

Sameh Iskander (ed.)

# Archaeological Discoveries at the Temple of Ramesses II in Abydos

Volume 1

Magazines, Animal Burials, and Miscellanea



Archaeological Discoveries  
at the Temple of Ramesses II  
in Abydos



# Archaeological Discoveries at the Temple of Ramesses II in Abydos

Volume 1:  
Magazines, Animal Burials, and Miscellanea

*edited by*

Sameh Iskander



Lockwood Press  
Columbus, Georgia

# Archaeological Discoveries at the Temple of Ramesses II in Abydos

## Volume 1: Magazines, Animal Burials, and Miscellanea

Copyright © 2025 by Lockwood Press

All rights reserved. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by means of any information storage or retrieval system, except as may be expressly permitted by the 1976 Copyright Act or in writing from the publisher. Requests for permission should be addressed in writing to Lockwood Press, PO Box 1080, Columbus, GA 31902 USA.

Cover design by Susanne Wilhelm.

Cover photographs by Sameh Iskander.

ISBN: 978-1-957454-48-1 (hardcover)

### Library of Congress Cataloging-in-Publication Data

Names: Iskander, Sameh (Egyptologist) editor

Title: Archaeological discoveries at the temple of Ramesses II in Abydos / edited by Sameh Iskander.

Description: Columbus, Georgia : Lockwood Press, 2025- | Includes bibliographical references and index. | Contents: Volume 1. magazines, animal burials, and miscellanea | Summary: "This book is the first of a three-volume study of the structures and objects discovered during nine seasons of excavations (2017-2025) within the Ramesses II temple precinct conducted under the direction of Sameh Iskander. This volume contains five chapters organized in two parts; the first presents in three chapters a clear understanding of the precinct site, its extant architectural mud-brick structures outside the stone temple, and a careful investigation of the archeological objects and ceramic data obtained from the excavation. The second part focuses on the data obtained from the excavation of a mysterious mixed deposit of materials that were brought from unknown locations and dumped in one of the temple's magazines (S15). This deposit offers new insights into our understanding of Abydos, a site rich in historical and archaeological significance"— Provided by publisher.

Identifiers: LCCN 2025038289 (print) | LCCN 2025038290 (ebook) | ISBN 9781957454481 hardcover | ISBN 9781957454498 adobe pdf

Subjects: LCSH: Ramses II, King of Egypt | Excavations (Archaeology)—Egypt—Abydos (Extinct city) | Abydos (Egypt : Extinct city)—Antiquities

Classification: LCC DT73.A16 A74 2025 (print) | LCC DT73.A16 (ebook)

LC record available at <https://lcn.loc.gov/2025038289>

LC ebook record available at <https://lcn.loc.gov/2025038290>

To Sylvia, Mona, and Joyce



# Table of Contents

Preface	vii
List of Figures	x
List of Tables and Charts	xvii
Abbreviations	xviii
<b>PART I. The Temple Precinct Archaeological Features</b>	<b>1</b>
CHAPTER 1. Mud-brick Structures, <i>Sameh Iskander</i>	3
1.1. Introduction	3
1.2. General Overview of the Location and Orientation of the Temple	3
1.3. General Description of the Precinct	6
1.4. The Enclosure Wall	8
1.5. The First Pylon	10
1.6. The Passageway around the Temple	12
1.7. The Temple Palace	16
1.8. The Magazines	23
1.9. The Mud-brick Structures within the Southeast Area of the Precinct	39
CHAPTER 2. The Various Pottery Periods of the Ramesses II Temple at Abydos, <i>Mohamed Naguib Reda</i>	45
2.1. Introduction	45
2.2. Methodology of the Pottery Processing	45
2.3. The Pottery	46
2.4. The Pottery Found in the Foundation Deposits of the Ramesses II Temple	61
2.5. Conclusion	84
Chapter 3. The Unearthed Artifacts, <i>Sameh Iskander</i>	85
3.1. Statues	86
3.2. Stelae and Offering Tables	91
3.3. Miscellaneous Objects	108
<b>PART II. The Mixed Deposit in Magazine S15</b>	<b>127</b>
Introduction	127
Description of the Fill, <i>Salima Ikram</i>	129



CHAPTER 4. The Animal Deposit in Magazine S15, <i>Salima Ikram, Louise Bertini, Audrey Crabbé, with the support of Ahmed Jaber</i>	131
4.1. Introduction	131
4.2. Methods	132
4.3. Sheep	133
4.4. Sheep Skulls	135
4.5. Goats	139
4.6. Cattle	141
4.7. Dogs	143
4.8. Miscellaneous Animals	146
4.9. Mummies	147
4.10. Pathology	152
4.11. Discussion and Conclusions	164
CHAPTER 5. Analysis of Human Remains at Magazine S15, <i>Zeinab Hashish</i>	169
5.1. Introduction	169
5.2. Methodology	169
5.3. Skeletal Materials Description	171
5.4. Analysis of Postcranial Elements	202
5.5. Discussion	205
5.6. Acknowledgments	209
Bibliography	211
Index	225

# Preface

## The Significance of the Recent Excavations within the Temple Precinct

This book is the first of a three-volume study of the structures and objects discovered during nine seasons of excavations (2017–2025) within the Ramesses II temple precinct conducted under my direction. These excavations were preceded by nine seasons of comprehensive documentation, translation, and analysis under the direction of Ogden Goelet and myself of a multidisciplinary project initiated by both of us in 2008 which resulted in the publication of three volumes, while the fourth is currently in preparation. The entire project since its inception is sponsored by the Institute for the Study of the Ancient World, New York University. The excavation and restoration work were supported by partial funding from the American Research Center’s Archeological Egyptian Fund (AEF).

First a brief background. The temple was excavated by Auguste Mariette between 1861 and 1869, and has been a focal point for scholars interested in ancient Egyptian inscriptions and architecture. As such, Mariette’s excavation primarily focused on the stone temple only, neglecting the surrounding mud-brick structures and archeological objects that are typically integral to the understanding of the layout and function of ancient Egyptian temple precincts. By overlooking these items, Mariette’s work presents an incomplete picture of the temple’s original context and function.

As such, we felt it necessary to undertake a comprehensive excavation initiative of the entire precinct area around the stone temple. The excavation revealed that the precinct was occupied almost continuously from the thirteenth century BCE—when it was constructed—until the eighth century CE. This extensive occupation timeline, spanning approximately two millennia, is characterized by intermittent brief periods of partial abandonment followed by subsequent reoccupation.

The results of the multifaceted abundant material recovered from the excavation contain a rich range of data that shed light on the site’s significance during these various phases of occupation, both while the temple was operational and after it ceased to function. By employing a multidisciplinary approach, we aim to uncover evidence that highlights the temple’s role in Abydos and ancient Egyptian society, its economic activities, and its evolution over time. Additionally, understanding the site’s posttemple functionality will shed light on its lasting impact on the region.

This volume contains five chapters organized in two parts; the first attempts to present in three chapters a clear understanding of the precinct site, its extant architectural mud-brick structures outside the stone temple, and a careful investigation of the archeological objects and ceramic data obtained from the excavation. The second part focuses on the data obtained from the excavation of a mysterious mixed deposit of materials that were brought from unknown locations and dumped in one of the temple’s magazines (S15). This deposit offers new insights into our understanding of Abydos, a site rich in historical and archaeological significance. Given the extensive corpus of data collected, we have decided to present our findings in (1) two chapters within the present publication, and (2) additional chapters to be included in a forthcoming volume. This approach provides a thorough examination of the materials and their implications without overwhelming the reader with excessive detail at once. Moreover, we are planning a third

volume to present further remaining archeological topics, temple restoration techniques, conservation methods, and site management strategies.

Chapter 1 (Sameh Iskander) outlines a clear understanding to the reader of the original layout of the mud-brick structures as initially built by Ramesses II, along with later modifications made over various phases of occupation. Also included in this chapter is restoration work that was immediately crucial in preserving the historical integrity and understanding of the site.

The aim of chapter 2 (Mohamed Naguib Reda) is to investigate the historical phases of the temple through careful analysis of the data gleaned from the recovered pottery material in order to place the precinct in its historical and archaeological context.

Chapter 3 (Sameh Iskander) catalogs the large number of objects yielded from the stratified features that included statuary, stelae, cosmetic jars, jewelry, amulets, glass, and terracotta fragments.

Chapter 4 (Salima Ikram with colleagues) provides a careful analysis of the unusual large assemblage of rams' skulls and other animal deposits found in one of the magazines at the northwest area of the precinct, which adds to our knowledge of the flourishing of animal cults, and a desire to respectfully dispose of them.

Chapter 5 (Zeinab Hashish) presents a comprehensive account of the osteological examination conducted on disarticulated human remains recovered during the cleaning of a reused storage magazine associated with the temple palace.

The enormous effort to excavate, preserve, restore, and study the finds of the entire precinct, and to grasp its historic implication was conducted by an interdisciplinary team of archeologists, ceramicists, conservators, zoologists, and demoticians, along with surveyors, archivists, masons, manual workers, and their foremen, to all of whom I am greatly indebted.

Our field work and this volume could not have been accomplished without the generous contribution of many institutions and individuals. I would like to express my deep appreciation for the privilege bestowed on us by the Ministry of Tourism and Antiquities and the Supreme Council of Antiquities for granting us the permission to work in Abydos since 2008. The generous cooperation of the members of the Sohag Department of Antiquities under its dynamic General Director Dr. Mohamed Naguib, his predecessors, and the inspectors over the years who were crucial to the production of this work.

I would like to recognize the generous academic support of NYU-ISAW to which we are indebted under the directorship of Professor Alexander Jones; his predecessor Professor Roger Bagnal; Dr. Diane Bennet, associate director for administration; Dr. Marc LeBlanc, assistant director for academic affairs for facilitating our work at the institute; Dr. Tom Elliott and Kristen Soule for support and assistance in connection with IT services and programs; Dr. David Ratzan and Mr. Gabriel McKee for the generous library services.

The scholarship and expertise of the participants in this volume is greatly appreciated in providing an enormous contribution to the understanding of the multifaceted finds excavated within the precinct. Thanks to Dr. Mohamed Naguib, General Director of the General Administration of Egyptian, Greek and Roman Antiquities in Sohag; Dr. Salima Ikram Distinguished University Professor, Egyptology Unit Head, American University in Cairo; Dr. Louise Bertitni of the American Foundation for Cultural Research; Dr. Zeinab Hashish, associate professor, Department of Egyptology, Beni-Suef University, Faculty of Arts.

The generous support by the American Research Center in Egypt through its AEF program, Fred Elghanian, and the friends of the temple of Ramesses II in Abydos is greatly appreciated.

Also, many thanks must go to our excavation and surveying team Essam Shehab, Mansour Badry, Napolian Elai, Amira Fawzi, surveyors Amr Zakaria, and Mohamed Moustafa, conservators Mohamed Ibrahim, Moataz AlShahawy, Ahmed Tarek, and Sara AlAshmawy for their superb restoration work.

Needless to say, all our fieldwork operations at the site could not have been possible without Ahmed Ragab and his tireless dig-house staff; Gufties foremen the late Raiss Mohamed Ibrahim and Raiss Ashraf Zedan; and their experienced Gufti team together with the energetic Abydos workforce, where no task is impossible, and to all of whom I am indebted.

Last but not least, I am grateful to Dr. Briana Jackson for her thorough review and edit of the manuscript with valuable suggestions, and to Dr. Billie Jean Collins of Lockwood Press and her dedicated team for their efforts and attention in producing this volume.

Sameh Iskander  
February 2025

# List of Figures

PI.1. West view of the site. Photograph: Sameh Iskander	1
PI.2. Southwest view of the site. Photograph: Sameh Iskander	2
PI.3. Northwest view of the site. Photograph: Sameh Iskander	2
1.1. Aerial Google photograph of Abydos.	4
1.2. Aerial Google photograph indicating the orientations of the two temples looking northwest.	5
1.3. 3-D rendering of the temple precinct. Rendering: Ahmed Abdel Gawad.	7
1.4. Plan of the temple precinct. Surveyor Amr Zakaria.	7
1.5. Cross section of western enclosure wall and passageway. Surveyor, Mohamed Abdelbaset.	9
1.6. View of the excavation cross section south of the southern enclosure wall looking east. Photograph: Sameh Iskander.	10
1.7. View of the remains of the first pylon. Photograph: Sameh Iskander.	11
1.8. View of the rebuilt First Pylon looking west. Photograph: Sameh Iskander.	12
1.9. 3-D rendering of the temple precinct showing the passageway around the temple. Rendering; Ahmed Abdel Gawad.	13
1.10. View of the southern passageway looking east. Photograph: Sameh Iskander.	13
1.11. View of the northern passageway looking east. Photograph: Sameh Iskander.	14
1.12. View of the western passageway looking north. Photograph: Sameh Iskander.	14
1.13. View of western passageway looking south. Photograph: Sameh Iskander.	15
1.14. A schematic drawing of western passageway showing the line of sight of a viewer to the upper wall inscriptions. Rendering: Ahmed Abdel Gawad.	16
1.15. Photograph of the Temple Palace looking north. Photograph: Sameh Iskander.	17
1.16. Plan of the Temple Palace. Survey and drawing: Amr Zakaria.	18
1.17. View of west wall of Temple Palace's court with a door leading to the side chamber flanked by inscriptions of the birth name of Ramesses II. Photograph: Sameh Iskander.	18
1.18. A. Inscriptions of the birth name of Ramesses II at the entrance of the side chamber. Photograph: Sameh Iskander. B. Line drawing of the birth name of Ramesses II at the entrance of the side chamber. Line drawing: Ahmed Abdel Halim.	19
1.19. Scene from the Theban tomb TT157 of the High Priest Amin Nebwenenef in Year 1, 3rd month of Akhet.	21
1.20. View of animal burial under the floor of the temple palace. Photograph: Sameh Iskander.	22
1.21. View of the southern magazines and stairs looking east. Photograph: Sameh Iskander.	23
1.22. Plan of the southern magazines and stairs. Surveyor, Amr Zakaria.	24
1.23. Photograph of the stairs of the southern magazines. Photograph: Sameh Iskander.	24
1.24. Photograph of the fallen vaulted roof. Photograph: Sameh Iskander.	25
1.25. Schematic of a vaulted roof brick. Drawing: Ahmed Abdel Halim.	25
1.26. Schematic hypothetical cross section of the magazines and Temple Palace looking south. Schematic: Eman Fares.	25
1.27. Schematic hypothetical 3-D rendering of the magazines and Temple Palace looking south. Schematic: Eman Fares.	25
1.28. Scene from the Theban tomb TT157 of the High Priest Amin Nebwenenef.	25
1.29. Photograph of bovine skulls packed inside the magazine S2 wall. Photograph: Sameh Iskander.	26
1.30. Photograph of a bovine skull packed inside the magazine S1 wall. Photograph: Sameh Iskander.	26
1.31. Photograph of bones found inside magazine walls. Photograph: Sameh Iskander.	27
1.32. View of magazines S8, S9, and S10 looking west. Photograph: Sameh Iskander.	29
1.33. View of the kiln located inside magazine S8 looking north. Photograph: Sameh Iskander.	29
1.34. View of the kiln looking west, with four gray plates inside. Photograph: Sameh Iskander.	30
1.35. Faience plate found inside the kiln, after restoration. Photograph: Sameh Iskander.	30
1.36. Hypothetical reconstruction of the kiln's plan and a cross section. Drawing: Eman Fares.	31
1.37. Hypothetical 3-D rendering of the kiln. Rendering: Eman Fares.	31

1.38. Schematic plan of the northern magazines. Surveyor: Amr Zakaria.	32
1.39. Schematic plan of part of the northern magazines. Surveyor: Amr Zakaria.	32
1.40. Photograph of corridor S23 within the northern-eastern magazines. Photograph: Mansour Elbadry.	33
1.41. View of the limestone base and remains of a mud-brick arch at the northern end of corridor S23. Photograph: Essam Shehab.	33
1.42. View of the stairs in magazines S11. Photograph: Essam Shehab.	34
1.43. Plan of the corridor S100 looking north. Surveyor: Amr Zakaria.	34
1.44. View of corridor S100 within the northeastern magazines looking south. Photograph: Essam Shehab.	35
1.45. View of the two corridors S23 and S 100 looking east. Photograph: Essam Shehab.	35
1.46. Scene from the Theban tomb TT60 of the vizier Rekhmire.	36
1.47. Schematic plan of the northeastern magazines of the northern precinct. Surveyor, Amr Zakaria.	36
1.48. View of the northeastern magazines of the northern precinct, looking north. Photograph: Essam Shehab.	37
1.49. Photograph of the southern eastern structures of the southern precinct looking north. Photograph: Mansour Elbadry.	40
1.50. Schematic plan of the eastern structures of the southern precinct. Surveyor: Amr Zakaria.	40
1.51. Photograph of the southern eastern structures of the southern precinct looking east. Photograph: Mansour Elbadry.	41
1.52. View of extensive finger gouges left by visitors at the temple's southern exterior doorway arriving from corridor S110. Photograph: Sameh Iskander.	41
1.53. View of the <i>heb-sed</i> chapel and surrounding mud-brick structures looking south. Photograph: Mansour Elbadry.	42
1.54. Plan of the <i>heb-sed</i> chapel. Surveyor, Amr Zakaria.	42
1.55. View of the southern part of the <i>heb-sed</i> chapel looking south. Photograph: Sameh Iskander.	43
1.56. Photograph of the <i>heb-sed</i> chapel looking east. Photograph: Mansour Elbadry.	43
2.1. R1–8 the pottery finds of the Predynastic–Early Dynastic periods. Drawing and inking: Mohamed Naguib Reda.	48
2.2. R9–16 the pottery finds of the Old Kingdom period. Drawing and inking: Mohamed Naguib Reda.	51
2.3. R17–23 the pottery finds of the First Intermediate-early Middle Kingdom periods. Drawing and inking: Mohamed Naguib Reda.	53
2.4. R24–27 the pottery finds of the Middle Kingdom period; R28-30 the pottery finds of the New Kingdom period. Drawing and inking: Mohamed Naguib Reda.	55
2.5. R31–40 the pottery finds of the New Kingdom Period. Drawing and inking: Mohamed Naguib Reda.	58
2.6. R 41-47 the pottery finds of the New Kingdom period. Drawing and inking: Mohamed Naguib Reda.	59
2.7. R48–59 representative sample from the pottery finds found in the foundation deposit of Ramesses II's Temple. Drawing and inking: Mohamed Naguib Reda, R48 Photograph: Ayman Damarany.	63
2.8. R60–70 the pottery finds of the 3rd Intermediate–Late periods. Drawing and inking: Mohamed Naguib Reda.	65
2.9. R71–77 the pottery finds of the 3rd Intermediate–Late periods. Drawing and inking: Mohamed Naguib Reda.	68
2.10. R78–80 the pottery finds of the 3rd Intermediate–Late periods, R81–82 the pottery finds of the Ptolemaic period. Drawing and inking: Mohamed Naguib Reda.	70
2.11. R83–93 the pottery finds of the Ptolemaic period. Drawing and inking: Mohamed Naguib Reda.	73
2.12. R94–96 the pottery finds of the Ptolemaic period, R97–99 the pottery finds of the Roman period, R100 the neck of amphora from the Roman–Late Roman periods. Drawing and inking: Mohamed Naguib Reda.	75
2.13. R101–107 the pottery finds of the Late Roman period. Drawing and inking: Mohamed Naguib Reda.	77
2.14. R108–118 the pottery finds of the Late Roman period. Drawing and inking: Mohamed Naguib Reda.	79
2.15. R119–127 the pottery finds of the Late Roman period. Drawing and inking: Mohamed Naguib Reda.	81
2.16. R128–135 the pottery finds of the Late Roman period. Drawing and inking: Mohamed Naguib Reda.	83
2.17. R136–138 the pottery finds of the Late Roman period. Drawing and inking: Mohamed Naguib Reda.	84
3.1. Graphic ten-meter grid superimposed on the temple site map. Surveyor: Amr Zakaria.	85

3.2. Front view of statue head 3.1.1. Photograph: Mohamed Ibrahim.	86
3.3. Partial sideview of statue head 3.1.1. Photograph: Mohamed Ibrahim.	86
3.4. Sideview of statue head 3.1.1. Photograph: Mohamed Ibrahim.	86
3.5. Fragment front view of statuette 3.1.2. Photograph: Ahmed Tarek.	88
3.6. Back view of statuette fragment 3.1.2. Photograph: Ahmed Tarek.	88
3.7. Schematic rendering of statuette 3.2.2. Illustrator: Ahmed Tawfik.	88
3.8. Front view of a statue head 3.1.3 (TRA 2023-1480). Photograph: Mohamed Ibrahim.	89
3.9. Sideview of statue head 3.1.4 (TRA 2023-1480). Photograph: Mohamed Ibrahim.	89
3.10. Frontal view of seated statue 3.1.4 (TRA 2491). Photograph: Mohamed Ibrahim.	90
3.11. Back view of seated statue 3.1.4 (TRA 2491). Photograph: Mohamed Ibrahim.	90
3.12. Side view of seated statue 3.1.4 (TRA 2491). Photograph: Mohamed Ibrahim.	90
3.13. Inscriptions on the back pillar of seated statue 3.1.4 (TRA 2491). Drawing: Ahmed Abdel Halim.	90
3.14. Animal statuette 3.1.5 (TRA 2021-807). Photograph: Mohamed Ibrahim.	91
3.15. Left: Fragment of stela 3.2.1 (TRA 2099). Photograph: Mohamed Ibrahim. Right: Drawing of the fragment. Drawing: Ahmed Abdel Halim.	92
3.16. Above: Fragment of stela 3.2.2 (TRA 818b). Below: Drawing of the stela. Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	93
3.17. Left: Fragment of round-topped stela 3.2.3 (TRA 1034). Right: Drawing of the fragment. Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	95
3.18. Left: Fragment of stela 3.2.4 (TRA 1176). Right: Drawing of the fragment. Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	96
3.19. Left: Fragment of round-topped stela 3.2.5 (TRA 1300). Right: Drawing of the fragment. Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	96
3.20. Left: Round-topped stela 3.2.6 (TRA 1490). Right: Drawing of the fragment. Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	98
3.21. Left: Fragment of stela 3.2.7 (TRA 164). Right: Drawing of the fragment. Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	98
3.22. Left: Round-topped stela 3.2.8 (TRA 1837). Right: Drawing of the stela. Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	100
3.23. Left: Fragment of round-topped stela 3.2.9 (TRA 2505). Right: Drawing the fragment. Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	100
3.24. Left: Fragment of round-topped stela 3.2.10 (TRA 2530). Right: Drawing of the fragment. Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	102
3.25. Top left: Fragment of a double-faced square stela 3.2.11 (TRA 1174). Top right: Drawing of the fragment. Bottom left: Back side of fragment of a double-faced square stela 3.2.11 (TRA 1174). Bottom right: Drawing of the back side of the fragment. Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	103
3.26. Left: Fragment of round-topped stela 3.2.12 (TA 2019-308). Right: Drawing of the fragment. Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	104
3.27. Left: Fragment of round-topped stela 3.2.13 (TA2019-147). Right: Drawing of the fragment. Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	105
3.28. Left: Offering table 3.2.14 (2023-1476). Right: Drawing of offering table 3.2.14 (2023-1476). Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	106
3.29. Left: Offering table 3.2.15 (2023-2153). Right: Drawing of offering table 3.2.15 (2023-2153). Photograph: Mohamed Ibrahim. Drawing: Ahmed Abdel Halim.	107
3.30. Offering table 3.2.16 (2021-529). Photograph: Mohamed Ibrahim.	107
3.31. Lapis lazuli large scarab 3.3.1 (2022-10430). Photograph: Mohamed Ibrahim.	108
3.32. Above: Two sections of lapis lazuli large scarab 3.3.1 (2022-10430). Below: Drawing of the two sections of lapis lazuli large scarab 3.3.1 (2022-10430). Photograph: Mohamed Ibrahim. Drawing: Ahmed Tarek.	108
3.33. Bronze Arrows 3.3.2.1 (2023-1527). Photograph: Mohamed Ibrahim.	109
3.34. Bronze Arrows 3.3.2.2 (2023-1527). Photograph: Mohamed Ibrahim.	109

3.35. Left: Bronze bell 3.3.3 (2021-473) with a view of the clapper. Right: Bronze bell 3.3.3 (2021-473). Photographs: Mohamed Ibrahim.	110
3.36. Bronze amulet 3.3.3.c (2021-870). Photograph: Mohamed Ibrahim.	111
3.37. Cosmetic jar 3.3.4.1 (2020-413). Photograph: Mohamed Ibrahim.	112
3.38. Cosmetic jar 3.3.4.2 (2021-533). Photograph: Mohamed Ibrahim.	112
3.39. Cosmetic jar 3.3.4.3 (2021-547). Photograph: Mohamed Ibrahim.	112
3.40. Cosmetic jar 3.3.4.4 (2021-791). Photograph: Mohamed Ibrahim.	112
3.41. Cosmetic jar 3.3.4.5 (2023-1669). Photograph: Mohamed Ibrahim.	113
3.42. Cosmetic jar 3.3.4.6 (2023-1670). Photograph: Mohamed Ibrahim.	113
3.43. Cosmetic jar 3.3.4.7 (2024-2559). Photograph: Mohamed Ibrahim.	114
3.44. Cosmetic jar 3.3.4.8 (2024-2774). Photograph: Mohamed Ibrahim.	114
3.45. Cosmetic box 3.3.4.9 (2024-2774). Photograph: Mohamed Ibrahim.	114
3.46. Pottery molds. Photographs: Mohamed Ibrahim.	115
3.47. Selected glass objects. Photographs: Mohamed Ibrahim.	116–17
3.48. Faience beads and ornaments. Photographs: Mohamed Ibrahim.	119–24
3.49. Terracotta figurine. 3.3.8.1 (2021-809). Photograph: Mohamed Ibrahim.	124
3.50. Terracotta sculpted horse. 3.3.8.2 (2023-1545). Photograph: Mohamed Ibrahim.	124
P11.1. The ram heads laid out in rows preparatory to counting them. Photograph: Sameh Iskander.	127
P11.2. Profile of the area left for excavation by Ikram, viewed from the northeast. Photograph: Salima Ikram.	128
P11.3. Profile of the area left for excavation by Ikram, viewed from the southwest. Photograph: Salima Ikram.	128
P11.4. View of the profile from the southwest after initial layers had been removed (north arrow is approximate). Photograph: Salima Ikram.	129
P11.5. Top view of the trench after excavation had started, revealing two dog mummies in situ. Photograph: Salima Ikram.	130
4.1. Skull type 1: Amun-horn type, of the type previously known as <i>Ovis platyara aegyptiaca</i> . Photograph: James Sunday.	132
4.2. Skull type 2: Horizontal corkscrew type, formerly identified as <i>Ovis longipes paleoagyptius</i> . Photograph: James Sunday and Ana Oliveira.	136
4.3. Skull type 3, a sheep or unconfirmed taxon, perhaps an animal that underwent horn modification. Photograph: Salima Ikram and Ana Oliveria.	136
4.4. Sheep skulls showing chopping of the horns. Photographs: Salima Ikram, Ana Oliveira, and James Sunday.	138
4.5. Sheep skull showing an abortive cut in, and then final severing of, the right horncore. Photograph: Salima Ikram and Ana Oliveira.	138
4.6. A sheep with both horns neatly sawn or chopped off at a small distance from their bases. Photograph: Salima Ikram and Ana Oliveira.	138
4.7. Goat skulls showing the distinctive upwardly twisting horns, with the chop marks on the base of the right horn (in a circle), and more tentative cut marks appearing on the skull and horn of the goat in the lower right. Photograph: Salima Ikram and Nicholas Warner.	140
4.8. Cattle skull with long horns (broken). Photograph: Salima Ikram.	143
4.9. Cattle skull with the section of the frontale chopped off vertically, toward the occiput. Photograph: Salima Ikram and Ana Oliveira.	143
4.10. A selection of canine skulls with the probable wolf in the top left corner, indicated by an arrow. The range of ages and sexes of the animals are apparent in this photograph, as well as some of the diversity of skull shape. Photograph: Salima Ikram.	145
4.11. A ram skull (M8) that is well wrapped. Photograph: Salima Ikram.	149
4.12. The completely wrapped head of a ram (M13). A: frontal view. B: palatal view. C: occipital view. Photographs: Salima Ikram.	150
4.13. A ram's horn, with some keratin surviving, wrapped spirally in textile with the wrappings secured with a halfa-grass rope. Photograph: Salima Ikram.	151



4.14. Two dog mummies laid on a flattened part of the deposit. The more southern dog is M18 and the one to the north is M19. Photograph: Salima Ikram.	151
4.15. Two ribs of ovicaprids (P66, P70) and two rib of dogs (P50, P52) with different callus formations of which one is caused by a severe fracture. Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	156
4.16. Different severities of healed fractures, from a minor fractured dog tibia (P11) to a severely fractured dog femur (CF345) and sheep humerus with extensive bone growth (P4). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	156
4.17. Right pelvis half of a bovine with a severely fractured and displaced coxal tuberosity (P136). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	157
4.18. Skull of a ram with a severe fracture and signs of inflammation above its right eye socket (P115). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	157
4.19. Different stages of osteophytes, from a light formation of extra bone on the first rib of a bovine (P108) to more severe osteophyte proliferations at the articulations of an ovicaprid thoracic vertebrae (P101) and the complete fusion of the distal epiphysis of a right tibia, tarsal bones, and the proximal epiphysis of the right metatarsus of a sheep (P104). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	157
4.20. Left femur of a dog with an ossified ligament or tendon on the medial side of the bone (CF344). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	157
4.21. Examples of various periostosis formations: along the shaft on a right sheep metacarpus (P24), covering the entire bone possible in combination with osteomyelitis on a left ovicaprid metacarpus (P2), and the formation of a second acetabulum on a sheep pelvis (P119). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	158
4.22. Two bicipital ribs of a dog (P99). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	158
4.23. Right hacked horncore of a sheep with a depression near its base (P135). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	160
4.24. Various bone destruction types developed inside the bone: a cloaca on an ovicaprid tibia (P17), cyst on at the distal epiphysis of a dog humerus (P9), and a possible myeloma on a sheep metatarsus (P16). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	160
4.25. Fusing left femur of an ovicaprid with a bowed shaft and a cloaca in the middle of the shaft (OC1657). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	160
4.26. Left mandible of an ovicaprid with a severe stage of periosteal new bone formation (L457). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	161
4.27. Right mandible of an ovicaprid with a severe alveolar recession below the fourth premolar and first molar leading in tooth loss of which the socket has healed, malocclusion, and excessive wear of the second and third molar (R1). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	161
4.28. The different combination of abscess with other dental pathologies on left ovicaprid mandibles: combined with malocclusion and periosteal bone formation along the alveolar ridge (L470), combined with malocclusion, excessive wear, and caries (L288), and combined with an oblique mandibular foramen fracture (L480). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	162
4.29. Three examples of horn pathologies: horn loss with healing (P125), horn loss fully healed (P115), and irregular horn growth of a right sheep horncore (P111). Photograph: Mohamed Ibrahim, Ahmed Jaber, and Audrey Crabbé.	163
5.1. Individual no. 1: anterior (top left), inferior (top right), lateral views (bottom).	172
5.2. Individual no. 1: dental disease. A: slight periodontal diseases in the left maxillary third molar (red arrow), and two abscesses (white arrows), buccal view. B: two abscesses of right maxillary first and third molars (yellow arrows), occlusal view.	172
5.3. Figure 5.3. Individual no.1. A: biparietal thinning on a female cranium in right side (yellow arrows) and left side (blue arrows). B: macro on both sides biparietal thinning, superior view.	173
5.4. Layout of individual no. 2 anterior, inferior, lateral views.	174

5.5. Individual no. 2. Slight calculus in the right maxillary anterior teeth (white arrows), abscesses in right maxillary second molar (red arrow), slight periodontal disease (yellow arrow), labial view.	174
5.6. Individual no. 2 active <i>Cribra Orbitalia</i> in left eye orbit, inferior view.	174
5.7. Layout of Individual no. 3 anterior, inferior, lateral views.	175
5.8. Individual no. 3. Dental disease showed in individual no. 3. A: moderate periodontal diseases in the maxillary molars and premolars, buccal view (red arrow), and chipping in the right maxillary first molar (white arrows), occlusal view. B: slight calculus of the left maxillary molars and second premolar (blue arrow), buccal view.	176
5.9. Layout of Individual no. 4 anterior, inferior, lateral views.	177
5.10. Individual no. 4 skull exhibiting complete antemortem tooth loss and related alveolar bone resorption (white arrows), occlusal view.	177
5.11. Layout of Individual no. 5 anterior, inferior, lateral views.	178
5.12. Individual no. 5 The left maxillary canine showed antemortem teeth loss (red arrow), right maxillary teeth displaying postmortem teeth loss (white arrow), the left maxillary molars displaying large abscess (yellow arrow), occlusal view, large healed infections in the left palatine (blue arrow) lingual and occlusal view.	178
5.13. A healed injury in the left maxilla above the infraorbital foramen in the area between zygomatic suture and left orbit (white arrow), anterior view, individual no. 5.	179
5.14. Layout of individual no. 6 anterior, inferior, lateral views.	180
5.15. Individual no. 6; extensive dental wear in the right anterior maxillary teeth, and premolars and first molar are antemortem teeth loss (red arrows), the left maxillary molars displaying two rounded abscesses in labial and occlusal view (white arrows).	180
5.16. Individual no. 6; closed sagittal suture, (synostosis) (white arrows), superior view.	181
5.17. Layout of individual no. 7 anterior, inferior, lateral views.	182
5.18. Individual no. 7 left maxillary first and second molars show heavy wear with chipping (white arrow), occlusal view.	182
5.19. Layout of individual no. 8 anterior, inferior, lateral views.	183
5.20. Individual no. 8: the left maxillary first and second premolars, and first molar showed antemortem teeth loss and abscess (white arrow), right maxillary second premolar, and first molar displaying antemortem teeth loss (white arrow), occlusal view.	183
5.21. Layout of individual no. 9 anterior, inferior, lateral views.	184
5.22. Individual no. 9: left and right maxillary anterior teeth displaying two small, rounded abscesses in labial (white arrows), slight periodontal disease showed in all teeth (yellow arrow) buccal view, slight calculus showed in left canine (blue arrow), buccal view.	184
5.23. Layout of individual no. 10 anterior, inferior, lateral views.	186
5.24. Individual no. 10 left and right maxillary teeth displaying slight periodontal disease (white arrow) buccal view.	186
5.25. Layout of individual no. 11 anterior, inferior, lateral views.	187
5.26. Individual no. 11 porotic hyperostosis in both parietals and occipital (white arrows), posterior view.	187
5.27. Layout of individual no. 12 anterior, inferior, lateral views.	189
5.28. Individual no. 12 left and right maxillary teeth displaying slight periodontal disease (white arrows), buccal view, right frontal showed nonspecific infections (blue arrow), lateral view.	189
5.29. Layout of individual no. 13 anterior, inferior, lateral views.	190
5.30. Individual no. 13 left maxillary third molar displaying small rounded abscesses, buccal and occlusal views (blue arrows), slight periodontal diseases (yellow arrows), buccal view.	190
5.31. Individual no. 13 left mandibular third molar displaying small rounded occlusal abscesses (blue arrows) as well as caries in the right mandibular first premolar (white arrows), left and right first and second mandibular molars showed antemortem teeth loss (red arrows), buccal view.	191
5.32. Individual no. 14 <i>Cribra Orbitalia</i> in both eye orbits (yellow arrows), inferior view.	191
5.33. Individual no. 15: healed porotic hyperostosis in both parietals and occipital (yellow arrows), posterior view.	191

5.34. Individual no. 16: porosity beside the occipital condyles (yellow arrows), and postmortem destruction in the left condyle (red arrow), inferior view.	193
5.35. Individual no. 17: <i>Cribra Orbitalia</i> in both eye orbits (black arrows) arachnoid granulation pits in the sagittal sulcus in the parietal bones, endocranial aspect, (red arrow), inferior view.	193
5.36. Individual no. 18: slight healed porotic hyperostosis in both parietals and occipital (black arrows) posterior-lateral views.	193
5.37. Individual no. 19: <i>Cribra Orbitalia</i> in both eye orbits, (blue arrows), arachnoid granulation pits in the sagittal sulcus in the parietal bones, endocranial aspect (red arrow), deep meningeal artery (yellow arrow), inferior view.	194
5.38. Individual no. 19 endocranial lesions due to tuberculosis meningitis.	194
5.39. Skull fragments of individual no. 20.	195
5.40. Individual no. 20, the endocranial aspect, HFI type "A" on the inner frontal squama (yellow arrows).	195
5.41. The abnormal thickness of the skull individual no. 21.	195
5.42. A: Active <i>Cribra Orbitalia</i> in individual no. 22 (black arrows). B: fiber bone formation on the endocranial surface of the frontal, right and left parietal, the vascular impressions are suggestive of healing. C: close-up of the circular lesion on the endocranial surface of right frontal.	197
5.43. Skull fragmented of individual no. 23 showed slight porotic hyperostosis (red arrow), superior view.	197
5.44. Individual 23 active <i>Cribra Orbitalia</i> in left eye orbit (yellow arrow), impressions of vessel tracks showed very early stage of tuberculosis meningitis (blue arrows).	197
5.45. Skull fragments showed slight <i>Cribra Orbitalia</i> (yellow arrows) in both eye orbits of individual no. 24.	198
5.46. Capillary lesions on the endocranial surface of the frontal individual no. 25 (yellow arrow). The vascular impressions extend into the inner lamina, both eye orbits showed active <i>Cribra Orbitalia</i> (red arrow).	198
5.47. Frontal and right parietal of individual no. 26, both eye orbits showed active <i>Cribra Orbitalia</i> (red arrows).	198
5.48. Frontal of individual no. 27 showed slight <i>Cribra Orbitalia</i> and periosteal appositions, which suggest a case of pulmonary tuberculosis.	198
5.49. Frontal of individual no. 28 showed active <i>Cribra Orbitalia</i> in both orbits (blue arrows).	199
5.50. Frontal of individual no. 29, showed active <i>Cribra Orbitalia</i> in both orbits (blue arrows).	200
5.51. Lateral view of individual no. 30 skull with maxilla.	200
5.52. Eroded defects (red arrows) on the endocranial surface indicative of tuberculosis, individual no. 30.	201
5.53. Skull fragment of individual no. 31 showed short, branching abnormal blood vessel impressions on the frontal and right parietal bone (yellow arrows), porotic hyperostosis in right parietal bone (blue arrows).	201
5.54. Skull fragment of individual no. 32, both eye orbits showed active <i>Cribra Orbitalia</i> (red arrows), and typical localizations of endocranial abnormal blood vessel impressions.	201
5.55. The endocranial surface of individual no. 33 occipital showed abnormal bone loss (blue arrows,) the left eye orbit showed <i>Cribra Orbitalia</i> (red arrow), and eroded defects (yellow arrows) on the endocranial surface indicative of tuberculosis.	201
5.56. Frontal of individual no. 35 showed <i>Cribra Orbitalia</i> in both eye orbits (yellow arrows), and the endocranial of the frontal showed fiber bone formations with vascular impressions that are suggestive of healing (red arrows).	202
5.57. The frontal of individual no. 36 showed short branching abnormal blood vessel impressions on the frontal and right parietal bone (yellow arrows), <i>Cribra Orbitalia</i> in right eye orbit (red arrow).	202
5.58. Right femurs ID nos. 119–135 and left femurs ID nos. 99–118, anterior view.	203
5.59. An adult female left tibia, showing abnormal bone formations, both woven and lamellar bone formation, medial view (ID no. 70).	204
5.60. A young child's left humerus showing severe woven bone, posterior view (ID no.94).	204
5.61. A: Right tibia ID no. 165 showing healed oblique fracture angle in the middle third, medial view; B: close-up of the fracture with probably soft tissue trauma.	204
5.62. Anterior view of skulls of thirty-six individuals.	207
5.63. Sex and age distribution within the studied population based on skulls.	207

# List of Tables

1.1. Various taxa found in niches cut in the magazines' walls.	28
3.1. Pottery molds.	115
3.2. Glass finds.	116
3.3. Faience objects.	117
4.1. Number of identified specimens (NISP) from the deposit.	131
4.2. Count of sheep bones.	133
4.3. Measurements of the left and right humeri and femur of sheep.	135
4.4. Summary of the possible mature ram skull measurements: the occipital part of the skull (skulls 26–30), teeth rows (skull 21), eye orbit (skulls 24 and 25), greatest diameter of the horn base (skull 41), least diameter of the horn base (skull 42). An additional measurement taken that is not described in von den Driesch (1976) is the measurement of the width between the horns.	137
4.5. NISP of Goats bones.	139
4.6. NISP of cattle bones.	141
4.7. Measurement of cattle bones.	141
4.8. The NISP of dog bones.	144
4.9. Age profile for dogs, based on femora, with N=409.	144
4.10. Age profile for dogs based on humeri, with N=380.	144
4.11. Measurements of selected limb bones of dogs.	146
4.12. Miscellaneous taxa identified from the deposit with bone measurements.	147
4.13. An overview of the seven categories of pathologies per taxa.	153
4.14. Distribution of pathological bones per animal species.	154
5.1. Skeletal elements for MNI.	205
5.2. Age distribution based on skulls.	206
5.3. Age and sex distribution.	206
5.4. Stature estimation.	208
5.5. Distribution of skull pathology among sexes.	209

# List of Charts

4.1. Sheep survivorship based on left mandibles, N=650.	134
4.2. Sheep survivorship based on left femora, N=835, age range following Baron (1965).	134
4.3. Sheep survivorship based on right humeri, N=1093, age range following Barone (1965).	135
4.4. Cattle survivorship based on right mandibles, following Grant (1982) and Hambleton (2001).	142
4.5. Cattle age ranges based on left humeri, N=45, after Barone (1965).	142



# Abbreviations

## Bibliographic

ÄA	Ägyptologische Abhandlungen
ÄAT	Ägypten und Altes Testament
AeL	Ägypten und Levante/ <i>Egypt and the Levant</i>
ASAE	<i>Annales du Service des Antiquités de l'Égypte</i>
BASOR	<i>Bulletin of the American Schools of Oriental Research</i>
BdE	Bibliothèque d'Étude
BIFAO	<i>Bulletin de l'Institut français d'archéologie orientale au Caire</i>
CCE	<i>Cahiers de la céramique égyptienne</i>
CDD	Johnson, Janet H., ed. <i>The Demotic Dictionary of the Institute for the Study of Ancient Cultures of the University of Chicago</i> . Chicago: University of Chicago, 2001–. <a href="https://isac.uchicago.edu/research/publications/chicago-demotic-dictionary">https://isac.uchicago.edu/research/publications/chicago-demotic-dictionary</a> .
CdE	<i>Chronique d'Égypte: Bulletin périodique de la Fondation Égyptologique Reine Élisabeth</i>
CNI Publications	Carsten Niebuhr Institute Publications
CRIPeL	<i>Les Cahiers de Recherches de l'Institut de Papyrologie et d'Égyptologie de Lille</i>
Demot. Nb.	Lüddeckens, Erich, et al. <i>Demotisches Namenbuch</i> . Wiesbaden: Reichert, 1980–2000.
DLE	Lesko, Leonard H., and Barbara S. Lesko. <i>A Dictionary of Late Egyptian</i> . 5 volumes. Berkeley, 1982–1990.
Glossar	Erichsen, W. <i>Demotisches Glossar</i> . Copenhagen: Munksgaard, 1954.
GM	<i>Göttinger Miszellen: Beiträge zur ägyptologischen Diskussion</i>
HP	Möller, Georg. <i>Hieratische Paläographie: Die ägyptische Buchschrift in ihrer Entwicklung von der fünften Dynastie bis zur römischen Kaiserzeit</i> . 3 volumes. Leipzig: Hinrichs, 1909–1912.
IFAO	Institut français d'archéologie orientale
JANER	<i>Journal of Ancient Near Eastern Religions</i>
JARCE	<i>Journal of the American Research Center in Egypt</i>
JESHO	<i>Journal of the Economic and Social History of the Orient</i>
JEA	<i>Journal of Egyptian Archaeology</i>
JNES	<i>Journal of Near Eastern Studies</i>
KHwB	Westendorf, Wilhelm. <i>Koptisches Handwörterbuch</i> . Heidelberg: Winter, 1977.
LÄ	Helck, Wolfgang, Eberhard Otto, and Wolfhart Westendorf, eds. <i>Lexikon der Ägyptologie</i> . 7 vols. Wiesbaden: Harrassowitz, 1972–1992.
LGG	Leitz, Christian, et al. <i>Lexikon der ägyptischen Götter und Götterbezeichnungen</i> . 8 vols. OLA 110–116, 129. Leuven, 2002–2003.
Lexikon	Wilson, Penelope. <i>A Ptolemaic Lexikon: A Lexicographical Study of the Texts in the Temple of Edfu</i> . OLA 78. Leuven: Peeters, 1997.
MDAIK	<i>Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo</i>
MIFAO	Mémoires publiés par les membres de l'Institut français d'archéologie orientale du Caire
OIP	Oriental Institute Publications
OLA	Orientalia Lovaniensia Analecta
P. L. Bat.	<i>Papyrologica Lugduno-Batava</i>
PAM	<i>Polish Archaeology in the Mediterranean</i>
RdE	<i>Revue d'égyptologie</i>
SAK	<i>Studien zur altägyptischen Kultur</i>
SAOC	Studies in Ancient Oriental Civilization
SSR	Studien zur spätägyptischen Religion
Wb.	Erman, Adolf, and Hermann Grapow, eds., <i>Wörterbuch der ägyptischen Sprache</i> , 7 vols. plus 5 vols. Berlin: Akademie, 1926–1963.
ZÄS	<i>Zeitschrift für ägyptische Sprache und Altertumskunde</i>

## General Abbreviations

act.	active
adj.	adjective
BCE	Before the Common Era
ca.	circa, about, approximately
CE	Common Era
cf.	<i>confer</i> , compare
circ.	circumstantial
cm	centimeter
col(s).	column(s)
det.	determinative
ed(s).	editor(s), edited by
e.g.	<i>exempli gratia</i> , for example
esp.	especially
fem.	feminine
fn(s).	footnote(s)
frag(s).	fragment(s)
ibid.	<i>ibidem</i> , in the same place
MNI	Minimum number of individuals
N.B.	nota bene, note well
NISP	Number of identified specimens
part.	participle
pf.	perfect
pl(s).	plate(s)
p(p).	page(s)
prep.	preposition
prob.	probably
rel.	relative
s.v.	<i>sub voce</i> , under the word
var.	variant
vb.	verb
vol(s).	volume(s)
vs.	versus
vso.	verso

## Symbols

∏	encloses partly damaged text
[ ]	encloses text lost in break
...	damaged or unread text
< >	encloses reconstruction due to scribal omission