Excavations at Gilund
The Artifacts and Other Studies

Edited by

VASANT SHINDE

TERESA P. RACZEK

GREGORY L. POSSEHL

Excavations at Gilund:
The Artifacts and Other Studies



Parallel-walled structure on GLD-2.

MUSEUM MONOGRAPH 138

Excavations at Gilund: The Artifacts and Other Studies



edited by

Vasant Shinde, Teresa P. Raczek, and Gregory L. Possehl

UNIVERSITY OF PENNSYLVANIA MUSEUM OF ARCHAEOLOGY AND ANTHROPOLOGY
PHILADELPHIA

Gilund Archaeological Research Project, jointly in collaboration between Deccan College, Post-Graduate and Research Institute, Deemed University, Pune, India, and the University of Pennsylvania Museum, University of Pennsylvania, Philadelphia, USA.

CIP data available from the Library of Congress

ISBN-13: 978-1-934536-66-7
ISBN-10: 1-934536-66-0

© 2014
by the University of Pennsylvania Museum of Archaeology and Anthropology
Philadelphia, PA
All rights reserved. Published 2014

Published for the University of Pennsylvania Museum of Archaeology and Anthropology by the University of Pennsylvania Press.

Printed in the United States of America on acid-free paper.

Contents

List of Figures vii
List of Tables xi
List of Contributors xiii
Foreword *by B.B. Lal* xv
Acknowledgments xvii

1 Excavations at Gilund 1999–2005: The Artifacts and Other Studies 1
Vasant Shinde, Teresa P. Raczek, and Gregory L. Possehl
2 Excavation Methods and Stratigraphy 11
Vasant Shinde and Gregory L. Possehl
3 Chalcolithic Structures and Features 25
Vasant Shinde and Gregory L. Possehl
4 Excavation of Early Historic Deposits, Gilund, 1999–2001 45
Praveena Gullapalli and Peter Johansen
5 Site Catchment Analysis 53
Debasri Dasgupta Ghosh
6 Ceramic Assemblages at Gilund 61
Shweta Sinha Deshpande
7 Ceramic Sequence of Gilund (Index Trench 4F) 73
Lorena Giorgio
8 The Gilund Antiquities 89
Julie A. Hanlon
9 Report on the Seal Impressions and Related Small Finds 157
Marta Ameri
10 Lithics from Gilund 211
Teresa P. Raczek
11 Faunal Remains from Gilund 227
Matthew J. Landt
12 Synthesizing Gilund: A Summary and Discussion of Excavation Finds 231
Vasant Shinde, Teresa P. Raczek, and Gregory L. Possehl

Appendix 1: Radiocarbon Dates for Gilund 237
Appendix 2: List of Supervisors and Student Participants in the Gilund Excavations, 1999–2005 239
Bibliography 243
Index 253

This page intentionally left blank

Figures

1.1 Map showing distribution of Chalcolithic sites in Ahar-Banas, Ganeshwar-Jodhpura, and Indus regions 2
1.2 Location of selected Ahar-Banas sites in the Mewar region of Rajasthan 3
1.3 Map of excavated Ahar-Banas sites in Rajasthan in relation to major sites of the Indus 4
2.1 Satellite photo of Gilund 12
2.2 Topographic map of Gilund with location of excavation areas 12
2.3 GLD-1, Trench 4, Step Trench 13
2.4 GLD-2, Area III 17
2.5 GLD-2, Area IV, pyrotechnic feature and related structure 18
2.6 Plan of trenches excavated at Gilund,1999–2005 19
2.7 Index trench, Trench 4F profile 19
2.8 GLD-2, Area I, Trench 9 profiles looking NW 22
2.9 GLD-2, Area I, Trench 9 profile drawings 23
3.1 GLD-1, Trench 4B 24
3.2 GLD-1, Trenches 4C-4J 27
3.3 GLD-2, Area I, Trench 5, Layer 4, Structure 3 29
3.4 GLD-2, Area I, Trench 5, Chulha and pot 30
3.5 GLD-2, Area I, Trenches 31-32, rectangular storage structure 32
3.6 GLD-2, Area I, Trenches 31-32, plan of rectangular storage structure 33
3.7 GLD-2, Area I, Trench 9, brick-lined pit 36
3.8 GLD-2, Area I, parallel-walled structure 36
3.9 GLD-2, Area I, parallel-walled structure with brick and bin outlines 37
3.10 GLD-2, Area I, pits in Trench 11 and 12 39
3.11 GLD-2 Trench 18 deep trench 40
3.12 GLD-2 Trench 18 deep trench profile, facing north 41
4.1 Trench 4A, looking north, with Wall 3 (at left, in northeastern corner of trench 4B) and Wall 4 (in center) visible 47
4.2 GLD 1900, feature with curved wall in Trench 4B 48
4.3 GLD 1899, Trench 4A, looking west, with Wall 1 at left and associated Wall 2 in foreground 49
5.1 Agricultural and pastoral land near Gilund, 0–10 km 54
5.2 Resources near Gilund, 0–5 km 55
5.3 Resources near Gilund, 5–10 km 55
5.4 Sites near Gilund, 0–5 km 56
5.5 Sites near Gilund, 5–10 km 57

6.1 Burnished Black Ware 62
6.2 Coarse Red Ware 63
6.3 Thin Red Ware 65
6.4 Coarse Gray Ware 66
6.5 Reserve Slip Ware 67
7.1 4F-3002a Thick Burnished Red Ware wide-mouth jar 78
7.2 4F-3002b Coarse Gray Ware jar or pot 78
7.3 4F-3002c Thin Slipped Coarse Red Ware bowl 78
7.4 4F-3002d Coarse Red Ware jar 78
7.5 4F-3002i Thin Slipped Coarse Red Ware jar 78
7.6 4F-3002j Coarse Gray Ware bowl 78
7.7 4F-3002k Coarse Red Ware jar 78
7.8 4F-3002l Coarse Red Ware globular pot 78
7.9 4F-3003l Thin Slipped Coarse Red Ware pot (associated with tandoor) 80
7.10 4F-3004 Coarse Gray Ware sherd 80
7.11 4F-3004b Coarse Gray Ware pot 80
7.12 4F-3004c Thin Slipped Coarse Red Ware small wide-mouth pot 80
7.13 4F-3004e Coarse Red Ware stand 80
7.14 4F-3005a Thin Slipped Coarse Red Ware shallow carinated bowl 80
7.15 4F-3005b Thin Slipped Coarse Red Ware wide-mouth pot 80
7.16 4D-3019 Coarse Red Ware globular pot 80
7.17 4F-3005e Thick Slipped Burnished Red Ware pot 80
7.18 4F-3005f NCR possible bowl 80
7.19 4F-3005g Coarse Red Ware sherd 80
7.20 4F-3005h White-painted Black and Red Ware deep bowl 82
7.21 4F-3007a Thin Slipped Burnished Red Ware everted rim ridged globular pot 82
7.22 4F-3007b Coarse Gray Ware 82
7.23 4F-3007c Coarse Gray Ware pot 82
7.24 4F-3007d Coarse Gray Ware pot 82
7.25 4F-3007e Coarse Gray Ware basin 82
7.26 4F-3007f Thick Slipped Burnished Red Ware pot 82
7.27 4F-3007h Thick Slipped Burnished Red Ware pot 82
7.28 4F-3008b Coarse Gray Ware pot 82
7.29 4F-3008c Coarse Gray Ware pot 82
7.30 4F-3008d Coarse Red Ware basin 84
7.31 4F-3008e Coarse Red Ware globular jar/pot 84
7.32 4F-3008f Coarse Gray Ware jar/pot 84
7.33 4F-3009a Thick Burnished Red Ware short rimmed globular pot 84
7.34 4F-3009b Thin Slipped Coarse Red Ware everted rim bowl 84
7.35 4F-3009c Thin Slipped Red Coarse Ware ridged featureless bowl 84

7.36 4F-3010a Coarse Gray Ware handle 84
7.37 4F-3010b Thick Slipped Black and Red Ware everted rim globular pot 84
7.38 4F-3010c Thin Slipped Coarse Red Ware bowl 84
7.39 4F-3010d Coarse Red Ware globular pot 84
7.40 4F-3010e Coarse Red Ware globular bowl 84
7.41 4F-3010f Coarse Gray Ware bowl 84
7.42 4F-3011a Thin Slipped Coarse Red Ware bowl 84
7.43 4F-3011b MCR Jar 86
7.44 4F-3011c Harappan Buff Ware 86
7.45 4F-3011d Burnished Red Ware 86
7.46 4F-3018 NCR stand 86
7.47 4F-3019a Thin Slipped Coarse Red Ware globular bowl 86
7.48 4F-3019b Coarse Red Ware narrow-neck pot 86
7.49 4F-3019c Coarse Red Ware everted rim pot 86
7.50 4F-3019d Coarse Gray Ware pot 86
7.51 4F-3019e Coarse Gray Ware pot 86
7.52 4D-3019f Coarse Red Ware globular pot 86
7.53 4F-3021a Coarse Red Ware combed sherd 86
7.54 4F-3021b Polychrome painted sherd 86
7.55 4F-3027 Thick Burnished Red Ware pot 86
7.56 4F-3028a Coarse Red Ware jar 86
9.1 Clay bin located in parallel-walled complex 159
9.2 Clay bin located in parallel-walled complex 160
9.3 Reconstructed seal designs 161
9.4 Reconstructed seal-amulets 164
9.5 Reconstructed stamps 165
10.1 Location of lithics included in study sample 213
10.2 Distribution of complete and broken lithic types at Gilund 216
10.3 Scatterplot of complete blades 221
10.4 Scatterplot of flakes 221
10.5 Scatterplot of cores 222
10.6 Distribution of raw material sources 223
10.7 Lithic illustrations 224
10.8 Lithic illustrations 224
10.9 Lithic illustrations 225
11.1 Concentration of faunal remains, ceramics, and lithics on GLD-2 229
A2.1 Camp at Gilund, 2005 240
A2.2 Dr. Gregory L. Possehl at Gilund, 1999–2000 240
A2.3 Dr. Vasant Shinde (top of ladder) and workers at Gilund, 2005 241

This page intentionally left blank

Tables

Table 2.1	Stratigraphy of index trench, GLD-1	14
Table 2.2	Stratigraphy of GLD-2	20
Table 3.1	Pits associated with Structure 7	35
Table 4.1	Early Historic wall and floor designations, Trenches 4A, 4B	46
Table 6.1	Varieties of Thin Red Ware	64
Table 6.2	Index trench ceramics	69
Table 7.1	Summary of ceramics from index trench	77
Table 8.1	Materials associated with figurines by trench and layer	92
Table 8.2	Distribution of figurines by period	94
Table 8.3	Distribution of animal figurines by trench	94
Table 8.4	Erosion/surface finds	95
Table 8.5	Distribution of ear spools by trench	95
Table 8.6	Distribution of ear studs by trench	95
Table 8.7	Distribution of terracotta bangle fragments by trench	95
Table 8.8	Distribution of miniature vessels (toy pots) by trench	95
Table 8.9	Distribution of discs and gamesmen by trench	96
Table 8.10	Distribution of perforated terracotta discs (wheels) by trench	96
Table 8.11	Distribution of small lamps (votive lamps) by trench	96
Table 8.12	Distribution of rectilinear containers (votive tanks) by trench	97
Table 8.13	Distribution of molds	97
Table 8.14	Distribution of dabbers by trench	98
Table 8.15	Distribution of round lumps	98
Table 8.16	Distribution of miscellaneous unidentified objects by trench	98
Table 8.17	Distribution of game pieces by trench	99
Table 8.18	Distribution of ground discs (hopscotches) by trench and size	100
Table 8.19	Distribution of hopscotches by period and size	101
Table 8.20	Distribution of perforated disks by trench and size	102
Table 8.21	Distribution of perforated disks by period and size	102
Table 8.22	Distribution of worked sherds by trench	102
Table 8.23	Distribution of graffiti on pottery by trench	103
Table 8.24	Distribution of ground stones, rubber stones, and hammerstones by trench	104
Table 8.25	Distribution of ground stones, rubber stones, and hammerstones by period	105
Table 8.26	Distribution of querns, mullers, pestles, pounders, and polishers by trench	106
Table 8.27	Distribution of querns, mullers, pestles, pounders, and polishers by period	106
Table 8.28	Distribution of perforated stones/weights by trench	107

Table 8.29 Distribution of bead polishers by trench 107
Table 8.30 Distribution of stone and terracotta spheres (slingballs) by trench and size 108
Table 8.31 Distribution by trench of additional unmeasured stone and terracotta spheres (slingballs) 109
Table 8.32 Distribution of stone and terracotta spheres (slingballs) by period and size 109
Table 8.33 Chalcolithic metal antiquities 110
Table 8.34 Early Historic iron antiquities and fragments 111
Table 8.35 Other metal antiquities 112
Table 8.36 Early Historic metal antiquities by trench 112
Table 8.37 Distribution of shell bangles by trench and type 112
Table 8.38 Distribution of bangles by period and type 112
Table 8.39 Distribution of worked shells by trench 113
Table 8.40 Distribution of cowries by trench 113
Table 8.41 Distribution of inlay pieces by trench 113
Table 8.42 Distribution of bone objects by trench 113
Table 9.1 Readable impressions on backs of sealings 160
Table 10.1 Count of study sample lithics per trench at Gilund 212
Table 10.2 Methods of analysis 214
Table 10.3 General attributes recorded 215
Table 10.4 Distribution of broken and complete lithic types 216
Table 10.5 Distribution of tool types 217
Table 10.6 Dorsal features on blades 218
Table 10.7 Blade and flake retouch 218
Table 10.8 Blade and flake backing 218
Table 10.9 Location of backing 218
Table 10.10 Type of backing (pieces backed on one edge only) 218
Table 10.11 Summary of truncations on blades 219
Table 10.12 Truncations on backed and non-backed blades 219
Table 10.13 Platform preparation 219
Table 10.14 Average artifact size by raw material (complete artifacts only) 220
Table 10.15 Distribution of chalcedony colors 222
Table 10.16 Distribution of chalcedony inclusions 222
Table 11.1 2005 Gilund fauna estimates 228
Table 11.2 Species inventory from the Gilund faunal assemblage 228

Contributors

Marta Ameri
College of Arts and Creative Enterprises
Zayed University
Dubai, UAE

Shweta Sinha Deshpande
Deccan College Postgraduate and Research Institute
Deemed University
Pune, INDIA

Debasri Dasgupta Ghosh
Deccan College Postgraduate and Research Institute
Deemed University
Pune, INDIA

Lorena Giorgio
Department of Archaeology
University of Bologna
Ravenna, ITALY

Praveena Gullapalli
Department of Anthropology
Rhode Island College
Providence, RI
USA

Julie Hanlon
Department of Anthropology
University of Chicago
Chicago, IL
USA

Peter Johansen
Department of Anthropology
University of British Columbia
CANADA

Matthew Landt
Alpine Archaeological Consultants
Montrose, CO
USA

Gregory L. Possehl†
Department of Anthropology
University of Pennsylvania

Teresa P. Raczek
Department of Geography and Anthropology
Kennesaw State University
Kennesaw, GA
USA

Vasant Shinde
Deccan College Postgraduate and Research Institute
Deemed University
Pune, INDIA

†deceased

This page intentionally left blank

Foreword

I feel somewhat flattered to have been requested by Professor Gregory L. Possehl to write a Foreword to the report on the excavations at Gilund which he, Professor Vasant Shinde, and their colleagues have carried out at this site from 1999 to 2005. What seems to have impelled Professor Possehl to do so is very likely the fact that a little over a decade ago, prior to the planning of his work at this site, he asked me if I had any objection to his carrying out further excavation there, since it had been excavated by me in 1959–60. I told him that I would be only too glad if he did so, and wished him all the best in his venture.

The Museum of the University of Pennsylvania in Philadelphia, represented by Professor Possehl, and the Deccan College Post-Graduate and Research Institute (a Deemed University), Pune, India, represented by Professor Vasant Shinde, and a host of other field workers and research specialists have done commendable excavations, documentation, and analysis of the excavated material, which is faithfully reflected in this report.

Straightaway, I would like to draw special attention to some new aspects which these excavations have brought to light about this site in particular and in the context of the Ahar-Banas Culture Complex in general. Thus, if we begin with the earliest occupation of the site, the discovery of a separate microlithic basal stratum is indeed very noteworthy, since I had not come across such a deposit in my single season of field work in 1959–60. According to the excavators, this milieu is comparable to the microlithic complex of Bagor to the north. However, it still remains to be determined whether the Ahar-Banas Chalcolithic Culture arose from this Bagor-like complex and, if it did, as may not be unlikely, how exactly the transition took place from a nomadic, microlith-using stage to an agriculture-based, metal-using settled society. I am sure further work at this very site and at other related ones will provide the answer in due course.

In the context of the Ahar-Banas Chalcolithic Complex itself, the renewed excavations at Gilund have brought to light two new elements. The excavation at Balathal, carried out by Professors V.N. Misra and Vasant Shinde, had revealed that the Ahar-Banas settlement over there was provided with a peripheral wall which was duly identified on the eastern side. The work at Gilund has now also thrown up some evidence which seems to suggest that fortifying their settlements may have been a normal practice with the Ahar-Banas people as well, as was doubtless the case with their contemporaries, the Harappans, farther to the north. The Gilund evidence, however, needs to be amplified by conducting further work at the site.

My small-scale excavation in 1959–60 did bring to light the massive "parallel-wall complex" in the northern part of GLD-2. But much welcome further light has been thrown by the work carried out in 1999–2005. What is most significant in this context is the discovery of 214 sealings of clay in a circular bin located in this very area. While these sealings do testify to the fact that some containers had been sealed, what exactly was the purpose of storing such a large number of sealings in a bin close to the "parallel-wall complex" which, for all one can guess, may have been a granary? A record of the contributors? Maybe or maybe not!

Some of the motifs occurring on these sealings have parallels on painted pottery and sealings in Iran (e.g., Tepe Hissar, Tepe Sialk, etc.), which may go as far back as circa 3500 BCE. Again, similar motifs also occur on the sealings/seals in the Bactria-Margiana Archaeological Complex which dates to as late as 1800–1700 BCE. In contrast, the Gilund sealings are dated to circa 2300 BCE. From time to time, various views have been offered to explain these similarities, but each one, I am afraid, has its flaws. The issue is an important one and requires a much more in-depth study before arriving at any conclusion.

The report contains, besides the usual chapters on the architectural remains, ceramics, metal tools, lithics, and floral and faunal remains, some very interesting contributions, such as "Site Catchment Analysis," which provide a meaningful background to the various features of the site. Such studies deserve to be encouraged more and more.

At the end, I would like to congratulate heartily Professors Possehl and Shinde and all their colleagues on presenting such a comprehensive report—well argued and amply illustrated.

B.B. Lal
Los Angeles
July 4, 2009

This page intentionally left blank

Acknowledgments

Archaeology is a team effort and our accomplishments at Gilund would not have been possible without the help of many. We owe a deep debt of gratitude to hundreds of people and many institutions who made the five seasons of excavation at Gilund possible. Their names are too many to list in full here, but we would like to acknowledge a few institutions and individuals who provided exceptional assistance.

We are grateful to the Archaeological Survey of India and the Government of India for granting us permission to excavate this centrally protected site. Ultimately, Gilund was successfully excavated because the site has been remarkably well preserved thanks to the extraordinary efforts of the Archaeological Survey of India. The efforts of the central ASI, the Rajasthan Circle, and the site guards that have been posted there since 1960, have prevented illegal digging and other disturbances. The contrast between the preservation of Gilund, a designated "Centrally Protected Monument," and Ahar-Banas sites without protected status is remarkable. Many of these other sites have been lost to farming, soil borrowing, construction, and other activities. This project was only possible because of the work of the ASI at Gilund. We would also like to thank the State Department of Archaeology and Museums, Government of Rajasthan, and the staff at the Government State Museum in Jaipur and Udaipur.

Financial support was provided by the University of Pennsylvania Museum of Archaeology and Anthropology, the National Science Foundation (NSF INT99-08463), the American Institute of Indian Studies, James and Karen Possehl, the Archaeological Survey of India, and Deccan College. The University of Pennsylvania Undergraduate Research fund provided financing for several students to participate in the excavation. Dr. Pradeep Mehendiratta and Purnima Mehta of the American Institute of Indian Studies in Delhi provided valuable counsel and assistance. In addition, Madhav Bhandare visited the site and assisted with visa compliance both in Rajasthan and in Pune.

We would like to thank Deccan College and the University of Pennsylvania Museum of Archaeology and Anthropology. The authorities of Deccan College, particularly Dr. S.N. Pathan, the then acting Director, Dr. K. Paddayya, the then Joint Director, Mr. Kashikar and Mr. Gaware, the then Registrar and Deputy Registrar respectively, provided strong administrative and moral support to this project. At the Penn Museum, Jennifer Bornstein provided administrative assistance. In the Museum's Publications Department, we would like to thank James Mathieu for helping to shepherd this volume through a long editorial process and for being a strong advocate for this volume. We also thank Jennifer Quick in Publications for additional editorial assistance. We appreciate the extensive work of the anonymous reviewers who provided helpful guidance. The authors are grateful to Prof. B.B. Lal not only for writing the Foreword to this volume but providing guidance at various stages while we were excavating and writing this report.

It takes many people to run a camp full of archaeologists. Dighe Bharat Baburao and V. Vishwasrao acted as Camp Managers and oversaw many details. Krishna Malap prepared delicious meals. Shantiba Nai provided many services and acted as a resident grandfather, while Dilip Kumawat ably transported us back and forth to Udaipur and many other locations. Dr. Lalit Pandey and Dr. Jeewan Kharakwal of the Institute of Rajasthan Studies, and Rajasthan Vidhyapeeth deserve special thanks for providing local logistic support during the course of excavation.

Dozens of students offered their time and talents, most notably the dedicated students of Deccan College and the University of Pennsylvania, who performed much of the excavation. Sanjay Desphande, Shweta Sinha Deshpande, and Prabodh Shirvalkar provided extensive leadership throughout. The senior research students like Marta Ameri, Debashree Dasgupta Ghosh, Lorena Giorgio, Praveena Gullapalli, Julie Hanlon, Matthew Landt, Rita Jeney, Peter Johansen, and Shiv Kumar, etc., shouldered various responsibilities ably. The bulk of the work was conducted by dozens of workers from Gilund village who toiled to excavate, screen, and wash artifacts in the coldest part of winter. It is their hard work that allowed us to accomplish so much in

five short seasons. Harriet F. (Rae) Beaubien and Claudia Chemello of the Smithsonian Institution helped to preserve the incredibly important and incredibly fragile seal impressions. We also thank the following students from Kennesaw State University who provided assistance in the volume production: Mollie Gilstrap, Allie Ingram, Elise Krause, Jenn Parent, Madyson Price, Samantha Roberts, April Tolley, and Brian LaRaia.

Our warmest gratitude is reserved for the people of Gilund village who opened their hearts and homes each year to multitudes of researchers from across India and around the world. Their patience with our many impositions and cultural confusion has been immense. Many families in the village participated in the excavations in some way. Girish Vyas and his entire family helped to make several complicated arrangements. Omji Bohra and his family graciously hosted the directors, visiting guests, and various researchers throughout the years.

Finally, we would like to say a few words about Gregory L. Possehl, who sadly passed away during the final stages of editing this volume. Dr. Possehl played a critical role in the operations at Gilund, which was his last excavation in India. He was involved in the initial drafts of Chapters 1, 2, 3, and 12 and assisted in the compilation and initial editing of the additional chapters. It was his request to be listed as third author on this volume. Always ready to give an impromptu lecture, Dr. P delighted in working with students at Gilund, and sharing his knowledge of Indian archaeology accumulated over a lifetime. He will be greatly missed.

Vasant Shinde
Teresa P. Raczek

1

Excavations at Gilund 1999–2005: The Artifacts and Other Studies

Vasant Shinde, Teresa P. Raczek, and Gregory L. Possehl

Introduction

As the largest known Chalcolithic settlement in its region, the site of Gilund played an important role in the development of early social, political, and economic forms of the 3rd and 2nd millennia BC in northwest India. The site was home to an ancient community of farmers and artisans who engaged in extensive inter- and intra-regional networks of interaction. The presence of monumental architecture in the form of a large parallel walled mudbrick structure, along with a circumference wall, workshops, and a diverse body of material culture make Gilund an excellent site for studying early social complexity. Moreover, its location on the margins of the Indus Civilization provides a distinctive vantage point for viewing social, political, and economic processes more broadly.

Gilund was first excavated over half of a century ago by B.B. Lal of the Archaeological Survey of India (IAR 1959–60). In order to follow up on his initial finds, new multi-disciplinary excavations were undertaken from 1999–2005 by the University of Pennsylvania and Deccan College, Post-Graduate and Research Institute. These new excavations investigated the role that Gilund played in ongoing regional social processes including increased sedentism, the spread of farming, and the development of trade and exchange networks. In this volume, we present an overview of the artifacts recovered from the new excavations, together with an overview of related studies and significant discoveries. In order to situate these studies, a summary of previous research in the region is presented here.

The Mewar Plain and the Ahar-Banas Complex

The ancient habitation mound of Gilund (25°01′56″ N and 74°15′45″ E, 485 m above sea level, Rajsamand District, Rajasthan) is locally known as Modiya Magari ("bald habitation mound"). Although it was referred to as Bhagwanpura in Lal's first excavation report, it is currently called Gilund after the nearby contemporary village of that name. The site sits in the middle of the Banas Basin in the Mewar Plain, a geological extension of central India's Malwa Plateau. The region is bounded on the west by the Aravalli Mountains, which form the watershed for this part of the subcontinent. The Banas/Berach River and several of its tributaries drain from here to the northeast, eventually emptying into the Chambal River in Madhya Pradesh. The site is located approximately 1.20 km south of the Banas River, which served the occupants of ancient Gilund as a source of water, fish, stone, and potentially reeds and transport. A nulla, or creek, that connects to the Banas passes just south of the site, potentially providing more immediate access to water. Additional water and water-based flora and fauna may also have been obtained from a now dry lake located 2 km to the west.

The region has a semi-arid environment characterized by hot, dry summers (over 45° C); cold, dry winters (under 15° C); and an unpredictable monsoon with an average rainfall of 500 to 800 mm. Until recently, much of the region was covered by thorny scrub forests; some varieties of trees including babul, banyan, tamarind, mango, papal, and neem are still commonly found. Wild animals present

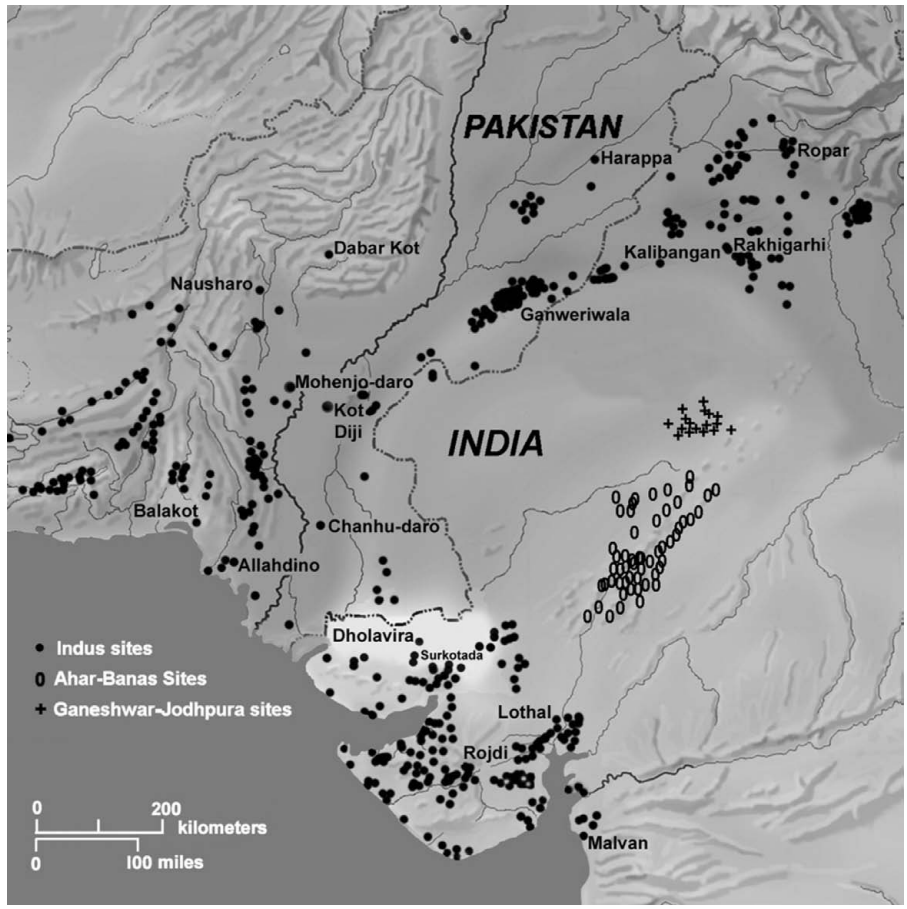


Fig. 1.1. Map of Chalcolithic sites in Ahar-Banas, Ganeshwar-Jodhpura, and Indus regions. (Map by G.L. Possehl)

when Gilund was inhabited include nilgai (a large antelope), tiger, wild boar, and sambar (a large deer).

The land surrounding Gilund is slightly sandy, but arable; crops currently grown in the area include wheat, barley, millet, sorghum, sesame, green gram, black gram, and mustard. Non-agriculturally productive land suitable for pasture is available across the river (between 2 and 4 km away) on several small hillocks covered by coarse red soil. Additional pasturage is available throughout the region. In sum, the local ecological conditions were suitable for both farming and pastoralism.

Although the Mewar Plain was first occupied in the Pleistocene, the population increased in the mid-Holocene (Misra 2002). By the early 3rd millennium BC permanent settlements spread across the region and the occupants began to emphasize agro-pastoralism. Many of these settlements are known collectively as the Ahar-Banas Cultural Complex, named after the first excavated site, Ahar, and the nearby Banas River. Over 100 sites with Ahar-Banas pottery have been located in southeast Rajasthan near the Banas, Khari, Berach, Kothari, and Gambhiri Rivers and their tributaries (Hooja 1988, Misra 1967) (see Fig. 1.2). Although some of these settlements, like Tarawat, are as small as 0.3 hectares, most are larger, with several in the 5-hectare range. Gilund remains the largest site at approximately 22 hectares.

The past few years have shown a resurgence of interest in the archaeology of the Mewar region as indicated by the large-scale excavations at the sites of Gilund (Raczek and Shinde 2010, Shinde 2010a, 2010b, Shinde and Possehl 2005, Shinde and Raczek 2010, Shinde, Deshpande, and Yasuda 2004, Shinde, Possehl, and Ameri 2005), Balathal in Rajsamand District, and Ojiyana in Bhilwara District, as well as the test excavations at Chatrikhera in Rajsamand District and Purani Marmi in Chitaurgarh District (Fig. 1.3). Together, these studies have clarified regional cultural

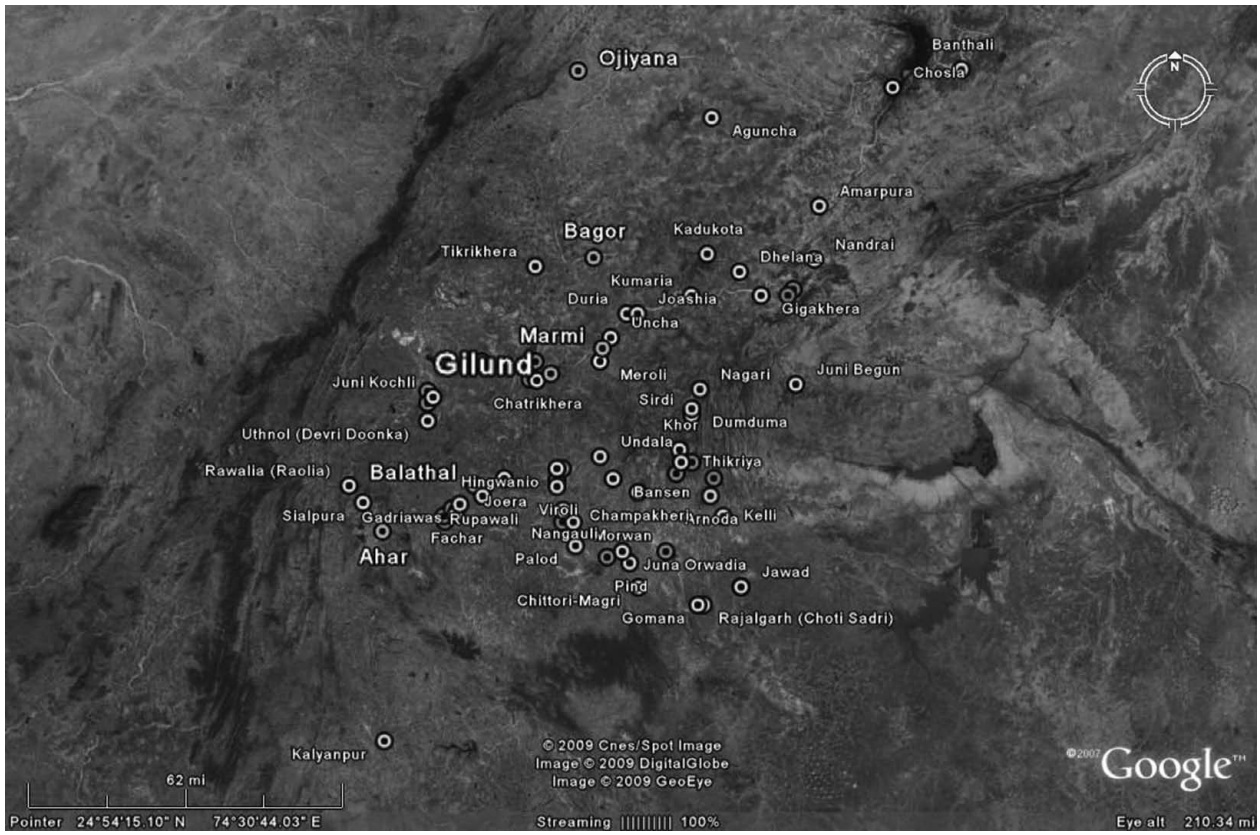


Fig. 1.2. Location of selected Ahar-Banas sites in the Mewar region of Rajasthan.

sequences as well as local variation in material culture. In addition, they have contributed to our understanding of the development of cultural complexity and the expansion of interaction within the Mewar region and beyond. A brief description of excavated sites is presented here in order to provide context to the artifact analyses included in this volume.

Ahar

Ahar (24˚35′ N, 73˚44′ E), was first excavated in 1952 on a limited scale by A.K. Vyas of the Department of Archaeology, Rajasthan, although this excavation remains unpublished. R.C. Agrawala resumed the excavations in 1954–56 (IAR 1954–55:14–15; IAR 1955–56:11) as did H.D. Sankalia of Deccan College in 1961–62 (Sankalia, Deo, and Ansari 1969). This latter work established a relatively complete cultural sequence for the "Ahar-Banas Complex" of the 3rd and 2nd millennium BC. Located on the Ahar River, a tributary of the Banas, the archaeological site locally known as Dhulkot has a deposit of 12.8 m and is divided into two periods: Period I Ahar-Banas Complex (2580–1500 BC or later) with three sub-phases, and Period II Iron Age (Sankalia, Deo, and Ansari 1969). While no sterile layer was found separating the two periods, there is a chronological gap. Sankalia and Deo divided the three sub-phases of Period I according to changes in the ceramic assemblage (Deo 1969a, Sankalia 1969b). Phase Ia (2580–2170 BC) is characterized by the presence of Black and Red Ware (especially convex-sided bowls); Buff Ware and imitation Buff-Slipped Ware; Red Ware; some Gray Ware; and the absence of sharply carinated bowls. In Phase Ib (2170–2080 BC) Black and Red Ware continues to be present while Buff and imitation Buff-Slipped Ware are absent. The amount of Gray Ware and Red Ware (including cut and ribbed styles) increases and some new ceramic types appear. Finally, Phase Ic (2080–1500 BC) is characterized by the presence of sharply carinated Black and Red Ware bowls and Lustrous Red Ware similar to that of Rangpur, as well as the absence of sturdy metallic ceramics and dishes-on-stands.

In addition to pottery (Deo 1969a), other artifacts recovered from Ahar include shell bangles, beads made of crystal, terracotta, and lapis lazuli (most of which belong

to Phase Ib and Ic), and terracotta figurines of animals like bulls and elephants (Deo 1969b). The archaeologists collected only a few microliths: mainly backed blades, borers, fluted cores, and side scrappers made of chert, chalcedony, and quartz. This led Sankalia to suggest that the people of Ahar depended on copper tools. In fact, he argues that the inhabitants smelted copper using ore procured from local sources in the Aravallis. The Aravallis have extensive metal and mineral deposits, including copper, lead, zinc, silver, and iron. Pointing to finds of copper slag and copper implements like celts, blades, knives, rings, bangles, and kohl sticks he argues that the inhabitants manufactured their own copper tools.

Finally, fauna and flora remains indicate that the people of Ahar practiced agriculture and animal husbandry, along with hunting and fishing. Impressions of domestic rice and millet were found in several pot sherds (Vishnu-Mittre 1969). Domesticated animal remains included donkey, cow, buffalo, goat, sheep, and dog, while wild animal remains included fish, turtles, birds, deer, pig, and mongoose (Shah 1969).

Due to the vertical nature of the excavations, no complete house plans were outlined. However, both stone and mud houses were identified along with related storage jars and cooking features, including U-shaped chulhas or hearths (Sankalia 1969c).

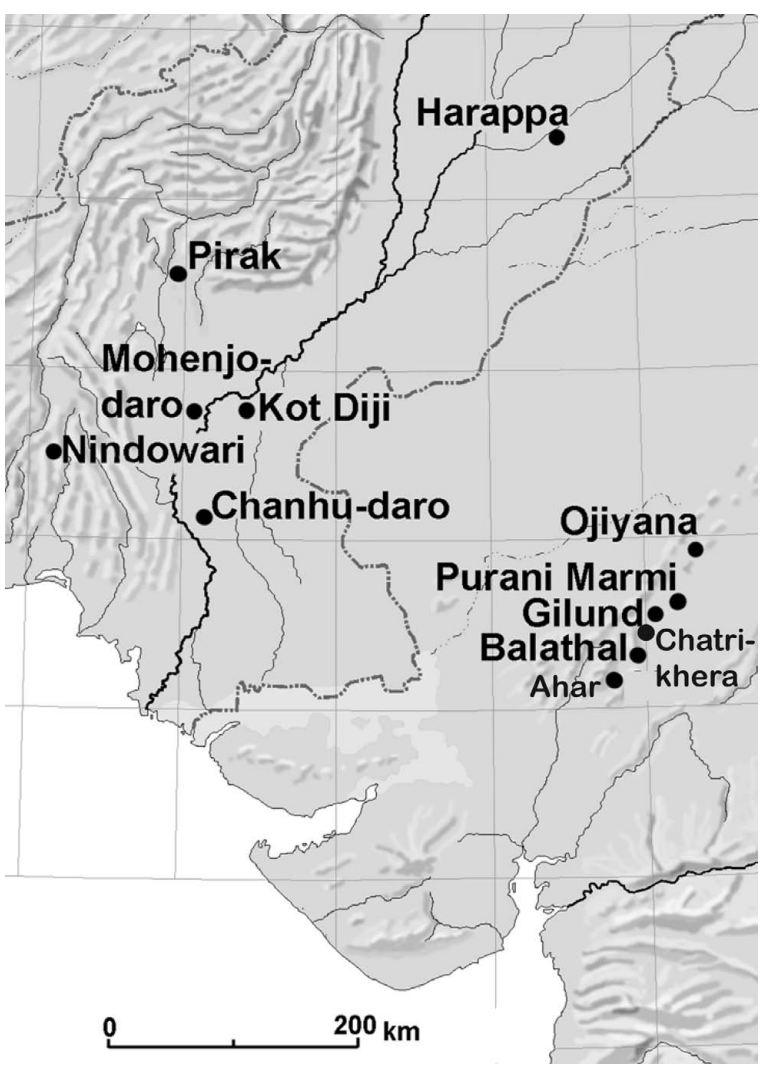


Fig. 1.3. Excavated Ahar-Banas sites in Rajasthan in relation to major sites of the Indus.

Balathal

The site of Balathal (24°43′ N and 73°59′ E) is located 42 km northeast of Udaipur in the Banas River basin. At 2 hectares (150 m N-S and 135 m E-W), it is among the smallest sites of the region. However, it has a deposit of 7 m, indicating long-term occupation. The site is located near a large freshwater lake and is surrounded by agricultural land. Excavations carried out at Balathal between 1993 and 2000 by Deccan College, Post-Graduate and Research Institute, Pune, and the Rajasthan Vidyapeeth, Udaipur, aimed at reconstructing the socio-economic organization of the 3rd and 2nd millennium BC culture of the Mewar region (Misra 1997, Misra et al. 1995, 1997).

The excavators divide the occupation of Balathal into two cultural periods that are separated by a gap of 1600 years—Ahar-Banas (2800–1800 BC) and Early Historic (200–300 BC) (Misra et al. 1995, 1997). The Ahar-Banas period is further divided into three phases based on the pottery. Phase A, Early Ahar-Banas (2800–2500 BC) includes typical Ahar-Banas pottery such as Coarse and Thick Slipped Red Ware, Thin Red Ware, Black and Red Ware, and Thin Red Slipped Ware. In addition, Reserve Slip Ware was found in very early deposits. In this phase, however, the majority of the pottery is handmade, coarse, thick, and low-fired. Shapes that are common across the region for the Chalcolithic are present in the initial oc-

cupations (Mishra 2000). These include wide-mouthed deep carinated bowls, small narrow-mouthed jars, and storage jars with beaded rims. In Phase B, the Mature Ahar-Banas (2500–2000 BC), the Balathal pottery has three different traditions: Ahar-Banas (Mewar region), Kayatha (Chambal Valley), and Malwa (Malwa Plateau). Finally, in Phase C, Late Ahar-Banas (2000–1700 BC), the texture of classical Ahar-Banas pottery becomes coarser. The large quantity of the Malwa Ware recovered in Phase C indicates that interaction with the Malwa region continued.

At Balathal, the initial structures of wattle and daub, mud, and stone (Phase A) were built on bedrock. During Phase B, houses were rectangular or square with single or double rooms and storage and cooking facilities. The floors of these structures were made of clay and plastered with cow dung or lime (Boivin 2010). Significantly, a large (30 m E–W by 20 m N–S), roughly rectangular fortified stone enclosure was identified in the middle of the site. Its function is unclear. House complexes were constructed in a rectangular plan around this central structure and all were enclosed by an outer wall.

A wide variety of ethnobotanical remains were recovered from Balathal, including wheat, barley, three varieties of millet, three or four varieties of lentils, and peas (Kajale 1996). Recovered wild plant remains include Job's tears, Indian jujube, and okra (Kajale 1996). In addition, sheep, goat, and cattle were identified (Thomas and Joglekar 1996).

Five burials were recovered from Balathal: three from Early Historic levels and two from Chalcolithic Phase B levels (Robbins et al. 2006, 2007, 2009). One of these, an adult male dated between 2500 and 2000 BC provides the earliest evidence of leprosy in South Asia and the world (Robbins et al. 2009). One skeleton from Early Historic deposits was buried in a seated, upright position.

The excavators suggest that Balathal was a well-planned fortified settlement, where society and economy gradually developed then declined (Misra et al. 1995, 1997, Shinde, Possehl, and Deshpande 2002). They argue that gradual development and technological advancement led to the rise of the Mature Ahar-Banas (Phase B) at Balathal, which included contact with Harappans in Gujarat. Changes during the Late Ahar-Banas Phase (Phase C) included a decline in population at the site, the replacement of large multi-room structures by single- or double-room structures, and a shift from fine to coarse pottery. This later decline is contemporary with the emergence of the Post-urban (or "Late") Harappan.

Purani Marmi

Marmi is also known as Purani Marmi (25°06′ N and 74°26′ E) in order to distinguish it from the contemporary village of the same name. It is located on the banks of the Banas River, and is partly under cultivation at this time. Several major natural alluvial channels run from the middle of the site down to the riverbed. These channels are quite deep and cut through the archaeological deposits as well as the sterile soil underneath. As a result, the site of Marmi is currently disturbed.

Marmi was first identified through survey (IAR 1957–58); more recently two 1 m by 5 m trenches were excavated in 2000 (Joglekar, Thomas, and Mohanty 2003, Mohanty et al. 2000). The excavators used the site's alluvial channels to their advantage and set their trenches so as to create a clean and visible profile. They found that the deposition was 1.5 m to 1.7 m deep and included Ahar-Banas Phase and Early Historic artifacts. Unfortunately, their excavations were not extensive enough to allow them to identify any structures.

Five types of pottery have been identified at Marmi: Black and Red Ware, Thin Red Slipped Ware, Thick Red Slipped Ware, Gray Slipped Ware, and Coarse Red Ware. However, some common Ahar-Banas wares that were identified at Balathal and Ahar were not found at Marmi. These include Tan, Chocolate Slipped, Thin Red, and Reserved Slip (Mohanty et al. 2000:136). These substantial differences between the pottery of Marmi and Balathal may be due to the late occupation of Marmi (approximately 1500–1400 BC) and could represent a fourth phase in the regional Ahar-Banas chronology.

The most distinctive artifacts at Marmi are the terracotta bulls. A team from Deccan College collected 58 terracotta bull figurines during a survey in 1993 (Misra et al. 1993). The analysts divided the bulls into three categories: naturalistic figurines with a hump, naturalistic figurines without a hump, and stylized figurines. Those of the first two categories are formally similar to bulls found at other Ahar-Banas sites such as Ojiyana and Gilund. However, the stylized figurines are unique to Marmi. They do not have any limbs and consist of an upright cylindrical form with two horns on the upper portion. A slight nodule indicates the presence of a face on some figurines, but most bulls are faceless. In addition, the horns are frequently broken and missing. The analysts suggest that these bulls may have been made locally at Marmi for ritual purposes. They present an analogy with several traditions among contemporary Indian communities who also use small bull figurines in their worship. Because Marmi has produced far more bull figurines

than other sites, Misra et al. (1993) suggest that Marmi may have been a kind of religious center, although the large size of the mound and the unique depositional circumstance at Marmi may also contribute to the high concentration of figurines (for more on terracotta bulls see Hanlon 2006).

Chatrikhera

Located 3 km southwest of Gilund, Chatrikhera is a small settlement that was occupied during multiple time periods. The main mound at Chatrikhera was first discovered as part of the explorations in southeastern Rajasthan by K.N. Puri (IAR 1957–58:44–45), and was also identified in three other surveys (Misra 1967:149; Hooja 1988:163; Dasgupta 2006a, 2006b). The site was more intensively studied by a joint Indian-American team in 2009 and 2011. Although heavily disturbed, the research team documented evidence that the site was occupied during the Ahar-Banas, Early Historic, Medieval, and Modern periods (Sugandhi et al. 2010, Raczek et al. 2011). Two test trenches were excavated, one in the northern deposit and one in the southern deposit. Mudbrick walls and a hearth were encountered in the layers with Ahar-Banas pottery. Multiple Ahar-Banas wares were recovered including white-painted Black and Red Ware bowls, Thin Red Slipped small pots and jars, Coarse Red Ware pots, Gray Wares, and Burnished Black Ware. A few sherds of Chocolate Wares (possibly Kayatha) were also encountered along with three small terracotta animal figurines.

Ojiyana

Located in the hills of the Aravallis, Ojiyana (25°53′ N and 74°21′ E) is the farthest north of all the excavated Ahar-Banas sites. The site was first identified in 1980 by R.C. Agrawala and first excavated by the Archaeological Survey of India in 2000 (Meena and Tripathi 2000a, 2000b, 2001, 2001–02). The deposit is 7.5 m deep and contains 26 separate layers. The excavators pursued both vertical and horizontal excavation strategies, which allowed them to gather chronological data as well as information about settlement patterns.

Ojiyana has been dated to 3000–1500 BC and the occupation has been divided into three separate phases based on pottery sequences: I, II (a and b), and III. Ahar-Banas white-painted Black and Red Ware was found in all phases. In addition, Black Slipped Ware, Gray Ware, Tan Ware, and Red Slipped Ware were all recovered. Several small terracotta bulls and cows, including some that were painted white, were recovered. Other recovered antiquities are common throughout the Ahar-Banas: spindle whorls, slingballs, toy cart wheels, "gamesmen" (small baked terracotta objects of various sizes), "hopscotches" (ground pottery sherds), and beads of various materials.

The structures at Ojiyana vary by phase. Phase I structures are made of mud brick with clay floors. Phase II structures consist of multiple rooms and courtyard areas that are made of stone and mud plaster with bamboo and mud roofs. Associated querns and chulhas were found in some rooms. In addition, the excavators argue that one of the structures served as a communal granary. The excavators describe the Phase II settlement as "well-planned," with east-west aligned structures, parallel streets, and a surrounding fortification wall. Phase III structures are smaller than those of Phase II and do not follow any specific orientation. Some are made of stone, others of wattle and daub with clay floors. A number of subterranean lined storage pits were identified and presumably stored grain.

Bagor

The site of Bagor, originally excavated by V.N. Misra (IAR 1967–68b:41–42; 1968–69:26–28; 1969–70:32–34; Misra 1971a, 1973, 1982) and later reopened by Deccan College in 2000 (Deshpande et al. 2004, Shinde 2010a), consists largely of a lithic and pottery scatter that lies on top of a fossilized sand dune. Although it is the only published excavation of a lithic scatter site in southeastern Rajasthan, hundreds of sites like it have been identified throughout the region (Hooja 1988, Misra 1967, and see Ghosh this volume). The site is located at a bend in the Kothari River and has an excellent view of the surrounding area. It was intermittently occupied from 5500 BC until approximately AD 200. Misra divides the site occupations into three phases (1973, 1982). Phase I (5000–2800 BC) is considered to be Mesolithic and is largely aceramic, although some small pieces of eroded pottery were found in these levels. Phase II (2800–600 BC) is characterized by low-fired pottery that resembles both Ahar-Banas and Kayatha pottery sequences. Ahar Black and Red Ware is present, as are other Ahar Red Wares including basins, bowls, and jars that have Ahar designs and motifs. This phase overlaps with the occupations at Gilund and other Ahar-Banas sites. Phase III (600 BC–AD 200) is the historic period occupation. It includes wheel-made pottery, iron artifacts, glass beads, bricks, and tiles. There are fewer lithics in this phase than in previous phases. Shinde, Deshpande, and Yasuda (2004) divide the Bagor sequence into aceramic and ceramic.

The site has no permanent architecture, although some concentrations of schist stone slabs procured from the outcrops across the river were identified in Phase I and

II. These stones may have been used as house floors for superstructures made of portable or perishable materials. Beyond pottery, recovered artifacts in Phase II include stone and carnelian beads, a copper spearhead, a copper awl, and three copper arrowheads described as similar to Harappan arrowheads (Misra 1970, 1973). Hammerstones, groundstones, two perforated stones, and a spindle whorl were also found in Phase II (Misra 1973:105).

Vast quantities of faunal remains were recovered from Bagor; however, most were fragmentary. The initial faunal analysis indicated that Phase I fauna only included wild species; later studies identified domesticated animal remains in Phase I and II including sheep/goat and cattle (Thomas 1975, 1977, 1984). In recent years, the faunal analysis has been challenged since archaeologists have learned more about the comparative osteology of the local wild animals of Rajasthan (Meadow and Patel 2002, Patel 2009). Recent microwear and starch grain analyses conducted on lithics procured during the 2000 excavations indicate that the inhabitants prepared and consumed a variety of fruits, pulses, and grains (Kashyap 2006).

While five burials were recovered, only three are attributed to the time period that is contemporaneous with Gilund: one child and two adults (Kennedy 1982, Kumar 1970–73, Lukacs 1982, Misra 1972). Several pots were buried with the deceased in Phase II along with copper arrowheads and a stone and bone bead necklace (Misra 1982). In addition, one burial with no associated goods was uncovered from Phase I deposits.

Several archaeologists have suggested that the inhabitants of Bagor engaged in exchange with other settlements of the Mewar Plain and beyond (Hooja 1988, 1996, Misra 1971b) (Lukacs 2002, Possehl 2002, Possehl and Kennedy 1979). Recent visual analysis of the lithic raw materials supports the idea that the inhabitants of Bagor may have traveled to areas near the border of the contemporary state of Madhya Pradesh (Raczek 2011), while analysis of the lithic technology confirms a shared technological vocabulary with Gilund (Raczek 2013).

Excavated Ahar-Banas Sites Outside of the Banas-Berach Basin

A number of researchers have observed that Ahar-Banas pottery extends into Madhya Pradesh (Chakrabarti 1999, Dhavalikar 2002, Hanlon 2006; Hooja 1988:43; Possehl and Rissman 1992, Sankalia 1979). For the most part, sites in this area have layers with Ahar-Banas material culture that precede or follow other phases that are not present in the Banas-Berach Basin. Excavated sites include Navdatoli (Sankalia, Deo and Ansari 1971, Sankalia, Subbarao, and Deo 1958), Kayatha (Ansari and Dhavalikar 1975, IAR 1964–65, 1967–68a, Wakankar 1967), Chichalli (IAR 1998–99, 1999–2000), and Eran (Pandey 1982, Singh 1967a, 1967b).

Common Themes among the Research Projects at Gilund

The studies presented in this volume address four common themes: early sedentism, increasing social complexity, trade and exchange, and the transition between the Ahar-Banas and Early Historic periods. Each study also addresses specific questions that are best suited to the material under analysis. Together, the data generated by these studies enable a synthetic consideration of social processes and practices of the 3rd and 2nd millennia Mewar Plain (see Chapter 12).

Early Sedentism

By the early 3rd millennium BC, many inhabitants of the Mewar region settled into villages and towns like Gilund. Beyond changes in mobility and diet, the new excavations at Gilund investigated shifts in social, economic, and political processes that occurred in concert with increasing sedentism. A deep trench on mound GLD-1 was excavated in order to identify the earliest habitations and document the transformations that occurred during the following occupations. The findings of the deep trench are presented in Chapter 2 while the analysis of artifacts from that trench is presented throughout the remaining chapters. In an effort to study the subsistence regime that developed in concert with sedentism, Matthew Landt presents an analysis of the faunal collection in Chapter 11.

Early Social Complexity

The largest site of the Ahar-Banas, Gilund was also situated at the geographic center of the Mewar Plain. Thus, Gilund's size and location suggest that it played a prominent role in regional economic interactions and political organization. Additionally, the location of the Banas-Berach Basin—on the peripheries of the Indus Civilization—is suitable for examining contemporaneous social and economic processes in a non-urban context. Evidence of specialization and social stratification was identified and studied through the excavation of workshop areas. In addition, re-opening the parallel walls previously discovered by Lal and investigating their surrounding archaeological context allowed the research team to examine questions about monumen-

tality and communality in the form of prominent architecture. These finds are discussed in Chapter 3. The chapters on pottery, small finds, and sealings provide the necessary data to consider questions of complexity, while Raczek's chapter on lithics challenges the idea that stone tools are indices of sites that predate the emergence of complexity.

Trade and Exchange

Previous studies of the Mewar economy identified local and long-distance exchange through such finds as Saurashtra Harappan artifacts from Balathal and pottery and copper artifacts from Bagor (Misra 1973). The new excavations at Gilund provided the opportunity to investigate the intensity and nature of regional interaction as well as interaction between Mewar and regions of the Indus and the Deccan. It had previously been argued that the Harappans may have established contact with the Mewar region in order to obtain raw materials such as copper, zinc, and semi-precious stones including chalcedony, carnelian, and agate. Although Gilund was not located near any deposits of these materials, it was large and centrally located and was thus likely pivotal in both regional and long-distance interactions.

In order to situate the finds at Gilund, a systematic site catchment and locational analysis was undertaken by Debashri Dasgupta Ghosh who identifies locally available raw materials and describes other nearby sites that may have engaged in trade and exchange with Gilund (Chapter 5). Questions regarding the procurement of raw materials and the production and circulation of goods were approached through systematic and scientific study of various artifact classes. For example, Lorena Giorgio's and Shweta Sinha Deshpande's pottery analyses identified sherds that came to Gilund from far-away places (Chapters 6 and 7). Julie Hanlon's discussion of antiquities presents additional evidence of long-distance interaction (Chapter 8), as does Marta Ameri's discussion on the seal impressions (Chapter 9), and Teresa Raczek's lithic analysis, which includes a description of non-local raw materials (Chapter 10).

Transitions

Finally, little is known archaeologically about the transition between the Ahar-Banas and Early Historic periods. The problem of the so-called gap or "Dark Age" between these time periods in western and central India is reinforced by the paucity of research at occupations that span 1200 BC to 600 BC. Earlier explorations carried out on the eastern mound at Gilund identified the presence of fine Gray Ware, which often dates to 7th or 8th century BC. As a result, Gilund was seen as a fit candidate to study this transition and a trench was opened on GLD-I. Praveena Gullapalli and Peter Johansen present their finds of the Early Historic occupations in Chapter 4. Hanlon's presentation of the small finds also includes an Early Historic section and both pottery chapters document shifts in pottery production at the transition.

Plan of the Work

The chapters that follow present the finds and analyses undertaken in conjunction with the new excavations at Gilund. Chapters 2 and 3 provide the necessary context by summarizing methods, areas of excavation, and work conducted and presenting the site stratigraphy, architecture, and prominent features. Chapter 4 by Gullapalli and Johansen focuses on the Early Historic excavations and presents the stratigraphy, architecture, and features encountered in that part of the site. Chapter 5 by Ghosh presents the results of a detailed systematic survey of the area surrounding Gilund. In this chapter, nearby sites are described and natural resources available to the inhabitants of Gilund are identified. The chapter situates Gilund in a broader context among its geographic surroundings and nearest neighbors.

The analyses of artifacts from Gilund are presented in Chapters 6 through 11. Two separate pottery studies are presented (Chapter 6 by Deshpande and Chapter 7 by Giorgio) in order to provide both a chronological analysis and overall description of the pottery finds. These chapters highlight the most common Ahar-Banas pottery types, as well as select sherds that were brought to the site from other regions. In addition, a consideration of chronological changes in the pottery assemblage is presented.

Chapter 8 by Hanlon presents the antiquities collected at Gilund over the five seasons of excavation. Hanlon separates the antiquities by material class, and presents individual photos as well as summary tables of her finds. Her analysis also includes a discussion of how these small finds link Gilund to other sites both near and far (see also Hanlon 2010). Ameri's Chapter 9 on the seals and seal impressions found at Gilund provides additional analysis into Gilund's interactions with the wider world. Photos of the seals and impressions are presented along with a discussion of other sites where similar items can be found (see also Ameri 2010).

Chapter 10 by Raczek offers an in-depth analysis of technology used at Gilund by presenting the stone tool and debitage collection recovered during excavations. The study includes a typology, attribute analysis, and raw material analysis, and compares the Gilund collection to