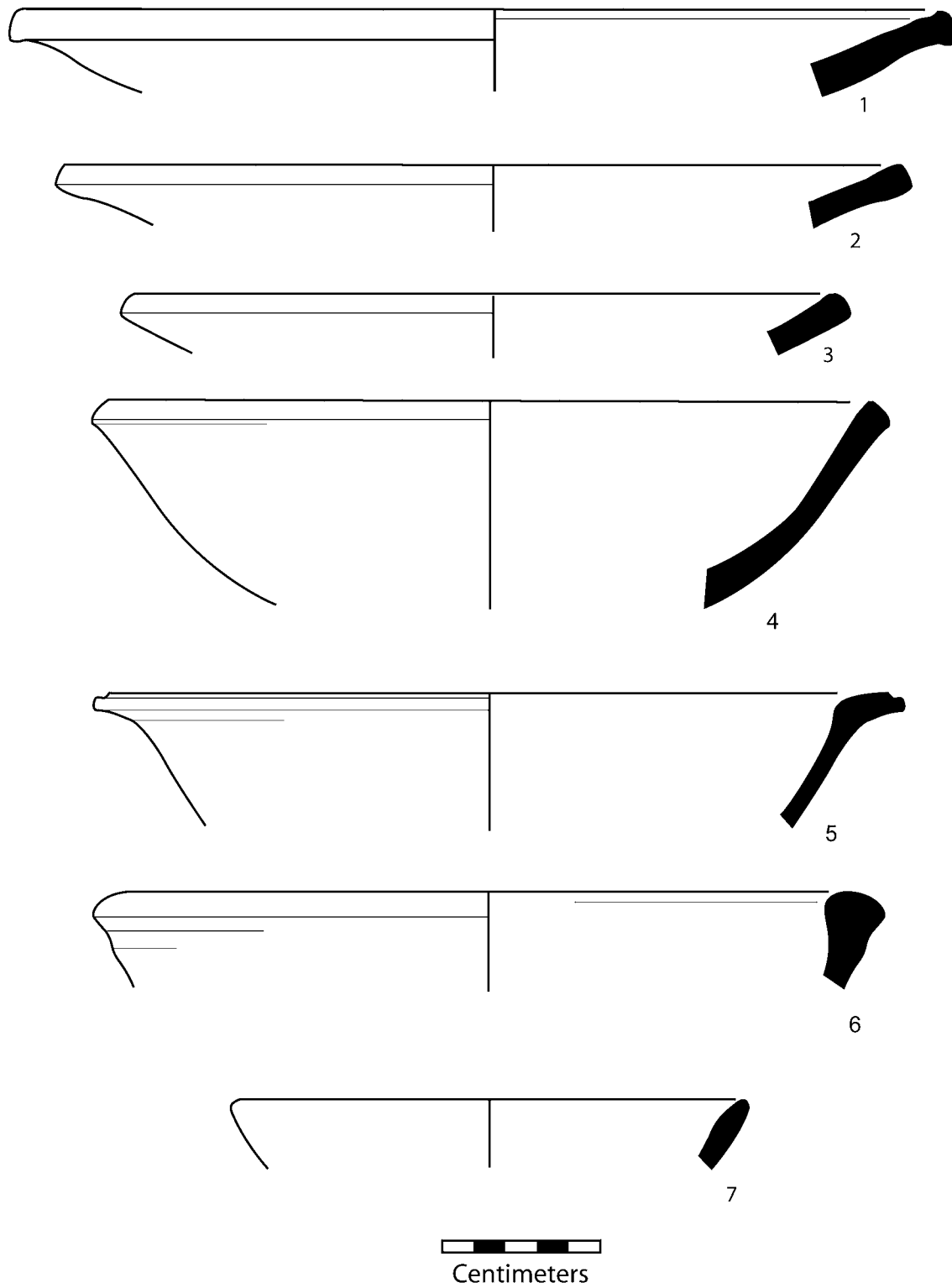


Figure A.14. Illustrative Drawings of (1-7) Red-slipped Burnished Ware (Amuq Phase O; Iron Age).  
Scales (1-6) 1:2 and (7) 1:4

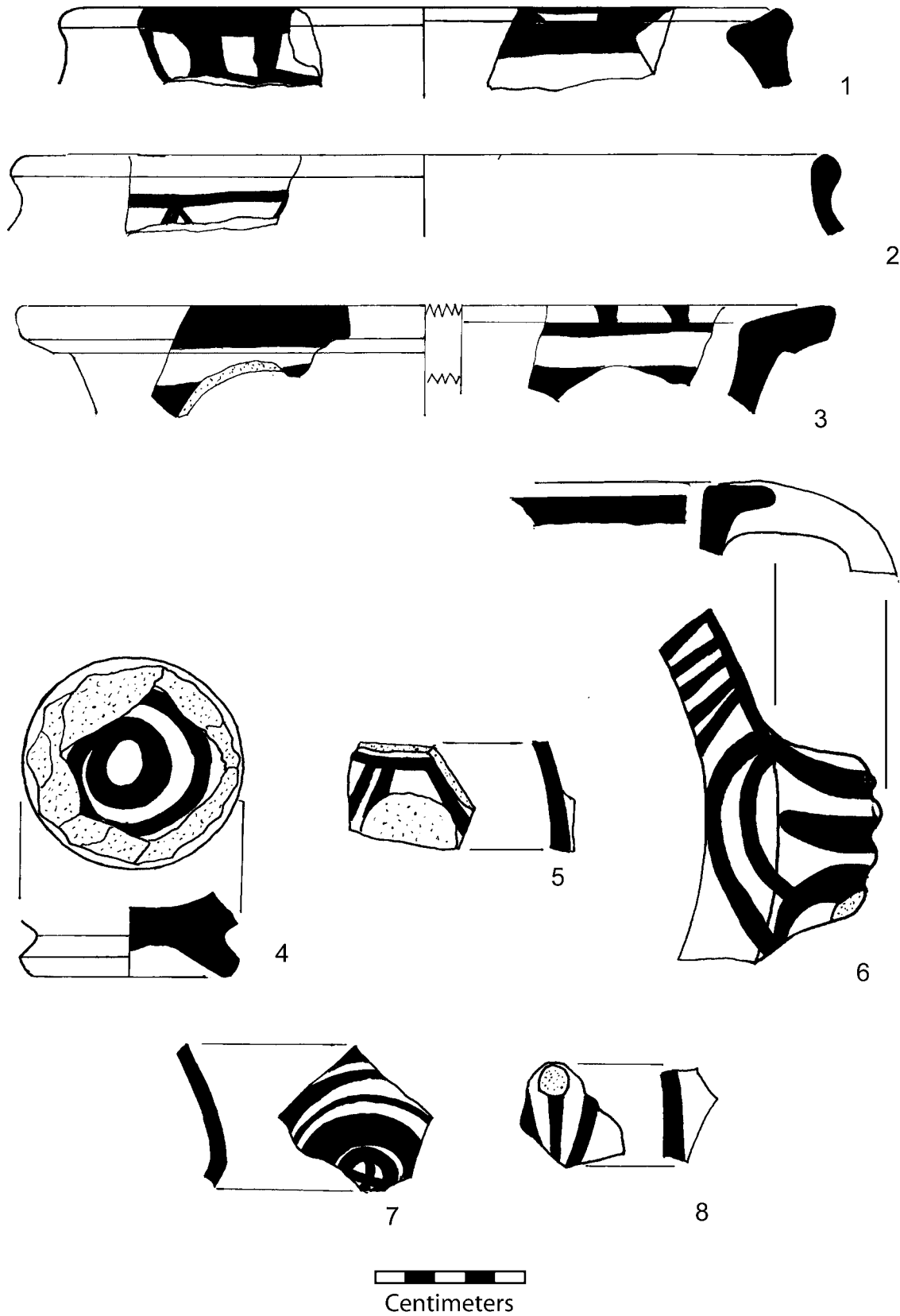


Figure A.15. Illustrative Drawings of (1-8) Painted Ware (Amuq Phase N; Early Iron Age). Scale 1:2

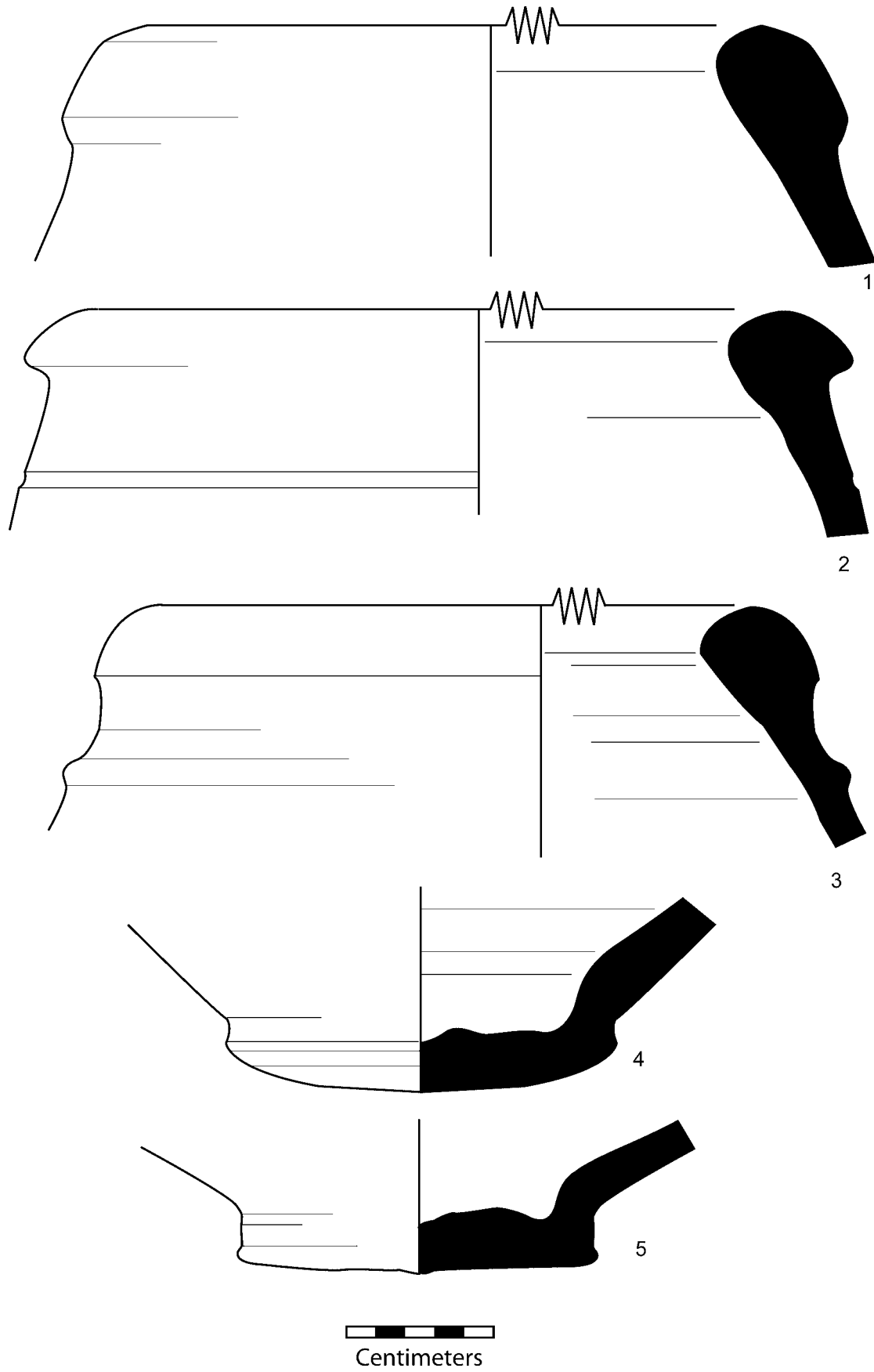


Figure A.16. Illustrative Drawings of (1-5) Pithoi (Amuq Phases N-O; Early Iron Age/Iron Age). Scale 1:2

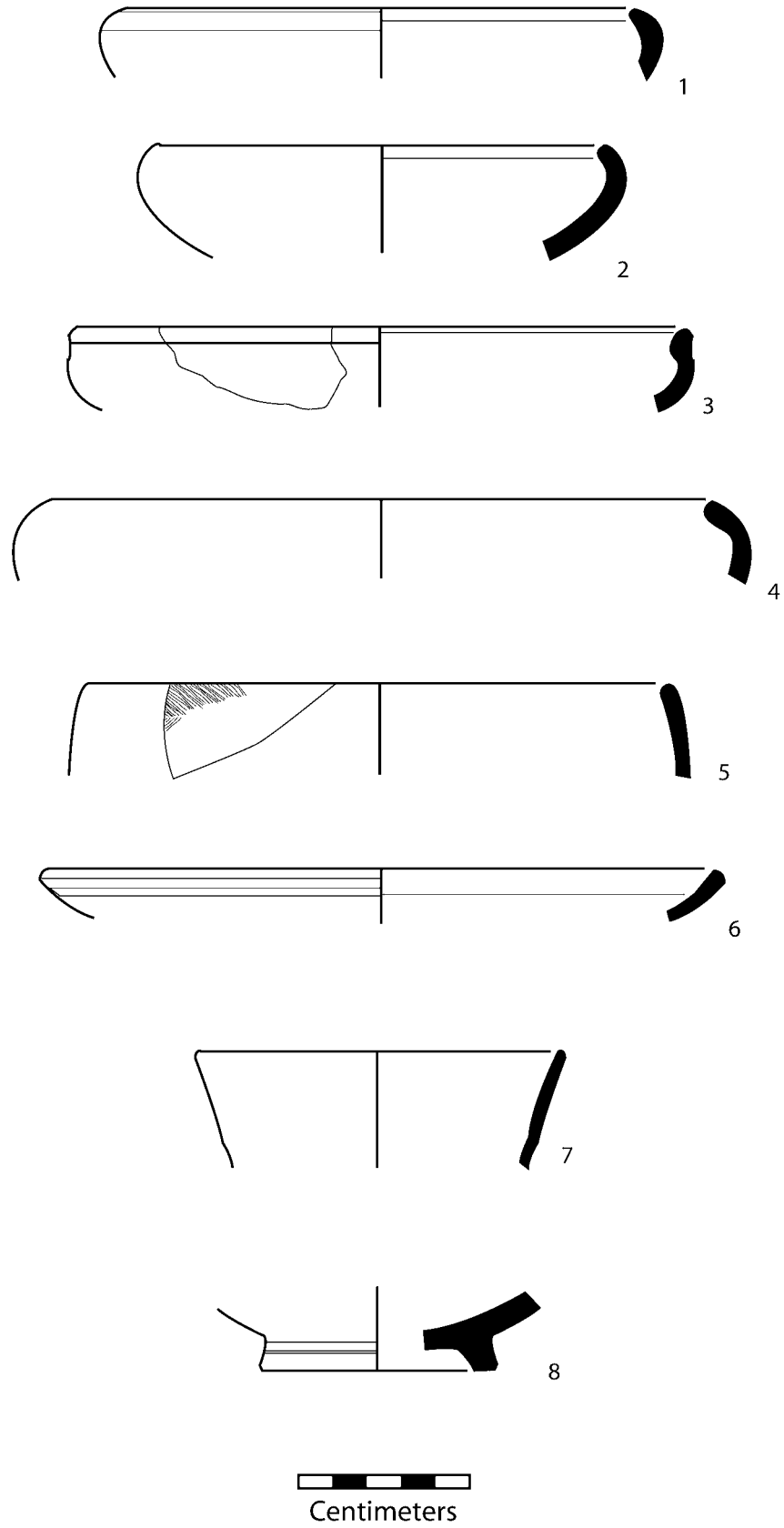
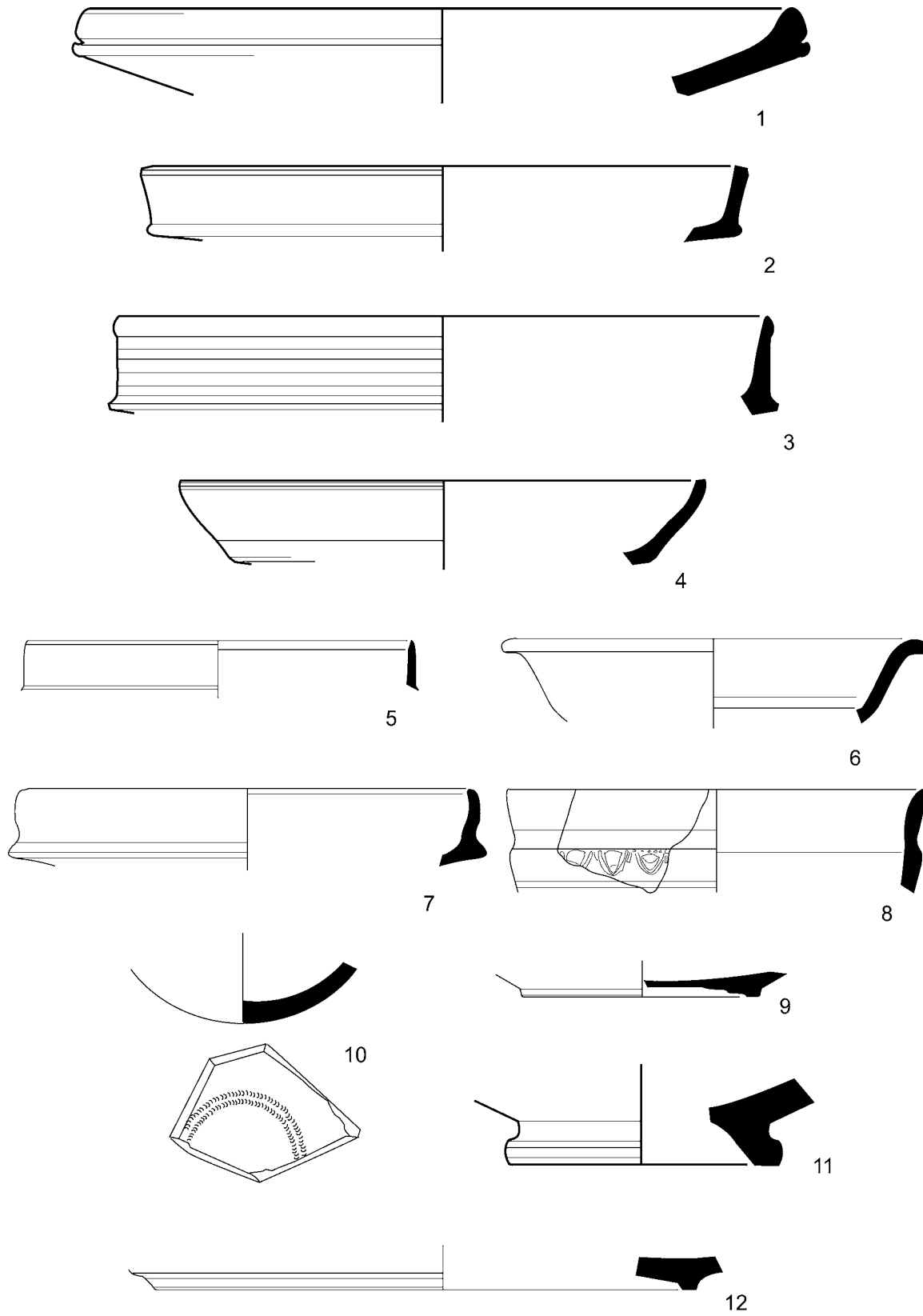


Figure A.17. Illustrative Drawings of (1–5) Black-glazed Incurved-rim Bowls (Seleucid) and (6–8) Red- or Brown-slipped Ware (Seleucid). Scale 1:2



Centimeters

Figure A.18. Illustrative Drawings of (1-12) Terra Sigillata Ware (Amuq Phase R; Roman). Scale 1:2

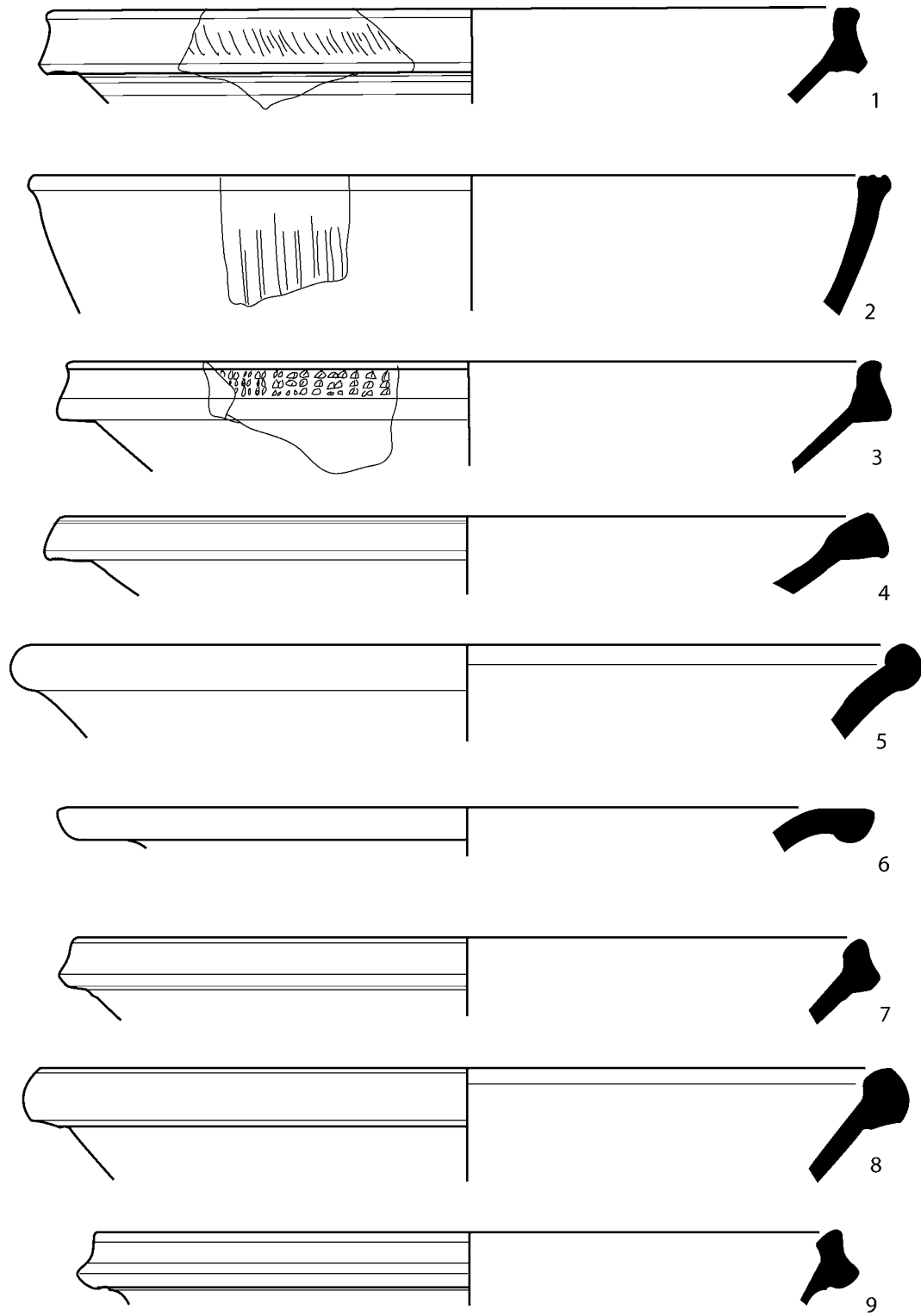


Figure A.19. Illustrative Drawings of (1-9) Red-slipped and Brown-slipped Wares (Amuq Phases S-T; Late Roman/Early Byzantine). Scale 1:2

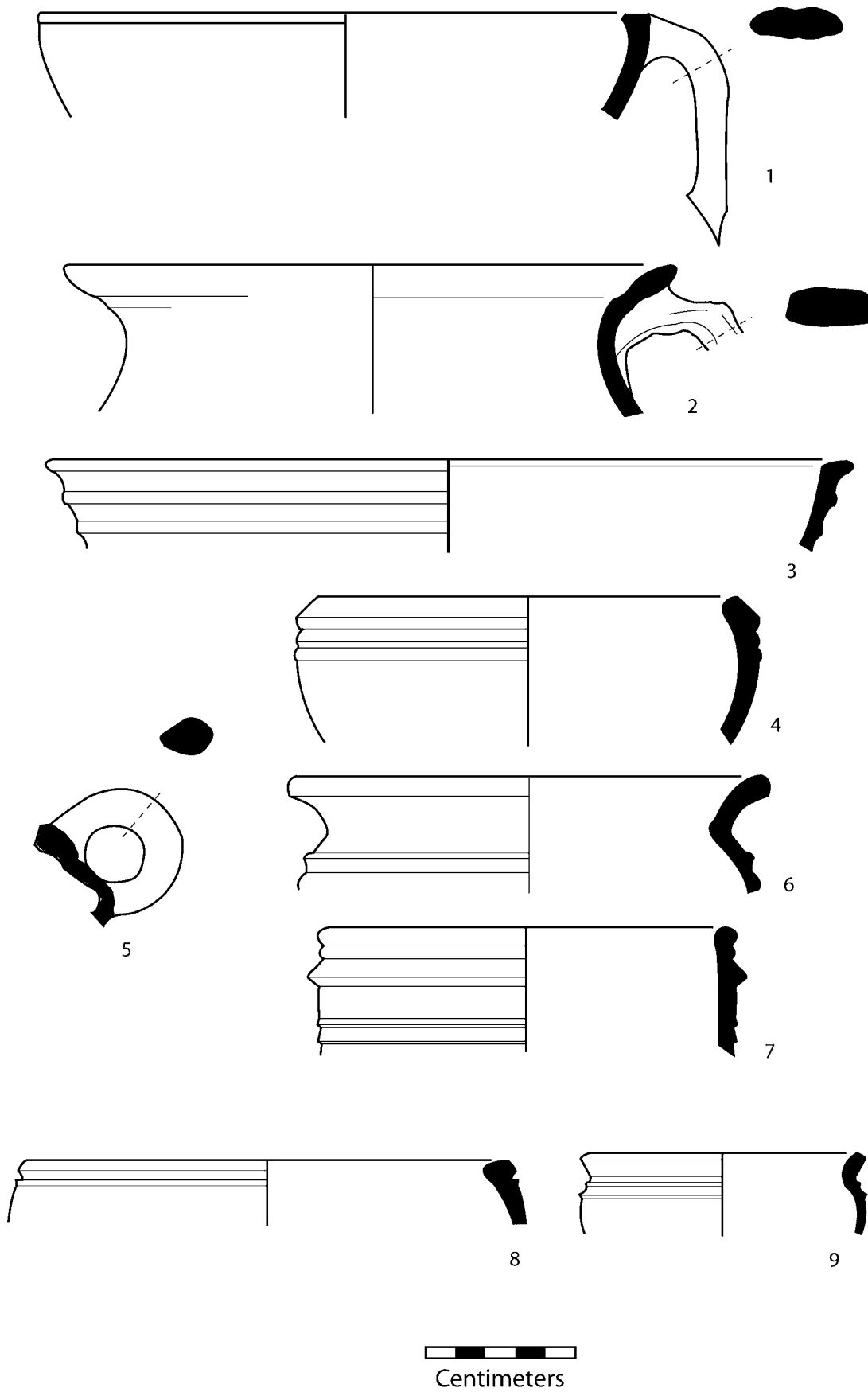


Figure A.20. Illustrative Drawings of (1–9) Brittleware (Late Antique [Late Roman/Early Islamic]). Scale 1:2



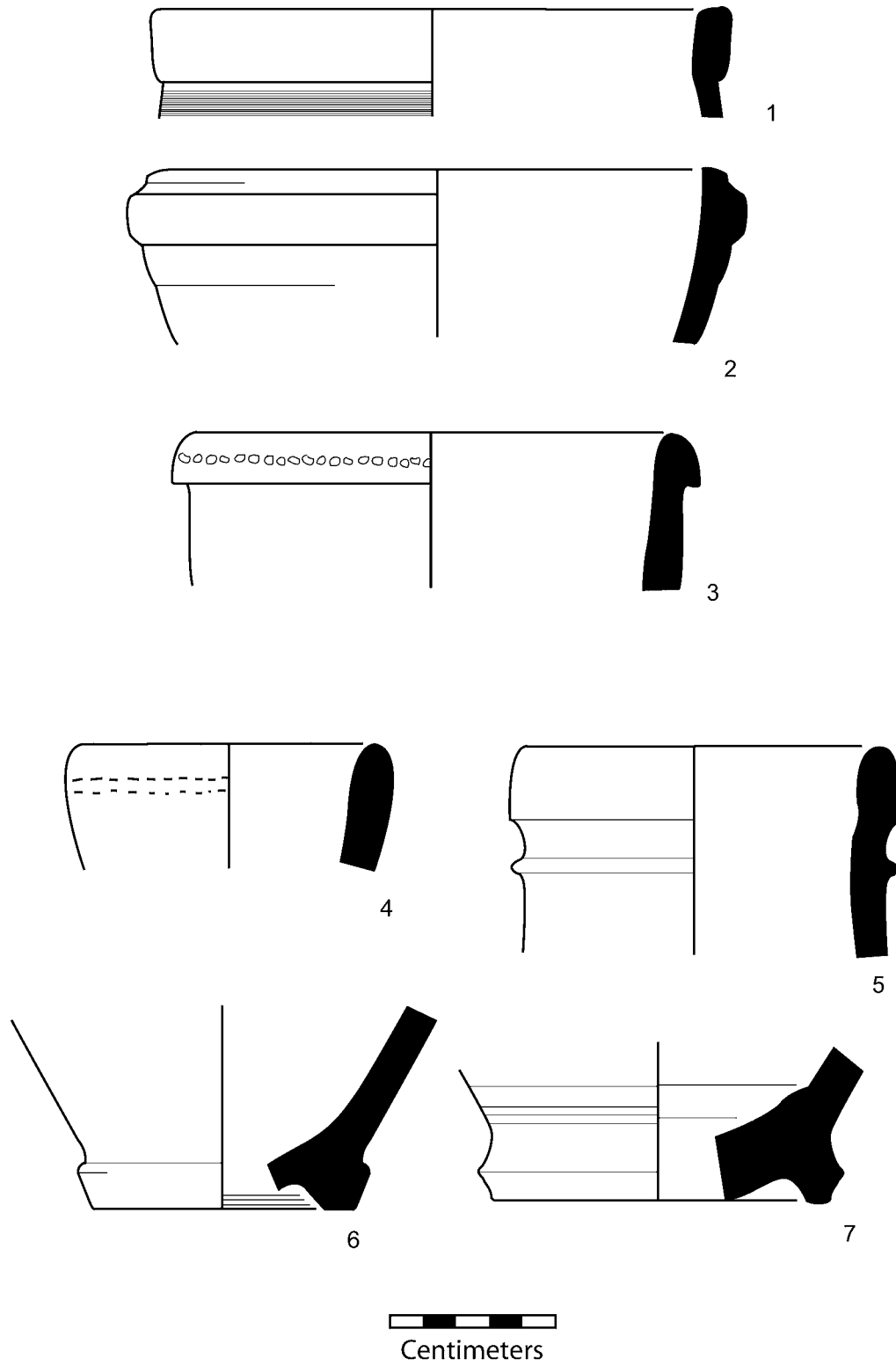


Figure A.21. Illustrative Drawings of (1-7) Buff Ware (Late Antique/Early Islamic). Scales (1) 1:4 and (2-7) 1:2

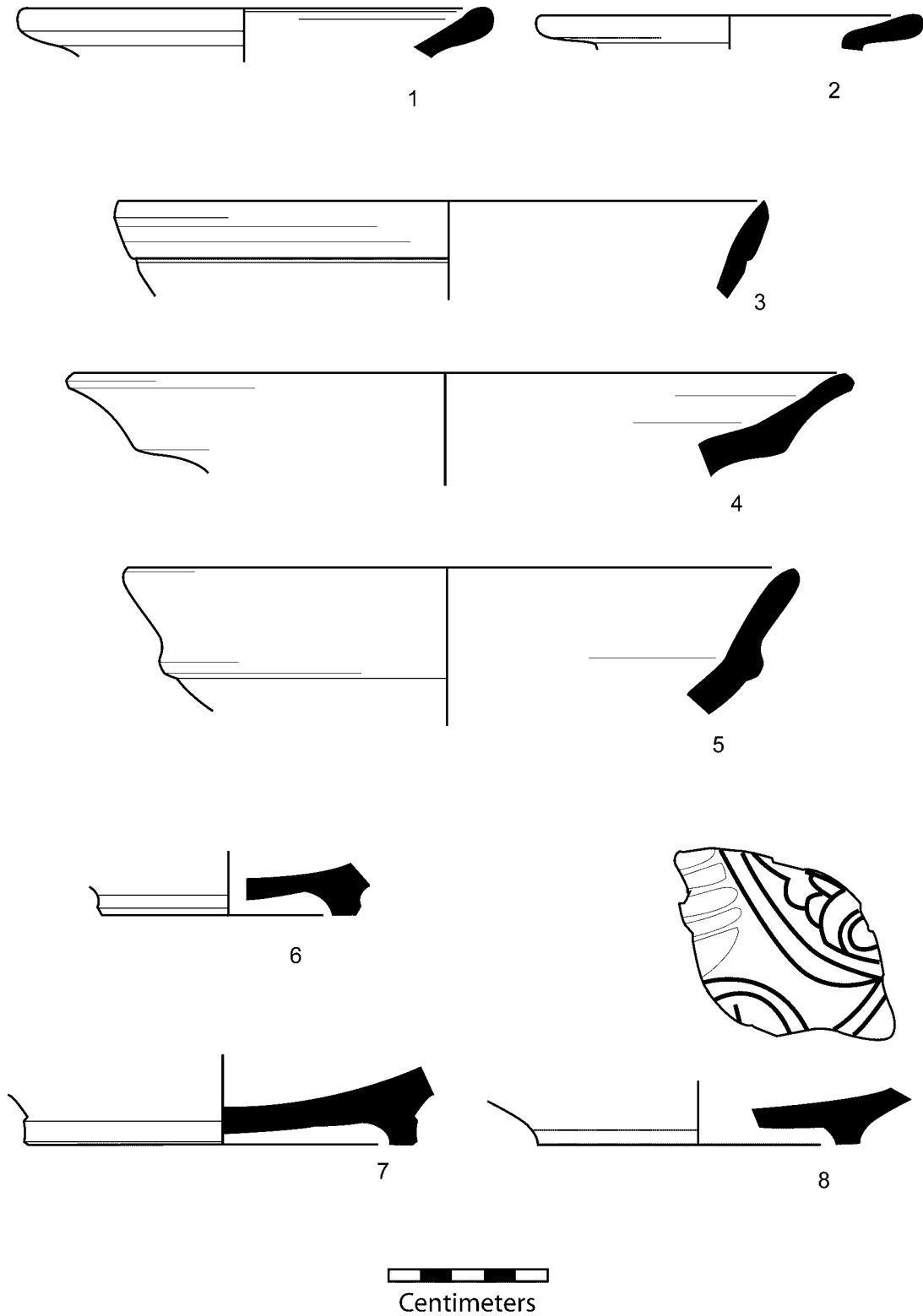


Figure A.22. Illustrative Drawings of Glazed Wares: (1, 3) Yellow and Green Slash Ware (Early Islamic), (2, 4–6) Green-glazed Ware (Early Islamic), (7) Yellow-glazed Ware (Early Islamic), and (8) Multi-colored Glazed Ware of Yellow, Green, and Blue (Early Islamic). Scale 1:2

## APPENDIX B SCARAB

ROBERT K. RITNER

<i>Date:</i>	New Kingdom
<i>Material:</i>	Bone(?), serpentine(?)
<i>Dimensions:</i>	Length 1.3 cm; width 0.9 cm
<i>Provenance:</i>	Surface find (South Slope, 3/9/98)
<i>Registration Number:</i>	AS 6.1

The base of the scarab is carved with a decorative field enclosed by an oval and bounded at the top and bottom by double horizontal lines (fig. B.1; pl. 1:H). The field is occupied by an inscription and an accompanying striding male figure, both facing to the right. Slight damage to the lateral edges of the base reaches the oval on the right and partially obscures the area above the figure's head. Although the animal head crowned by two projections is reminiscent of images identified as Seth (with snout and two erect ears) on scarabs of Thutmose III,<sup>1</sup> the text indicates that the schematically carved figure represents Amun-Re, with his customary falcon beak (or beard) and double-plumed crown.<sup>2</sup> Preceding the figure, the text reads *nb 'Imn-R* "The Lord, Amun-Re." The carving of *nb* "lord" is indistinct but secured by New Kingdom parallels from Egypt and Western Asia.<sup>3</sup> The odd writing of *R* "Re" with what appear as two circles can also be paralleled because the single stroke that should follow the sun disk is occasionally carved as two strokes, which may then be deformed to produce a small square, rectangle, or circle. Examples are again plentiful from Egypt and Western Asia, and all are attributed to the New Kingdom (Eighteenth–Twentieth Dynasty),<sup>4</sup> the likely date of this Amuq scarab as well.

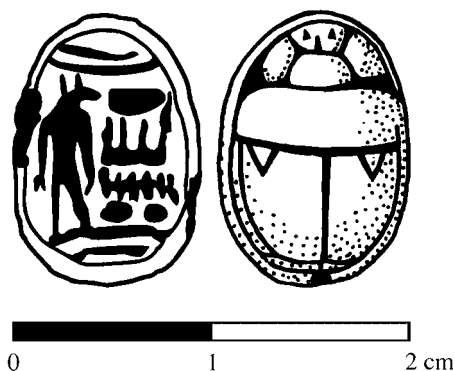


Figure B.1. Scarab AS 6.1. Courtesy of Katherine S. Burke

1. See Petrie 1889, p. 32 (BM 16632); idem 1917, pl. 27, no. 65:



2. For the characteristic head, see Beste 1978, p. 176 (labeled simply Re); and Hornung and Staehelin 1976, pp. 398 (MV 15–18, without crown) and 320 (with crown, where the falcon head is confused with the Seth head).

3. The name Amun-Re may be preceded, followed, or flanked by one or more *nb*-signs to produce variants "The Lord, Amun-Re," "Amun-Re, the Lord" or "Amun-Re, the Lord of All." For *nb* preceding, see Newberry 1907, no. 36566; Giveon 1985, pp. 38–39 (no. 47, Tell el-Far'ah, Tomb 934). For *nb* following, see *ibid.*,

pp. 48–49 (no. 74, Tell el-Far'ah, Tomb 960); and idem 1988, pp. 50–51, pl. 4 (no. 46). For flanking *nb*-signs, see Newberry 1905, pl. 29, no. 19; Ben-Tor 1989, p. 73, no. 1; Giveon 1985, pp. 52–53 (no. 90, Tell el-Far'ah, Tomb 984); and Beste 1979, pp. 84–85.

4. For comparable examples with circular forms, see Newberry 1907, nos. 36566, 36680, 36686, and 36759; Giveon 1985, pp. 48–49 (no. 74, Tell el-Far'ah, Tomb 960). For two strokes, see *ibid.*, pp. 38–39 (no. 47, Tell el-Far'ah, Tomb 934); idem 1988, pp. 50–51, pl. 4 (no. 46); Newberry 1907, nos. 36527 and 37224. For squares, see *ibid.*, nos. 36682 and 36685; and Beste 1979, pp. 84–85. For rectangles, see Newberry 1907, no. 36694; Giveon 1988, pp. 70–71 (no. 75).



## INDEX OF GEOGRAPHICAL NAMES

- Abalaklı (AS 192) — 240; fig. A.3  
 Abalaklı Höyük (AS 193) — 241; fig. A.3  
 Abdal, Tell (AS 174) — 236; fig. A.9; pl. 3:A–B  
 Abu Shair, Tell — *see* Ada Tepe  
 Acarköy (AS 12) — 206; figs. 2.16, A.3  
 Acarköy, Tell — *see* Yazı Höyük  
 Açıcana Höyük — *see* Atchana, Tell  
 Acemhöyük — 198  
 Ada Tepe (AS 26) — 209; fig. A.3  
 Aegean — 5, 10, 13, 26, 67, 73, 76, 100–02, 106, 174, 198–99 (n. 48), 230, 232, 235  
 Afis, Tell — 38, 157, 177  
 Africa — 7  
 African Rift Valley — 2  
 Afrin River — 28, 31, 33, 36, 45–46, 173 (n. 39), 236, 253; figs. 2.4, 2.11  
 Afrinhan — fig. 7.1  
 Ahmet Şahbaz Çiftliği (AS 231) — 249; fig. A.8  
 Ain al-Kerkh, Tell — 35–36  
 Ain al-Samah — *see* Balama  
 ʿAin Dara, Tell (AS 62) — 7, 173, 177, 200  
 Akgöl Çiftlik (AS 220) — 246; fig. A.8  
 Akgöl Çiftlik — *see* Çolaktepe  
 Akkuyu — *see* Çingillihoğlu Höyük  
 Akpınar Höyük (AS 52) — 214; figs. 2.16, A.6  
 Akrad, Tell (AS 137) — 230; fig. A.8  
 Alalakh — 1, 3–7, 10, 12–13 (n.14), 15, 26, 32, 73, 99–107, 109–13, 145, 178, 197–200, 202; table 5.1, figs. 4.1–34, 5.1–3, 6.1–5, 6.7–9; pl. 1:F; *see also* Atchana, Tell  
 Aleppo (*ancient* Yamhad) — 6, 40, 101, 113, 197; fig. 2.4  
 Alexandretta — *see* Iskenderun  
 Algana, Tell (AS 131) — 228, figs. 2.21, A.9  
 Ali Bey Höyük (AS 20) — 208; figs. A.2, A.5  
 Altınöz — 7  
 Altın Tepe — *see* Dhahab, Tell  
 Amanus Mountains — 2, 4, 6–8, 10, 12, 27–29, 31, 33, 35–36, 41–42, 44, 68, 194–95, 201, 251, 255–58; figs. 1.1, 1.3, 2.1, 2.4; pl. 6:C  
 Amik Gölü — *see* Lake of Antioch  
 Amik Ovası — *see* Amuq Valley  
 Amuq Basin — 34  
 Amuq Valley — *passim*  
 Anatolia — 2–3, 5–7, 10–11, 13, 16, 99, 101, 106–08, 110–11, 113, 178, 195, 197–98  
 Anbar, Tell — *see* Mirmiran, Tell  
 Ankara — 7–8, 14, 16, 175 (nn. 40–41), 178  
 ʿAnbar, Tell (AS 77) — 216; fig. A.8  
 Annepli — *see* Anneplihöyük  
 Anneplihöyük (AS 216) — 245  
 Ansariye Mountains, al- — 68  
 Antakya — 1, 2, 7–10, 15–16, 32–33, 36, 42–43, 67, 103–104 (n. 28), 174–76, 178, 198, 201–02, 231, 240, 247, 254, 256; figs. 1.10, 2.24, 7.1; pl. 6C; *see also* Antioch  
 Antepli — *see* Anneplihöyük  
 Antioch — 1–4, 6, 10, 15–16, 32, 40–46, 67–70, 74, 76, 193–94, 200–01, 240; figs. 2.1, 2.22–24. 2.31; pls. 6:C  
 Antioch, Lake of — 2, 11, 25, 28, 31, 33–34, 46, 238; fig. 2.1  
 Apamea — 74  
 Aqra, Jebel al- (Kel Dağı Mountain [*Turkish*], Huzzi/Hazzi Mountain [*Hittite*], Mount Kasios [*Greek*]) — 27, 29, 31, 35, 38, 41, 42, 44, 46, 68–69, 194, 257; figs. 2.1, 2.8, 2.23  
 Arpachiyah — pl. 1:E  
 Arpalı (AS 8) — 29–31, 205; figs. 2.4, A.2  
 Arslanlı Bel — 2  
 Arsuz — *see* Rhossos  
 AS 2 — *see* Boklukaya  
 AS 3 — *see* Kiritli Höyük  
 AS 4 — *see* Bozhöyük  
 AS 5 — *see* Güzelce  
 AS 6 — *see* Yassiyurt  
 AS 7 — *see* Yusufllu  
 AS 8 — *see* Arpalı  
 AS 9 — *see* Dana Höyük  
 AS 10 — *see* Balama  
 AS 11 — *see* Paşaköy  
 AS 12 — *see* Acarköy  
 AS 13 — *see* Çatal Tepe

- AS 14 — *see* İlkpınar Höyük  
AS 15 — *see* Koyuncu Höyük  
AS 16A — *see* Çataltepe  
AS 17 — *see* Soğuksu Höyük  
AS 18 — *see* Güzel Höyük  
AS 19 — *see* Karadurmuşlu, Tell  
AS 20 — *see* Ali Bey Höyük  
AS 21 — *see* Torun Anablı, Tell  
AS 22 — *see* Çolaktepe  
AS 23 — *see* Çiloğlan  
AS 24 — *see* Çiloğlan Iskân  
AS 25 — *see* Murat Paşa  
AS 26 — *see* Ada Tepe  
AS 27 — *see* Kırkhız Pınar  
AS 28 — *see* Malta, Tell  
AS 29 — *see* Esen Tepe  
AS 30 — *see* Tabarat Kızılkaya  
AS 31 — *see* Wafse, Tell  
AS 32 — *see* Sultan, Tell  
AS 33 — *see* Firka, Tell  
AS 35 — *see* Baldıran  
AS 36 — *see* Kızılkaya, Tell (Gavurköy)  
AS 36D — *see* Kızılkaya, Tell  
AS 37 — *see* Yanık Tepe  
AS 38 — *see* Cincik Tepesi  
AS 40 — *see* Baytarlı, Tell  
AS 41 — *see* Kiremitlik  
AS 42 — *see* Çingilloğlu Höyük  
AS 44 — *see* Tabarat Hacı Hasan  
AS 45 — *see* Killik Tepe (Tabarat ʾArab Ahmad)  
AS 46 — *see* Gökçeoğlu  
AS 50 — *see* Killik Tepe (Büyük Tepe)  
AS 51 — *see* Killik Tepe  
AS 52 — *see* Akpınar Höyük  
AS 54 — *see* Yeni Yapane  
AS 55 — *see* Kurcoğlu, Tell  
AS 73 — *see* Çamurlu  
AS 74 — *see* Mut Höyük  
AS 75 — *see* Keçebey, Tell  
AS 76 — *see* Mısır, Tell  
AS 77 — *see* ʾAnbar, Tell  
AS 80 — *see* Rasm, Tell al-  
AS 81 — *see* Yeşilova  
AS 84 — *see* Uzunarab, Tell  
AS 85 — *see* Mudanbo, Tell  
AS 86 — *see* Karatepe  
AS 87 — *see* Hardallı Tepe  
AS 88 — *see* Körtepe  
AS 89 — *see* Boztepe  
AS 91 — *see* Paşa Höyük  
AS 92 — *see* Karacanic  
AS 93 — *see* Hasanuşağı  
AS 94 — *see* Kurdu, Tell  
AS 95 — *see* Karahöyük  
AS 96 — *see* Tarfah Höyük  
AS 99 — *see* Hasanuşağı, Tell  
AS 100 — *see* Ömercedit / ʿImar al-Jadid al-Gharbi  
AS 101 — *see* ʿImar al-Jadid al-Sharqi  
AS 102 — *see* Baştepe  
AS 103 — *see* Tabarat Mastep  
AS 104 — *see* Terzi, Tell al-  
AS 105 — *see* Tutlu Höyük  
AS 106 — *see* Harab Ali Höyük  
AS 107 — *see* Hürriyet Tepe  
AS 108 — *see* Üçtepe  
AS 109 — *see* İbrahimiyyah, Tell  
AS 110 — *see* Far, Tell al-  
AS 111 — *see* Tallat  
AS 112 — *see* Çolaktepe  
AS 113 — *see* Çakal Tepe  
AS 114 — *see* Küçük Avara  
AS 115 — *see* Tabarat Büyük Avara  
AS 116 — *see* Büyük Avara  
AS 117 — *see* Karataş, Tell  
AS 119 — *see* Kokaz  
AS 120 — *see* Mirmiran, Tell  
AS 122 — *see* Horlak Atika  
AS 123 — *see* Siçanlı  
AS 124 — *see* Keleş, Tell  
AS 125 — *see* Saçaklı  
AS 126 — *see* Taʿyinat, Tell  
AS 127 — *see* Taʿyinat al-Saghir, Tell  
AS 128A — *see* Tulul Salihyyah al-Saghir  
AS 128B — *see* Tulul Salihyyah al-Saghir (N)  
AS 129 — *see* Salihyyah, Tell  
AS 130 — *see* Tabarat Algana  
AS 131 — *see* Algana, Tell  
AS 132 — *see* Tabarat Jalil

- AS 133 — *see* Bahlulah, Tell  
 AS 134 — *see* Halak Tepe  
 AS 135 — *see* Tulail al-Sharqi  
 AS 136 — *see* Atchana, Tell  
 AS 137 — *see* Akrad, Tell  
 AS 138 — *see* Saluq, Tell  
 AS 139 — *see* Götübüyük Höyük  
 AS 140 — fig. 2.21  
 AS 142 — fig. 2.21  
 AS 143 — *see* Beşarslan  
 AS 144 — *see* Bohşin  
 AS 147 — *see* Selam, Tell  
 AS 150 — *see* Saye, Tell  
 AS 151 — *see* Karataş  
 AS 152 — *see* Ayrancı Doğu  
 AS 156 — *see* Mastepe, Tell  
 AS 157 — *see* Ayrancı  
 AS 158 — *see* Yazı Höyük  
 AS 159 — *see* Zoba Höyük  
 AS 161 — *see* Kokarkuyu  
 AS 162 — *see* Dağlağan  
 AS 163 — *see* Müşrefe, Tell  
 AS 164 — *see* Davutpaşa, Tell  
 AS 165 — *see* Ghazi Haji Mursal, Tell  
 AS 166 — *see* Putoğlu  
 AS 167 — *see* Chatal Höyük  
 AS 168 — *see* Karaca Kirbet ‘Ali  
 AS 169 — *see* Qinanah, Tell  
 AS 170 — *see* Gazi Tayfur Çiftlik  
 AS 171 — *see* Khirbet al-Tahoun  
 AS 172 — *see* Qirmidah, Tell  
 AS 173 — *see* Ermeneia, Tell  
 AS 174 — *see* Abdal, Tell  
 AS 176 — *see* Judaidah, Tell al-  
 AS 177 — *see* Dhahab, Tell  
 AS 178 — *see* Hasan Bellu Höyük  
 AS 179 — *see* Baytarlı  
 AS 180 — *see* Hajar, Tell  
 AS 181 — 30–31, 33–34, 238; figs. 2.4, A.5, A.8  
 AS 182 — *see* Tabarat al-Akrad  
 AS 183 — *see* Ingeban  
 AS 184 — *see* Gökçeoğlu  
 AS 185 — *see* Muharrem  
 AS 186 — *see* Kemalaga Çiftliği  
 AS 187 — *see* Hisarlık Tepesi  
 AS 188 — *see* Domuz Höyük  
 AS 189 — *see* Tınç Höyük  
 AS 190 — *see* Kiritli  
 AS 191 — *see* Boklu Tepe  
 AS 192 — *see* Abalaklı  
 AS 193 — *see* Abalaklı Höyük  
 AS 194 — *see* Çağıl Tepe  
 AS 195 — *see* Atçı Tepe  
 AS 196 — *see* Gölbaşı Höyük  
 AS 197 — 241–42; figs. A.7–8  
 AS 198 — 242; figs. A.5–6  
 AS 199 — 242; fig. A.9  
 AS 200 — Dutlu Höyük  
 AS 201 — 242; fig. A.9  
 AS 202 — *see* Khirbet al-Tahoun  
 AS 203 — *see* Tabarat Jaffar  
 AS 204 — *see* Harranköy  
 AS 205 — *see* Cudeidah  
 AS 206 — *see* Kastal Çiftliği  
 AS 207 — *see* Kızılkaya Tepesi  
 AS 208 — *see* Temel Kızılkaya  
 AS 209 — *see* Kızılkaya: Reşaoğulları Çiftlik  
 AS 210 — *see* Aygiroğlu  
 AS 211 — *see* Göktepe  
 AS 213 — *see* Höyük Tepe  
 AS 214 — *see* Eskideğirmen Tepe  
 AS 215 — *see* Sekizevler  
 AS 216 — *see* Anneplihöyük  
 AS 217 — 246; fig. A.9  
 AS 218 — *see* Küçük Avara  
 AS 219 — *see* Çakal Tepe  
 AS 220 — *see* Akgöl Çiftlik  
 AS 221 — *see* Wuzwuz, Tell  
 AS 222 — *see* Konut Köy / Vesvese Köyü  
 AS 223 — *see* Su Tepe  
 AS 224 — *see* Kocakışla  
 AS 226 — *see* Yıldızlı  
 AS 227 — *see* Habeş, Tell  
 AS 228 — *see* Eski Mezarlık  
 AS 229 — *see* Doğan Çırçır Fabrikası  
 AS 230 — *see* Mağaranın Kilisesi  
 AS 231 — *see* Ahmet Şahbaz Çiftliği  
 AS 233 — *see* Küçük Haji Aslı Köy

- AS 234 — *see* Uluca-Tarlası  
 AS 235 — *see* Uluca East  
 AS 236 — *see* Uluca North  
 AS 237 — *see* Zeytin Altı  
 AS 238 — *see* Serinyol Kale  
 AS 239 — *see* Serinyol Kale Çiftlik  
 AS 240 — *see* Khirbet Alahan  
 AS 241 — 250; fig. A.4  
 AS 242 — 250; fig. A.4  
 AS 243 — 250; fig. A.4  
 AS 244 — 251; fig. A.5  
 AS 245 — 251; fig. A.5  
 AS 246 — *see* Çakallı Karakol  
 AS 247 — *see* Bakras Kalesi  
 AS 248 — *see* Bakras Khan  
 AS 249 — 252; fig. A.8  
 AS 250 — 252; fig. A.8  
 AS 251 — 252; fig. A.8  
 AS 254 — 252; fig. A.6  
 AS 255 — *see* Atçitepe  
 AS 256 — 253; fig. A.5  
 AS 257 — 253; fig. A.5  
 AS 271 — 253; fig. A.8  
 AS 272 — *see* Ceylanlı Kale  
 AS 273 — 254; fig. A.2  
 AS 287 — *see* Ceylanlı (Gündüzlü)  
 AS 288 — *see* Telhöyük Tepe  
 AS 289 — *see* Tofaş Tepe  
 AS 290 — 255; pls. 1:D, 3:C  
 AS 292 — 255  
 AS 297 — *see* Demir Köprü  
 AS 325 — 255; fig. A.5  
 AS 326 — 255; fig. A.5  
 AS 327 — 255; fig. A.5  
 AS 328 — 256; fig. A.5  
 AS 329 — 256; fig. A.5  
 AS 331 — 256; fig. A.5  
 AS 333 — 256; fig. A.8  
 AS 335 — *see* Dalyan Höyük  
 AS 336 — fig. 2.22  
 AS 341 — 257; fig. A.2  
 AS 342 — 257; fig. A.2  
 AS 343 — 257; fig. A.2  
 AS 344 — 257; fig. A.8; pl. 7:A  
 AS 345 — *see* Yenişehir  
 AS 346 — *see* Beyazid-i Bestami  
 AS 354 — pl. 6:A  
 Asgündür — *see* Sekizevler  
 Asia — 5, 7, 13, 16, 67–68, 195, 281  
 Asi Nehri — *see* Orontes River  
 Asir, Tell — *see* Saye, Tell  
 Assyria — 16, 173  
 Atchana, Tell (AS 136) — 1, 3–10, 12–16, 26, 29–31, 34, 37–41, 46, 76, 99–101, 103–04 (nn. 28, 29), 105, 113, 145, 149, 153 (n. 32), 154, 155 (n. 34), 156–59, 178, 193–94, 196–98, 200, 202, 230, 243; figs. 1.6, 1.10, 2.1, 2.3–4, 2.16, 2.23a, 4.1–34, 5.1–3, 6.1–9, 7.1; pls. 2:C, G, 3:G, 8  
 Atchana drain — 29–31, 158–59, 243; figs. 2.4, 6.5, 6.6  
 Atçı Tepe (AS 195) — 241; fig. A.3  
 Atçitepe (AS 255) — 253; fig. A.6  
 Aygıroğlu (AS 210) — 244; fig. A.3  
 Ayrancı (AS 157) — 232; fig. A.6  
 Ayrancı Şarki — *see* Ayrancı Doğu  
 Ayrancı Doğu (AS 152) — 232; fig. A.6  
 Babylon — 6, 102, 197  
 Bağras Kalesi — *see* Bakras Kalesi  
 Bahlılah, Tell (AS 133) — 229; figs. 2.21, A.9  
 Bakhshin — *see* Bohşin  
 Bakras — 42  
 Bakras Kalesi (AS 247) — 33, 251; pl. 1:D  
 Bakras Khan (AS 248) — 252; figs. 2.22, A.5  
 Bakras Valley — 255–56  
 Balama (AS 10) — 205; fig. A.5  
 Balderan — *see* Baldıran  
 Baldıran (AS 35) — 212; fig. A.6  
 Balikh Valley — 36, 40  
 Balikh River — fig. 2.4  
 Barutlu Cave — 70  
 Baş Köy — *see* Baştepe  
 Baş Pınar — *see* Kırkhız Pınar  
 Baştepe (AS 102) — 221; fig. A.6  
 Batı Ayrancı — *see* Ayrancı  
 Baytarlı (AS 179) — 237, 253; fig. A.5  
 Baytarlı, Tell (AS 40) — 213; fig. A.5  
 Belen — *see* Beylan Pass  
 Berraktepe (OS 34) — 72; figs. 3.2, 3.9  
 Beşarslan (AS 143) — 231; figs. 2.21, A.9



- Beyazid-i Bestami (AS 346, ancient Darbasak) — 258; fig. A.2
- Beylan Pass — 36, 39, 251, 256
- Bingöl — 195
- Bohşin (AS 144) — 231, 254; fig. A.8
- Bokluca — *see* Baldıran
- Boklukaya (AS 2) — 203
- Boklu Tepe (AS 191) — 240; fig. A.3
- Boğazköy — *see* Hattuşa
- Bozhöyük (AS 4) — 204; fig. A.3
- Bozhöyük — *see* Uzunarab, Tell
- Boztepe (AS 89) — 218; fig. A.5
- Bulgaria — 197
- Büyük Avara (AS 116) — 225, 246; fig. A.9
- Büyük Ayrancı — *see* Ayrancı
- Büyük Tepe — *see* Killik Tepe (AS 50)
- Buqa — 45
- Cafer — *see* Tabarat Jaffar
- Çağıl Tepe (AS 194) — 241; fig. A.3
- Çakallı Karakol (AS 246) — 11, 36, 39, 251, 256; figs. 2.15, A.5; pl. 1:D
- Çakal Tepe (AS 113) — 31, 35–37, 224, 246, 256; fig. A.8
- Çakal Tepe (East) (AS 219) — 246; figs. A.8–9
- Çamurlıye, Tell — *see* Çamurlu
- Çamurlu (AS 73) — 215; fig. A.7
- Canaan — 16, 70
- Carchemish — 102, 157, 177
- Çatalhöyük (Konya) — 195
- Çataltepe (AS 16A) — 207; fig. A.3
- Çatal Tepe (AS 13) — 206; fig. A.3
- Caucasus — 2, 196
- Çayönü — 12
- Çevlik — 68; figs. 3.2, 3.3a, 3.4, 3.9, 3.13
- Ceylanlı (Gündüzlü) (AS 287) — 33, 42–44, 254, 257; figs. 2.1, 2.22, 2.25, A.2
- Ceylanlı Kale (AS 272) — 253; figs. 2.26, A.2
- Ceylanlı Valley — 43, 254
- Chatal Höyük (AS 167) — 3, 5, 8–10, 14, 26, 39–41, 113, 154, 172–73 (n. 39), 198–200, 235; figs. 2.16, A.9
- Cilicia — 2–3, 11, 16, 112, 156, 178, 196–97, 199 (n. 48), 200, 251; pl. 4B
- Cilician Plain — 197
- Çiloğlan (AS 23) — 209; fig. A.3
- Çiloğlan Iskân (AS 24) — 209; fig. A.3
- Cincik Tepesi (AS 38) — 212; fig. A.5
- Çingilliöğlü Höyük (AS 42) — 213; fig. A.6
- Çolaktepe (AS 22) — 208; figs. A.2–3
- Çolaktepe (AS 112) — 224; fig. A.8
- Crete — 5, 201
- Cudeidah (AS 205) — 243; fig. A.9
- Çukurova — *see* Cilicia
- Çukur — *see* Tabarat Büyük Avara
- Cyprus — 6, 13, 67, 68, 76, 103, 199 (n. 48), 201
- Daba‘a, al- — 106
- Dağılğan — *see* Dağlağan
- Dağlağan (AS 162) — 234; fig. A.6
- Dalyan Höyük (AS 335) — 256; fig. A.7
- Damalka al-Qibli, Tell — *see* Yeşilova
- Dan — 106
- Dana Höyük (AS 9) — 205; fig. A.5
- Daphne (modern Harbiye) — 43, 194
- Darbasak — *see* Beyazid-i Bestami
- Darb es-Sak — *see* Beyazid-i Bestami
- Darbsac — *see* Beyazid-i Bestami
- Daud Paşa — *see* Davutpaşa, Tell
- Davutpaşa, Tell (AS 164) — 234; fig. A.6
- Degirmendere Stream — fig. 3.17
- Degirmentepe — pl. 1:D
- Demir Köprü (AS 297, ancient Gephyra) — 42, 171, 255; figs. 7.1, A.8
- Dhahab, Tell (AS 177) — 5, 11–12, 15, 26, 35, 194 (n. 44), 197, 237; figs. 2.12, A.9
- Dibsi Faraj — fig. 2.4
- Doğan Çırcır Fabrikası (AS 229) — 248; fig. A.8
- Döşhasan — *see* Wasfe, Tell
- Domuz Höyük (AS 188) — 240; A.3
- Domuztepe — 11
- Dutlu Höyük (AS 200) — 31, 36, 194, 242, 255; fig. A.8
- Ebla — 3–4, 7, 99, 106, 111, 178, 198; pl. 2:C
- Egypt — 2–3, 6, 13, 16, 67, 74, 102, 195, 199–200, 281
- Emar — 110–11
- Ephesus — 6
- Ermeneia, Tell (AS 173) — 236; fig. A.9; pl. 2:E
- Esen Tepe (AS 29) — 210; figs. 2.16, A.5–6
- Eski Afrin River — fig. 2.4
- Eskideğirmen Tepe (AS 214) — 245; fig. A.3
- Eski Enek (AS 319) — 44 (n. 20)
- Eski Mezarlık (AS 228) — 248; fig. A.8
- Euphrates River — 2, 7–8, 35, 40, 195–96; fig. 2.4

- Eurasia — 7
- Far, Tell al- (AS 110) — 223; fig. A.8
- Firgah, Tell — *see* Firka, Tell
- Firka, Tell (AS 33) — 211; fig. A.6
- Firqah, Tell — *see* Firka, Tell
- Gavurköy — *see* Kızılkaya, Tell
- Gaziantep — 108
- Gazi Tayfur Çiftlik (AS 170) — 235; fig. A.9
- Gedikli Höyük — 7
- Gephyra — *see* Demir Köprü
- Ghab Plain — 34
- Ghab Valley — 34–35, 45, 157
- Ghazi, Tell — *see* Gazi Tayfur Çiftlik
- Ghazi Haji Mursal, Tell (AS 165) — 234; fig. A.9
- Gökçeoğlu (AS 46) — 214; fig. A.6
- Gökçeoğlu (AS 184) — 239; fig. A.6
- Gökçölu — *see* Gökçeoğlu
- Göktepe (AS 211) — 245; fig. A.3
- Göktepe — *see* Kokaz
- Gölbaşı, Lake — 10–11, 33
- Gölbaşı Höyük (AS 196) — 241; fig. A.3
- Göltepe — 8–9, 201
- Götübüyük Höyük (AS 139) — 230; figs. 2.21, A.8–9
- GPS 61 — 30, 33; fig. 2.4
- GPS 71 — 30, 33; fig. 2.4
- Gritille — 35
- Gündüzlü — *see* Ceylanlı (AS 287)
- Güzelce (AS 5) — 204; fig. A.2
- Güzel Höyük (AS 18) — 207; fig. A.5
- Habeş, Tell (AS 227) — 30–31, 33, 35, 40, 43, 248; figs. 2.4, A.7
- Habish, Tell — *see* Çakal Tepe
- Hacılar — fig. 7.1
- Hadidi, Tell — 102
- Hâkhor — *see* Ilıkpınar Höyük
- Halak Tepe (AS 134) — 229; fig. A.8
- Halaq — *see* Halak Tepe
- Halawa — 110
- Halılağa Höyük — *see* Acarköy
- Hamda, Tell — *see* Beşarslan
- Hammam al-Gharb, Tell — *see* Ilıkpınar Höyük
- Hammam al-Turkman — 12, 110
- Hanımın Çiftliği — *see* Dağlağan
- Han Karamurt — *see* Bakras Khan
- Harab Ali Höyük (AS 106) — 222; fig. A.9
- Hardallı Tepe (AS 87) — 218; figs. 2.4, A.5
- Harranköy (AS 204) — 243; fig. A.9
- Hasan Bellu Höyük (AS 178) — 237; fig. A.6
- Hasanuşağı (AS 93) — 36, 219; figs. 2.15, A.5
- Hasanuşağı, Tell (AS 99) — 3, 31, 38, 41, 220; figs. 2.16, A.5; pl. 2:F
- Hatay — 1, 4–5, 7–9, 15–16, 34–35, 74, 100, 103–04 (n. 28), 178, 193–94; fig. 7.1
- Hatti — 6, 102
- Hattuša (modern Boğazköy) — 3, 106–09, 111
- Ḫattina (Iron Age kingdom) — 5, 16
- Hayey, Tell al- — *see* Tabarat al-Akrad
- Hazor — 106, 112
- Hazzi Mountain — *see* Aqra, Jebel al-
- Hıdırbey River — 69
- Hijar, Tell (AS 180) — 238, 240; figs. 2.4, A.5, A.8; pls. 4:A, 5
- Hisallıtepe — 71
- Hisarlık Tepesi (AS 187) — 239; fig. A.5
- Horlak Atika (AS 122) — 226; fig. A.8
- Hösürlük Tepesi — *see* Hisarlık Tepesi
- Höyük Tepe (AS 213) — 245; fig. A.3
- Hürriyet, Tell — *see* Kokarkuyu
- Hürriyet Tepe (AS 107) — 222; figs. A.6, A.9
- Hüseyindedede — 198
- Huzzi Mountain — *see* Aqra, Jebel al-
- Ibrahimiyyah, Tell (AS 109) — 223; fig. A.8
- Ilıkpınar Höyük (AS 14) — 206; fig. A.2
- ‘Imar al-Jadid al-Gharbi — *see* Ömercedit
- ‘Imar al-Jadid al-Sharqi, Tell (AS 101) — 9, 12, 32–33, 36, 39, 46, 195–96, 221; figs. 2.4, 2.11, 2.15, A.6, A.9
- Imma — *see* Yenişehir
- Ingeban (AS 183) — 238; fig. A.6
- Iran — 6
- Iraq — 2, 6, 11, 37, 39–40
- Iskenderun — 2, 5, 11, 42
- Israel — 2
- Jabbul Plain — 40
- Jabur, Tell — *see* Çamurlu
- Jeble — 68
- Jericho — 106, 195
- Jindaris, Tell (AS 58) — 7, 173 (n. 39)
- Jinderez, Tell — *see* Jindaris, Tell

- Jisr al-Shughur — 174  
 Jisr Hadid — *see* Demir Köprü  
 Jisr Maksur — fig. 7.1  
 Jordan — 2  
 Judaidah, Tell al- (AS 176) — 3, 5, 8–12, 14, 26–27, 39–41, 113, 154, 172, 194 (n. 44), 195 (n. 45), 196–200, 237; figs. 1.2, 1.7, 2.1–2, 2.4, 2.12, 2.16, A.9; pls. 1:A–C, G, 2:A, 3:H, 5:B  
 Kabri — 106  
 Kahramanmaraş — 11  
 Kanal Cave — 34, 70  
 Kanesh — *see* Kültepe  
 Kanisah, al- — *see* Esen Tepe  
 Karababa Dam — 8  
 Kara Su River — 26, 28, 31, 45; fig. 2.4  
 Kara Su Valley — 7  
 Karaca Khirbet ‘Ali (AS 168) — 30, 36, 195, 235; figs. 2.4, 2.15, A.9  
 Karacanic (AS 92) — 31, 39, 219; figs. 2.4, A.5  
 Karacanic — *see* Karacanic  
 Karadurmuşlu, Tell (AS 19) — 208; figs. A.2, A.5  
 Karağaaç Höyük — 7  
 Karahöyük (AS 95) — 7, 111, 198, 220; fig. A.6  
 Karataş (AS 151) — 232; fig. A.6  
 Karataş, Tell (AS 117) — 225; figs. A.8–9  
 Karatepe (AS 86) — 32, 39, 45, 217; figs. 2.16, A.5; pls. 1:F, 2:D, 3:B  
 Kasios, Mount — *see* Aqra, Jebel-al  
 Kastal Çiftliği (AS 206) — 243; fig. A.6  
 Kazana Höyük — fig. 2.4  
 Keçebey, Tell (AS 75) — 216; fig. A.8  
 Kel Dağı Mountain — *see* Aqra, Jebel al-  
 Keleş, Tell (AS 124) — 226; fig. A.9; pls. 1:C, 3:D, 7:B  
 Kemalağa Çiftliği (AS 186) — 239; fig. A.6  
 Kemal Akpınar Çiftliği — *see* Kemalağa Çiftliği  
 Kestel — 8–9  
 Khirbet Alahan (AS 240) — 250; fig. A.4  
 Khirbet al-Tahoun (AS 171) — 236; figs. 2.27–29, A.9  
 Khirbet al-Tahoun (AS 202) — 243; figs. 2.30, A.9  
 Khorlak, Tell — *see* Horlak Atika  
 Killik Tepe (Tabarat ‘Arab Ahmad) (AS 45) — 213; fig. A.6  
 Killik Tepe (Büyük Tepe) (AS 50) — 214; fig. A.6  
 Killik Tepe (AS 51) — 214; fig. A.6  
 Kilise, Tell — *see* Çolaktepe  
 Kinet Höyük — 7, 11, 106, 156–57, 198  
 Kinneret, Lake — 34  
 Kırcaoğlu, Tell — *see* Kurcoğlu, Tell  
 Kireç Tepe — 69  
 Kiremitli — *see* Kiritli Höyük  
 Kiremitlik (AS 41) — 213; fig. A.5  
 Kırıkhan — 254, 256, 258; figs. 2.4, 7.1  
 Kırıkhan Valley — 42  
 Kırkhız Pınar (AS 27) — 210; fig. A.3  
 Kirit, Tell — *see* Qirmidah, Tell  
 Kiritli (AS 190) — 240; figs. A.2–3  
 Kiritli Höyük (AS 3) — 204; fig. A.3  
 Kisap, Tell — 217  
 Kisecik — 10, 41; fig. 1.3  
 Kızıl İrk River — 36, 43; figs. 2.4, 2.22, 2.30  
 Kızılkaya, Tell (AS 36D) — 212; fig. A.6  
 Kızılkaya, Tell (Gavurköy) (AS 36) — 212; fig. A.6  
 Kızılkaya: Reşaoğulları Çiftlik (AS 209) — 244; fig. A.6  
 Kızılkaya Tepesi (AS 207) — 10, 197, 244; fig. A.6  
 Kıztepe — *see* Ömercedit / ‘Imar al-Jadid al-Gharbi  
 Kizzuwatna — *see* Cilicia  
 Knossos — 6  
 Kocakışla (AS 224) — 247; fig. A.6  
 Kokarkuyu (AS 161) — 233; fig. A.6  
 Kokaz (AS 119) — 225; fig. A.9  
 Konut Köy / Vesvese Köyü (AS 222) — 247; fig. A.8  
 Konya — *see* Çatal Höyük  
 Konya Plain — 197  
 Körtepe (AS 88) — 218; fig. A.5  
 Koyuncu Höyük (AS 15) — 207; fig. A.2  
 Kubbece — *see* Tabarat Kızılkaya  
 Küçük Avara (AS 114) — 224; fig. A.9  
 Küçük Avara (South Çiftlik, AS 218) — 246; fig. A.9  
 Küçük Bozhöyük — *see* Domuz Höyük  
 Küçük Haji Aslı Köy (AS 233) — 249; fig. A.2–3  
 Küçük Ta‘yinat — *see* Ta‘yinat al-Saghir, Tell  
 Kullani — 174  
 Kültepe (ancient Kanesh) — 101, 104, 107, 109, 111, 113, 198; pl. 8  
 Kumtepe — *see* Körtepe  
 Kuna‘na, Tell — 173 (n. 39)  
 Kunulua — *see* Ta‘yinat, Tell  
 Kurban Höyük — fig. 2.4  
 Kurcoğlu, Tell (AS 55) — 5, 215; fig. A.6

- Kurdu, Tell (AS 94) — 1–2, 5, 8–9, 11–12, 15, 26, 32–33, 36, 39, 41, 46, 70, 99, 194–96, 202, 219; figs. 1.4, 1.5, 2.4, 2.15, A.6; pl. 1:G
- Kurt Dağı Mountains — 10, 35; fig. 2.1
- Kuşaklı — 99, 111
- Laodiceia ad Mare — 74
- Latakia — 68
- Levant — 2, 5, 10, 16, 34, 38–40, 42, 67–68, 70, 74, 101, 104, 106, 108, 113, 156, 194–95, 197–98, 199 (n. 48), 200, 202; fig. 3.1
- Limonsuyu Stream — fig. 3.17
- Madenboyu — *see* Mudanbo, Tell
- Mağaracık — 7
- Mağaracık Caves — 69
- Mağaranın Kilisesi (AS 230) — 248; fig. A.2
- Mahmutlu, Tell — *see* Koyuncu Höyük
- Malta, Tell (AS 28) — 32, 210; fig. A.5
- Maraş — 42, 240
- Mardikh, Tell — 3
- Mari — 6
- Maşat Höyük — 111
- Massif Calcaire — 28, 31, 41, 44
- Mastepe — *see* Mastepe, Tell
- Mastepe, Tell (AS 156) — 232; fig. A.6
- Matta — *see* Malta, Tell
- Mediterranean Sea — 1–3, 5–6 (n. 4), 7, 10, 12, 16, 27, 45, 67–69, 71, 73–74, 76, 102, 105–06, 171–72, 193–95, 197–200; figs. 1.1, 2.4, 3.2, 3.3a, 3.4, 3.9, 3.13, 3.17
- Meleagrum — *see* Murat Paşa
- Merdivenli Cave — 70
- Mersin — 112
- Mesopotamia — 3, 5, 10–11, 16, 67, 74, 101–02, 195–98
- Meydan Köyü — 68, 70; figs. 3.2, 3.3a, 3.4, 3.9, 3.13
- Mezar Tepe (OS 16) — 72, 200; figs. 3.2, 3.9
- Mina, al- (OS 11) — 6, 10, 67–73, 75–76, 193–94, 200, 202; figs. 3.2, 3.9–10, 3.11:7–11, 3.12:8, 12, 3.13:7, 3.15
- Miri — *see* Mısır, Tell
- Mirmiran, Tell (AS 120) — 15, 226; fig. A.8; pl. 3:E
- Mısır, Tell (AS 76) — 216; fig. A.8; pl. 2:A
- Misri, Tell — *see* Mısır, Tell
- Mitanni — 6, 101–02, 113, 199
- Mount St. Symeon — *see* Sem'an Dağı Mountain
- Moza, Tell — pl. 2:D
- Mudanbo, Tell (AS 85) — 217
- Muharrem (AS 185) — 239; fig. A.6
- Mumbaqa, Tell — 102
- Murat Paşa (AS 25) — 45, 209; fig. A.3; pl. 6:B
- Mürefe — *see* Müşrefe, Tell
- Musa Dağı Mountain — 68–69, 74
- Müşrefe, Tell (AS 163) — 234; fig. A.9
- Mutayran River — 69–71; figs. 3.2, 3.3a, 3.4, 3.9, 3.13
- Mut Höyük (AS 74) — 215; fig. A.8
- Narlıca — 43; fig. 2.29, 2.31
- Necar Tepe — *see* Karataş
- Nejar Tepe — *see* Karataş
- Nile Delta — 106, 198
- Nişantepe — 111
- Niznez Tepe — 69
- O'Brien's Cave — 35, 194
- Ömercedit / 'Imar al-Jadid al-Gharbi (AS 100) — 220; fig. A.9
- Orontes Delta — 1, 4, 7, 9–10, 30, 36, 67–70, 74, 76, 105, 193–94, 199–202; figs. 1.1, 1.8, 3.1–4, 3.9, 3.13
- Orontes River — 1–3, 6, 10, 28–31, 42, 46, 67–74, 76, 99, 105, 153, 157–59, 171, 173–74, 193–94, 198, 200–01, 217, 252; figs. 2.4, 2.24, 3.2, 3.3a, 3.4, 3.9, 3.10a, 6.7–8, 7.1
- Orontes Valley — 34, 36, 68, 159, 175; fig. 2.5
- Ortaköy — 99, 111
- OS 1 — fig. 3.2
- OS 2 — fig. 3.16:5–6
- OS 3 — figs. 3.2, 3.16:4, 8
- OS 4 — fig. 3.2
- OS 5 — fig. 3.2
- OS 6 — fig. 3.2
- OS 7 — fig. 3.2
- OS 8 — fig. 3.2
- OS 9 — fig. 3.2
- OS 10 — fig. 3.2
- OS 11 — *see* al-Mina
- OS 12 — *see* Sabuniye
- OS 13 — fig. 3.2
- OS 14 — fig. 3.2
- OS 15 — 74; figs. 3.2, 3.14:12
- OS 16 — *see* Mezar Tepe
- OS 17 — fig. 3.2
- OS 18 — fig. 3.2
- OS 19 — fig. 3.2

- OS 20 — fig. 3.2  
 OS 21 — fig. 3.2  
 OS 22 — fig. 3.2  
 OS 23 — fig. 3.2  
 OS 24 — fig. 3.2  
 OS 25 — fig. 3.2  
 OS 26 — fig. 3.2  
 OS 27 — fig. 3.2  
 OS 28 — fig. 3.2  
 OS 29 — fig. 3.2  
 OS 30 — fig. 3.2  
 OS 31 — fig. 3.2  
 OS 32 — *see* Virşa Tepe  
 OS 33 — fig. 3.2  
 OS 34 — *see* Berraktepe 72  
 OS 35 — fig. 3.2  
 OS 36 — fig. 3.2  
 OS 37 — figs. 3.2, 3.14:10, 14  
 OS 38 — fig. 3.2  
 OS 39 — fig. 3.2  
 OS 40 — fig. 3.2, 3.14:9, 11, 13, 15  
 OS 41 — fig. 3.2  
 OS 42 — fig. 3.2  
 OS 43 — fig. 3.2  
 OS 44 — fig. 3.2  
 OS 45 — fig. 3.2  
 OS 46 — fig. 3.2  
 OS 47 — 36, 70, 194; figs. 3.2, 3.3  
 OS 48 — fig. 3.2  
 OS 49 — fig. 3.2  
 OS 50 — fig. 3.2  
 OS 51 — fig. 3.2  
 OS 52 — fig. 3.2  
 OS 53 — fig. 3.2  
 OS 54 — fig. 3.2  
 OS 55 — *see* Seleuceia Pieria  
 Pagrae Kalesi — *see* Bakras Kalesi  
 Pagras — *see* Bakras  
 Pagras Kalesi — *see* Bakras Kalesi  
 Paşa Höyük (AS 91) — 218; figs. 2.16, A.6  
 Paşaköy (AS 11) — 206, 219; figs. 2.4, A.4–5  
 Putoğlu (AS 166) — 235; fig. A.9  
 Qarqur, Tell — 99, 157  
 Qatna — 99, 104, 106  
 Qinanah, Tell (AS 169) — 235; fig. A.9; pl. 3:F  
 Qirmidah, Tell (AS 172) — 236; fig. A.9  
 Qukhar, Tell — *see* Kokarkuyu  
 Raqqa — fig. 2.4  
 Ras al-Bassit — 68  
 Ras Ibn Hani — 68  
 Ras Shamra — *see* Ugarit  
 Rasm, Tell al- (AS 80) — 36, 196, 216; fig. A.8; pl. 2:B  
 Reyhanlı — 5, 15, 30, 32, 43–44, 175–76, 214, 235, 242, 248; fig. 2.4  
 Rhossos — pl. 6:C  
 Rift Valley — 2, 11, 28, 198  
 Rouj, Wadi — 34–36  
 Sabi, Tell — *see* Ermeneia, Tell  
 Sabi Abyad — fig. 2.4  
 Sabuniye (OS 12) — 6 (n. 4), 10, 67–72, 76, 193–94, 198–99, 202; figs. 3.2, 3.4–6, 3.9, 3.13  
 Saçaklı (AS 125) — 227; fig. A.8  
 Safsafa — *see* Kokaz  
 Sakçegözü — 34–35  
 Salihyyah, Tell (AS 129) — 37, 39, 41, 228; figs. 2.16, 2.21, A.9  
 Saluq, Tell (AS 138) — 230; fig. A.8; pl. 1:A  
 Samandağ — 1, 6, 68–69, 72, 76; fig. 3.3a  
 Samarkand — 74  
 Şapinuwa — *see* Ortaköy  
 Sardis — 74  
 Sarissa — *see* Kuşaklı  
 Saye, Tell (AS 150) — 231  
 Sayılık — *see* Kiritli Höyük  
 Sekizevler (AS 215) — 245; fig. A.3  
 Selam, Tell (AS 147) — 231; figs. 2.21, A.8–9  
 Seleuceia Pieria (OS 55) — 6, 67–70, 74–75, 193–94, 201; figs. 3.2, 3.3a, 3.13, 3.17  
 Sem'an Dağı Mountain — 68–69, 71  
 Serinyol — 42  
 Serinyol Kale (AS 238) — 250; fig. A.4  
 Serinyol Kale Çiftlik (AS 239) — 250; fig. A.4  
 Shair Askar, Tell — *see* Ermeneia, Tell  
 Sheikh, Tell es- — *see* Tulail al-Sharqi  
 Siçanlı (AS 123) — 226; figs. 2.21, A.8–9  
 Siçantarla — *see* Far, Tell al-  
 Sicaz Tepe — *see* Far, Tell al-  
 Sivrice — *see* Yassıyurt

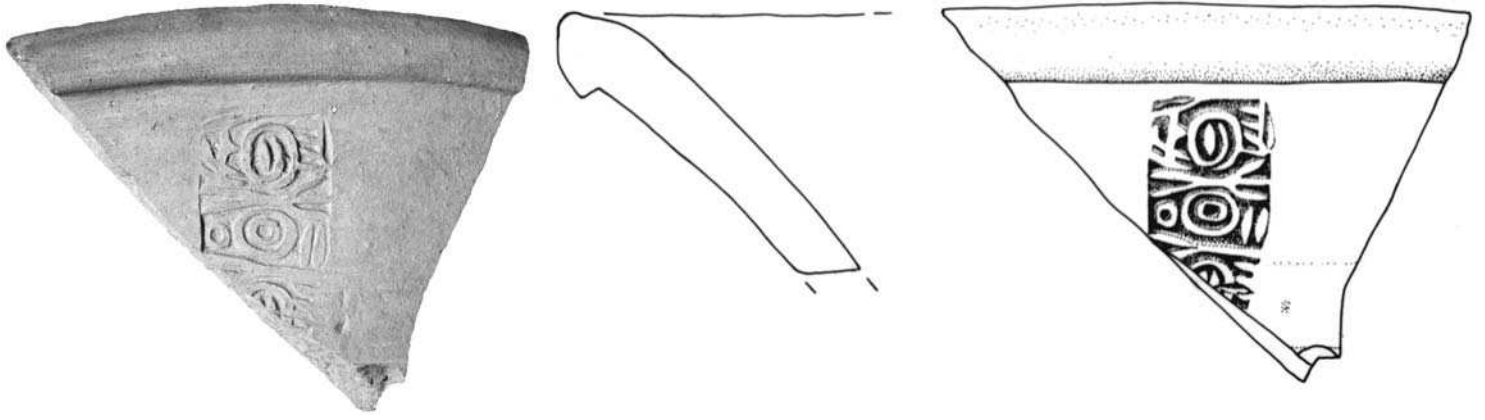
- Soğuksu Höyük (AS 17) — 207; fig. A.5  
 Sultan, Tell (AS 32) — 40, 211, 240; figs. 2.22, 3.4, A.5  
 Sultan Merkezi — *see* Habeş, Tell  
 Sumer — 6  
 Sutaşı Village — 71, 74  
 Su Tepe (AS 223) — 247; figs. 2.4, A.5  
 Sweyhat, Tell-es — fig. 2.4  
 Syria — 2–3, 7, 11, 16, 28, 34, 36–41, 67–69, 74, 99, 108, 111, 157, 171, 173–74, 178, 193, 195, 197–98, 203 (n. 49); figs. 2.1, 2.4  
 Syro-Mesopotamia — 10  
 Syro-Palestine — 5  
 Tabarat al-Akrad (AS 182) — 5, 15, 26, 195, 230, 238; fig. A.8  
 Tabarat Algana (AS 130) — 228; fig. A.9  
 Tabarat ʿArab Ahmad — *see* Killik Tepe (AS 45)  
 Tabarat Baytarlı — *see* Yanık Tepe  
 Tabarat Büyük Avara (AS 115) — 225; fig. A.9  
 Tabarat Hacı Hasan (AS 44) — 213; fig. A.6  
 Tabarat Hassan Bellu — *see* Hasan Bellu Höyük  
 Tabarat Hürriyet — *see* Hürriyet Tepe  
 Tabarat Jaffar (AS 203) — 243; fig. A.8  
 Tabarat Jalil (AS 132) — 229; figs. 2.21, A.9  
 Tabarat Kızılkaya (AS 30) — 210; fig. A.6  
 Tabarat Mastepe (AS 103) — 221; fig. A.6  
 Tallat (AS 111) — 224; fig. A.8  
 Tarfah Höyük (AS 96) — 220; fig. A.6  
 Tarla Höyük — 39  
 Tartus — 68  
 Taurus Mountains — 2, 4, 8–10 (n. 11), 201  
 Tayfur Sökmen Village — 9, 247  
 Taʿyinat, Tell (AS 126) — 1, 3–6, 8–11, 13–15, 22, 26, 34, 38–39, 46, 67, 76, 99, 105, 111, 149, 157–59, 171–75 (n. 42), 176–78, 190, 193–94, 196–97 (n. 46), 200, 202, 227; figs. 1.2, 2.3–4, 2.16, 2.23a, 6.9, 7.1–15, A.8; pls. 1:A, C, G, 2:A, 5:B  
 Taʿyinat al-Saghir, Tell (AS 127) — 159, 177, 200, 227; fig. A.8  
 Telhöyük Tepe (AS 288) — 254; fig. A.8  
 Telli Sultan — *see* Sultan, Tell  
 Temel Kızılkaya (AS 208) — 244; fig. A.6  
 Terzi, Tell al- (AS 104) — 221, 256; figs. A.5, A.8  
 Terzi Höyük — *see* Terzi, Tell al-  
 Tigris River — 2, 7, 195; figs.  
 Tikalı Cave — 70  
 Tilmen Höyük — 7, 108, 111  
 Tınç Höyük (AS 189) — 240; fig. A.3  
 Titriş Höyük — 39, 157; fig. 2.4  
 Tofaş Tepe (AS 289) — 254; fig. A.7  
 Topraklı — *see* Baytarlı, Tell  
 Torun Anablı, Tell (AS 21) — 208; figs. A.2–3  
 Torun Höyük — *see* Torun Anablı, Tell  
 Trabesac — *see* Beyazid-i Bestami  
 Trabzon — *see* Beyazid-i Bestami  
 Troy — 6, 106, 193  
 Tulail al-Sharqi (AS 135) — 5, 229; fig. A.8; pl. 1:B  
 Tulul Salihiyah al-Saghir (AS 128A) — 227; fig. A.9  
 Tulul Salihiyah al-Saghir (North) (AS 128B) — 228; fig. A.9  
 Turkey — 1–2, 4–9, 16, 67–68, 70, 99, 103–04, 109, 171, 178, 193, 196–97, 199 (n. 48); figs. 2.1, 2.4, A.1–9; pl. 1:B  
 Turhan Bey Çiftlik — *see* Küçük Avara  
 Tutlu Höyük (AS 105) — 11, 13, 222; fig. A.8  
 Üçağızlı Cave — 7, 34, 67, 70, 194  
 Üçtepe (AS 108) — 222; fig. A.9; pl. 7:C  
 Üçtepe — *see* Putoğlu  
 Ugarit — 3, 68, 102, 104, 108, 198–200; pl. 8  
 Uluburun-Kaş — 111, 199  
 Uluca — *see* Zeytin Altı  
 Uluca East (AS 235) — 249; figs. A.7–8  
 Uluca North (AS 236) — 249; figs. A.7–8  
 Uluca-Tarlası (AS 234) — 249; figs. A.7–8  
 Umm al-Aʿzum — *see* Çataltepe  
 Umm al-Marra, Tell — 110  
 Unqi — 2–3, 13, 16, 38, 111, 171, 173–74, 178; fig. 2.19  
 Ur — 3, 178  
 Urfa — 8, 39; fig. 2.4  
 Üzümdallı — *see* Yıldızlı  
 Uzunarab, Tell (AS 84) — 5 (n. 3), 217; figs. 2.16, A.8  
 Uzun Kelli — *see* Muharrem  
 Vesvese Köyü — *see* Konut Köy / Vesvese Köyü  
 Virşa Tepe (OS 32) — 70, 72; figs. 3.2, 3.4, 3.8:1–3, 3.9  
 Wadasatini — *see* Taʿyinat, Tell  
 Wadi al-Hammam — 5, 35, 194 (n. 44)  
 Wasfe, Tell (AS 31) — 32, 211; figs. 2.10, A.6  
 Wuzwuze, Tell (AS 221) — 247; fig. A.8  
 Yalanköy — 245  
 Yamhad — *see* Aleppo  
 Yanık Tepe (AS 37) — 212; fig. A.5

- Yassıyurt (AS 6) — 204; fig. A.3  
 Yazı Höyük (AS 158) — 232; fig. A.6  
 Yeşilova (AS 81) — 217; fig. A.8  
 Yenişehir (AS 345, ancient Imma) — 29, 32–33, 42–44, 201, 257; figs. 2.9, 2.14, 2.22, 2.27, 2.30, A.9  
 Yenyapan — *see* Yeni Yapane  
 Yeni Yapane (AS 54A–B) — 215; fig. A.6  
 Yerkuyu — *see* Hasanuşağı, Tell  
 Yesemek — 7  
 Yıldızlı (AS 226) — 247; fig. A.8  
 Yolaşan — *see* Çiloğlan Iskân  
 Yurt Höyük — *see* Hasanuşağı, Tell  
 Yusufu (AS 7) — 205; fig. A.3  
 Zagros Mountains — 6  
 Zengin Valley — 44, 257  
 Zeytin Altı (AS 237) — 249; fig. A.7  
 Zoba Höyük (AS 159) — 233, 237; fig. A.6

## Plate 1. Seals and Sealings from Diverse Periods

	<i>Provenance</i>	<i>Date</i>	<i>Description/Remarks</i>
A	AS 138B	Early Bronze Age I/III	Vessel rim with stamped impression. Handmade, cream-colored, sand-tempered fabric with externally protruding rim. Stamped vertically just below the rim with abstract curvilinear design consisting of concentric circles and floral elements. Similar to types from Tell al-Judaïdah and Tell Ta'çinat; see Braidwood and Braidwood 1960: figs. 236, 369:4; Mazzoni 1985; Woolley 1955: pl. 108g.
B	AS 128B	Amuq Phase F	Stamp seal, pyramidal, serpentine, parallel zigzag lines on base. Obverse is perforated. Although zigzags are more prevalent in the Neolithic period, the pyramidal shape is locally found at Tell al-Judaïdah and Tulail al-Sharqi; see von Wickede 1990: nos. 577, 580, 583 (for the design).
C	AS 124	Amuq Phases C–E	Stamp seal, circular with damaged edge, serpentine, hatched design on base, obverse, perforated handle. Similar to types from Tell al-Judaïdah and Tell Ta'çinat; see Braidwood and Braidwood 1960: figs. 37, 68.
D	AS 246	Amuq Phases C–E	Found at the medieval town on the slopes below Bakras Kalesi, a Crusader castle (AS 247). No other pre-Roman materials were found at the site, suggesting that this object was out of context. Stamp seal; spool shaped; diorite, serpentine, or agate; hatched design on base. Cross-hatching on amulet stamps is common in the Halaf, but unusual shapes proliferate in the Ubaid. Compare von Wickede 1990: nos. 540–44 (Degirmentepe).
E	AS 290	Amuq Phase C	Stamp seal, square, diorite/serpentine(?), geometric design with cross and square hatching, five drillings on interstices; compare Braidwood and Braidwood 1960: fig. 167; for drilling, see von Wickede 1990: no. 72 (Arpachiyah).
F	AS 86	Middle Bronze Age	Cylinder seal, hematite, with cursive design similar to rows of skeletal marching men and sphinxes; compare Alalakh example in Woolley 1955: pl. 65:93; Mazzoni 1975, 1979.
G	AS 94	Amuq Phase A/B	Stamp seal, serpentine, with crude geometric design on base. Tell Kurdu excavations 1999, no. 3635. Similar to types from Tell al-Judaïdah and Tell Ta'çinat; see Braidwood and Braidwood 1960: fig. 37.
H	AS 6.1	New Kingdom/second millennium	Scarab, bone(?), serpentine(?); see description and translation by Robert K. Ritner in <i>Appendix B: Scarab</i> .

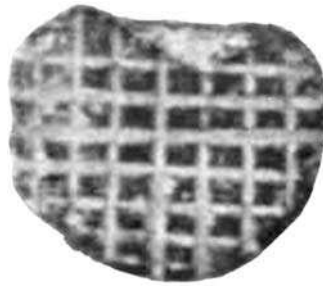




A



B



C



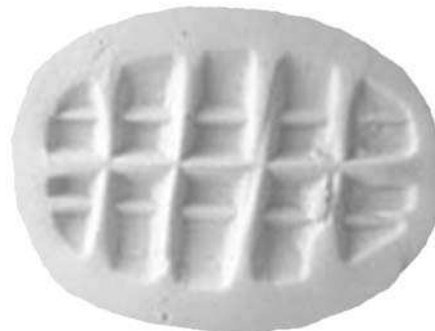
D



E



F



G



H

Seals and Sealings from Diverse Periods. Scales 1:2 (A), 2:1 (B-F, H), and 1:1 (G)

Plate 2. Metals, Mold, and Slag

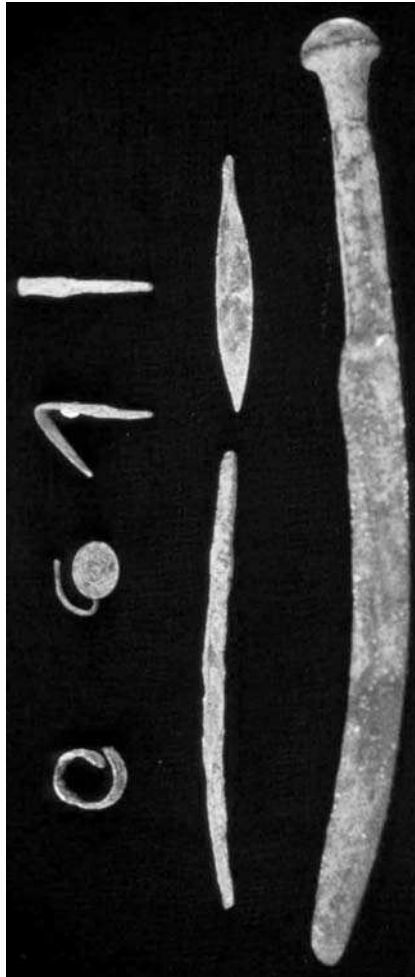
	<i>Provenance</i>	<i>Date</i>	<i>Description/Remarks</i>
A	AS 76	Phase G/F	Pin, copper based, globular head and bent shaft. Similar to types from Tell al-Judaidah and Tell Ta'ayinat; see Braidwood and Braidwood 1960: 239:10.
B	AS 80	Amuq Phase B/C	Mold, stone, rectangular with bed carved for an ax or chisel, fragmentary. Found along prehistoric cut (Late Neolithic?). Later complex, multi-faceted molds are late third–early second millennium B.C.; compare Braidwood and Braidwood 1960: fig. 350:1.
C	AS 136	Late Bronze Age and later	Metal assemblage found by Atchana farmers on mound surface. Copper based, includes curved blade with rounded pommel; see ceremonial example depicted on Middle Bronze Age statue from Ebla in Matthiae 1992: pls. 48–53; for knife, see Woolley 1955: pl. 72, type 9; for awl and bent pin, see Woolley 1995: pl. 73.
D	AS 86	Middle Bronze Age	Spearhead, copper based with bent tang, prominent midrib. Similar to types from ca. 1800 B.C.; see Fortin 1999: no. 45; Phillip 1989: fig. 10, no. 54 from Carchemish. Toggle pin, copper based, with fluted head, small ring in toggle perforation; similar to type P.18 in Woolley 1955: pl. 73.
E	AS 173	—	Glassy, viscous slag, perhaps clinkers from ceramic- or glass-making kiln.
F	AS 99	—	Copper and high iron content slag from metal-smelting production.
G	AS 136	Middle Bronze Age	Pin, copper based, fluted head with irregular shaft. Similar to type P.18 in Woolley 1955: pl. 73.



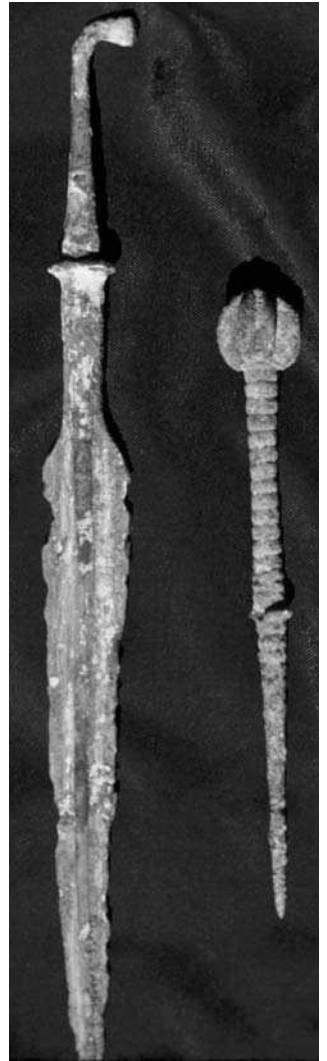
A



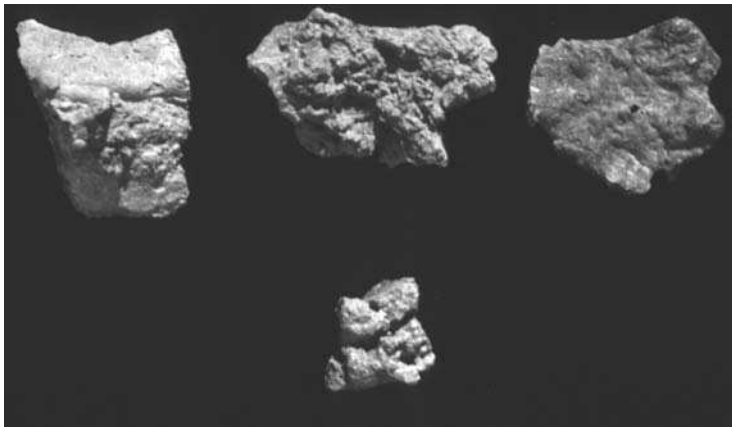
B



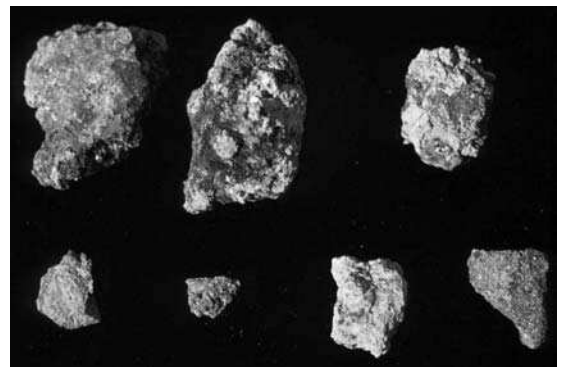
C



D



E



F

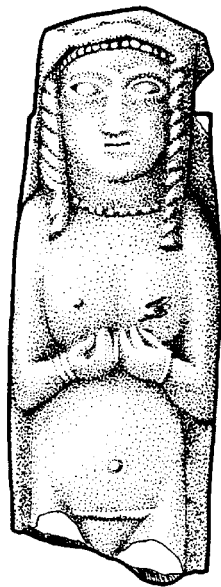


G

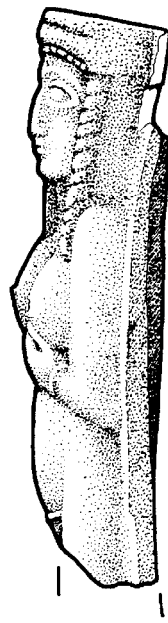
Metals, Mold, and Slag. Scales 1:1 (A-B) and 1:2 (C-G)

Plate 3. Figurines

	<i>Provenance</i>	<i>Date</i>	<i>Description/Remarks</i>
A	AS 174D	Middle Bronze Age/Late Bronze Age	Figurine, terra-cotta, fragmentary, naked female “Astarte” style with flat headdress and curls on sides of face, coiled necklace and bracelets, hands at breasts; see Pruß 1996 types I/II; compare Woolley 1955: pl. 56.
B	AS 174C	Iron Age	Figurine, terra-cotta, fragmentary, beard and hair incised with parallel lines, with “stocking” cap, cream-colored fabric, mold made. Similar to “Persian rider figures”; see Pruß 1996, type I, pl. 42:243.
C	AS 290	Iron Age(?)	Figurine, terra-cotta, mold made, fragmentary, naked female, hands at breasts.
D	AS 124	Iron Age(?)	Figurine, terra-cotta, mold made, fragmentary, naked female, hands at breasts, with beaded necklace.
E	AS 120	Hellenistic	Figurine, terra-cotta, mold made, fragmentary, only head preserved.
F	AS 169	Late Bronze Age–Hellenistic	Figurine, terra-cotta, mold made, fragmentary, naked female, hands at breasts.
G	AS 136	Late Bronze Age	Figurine, terra-cotta, mold made, fragmentary, naked female, hands at breasts; compare Woolley 1955: pl. 56b.
H	AS 176	Middle Bronze Age/Late Bronze Age	Figurine, terra-cotta, fragmentary, head of animal, possibly equid.



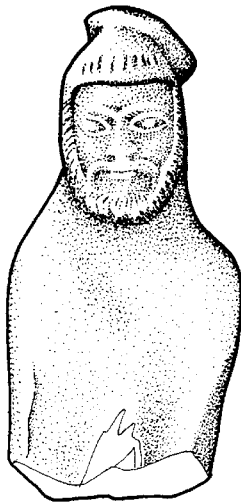
A



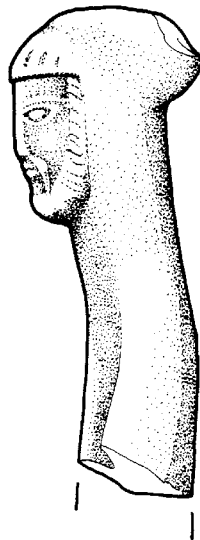
C



D



B



E



F



G



H



Figurines. Scales 1:2 (A-B) and 1:1 (C-H)

Plate 4. Ceramic Assemblages

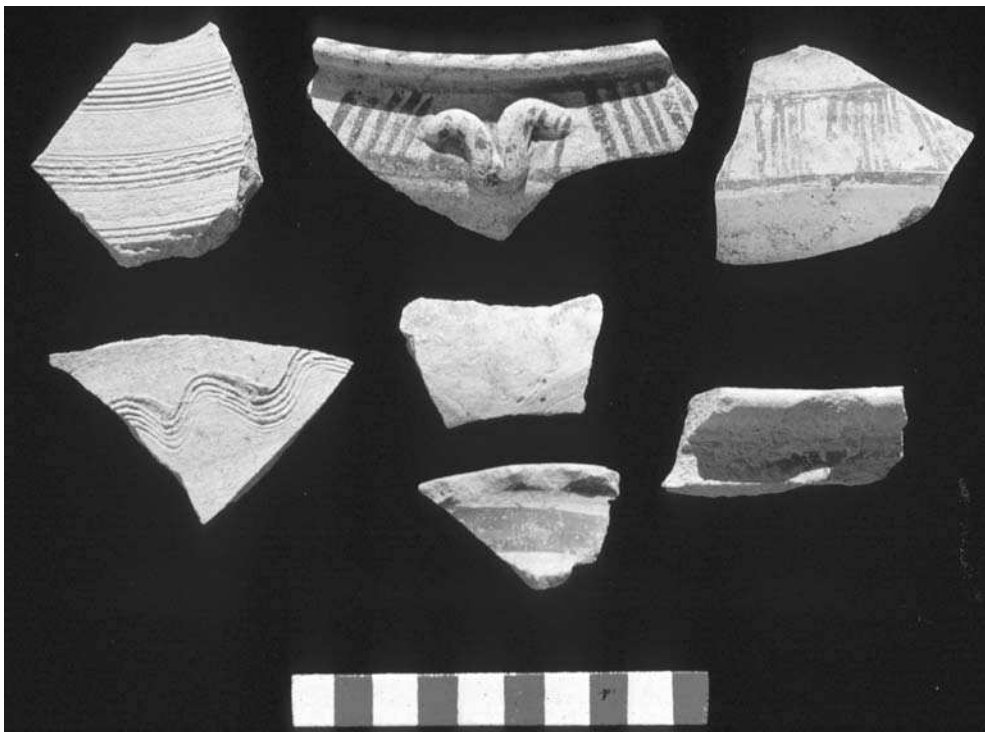
---

	<i>Provenance</i>	<i>Date</i>	<i>Description/Remarks</i>
A	AS 180	Late third/early second millennium	Ceramic assemblage of mostly buff, combed, incised wheel-made wares; see Verstraete and Wilkinson 2000: fig. 11.
B	AS 86	Late third/early second millennium	Ceramic assemblage of mostly buff, combed wheel-made wares, Syro-Cilician painted; compare Woolley 1955: pls. 84, 91.

---



A



B

Ceramic Assemblages

Plate 5. Ceramic Assemblages

---

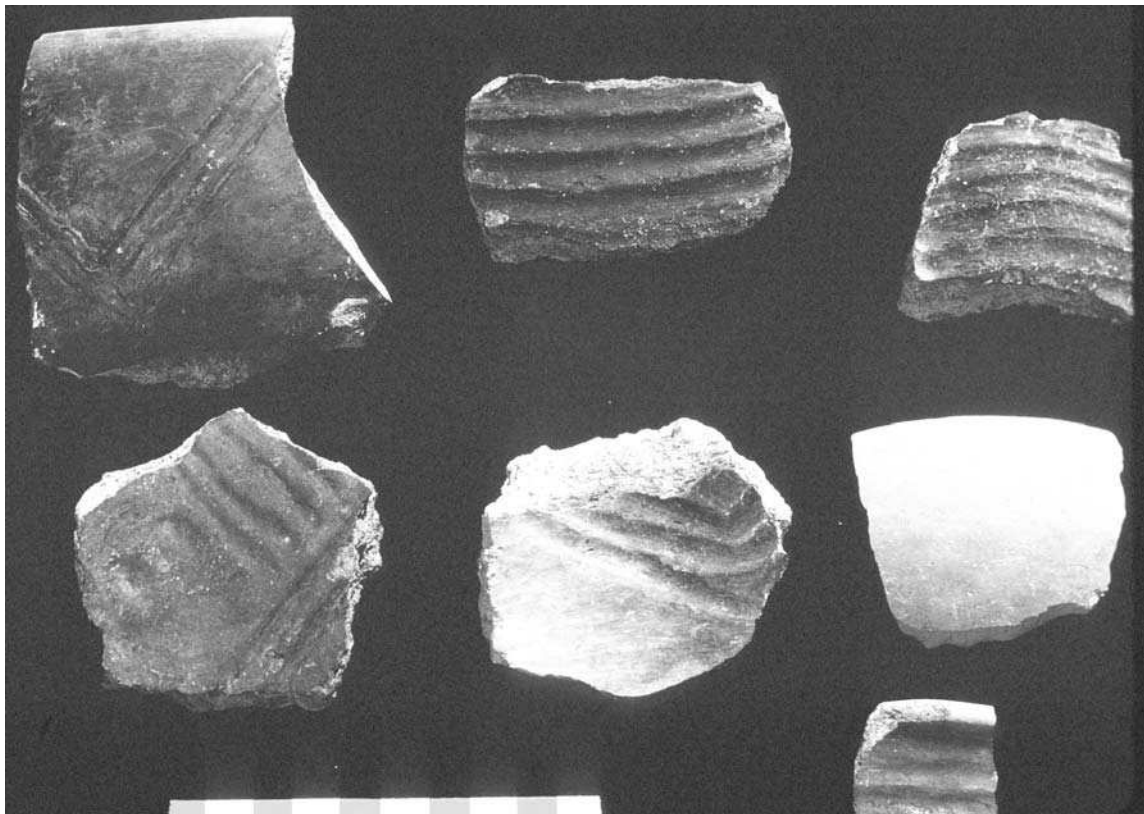
	<i>Provenance</i>	<i>Date</i>	<i>Description/Remarks</i>
A	AS 180	Late Antique	Ceramic assemblage of mostly brittleware.
B	AS 180	Amuq Phase H/I	Ceramic assemblage of mostly red-black burnished wares with relief decorations similar to types from Tell al-Judaidah and Tell Ta'yinat; compare Braidwood and Braidwood 1960: pl. 86:4-5.

---





A



B

Ceramic Assemblages

Plate 6. Inscribed Stones

---

	<i>Provenance</i>	<i>Date</i>	<i>Description/Remarks</i>
A	AS 354	Classical/Late Antique	Stone slab with inscription.
B	AS 25	Islamic	Stone slab with Islamic inscription.
C	Amanus	Classical	Two Greek inscriptions inscribed on stone were found in the Amanus Mountain pass between Antioch (Antakya) and Rhossos (Arsuz) on the coast. Dedicated to Zeus and Zeus Uranios, the inscription is intended to protect travelers from inclement weather and other dangers. One inscription was dedicated to Zeus Uranios by Antiochos son of Antiochos, who identifies the stone as an altar. The other inscription on the altar identifies Euangellios, priest of Zeus. These inscriptions probably date to different periods. <i>(Professor Mustafa Hamdi Sayar, Istanbul University)</i>

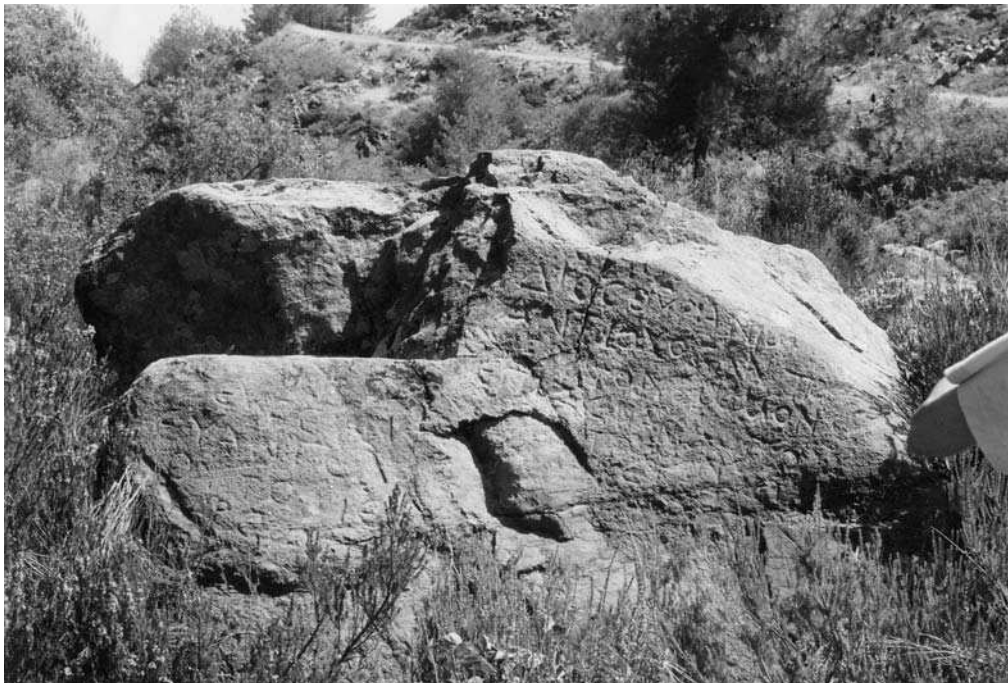
---



A



B



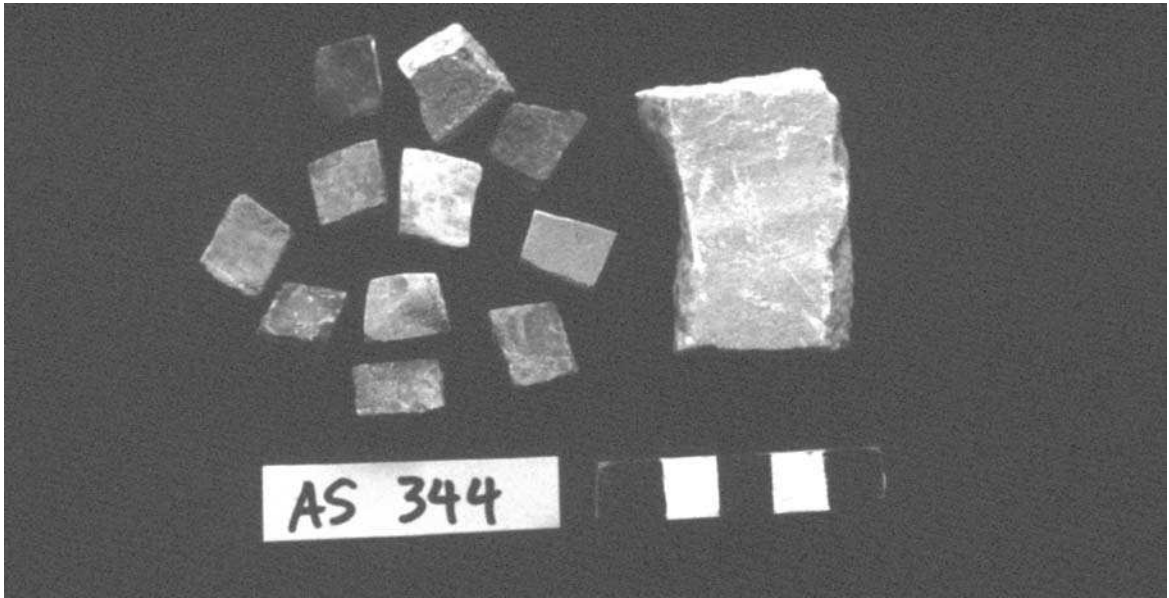
C

Plate 7. Various Stone and Glass Pieces

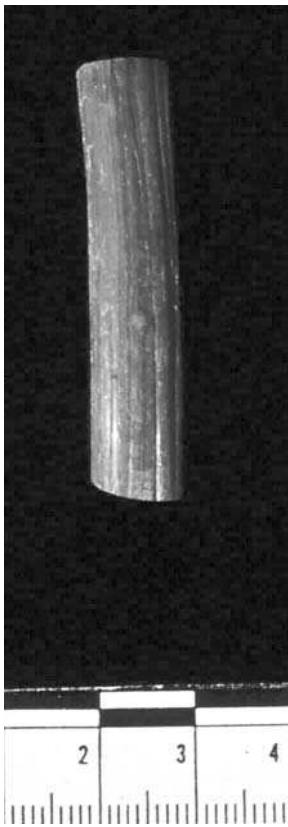
---

	<i>Provenance</i>	<i>Date</i>	<i>Description/Remarks</i>
A	AS 344	Roman/Late Roman	Mosaic tesserae and <i>opus sectile</i> .
B	AS 124	Roman/Medieval	Bracelet of glass, fragmentary, blue coloration.
C	AS 108C	Amuq Phases A–I	Ax (stone-gabbro?), complete. Found in all earlier phases of the Amuq; see Braidwood and Braidwood 1960.

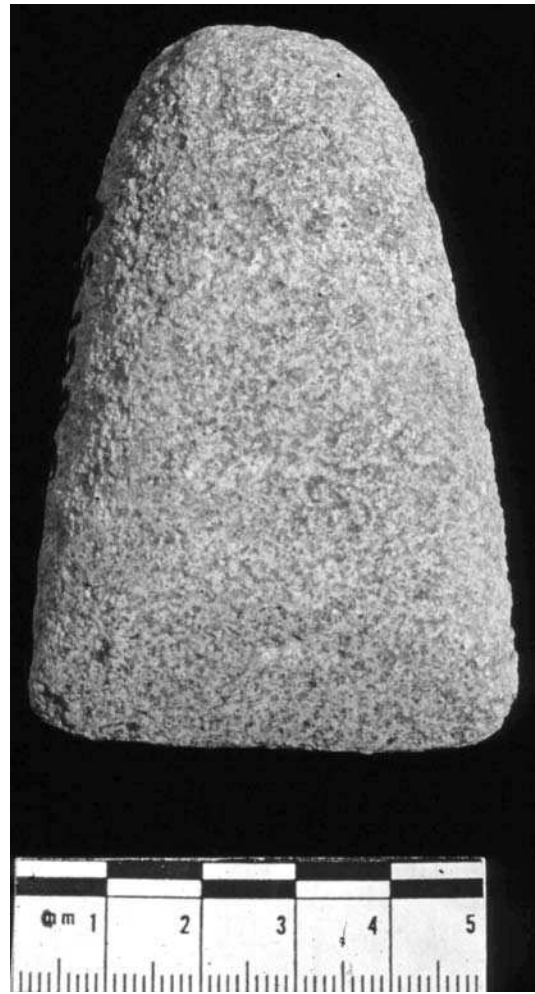
---



A



B



C

Various Stone and Glass Pieces

Plate 8. Animal-headed Vessel

---

<i>Provenance</i>	<i>Date</i>	<i>Description/Remarks</i>
AS 136	Middle Bronze Age/Late Bronze Age	Animal-headed vessel, complete. Perhaps a lion, pig, or bear. Two parallel grooves were incised on the shoulder of the vessel. Concentric incised grooves also appear on the prominent snout of the animal. A round incised marking on the animal's forehead was probably made with a hollow tube while the clay was wet. Other incised details are evident on its nozzle. Under its arching eyebrows, two pellets of clay, one circular, the other donut shaped, serve to indicate the eyes. Two pellets were applied to the snout. Only a portion of the gaping mouth is preserved, but a tongue is partially evident and whiskers were delineated on the upper lip. For parallels, see Zevulan 1982 (Ugarit) and Özgüç 2002: 127 no 13 ("Old Hittite" Kültepe/Kanesh Level Ia).

---



A



B



C

