

The History of the Peoples of the Eastern Desert



edited by

Hans Barnard

and

Kim Duistermaat

Monograph 73

Cotsen Institute of Archaeology
University of California, Los Angeles

THE COTSEN INSTITUTE OF ARCHAEOLOGY PRESS is the publishing unit of the Cotsen Institute of Archaeology at UCLA. The Cotsen Institute is a premier research organization dedicated to the creation, dissemination, and conservation of archaeological knowledge and heritage. It is home to both the Interdepartmental Archaeology Graduate Program and the UCLA/Getty Master's Program in the Conservation of Archaeological and Ethnographic Materials. The Cotsen Institute provides a forum for innovative faculty research, graduate education, and public programs at UCLA in an effort to impact positively the academic, local and global communities. Established in 1973, the Cotsen Institute is at the forefront of archaeological research, education, conservation and publication and is an active contributor to interdisciplinary research at UCLA.

The Cotsen Institute Press specializes in producing high-quality academic volumes in several different series, including *Monographs*, *World Heritage and Monuments*, *Cotsen Advanced Seminars*, and *Ideas, Debates and Perspectives*. The Press is committed to making the fruits of archaeological research accessible to professionals, scholars, students, and the general public. We are able to do this through the generosity of Lloyd E. Cotsen, longtime Institute volunteer and benefactor, who has provided an endowment that allows us to subsidize our publishing program and produce superb volumes at an affordable price. Publishing in nine different series, our award-winning archaeological publications receive critical acclaim in both the academic and popular communities.

THE COTSEN INSTITUTE OF ARCHAEOLOGY AT UCLA

Charles Stanish, Director

Gregory Areshian, Assistant Director

Willeke Wendrich, Editorial Director

Julie Nemer, Publications Manager

EDITORIAL BOARD OF THE COTSEN INSTITUTE OF ARCHAEOLOGY

Willeke Wendrich Area Editor for Egypt, North, and East Africa

Christopher Donnan Area Editor for South and Central America

Jeanne E. Arnold Area Editor for North America

Jeffrey P. Brantingham Area Editor for the Paleolithic and Environmental Archaeology

Aaron Burke Area Editor for Southwestern Asia

Lothar Von Falkenhausen Area Editor for East and South Asia and Archaeological Theory

Sarah Morris Area Editor for the Classical World

John Papadopoulos Area Editor for the Mediterranean Region

Ex-Officio Members: Charles Stanish, Gregory E. Areshian, and Julie Nemer

External Members: Kusimba Chapurukha, Joyce Marcus, Colin Renfrew, and John Yellen

This book is set in 10.5-point Times New Roman, with titles in 28-point Mittelschrift.

Edited by Barbara Kohl

The image on the cover is showing a dromedary race between riders of the Beja Khatmayah tribe as part of a religious festival (photograph by Lucy Skinner, Suakin Project, 2004). Such events are treasured celebrations of Bedouin life.

Library of Congress Cataloging-in-Publication Data

The history of the peoples of the Eastern Desert / edited by Hans Barnard and Kim Duistermaat.

p. cm.

Proceedings of a conference held Nov. 25-27, 2008 at the Netherlands-Flemish Institute in Cairo.

1. Eastern Desert (Egypt)--Antiquities--Congresses. 2. Desert people--Egypt--Eastern Desert--History--Congresses. 3. Desert people--Egypt--Eastern Desert--Antiquities--Congresses. 4. Eastern Desert (Egypt)--Antiquities, Roman--Congresses. 5. Excavations (Archaeology)--Egypt--Eastern Desert--Congresses. I. Barnard, H. II. Duistermaat, Kim.

ISBN-13: 978-1-931745-96-3 (cloth)

DT137.E38H57 2012

932.3--dc23

2012023427

Copyright © 2012 Regents of the University of California

All rights reserved. Printed in the USA.

Table of Contents

PART 1

1.	Introduction to Part 1: From Adam to Alexander (500,000–2500 Years Ago)	2
	<i>H. Barnard</i>	
	The Eastern Desert.	4
	Outline of the Geology	6
	Early Human History	6
	The Eastern Desert in Pharaonic Times	14
	Some Editorial Remarks	20
	Everybody Needs an Editor	21
	Less Is More	22
	Kill Your Darlings	22
	Acknowledgments	23
2.	Contributions to the Prehistory of the Eastern Desert in Egypt	24
	<i>P.M. Vermeersch</i>	
	Lower and Middle Paleolithic Sites in the Eastern Desert	26
	Sodmein Cave	28
	Wadi Bili	29
	Bili Cave Area	31
	The ‘Out of Africa’ Migration of Modern Humans	31
	The Upper Paleolithic	32
	The Late Paleolithic	32
	The Epipaleolithic	33
	The Neolithic and the Predynastic	36
	El Gouna Shell Mound	37
	<i>Steinplätze</i>	39
	Rens Shelter	39
	Discussion	40
3.	The Holocene Prehistory of the Nubian Eastern Desert	42
	<i>M.C. Gatto</i>	
	Early Holocene Evidence	44
	Late Holocene Evidence	51
	Discussion	57

4.	The Journey to the Rock Art Gallery of Bir Nurayet (Sudan)	58
	<i>K. Pluskota</i>	
5.	Boat Petroglyphs in Egypt's Central Eastern Desert	66
	<i>F. Lankester</i>	
	Geographical and Historical Context	67
	Boat Petroglyphs: Typology	69
	Dating Boat Petroglyphs	70
	Naqada I Boat Motifs.....	71
	Naqada II Boat Motifs	73
	Naqada III Boat Motifs	73
	Pharaonic and Later Boat Motifs.....	74
	Overview of Sites with Boat Petroglyphs	75
	'Arms Raised' Figures	76
	Discussion	78
6.	Nomads at the Nile: Towards an Archaeology of Interaction	80
	<i>C. Näser</i>	
	The Archaeological Record of the Pan-Graves.....	81
	The Socio-Economic Constitution of the Pan-Grave People	84
	A Case Study of Two Painted Skulls.....	88
	Discussion: Towards an Archaeology of Interaction.....	89
7.	Gods in the Red Land: Development of Cults and Religious Activities in the Eastern Desert	90
	<i>A.D. Espinel</i>	
	The Nature of Religious Practices in the Eastern Desert	92
	The God Min (Pan)	94
	Falcon Gods in the Eastern Desert	98
	The Difficulties of Understanding Past Religious Beliefs	102
8.	Sinai in Egyptian, Levantine and Hebrew (Biblical) Perspectives	104
	<i>J.K. Hoffmeier</i>	
	Egyptian Terms for Sinai	108
	Hebrew Terms for Sinai.....	109
	Early Human Presence in Sinai	111
	Egyptian Economic Interests.....	111
	The Desert People	112
	Population Fluctuations in Sinai	116
	The Egyptian View of Sinai.....	117
	The Genesis Patriarchs in Sinai.....	119
	Forty Years in the Wilderness of Sinai	120
	Mount Sinai	122
	Discussion	124

9.	Vegetation and Management Regime Continuity in the Cultural Landscape of the Eastern Desert	126
	<i>G.L. Andersen</i>	
	Long-Term Vegetation Change and Continuity.	128
	Survival Strategies of Trees.	132
	Traditional Management Strategies of Nomadic Pastoralists.	134
	The Effects of Discontinuity of Management.	136
	Discussion and Conclusion	138
10.	The Eastern Desert Tombs and Cultural Continuity	140
	<i>K. Krzywinski</i>	
	The Eastern Desert and Its Peoples.	141
	The Ancient Sources on the Eastern Desert	142
	Ring Graves	143
	Disk-Shaped <i>Akerataheils</i>	144
	Fishtail <i>Akerataheils</i>	146
	Muslim Graves.	147
	Desert Grave Chronology	147
	Cultural Continuity in the Grave Monuments.	148
	Ring Graves and the Medjay Pan-Graves	150
	Blemmyes and Disk-Shaped <i>Akerataheils</i>	151
	Disk-Shaped <i>Akerataheils</i> , Blemmyes and Enigmatic Sites.	152
	Discussion	153
	A Note on Early Evidence for a Blemmy in the Eastern Desert	155
11.	The Desert Dwellers of Marmarica, Western Desert: Second Millennium BCE to First Millennium CE	156
	<i>A.-K. Rieger, T. Vetter and H. Möller</i>	
	Egyptian Desert Environments	157
	The Issue of the ‘Eastern Libyans’	159
	The Natural Landscape	161
	Archaeological Sources on the Dwellers of Marmarica	163
	The Cultural Landscape.	164
	Ancient Water and Soil Management in Agricultural Areas and Settlements	165
	Temporary Settlements, Water Supply Points and Rangelands	168
	Routes, Tracks, <i>Alaam</i> and Burials	170
	Drop-Sites and Northern Libyan Desert Ware	172
	Comparison Between Research in the Western and the Eastern Deserts	172

PART 2

12.	Introduction to Part 2: The Last 2500 Years	175
	<i>H. Barnard</i>	
	The Desert Today	181
	Beja Clans and Tribes	182
13.	The Eastern Desert during the Ptolemaic Period: An Emerging Picture	190
	<i>J. Gates-Foster</i>	
	The Ptolemaic Eastern Desert: Precedents, Sources and Evidence	191
	The Third Century BCE	196
	The Second and First Centuries BCE	199
	The Probable Role of Nomadic Groups in the Ptolemaic Eastern Desert	201
14.	Nabataeans in the Eastern Desert during the Roman Period	204
	<i>R.Z. Mohamed</i>	
	Nabataean Maritime Routes on the Red Sea	206
	Nabataeans in Egypt	208
	Nabataean Inscriptions from the Late Ptolemaic Period	209
	Nabataean Inscriptions from the Roman Period	209
	Wadi Hammamat (Between Qift and Quseir)	211
	Discussion	212
15.	Roman Gold Mining in the Eastern Desert: The Mining Settlement in Wadi Bakariya	214
	<i>B.J.M. Tratsaert</i>	
	The Prospecting and Exploration Phases	217
	The Development Phase	217
	The Exploitation Phase	221
	Discussion	224
16.	A Blemmy by Any Other Name...: A Study in Greek Ethnography	226
	<i>R.H. Pierce</i>	
	Ethnicity in the Eastern Desert	228
	The Megabaroi	228
	The Trog(l)odytes	228
	The Blemmyes	231
17.	Blemmyes, Noubades and the Eastern Desert in Late Antiquity: Reassessing the Written Sources	238
	<i>J.H.F. Dijkstra</i>	
	Previous Scholarship on the Society of Late Antique Lower Nubia	240
	The Problem of the Historical Sources of the 4th Century CE	241
	The Society of Northern Lower Nubia in the 5th Century CE	243

	The Blemmyes and the Eastern Desert	246
	Discussion	247
18.	On the Archaeology of the Native Population of the Eastern Desert in the First–Seventh Centuries CE.	248
	<i>G. Lassányi</i>	
	The Eastern Desert in the First–Third Centuries CE	249
	The Eastern Desert in the 4th–7th Centuries CE.	251
	The Desert Dwellers in the First–Third Centuries CE	252
	The Desert Dwellers in the 4th–7th Centuries CE	253
	Burial Customs in the 4th–7th Centuries CE	262
	The Material Culture and Economy of the Desert Dwellers.	265
	Discussion	267
19.	Results of Recent Mass Spectrometric Research of Eastern Desert Ware (4th–6th centuries CE)	270
	<i>H. Barnard</i>	
	Introduction to ICP-MS and GC/MS.	271
	Fingerprints of Eastern Desert Ware	275
	Organic Residues in Eastern Desert Ware.	279
20.	“You Shall Not See the Tribes of the Blemmyes or of the Saracens”: On the Other ‘Barbarians’ of the Late Roman Eastern Desert of Egypt	282
	<i>T. Power</i>	
	Historical Sources for Nomadic Arabs	283
	Archaeological Evidence for Nomadic Arabs.	285
	Sedentary Arabs and the Settlement at Shenshef	287
	Sedentary Arab <i>Foederati</i> on the Coast of Egypt?	294
	Sedentary Arab Merchants of the Red Sea	295
	Conclusion	297
21.	Invisible Monks, Human Eyes and the Egyptian Desert in Late Antique Hagiography	298
	<i>K.M. Klein</i>	
	Visible and Invisible Anchorites	300
	Discussion and Conclusion	309
	List of Abbreviations and Ancient Texts	309
22.	Desert Imagery: Bedouin, Monks, Demons and Hermits around Saint Anthony’s Monastery	312
	<i>J.C.M. Starkey</i>	
	The Monasteries in the Eastern Desert	313
	Dayr Mar Antonios al-Kabir	315
	Dayr Anba Bula	316
	The Desert	318
	Mobility of Monks.	318
	Nomadic Raids.	319

	Boundaries	319
	Multi-Resource Relationships	320
	Resource Procurement	320
	Managing Micro-Environments of the Desert	321
	Islands of the Blessed	322
	Pilgrimage	324
	Literary Treasure	324
	Wall Paintings	325
	Giving the Nomads an Identity	327
	Discussion and Conclusion	329
23.	Nomadism and the Monastic Life in the Eastern Desert of Egypt	332
	<i>M. Jones</i>	
	Monastery Resources Reserved for the Bedouin	335
	Caravans and Supplies from the Nile Valley	337
	Visitors and Pilgrims	342
24.	Towards Variability: Cultural Diversity in Economic Strategies of the Beja Peoples	344
	<i>P. Weschenfelder</i>	
	The Beja Peoples	346
	The Sources	349
	Ababda Variable Strategies in the 19th Century CE	349
	Developments in the Early 20th Century CE	351
	Cultural Variability in Economic Strategies	351
	Sociopolitical Institutions to Balance Economic Variability	352
	Sociopolitical Institutions Controlling Economic Strategies	353
	Decision Making towards Economic Strategies on Individual Levels	354
	Social Support for Individual Strategies	355
	Cultural Values Determining Individual Strategies	355
	Discussion	356
25.	The Documentation of the Cultural Heritage of the Bedouin of South Sinai: A Pilot Study in Serabit al-Khadim	358
	<i>M. Hanna, F. Keshk and S. Aboubakr</i>	
	The Archaeological Heritage of Serabit al-Khadim	360
	The Bedouin of South Sinai	364
	The Bedouin Image in Past and Present	365
	The Place and the Beginning	366
	The Female Bedouin of Serabit al-Khadim	366
	The Cultural Heritage and Development of Serabit al-Khadim	368
	Outline of the Pilot Study	368
26.	Nominating Suakin a World Heritage Site	372
	<i>M.D.S. Mallinson</i>	
	The History of Suakin	374
	Archaeological Research in Suakin	376
	The Future of Suakin	377

27.	The Establishment of a Transboundary Biosphere Reserve in Wadi Allaqi, Egypt	380
	<i>M. al-Aawah and C. De Simone</i>	
	Transboundary Biosphere Reserves	381
	Wadi Allaqi	381
	Establishing a Transboundary Biosphere Reserve in Wadi Allaqi	382
28.	Beja Innovation and Responses to Environmental Change in the Southeastern Desert of Egypt	384
	<i>A. Roe</i>	
	Adaptation and Change in Pastoral Societies	385
	The Physical Environment: From Desert to Lake	386
	The Human Environment	388
	Natural Resources and Desert Livelihoods	390
	Changing Resource Opportunities and Economic Adaptation	392
	Structural, Societal and Political Transitions	393
	Discussion	396
29.	Giving a Voice to the Ababda	398
	<i>M. Abdel-Qadr, W.Z. Wendrich, Z. Kosci and H. Barnard</i>	
	The Tribe of the Ababda	404
	Rainfall and Livestock	405
	Celebrations of the Ababda	405
	Herbal Medicines	407
	Geographical Names	408
	Interview with an Ababda Sheikh	408
	Ababda Music and Dancing	408
	Plays and Dances	410
	Biographies of the Singers	411
	Discussion	412
	Contents of the Media Files	414
30.	Sustainable Desert Tourism: A Tool for Competition	416
	<i>S.B. Hassan</i>	
	Definitions	418
	Features of Desert Travel	419
	Management of Desert Areas	420
	Travelers' Descriptions of the Western Desert	421
	Travelers' Descriptions of the Eastern Desert and the Sinai	423
	Profile of Current Tourism in Egypt's Deserts	423
	Discussion	426
31.	Concluding Remarks	428
	<i>J.L. Bintliff and H. Barnard</i>	
	The Eastern Desert	430
	Continuity and Change	435
	Mobility and Ethnicity	438

	Archaeology and Texts	439
	Insiders and Outsiders	440
	Towards an Explanatory Model	441
	Final Remarks	443
32.	Bibliography	445
	List of Figures	485
	List of Tables	491
	List of Contributors	492
	Index	493

List of Figures

- Figure 1.1: Location of the Eastern Desert and the Sinai Peninsula.
Figure 1.2: View of the Eastern Desert.
Figure 1.3: Schematic overview of the Paleolithic history of the lower and middle Nile region.
Figure 1.4: Possible 'Out-of-Africa' routes for anatomically modern humans.
Figure 1.5: Acheulian (Lower Paleolithic) stone tools from Wadi Abu Had.
Figure 1.6: Major prehistoric sites in the central Eastern Desert .
Figure 1.7: Upper Paleolithic blades from layers deposited in Sodmein Cave.
Figure 1.8: Movements of humans and domesticated animals 8000-2500 years ago.
Figure 1.9: Overview of the introduction of settled agriculture and ceramic technology.
Figure 1.10: Major movements of people into the middle Nile region during the last 2500 years.
Figure 1.11: Map of the central and southern Eastern Desert.
Figure 1.12: Part of a New Kingdom map of the Eastern Desert.
Figure 1.13: Typical Pan-Grave excavated in Sayala (Lower Nubia).
- Figure 2.1: Map of the Eastern Desert.
Figure 2.2: Nubian cores and a cordiform hand-axe.
Figure 2.3: View into the Wadi Sodmein gorge.
Figure 2.4: View of the trenches inside Sodmein Cave.
Figure 2.5: Profile of Sodmein Cave.
Figure 2.6: Artifacts from Sodmein Cave.
Figure 2.7: The Middle Paleolithic site of Wadi Bili.
Figure 2.8: View of the Bili Cave interior.
Figure 2.9: Position of the Tree Shelter (near Quseir).
Figure 2.10: The artifacts recovered from the deposits in the Tree Shelter.
Figure 2.11: Elkabian artifacts from the Tree Shelter.
Figure 2.12: Elkabian artifacts from Laqeita.
Figure 2.13: CalPal plot of calibrated radiocarbon dates from the Eastern Desert.
Figure 2.14: Comparison of a sherd from the Sodmein Neolithic with *Fischgratverzierte Keramik*.
Figure 2.15: Artifacts from Holocene sites in the Eastern Desert.
Figure 2.16: 'Steinplätze' in Wadi Bili.
Figure 2.17: CalPal plot of radiocarbon dates of Holocene sites from the Egyptian Red Sea area.
Figure 2.18: Large cave along the railway between Quseir and Qena.
- Figure 3.1: Map of the Nubian Eastern Desert.
Figure 3.2: Examples of decorations made with the rocker technique.
Figure 3.3: Examples of decorative types made with the alternating pivoting stamp technique.
Figure 3.4: Example of decorative type I2.
Figure 3.5: Pottery disk (Clayton disk) from site ED05-42.
Figure 3.6: The tumulus at Shaab Negema after cleaning.
Figure 3.7: Burnished rippled bowl from the Shaab Negema tumulus.
Figure 3.8: Bone awls from Shaab Negema.
- Figure 4.1: Map of northeast Sudan.
Figure 4.2: The caravan during our second journey.
Figure 4.3: The water well at Bir Wario.
Figure 4.4: Petroglyphs of long-horned cattle and men with bolas.

- Figure 4.5: Rock art panels in Wadi Diib showing pastoral scenes.
- Figure 4.6: Rock art scenes of cows being milked.
- Figure 4.7: Boulders near Gebel Magardi with representations of cattle.
- Figure 4.8: Elephant hunting scene on Gebel Magardi in Wadi Diib.
- Figure 4.9: Panel of rock art near Gebel Magardi showing obvious stratification.
- Figure 4.10: Gebel Magardi in Wadi Diib.
- Figure 4.11: Petroglyph in Wadi Aqumpt showing mounted dromedaries.
- Figure 5.1: Map of Egypt's Central Eastern Desert.
- Figure 5.2: Examples of boat types as found in the rock art of the Eastern Desert.
- Figure 5.3: Drawing on a piece of pottery representing a boat with a very high prow.
- Figure 5.4: Image of a boat surrounded by animals.
- Figure 5.5: A clay box with a decoration showing an incurved sickle boat.
- Figure 5.6: Example of a petroglyph of an incurved boat.
- Figure 5.7: Example of a Type 1 petroglyph.
- Figure 5.8: Example of a 'Type 1' sickle boat.
- Figure 5.9: Example of a Naqada III boat petroglyph.
- Figure 5.10: Example of a Pharaonic boat petroglyph.
- Figure 5.11: Composite drawing of the petroglyphs in Wadi Baramiya.
- Figure 5.12: Example of an 'arms raised' figure.
- Figure 6.1: Distribution of the Pan-Grave cemeteries.
- Figure 6.2: A typical Pan-Grave at Cemetery SJE47, Debeira.
- Figure 6.3: Superstructure of a Pan-Grave at Cemetery C, Aniba.
- Figure 6.4: Jewelry found at Pan-Grave Cemetery 3100/3200, Mostagedda.
- Figure 6.5: Typical Pan-Grave ceramics from Aniba.
- Figure 6.6: The identification of the animal horns found at Cemetery SJE47, Debeira.
- Figure 6.7: The anthropological analysis of the burials at Cemetery 3100/3200, Mostagedda.
- Figure 6.8: Tools found at Cemetery 3100/3200, Mostagedda.
- Figure 6.9: Decorated animal skulls found at Cemetery 3100/3200, Mostagedda.
- Figure 6.10: Decorations on two animal skulls found at Cemetery 3100/3200, Mostagedda.
- Figure 7.1: Middle Kingdom graffiti at Abu Kua' and the mountain ridge at al-Muwayh.
- Figure 7.2: Feathered divinities, ships and representations of Min-Pan.
- Figure 7.3: Map showing the location of the main *paneia* in the Eastern Desert.
- Figure 7.4: The *paneia* in Wadi Minayh and al-Buwayb.
- Figure 7.5: A falcon from al-Buwayb and graffiti at Wadi Midrik.
- Figure 7.6: The shelter of Huqab Karar and the *inselberg* of Huqab al-Askar.
- Figure 7.7: Map indicating sites with falcon graffiti.
- Figure 7.8: Falcon graffiti "made by the priest Herunefer" in Bir Murrat.
- Figure 8.1: Satellite image of Sinai.
- Figure 8.2: Map of the northeastern Nile Delta and northwestern Sinai.
- Figure 8.3: Map of the Sinai Peninsula.
- Figure 8.4: Line drawing of a relief by Pharaoh Seti I in the Temple of Karnak.
- Figure 8.5: Plan of a 'desert kite.'
- Figure 8.6: Plan of a stone encampment and the reconstruction of a tent camp.
- Figure 8.7: Relief discovered by the author at Tell al-Borg.
- Figure 9.1: Map of the research area.
- Figure 9.2: Traces of Holocene desert 'forests' in the Eastern Desert.
- Figure 9.3: Management of trees as depicted in the Egyptian New Kingdom and as seen today.
- Figure 9.4: Relative total recruitment and mortality of trees at a selection of sites.
- Figure 10.1: Map of the arid land between the Nile Valley and the Red Sea coast (Atbai).
- Figure 10.2: Examples of the various ring grave types.

- Figure 10.3: *Akerataheils* of various sizes.
- Figure 10.4: Schematic drawing of a skeleton found in Samadi, Sudan.
- Figure 10.5: Examples of fishtail *akerataheils*.
- Figure 10.6: A schematic typology for Eastern Desert grave monuments.
- Figure 10.7: Lines of continuity in the Eastern Desert.
- Figure 10.8: The Blemmye city of Nubt and the Berber-Suakin route.
- Figure 11.1: Map of northern Egypt, showing the location of the research area.
- Figure 11.2: The ecological gradient of Eastern Marmarica, Egypt.
- Figure 11.3: Ancient sites in Eastern Marmarica.
- Figure 11.4: Crosssectional terracing in Wadi Umm al-Ashtan.
- Figure 11.5: Embanked field (*karm*) in Umm al-Ashtan.
- Figure 11.6: Remains of water and soil harvesting structures in Wadi Umm al-Ashtan.
- Figure 11.7: Plan of the ancient settlement in Wadi Umm al-Ashtan.
- Figure 11.8: Remains of locally produced amphorae from coastal production sites.
- Figure 11.9: Site in Wadi Umm al-Ashtan with the remains of flint knapping.
- Figure 11.10: The campsite near the cistern at Abar Abu Imama.
- Figure 11.11: Stone arrowhead found on the surface at Abar al-Kanayis.
- Figure 11.12: The cistern site at Abar al-Kanayis.
- Figure 11.13: Examples of Northern Libyan Desert Ware.
- Figure 12.1: Graeco-Roman way-station associated with the quarries in Wadi Umm Wikala.
- Figure 12.2: Graeco-Roman gold mining settlement at al-Ghuzzah.
- Figure 12.3: Examples of Eastern Desert Ware.
- Figure 12.4: One of many prehistoric petroglyphs of giraffes at al-Hosh.
- Figure 12.5: One of several prehistoric petroglyphs of elephants at Abu Tanqara.
- Figure 12.6: Schematic section through the Eastern Desert.
- Figure 12.7: Drawing by Ababda Bedouin Sa'ad Mansour.
- Figure 12.8: A Beja coffee maker and its basketry container.
- Figure 12.9: Typical mat-house in northern Sudan.
- Figure 13.1: The Eastern Desert in its Egyptian context.
- Figure 13.2: Map showing the location of Meroe and the *Triakontaschoinus*.
- Figure 13.3: Map showing the Ptolemaic and Roman routes through the Eastern Desert.
- Figure 13.4: The inscription found at Bir 'Iayyan.
- Figure 14.1: Map showing the Nabataean heartland.
- Figure 14.2: Nabataean potsherd with Nabataean inscription.
- Figure 14.3: Map showing the location of Nabataean inscriptions.
- Figure 14.4: Nabataean inscription from Tell Shaqfia.
- Figure 14.5: Map showing the location of Nabataean graffiti dating to the Roman Period.
- Figure 14.6: Nabataean inscription in Bir Umm Dummerana.
- Figure 14.7: Nabataean inscription in Bir Umm Dalfa.
- Figure 14.8: Nabataean inscription in Bir Umm Enab.
- Figure 15.1: Location of the gold mining settlement in Wadi Bakariya.
- Figure 15.2: The seven areas of the Roman gold mining operation in Wadi Bakariya.
- Figure 15.3: View of Site 1 in Wadi Bakariya.
- Figure 15.4: View of Site 2 in Wadi Bakariya.
- Figure 15.5: The valley tentatively identified as a transport area in Wadi Bakariya.
- Figure 15.6: Ancient hut with a boat petroglyph in Wadi Bakariya.
- Figure 15.7: The ancient well near the gold mining settlement in Wadi Bakariya.
- Figure 15.8: The building identified as a shrine in Wadi Bakariya.
- Figure 15.9: One of the suburbs in Wadi Bakariya.
- Figure 15.10: Open-cast trenches typical for Wadi Bakariya.
- Figure 15.11: Entrance to the western shaft in the Wadi with the Two Shafts.

- Figure 15.12: Mining tools as described by Diodorus Siculus.
 Figure 15.13: Saddle quern and rotary quern found in Wadi Bakariya.
- Figure 18.1: Map of the area showing the sites mentioned in the text.
 Figure 18.2: Plan of two Early Roman burials near Hitan Rayan.
 Figure 18.3: Stone buildings in Bir Minayh
 Figure 18.4: Plan of the Late Roman settlement at Bir Nakheel.
 Figure 18.5: Plan of the Late Roman settlement at Bir Minayh.
 Figure 18.6: Plan of Hitan Rayan.
 Figure 18.7: Plan of the settlement in Khor Kalabsha.
 Figure 18.8: Satellite photograph of the ancient settlement at al-Garayat.
 Figure 18.9: Satellite photograph of the ancient settlement at Dababieh.
 Figure 18.10: A typical, high quality stone building in Nugrus.
 Figure 18.11: Comparison of the tentative temples in Wadi Sikait, Nugrus and Kab Marfu'a.
 Figure 18.12: Layout of the Late Antique burials in the Eastern Desert.
 Figure 18.13: Tumulus grave in Bir Minayh.
 Figure 18.14: Satellite photograph of the cemetery in Moalla.
 Figure 18.15: Tumulus grave in Moalla.
 Figure 18.16: Small altars or offering tables found at cemeteries.
 Figure 18.17: Arrowheads from Kalabsha, Sikait and Mouweis.
- Figure 19.1: Examples of Eastern Desert Ware from different production areas.
 Figure 19.2: Schematic representation of an ICP-MS instrument and a GC/MS instrument.
 Figure 19.3: Petrologic thin-sections of selected Eastern Desert Ware sherds.
 Figure 19.4: Abundance of 44 elements in 141 Eastern Desert Ware sherds.
 Figure 19.5: Scatter plot of the abundance of thulium and europium in selected sherds.
 Figure 19.6: The sherds for which the organic residues are discussed in this chapter.
 Figure 19.7: Selected fatty acid ratios in the 51 sherds analyzed in this study.
- Figure 20.1: The Eastern Desert in the Late Antique Period.
 Figure 20.2: The distribution of Nabataean inscriptions and Eastern Desert Ware.
 Figure 20.3: Possible Saracen settlements and a modern Bedouin winter residence.
 Figure 20.4: Plan of Shenshef and selected buildings at that site.
 Figure 20.5: Typology of Romano-Egyptian houses.
 Figure 20.6: Blemmyan housing types.
 Figure 20.7: Plans of different Arab housing types.
- Figure 21.1: Egypt in Late Antiquity.
- Figure 22.1: Front page and pages 256-260 of *Nouvelle relation en forme de journal d'une voyage en Égypte*.
 Figure 22.2: *Carte des déserts de la basse Thébaïde* (Claude Sicard).
 Figure 22.3: Satellite image showing the location of St Anthony's and St Paul's.
 Figure 22.4: Satellite image of St Anthony's.
 Figure 22.5: St Paul's seen from the east.
 Figure 22.6: Satellite image of St Paul's.
 Figure 22.7: Keep, monastic cells and the former entrance at St Anthony's.
 Figure 22.8: Palm gardens at St Paul's, mill and oil jars in St Anthony's.
 Figure 22.9: The Meeting of Saint Anthony and Saint Paul (Sano di Pietro, 1430).
 Figure 22.10: Wall painting in the Cave Church at St Anthony's.
- Figure 23.1: Map of Egypt and the northern part of the Eastern Desert.
 Figure 23.2: Aerial photograph showing St Anthony's in 1979.
 Figure 23.3: The garden of St Anthony's with the last *mirth* palm and the *fatuli* room.
 Figure 23.4: The outer walls of St Paul's.
 Figure 23.5: The windlass operating the *fatuli* at St Anthony's.
 Figure 23.6: The mill in the western mill room of St Paul's.

- Figure 23.7: Schematic cross-section and plan of a typical mill.
 Figure 23.8: Carved wooden hopper at St Paul's.
 Figure 23.9: Detail of the inscription on the hopper at St Paul's.
 Figure 23.10: Carved wooden hopper at St Anthony's.
 Figure 23.11: Detail of the inscription on the hopper at St Anthony's.
 Figure 23.12: Retired mill equipment in St Anthony's.
 Figure 23.13: Interior of the mill building at St Anthony's.
 Figure 23.14: Plans of the mill buildings at St Paul's and St Anthony's.
 Figure 23.15: Inscribed beam in the western mill at St Paul's.
 Figure 23.16: Vehicles bringing Coptic faithful to St Anthony's.
- Figure 24.1: Map showing the approximate territory of the major Beja tribes.
 Figure 24.2: Map of the Red Sea coastal area around Halaib.
- Figure 25.1: Map of the lower Nile Valley and the Sinai Peninsula.
 Figure 25.2: Plan of Serabit al-Khadim and its environs.
 Figure 25.3: Three-dimensional reconstruction of the Temple of Hathor at Serabit al-Khadim.
 Figure 25.4: Camp Barakat with one of the young Bedouin who help around the camp.
 Figure 25.5: Umm Mukhtar displaying the intricate handiwork of Bedouin women.
 Figure 25.6: A group of eager young Bedouin children on their way to an educational session.
- Figure 26.1: Satellite image of northeast Sudan, showing Suakin.
 Figure 26.2: Map of the wider environs of Suakin.
 Figure 26.3: The Shafai Mosque in Suakin during restoration work in the spring of 2010.
 Figure 26.4: Map of Suakin, showing the main structures on the island and the mainland.
- Figure 27.1: Map of Egypt showing the location of the Wadi Allaqi Biosphere Reserve.
- Figure 28.1: The location of Wadi Allaqi.
 Figure 28.2: Recorded maximum and minimum water levels in Lake Nasser.
 Figure 28.3: Traditional routes of migration for the pastoral nomads in the Wadi Allaqi region.
 Figure 28.4: Cycle of forage resource availability in the Wadi Allaqi region.
 Figure 28.5: The recently modified cycle of forage resource availability.
 Figure 28.6: Bedouin life in the Wadi Allaqi area at the beginning of the 21st century CE.
- Figure 29.1: Map of the territory of the Ababda.
 Figure 29.2: Mohamed Gama'a filling out an object form.
 Figure 29.3: The wife and child of Mohamed Eid in their camp.
 Figure 29.4: The friends of Ahmad Abdel-Rahman on their way to slaughter a sheep.
 Figure 29.5: Two family members of Mustafa Abdel-Qadr.
 Figure 29.6: A drawing by Sa'ad Mansour showing the dreamscape of Ababda men.
 Figure 29.7: Drawing by Mohamed Gama'a showing men hunting in their pick-up trucks.
 Figure 29.8: Selected objects in the Beyt Ababda Museum.
 Figure 29.9: The tomb and mosque of Sheikh Shazli.
 Figure 29.10: The Beyt Ababda Museum in Wadi Gamal.
 Figure 29.11: Ababda men singing and dancing.
 Figure 29.12: Ali Gama'a playing the *tanboura*.
 Figure 29.13: Ababda girls dancing.
 Figure 29.14: Ababda men singing and dancing.
 Figure 29.15: Ababda men dancing *shakreeb*.
 Figure 29.16: Ababda men dancing *hosheeb*.
 Figure 29.17: Eid Abdel-Qadr.
 Figure 29.18: Hassan and this family.
 Figure 29.19: Mahmed Abu al-Hawa.
 Figure 29.20: Mohamed Gama'a Mahmud.

- Figure 30.1: Relationships among various elements in desert tourism.
- Figure 30.2: Preferred language and destination of desert tourists traveling in Egypt.
- Figure 30.3: Age distribution and group size of tourists and guides education during desert trips.
- Figure 30.4: Guide experience, trip duration and awareness of environmental laws during desert trips.
- Figure 30.5: Procedures for protection, assessment of the application of laws and procedures, and awareness of tourism among the local population during desert trips.
- Figure 30.6: Infrastructure, tourist services, and tools for waste disposal during desert trips.
-
- Figure 31.1: Dr R.P. Cleveringa and the Academy Building in Leiden in November 1940.
- Figure 31.2: Map of the Eastern Desert.
- Figure 31.3: Site distribution in the northeastern Sahara.
- Figure 31.4: One of a series of petroglyphs depicting bovids and boats in the Eastern Desert.
- Figure 31.5: A Graeco-Roman gold processing settlement and way-station.
- Figure 31.6: Prehistoric petroglyphs of giraffes and elephants between Aswan and Edfu.
- Figure 31.7: Spatial change in Palestine between 1800 and 1914 CE.
- Figure 31.8: Conference participants engaged in a discursive seminar.

List of Tables

- Table 1.1: Schematic overview of the main geological features in the Eastern Desert.
Table 1.2: Schematic overview of the history of the lower and middle Nile region.
- Table 3.1: Comparative chart of the Nubian Holocene chronological sequence.
Table 3.2: Eastern Desert fabrics compared with those from surrounding regions.
Table 3.3: Eastern Desert decorative types compared with those from surrounding regions.
Table 3.4: Tentative dating of decorated pottery types at Nabta Playa and Kerma.
- Table 5.1: Number of sites identified in each valley (*wadi*) in the survey area.
Table 5.2: Boat petroglyphs in the Central Eastern Desert separated by type and feature.
Table 5.3: Chronology of the late prehistoric periods in the Upper Egyptian Nile Valley.
Table 5.4: The number of sites and boat petroglyphs of different periods per valley (*wadi*) in the survey area.
Table 5.5: The number of sites with human figures and the number of human figures per valley (*wadi*) in the survey area.
Table 5.6: Distribution of ‘arms raised’ figures by region.
- Table 10.1: Radiocarbon dates of human remains from intrusive burials in *akerataheils*.
- Table 11.1: Overview of the dates of soil samples from Wadi Umm al-Ashtan and Wadi Megid.
- Table 12.1: The correlation between selected years the Islamic lunar calendar and the Western solar calendar.
Table 12.2: Overview of the Beja clans and tribes.
- Table 13.1: Chronology of rulers and periods mentioned in the text.
- Table 18.1: Overview of the discussed ‘enigmatic’ sites in the Eastern Desert from north to south.
Table 18.2: Grave types in the Eastern Desert.
- Table 19.1: Overview of the sites where Eastern Desert Ware has been found.
Table 19.2: Arabic vernacular terms for clay.
Table 19.3: Average abundance of 44 elements in 141 Eastern Desert Ware sherds.
Table 19.4: Average abundance of cobalt, cerium, samarium, europium and thulium in selected sherds.
- Table 24.1: Glossary of important legal and social terms used by the Beja.
- Table 27.1: The biosphere reserve concepts.
- Table 28.1: Attributes of the principal Eastern Desert herd species.
Table 28.2: Reported resource ownership, management and use in Wadi Allaqi.
Table 28.3: Highly valued forage resources in upstream Wadi Allaqi.
Table 28.4: Principal pasture species in downstream Wadi Allaqi.
Table 28.5: Highly valued medicinal plants collected for use or sale.
- Table 29.1: The audio files with this chapter.
Table 29.2: The video files with this chapter.
- Table 31.1: The two alternating modes of demography in marginal regions.

List of Contributors

M. Abdel-Qadr, Ababda Bedouin (Egypt)
S. Aboubakr, Anthropologist, Center for Documentation of Cultural and Natural Heritage (Egypt)
M. al-Aawah, UNESCO Cairo Office (Egypt)
G.L. Andersen, Researcher, Uni Research, Bergen (Norway)
H. Barnard, Adjunct Professor and Assistant Researcher, Cotsen Institute of Archaeology
J.L. Bintliff, Professor, Leiden University (the Netherlands)
A.D. Espinel, Spanish National Research Council, Madrid (Spain)
C. De Simone, UNESCO Cairo Office (Egypt)
J.H.F. Dijkstra, Professor, University of Ottawa (Canada)
K. Duistermaat, Director, Netherlands Flemish Institute in Cairo (Egypt)
J. Gates-Foster, Professor, Department of Classics, University of Texas at Austin (USA)
M.C. Gatto, Assistant Research Scholar, Yale University (USA)
M. Hanna, Postdoctoral Fellow, Humboldt University Berlin (Germany)
S.B. Hassan, Professor, Faculty of Tourism and Hotels, Fayum University (Egypt)
J.K. Hoffmeier, Professor, Trinity International University (USA)
M. Jones, American Research Center in Egypt
F. Keshk, Archaeologist and Guide (Egypt)
K.M. Klein, Lecturer, University of Bamberg (Germany)
Z. Kosci, Independent Photographer, Amsterdam (the Netherlands)
K. Krzywinski, Professor, University of Bergen (Norway)
F. Lankester, Graduate Student, University of Durham (UK)
G. Lassányi, Curator, Aquincum Museum, Budapest (Hungary)
M.D.S. Mallinson, Restoration Architect (London)
H. Möller, Professor, University of Leipzig (Germany)
R.Z. Mohamed, Curator, Nubian Museum, Aswan (Egypt)
C. Näser, Junior Professor, Humboldt University Berlin (Germany)
R.H. Pierce, Professor Emeritus, University of Bergen (Norway)
K. Pluskota, Archaeologist (Sweden)
T. Power, Graduate Student, University of Oxford (UK)
A.-K. Rieger, Researcher, Martin-Luther-University Halle Wittenberg (Germany)
A. Roe, Research Adjunct, Charles Darwin University (Australia)
J.C.M. Starkey, Honorary Research Fellow, Durham University (UK)
B.J.M. Tratsaert, Graduate Student, University of Gent (Belgium)
P.M. Vermeersch, Professor Emeritus, Catholic University Leuven (Belgium)
T. Vetter, Professor, University of Greifswald (Germany)
W.Z. Wendrich, Professor, University of California, Los Angeles (USA)
P. Weschenfelder, Graduate Student, Humboldt University Berlin (Germany)

Index

Note: Page numbers followed by the letters *f* and *t* indicate figures and tables, respectively.

A

- Aawah, Mohamed al-, 381–383
Ababda, 346–349, 399–414
archaeologists working with, 399–404, 401*f*
audio and video recordings of, 414, 414*t*
dances of, 406–407, 408, 410–411, 410*f*
distribution of, 346, 348, 389, 404
drawings and photographs by, 400, 401*f*
dwellings of, 388–389, 403
economic strategies of
in 19th century, 349–351
agriculture in, 392–393
Aswan High Dam's impact on, 389–396
herding in, 389, 391–393, 405
at individual level, 354–355
modern, 354–355, 389, 405
sources of information on, 349
first-hand account of culture of, 404–408
future of, 413–414
geographical names used by, 405, 408
herbal medicines of, 394–395, 407–408
language of, 349, 388
lineage groups of, 388
maps of territory of, 347*f*, 399*f*
migration of, 391, 391*f*, 394
museum exhibits of material culture of, 400–404, 402*f*, 403*f*
music of, 408–412, 409*f*, 410*f*
origins of, 348–349, 404–405, 408
overview of culture of, 346–349
resource ownership, management, and use by, 390–391, 390*r*, 394
and Saint Paul's Monastery, 328
sedentary population of, 389
social organization of, 388, 394–396
in Wadi Allaqi, 382, 388–396
wedding celebrations of, 405–407
women, 394–395, 403, 406
Abad, 348–349
Abar Abu Imama, temporary settlements in, 168–169, 170*f*
Abar al-Kanayis
pottery at, 172, 173*f*
temporary settlements in, 169–170, 171*f*
abdel-Magid, Anwar, 143
Abdel-Qadr, Eid, 404, 412, 412*f*
Abdel-Qadr, Mustafa, 401*f*, 404–408
Abdel-Rahman, Ahmed, 401*f*, 404
Abinnaeus, Archive of, 235–236, 251–252
Abkan tradition, 52–53, 56
Aboubakr, Sara, 359–370
Abraham (biblical figure), 119–120
abriq, 402, 402*f*
Abu al-Hawa, Mahmed, 412, 413*f*
Abu al-Makarim, 316, 323, 324
Abu Ghusun, Paleolithic artifacts in, 28
Abu Hamed, Early Holocene sites near, 46, 50
Abu Lughod, L., 367
Abu Mohamed, Radwan, 365
Abu Quraya, Blemmyes in, 155
Abu Tanqara, elephant petroglyphs at, 181*f*
Abylloi, 231
acacia(s)
in Hebrew Bible, 123
survival strategies of, 132–134
Acacia tortilis
as key species to pastoral nomads, 132–133
subspecies of, 132*n*
survival strategies of, 132–134
acculturation
of Blemmyes, 259
of Pan-Grave People, 87–89
in Roman Egypt, 251, 259
Achaemenid Kingdom, 191–192
Adams, W. Y., 15
Adulis Inscription, 199
Aelianus, Claudius, 230
Aelius Gallus, 207, 234
Africa, migration out of, 7, 10*f*, 11, 25, 31–32
African Humid Period, 129–131, 134
afsha, 389
Agatharchides of Cnidus
on elephants, 197
on gold mining, 198, 217, 221, 224
lifestyle names used by, 228
on Megabaroi, 228
On the Erythrean Sea, 195
on Troglodytes, 151–152, 230, 231
agriculture. *See also* farmers
in economic strategies
of Ababda, 392–393
of Beja, 351–356
in Gash Delta, development of, 351, 352
introduction of, 11–13, 13*f*
around Lake Nasser, 392–393
in Marmarica, water and soil management in, 165–168, 165*f*, 166*f*, 167*t*
private ownership of land in, 390
A-group tradition, 52–53, 56
AHDLDA. *See* Aswan High Dam Lake Development Authority
Ahmed, Isa, 404
Ain Qadis, in Hebrew Bible, 121
Ain Qudeirat, in Hebrew Bible, 121–122
air travel, to monasteries, 342
akerataheils, 143–155. *See also specific types*
cultural continuity in, 149–155, 150*f*
dating of, 147–148, 150, 150*t*
definition of, 143
design of, 143–147, 262–263
distribution of, 143–144, 146
intact vs. plundered, 145
intrusive burials in, 150, 150*t*
typology of, 143–147, 147*f*
Akhmin, Min in, 95
alam (pl. alaaam), in Marmarica, 172
Alexander the Great
death of, 176
Egypt conquered by, 176, 191, 192
fortifications of, 196
Alexandria
establishment of, 191
revolts in, 200
wealth from trade in, 207
Ali Betai, 351
Ali Jalan, 348
altars, in Late Roman cemeteries, 265, 266*f*
alternating pivoting stamp technique, 48–50, 49*f*, 51
Amalekites, in Hebrew Bible, 121, 122, 124
Amara, geographical list from temple at, 118, 119
Amarar
distribution of, 346
economic strategies of, 353
in journey to Bir Nurayet, 60
amara rights of use, 352–353
Amarat, distribution of, 328
Amarin, distribution of, 328
Amenemhat II (pharaoh), annals of, 85
Amenemhat III (pharaoh), inscriptions of, 115
Amennakte, map drawn by, 17, 18*f*
American Research Center in Egypt (ARCE), 325*n*, 333
Ammianus Marcellinus
on Blemmyes, 242–243, 243*n*10
on Saracens, 294
Ammon (abba), 309
Ammonii Monachi Relatio, 294
Amon (god), 94
Amorkesos (Saracen chief), 295
Amose (pharaoh), 16
Amr, Ali, 404
Amrab, economic strategies of, 353
'Amr bin al-'As, 296
anchorites. *See* Christian ascetics and hermits
Andersen, Gidske L., 127–139
Aniba, falcon god graffiti in, 98
animal(s). *See also specific types*
Abada songs about, 408–409
changes to distribution of, 181, 436–437
domesticated, arrival and spread of, 11–13, 12*f*, 14, 37, 432 (*See also* animal herding; pastoral nomads)
management of, 322
medicinal use of, 407–408
in petroglyphs (*See* petroglyphs)
types of, 322
animal hair
identification of, 400
in ropes, 267
in Tabernacle, 123
animal herding and husbandry
diet of livestock, 149, 389*r*, 391, 391*t*, 392, 392*t*
in economic strategies
of Ababda, 389, 391–393, 405
of Beja, 350–356
of Pan-Graves, 85
location of, 149
origins of, 11–13, 12*f*, 14, 432
species involved in, 346, 354, 389, 389*r*
traditional strategies of management of, 134–136
in Wadi Allaqi, 389, 391–393, 391*t*, 392*f*, 393*f*
Ankhtifi of Mo'alla, 84–85
Ankh-wennefer (king), 199
'Antara bin Shadad al-'Absi, 296
Antony (Anthony), Saint. *See also* Saint Anthony's Monastery
alternative names for, 315
birth of, 315
death of, 309, 316
and Macarius the Great, 318
meaning of desert to, 303
in origins of asceticism, 299–300, 309, 315–316
paintings of, 325–326, 326*f*
reasons for moving to desert, 300, 303–304, 316
relics of, 316, 324
in Saint Anthony's Cave, 324
and Saracens, 285, 327
on vision, 308

- visits to civilization, 301, 304
- Apollo (abba), 300, 308
- Apollodorus, 230, 231
- Appion of Syene, 243
- Aqualithic Age, 432
- aquifers, 4, 182, 182*f*. *See also* water resources
- Arab(s)
- courtyard houses of, 292, 293*f*
 - definition of, 182*n*
 - evolution of term, 182*n*
 - first appearance in Eastern Desert, 283
 - in Late Roman Egypt, 283–297
 - as foederati, 294–295
 - nomadic, 283–287
 - as Saracens, 283
 - sedentary, 283, 287–297
 - use of term, 182*n*, 283
- Arabia, as name for Sinai Peninsula, 110–111
- Arabia Nova, historical sources on, 284
- Arabic language
- Ababda use of, 388
 - transliteration systems for, 20, 20*n*4, 20*n*5
- ARCE. *See* American Research Center in Egypt
- archaeological record. *See also specific peoples, periods, and sites*
- connection between historical sources and, 19, 141
 - lack of, *vs.* evidence of absence, 143
 - limitations of, 4, 143, 187–188, 431, 439–440
- archaeology
- of Egypt, rise of, 435–436
 - of interaction, 89
 - of mobility, 13–14, 443
- architecture
- domestic (*See* dwellings)
 - Red Sea style of, in Suakin, 373–374, 376, 378
 - of Sinai Peninsula, 112–114, 117, 118*f*
- aridity gradient, 130–132
- 'arms raised' figures
- in boat petroglyphs, 77–78
 - dating of, 72
 - definition of, 76, 77*f*
 - distribution of, 76–77, 77*t*
- arrowheads
- Neolithic, 38, 38*f*, 39
 - Roman Period, 267, 268*f*
- Arsenius (abba), 305–306, 308
- art. *See* mobiliary art; paintings; rock art
- Artaxerxes III, conquest of Egypt by, 193–194
- Artemidorus, 228
- artifacts. *See specific periods and types of artifacts*
- Artiga, 376
- ascetics. *See* Christian ascetics
- aseedah, 186
- Ashebab, distribution of, 388
- Ashkeit, Pan-graves in, 18, 86
- Ashmolean Museum (Oxford), boat motifs in works at, 71, 71*f*, 72, 72*f*
- Assemani, Giuseppe Simone, 314, 325
- Aswan clay, 275
- Aswan High Dam, changes caused by
- to Beja economic strategies, 385, 389–396
 - to Beja migration patterns, 391, 391*f*, 394
 - to environment and natural resources, 385, 387–388, 390–396
- Aswan High Dam Lake Development Authority (AHDLD), 388
- Aswan-Kom Ombo Archaeological Project, 54
- Atbai. *See* Nubian Eastern Desert
- ateliers, Paleolithic, 27
- Aterian points, 33
- Athanasius, *Life of Antony*
- authorship of, 299*n*3
 - on demons, 305
 - on gardens of monastery, 323
 - influence of, 299–300, 299*n*3, 329, 333–334
 - on motivations of Antony, 303–304, 316
 - on Saracens, 285, 327
- Athenaeus of Naucratis, 155
- audio recordings, of Ababda, 414, 414*t*
- Augustine, Saint, 308, 308*n*74
- Augustus (Roman emperor), 207, 249
- Auwdid, Mohamed, 404
- Avner, U., 113
- awaani, 402, 402*f*, 406
- Awlad Said, distribution of, 365
- Ayayde, distribution of, 328
- Aydhah, 375
- B
- Baaijens, Arita, 59, 59*n*
- Badarian tradition, 56, 71
- Bahariya Oasis, 422
- Bailey, Clinton, 365
- Ballah Lakes, 106
- Ballana Culture, 16
- Bani Wasil, distribution of, 365
- Banu Kanz
- vs.* Exodus story, 181, 438
 - origins of, 180
 - overview of history of, 180–181
- Barakat family, 365, 365*f*, 366, 367–368
- Baratit, 155, 251
- barbarians
- Blemmyes as, 155, 235, 236, 442
 - definition of, 155
 - use of term, 155, 335
- Barge, Johannes Antonius James, 429
- Barnard, Hans, 3–23, 176–188, 271–281, 319, 320, 321, 399–414, 429–444, 443*f*
- Barnes, Timothy, 299*n*3
- bartering
- Khor Daud as market for, 64
 - by pastoral nomads, 13
- Barth, Heinrich, 349
- Bar-Yosef, O., 112
- bayt al-bursh, 186, 187*f*, 388–389, 403
- beads
- Late Holocene, 52, 53
 - Late Roman, 267
- Bedouin. *See also specific sites and tribes*
- cultural heritage of, 359, 368
 - economic strategies of, 386
 - Egyptian view of, 117
 - future of, 443–444
 - meaning of term, 318, 365–366
 - monasteries' relationship with (*See* monasteries)
 - at NVIC conference, 3, 443
 - origins of term, 117
 - relationships among tribes of, 237
 - of South Sinai (*See* Serabit al-Khadim)
 - in trade, in Ptolemaic Period, 202
 - use of term, 6, 313, 318
 - vegetation management by, 123, 134, 136, 137, 322
 - water sources of, 122
 - women, 366–368, 369
- Beegle, D., 109
- Beer-Sheva, Genesis patriarchs in, 119, 120
- Beit-Arieh, I., 115
- Beja. *See also specific sites and tribes*
- ancient roots of, 142, 149, 154–155
 - Blemmyes' connection to, 153, 236–237, 267, 438
 - boundaries of territory of, 286–287
 - climate of territory of, 346
 - cultural continuity of, 153–155
 - among tribes, 347–349
 - with Blemmyes, 153, 237, 267, 438
 - debate over theories of, 187, 438
 - graves in, 149, 153
 - diet of, 186, 267
 - distribution of, 142, 142*f*, 346, 347*f*, 348*f*
 - dromedaries used by, 182, 185*f*
 - dwellings of, 186–187, 187*f*
 - economic strategies of (*See* economic strategies)
 - glossary of key terms of, 352*t*
 - graves of (*See* akeraataheils)
 - historical record of, 149, 434–435
 - in journey to Bir Nurayet, 59, 60–62, 61*f*
 - languages of, 182, 346–347, 388, 435
 - maps of territory of, 347*f*, 348*f*
 - member tribes and clans, 142, 183*t*–184*t*, 346, 388, 435*n*
 - migration of, seasonal, 346, 391, 391*f*, 394
 - modern history of, 182–188
 - as multi-resource nomads, 435
 - overview of history of, 434–435
 - religious practices of, 268, 388
 - in Roman Period, 267–269
 - as slaves, 296, 297
 - tree management by, 134, 135, 136
 - use of term, 237, 267, 440
- Beja Culture, Early, 267
- Belgab, economic strategies of, 353
- Belgian Middle Egypt Prehistoric Project, 25, 26
- Bell, J., 314
- Belon du Mans, Pierre, 313
- Beni Amer, distribution of, 346
- Beni Ouasal, economic strategies of, 350
- Beni Suef, and Saint Anthony's Monastery, 337–338
- Berber-Suakin route, 153, 154*f*
- Bered, in Hebrew Bible, 120
- Berenike
- Ababda in, 399–400
 - diet at, 267
 - Eastern Desert Ware at, 266
 - links with Shenshef settlement, 287
 - ring-cairn graves in, 152
 - visitor's center at, 400
- Berenike-Coptos route, 215
- Bernard, A., 251*n*2
- Beshari'ab, economic strategies of, 352
- Beyt Ababda Museum, 402*f*, 403–404, 403*f*
- B-Group tradition, 52–53
- Bible. *See* Hebrew Bible
- Bietak, M., 116*n*
- bifacial retouching, in Neolithic, 36, 37, 38*f*
- Bili Cave, 31, 31*f*
- Bintliff, John L., 429–444
- Biography of Weni, 18
- biosphere reserves
- core concepts of, 383*t*
 - definition of, 381
 - functions of, 381
 - Seville Strategy for managing, 381
 - transboundary, 381–383
 - Wadi Allaqi as, 381–383, 388
- Bir Abu Mukhayat, temporary settlements in, 170
- Bir 'Iayyan, inscription at, 197, 198–199, 198*f*, 200
- Bir Minayah
- enigmatic settlements in, 253, 254*f*, 255–256, 255*f*
 - grave goods in, 265, 266*f*
 - types of graves in, 262, 264*f*, 265
- Bir Nakheel
- enigmatic settlements in, 253, 255*f*
 - Nabataean inscriptions in, 211
- Bir Nurayet, 59–65
- journey to, 59–62, 60*f*, 61*f*
 - petroglyphs in, 62–65, 62*f*, 63*f*, 64*f*
- Bir Umm Bummerana, Nabataean inscriptions in, 209–210, 210*f*
- Bir Umm Dalfa, Nabataean inscriptions in, 210, 211*f*
- Bir Umm Enab, Nabataean inscriptions in, 210, 211*f*
- Bir Umm Fawakhir
- diet at, 267
 - gold mining operation in, 215*n*, 260
- Bishar, 348
- Bisharin
- distribution of, 348*f*
 - economic strategies of
 - in 19th century, 350–351
 - in early 20th century, 351
 - at individual level, 354–355
 - modern, 353, 354–355, 389
 - sociopolitical institutions in, 353
 - in journey to Bir Nurayet, 60
 - lineages of, 347–348
 - overview of culture of, 347–348
 - in Wadi Allaqi, 382, 388–396, 395*f*
- Bisharin Umm Ali
- economic strategies of, 353
 - overview of culture of, 347–348
- Bisharin Umm Nagi, overview of culture of, 347–348

- Blackman, W., 305
 blades, Paleolithic stone, 11, 12*f*, 32
 Blemmyes
 acculturation of, 259
 as barbarians, 155, 235, 236, 442
 Beja connection to, 153, 236–237, 267, 438
 boundaries of territory of, 286–287
 cultural continuity of, 151–154, 237, 267, 438
 debate over meaning of term, 231, 246–247, 267
 and disk-shaped akeraheils, 151–153
 distribution of, 142*f*, 231, 239
 dwellings of, 290–291, 291*f*
 early evidence for presence of, 155
 Eastern Desert Ware associated with, 151, 180, 247
 economic strategies of
 herding in, 149
 mining in, 244, 246
 enigmatic settlements of, 152–153, 258–259, 287
 etymology of name, 231–232
 as Graeco-Roman construct, 153–154
 as heterogeneous ethnic group, 246–247
 historical sources on
 Graeco-Roman, 149, 151, 197, 231–237
 inside, 236, 237, 241, 241*n*6, 244–245
 Late Antique, 239–247, 285
 overview of, 180
 Ptolemaic, 197, 232–233
 as pastoral nomads, 237
 religious practices of, 244, 268
 in Roman Egypt
 diplomatic relations with, 251–252, 295
 federate status for, 243–244
 Graeco-Roman sources on, 234–236
 Late Antique sources on, 240–244
 in military conflicts, 251, 252, 295
 social organization of, as chiefdom, 245, 259, 268–269
 subgroups of, 237
 transition to settled living, 241–244, 247
 use of term, 313, 440
Blomyomachia, 243*n*11
 boat models, 73
 boat petroglyphs, 67–78, 433*f*
 ‘arms raised’ figures in, 77–78
 dating of, 70–71, 70*r*, 75–76, 76*r*, 78
 historical context for, 67–69, 432
 limitations of research on, 68–69
 location of, 67, 68, 68*f*, 68*t*
 prevalence of, 68, 432
 stylistic comparisons of motifs of, 71–76
 typology of, 69–70, 70*f*, 71*r*
 in Wadi Bakariya, 219, 219*f*
 Boethos (official), 200, 201, 202
 Bokari I, 215
 Bokari II, 215
 Bolgioi, 231
 Bolling oscillation, 32, 32*n*
 Bolman, E. S., 314
Book of Might, 325
 Bostra, Nabataeans in, 206
 bovids. *See specific types*
 British colonial period, economic strategies of Beja during, 351
 British Museum (London), boat motifs in works at, 73
 Bronze Age, Early, Sinai Peninsula during
 desert people of, 113–115
 early humans in, 111
 Egyptian economic interests in, 111–112
 Bronze Age, Late, Sinai Peninsula during, 115
 Bronze Age, Middle, Sinai Peninsula during, 115
 Brown, Edward, 337
 Browning, Robert, 22
 Bruce, James, 377
 Buhen, falcon god graffiti in, 98–99
 Buja, Blemmyes’ connection to, 236, 237
 bunds, 168–169, 169*n*
 buqrah, al-, 406–407, 411*n*12
 Burekhardt, J. L., 320–321, 328, 374, 377
 burial structures. *See grave(s); specific types*
 Burton, Richard, 319, 321, 328
 Bush, monastery in, 321
 Buwayb, al-, *paneion* in
 falcon gods in, 98, 99, 99*f*
 Min in, 96–98, 97*f*
 Byzantine Egypt. *See Roman Egypt*
 Byzantine Institute Expedition, 336, 342
 C
 cabins, in boat petroglyphs, 69, 70*r*
 cairns
 definition of, 217*n*3
 in gold mining settlements, 217
 in Sinai Peninsula, 113
 calciform (tulip) beaker, 56
 calendars, Islam lunar vs. Western solar, 177*t*
 Cambyses (Persian king), 192
 camels
 one-humped (*See dromedaries*)
 species of, 20*n*3
 use of term, 20
 Cameron, Averil, 299*n*3
 Campaign to Save the Monuments of Nubia, UNESCO, 56, 65
 Camp Barakat, 365, 365*f*, 366
 Camus, Albert, 299
 Canaan
 architectural features in, 112–113
 Egyptian economic interests in, 111, 114, 117
 Genesis patriarchs in, 119–120
 Israelites’ arrival in, 116
 population fluctuations in, 116
 religious installations in, 113
 canals, in Sinai Peninsula, 106, 106*f*
 caravanserai, 170
 caravan trade. *See also trade*
 Beja in, 350–351
 Nabataeans in, 205, 206
 Carignano, 374–375
 Carne, J., 325
 car travel, to monasteries, 342–343, 343*f*
 Castiglioni, Alfredo, 44
 Castiglioni, Angelo, 44
 cattle
 arrival in North Africa, 11–13, 432
 diet of, 149
 domestication of, 13
 in Neolithic, 36, 37, 39
 in Pan-graves, 82, 83*f*, 85, 85*f*
 petroglyphs of, 432, 433*f*
 in Bir Nurayet, 62–64, 62*f*, 63*f*
 shift away from, 149
 and pottery decorations, 51
 caves. *See also specific sites*
 future research in, 40
 in Western vs. Eastern Desert, 43
 Cawarmah, distribution of, 365
 Central Eastern Desert. *See also specific sites*
 petroglyphs in
 boat, 67–78
 history of exploration of, 67–68
 location of, 67, 68, 68*f*
 Centre for Documentation of the Cultural and National Heritage of Egypt (CULTNAT), 359
 Centro di Ricerche sul Deserto Orientale (CeRDO), 44, 47, 52
 ceramics. *See pottery*
 CeRDO. *See Centro di Ricerche sul Deserto Orientale*
 Chalcolithic Period, Sinai Peninsula during
 desert people of, 113–114
 early humans in, 111
 Egyptian economic interests in, 111
 charcoal
 production of
 commercial, 136, 137–138
 in economic strategies of Beja, 353
 traditional, 136, 137, 353
 vegetation and climate history revealed in, 130
 Chartier-Raymond, M., 360
 Cherry, Peter, 68
 Chester, Grenville, 314
 chiefdoms, of Blemmyes, 245, 259, 268–269
Chorographia (Mela), 234
Chrestomathia Straboniana, 228–229
 Christ, time spent in desert, 303
 Christian ascetics and hermits, 299–309
 alternatives to desert living for, 304–305, 307–309
 biographies of, 302–303
 challenges facing, 300–302, 305–306
 death of, 306–307
 at enigmatic settlements, 287
 eye control by, 307–309
 location of major sites of, 301*f*
 metaphorical meaning of desert to, 318, 329
 origins of, 299–300, 303–304, 315–316
 outside visitors to, 302, 304, 305–306, 307
 overview of history of, 177
 persecutions of, 306
 prevalence of, 299–300, 304
 reasons for moving to desert, 300, 303–305
 rise of, 299–300, 316
 Christian burials, cultural continuity of, 149
 Christianity
 in Roman Empire, 177, 294
 of sedentary Arabs, 294
 spread of, 177
 Christian monasticism. *See also monasteries*
 mobility of monks in, 318–319
 origins of, 315*n*6
 circular tumuli, Late Roman, 262–263, 268
 cisterns, in Marmarica, 162, 162*f*, 165, 168–170
 clay
 types of, in pottery production, 275
 vernacular terms for, 275, 275*t*
 Clayton disks, 52, 52*f*
 Cleopatra VII (queen), in Nabataean inscriptions, 209
 Cleveringa, Rudolph Pabus, 429–430, 430*f*
 Cleveringa Lectures, 429–430
 climate
 and cultural continuity, 148, 436–437
 history of
 in Epipaleolithic, 33
 in Holocene, 129–131, 138, 148, 431
 overview of, 128–131, 430–432
 and livestock types, 149
 microclimate, of trees, 133, 134
 in migration, 85–86, 148, 438
 modern, 181–182, 346
 transition zones between, 148, 148*n*5, 387
 of Western Desert, 421
 Clymsa, nomadic Arabs in, 284–285
 coffee
 in Ababda culture, 347, 400, 402, 402*f*, 405–406
 in Beja culture, 182, 186, 347
 coins, Roman, 260, 267
 Cole, D. P., 366
 Colin, Frederic, 159
 Constantinian Period, 251
 contracted burials, cultural continuity in, 149, 151–152
 copper mining, in Sinai Peninsula
 by Egyptians, 112, 114, 360
 by Israelites, 121
 Coppin, Jean, 314, 319, 322, 337
 Copres (monk), 304*n*31
 Coptic Church, monasteries’ position in, 313
 Coptos
 Min in, 95
 road between Myos Hormos and, 287
 Coptos Tariff, 224, 224*n*6
 core–periphery interactions, 441–443, 441*r*
 Cosmas Indicopleustes, 229, 246
 courts, tribal, of Bedouin, 366
 courtyard houses, Arab, 292, 293*f*
 cows. *See cattle*
 Cream Ware, prevalence of, 271
 Cresswell, T., 322
 crevice graves, 262
 crews, in boat petroglyphs, 70, 70*r*
 Cribb, R., *Nomads in Archaeology*, 3
 Crick, Francis, 21

- CRM. *See* cultural resource management
- crocodiles, in graffiti, 93–94, 94f
- CULTNAT. *See* Centre for Documentation of the Cultural and National Heritage of Egypt
- cults. *See* religious practices
- cultural continuity, 435–438
- akerataheils in, 149–155, 150f
- of Beja, 153–155
- among tribes, 347–349
- with Blemmyes, 153, 237, 267, 438
- debate over theories of, 187, 438
- graves in, 149, 153
- of Blemmyes, 151–154, 237, 267, 438
- debate over theories of, 187, 385–386, 435–438
- environment in, 148–149, 436–437
- in Pharaonic and Ptolemaic Periods, 191, 193
- in Roman Period, 267
- sources of evidence of, 141
- traditions as proof of, 438
- cultural landscapes
- of Marmarica, 163–165, 164f
- preservation of, 138, 139
- value of, 138
- cultural resource management (CRM), at Serabit al-Khadim, 359, 368–370
- cultural values, in economic strategies of Beja, 353–354, 355–356
- cultural variability, in economic strategies of Beja, 351–352
- C-Ware
- ‘arms raised’ figures on, 77
- boat motifs on, 71
- Cyril of Scythopolis, 294
- D
- Dababieh, 256
- Daheb, 409n
- Dakhla Oasis, 338, 422
- dakhl* system, 136
- dances, Ababda, 406–407, 408, 410–411, 410f
- Daraheib
- Eastern Desert Ware at, 266
- settlements in, 257f, 268, 269
- dating
- challenges of, 20–21, 430n
- techniques for, 20–21, 430n
- Dayr al-Maharaq, 320
- Dayr Anba Bula. *See* Saint Paul’s Monastery
- Dayr Mar Antonios. *See* Saint Anthony’s Monastery
- Debeira, Pan-graves in, 18, 83f, 85, 85f, 86
- de Castro, Joam, 377
- de Lannoy, Ghillebert, 313
- della Valle, Pietro, 325
- Den (pharaoh), 112
- Deraheib, Blemmy tombs in, 152
- desert(s), definition of, 418
- desert dwellers, of Eastern Desert, 4–6. *See also specific peoples, periods, and sites*
- arrival of, 4, 6–7
- changes to names for, 440
- on continuum of mobility, 13, 320
- cultural continuity vs. change in, 435–438 (*See also* cultural continuity)
- demographic models for understanding, 441–443, 441r
- Egyptian terms for, 117
- future of, 443–444
- monasteries’ relationships with (*See* monasteries)
- movement of (*See* migration)
- nomadic (*See* nomads; pastoral nomads)
- overview of historical, 6–19, 8r, 430–435
- overview of modern, 182–188
- record of (*See* archaeological record; historical sources)
- in symbiotic relationship with sedentary peoples, 4, 13, 15, 84–86, 318, 320, 438–439
- use of term, 313
- vs. Western Desert, 158–161
- desertification, factors in, 127, 137
- desert kites, 113, 113f
- de Simone, Costanza, 381–383
- Deuteronomy (biblical book), 122
- diet
- of Beja, 186, 267
- of livestock, 149, 389r, 391, 391r, 392, 392r
- at monasteries, 323–324, 337–338
- and organic residues on pottery, 280–281
- Diffa Plateau, al-. *See* Marmarica (Libyan) Plateau
- Dijkstra, Jitse H. F., 239–247
- Diocletian (Roman emperor), withdrawal of, 235, 240, 241, 242, 251
- Diodorus (Diodoros) Siculus
- on Artaxerxes III, conquest of Egypt by, 193
- on gold mining, 217
- on Libyans, 160
- lifestyle names used by, 228
- on Megabaroi, 228
- on Troglodytes, 229
- Dioscorus archive, 246n, 285
- Dioscorus of Aphrodito, 294
- disk-shaped akerataheils, 144–145
- alternative names for, 151
- and Blemmyes, 151–153
- cultural continuity in, 149–150, 151–153
- dating of, 147–148, 151
- design of, 144–145, 145f, 146f
- distribution of, 144, 145, 151, 152
- intact vs. plundered, 145
- divorce, among Bedouin, 367–368
- Dodekaschoinos
- in Late Antiquity, Blemmyes in, 240, 241–243, 246
- in Ptolemaic Period, 199
- in Roman Egypt, 251
- dolphins
- hides of, 123
- Nabataeans influenced by, 206
- domestic architecture. *See* dwellings
- domesticated animals, arrival and spread of, 11–13, 12f, 14, 37, 432. *See also* animal herding; pastoral nomads
- Dongola Reach, Early Holocene pottery in, 50, 51
- donkeys
- arrival in North Africa, 14, 181, 437
- domestication of, 14
- Dorotheus (abba), 304
- dromedaries
- Ababda branding of, 405
- in Ababda museum exhibits, 402f, 403
- Ababda songs about, 408–409
- arrival and spread of, 14, 176, 181, 433, 437
- attributes as herd species, 389r
- Beja use of, 182, 185f, 354
- diet of, 149, 389r, 392
- domestication of, 14, 437
- dung of, as fuel, 353
- in journey to Bir Nurayet, 59–60, 61f
- in Nabataean inscriptions, 208, 210
- in Old Testament, 14, 14n
- petroglyphs of, 64, 64f, 65, 149
- social value of ownership of, 323
- use of term, 20
- drop-sites
- definition of, 164n
- in Marmarica, 172
- drought crises, economic strategies of Beja during, 346, 349, 353, 355, 356
- drylands, as coupled human-environment systems, 127
- Dungul Oasis, 422
- Dunn, Marilyn, 300
- durareit, 355–356
- Dushara (god), 209
- dust deposits, in climate history, 129
- D-Ware
- ‘arms raised’ figures on, 77–78
- boat motifs on, 72, 73, 77, 78
- dwellings
- of Ababda, 388–389, 403
- of Bedouin, in Serabit al-Khadim, 365, 366
- of Beja, 186–187, 187f
- of Blemmyes, 290–291, 291f
- of Nabataeans, 205
- in Roman Egypt, 288–289, 290f
- at Shenshef, 288–294
- at Suakin, 292, 293f, 375, 376, 377–378
- Dynastic period
- Min in, 95
- mobiliary art of, 71
- Dyson-Hudson, N., 329
- E
- earthquakes, in Suakin, 377–378
- Eastern Desert. *See also specific peoples, periods, and sites*
- boundaries of, 4, 14–15, 141, 421
- chronology of civilizations of, 8r
- continuity vs. change in, 435–438
- definition of, 4, 141, 421, 430
- environment of (*See* environment)
- geology of, 6, 7r, 9f
- inhabitants of (*See* desert dwellers)
- landscape types of, 141–142
- landscape of, 4, 5f, 93–94, 249, 423
- location of, 4, 5f (*See also* maps)
- overview of history of, 4–19, 181–182, 430–435
- regional divisions of, 43 (*See also specific regions*)
- unification of, 14, 16
- use of term, 141
- Eastern Desert Antiquities Protection Project (EDAPP), 400
- Eastern Desert Survey (EDS), 67–68, 69
- Eastern Desert Ware (EDW)
- Blemmyes associated with, 151, 180, 247
- dating of, 151, 179, 271
- definition of, 179, 271
- distribution of, 142f, 151, 179, 253, 271, 273r
- examples of, 179f, 272f
- fabric of, 275–276, 276f
- first appearance of, 179, 266
- at Late Roman sites, 266–267
- mass spectrometry of, 271, 275–281, 277r, 278f, 278r, 279f, 281f
- organic residues in, 279–281, 279f, 281f
- overview of history of, 179–180
- prevalence of, 271
- ecological gradient, of Marmarica, 161–162, 162f
- economic development
- in Serabit al-Khadim, 368
- through tourism, 417–418, 419–420, 426–427, 444
- in Wadi Allaqi, 388
- economic interests, of Egypt, in Sinai Peninsula, 105, 111–112, 114–117, 360
- economic strategies, of Beja, 345–356. *See also specific strategies*
- in 19th century, 349–351
- Aswan High Dam’s impact on, 389–396
- cultural values in, 353–354, 355–356
- cultural variability in, 351–352
- in early 20th century, 351
- at individual level, 354–356
- modern, 185–186, 386
- in Roman Period, 267–268
- sociopolitical institutions supporting, 345, 346, 352–354, 355, 356
- sources on information on, 349
- ecotones
- definition of, 148n5
- Eastern Desert as, 148
- EDAPP. *See* Eastern Desert Antiquities Protection Project
- Edfu
- falcon god graffiti in, 98, 99
- in Ptolemaic travel routes, 194, 201, 249
- Edom, Shasu band of, 118
- Edonians, 232
- EDS. *See* Eastern Desert Survey
- education
- of Bedouin of Serabit al-Khadim, 367, 368–370, 369f
- of desert tour guides, 423, 424f
- of desert tourists, 419
- EDW. *See* Eastern Desert Ware
- Eemian Interglacial Period, 6–7, 9f

- Egeria (nun), 284–285
- Egypt. *See also specific peoples, periods, and sites*
 archaeology of, rise of, 435–436
 borders of, 14–15, 21
 chronology of, 8r
- Egyptian Eastern Desert. *See also specific peoples and sites*
 boundaries of, 43
 climate of, 33, 40
 environment of, 157–159
 prehistory of, 25–40
 Epipaleolithic, 33–35
 Late Paleolithic, 32–33
 location of major sites in, 26f
 Lower Paleolithic, 26–27
 Middle Paleolithic, 25–32
 Neolithic, 36–39
 Predynastic, 39–40
 Upper Paleolithic, 32
 zones of cultural affiliation in, 44
- Egyptian language
 name for desert dwellers in, 117
 name for Sinai Peninsula in, 108–109, 112
- Egyptian Museum (Cairo), boat motifs in works at, 71, 71f
- Egyptian Western Desert. *See also specific peoples and sites*
 environment of, 157–159
 research in, 172–173
- Eid, Mohamed, 404
- Eid al-Kebir, 347
- elephants
 disappearance of, 181, 436
 petroglyphs of, 63, 64f, 65, 181, 437f
 in Ptolemaic Period
 decline in use of, 199, 201, 202
 importation of, 176, 196, 197, 199, 232
- El Gouna, Shell Mound near, 26, 37–39, 38f
- Elkab, 35
- Elkabian, at Tree Shelter, 25, 33–35, 34f
- emerald mining, by Blemmyes, 244, 246
- Emireh points, 32
- end-scrapers, 35
- English language, transliteration of Arabic into, 20, 20n4, 20n5
- enigmatic settlements
 of Blemmyes, 152–153, 258–259, 287
 Late Roman, 253–262
 abandonment of, 259
 Blemmyes as inhabitants of, 258–259, 287
 cemeteries associated with, 255–256
 characteristics of, 253, 254r, 255
 functions of, 256, 259
 location of, 253–255, 254t
 mining associated with, 259–262
 nomadic Arabs as inhabitants of, 287
 other settlements similar to, 256–258, 259–260
 pottery at, 253, 254r, 265–267
- environment. *See also climate; landscape; vegetation of Eastern Desert*
 Aswan High Dam's changes to, 385, 387–388, 390–396
 and cultural continuity, 148–149, 436–437
 current status of, 181–182, 386–388
 as ecotone, 148
 history of, 128–132, 387, 436–437
 vs. Western Desert, 157–159
 of Western Desert, 157–159, 161–163, 421
- environmental laws, tour guides' awareness of, 424, 425f
- Ephorus of Cyrene, 193
- Epipaleolithic, 25, 33–35
- Epiphanius of Salamis, on Blemmyes, 236, 241, 242n9, 244
- equilibrium, punctuated, 441
- Eratosthenes, on Blemmyes, 197, 233, 234
- Erembians, 228–229
- Ergamenes II (Meroitic king), 199
- Espinél, Andrés D., 91–102
- ethnic groups. *See also specific groups*
 challenges of defining, 440
 changes in names for, 440
 Greek writings on, 227–237, 239
 lifestyle names for, 228, 230–231
- ethnos, meanings of term, 227
- europium, in Eastern Desert Ware, 277
- Eusebius of Caesarea, 235–236
- Evagrius, 243n11
- Evans, E. P., 326
- Exodus (biblical book)
 vs. Banu Kanz tribe, 181, 438
 and cultural continuity vs. change, 437–438
 Sinai Peninsula in
 forty years in wilderness of, 120–122
 Mount Sinai, 106, 120–121, 122–124
 terms used for, 109, 110
- eyes
 Augustine on, 308, 308n74
 Christian ascetics on control of, 307–309
 painted on animal skulls in Pan-graves, 88, 89f
- Ezana (king of Aksum), 242
- F
- fabrics (pottery)
 definition of, 275
 in Eastern Desert vs. surrounding regions, 47, 47r
 of Eastern Desert Ware, 275–276, 276f
 Vienna System of classification of, 275, 276
- falcon gods, 98–101, 99f, 100f, 101f, 102f
- falcons, in boat motifs, 74
- FanSina organization, 369
- Farafra Oasis, 422
- Faridah (queen of Egypt), 342
- farmers, settled
 on continuum of mobility, 13
 overview of history of, 13–14
 in symbiotic relationship with desert dwellers, 4, 13, 15, 84–86, 320, 438–439
- Faruq (king of Egypt), 342
- Fashekab
 Aswan High Dam's impact on, 392, 394
 distribution of, 388, 390, 391
 migration of, 394
- Fathi, Hassan, 342
- fatty acids, on Eastern Desert Ware, 280, 281f
- fatuli, 335f, 338, 338f
- fauna. *See animal(s)*
- Fayum Oasis, 422
- Fedden, Romilly, 314
- feldspar, green, 124
- ferkabas technique, 136, 136n, 137
- Field, Henry, 364–365
- Final Neolithic tradition, 56
- Finkelstein, I., 116
- fireplaces. *See also Steinplätze*
 Late Holocene, 53
- First Intermediate Period, Pan-Graves in, 84
- fishtail akerataheils, 146–147
 cultural continuity in, 149–150
 dating of, 147–148
 design of, 146–147, 146f, 147f
 distribution of, 146
- flared boat petroglyphs, 69–70, 69f, 70r
- flash flooding, 4, 143
- Flavian Period, 250
- flooding, flash, 4, 143
- foederati, Arab, 294–295
- Fons Tados, 38
- Fontes Historiae Nubiorum, 240–241
- food. *See diet*
- Forbin, Comte de, 314
- forests, desert, evidence of, 131, 132f
- forts, of Sinai Peninsula, 107–108, 112
- frankincense, 206, 207
- frond boat petroglyphs, 72, 72f, 78
- Fuchs, Gerald, 67
- G
- Gabriel VII of Alexandria (patriarch), 319
- Galland, Antoine, 314
- Gama'a, Mohamed, 400, 401f, 404, 413f
- Gararshah, distribution of, 365
- Garayat, al-, ancient settlement in, 256, 257f
- Garden of Eden, 304n31
- Gardiner, Sir Alan, 108, 109
- Gare'ib, economic strategies of, 351, 352
- gas chromatography/mass spectrometry (GC/MS), mechanisms of, 274–275, 274f. *See also mass spectrometry*
- Gash Delta
 agriculture in, 346n, 351, 352
 location of, 346n
- Gates-Foster, Jennifer, 191–203
- Gatto, Maria C., 43–57
- GC/MS. *See gas chromatography/mass spectrometry*
- Gebelein, Blemmy documents from, 237, 241n6, 246n, 252
- Gebelein Linen, 71, 71n, 72, 77
- Gebel Elba, vegetation of, 131, 132f
- Gebel Halal, as location of Mount Sinai, 122
- Gebel Katrina, as location of Mount Sinai, 106, 122
- Gebel Magardi
 as male symbol, 64, 64f
 petroglyphs near, 63, 63f
- Gebel Maqran, 46
- Gebel Musa, as location of Mount Sinai, 106, 122
- Gebel Serbal, as location of Mount Sinai, 106, 122
- Gebel Sheikh Suleiman, boat motifs at, 73
- Gebel Tarbul, Paleolithic artifacts in, 27
- Gebel Umm Nabari
 Early Holocene sites near, 46
 Late Holocene pottery near, 52, 52f
- Gebel Wassif, Paleolithic artifacts in, 27
- Geili, disk-shaped akerataheils in, 152
- gemstones, in Hebrew Bible, 123–124
- Genesis (biblical book)
 Amalekites in, 121
 and cultural continuity vs. change, 437–438
 Edom in, 118
 patriarchs of, in Sinai Peninsula, 119–120
- genetic diversity, of trees, 134, 138
- genos, meanings of term, 227
- Geographica (Ptolemy), 234–235, 239
- geology
 of Eastern Desert, 6, 7r, 9f
 of Sinai Peninsula, 106
- George of Cappadocia, Saint, paintings of, 326–327
- Ghuzzah, al-, Graeco-Roman mining in, 178f
- Gilf Kebir, climate history of, 130
- giraffes
 disappearance of, 181, 436
 petroglyphs of, 181f, 437f
- Glacial Period, Last, 31, 33
- glass beads, Late Roman, 267
- Gleichen, Albert, 349
- glossary, of key Beja terms, 352r
- goats
 arrival in North Africa, 11, 181, 432, 437
 attributes as herd species, 389r
 diet of, 149, 389r
 domestication of, 11
 in economic strategies of Beja, 354, 389
 hair of, in Tabernacle, 123
 in Late Roman diets, 267
 in Marmarica, 169
 Neolithic, 37
 in Pan-graves, 82, 83f, 85, 85f
 petroglyphs of, 149
 in Sinai Peninsula, 114
 social value of ownership of, 323
- god(s). *See religious practices; specific gods*
- Goebbels, Joseph, 440
- Goehring, James, 303–304, 329
- gold mining
 in Ptolemaic Period, 197–198, 201, 249, 433, 434f
 Roman, in Wadi Bakariya, 215–225
 areas of operation, 215, 216f, 218f, 219f, 220f, 221f
 development phase of, 217–220
 exploitation phase of, 221–224, 221f, 222f, 223f
 exploration phase of, 217
 prospecting phase of, 217

- Goniotai, 160
 Gordon, Charles, 375
 Göring, Hermann, 440
 Goshen, 111
 Graeco-Roman Egypt. *See also* Ptolemaic Period;
 Roman Egypt
 akerataheils in, 151–152
 Blemmyes as construct of, 153–154
 chronology of, 8*r*
 overview of history of, 433–434
 Graeco-Roman ethnographic sources, 227–237. *See also specific sources*
 Blemmyes in, 149, 151, 197, 231–237
 classification systems in, 227
 ethnonyms in, 227–228
 literary vs. documentary sources of, 228
 Megabaro in, 228
 Troglodytes in, 228–231, 234
 graffiti. *See also* inscriptions
 falcon gods in, 98–101, 99*f*, 100*f*, 101*f*, 102*f*
 nature of religious practices revealed in, 92–94
 grave(s). *See also* akerataheils; Pan-graves; tumuli
 in archaeological record, 439
 cultural continuity in, 438
 Early Roman, 252–253, 253*f*
 Late Roman, 255–256, 262–265, 266*f*, 268
 in Marmarica, 172
nawamis, 113–114, 263
 typology of, 262–263, 262*r*
 grazing. *See* animal herding
Great Harris Papyrus, 117–118
 Great Sand Sea, landscape of, 421
 Greek ethnography. *See* Graeco-Roman ethnographic sources
 green feldspar, 124
 Greenlaw, Jean-Pierre, 375, 377
 Green Sahara, 129
 Gregory of Nazianzus, 306
 Grimal, N., 194
- H**
 Hadareb, al-, 375
 Hadariba, 180
 Hadat, 356
 Hadendowa
 distribution of, 346
 economic strategies of
 cultural variability in, 351–352
 in early 20th century, 351
 at individual level, 354, 355
 sociopolitical institutions in, 353–354
 sources of information on, 349
 women in, 354–355, 356
 in journey to Bir Nurayet, 60
 lineages of, 347
 overview of culture of, 347
 in Suakin, 375
 Hadrian (Roman emperor), 250
 Hagar (biblical figure), 120
 Häggag al-Qasaba, temporary settlements in, 169
 Halaib Triangle, 21, 21*n*10, 414, 414*n*
 hamadas
 akerataheils on, 145
 definition of, 145*n*
 Hamadhah, distribution of, 365
 Hamadorab, economic strategies of, 353
 Hamdani, al-, 374
 Hamedab
 Aswan High Dam's impact on, 392, 394
 distribution of, 388, 390
 migration of, 394
 Hamra, al-, Nabataean inscriptions in, 210, 211
 hand-axes, Paleolithic, 10*f*, 27, 28
 Hanna, Monica, 359–370
 Harkhuf, Tomb of, 159, 159*n*3
 Har-wer-re (expedition leader), 111
 Hassan (singer), 412, 412*f*
 Hassan, Suzan Bakri, 417–427
 Hathor (goddess), 362–363
 temple of, at Serabit al-Khadim, 359, 361, 363–364, 363*f*
 Hatshepsut (pharaoh), 17
- Hawking, Stephen, 21–22
 head rests, 187
 Hebrew Bible
 dromedaries in, 14, 14*n*
 migration in, 437–438
 Septuagint translation of, 111, 111*n*13
 Sinai Peninsula in
 forty years of exodus in, 120–122
 Genesis patriarchs in, 119–120
 Tabernacle in, 123
 terms used for, 109–111
 travel routes through, 107, 108, 120
 value as source, 105
 tents in, 117, 122–123
 Hebrew language, Sinai Peninsula in, 109–111
 Helladius (abba), 309
 Helle, 303*n*24
 herder-gatherers, on continuum of mobility, 13
 herding. *See* animal herding
 hermits. *See* Christian ascetics
 Herodotus
 on Arabia, 110
 on Edomians, 232
 on Libyans, 159, 160, 161
 on Troglodytes, 228, 230
 Herunefar (priest), 101, 101*n*12, 102*f*
 Her-wennefer (king), 199
 Herzog, R., 153
 Heuglin, Theodor von, 349
 Hierakonpolis, boat motifs in Tomb 100 at, 73
 hieroglyphic texts, in Sinai Peninsula, 115–116
 Hilarion, 306
 hilf, al-, 134
 hima system, 134
 Himyarites, Nabataean trade with, 206
 Hinkle, Friedrich, 378
 hippopotami, in boat motifs, 71
Historia Augusta, 235, 241
Historia Monachorum in Aegypto, 300
 historical (written) sources. *See also specific peoples, periods, sites, and sources*
 archaeology overshadowed by, 435–436
 connection between archaeological record and, 19, 141
 limitations of, 4, 6, 142–143, 430–431, 436, 440
 literary vs. documentary, 228
 in monasteries, 324–325
 outsiders as authors of, 6, 142–143, 154, 159, 241, 430–431
 reliability of, 439–440
- Hitan Rayan
 enigmatic settlement in, 256*f*
 graves near, 252–253, 253*f*, 265
 plan of, 291*f*
 Hobab (biblical figure), 121
 Hobbs, J. J., 131, 318, 319, 320, 322, 327, 335
 Hoffmeier, James K., 105–124
 Holk, Lambertus Jacobus van, 429
 Holocene
 climate history of, 129–131, 138, 148, 431
 in Nubian Eastern Desert, 43–57
 overview of human history in, 9*f*, 11
 pluvial period (wet phase) of, 33, 51, 129, 430
 start of, in Western vs. Eastern Desert, 35, 36*f*
 vegetation history of, 129–131, 138
- Holocene, Early, in Nubian Eastern Desert, 44–51
 location of major sites of, 44–46, 46*f*
 pottery from, 47–51, 47*r*, 48*r*, 49*f*, 50*f*, 51*r*
 Holocene, Late, in Nubian Eastern Desert, 44, 51–56
 location of major sites of, 46*f*
 pottery from, 52–53, 52*f*
 tumuli from, 52–56, 55*f*, 57
- Homer
 lifestyle names used by, 230
 and Troglodytes, 228–229
 honor code, of Beja, 355–356
 Horeb, 109, 110
 horizontal transhumance (mobility), 321–322
 horns, in Pan-graves, 82, 83*f*, 85, 85*f*, 87
 Horus (god), 97–100
 Hosea (biblical figure), 124
 Hosh, al-, giraffe petroglyphs at, 181*f*
- hosheeb, 410–411, 411*f*
 hospitality, in Beja honor code, 356
 houses. *See* dwellings
 human figures, petroglyphs of
 'arms raised,' 72, 76–78
 in Bir Nurayet, 62–63, 62*f*, 63*f*
 in boat petroglyphs, 70
 in Central Eastern Desert, 68, 70
 hunter-gatherers
 migration patterns of, 13
 overview of history of, 13–14
 vs. pastoral nomads, 13
 pottery decorations of, 51
 hunting
 in Central Eastern Desert petroglyphs, 78
 in Sinai Peninsula, desert kites in, 113
 and tree management, 135–136
 Huqab al-Askar, falcon god graffiti in, 99, 100, 100*f*, 101
 Huqab Karar, falcon god graffiti in, 99, 100*f*
 Hussein, Gama'a, 402, 404
 Huwaytat Bedouin, distribution of, 328
 hydraema (pl. hydraemata)
 definition of, 158*n*, 207*n*
 near mining areas, 178*f*
 Nabataean inscriptions associated with, 210, 211
 along trade routes, 207, 211
 Hyksos, 16
 hypotyranos (title), 155
- I**
 ibex, petroglyphs of, 77
 Ibn 'Abd al-Hakam, 296
 Ibn al-Assal, 325
 Ibn Hawqal, 290
 Ibn Said, 374
 Ibn Sulaym al-Aswani, 374
 Ibrahim al-Jawhari, 341, 341*f*, 342
 Ibrahim al-Nasikh, 326*n*
 ICP-MS. *See* inductively coupled plasma mass spectrometry
 IFAO. *See* Institut Français d'Archéologie Orientale
 incense trade, Nabataeans in, 205, 206, 207–208
 incident solar radiation (insolation), 129, 129*n*
 incision technique, 50, 50*f*
 incurved boat petroglyphs, 69–70, 69*f*, 70*r*, 72, 72*f*
 India, Nabataean trade with, 206–207, 212
 inductively coupled plasma mass spectrometry (ICP-MS), mechanisms of, 272–274, 274*f*. *See also* mass spectrometry
 inscriptions. *See also specific sites*
 Nabataean (*See* Nabataeans)
 Proto-Canaanite, 115
 Proto-Sinaitic, 115, 116, 364
Inscriptions of Sinai, 360, 362
 insolation (incident solar radiation), 129, 129*n*
 Institut Français d'Archéologie Orientale (IFAO), 53–54, 361
Instruction Concerning a Spiteful Monk (Pachomius), 304–305
 interaction, archaeology of, 89
 Interglacial Period, Last, 29, 31–32, 40
 intrusive burials, 150, 150*r*
 Irons, W., 329
 Isaac (biblical figure), 119, 120
 Isaiah of Scetis (abba), 307, 308
 Ishkirun of Qalin, 327
 Ishmael (biblical figure), 119
 Isis (god), 268. *See also* Philae
 Islam
 arrival in North Africa, 177
 Beja adoption of, 388
 chronology of transition to, 148
 lunar calendar of, vs. Western solar calendar, 177*t*
 Islamic Egypt
 akerataheils in, 147–148
 chronology of, 8*r*
 overview of history of, 434–435
- Israel
 borders of, 21
 Sinai Peninsula under control of, 122

- Israelites
 arrival in Canaan, 116
 forced labor of, 120
 forty years of exodus in Sinai, 120–122
 Genesis patriarchs of, 119–120
 god of, 118–119, 124
 migration of, 116, 120
 at Mount Sinai, 120–121, 122–124
 origins of, 116
 as pastoral nomads, 119–120
 Shasu connection with, 118–119
 tents of, 117, 122–123
 Israel Stele, 159, 159n4
- J
 Jaballyah, distribution of, 365
 jabanah. *See* coffee
 Jacob (biblical figure), 119, 120
 Jadhimah al-Abrash bin Malik, 292
 Jahiz, al-, 296
 Jamilab, economic strategies of, 351–352
 jasper, red, 123–124
 Jenyos, Nabataeans in, 206
 Jeremiah (biblical figure), 124
 Jerome, Saint
 Life of Paul of Thebes, 299, 302–303, 333–334
 reliability as source, 302–303, 302n22
 on Saracens, 285
 on solitary living, 300
 Jethro (biblical figure), 120
 jewelry, in Pan-graves, 82, 83f
 Jews, Nazi persecution of, 429–430, 440
 Jirjis Abu Mansur al-Tukhi, 337
 John Chrysostom, 302
 John of Lycopolis, 300, 304
 Johnson, Samuel, 314
 John the Little, Saint, 319, 326
 Jones, Michael, 333–343
 Joseph (biblical figure), 119–120
 Josephus, 230
 Julian (Roman emperor), 301–302
 Julio-Claudian Period, 249
 Jullien, Michel, 314
 Justin (Roman emperor), 177
 Justinian (Roman emperor), 177, 315
- K
 Kab Marfua
 buildings in, 259, 261f
 disk-shaped akerrataheils in, 152
 kabutah, 400, 402f
 Kadesh-Barnea, in Hebrew Bible, 120, 121, 122
 Kalabsha
 ancient settlement in, 256, 257f
 arrowheads at, 267, 268f
 graves and grave goods in, 263, 265, 266f
 inscriptions in temple of Mandulis at, 180, 244, 245, 252, 268
 Kallixeinos, 196
 Kamose (pharaoh), 16, 84
 Kaper, Olaf E., *Life on the Fringe*, 3
 Karanis, dwellings in, 288–289, 290f
 Karmak, temple at, 436
 Karmakol group, Early Holocene pottery of, 50, 51
 karms, 168, 169f, 169n
 Karmak, Temple of, reliefs of Pharaoh Seti I at, 107, 108f, 117, 118
 Kenites, in Hebrew Bible, 121, 124
 Kennedy, Shauna, 152
 Kenzi Nubians, origins of, 180
 Kerma (site), Early Holocene pottery in, 50–51
 Kerma, Kingdom of, overview of history of, 16
 Keshk, Fatma, 359–370
 Keturah (biblical figure), 119, 120, 230
 keystone species, trees as, 127
 Khalaf, Sulayman, 365–366
 Kharga Oasis, 421–422
 Khartoum Variant pottery, 47–51
 Khasa, al-, 374
 Khatamya group, Eastern Desert Ware associated with, 266
 Khor Daud, as barter market, 64
- Khufu, Pyramid of, boat motifs in, 74–75
 kinship, in ethnic classification, 227
 kirsas, al-, 406
 Kirwan, Sir Laurence, 377
 Kitchener, Horatio, 375
 kites, desert, 113, 113f
 Klein, Konstantin M., 299–309
 Kleinberg, Aviad, 299n3
 Klunzinger, Carl, 349
 knife handles, boat motifs on, 73
 Kobusiewicz, Michal, 65
 Koch, André, 429
 Kom Ombo, falcon god graffiti in, 99, 99f
 Kosciuszko, Zbigniew, 404–412, 414
 Krzywinski, Knut, 141–155
 Kuban, falcon god graffiti in, 98, 99
 Kurkh monolith, 110–111, 110n12
 Kurkur Oasis, 422
 kushait, al-, 406–407, 411n14
 Kushite Kingdom
 expansion of, 193
 overview of history of, 16
 Kutba, al- (god), 209, 209n2
 Kyrillos IV (patriarch), 335
- L
 landform types, of Eastern Desert, 141–142
 landscape. *See also* cultural landscapes; vegetation of Eastern Desert
 characteristics of, 4, 5f, 423
 diversity of, 249
 in religious practices, 93–94
 of Sinai Peninsula, 423
 of Western Desert, 161–163, 421–422
 land use agreements, in economic strategies of Beja, 352–353
 languages. *See also specific languages*
 of Beja, 182, 346–347, 349, 388, 435
 in desert tourism, 423, 424f
 Lankester, Francis, 67–78
 Lanna, Simone, 44
 Laqeita, Epipaleolithic artifacts at, 33, 35, 35f
 Lassányi, Gábor, 249–269
 Late Antiquity
 historical sources of, 239–247
 Blemmyes in, 239–247, 285
 Noubades in, 239–247
 Saracens in, 283–285
 location of major sites in, 284f, 301f
 overview of history of, 433–434
 Late Period of Egypt, 191–193
 chronology of rulers in, 192, 192n
 definition of, 191
 mining in, 192–193
 Late Roman Egypt. *See* Roman Egypt
 Lauterbur, Paul, 21–22
 laws, environmental, tour guides' awareness of, 424, 425f
 Leiden University, 429–430, 430f
 Leuger, Karl, 440
 Leuven University, Belgian Middle Egypt Prehistoric Project of, 25, 26
 Levallois flints, 27, 27f, 28, 29–31
 Levensohn, Amanda, 414
 Levenson, J., 109
 Libu, 159–160
 Libyan(s), 159–161
 archaeological record of, 163, 173
 cultural landscape of, 163–165
 definition of, 159
 distribution of, 161
 'Eastern,' 159–161, 173
 historical sources on, 159–161
 land use strategies of, 160, 161, 164, 173
 in Marmarica (See Marmarica)
 pictorial depictions of, 161
 political autonomy of, 160–161
 socio-economic organization of, 160–161
 use of term, 159
 Libyan Palette, 159, 159n3, 161
 Libyan Plateau. *See* Marmarica Plateau
- Libyan Valleys Archaeological Survey, UNESCO, 444
Life of Antony (Athanasius)
 authorship of, 299n3
 on demons, 305
 on gardens of monastery, 323
 influence of, 299–300, 329, 333–334
 on motivations of Antony, 303–304, 316
 on Saracens, 285, 327
Life of Mary of Egypt, 303
Life of Onuphrius, 303
Life of Paul of Thebes (Jerome), 299, 302–303, 333–334
Life on the Fringe (Kaper), 3
 Linant de Bellefonds, L. M. A., 355
 lineage reserves system, 136
 linen, in Tabernacle, 123
 lipids, on Eastern Desert Ware, 280, 281f
 livestock. *See* animal(s); *specific types*
 Lobo, Jeronimo, 377
 Lynch, John, 414
 Lyster, W., 314
- M
 Ma'aza Bedouin
 distribution of, 142, 328
 migration of, 328, 333
 modern history of, 182
 monasteries' relationship with (See monasteries)
 vegetation management by, 136, 137, 322
 MAB. *See* Man and Biosphere
 Macarius of Egypt, 306
 Macarius the Great, 306, 318–319, 326
 Macedonius (abba), 306
 Maddox, John, 21
 Madulis (god), 268
 Mahmoud, Mustafa, 404
 Maillet, Benoît de, 314
 Malchus of Philadelphia, 295
 Malthus, Thomas, 441
 Man and Biosphere (MAB) program, UNESCO, 381, 382, 388
 Manger, L., 349
 Mansour, Sa'ad, 400, 401f
 Mansour al-Hakim, al- (caliph), 180
 maps
 of Ababda territory, 347f, 399f
 of Beja territory, 347f, 348f
 of Eastern Desert, 5f, 128f, 431f
 of falcon graffiti, 101f
 of major sites, 17f
 in Central Eastern Desert, 68f
 in Egyptian Eastern Desert, 26f
 in Late Antique Period, 284f, 301f
 in Nubian Eastern Desert, 46f
 prehistoric, 11f, 432f
 in Ptolemaic Period, 193f, 194f
 in Roman and Byzantine Periods, 250f
 of Marmarica, 158f, 164f
 of migration, 10f, 12f, 15f, 391f
 of monasteries, 334f
 of Nabataean inscriptions, 208f, 210f, 286f
 from New Kingdom, 17, 18f
 of Pan-Grave cemeteries, 82f
 of Sinai Peninsula, 106f, 107f, 361f
 of travel routes
 Berber-Suakin, 154f
 to Bir Nurayet, 60f
 Ptolemaic and Roman, 195f
 in Sinai Peninsula, 107f
 of Wadi Allaqi, 382f, 387f
 of Wadi Bakariya, 216f
 Maqrizi, Taqy al-Din Mohamed al-, 182, 186, 324, 374
 marine oxygen isotope stages (MIS), 25n2
 maritime trade
 routes of Nabataeans in, 206–208
 sedentary Arabs in, 295–297
 Mark, Saint, relics of, 324
 marl clays, 275
 Marmarica, 157–173

- agricultural areas and settlements in, 165–168
 archaeological record of, 163, 164
 cultural landscape of, 163–165, 164f
 drop-sites in, 172
 graves in, 172
 historical sources on, 160
 location of, 157, 158f
 major sites in, 164f
 native inhabitants of (*See* Libyan(s))
 natural environment of, 157–159, 161–163, 162f
 natural landscape of, 161–163
 pottery in, 166, 168f, 169, 172, 173f
 rangelands in, 169
 research in, *vs.* Eastern Desert, 172–173
 soil management in, 165–168, 165f, 166f
 temporary settlements in, 168–170
 travel routes through, 170–172
 water resources in
 management of, 165–168, 165f, 166f
 in natural landscape, 161–162, 162f
 supply points for, 168–170
- Marmarican Cliff, landscape of, 162
- Marmarica (Libyan) Plateau
 landscape of, 162, 421
 temporary settlements on, 169–170
- marriage
 among Ababda, 405–407
 among Bedouin, 367–368
- Marsa Alam-Edfu route, 215
- Marsa Gawasis (Wadi Gasus), 17, 27
- Marsa Nakari, sedentary Arabs in, 294
- Mary of Egypt, 303, 306–307, 308
- mass spectrometry, 271–281
 definition of, 271
 of Eastern Desert Ware, 271, 275–281, 277t, 278f, 278t, 279f, 281f
 introduction to mechanisms of, 271–275, 274f
- Master of the Osservanza, 326f
- Mastitai, 160
- Mas'udi, al-, 262, 374
- Maximinus, 252
- Mazikes, 160
- medicinal plants, 394–395, 395t, 407, 407n
- Medina Saleh, Nabataeans in, 206
- Medjay
 cattle herding by, 149
 connection between Pan-Graves and, 18, 19, 83–84, 151 (*See also* Pan-graves)
 cultural continuity of, 151, 153
 mercenaries of, 18, 19
 overview of history of, 18–19
 Semna Dispatches on, 18–19, 83–84
 use of term, 440
- Megabardoi, 228
- Megabaroï, Greek writings on, 228, 234, 239
- Megabradoi, 228
- Meijers, Eduard Maurits, 429
- Mela, Pomponius, *Chorographia*, 234
- Melaikab, distribution of, 388
- Melkites, at Saint Anthony's Monastery, 316, 319
- Menas, Saint, 326
- mercenaries
 Medjay, 18, 19
 Pan-Grave, 86, 87, 88
- Merenre (pharaoh), 18
- Merneptah (pharaoh), 118
- Meroe, Kingdom of
 location of, 194f
 overview of history of, 16
 in Ptolemaic Period, 196, 199
- Mersa Gawasis, Min in, 96
- Meshel, Z., 113
- Meshwesh, 159–160
- metal artifacts, rarity of, 222, 267
- metal tools, in gold mining, 222
- Miam, falcon god graffiti in, 99
- microclimates, of trees, 133, 134
- Middle Kingdom
 boat motifs in, 75
 Min in, 96
 Pan-Graves in, 82, 83, 85–86, 89
- Midian, in Hebrew Bible, 120
- Midianites, 120–121, 123, 124
- Mies van der Rohe, Ludwig, 22
- migration. *See also specific peoples*
 after Aswan High Dam, creation of, 391, 391f, 394
 climate in, 85–86, 148, 438
 in cultural continuity theories, 435–438
 of hunter-gatherers *vs.* pastoral nomads, 13
 maps of, 10f, 12f, 15f
 out of Africa, 7, 10f, 11, 25, 31–32
 overview of history of, 6–14, 10f
 in Pharaonic Egypt, 15–19, 15f
 in Wadi Allaqi, 391, 391f, 394
- Mikhail, Gabriel, 403
- Milch, Erhard, 440
- military campaigns
 in Ptolemaic Period, 196–197, 199, 201
 of Roman Empire, 207, 209
- military forces, Roman, sedentary Arabs in, 294–295
- military interests, Egyptian, in Sinai Peninsula, 105, 117–118
- Millar, Patricia Cox, 308n74
- mills
 in gold mining, 223, 223f
 at monasteries, 323, 323f, 334, 338–342, 339f, 340f, 341f
- Min (god), 94–98, 95f, 232
- mining. *See also gold mining*
 in Graeco-Roman Egypt, 177, 178f
 in Late Antiquity, by Blemmyes, 244, 246
 in Late Period, 192–193
 in Ptolemaic Period, 194–195, 198, 201–202, 249, 433, 434f
 in Roman Egypt
 early, 249, 251
 enigmatic settlements associated with, 259–262
 in Sinai Peninsula
 by desert dwellers, 116–117
 by Egyptians, 108–109, 112, 114–117, 360–361
 by Israelites, 121
- mirth al-'arab, 336
- MIS. *See* marine oxygen isotope stages
- Moalla, graves in, 263, 264f, 265
- mobile peoples. *See also nomads; pastoral nomads*
 continuum of, 13, 320
 methods for studying, 13–14
- mobiliary art, rock art compared to
 boat motifs in, 70–75
 limitations of methodology, 93
- mobility. *See also migration*
 archaeology of, 13–14, 443
 continuum of, 13, 320
 fluidity of, 320
 horizontal, 321–322
 of monks, 318–319
- Moghra Oasis, 422
- Mohamed, Rageh Z., 205–212
- Mohamed Ali, unification of region under, 14
- Möller, Heike, 157–173
- mollusks, in El Gouna Shell Mound, 38
- monasteries, in Eastern Desert, 333–343. *See also* Saint Anthony's Monastery; Saint Paul's Monastery
 boundary walls of, 319–320
 current status of, 444
 desert dwellers' relationships with, 327–330, 335
 as guides, 318, 324, 327
 identity of tribes in, 327–329
 multi-resource, 320
 in paintings, 325, 327, 327f
 as raiders, 319, 321
 resource procurement in, 320–322, 338, 350
 resource sharing in, 321, 335–336
 water resources in, 322, 335–336
 diet at, 323–324, 337–338
 global impact of, 444
 as insiders *vs.* outsiders, 440
 literary treasures in, 324–325
 locations of, 313
- mills at, 323, 323f, 334, 338–342, 339f, 340f, 341f
 movement of monks among, 318–319
 nomadic raids on, 319, 321
 position in Coptic Church, 313
 travel routes to, 321, 324, 334f, 337
 visitors and pilgrims to, 313–314, 324, 342–343
 wall paintings of, 325–327, 333
- monsoon rainfall
 current status of, 4
 history of, 6, 129, 431
- Mons Smaragdus, settlements in, 259–262
- mortars, in gold mining, 222, 222f
- Moses (biblical figure)
 in exodus in Sinai, 120–122
 as model for Christian ascetics, 303
 at Mount Sinai, 120–121, 122
 in origin of name Sinai, 109
- Mostagedda, Pan-graves in, 86–87, 86f, 88–89, 89f
- Mount Sinai
 in Hebrew Bible, 120–121, 122–124
 location of, 106, 120, 122
- Mouses, 247
- Mouweis, arrowheads at, 267, 268f
- multi-resource nomads
 Beja as, 435
 definition of, 13, 345
 origins of, 129
- Mumford, G., 360
- Muqaddasi, al-, 296
- Murqus al-Antoni, 337
- Murray, G. W., 296
- museum exhibits, of Ababda culture, 400–404, 402f, 403f
- Museum of Ethnology (Rotterdam), 400
- music, Ababda, 408–412, 409f, 410f
- Muslim(s)
 invasions of Egypt by, 297
 persecution of Christians by, 324
- Muslim graves (akerataheils)
 cultural continuity in, 149–150, 150f, 153
 dating of, 147–148
 design of, 147
- Muzaynah
 distribution of, 365
 in Serabit al-Khadim, 365–366
 tree management by, 136
- Muzena, distribution of, 328
- Myos Hormos
 Eastern Desert Ware at, 253, 266
 Nabataean pottery at, 207, 207f
 Quseir al-Qadim as, 207
 road between Coptos and, 287
- N
- Nabataeans, in Roman Egypt, 205–212
 dwellings of, 205
 inscriptions of, 208–212
 dating of, 208
 Late Ptolemaic, 209, 209f
 location of, 208, 208f, 210f, 285–286, 286f
 and nomadic Arabs, 285–286, 286f
 occupations mentioned in, 208
 Roman Period, 209–211, 210f, 211f
 in Wadi Hammamat, 210–212
- maritime routes of, 206–208
 origins of, 205, 208
 religious practices of, 208, 209
 in trade, 205–208, 206f, 212
 water management by, 205
- Nabta Playa, Early Holocene pottery in, 47–51
- Napata, overview of history of, 16
- Naqada I Period
 'arms raised' figures in, 77–78
 boat motifs in, 71–73, 72f
- Naqada II Period
 'arms raised' figures in, 77–78
 boat motifs in, 72–73, 73f, 78
 Min in, 95
- Naqada III Period, boat motifs in, 73–74, 74f, 78
- Narmer (pharaoh), 111, 111n14
- Narmer Palette, 73, 73n3

- Nasamones, 160
 Nasb Attilia, Early Holocene sites near, 46
 Näser, Claudia, 81–89
 Nasir-i Khusraw, 296
 Nasr al-Hagg Ali, 378
 Nasser, Lake
 agriculture around, 392–393
 changes caused by
 to Beja economic strategies, 385, 389–396
 to Beja migration patterns, 391, 391*f*, 394
 to environment and natural resources, 385, 387–388, 390–396
 water levels in, 388, 388*f*
 National Conservation Areas, Wadi Allaqi as, 382
 National Corporation of Antiquities and Museums (NCAM), 373, 376
 natural environment. *See* environment
 natural resources. *See also specific types*
 Aswan High Dam's impact on, 385, 390–396
 distribution of, 423
 pastoral nomads in protection of, 127, 134, 137
 in Roman Egypt, 249
 of Western vs. Eastern Deserts, 158
Nature (journal), 21–22
nawamis, 113–114, 263
 Nazi Germany, 429–430, 440
 NCAM. *See* National Corporation of Antiquities and Museums
 Nebnetjeru (priest), 101
 Nectanebo (Saite king), 193–194
 Negev
 Genesis patriarchs in, 119–120
 nomadic Arab settlements in, 287, 288*f*
 population fluctuations in, 116
 Neolithic, 36–39
 Sinai Peninsula in
 desert people of, 112–114
 early humans of, 111
Nerita snail shells, 82–83
 Netherlands, Nazi occupation of, 429
 Netherlands-Flemish Institute in Cairo (NVIC), 3
 2008 conference of, 3, 443, 443*f*
 New Kingdom
 boat motifs in, 74–75
 Israelites in, 120
 management of trees in, 135, 135*f*
 map of Eastern Desert from, 17, 18*f*
 overview of history of, 16
 Pan-Grave People in, 88
 religious practices in
 falcon gods in, 98–100
 Min in, 95–96, 97
 Sinai Peninsula during, 116, 117
 unification of region under, 14
 New Qurta, early human history in, 11
 Nile clay, 275
 Nile River
 cataracts of, 14
 origins of, 6, 421
 Nile Valley
 as boundary of Eastern Desert, 4
 overview of history of, 11, 14
 sedentary peoples of, in symbiotic relationship
 with desert dwellers, 4, 13, 15, 84–86, 320, 438–439
 Noba, 16
 Noubades, 236
 nomads. *See also specific peoples*
 adaptation and innovation by, 385, 413
 Arab, in Late Roman Egypt, 283–287
 in archaeological record, 4
 definition of, 84
 Egyptian terms for, 117
 in historical record, 4, 6
 monasteries' relationships with (*See* monasteries)
 multi-resource, 13, 129, 345, 435
 pastoral (*See* pastoral nomads)
 service, 84
 in symbiotic relationship with sedentary people,
 4, 13, 15, 84–86, 318, 320, 438–439
 tethered, 328–329
 tourism's effects on, 137
 use of term, 6, 84
Nomads in Archaeology (Cribb), 3
 Norov, Avraam, 314
 Northern Libyan Desert Ware, 172, 173*f*
Notitia Dignitatum, 294
 Noubades
 Late Antique historical sources on, 239–247
 origin of name, 242
 Noubai, Greek writings on, 239
 Nubia
 origins of name, 16
 spread of Christianity in, 177
 Nubia, Lower
 boundaries of, 14
 definition of, 14
 history of migration in, 15
 in Late Antiquity, 240–247
 in Ptolemaic Period, conquest of, 197
 Nubia, Upper
 boundaries of, 14
 definition of, 14
 Nubian Eastern Desert (Atbai). *See also specific peoples and sites*
 boundaries of, 43, 57
 challenges of research in, 43–44
 geography of, 43
 prehistory of, 43–57
 comparative chronology of, 45*t*
 Early Holocene, 44–51
 Late Holocene, 44, 51–56
 location of major sites in, 44–46, 46*f*
 pottery from, 47–51, 47*t*, 48*t*, 49*f*, 50*f*, 51*t*
 zones of cultural affiliation in, 44
 use of term, 141
 Nubian Levallois method, 27
 Nubian Nome List, 196–197
 Nubians, Noubades as, 242
 Nubt
 as Blemmy site, 152–153, 269
 as enigmatic settlement, 152–153, 256–258, 268
 etymology of name, 152, 152*n*10
 graves in, 153, 263
 Islamic presence in, 153
 location of, 153, 154*f*
 phases of, 154*f*
 Nugrus
 buildings in, 259–260, 260*f*, 261*f*
 disk-shaped akerataheils in, 152
 NVIC. *See* Netherlands-Flemish Institute in Cairo
 O
 oars, in boat petroglyphs, 69–70, 70*t*
 oases, of Western Desert, 421–422, 423
 offering tables, in Late Roman cemeteries, 265, 266*f*
 Ogier VIII, 313
 Old Kingdom
 boat motifs in, 74
 Min in, 96
 Old Testament. *See* Hebrew Bible
 Olympiodorus of Thebes, on Blemmyes, 236,
 243–244, 252, 295
On the Erythrean Sea (Agatharchides), 195
 open sanctuaries, in Sinai Peninsula, 113
 optimum climaticum, 51
 orbital forcing, 129, 129*n*
 organic artifacts, at Wadi Sikait, 267
 organic residues, in Eastern Desert Ware, 279–281,
 279*f*, 281*f*
 Origen (Christian scholar), 303
 Orosius, 300
 ostriches
 disappearance of, 181, 436
 petroglyphs of, 63, 64*f*
 Ottoman Egypt
 chronology of, 8*t*
 overview of history of, 181
 Ounan points, 33, 35*f*
 outsiders
 as authors of historical sources, 6, 142–143, 154,
 159, 241, 430–431
 challenges of defining, 440–441
 overgrazing, pastoral nomads in prevention of, 134
 ovicaprids. *See* goats; sheep
 P
 Pachomius, Saint
 on control of eyes, 307, 308
 death of, 306, 307
 on forms of monasticism, 300
Instruction Concerning a Spiteful Monk,
 304–305
 monasteries of, 304, 304*n*35, 307
 in origins of monasticism, 304–305, 315*n*6
 outside visitors to, 306
 paintings, in monasteries, 325–327, 333
 Palamon (abba), 304
 Paleolithic, Late, 27, 32–33
 Paleolithic, Lower, 26–27
 artifacts from, 10*f*, 11, 26–27
 early humans in Sinai Peninsula during, 111
 Paleolithic, Middle, 25–32
 arrival of humans in, 6–7, 9*f*
 artifacts from, 10*f*, 11, 26–32
 early humans in Sinai Peninsula during, 111
 migration out of Africa during, 31–32
 sites of, 25, 26–32
 use of term, 25*n*1
 Paleolithic, Upper, 32
 artifacts from, 11, 12*f*, 30*f*, 32
 early humans in Sinai Peninsula during, 111
 Palestine, spatial change in, 442*f*, 443
 Palestine Exploration Fund, 114
 Palmer, Edward Henry, 114, 328
 Palmer, Henry Spencer, 113–114
 Pan (god), 94, 96, 232
paneion (pl. *paneia*), 95–98, 96*f*, 97*f*
 Pan-Grave People, 81–89
 acculturation of, 87–89
 archaeological record of, 4, 18, 81–84, 89
 cemeteries of (*See* Pan-graves)
 classification as nomads, 84
 connection between Medjay and, 18, 19, 83–84,
 151
 definition of, 81–82
 distribution of, 81, 84
 migration of, 82–83, 85–86
 origins of, 82–83
 overview of history of, 18–19
 size of groups of, 86
 socio-economic organization of, 84–88
 use of term, 81
 Pan-graves, 81–89
 animal horns and skulls in, 82, 83*f*, 85, 85*f*, 87,
 88–89, 89*f*
 cultural continuity of, 150–151, 150*f*, 153
 dating of, 19, 82
 definition of, 18
 design of, 18, 19*f*, 82, 83*f*, 87
 distribution of, 81, 82*f*, 84, 86, 142*f*, 151
 jewelry in, 82, 83*f*
 pottery in, 18, 82, 83*f*
 sex and age of remains in, 86–87, 86*f*
 shells in, 82–83
 tools in, 87, 87*f*
 weapons in, 18
 Paran, 110
 Paris, François, 53
 pastoral nomads. *See also specific peoples, periods,
 and sites*
 adaptation and innovation by, 385–386
 Bir Nurayet rock art as evidence of, 64, 65
 definition of, 84
 demographic models for understanding,
 441–443, 441*t*
 economic strategies of, diversification of, 386
 future of, 443–444
 Genesis patriarchs as, 119–120
 vs. hunter-gatherers, 13
 migration patterns of, 13
 origins of lifestyle, 13, 14, 129, 132, 432
 overview of history of, 13–14, 432–435
 political organization of, 386
 pottery decorations of, 51

- as primary livelihood strategy, 127
 protection of natural resources by, 127, 134, 137
 in symbiotic relationship with sedentary people, 4, 13, 15, 84–86, 318, 320, 438–439
 trees' importance to, 127, 132–133, 134, 138
 vegetation management by
 discontinuity in, 136–138
 traditional strategies of, 127–128, 134–136, 138–139
 in Western vs. Eastern Deserts, 158–159
- Paternuthius (abba), 303n24, 307
- Paulinus of Nola, 300
- Paul of Thebes. *See also* Saint Paul's Monastery
 alternative names for, 317
 Jerome on, 299, 302–303
 life of, 317
 paintings of, 326, 326f
 threats of persecution, 306
 visits to civilization, 301
- PCA. *See* principal component analysis
- peer review, 21–22
- Pelusium, 109–110
- Pentateuch. *See* Hebrew Bible
- Pepi I (pharaoh), 18
- Periplus Maris Erythraei*, 195, 206, 296
- persistence niche, of trees, 132–134, 136
- pest control, traditional strategies of, 135
- Petermanns Geographische Mitteilungen*, 349
- Peter the Deacon, 285
- Petra
 as capital of Nabataeans, 205, 209
 development of, 205
 early inscriptions mentioning, 205, 206
 location of, 205
- Petrie, Sir Flinders, 115
- petroglyphs
 animal
 in Bir Nurayet (Wadi Diib), 62–65, 62f, 63f, 64f
 in Central Eastern Desert, 68
 changes in species depicted in, 149, 181
 types of species depicted in, 432, 433f
 in Wadi Aquampt, 64f, 65
 in archaeological record, 439
 boat, 67–78, 432, 433f
 challenges of understanding, 92–93, 439
 dating of, 92, 439
- Pharaonic Egypt
 boat motifs in, 74–75, 75f, 76, 76t, 78
 borders of, 14–15
 chronology of, 8t
 cultural continuity with Ptolemaic Period, 191, 193
 demographic models for understanding, 441–442
 dromedaries in, lack of, 14
 historical sources from, 16–18
 migration in, 15–19, 15f
 origins of, 11, 13
 overview of history of, 14–19, 432
 Pan-Graves sites from, 82
 religious practices in, 91–102
 trade in, 16
- Philae
 Blemmyes in, 235, 242, 244
 temple of Isis at, 177
 nome lists in, 196–197, 200
- Philon (Greek explorer), 196
- Phonen, Letter of, 180, 236, 237, 244, 245, 268–269
- Photius, 217, 221
- Pierce, Richard H., 143, 151, 155, 227–237
- pilgrimages
 to Christian ascetics, 302, 305–306, 307
 to Saint Anthony's and Saint Paul's monasteries, 313–314, 324, 342–343
- Pior (abba), 305
- Pishoy, Saint, 315n7
- Pithom Stele, 196, 196n4
- Piye (king), 16
- plants. *See also* vegetation
 domesticated (*See* agriculture)
 medicinal, 394–395, 395r, 407, 407n
- Pleistocene, Upper, in Egyptian Eastern Desert, 40
- Pliny the Elder
 on Blemmyes, 234
 on gold mining, 217
 on Libyans, 160
 on Megabaroi, 228
 on Scenitae, 294
- Pluskota, Krzysztof, 59–65
- Plutarch, 231
- Pococke, R., 314
- Poeman (abba), 306
- political organization, of pastoral nomads, 386
- pollarding, 135
- polygamy, among Bedouin, 367–368
- population dynamics, remnant, 133, 136
- population fluctuations, in Sinai Peninsula, 116–117
- porpoises, hides of, 123
- Postumianus, 342
- potter's clay, 275
- pottery. *See also specific types*
 'arms raised' figures on, 72, 76–78
 of Blemmyes, 151
 boat motifs in, 71–73, 78
 clay types used for, 275
 Early Holocene, 47–51
 dating of, 51, 51r
 decorative types of, 47–50, 48r, 49f, 50f, 51
 fabrics of, 47, 47t, 51
 phases of, 51
 at enigmatic settlements, 253, 254t, 265–267
 Epipaleolithic, 35
 in graves
 Late Roman, 265
 Pan-Grave, 18, 81, 82, 83f
 Late Holocene, 52–53, 52f, 54, 55f, 56
 in Marmarica, 166, 168f, 169, 172, 173f
 Nabataean, 207, 207f
 Neolithic, 36, 37f
 origins of, 13f, 14
 in Sinai Peninsula, 111–112, 114
 in Western vs. Eastern Desert, 35
 Pottery Neolithic, Sinai Peninsula in, 114
 pounders, in gold mining, 221, 222, 222f
 poverty, and vegetation management, 137
- Power, Tim, 283–297
- precipitation. *See* rain
- Pre-dynastic Egypt
 'arms raised' figures in, 78
 boat motifs in, 69, 71–74, 75–76, 76t, 78
 stone techniques of, 39–40
- prehistory. *See also specific periods*
 chronology of periods of, 8t, 70r
 of Egyptian Eastern Desert, 25–40
 location of major sites in, 26f
 of Nubian Eastern Desert, 43–57
- Pre-Kerma tradition, 52–53
- Pre-Marmarican Plain
 landscape of, 162
 temporary settlements on, 168–169
- Pre-Pottery Neolithic, Sinai Peninsula in, 112–113
- Prickett, M., 27, 32
- Priene, 205
- principal component analysis (PCA), 276–277
- Priscus, on Blemmyes, 242, 243, 245
- private ownership, of resources, 390, 394
- Procopius of Caesarea, on Blemmyes, 235, 236, 241, 242, 243, 245, 295
- Prophecy of Neferti, 120
- Proto-Canaanite inscriptions, 115
- Proto-Sinaitic inscriptions, 115, 116, 364
- Psammetichus II (pharaoh), 16
- Ptolemaic Period, 191–203
 administrative system in, 198–202
 Blemmyes in, 197, 232–233
 cultural continuity with Pharaonic Egypt, 191, 193
 demographic models for understanding, 442
 historical sources on, 194–196
 Libyans in, 160–161
 limitations of evidence on, 191, 201, 202–203
 location of major sites in, 193f, 194f
 military campaigns in, 196–197, 199, 201
 mining in, 194–195, 198, 201–202, 249, 433, 434f
 Nabataean inscriptions from, 209, 209f
 nomadic groups' role in, 201–203, 433
 overview of history of, 433
 pottery in, 197
 precedents to, 191–194
 revolts in, 199–200, 201–202
 rulers in
 Alexander the Great, 191, 192, 196
 chronology of, 192r
 Ptolemy I Soter, 196
 Ptolemy II Philadelphus, 176, 195–199, 201, 232–233
 Ptolemy III Euergetes, 199
 Ptolemy IV Philopator, 199
 Ptolemy V Epiphanes, 199
 Ptolemy VI Philometor, 199–200
 trade in, 194–195, 196, 202
 travel routes in
 administrative oversight of, 198–199, 200–201
 establishment of, 196
 map of, 195f
 traffic on, 196, 201–202, 249
- Ptolemy
 on Blemmyes, 234–235, 239
Geographica, 234–235, 239
 on Libyans, 160
 lifestyle names used by, 231
 on Sinai Peninsula, 110
 on Suakin, 374
- Ptolemy I Soter, 196
- Ptolemy II Philadelphus, 195–199
 death of, 199
 elephants imported by, 176, 196, 197, 199, 232
 exploration under, 196, 233
 military campaigns of, 196–197, 201
 procession of, 195–196, 197–198
- Ptolemy III Euergetes, 199, 229–230
- Ptolemy IV Philopator, 199
- Ptolemy V Epiphanes, 199
- Ptolemy VI Philometor, 199–200
 punctuated equilibrium, 441
- Pyramid of Khufu, boat motifs in, 74–75
- Q
 qaburi, 186
 Qarqar, Bettle of, 110n12, 111
 Qasrawet, western temple at, 209
 Qasr Ibrim, texts found in, 153, 180, 244, 245n, 269.
 See also Phonen, Letter of
- Qattara Depression, landscape of, 421, 422
- Qedrites, 110, 110n11
- Qena, caves near, 40, 41f
- Qift, Nabataean inscriptions in, 211
- querns, in gold mining, 223, 223f
- Qur'an
 on maritime trade, 295
 on sedentary vs. nomadic Arabs, 283
- Quseir
 Ababda museum exhibits in, 400
 caves near, 40, 41f
 Paleolithic artifacts in, 27
 shells scatters in, 38–39
- Quseir al-Qadim
 as Myos Hormos, 207
 Nabataean pottery at, 207, 207f
 Paleolithic artifacts in, 27
- Qustul Incense Burner, 73, 73n2
- Qusur al-Banat, Nabataean inscriptions in, 210, 211
- R
 radiocarbon dating, 20n8
 Radt, Stephan, 229, 230
 Ra'iba
 migration of, 180
 overview of history of, 180
- Rainey, Anson, 105
- rainfall
 current annual, 4
 in definition of deserts, 418

- in Egyptian Eastern Desert, 33, 40
 harvesting of, in Marmarica, 165–168, 165f, 166f
 history of, 6, 33, 128–131, 431
 in migration of early desert dwellers, 7
 monsoon, 4, 6, 129, 431
 and survival strategies of trees, 132–134
 variability of, 127
 in Wadi Allaqi, 387
- Rameses II (pharaoh), 117, 118
 Rameses III (pharaoh), 117–118
 Rameses IV (pharaoh), 17
 rangelands, in Marmarica, 169
 Raphia, Battle of, 199, 201
 Ras Budran, Egyptian mining in, 112
 Rashaida
 distribution of, 142
 modern history of, 182
- Ras Honkorab, Paleolithic artifacts in, 28
 Ras Issaran, Paleolithic artifacts in, 27
 Rathbone, D., 192
 RATS. *See* Rock Art Topographical Survey
 Redford, D. B., 119
 red jasper, 123–124
 Red Sea
 as boundary of Eastern Desert, 4
 Nabataean maritime routes on, 206–208
 Red Sea architectural style, in Suakin, 373–374, 376, 378
 Red Sea Area Program (RESAP), 349, 349n
 Red Sea Mountains, 5f
 as boundary of Eastern Desert, 4
 natural resources of, 158
 origins of, 6
 Red Ware, prevalence of, 271
 relict populations of trees, 134
 religious practices
 of Beja, 268, 388
 of Blemmyes, 244, 268
 definition of, 92
 methodology for study of, 92–93
 of Nabataeans, 208, 209
 in Pharaonic Egypt, 91–102
 archaeological record of, 92–93
 challenges of understanding, 91–92, 102
 continuities and changes in, 91–92
 falcon gods in, 98–101, 99f, 100f, 101f, 102f
 idiosyncratic features of, 92
 Min in, 94–98, 95f
 nature of, 92–94
 in Roman Empire, 177
 in Sinai Peninsula, 113
 in Wadi Bakariya, 219–220, 220f, 224–225
- remnant population dynamics, 133, 136
 Rens Shelter, 26, 39–40
 Rephidim, in Hebrew Bible, 121, 122
 RESAP. *See* Red Sea Area Program
 resources. *See also* natural resources
 procurement of, for monasteries, 320–322, 338, 350
- Reubeni, David, 377
 ridaaf, 186
 Rieger, Anna-Katharina, 157–173
 ring akeraataheils, 143–144
 cultural continuity in, 149–151
 dating of, 147–148
 design of, 143, 144, 144f, 147f
 distribution of, 143–144, 151
 ring-cairn graves, 151, 152, 262. *See also* disk-shaped akeraataheils
- RME. *See* Robert Mond Expedition
 roads. *See* travel routes
 Robert Mond Expedition (RME), 67, 68
 Robinson, Edward, 123
 rock art. *See also* petroglyphs
 in archaeological record, 439
 of Bir Nurayet, 59–65
 challenges of understanding, 92–93, 439
 dating of, 92, 439
 distribution of, 423
 religious practices revealed in
 falcon gods in, 98–101
- Min in, 95–98
 nature of, 92–94
- Rock Art Topographical Survey (RATS), 68, 69
 rocker technique, 47–48, 49f, 50, 51, 53
 Rod al-'Air, 364
 Roe, Alan, 385–396
 Rohl, David, 67–68
 Roman Egypt, 249–269, 283–297. *See also* Graeco-Roman Egypt
 acculturation of desert dwellers in, 251, 259
 Arabs in (*See* Arab(s))
 Blemmyes in (*See* Blemmyes)
 burial customs in, 252–253, 255–256, 262–265, 268
 chronology of, 8t
 cultural continuity in, 267
 demographic models for understanding, 442–443
 diets in, 267
 domestic architecture of, 288–289, 290f
 enigmatic settlements in, 253–262
 establishment of, 176, 191, 192
 location of major sites in, 250f
 mining in, 215–225, 249, 251
 Nabataeans in (*See* Nabataeans)
 overview of history of, 176–177, 249–252, 433–434
 trade in, 249–250, 295–297
 travel routes in
 administrative oversight of, 249–251
 map of, 195f
 Nabataean inscriptions on, 210, 210f
 road stations along, 249–250
- Roman Empire
 borders of, 176–177
 Christianity as religion of, 177
 Egypt in (*See* Roman Egypt)
 roots, tree, 133
 ropes, animal hair in, 267
 Rosen, S. A., 116
 rotary querns, 223, 223f
 Royal Netherlands Embassy, 400, 403
 ruqaaq, 186
 Russell, Michael, 325, 328
- S
 sabkhas, 170n
 saddle querns, 223, 223f
 Sadenab
 Aswan High Dam's impact on, 392, 394
 distribution of, 388, 390–391
 migration of, 394
- Sadr, K., 44, 147
 Sahara Desert. *See also* Eastern Desert
 climate history of, 127, 128–129
 dessication of, 127, 129, 138
 Saharan anticyclonic pressure zone, 129
 Sahara-Sahel climate belt, 129
 Saint Anthony's Cave, 324
 Saint Anthony's Monastery, 313–330, 333–343
 boundary walls of, 319–320, 320f
 desert dwellers' relationships with, 327–330, 335
 as guides, 318, 324
 identity of tribes in, 327–329
 multi-resource, 320
 in paintings, 325, 327
 as raiders, 319, 321
 resource procurement in, 320–322, 338, 338f, 350
 resource sharing in, 321, 335–336
 water resources in, 322, 335–336
 diet at, 323–324, 337–338
 gardens of, 322–323, 336f, 342
 historical sources on, 313–314, 314f, 334
 as insiders vs. outsiders, 440
 literary treasures in, 324–325
 location of, 313, 315, 315f, 316f, 333, 334f
 metaphorical meaning of desert at, 318, 329
 mills at, 323, 323f, 334, 338–342, 340f, 341f
 mobility of monks and, 318–319
 Muslim raids on, 324
 natural environment of, 318
 nomadic raids on, 319, 321
- as oasis, 322–324
 origins of, 315–316, 333–334
 overview of history of, 315–317
 position in Coptic Church, 313
 travel routes to, 321, 324, 334f, 337
 visitors and pilgrims to, 313–314, 324, 342–343, 343f
 wall paintings of, 325–327, 327f, 333
 waqf system of property and, 337
 water resources of, 322, 335–336, 335f
- Saint Catherine's Monastery
 boundary walls of, 319
 desert dwellers' relationship with, 321
 as insiders vs. outsiders, 440
 literary treasures in, 325
 origins of, 315
 visitors and pilgrims to, 313, 324
- Saint Macarius's Monastery, 318–319
 Saint Paul's Monastery, 313–330, 333–343
 boundary walls of, 319–320
 desert dwellers' relationships with, 327–330, 335
 as guides, 318, 324
 identity of tribes in, 327–329
 in paintings, 327
 as raiders, 319, 321
 resource procurement in, 320–322, 338, 338f
 resource sharing in, 321, 335–336
 water resources in, 322, 335–336
 diet at, 323–324
 gardens of, 322–323, 323f, 336
 historical sources on, 313–314, 314f, 334
 as insiders vs. outsiders, 440
 location of, 313, 315f, 317, 317f, 333, 334f
 metaphorical meaning of desert at, 318, 329
 mills at, 323, 334, 338–342, 339f, 340f, 341f
 mobility of monks and, 318–319
 natural environment of, 318
 nomadic raids on, 319, 321
 origins of, 317, 333–334
 position in Coptic Church, 313
 travel routes to, 321, 324, 334f
 visitors and pilgrims to, 313–314, 324, 342–343
 wall paintings of, 326–327, 326n, 333
 waqf system of property and, 337
 water resources of, 322, 335–336
- Saite dynasty
 consolidation of Egypt under, 192
 overview of history of, 192, 193–194
- Saleh, Mohamed Sa'ad, 404
 Salima, Sheikha, 369
 Samarandiwab, economic strategies of, 354
 Samuel (biblical figure), 121
 Saracens
 archaeological record of, 285–287, 288f
 historical sources on, 283–285, 294
 use of term, 283, 313
- Sarah (biblical figure), 120
 Sarapion, 306, 316
 Saul (biblical figure), 121
 Sawalhah, distribution of, 365
Sayings of the Desert Fathers, 305, 308, 309
 SCA. *See* Supreme Council of Antiquities
 Scenitae, 294
 Schinkel, Detlev, 342
 Schmallegger, D., 419
 Schön, Jan Hendrik, 22
 Schora-Ababde, economic strategies of, 350
 Schweinfurth, G. A., 147, 151, 314, 349
 Scott, Sir Walter, 325
 Sebilian, 27
 Second Intermediate Period, Pan-Graves in, 19, 82, 86
 sedentary peoples. *See also* farmers
 Ababda as, 389
 Arab, in Late Roman Egypt, 283, 287–297
 Bedouin of Serabit al-Khadim as, 365–366
 on continuum of mobility, 13
 in symbiotic relationship with nomads, 4, 13, 15, 84–86, 318, 320, 438–439
- Seir, Shasu land of, 118, 119
 seismic events, in Suakin, 377–378
 Sekhemkhet (pharaoh), 112

- Selah, Nabataeans in, 206
 Semitic language, origins of, 115
 Semna Dispatches
 climate history in, 437
 Medjay in, 18–19, 83–84
 Pan-Grave People in, 83–84, 86
 Semna Stela, Small, 85
 senna, 355, 355*n*
 Septuagint, 111, 111*n*13
 Serabit al-Khadim, 359–370
 archaeological heritage of, 360–364
 Bedouin of, 364–368
 development plans for, 368–370
 education for, 367, 368–370, 369*f*
 modern lives of, 365–368, 365*f*
 origins of, 365
 women, 366–368, 369, 369*f*
 Beit Hathor in, 369–370
 cultural heritage of, 359–364, 368
 cultural resource management at, 359, 368–370
 gaps in research on, 359, 364
 hieroglyphic texts at, 115–116
 inscriptions at
 Egyptian, 362, 364
 Proto-Sinaitic, 115, 364
 location of, 359, 361, 361*f*
 mining in, 361–362
 copper, 112
 turquoise, 112, 115, 123, 362, 368
 plan of, 361, 362*f*
 Temple of Hathor at, 359, 361, 363–364, 363*f*
 tourism in, 359, 365, 367, 368–370
 Serapion (abba), 308
serekhs, 98, 98*n*, 111, 111*n*14
 service nomadism, 84
 Setif (Algeria), dwellings in, 292, 293*f*
 Seti I (pharaoh), reliefs at Temple of Karnak, 107, 108*f*, 117, 118
 settled peoples. *See* sedentary peoples
 Severan Period, 251
 Seville Strategy, for managing biosphere reserves, 381
 Shaab Negema, Late Holocene tumulus in, 54–56, 55*f*
 Shabaka (king), 16
 Shadli, Sheikh, 347
 Shafai Mosque (Suakin), 376, 376*f*
 Shaj al-Qaum (god), 209*n*3
 shakreeb, 410–411, 411*f*
 Shalmaneser III (king), Kurkh monolith of, 110–111, 110*n*12
 Shantirab, economic strategies of, 353
 Shasu
 Egyptian military action against, 117–118
 Egyptian view of, 117–119
 Israelite connection with, 118–119
 origins of term, 117, 368
 Tell al-Borg relief depicting, 118, 119*f*
 use of term as region or tribal identity, 118, 368
 Shazli, Sheikh, 402–403, 403*f*
 sheep
 arrival in North Africa, 11, 181, 432, 437
 attributes as herd species, 389*t*
 domestication of, 11
 in economic strategies of Beja, 354
 in Late Roman diets, 267
 in Marmarica, 169
 in Pan-graves, 82, 83*f*, 85, 85*f*
 petroglyphs of, 62, 62*f*
 in Sinai Peninsula, 114
 social value of ownership of, 323
 shell(s)
 linked to Min, 96
 in Pan-graves, 82–83
 shell mounds, Neolithic, near El Gouna, 26, 37–39
 Shenshef, Late Roman settlement in, 258, 267
 diet at, 267
 domestic architecture of, 288–294
 functions of, 287–288, 294–297
 plan of, 289*f*
 sedentary Arabs at, 287–297
 Shera'ab, economic strategies of, 352
 Shilling, R., 366
Ship Wrecked Sailor, *The*, 108–109
 Sicard, Claude, 314, 314*f*
 sickle boat petroglyphs, 69–70, 69*f*, 70*t*, 73, 73*f*
 Sidebotham, Steve, 400
 Silko, Inscription of, 180, 245, 245*n*, 252
 Silsila, boat petroglyphs near, 72
 Silvanus (abba), 308–309
 Simon (abba), 306
 Sinai Peninsula, 105–124. *See also specific peoples and sites*
 architectural features in, 112–114, 117, 118*f*
 Bedouin of, 364–365 (*See also* Serabit al-Khadim)
 as border zone, 21
 canals in, 106, 106*f*
 desert people of, 105, 111, 112–117
 early humans in, 111, 360
 Egyptian economic interests in, 105, 111–112, 114–117, 360
 Egyptian military interests in, 105, 117–118
 Egyptian terms for, 108–109, 112
 Egyptian view of, 117–119
 gaps in research on cultural heritage of, 359
 geographical regions of, 105–106
 in Hebrew Bible
 forty years of exodus in, 120–122
 Genesis patriarchs in, 119–120
 Mount Sinai, 120–121, 122–124
 terms used for, 109–111
 travel routes through, 107, 108, 120
 value as source, 105
 landscape of, 423
 location of, 105, 105*f*; 360, 361*f*
 mining in, 360
 by desert dwellers, 116–117
 by Egyptians, 108–109, 112, 114–117, 360–361
 by Israelites, 121
 Mount Sinai, 106, 120–121, 122–124
 Nabataeans in, 205
 origins of, 106
 population fluctuations in, 116–117
 religious installations in, 113
 travel routes through, 106–108, 107*f*, 117, 120, 360
 water resources in, 121–122
 Sisoes (abba), 305
 Siwa Oasis, 422
 skopelos (pl. skopeloi), 217, 217*n*2
 skulls, animal, in Pan-graves, 82, 83*f*, 88–89, 89*f*
 slaves
 Beja as, 296, 297
 Israelites as, 120
 slave trade
 pre-Islamic, 295–296, 297
 Suakin-Berber route in, 153
 Slonta, cult grotto of, 161, 161*n*
 Small Semna Stela, 85
 social organization
 of Ababda, 388, 394–396
 of Blemmyes, 245, 259, 268–269
 social stratification, of Pan-Grave People, 87
 social value, of livestock ownership, 323
 socio-economic organization
 of Libyans, 160–161
 of Pan-Grave People, 84–88
 of pastoral nomads, 386
 of Sinai Peninsula inhabitants, 114
 sociopolitical institutions, in economic strategies of
 Beja, 345, 346, 352–354, 355, 356
 Sodmein Cave, 28–29, 28*f*
 climatic periods at, 130
 domestic animals at, 432
 Middle Paleolithic artifacts in, 29, 30*f*
 Middle Paleolithic inhabitants of, 25, 28–29, 32
 Neolithic artifacts in, 36, 37*f*
 structure of, 28–29, 29*f*
 Upper Paleolithic artifacts in, 11, 12*f*, 30*f*, 32
 soil management, in Marmarica, 165–168, 165*f*, 166*f*, 167*t*
 Sokal, Alan, 22
 Soleb, geographical list from temple at, 118, 119
 Sopdu (god), 364
 sorghum, 186, 267, 351–355
 Soterichos (official), 200–201, 202
 South Sinai Regional Development Program (SSRDP), 359
speos, 95, 95*n*
 square boat petroglyphs, 69, 69*f*, 70*t*
 SSRDP. *See* South Sinai Regional Development Program
 standing stone shrines, in Sinai Peninsula, 113
 Starkey, Janet C. M., 313–330
Steinplätze
 definition of, 26*n*
 in Wadi Bili, 26, 39, 39*f*
 Stone Age, Middle, use of term, 25*n*1. *See also* Paleolithic, Middle
 stone blades, Paleolithic, 11, 12*f*, 27, 32
 stone flakes, Levallois, 27, 27*f*, 28, 29–31
 stone fragments, *Steinplätze*, 26, 26*n*
 stone tools. *See also specific types*
 Epipaleolithic, 33, 34*f*
 in gold mining, 221–223, 222*f*
 Neolithic, 36–37, 37*f*, 38, 38*f*
 Paleolithic, 10*f*, 11, 27–28
 Predynastic, 39–40
 storage effect, 133, 136
 Strabo
 on Alexandria, 207
 on Arabians, 285
 on Blemmyes, 233, 234, 239, 246
 on Libyans, 160
 lifestyle names used by, 228
 on Megabari, 228, 239
 on Ptolemaic period, 196
 on Troglodytes, 228–229, 230, 239
 Suakin
 archaeological research in, 376
 Beja in, 374–376
 dwellings in, 292, 293*f*; 375, 376, 377–378
 future of, 377–378
 historical sources on, 374, 377
 history of, 374–376
 location of, 373, 374*f*
 Red Sea architectural style in, 373–374, 376, 378
 seismic events in, 377–378
 Shafai Mosque in, 376, 376*f*
 surroundings of, 375, 375*f*; 376, 377*f*
 travel routes through, 373, 375–376
 as World Heritage Site, 373–378
 Suakin-Berber slave route, 153
 Suakin Project, 373, 378
 Sudan. *See also* Nubian Eastern Desert
 borders of, 14–15, 21
 Sudan Notes and Records, 349
 Sudan Survey Department, 349
 Suez, walls around, 319
 Suez Canal, location of, 106
 Supreme Council of Antiquities (SCA), 359, 369
 sustainable tourism. *See* tourism
 Syess-Inquart, Arthur, 429
 Synesius of Cyrene, 294
 Syrian War, Third, 199
 T
 Tabari, al-, 290
 Tabernacle, in Hebrew Bible, 122–123
 Tabot, as enigmatic settlement, 152, 256–258
 Tafa, inscriptions in, 268
 Tallet, P., 360, 361
 tanboura, 409–410, 409*f*
 Tantani (Noubadian chief), 244, 245, 247
 Tarabein, distribution of, 328
 Tattam, Henry, 314
 Taw al-Kefar, graves in, 265
 Tehemu, 159
 Tell al-Borg, relief depicting Shasu in, 118, 119*f*
 Tell al-Shaqfia, Nabataean inscriptions in, 209, 209*f*
 Tell Hubua I, 107
 Tell Hubua II, 107
 temporary settlements, in Marmarica, 168–170

- tents
of desert people of Sinai, 117–118, 118f
of Israelites in Sinai, 117, 122–123
- tethered nomadism, and monasteries, 328–329
- Tethys Sea, 6
- Teti (pharaoh), 18
- Thebaid
definition of, 197n7, 317n
in Ptolemaic Period
as administrative center, 198, 200
elephants in, 197
revolts in, 199, 200
in Roman Egypt
Saracens in, 285
security situation in, 251, 252
- Theban Mountain complex, landscape of, 93
- Thebes, in Ptolemaic Period, 199
- Theocritus, on Blemmyes, 197, 232–233, 237
- Theodore (monk), 306, 307
- Theodore (painter), 325
- Theodosius, Flavius (Roman emperor), 177
- Theophanes, 295
- Theophilus (archbishop), 306
- thulium, in Eastern Desert Ware, 277
- Tih Plateau, geography of, 105–106
- Timna, mining in, 116, 121, 123
- Tipasa, dwellings in, 290f, 292
- Tjaru, 107
- Tjehenu, 159
- Tokar, agriculture in, 351
- Tomber, R. S., 296
- tombs. *See* grave(s)
- tourism, desert, 417–427
current status of, 423–425, 424f, 425f, 426f
definition of, 418
diversification of, 418
economic effects of, 417–418, 419–420, 426–427, 444
effects on nomads, 137
features of, 418–420
growth of, 417–418
infrastructure for, 424–425, 426f
motivations for, 418–419
profile of guides, 423–424, 424f, 425f, 425f
profile of tourists, 423, 424f
seasonality of, 420
in Serabit al-Khadim, 359, 365, 367, 368–370
sustainable
management practices in, 420–421, 420f, 426–427
need for, 418, 420, 426–427, 444
principles of, 420
in Western Desert, 421–422, 423
- Track of Man, The* (Field), 364–365
- trade
Beja in, 350–352
in Late Period, 192
Nabataeans in, 205–208, 206f, 212
Pan-Grave People in, 84–85, 86
in Pharaonic Egypt, 16
in Ptolemaic Period, 194–195, 196, 202
in Roman Egypt, 249–250, 295–297
routes of (*See* travel routes)
sedentary Arabs in, 295–297
in Sinai Peninsula, 111–112
- traditions, as proof of cultural continuity, 438
- Trajan (Roman emperor), 209
- transboundary biosphere reserves
functions of, 381
in Wadi Allaqi, 381–383
- transliteration systems, 20, 20n4, 20n5
- Tratsaert, Barbara J. M., 215–225
- travel routes
Berber-Suakin, 153, 154f
to monasteries, 321, 324, 334f, 337
of Nabataeans
inscriptions associated with, 208–212
maritime, 206–208
- Ptolemaic
establishment of, 196
map of, 195f
oversight of, 198–199, 200–201
- traffic on, 196, 201–202, 249
- through Roman Egypt
map of, 195f
Nabataean inscriptions on, 210, 210f
oversight of, 249–251
road stations along, 249–250
- through Sinai Peninsula, 106–108, 107f, 117, 120, 360
- through Suakin, 373, 375–376
- through Wadi Bakariya, 215
- trees, 127–139
climatic cycles and, 128–131
historical change and continuity in, 128–132, 132f
importance to pastoral nomads, 127, 132–133, 134, 138
- key species of, 132
- longevity of, 133
- management of
for agriculture, 353
discontinuity in, 136–138, 137f
traditional strategies of, 127, 134–136, 138–139, 322
- microclimates of, 133, 134
- persistence niche of, 132–134, 136
- survival strategies of, 132–134
- Tree Shelter, 33–35
climatic periods at, 130
- Epipaleolithic artifacts at, 25, 33–35, 34f
- location of, 33, 33f
- Neolithic artifacts at, 36–37
- stratigraphic sequence at, 33, 34f
- Triakontaschoinos, 194f, 200
- tribes, use of term, 6
- Trogodytes (Trogodytes), Greek writings on, 228–231, 234, 239
- Tu-Bedawie language, 346–347, 388
- tulip beaker, 56
- tumuli
disk-shaped akerataheils as, 151
Late Holocene, 52–56, 55f, 57
Late Roman, 256, 262–265, 264f, 268
- turquoise, in Hebrew Bible, 123
- turquoise mining, in Sinai Peninsula, 112, 114, 115, 123, 359, 360, 362, 368
- 25th Dynasty
overview of history of, 16
unification of region in, 14
- 26th Dynasty, overview of history of, 192
- U
- Ulaygat
distribution of, 365
in Serabit al-Khadim, 365–366
- Umm Howeitat Bahri, enigmatic settlements in, 253
- Umm Jimal, dwellings in, 292, 293f
- UNESCO
Campaign to Save the Monuments of Nubia, 56, 65
heritage sites of, 138, 373–378
Libyan Valleys Archaeological Survey, 444
Man and Biosphere program, 381, 382, 388
mission of, 381
- U.S. Agency for International Development (USAID), 325n, 333
- Uspensky, Porphyrius, 314
- V
- Valbelle, D., 360
- valley, vs. wadi, use of terms, 20, 20n4
- values, cultural, in economic strategies of Beja, 353–354, 355–356
- vegetation, of Eastern Desert, 127–139
characteristics of, 4
climatic cycles and, 128–131, 148
historical change and continuity in, 128–132, 148–149, 437
- management of
discontinuity in, 123, 136–138, 137f
records of, 128
traditional strategies of, 127–128, 134–136, 138–139, 322
- modern, 182
- survival strategies of, 132–134
- types of, 4, 322
- in wadis, 131–132, 148–149, 387
- vs. Western Desert, 162
- Vermeersch, Pierre M., 25–40
- Vetter, Thomas, 157–173
- Via Hadriana, 285, 324
- Via Maris, 107
- Viazzo, P. P., 441
- video recordings, of Ababda, 414, 414f
- Vienna System, 275, 276
- Viventius, 244, 245
- Volney, C. F. C., 324
- W
- wadi(s)
definition of, 20, 20n4, 131n6, 148n6, 386
use of term, 20, 20n4, 131n6
vegetation in, 131–132, 148–149, 387
- Wadi Abu Had, Paleolithic artifacts in, 10f, 11, 27
- Wadi Abu Iqaydi
‘arms raised’ figures in, 77f
boat petroglyphs in, 68, 68t, 76, 76t, 78
- Wadi Abu Mu Awad
‘arms raised’ figures in, 77f
boat petroglyphs in, 68, 68t, 76, 76t, 78
- Wadi Abu Wasil
‘arms raised’ figures in, 77f
boat petroglyphs in, 68, 68t, 70, 72, 76, 76t
- Wadi al-Guzzah, gold mining in, 434f
- Wadi al-Ku
Early Holocene sites near, 46
Late Holocene tumuli in, 53
- Wadi Allaqi
Aswan High Dam’s effect on, 387–396
as biosphere reserve, 381–383, 388
Early Holocene pottery in, 51
economic development in, 388
economic strategies in, 389–396
environment of, 386–388
falcon god graffiti in, 99–100
graves and grave goods in, 265, 266f, 268
herding in, 389, 391–393, 391t, 392f, 393f
Late Holocene artifacts in, 52, 53–54
location of, 43, 381, 382f, 386, 387f
medicinal plants in, 394–395, 395t
modern inhabitants of, 382, 388–396, 395f
as National Conservation Area, 382
pastures of, 392–393, 392t
resource ownership, management, and use in, 390–391, 390t
vegetation of, 387
water resources in, 386–388, 390, 391
- Wadi al-Lawi, Late Holocene tumulus in, 54–56, 57
- Wadi al-Natron, monasteries in, 313, 313n2, 318–319, 320, 326
- Wadi al-Qudeirat, early humans in, 360
- Wadi Ambagi, Paleolithic artifacts in, 27
- Wadi Aquampt, petroglyphs in, 64f, 65
- Wadi Arabah, Saracens in, 285
- Wadi Atulla, Predynastic artifacts in, 39
- Wadi Atwani
‘arms raised’ figures in, 77f
boat petroglyphs in, 68, 68t, 76t
- Wadi Bakariya, 215–225
boat petroglyphs in, 219, 219f
location of, 215, 216f
phases of occupation of, 215
religious practices in, 219–220, 220f, 224–225
Roman gold mining in, 215–225
areas of operation, 215, 216f, 218f, 219f, 220f, 221f
development phase of, 217–220
exploitation phase of, 221–224, 221f, 222f, 223f
exploration phase of, 217
prospecting phase of, 217
travel routes through, 215
- Wadi Baramiya
‘arms raised’ figures in, 77, 77t

- boat petroglyphs in, 68, 68*t*, 72, 73, 75, 76, 76*f*, 76*t*, 78
 falcon god graffiti in, 99, 100
 Wadi Bili, 29–31, 30*f*
 Bili Cave in, 31
 Middle Paleolithic artifacts in, 11, 25, 29–31
Steinplätze in, 26, 39, 39*f*
 Wadi Daghbag, gold mining in, 224
 Wadi Dahabiya
 ‘arms raised’ figures in, 77*t*
 boat petroglyphs in, 68, 68*t*, 76, 76*t*
 Wadi Deir Bolos, Paleolithic blades in, 27
 Wadi Diib, rock art in, 62–65, 62*f*, 63*f*, 64*f*
 Wadi Elei, Late Holocene site in, 52–53
 Wadi Faynan Landscape Survey, 444
 Wadi Fayran
 in Hebrew Bible, 121, 122
 sedentary Arabs in, 294
 Wadi Gabgaba
 Early Holocene sites near, 46
 landscape of, 46
 Late Holocene artifacts in, 52, 53–54
 location of, 43
 Wadi Gamal, Late Roman artifacts in, 260*n*6
 Wadi Gasus. *See* Marsa Gawasis
 Wadi Hajalij
 ‘arms raised’ figures in, 77*t*
 boat petroglyphs in, 68, 68*t*, 76*t*
 Wadi Halfa, Early Holocene sites near, 46
 Wadi Hammamat
 ‘arms raised’ figures in, 77, 77*t*
 boat petroglyphs in, 68, 68*t*, 72, 73, 75, 76, 76*t*, 78
 Late Period expeditions to, 192–193
 location of, 211
 Min in rock art of, 96
 Nabataean inscriptions in, 210–212
 travel routes through, 211
 Wadi Hamrawain, Paleolithic artifacts in, 27
 Wadi Kanais
 ‘arms raised’ figures in, 77, 77*t*
 boat petroglyphs in, 68, 68*t*, 72, 75, 76, 76*t*, 78
 Wadi Kua, graffiti at, 93–94, 94*f*
 Wadi Maghara
 inscriptions at, 360–361
 location of, 360
 mining in, 112, 360–361
 Wadi Manih, Nabataean inscriptions in, 211
 Wadi Minayh, *paneion* in, 96–98, 97*f*
 Wadi Mineh
 ‘arms raised’ figures in, 77*t*
 boat petroglyphs in, 68, 68*t*, 72, 76, 76*t*
 Wadi Mineh al-Heer, Nabataean inscriptions in, 211–212
 Wadi Miya
 ‘arms raised’ figures in, 77*t*
 boat petroglyphs in, 68, 68*t*, 72, 76*t*
 Wadi Natrun, 422
 Wadi Qash
 ‘arms raised’ figures in, 77*t*
 boat petroglyphs in, 68, 68*t*, 73, 76*t*
 Wadi Qitna
 Blemmy graves in, 152
 grave goods in, 265, 266*f*
 Wadi Seiga, Late Holocene artifacts in, 54
 Wadi Shalul
 ‘arms raised’ figures in, 77*t*
 boat petroglyphs in, 68, 68*t*, 76, 76*t*, 78
 Wadi Sikait
 arrowheads at, 267, 268*f*
 buildings in, 259–260, 261*f*
 disk-shaped akerataheils in, 152
 inscriptions at, 251, 251*n*2
 organic artifacts at, 267
 types of graves in, 262
 Wadi Sodmein, 28, 28*f*. *See also* Sodmein Cave;
 Tree Shelter
 Wadi Tarfa, Saracens in, 285
 Wadi Tumaylat, Saracens in, 284
 Wadi Tumilat
 Nabataean settlement in, 208
 travel routes through, 108
 Wadi Umm al-Ashtan
 dating of artifacts at, 166, 167*t*, 168, 169*f*
 location of, 164*f*
 plan of, 167*f*
 water and soil management in, 165*f*, 166*f*, 167*t*
 Wadi Umm Hajalij
 ‘arms raised’ figures in, 77*t*
 boat petroglyphs in, 68, 68*t*, 75–76, 76*t*
 Wadi Umm Salam
 ‘arms raised’ figures in, 77, 77*t*
 boat petroglyphs in, 68, 68*t*, 72, 75, 76*t*
 Wadi Umm Wikala, Graeco-Roman mining in, 178*f*
 Wailiab, economic strategies of, 354
 wall paintings, in monasteries, 325–327, 333
 Wansleben, Johann Michael, 314, 314*f*, 319, 321, 323, 325, 330
 waqf system, 337
 warthogs, petroglyphs of, 63
wasm (pl. *wasum*), 97, 97*n*
 water resources. *See also* rainfall
 historical change and continuity in, 128–132
 in Marmarica, 161–162, 162*f*
 management of, 165–168, 165*f*, 166*f*
 supply points for, 168–170
 modern, 182
 of monasteries, 322, 335–336
 Nabataeans’ management of, 205
 in Sinai Peninsula, 121–122
 subsurface vs. surface, 4, 131*n*6, 148*n*6
 and survival strategies of trees, 132–134
 in Wadi Allaqi, 386–388, 390, 391
 Watson, James, 21
 Way of Shur, 108, 120
 Ways of Horus, 106–107, 108
 weapons, in Pan-graves, 18
 Weigall, Sir Arthur, 67
 wells, in Eastern vs. Western Desert, 43
 Wendrich, Willeke Z., 3, 319, 320, 321, 399–414
 Weni, Biography of, 18
 Weschenfelder, Petra, 345–356
 Western Desert. *See also specific peoples, periods, and sites*
 boundaries of, 421
 caves in, 43
 definition of, 421
 desert dwellers of, 158–161
 environment of, 157–159, 161–163, 421
 historical sources on, 159–161
 landscape of, 161–163, 421–422
 pottery in, 35
 research in, 172–173
 tourism in, 421–422, 423
 use of term, 421
 wells in, 43
 White, Donald, 159
 Whittemore, Thomas, 336, 342
 Wickering, D., 364, 367
 wiggle plateau, 150, 150*n*
 Wild, F. C., 400
 Wild, J. P., 400
 ‘Wild Nile’ period, 11
 Wilkinson, Sir John Gardner, 314, 321, 322, 325, 327–328, 329
 Willis, A. J., 322
 Winkler, Hans Alexander, 67, 410, 411
 women
 Ababda, 394–395, 403, 406
 Bedouin, of Serabit al-Khadim, 366–368, 369, 369*f*
 Beja
 economic strategies of, 354–355, 356
 honor code of, 356
 in Wadi Allaqi, 394–395, 395*f*
 World Heritage Sites, 138
 Suakin as, 373–378
 World War II, Jewish persecution in, 429–430
 written sources. *See* historical sources
 X
 X-Group, 16
 Y
 Yahwa, Shasu land of, 118–119
 Yahweh (god), 118–119, 124
 Yakut, 374
 Ya’qubi, al-, 262, 269
 Yoannis XVI (patriarch), 337
 Yuhanna al-Armani, 326*n*
 Z
 zaghareed, 410
 Zahran, M. A., 322
 zanad, 402
 Zossima (monk), 303
 Zubayr bin al-Awwam, al-, 348–349, 405, 408

UCLA COTSEN INSTITUTE OF ARCHAEOLOGY PRESS

MONOGRAPHS

Contributions in Field Research and Current Issues in Archaeological Method and Theory

- Monograph 74 *Rock Art at Little Lake: An Ancient Crossroads in the California Desert*, Jo Anne Van Tilburg, Gordon E. Hull, and John C. Bretney
- Monograph 73 *The History of the Peoples of the Eastern Desert*, Hans Barnard and Kim Duistermaat (eds.)
- Monograph 71 *Crucible of Pueblos: The Early Pueblo Period in the Northern Southwest*, Richard H. Wilshusen, Gregson Schachner, and James R. Allison (eds.)
- Monograph 70 *Choluna and Chornancap: Excavating an Ancient Peruvian Legend*, Christopher B. Donnan
- Monograph 69 *An Investigation into Early Desert Pastoralism: Excavations at the Camel Site, Negev*, Steven A. Rosen
- Monograph 68 *The Chanka: Archaeological Research in Andahuaylas (Apurimac), Peru*, Brian S. Bauer, Lucas C. Kellett, and Miriam Aráoz Silva
- Monograph 67 *Inca Rituals and Sacred Mountains: A Study of the World's Highest Archaeological Sites*, Johan Reinhard and Maria Costanza Ceruti
- Monograph 66 *Gallinazo: An Early Cultural Tradition on the Peruvian North Coast*, Jean-François Millaire with Magali Morlion
- Monograph 65 *Settlement and Subsistence in Early Formative Soconusco*, Richard G. Lesure (ed.)
- Monograph 64 *The South American Camelids*, Duccio Bonavia
- Monograph 63 *Andean Civilization: A Tribute to Michael E. Moseley*, Joyce Marcus and Patrick Ryan Williams (eds.)
- Monograph 62 *Excavations at Cerro Azul, Peru: The Architecture and Pottery*, Joyce Marcus
- Monograph 61 *Chavin: Art, Architecture and Culture*, William J Conklin and Jeffrey Quilter (eds.)
- Monograph 60 *Rethinking Mycenaean Palaces II: Revised and Expanded Second Edition*, Michael L. Galaty and William A. Parkinson (eds.)
- Monograph 59 *Moche Tombs and Dos Cabezas*, Christopher B. Donnan
- Monograph 58 *Moche Fineline Painting From San José de Moro*, Donna McClelland, Donald McClelland, and Christopher B. Donnan
- Monograph 57 *Kasapata and the Archaic Period of the Cuzco Valley*, Brian S. Bauer (ed.)
- Monograph 56 *Berenike 1999/2000*, Steven E. Sidebotham and Willeke Wendrich (eds.)
- Monograph 55 *Roman Footprints at Berenike: Archaeobotanical Evidence of Subsistence and Trade in the Eastern Desert of Egypt*, René T. J. Cappers
- Monograph 54 *Advances in Titicaca Basin Archaeology 1*, Charles Stanish, Amanda B. Cohen, and Mark S. Aldenderfer
- Monograph 53 *Us and Them: Archaeology and Ethnicity in the Andes*, Richard Martin Reyecraft
- Monograph 52 *Archaeological Research on the Islands of the Sun and Moon, Lake Titicaca, Bolivia: Final Results from the Proyecto Tiksi Kjarka*, Charles Stanish and Brian S. Bauer (eds.)
- Monograph 51 *Maya Zooarchaeology: New Directions in Theory and Method*, Kitty F. Emery (ed.)
- Monograph 50 *Settlement Archaeology and Political Economy at Tres Zapotes, Veracruz, Mexico*, Christopher A. Pool (ed.)
- Monograph 49 *Perspectives on Ancient Maya Rural Complexity*, Gyles Iannone and Samuel V. Connell (eds.)
- Monograph 48 *Yeki bud, yeki nabud: Essays on the Archaeology of Iran in Honor of William M. Sumner*, Naomi F. Miller and Kamyar Abdi (eds.)
- Monograph 47 *Archaeology in the Borderlands: Investigation in Caucasia and Beyond*, Adam T. Smith and Karen S. Rubinson (eds.)
- Monograph 46 *Domestic Ritual in Ancient Mesoamerica*, Patricia Plunket (ed.)
- Monograph 45 *Pathways to Prismatic Blades*, Kenneth Hirth and Bradford Andrews (eds.)
- Monograph 44 *Ceramic Production and Circulation in the Greater Southwest*, Donna M. Glowacki and Hector Neff (eds.)
- Monograph 43 *Pottery of Postclassic Cholula, Mexico*, Geoffrey McCafferty
- Monograph 42 *Pompeian Households: An Analysis of the Material Culture*, Penelope M. Allison
- Monograph 41 *Rethinking Mycenaean Palaces: New Interpretations of an Old Idea*, Michael L. Galaty and William A. Parkinson (eds.)
- Monograph 40 *Prehistory of Agriculture: New Experimental and Ethnographic Approaches*, Patricia C. Anderson (ed.)
- Monograph 39 *Recent Advances in the Archaeology of the Northern Andes: In Memory of Gerardo Reichel-Dolmatoff*, Augusto Oyuela-Caycedo and J. Scott Raymond (eds.)
- Monograph 38 *Approaches to the Historical Archaeology of Mexico, Central and South America*, Janine Gasco, Greg Charles Smith, and Patricia Fournier-Garcia
- Monograph 37 *Hawaiian Adze Production and Distribution: Implications for the Development of Chiefdoms*, Barbara Lass
- Monograph 36 *New Light on Old Art: Recent Advances in Hunter-Gatherer Rock Art Research*, D. W. Whitley and L. L. Loendorf (eds.)
- Monograph 35 *Pottery of Prehistoric Honduras: Regional Classification and Analysis*, J. S. Henderson and M. Beaudry-Corbett
- Monograph 34 *Settlement Archaeology of Cerro de las Mesas, Veracruz, Mexico*, Barbara Stark (ed.)
- Monograph 33 *Girikihaciyán: A Halaftian Site in Southeastern Turkey*, P. J. Watson and S. LeBlanc
- Monograph 32 *Western Pomo Prehistory: Excavations at Albion Head, Nightbirds' Retreat and Three Chop Village, Mendocino County, California*, Thomas N. Layton
- Monograph 31 *Investigaciones Arqueológicas de la Costa Sur de Guatemala*, David S. Whitley and Marilyn P. Beaudry (eds.)
- Monograph 30 *Archaeology of the Three Springs Valley, California: A Study in Functional Cultural History*, Brian D. Dillon and Matthew A. Boxt
- Monograph 29 *Obsidian Dates IV: A Compendium of Obsidian Hydration Readings from the UCLA Obsidian Hydration Laboratory*, Clement W. Meighan and Janet L. Scalise (eds.)
- Monograph 28 *Archaeological Field Research in the Upper Mantaro, Peru, 1982–1983: Investigations of Inka Expansion and Exchange*, Timothy Earle et al. (eds.)
- Monograph 27 *Andean Archaeology: Papers in Memory of Clifford Evans*, Ramiro Matos M., Solveig Turpin, and Herbert Eling, Jr. (eds.)
- Monograph 26 *Excavations at Mission San Antonio 1976–1978*, Robert L. Hoover and Julio J. Costello (eds.)
- Monograph 25 *Prehistoric Production and Exchange in the Aegean and Eastern Mediterranean*, A. Bernard Knapp and Tamara Stech (eds.)
- Monograph 24 *Pots and Potters: Current Approaches in Ceramic Archaeology*, Prudence Rice
- Monograph 23 *Pictographs and Petroglyphs of the Oregon Country, Part 2*, J. Malcolm Loring and Louise Loring
- Monograph 22 *The Archaeology of Two Northern California Sites*, Delmer E. Sanburg, F. K. Mulligan, Joseph Chartkoff, and Kerry Chartkoff
- Monograph 21 *Pictographs and Petroglyphs of the Oregon Country, Part 1*, J. Malcolm Loring and Louise Loring
- Monograph 20 *Messages from the Past: Studies in California Rock Art*, Clement W. Meighan (ed.)
- Monograph 19 *Prehistoric Indian Rock Art: Issues and Concerns*, JoAnne Van Tilburg and Clement W. Meighan (eds.)
- Monograph 18 *Studies in Cypriote Archaeology*, Jane C. Biers and David Soren
- Monograph 17 *Excavations in Northern Belize, Central America*, Raymond Sidrys
- Monograph 16 *Obsidian Dates III: A Compendium of Obsidian Hydration Determinations Made at the UCLA Obsidian Hydration Laboratory*, Clement Meighan and Glenn Russell
- Monograph 15 *Inland Chumash Archaeological Investigations*, David S. Whitley, E. L. McCann, and C. W. Clewlow, Jr. (eds.)
- Monograph 14 *Papers in Cycladic Prehistory*, Jack L. Davis and John F. Cherry (eds.)
- Monograph 13 *Archaeological Investigations at the Ring Brothers Site Complex, Thousand Oaks, California*, C. W. Clewlow, Jr., David S. Whitley and Ellen L. McCann (eds.)
- Monograph 12 *The Running Springs Ranch Site: Archaeological Investigations at VEN-65 and VEN-261*, Jack Prichett and Allen McIntyre
- Monograph 11 *The Archaeology of Oak Park, Ventura County, California*, C. William Clewlow, Jr. and David S. Whitley (eds.)
- Monograph 10 *Rock Art of East Mexico and Central America: An Annotated Bibliography*, Matthias Strecker
- Monograph 9 *The Late Minoan I Destruction of Crete: Metal Groups and Stratigraphic Considerations*, Hara Georgiou
- Monograph 8 *Papers on the Economy and Architecture of the Ancient Maya*, Raymond Sidrys (ed.)
- Monograph 7 *History and Prehistory at Grass Valley, Nevada*, C. W. Clewlow, Jr., Helen F. Wells, and Richard Ambro (eds.)
- Monograph 6 *Obsidian Dates II: A Compendium of Obsidian Hydration Determinations Made at the UCLA Obsidian Hydration Laboratory*, C. W. Meighan and P. I. Vanderhoeven (eds.)
- Monograph 5 *The Archaeology of Oak Park, Ventura County, California*, C. W. Clewlow, Jr., Allen Pastron, and Helen F. Wells (eds.)

UCLA COTSEN INSTITUTE OF ARCHAEOLOGY PRESS

COTSEN ADVANCED SEMINAR SERIES

Books in this series present the published results of the Cotsen Advanced Seminars,
cross-disciplinary conferences periodically sponsored by the Cotsen Institute

- Volume 5 *The Construction of Value in the Ancient World*, edited by John K. Papadopoulos and Gary Urton
- Volume 4 *Archaeology of Mobility: Nomads in the Old and New World*, edited by Hans Barnard and Willeke Wendrich
- Volume 3 *The Archaeology of Ritual*, edited by Evangelos Kyriakidis
- Volume 2 *Agricultural Strategies*, edited by Joyce Marcus and Charles Stanish
- Volume 1 *Theory and Practice in Mediterranean Archaeology: Old World and New World Perspectives*, edited by John K. Papadopoulos and Richard M. Leventhal