



McDONALD INSTITUTE CONVERSATIONS

Fierce lions, angry mice and fat-tailed sheep

Animal encounters
in the ancient Near East

Edited by Laerke Recht & Christina Tsouparopoulou



Fierce lions, angry mice
and fat-tailed sheep



McDONALD INSTITUTE CONVERSATIONS

Fierce lions,
angry mice and
fat-tailed sheep
Animal encounters
in the ancient Near East

Edited by Laerke Recht
& Christina Tsouparopoulou

with contributions from

Francesca Alhaique, Troels Pank Arbøll, Laura Battini, Malwina Brachmańska,
Franco D'Agostino, Anne Devillers, Hekmat Dirbas, Neil Erskine, Marina Fadum,
Jill Goulder, Haskel J. Greenfield, Tina L. Greenfield, Ben Greet, Carina Gruber,
Tuna Kalaycı, Michael Kozuh, Aren M. Maeir, Timothy Matney, Alice Mouton,
Seraina Nett, Olga V. Popova, Louise Quillien, Laerke Recht, Licia Romano, Jon Ross,
Szilvia Sövegjártó, Christina Tsouparopoulou, Lorenzo Verderame, Andréa Vilela,
John Wainwright & Chikako E. Watanabe

Published by:

McDonald Institute for Archaeological Research
University of Cambridge
Downing Street
Cambridge, UK
CB2 3ER
(0)(1223) 339327
eaj31@cam.ac.uk
www.mcdonald.cam.ac.uk



McDonald Institute for Archaeological Research, 2021

© 2021 McDonald Institute for Archaeological Research.
Fierce lions, angry mice and fat-tailed sheep is made available
under a Creative Commons Attribution-NonCommercial-
NoDerivatives 4.0 (International) Licence:
<https://creativecommons.org/licenses/by-nc-nd/4.0/>

ISBN: 978-1-913344-05-4

On the cover: *Shepherd with sheep, palace ruins in background,*
photograph taken by Gertrude Bell at Mashetta, Jordan in March 1900;
A_232, The Gertrude Bell archive, Newcastle University.

Cover design by Dora Kemp and Ben Plumridge.
Typesetting and layout by Ben Plumridge.

Edited for the Institute by Cyprian Broodbank (*Acting Series Editor*).

CONTENTS

Contributors	vii
Figures	ix
Tables	xi
Abbreviations and sigla	xiii
Preface by Augusta McMahon	xvii
<i>Chapter 1</i> Introduction: encountering animals in the ancient Near East	1
LAERKE RECHT & CHRISTINA TSOUPAROPOULOU	
Animal agency and human-animal interactions	2
Animals in ritual and cult	3
Blurred lines: humans as animal, animals as humans	4
Managing animals	5
Animals in society and as a resource	5
Symbols of power: birds	7
Companions and working animals: equids and dogs	8
Avenues for future research	9
Part I Animal agency and human–animal interactions	
<i>Chapter 2</i> Animal agents in Sumerian literature	15
LORENZO VERDERAME	
The Fox in <i>Enki and Ninhursag</i>	15
Dumuzi and the Fly	16
Lugalbanda and Anzu	17
Ninurta and the Anzu’s chick	18
Inanna, Šukaletuda, and the Raven	18
Conclusions: magical helpers and the metamorphosis human-animal	19
<i>Chapter 3</i> Canines from inside and outside the city: of dogs, foxes and wolves in conceptual spaces in Sumero-Akkadian texts	23
ANDRÉA VILELA	
Canines from the ‘inside’: dogs	23
Canines from the ‘in-between’: stray dogs	25
Canines from the outside: wolves and foxes	26
Conclusion	28
<i>Chapter 4</i> A human–animal studies approach to cats and dogs in ancient Egypt: evidence from mummies, iconography and epigraphy	31
MARINA FADUM & CARINA GRUBER	
Human–cat relationships in ancient Egypt: the cat as an animal mummy	31
Human–canine relationships in ancient Egypt: the dog as companion animal	33
Conclusion	34
Part II Animals in ritual and cult	
<i>Chapter 5</i> Encountered animals and embedded meaning: the ritual and roadside fauna of second millennium Anatolia	39
NEIL ERSKINE	
Deleuze, Guattari, and reconstructing ancient understanding	39
Landscape, religion, and putting meaning in place	40
Creatures, cult, and creating meaning	41
Folding animals in ritual	41
Bulls, boars, birds	42
Folding animals on the road	44
Human–animal interactions	46
Conclusion	49

<i>Chapter 6</i>	The dogs of the healing goddess Gula in the archaeological and textual record of ancient Mesopotamia	55
	SERAINA NETT	
	The dogs of Gula in Mesopotamian art	55
	The Isin dog cemetery	56
	The dogs of Gula in Ur III documentary sources	59
	Conclusion	60
<i>Chapter 7</i>	Between sacred and profane: human–animal relationships at Abu Tbeirah (southern Iraq) in the third millennium BC	63
	FRANCESCA ALHAIQUE, LICIA ROMANO & FRANCO D’AGOSTINO	
	Materials and methods	63
	Faunal assemblage from Area 1	63
	The faunal assemblage from Grave 100 Area 2	66
	Discussion on dog findings	68
	Discussion on equid findings	69
	Discussion on aquatic taxa	70
	General conclusions	72
Part III	Blurred lines: humans as animals, animals as humans	
<i>Chapter 8</i>	Dog-men, bear-men, and the others: men acting as animals in Hittite festival texts	79
	ALICE MOUTON	
	What did the animal-men look like?	79
	The social status of the animal-men	81
	The animal-men’s actions	83
	Men impersonating animals in rituals	87
	Conclusions	87
<i>Chapter 9</i>	The fox in ancient Mesopotamia: from physical characteristics to anthropomorphized literary figure	95
	SZILVIA SÖVEGJÁRTÓ	
	Descriptions of physical and behavioural characteristics of the fox	95
	The fox as anthropomorphized literary figure	97
	The fox in the animal world	97
	The fox and the divine sphere	99
	The character of the fox as a reflection of human nature	100
<i>Chapter 10</i>	Animal names in Semitic toponyms	103
	HEKMAT DIRBAS	
	Cuneiform sources	103
	Ugaritic	105
	Biblical Hebrew	105
	Arabic	106
	Concluding remarks	109
<i>Chapter 11</i>	The king as a fierce lion and a lion hunter: the ambivalent relationship between the king and the lion in Mesopotamia	113
	CHIKAKO E. WATANABE	
	The association between the king and the lion	113
	Royal lion hunt	115
	Symbolic mechanism	118

Part IV Managing animals

Chapter 12	An abstract Agent-Based Model (ABM) for herd movement in the Khabur Basin, the Jazira	125
	TUNA KALAYCI & JOHN WAINWRIGHT	
	Herd animals as geo-agents of landscape transformation	128
	Methodology	130
	Results	134
	Conclusions	135
Chapter 13	An ox by any other name: castration, control, and male cattle terminology in the Neo-Babylonian period	139
	MICHAEL KOZUH	
	Anthropology and terminology	139
	Cattle castration and Babylonian terminology	140
	An ox by any other name	141
	Terminology and ritual purity	142
Chapter 14	What was eating the harvest? Ancient Egyptian crop pests and their control	147
	MALWINA BRACHMAŃSKA	
	Ancient Egyptian crop pests	147
	Ancient Egyptian pest control	151

Part V Animals in society and as a resource

Chapter 15	Stews, ewes, and social cues: commoner diets at Neo-Assyrian Tušhan	161
	TINA L. GREENFIELD & TIMOTHY MATNEY	
	Background	161
	Textual sources of evidence for peasant household economy and diet	163
	Zooarchaeological data on commoner households from Tušhan	164
	Model building: assumptions about the status of food sources	166
	Datasets: faunal consumption and disposal patterns	167
	Body portions of domesticated sheep/goat (<i>Ovis/Capra</i>) and status	171
	The distribution of wild resources	172
	Discussion: elite and commoner diets	174
Chapter 16	A new look at eels and their use in Mesopotamian medicine	179
	TROELS PANK ARBØLL	
	<i>Kuppû</i> in cuneiform sources	179
	Medical uses of the <i>kuppû</i> -eel	180
	Identifying the <i>kuppû</i> -eel	182
	Conclusion	184
	Appendix 1: Editions of prescriptions utilizing the <i>kuppû</i> -eel	184
Chapter 17	Wild fauna in Upper Mesopotamia in the fourth and third millennia BC	193
	ANNE DEVILLERS	
	Introduction	193
	The iconographic corpus	193
	The archaeozoological record	199
	A hypothetical potential fauna constructed through predictive niche evaluation	200
	Conclusions	201

Part VI Symbols of power: birds

Chapter 18	Waterfowl imagery in the material culture of the late second millennium BC Southern Levant	207
	BEN GREET	
	The material	207
	Religious symbols	214
	Elite markers	216
	Conclusion	217

<i>Chapter 19</i>	Ducks, geese and swans: <i>Anatidae</i> in Mesopotamian iconography and texts	221
	LAURA BATTINI	
	Difficulties of the research	221
	<i>Anatidae</i> in the natural world	224
	<i>Anatidae</i> in the human world	226
	<i>Anatidae</i> in the divine world	228
	Conclusions	229
<i>Chapter 20</i>	Wild ostriches: a valuable animal in ancient Mesopotamia	235
	OLGA V. POPOVA & LOUISE QUILLIEN	
	Ostriches and royal ideology	236
	The use of the animal and its by-products at royal courts	241
	Conclusion	243
Part VII	Companions and working animals: equids and dogs	
<i>Chapter 21</i>	Face to face with working donkeys in Mesopotamia: insights from modern development studies	249
	JILL GOULDER	
	Donkey-mindedness	249
	Modern studies	250
	Breeding and supply	252
	Hiring and lending	253
	The role of person-to-person dissemination	254
	Short-distance transportation	254
	Transforming women's lives?	257
	And finally, ploughing	258
	Summing up	259
<i>Chapter 22</i>	Sacred and the profane: donkey burial and consumption at Early Bronze Tell eṣ-Şâfi/Gath	263
	HASKEL J. GREENFIELD, JON ROSS, TINA L. GREENFIELD & AREN M. MAEIR	
	Tell eṣ-Şâfi/Gath	263
	The Early Bronze occupation at Area E	264
	The sacred asses of Tell eṣ-Şâfi/Gath	267
	The profane asses of Tell eṣ-Şâfi/Gath	269
	Conclusions	274
<i>Chapter 23</i>	Dogs and equids in war in third millennium BC Mesopotamia	279
	CHRISTINA TSOUPAROPOULOU & LAERKE RECHT	
	Symmetrical relation: companionship	279
	Asymmetrical relation: dog eat equid	284
	Conclusion	287

CONTRIBUTORS

FRANCESCA ALHAIQUE

Servizio di Bioarcheologia, Museo delle Civiltà,
Piazza G. Marconi 14, 00144 Rome, Italy

Email: francesca.alhaique@beniculturali.it

TROELS PANK ARBØLL

Linacre College, University of Oxford, St Cross
Road, Oxford OX1 3JA

Email: troels.arboell@gmail.com

LAURA BATTINI

UMR 7192, CNRS-Collège de France, 52 rue du
Cardinal Lemoine, 75005 Paris, France

Email: laura.battini@college-de-france.fr

MALWINA BRACHMAŃSKA

Department of Archaeology, Adam Mickiewicz
University, Poznań, 61-614, Poland

Email: malwina.brachmanska@gmail.com

FRANCO D'AGOSTINO

Istituto Italiano di Studi Orientali, 'Sapienza'
Università di Roma, Circonvallazione Tiburtina, 4,
00185 Rome, Italy

Email: franco.dagostino@uniroma1.it

ANNE DEVILLERS

Royal Belgian Institute of Natural Sciences, Rue
Vautier 29, 1000 Brussels, Belgium

Email: as.devillers@gmail.com

HEKMAT DIRBAS

Ohio State University, 314 Hagerty Hall, 1775
College Rd, 43210 Columbus, OH, USA

Email: dirbas.hek@hotmail.com

NEIL ERSKINE

School of Humanities, University of Glasgow,
1 University Gardens, Glasgow G12 8QQ

Email: Neil.Erskine@glasgow.ac.uk

MARINA FADUM

Independent researcher

Email: fadum@gmx.at

JILL GOULDER

UCL Institute of Archaeology, 31–34 Gordon
Square, Bloomsbury, London WC1H 0PY

Email: j.goulder@alumni.ucl.ac.uk

HASKEL J. GREENFIELD

Near Eastern and Biblical Archaeology Laboratory,
St. Paul's College, University of Manitoba, 144-70

Dysart Road, Winnipeg, MB R3T 2M6, Canada

Email: haskel.greenfield@umanitoba.ca

TINA L. GREENFIELD

Department of Religion and Culture, St. Thomas
More College, University of Saskatchewan, 1437

College Dr, Saskatoon SK S7N 0W6, Canada

Email: tlgreenfield@gmail.com

BEN GREET

Department of Religious Studies, University
of Zurich, Kantonsschulstrasse 1, 8001 Zürich,
Switzerland

Email: benjamin.greet@gmail.com

CARINA GRUBER

Independent researcher

Email: carina.gruber1991@gmail.com

TUNA KALAYCI

Faculteit Archeologie, Leiden University,
Einsteinweg 2, 2333 CC Leiden, The Netherlands

Email: t.kalayci@arch.leidenuniv.nl

MICHAEL KOZUH

Department of History, Auburn University, 331

Thach Hall, Auburn, AL 36849-4360, USA

Email: mgk0001@auburn.edu

AREN M. MAEIR

The Institute of Archaeology, The Martin (Szusz)

Department of Land of Israel Studies and

Archaeology, Bar-Ilan University, Ramat-Gan

5290002, Israel

Email: arenmaeir@gmail.com

TIMOTHY MATNEY

Department of Anthropology, University of Akron,
Olin Hall 237, Akron, OH 44325-1910, USA

Email: matney@uakron.edu

ALICE MOUTON

UMR 8167, CNRS Paris, 27 rue Paul Bert, 94204 Ivry-
sur-Seine Cedex, France

Email: alice.mouton@cnrs.fr

SERAINA NETT

Department of Linguistics and Philology, Uppsala University, Engelska parken, Thunbergsvägen 3H, Sweden

Email: seraina.nett@lingfil.uu.se

OLGA V. POPOVA

Institute of Oriental Studies of the Russian Academy of Sciences, Rozhdestvenska st., 12, Moscow, Russian Federation

Email: olga.v.popova@gmail.com

LOUISE QUILLIEN

CNRS (Centre National de la Recherche Scientifique), ArScAn laboratory (Archéologies et Sciences de l'Antiquité), Nanterre, 92000, France

Email: louise.quillien@cnrs.fr

LAERKE RECHT

Department of Early Eastern Mediterranean Civilisation, Institut für Antike, University of Graz, Universitätsplatz 3/II, 8010 Graz, Austria

Email: laerke.recht@uni-graz.at

LICIA ROMANO

Istituto Italiano di Studi Orientali, 'Sapienza' Università di Roma, Circonvallazione Tiburtina, 4, 00185 Rome, Italy

Email: licia.romano@uniroma1.it

JON M. ROSS

Department of Anthropology, University of Manitoba, Winnipeg, MB R3T 2N2, Canada

Email: rossj313@myumanitoba.ca

SZILVIA SÖVEGJÁRTÓ

University of Hamburg, Hauptstrasse 67, 69214 Eppelheim, Germany

Email: ssoveg@gmail.com

CHRISTINA TSOUPAROPOULOU

Institute of Mediterranean and Oriental Cultures, Polish Academy of Sciences, 72 Nowy Świat St., 00-330 Warsaw, Poland & McDonald Institute for Archaeological Research, University of Cambridge, Downing Street, Cambridge CB2 3ER

Email: ct272@cam.ac.uk

LORENZO VERDERAME

Istituto Italiano di Studi Orientali, 'Sapienza' Università di Roma, Circonvallazione Tiburtina, 4, 00185 Rome, Italy

Email: lorenzo.verderame@uniroma1.it

ANDRÉA VILELA

Laboratoire Archéorient, Maison de l'Orient et de la Méditerranée, 7 rue Raulin, F-69365 Lyon cedex 07, France

Email: andrea.vilela@univ-lyon2.fr

JOHN WAINWRIGHT

Department of Geography, Durham University, Lower Mountjoy, South Road, Durham DH1 3LE, UK

Email: john.wainwright@durham.ac.uk

CHIKAKO E. WATANABE

Faculty of International Studies, Osaka Gakuin University, 2-36-1 Kishibe-Minami, Suita-shi, Osaka 564-8511 Japan

Email: chikako@ogu.ac.jp

Figures

1.1	<i>Fat-tailed sheep at the site of Niğde-Kınık Höyük, Niğde Province, Turkey.</i>	2
1.2	<i>Carved ivory lion (probably furniture element) from Nimrud, 9th–8th centuries BC.</i>	5
1.3	<i>Two faience jerboa figurines, Egypt, possibly from the Memphite Region (c. 1850–1640 BC).</i>	6
1.4	<i>Ivory blinker carved with a sphinx. From Nimrud, 8th century BC.</i>	7
1.5	<i>Ostrich eggshell converted to vessel. From Ur, Mesopotamia, Early Dynastic III (c. 2550–2400 BC).</i>	8
5.1	<i>Animal-shaped vessels from Kültepe.</i>	42
5.2	<i>Bull- and boar-vessels from Kültepe.</i>	43
5.3	<i>Eagle-shaped vessel from Kültepe.</i>	43
5.4	<i>Animal vessels rhizome.</i>	44
5.5	<i>Hypothesized early second millennium Assyrian trade networks.</i>	45
5.6	<i>Hypothesized early second millennium routes between Kültepe and the Lower Euphrates.</i>	45
5.7	<i>Likely animal presence within the corridor of hypothesized routes.</i>	47
5.8	<i>Landscape rhizome.</i>	48
6.1	<i>Middle Babylonian kudurru showing the dog as a symbol for the goddess Gula.</i>	56
6.2	<i>Neo-Assyrian cylinder seal: Gula seated on a throne with a dog at her feet.</i>	57
6.3	<i>Impression of a Late Babylonian stamp seal: Gula seated on her throne with a dog at her feet.</i>	57
6.4	<i>The overall height distribution of the dog skeletons from the Isin dog cemetery.</i>	58
6.5	<i>The mastiffs of Ashurbanipal. Relief from the North Palace in Nineveh.</i>	59
7.1	<i>Plan of the site with excavation areas and canals.</i>	64
7.2	<i>Plan of Area 1 Cemetery and latest activities.</i>	65
7.3	<i>Plan of Area 1 Building A with location of sub-pavement graves.</i>	66
7.4	<i>Plan of Area 2 with location of Grave 100, the equid burial, the dog burial, and other graves.</i>	67
7.5	<i>Dog burial in Room 22 – Building A (Area 1).</i>	68
7.6	<i>Equid burial in Area 2.</i>	70
7.7	<i>Fish specimens.</i>	71
11.1	<i>Metaphor explained by the ‘primary’ and ‘secondary’ subjects.</i>	114
11.2	<i>Lion with flashing eyes.</i>	114
11.3	<i>Lion-hunt stele from Uruk, Eanna III.</i>	115
11.4	<i>Lion-hunt relief of Ashurnasirpal II, from Room B, Northwest Palace, Nimrud, c. 865 BC.</i>	115
11.5	<i>Narrative scheme of the lion-hunt reliefs of Ashurbanipal in Room C, North Palace at Nineveh.</i>	116
11.6	<i>Drawing of relief representing the god Ninurta pursuing Anzû, entrance to the Ninurta Temple, Nimrud.</i>	117
11.7	<i>Clay sealing bearing the stamp of the Assyrian royal seal, Nineveh, 715 BC.</i>	118
11.8	<i>Assyrian royal seal.</i>	119
12.1	<i>Upper Mesopotamia and the Khabur Basin.</i>	126
12.2	<i>The Khabur Basin with a dense network of hollow ways, location of Tell Brak marked.</i>	128
12.3	<i>A CORONA historical satellite image preserves details of the radial route system around Tell Brak.</i>	129
12.4	<i>Variable herd movement strategies differentially alter landscapes.</i>	129
12.5	<i>Hollow ways visible on the TanDEM-X Digital Elevation Model.</i>	132
12.6	<i>Variations in profiles may indicate differential traffic, hydrological systems, and/or preservation conditions.</i>	132
12.7	<i>TanDEM-X DEM around Tell Brak; the DEM after Gaussian Filtering and Sink Filling.</i>	133
12.8	<i>The ABM gives herd animals an equal chance of picking any given hollow way.</i>	133
12.9	<i>The results of the ABM from four main scenarios.</i>	135
12.10	<i>Close-up views of one of the hollow ways around Tell Brak.</i>	136
14.1	<i>Capturing common quails, Tomb of Mereruka, Saqqara, VI dynasty.</i>	151
14.2	<i>Ostrakon from Deir el-Medina, Ramesside period.</i>	153
14.3	<i>Mouse trap, el-Lahun, XII dynasty.</i>	154
15.1	<i>Location of Ziyaret Tepe.</i>	162
15.2	<i>Topographic plan of Ziyaret Tepe.</i>	162
15.3	<i>Photograph of the obverse of cuneiform text ZTT14, docket for receipt of grain by bakers.</i>	163
15.4	<i>Plan of the Late Assyrian architectural remains from Operation K, later level of occupation.</i>	165
15.5	<i>Histograms of relative percentage frequencies of wild taxa.</i>	168
15.6	<i>Relative frequencies of domestic and wild taxa from individual buildings.</i>	169

15.7	<i>Stacked histogram of the combined domestic taxonomic frequencies for each Operation.</i>	170
15.8	<i>Stacked bar graph of portions for Ovis/Capra by building.</i>	171
15.9	<i>Relative percentage frequencies of wild taxa within corrected wild populations of each building.</i>	173
15.10	<i>Stacked histogram of percentage frequencies of good, bad, and ugly wild species within each Operation.</i>	174
16.1	<i>A Mesopotamian spiny eel.</i>	182
16.2	<i>Neo-Assyrian relief displaying an eel.</i>	183
17.1	<i>Sites of provenance of the iconographic material and regional clusters.</i>	194
17.2	<i>Localization of the sites in relation to potential vegetation zones.</i>	195
17.3	<i>Wild ungulates appearing most frequently in early Near Eastern glyptic.</i>	196
17.4	<i>Relative frequency of wild ungulates representations by region.</i>	197
17.5	<i>Number of lion representations in each region.</i>	198
17.6	<i>Absolute number of representations of carnivores other than the lion.</i>	199
17.7	<i>Historic range of the cheetah.</i>	201
18.1	<i>Scarab/Plaque No. 8. Enstatite scarab seal from Hebron.</i>	210
18.2	<i>Waterfowl-shaped scaraboid No. 7. Found at Gezer.</i>	210
18.3	<i>Painted ceramic duck head found at Beth Shean.</i>	211
18.4	<i>Three waterfowl-shaped ceramic bowls atop perforated cylindrical stands found at Tell Qasile.</i>	212
18.5	<i>Ivory cosmetic box in the form of a waterfowl found at Megiddo.</i>	213
18.6	<i>Drawings of two of the ivory panels found at Megiddo.</i>	214
18.7	<i>Ivory panels found at Tell el-Far'a (South).</i>	215
19.1	<i>Modern birds.</i>	222
19.2	<i>Different breeds of birds represented on different media.</i>	223
19.3	<i>A miniature chair representing geese in natural 'milieu'. Old Babylonian period, from Diqdiqqah.</i>	225
19.4	<i>Cylinder seals with geese.</i>	226
19.5	<i>Toys in the shape of a goose.</i>	227
19.6	<i>Personal ornaments from Ur.</i>	227
19.7	<i>Culinary text.</i>	228
19.8	<i>The Goose Goddess.</i>	229
19.9	<i>Incised and painted vase from Larsa.</i>	230
20.1	<i>Modern impression of a cylinder seal, Tello, Early Dynastic period.</i>	236
20.2	<i>Modern impression of a cylinder seal, Mesopotamia, Middle Assyrian period.</i>	237
20.3	<i>Cylinder seal and its modern impression, Mesopotamia, Neo-Assyrian period.</i>	238
20.4	<i>Cylinder seal and its modern impression, Mesopotamia, Middle Assyrian period.</i>	239
20.5	<i>Cylinder seal and its modern impression, Mesopotamia, Neo-Babylonian period, 1000–539 BC.</i>	239
20.6	<i>Cylinder seal, Northern Mesopotamia, c. 1600–1000 BC.</i>	240
21.1	<i>Interviewing farmers in western Ethiopia.</i>	251
21.2	<i>Thrice-weekly donkey market in western Ethiopia.</i>	253
21.3	<i>Carrying bricks in India.</i>	255
21.4	<i>Donkeys with 100 kg grain-sacks at Yehil Berenda market, Addis Ababa.</i>	256
21.5	<i>Kenyan woman with seven children carrying food home from market.</i>	257
21.6	<i>Woman ploughing with a donkey in central Burkina Faso.</i>	258
22.1	<i>Map showing location of Tell eṣ-Şâfi/Gath.</i>	264
22.2	<i>Map of Tell eṣ-Şâfi/Gath archaeological site with the location of the various excavation areas.</i>	265
22.3	<i>Plan of the E5c Stratum, Area E, Tell eṣ-Şâfi/Gath, with location of donkey burial pits.</i>	266
22.4	<i>Photograph of sacrificial donkey.</i>	267
22.5	<i>Photographs of the three donkey burials beneath Building 17E82D09.</i>	268
22.6	<i>Histogram of Equus asinus osteological element frequency.</i>	272
22.7	<i>Plantar face of Equus asinus third phalange bone with butchery slicing marks.</i>	272
22.8	<i>SEM photograph of butchery slicing marks on the donkey (Equus asinus) first phalange.</i>	273
23.1	<i>Detail of the War side of the Standard of Ur.</i>	280
23.2	<i>Clay door peg sealing.</i>	280
23.3	<i>Digital reproduction of cylinder seal VA 2952.</i>	281
23.4	<i>Seal impression from Tell Mozan.</i>	282
23.5	<i>Sites with equid, dog and equid-dog depositions in the third millennium BC.</i>	282

23.6	<i>Tell Madhhur Tomb 5G plan.</i>	283
23.7	<i>Tell Brak Area FS 'Caravanserai', Akkadian period, Level 5.</i>	284
23.8	<i>Sargon stele.</i>	285

Tables

5.1	<i>Anatolian Middle Bronze Age chronology.</i>	41
7.1	<i>Faunal remains from relevant contexts in Abu Tbeirah.</i>	67
8.1	<i>Chart summarizing the textual data about these characters interacting with animal-men.</i>	83
8.2	<i>Chart summarizing the textual data presented in the chapter.</i>	88
15.1	<i>Model of expectations for typical patterns of faunal distributions within elite and commoner residences.</i>	166
15.2	<i>Utility index of combined body portions and associated element categories.</i>	167
15.3	<i>Relative percentage frequencies of wild taxa.</i>	168
15.4	<i>Relative percentage frequency of domestic versus wild taxa, buildings A/N, G, K, M and U.</i>	169
15.5	<i>Relative frequency distributions for domestic taxa.</i>	170
15.6	<i>Percentage frequencies of body portion categories of good, bad, and ugly for Ovis/Capra.</i>	171
15.7	<i>Relative frequency distributions for wild taxa in commoner buildings and elite buildings.</i>	173
17.1	<i>Predicted presence of large mammals in the different vegetation belts.</i>	200
18.1	<i>Scarabs and plaques with waterfowl iconography.</i>	208
18.2	<i>Waterfowl-shaped scaraboids.</i>	211
18.3	<i>Fragmentary ceramic waterfowl heads.</i>	212
18.4	<i>Waterfowl-shaped ivory cosmetic boxes.</i>	213
22.1	<i>Frequency distribution of non-articulated Equus asinus bone elements.</i>	270
22.2	<i>Frequency distribution of non-articulated Equus asinus bone elements by age groups.</i>	271
22.3	<i>Frequency (NISP) of Stratum E5c Equus asinus osteological elements by depositional context.</i>	271
23.1	<i>Calculation of meat weight.</i>	287

Abbreviations and sigla

ABL	Harper, R.F., 1892–1914. <i>Assyrian and Babylonian Letters Belonging to the Kouyunjik Collection of the British Museum</i> , 14 volumes. Chicago: University of Chicago Press.	ARM 30	Durand, J.-M., 2009. <i>La nomenclature des habits et des textiles dans les textes de Mari</i> . (Archives royales de Mari 30.) Paris: Lib. Paul Geuthner.
AHw	von Soden, W., 1959-1981. <i>Akkadisches Handwörterbuch</i> . Wiesbaden.	AUCT 1	Sigrist, M., 1984. <i>Neo-Sumerian Account Texts in the Horn Archaeological Museum</i> . (Andrews University Cuneiform Texts 1.) Berrien Springs: Andrews University Press.
AKA I	Wallis Budge, E.A. & L.W. King, 1902. <i>Annals of the Kings of Assyria: The Cuneiform Texts with Translations and Transliterations from the Original Documents in the British Museum</i> . Vol. I. London: The Trustees of the British Museum.	BabMed	Babylonian Medicine online [no year]: ‘Corpora’, https://www.geschkult.fu-berlin.de/e/babmed/Corpora/index.html
AMT	Campbell Thompson, R., 1923. <i>Assyrian Medical Texts</i> . Milford, Oxford: Oxford University Press.	BAM	Köcher, F., 1963–1980. <i>Die babylonisch-assyrische Medizin in Texten und Untersuchungen</i> , 6 Vols. Berlin: De Gruyter.
AnOr 8	Pohl, A., 1933. <i>Neubabylonische Rechtsurkunden aus den Berliner staatlichen Museen</i> . (Analecta Orientalia 8.) Rome: Pontificium Institutum Biblicum.	BCT 1	Watson, P.J., 1986. <i>Neo-Sumerian Texts from Drehem</i> . (Catalogue of Cuneiform Tablets in Birmingham City Museum I.) Warminster: Aris & Phillips.
AO	Siglum of objects in the Louvre Museum, Paris (Archéologie Orientale).	BIN 1	Keiser, C.E., 1917. <i>Letters and Contracts from Erech Written in the Neo-Babylonian Period</i> . (Babylonian Inscriptions in the Collection of James B. Nies, vol. 1.) New Haven: Yale University Press.
ARM 2	Jean, Ch.-F., 1950. <i>Lettres diverses</i> . (Archives royales de Mari 2.) Paris: Lib. Paul Geuthner.	BIN 3	Keiser, C.E., 1971. <i>Neo-Sumerian Account Texts from Drehem</i> . (Babylonian Inscriptions in the Collection of B.J. Nies, vol. 3.) New Haven: Yale University Press.
ARM 9	Biro, M., 1958. <i>Textes administratifs de la Salle 5 du Palais</i> . (Archives royales de Mari 9.) Paris: Lib. Paul Geuthner.	BM	Siglum for objects in the British Museum, London.
ARM 10	Dossin, G., 1978. <i>Correspondance feminine</i> . (Archives royales de Mari 10.) Paris: Lib. Paul Geuthner.	BPOA	Biblioteca del Proximo Oriente Antiguo (Madrid: Consejo Superior de Investigaciones Científicas, 2006ff.)
ARM 14	Biro, M., 1974. <i>Lettres de Yaqqim-Addu, gouverneur de Sagarâtum</i> . (Archives royales de Mari 14.) Paris: Lib. Paul Geuthner.	BPOA 6	Sigrist, M., & T. Ozaki, 2009a. <i>Neo-Sumerian Administrative Tablets from the Yale Babylonian Collection. Part One</i> (Biblioteca del Próximo Oriente Antiguo 6.) Madrid: Consejo Superior de Investigaciones Científicas.
ARM 15	Bottero, J. & A. Finet, 1954. <i>Repertoire analytique des tomes I à V</i> . (Archives royales de Mari 15.) Paris: Lib. Paul Geuthner.	BPOA 7	Sigrist, M., & T. Ozaki, 2009b. <i>Neo-Sumerian Administrative Tablets from the Yale Babylonian Collection. Part Two</i> (Biblioteca del Próximo Oriente Antiguo 7.) Madrid: Consejo Superior de Investigaciones Científicas.
ARM 26	Durand, J.-M. et al., 1988. <i>Archives épistolaires de Mari</i> . (Archives royales de Mari 26.) Paris: Lib. Paul Geuthner.	BRM 1	Clay, A.T., 1912. <i>Babylonian Business Transactions of the First Millennium B.C.</i> (Babylonian Records
ARM 27	Biro, M., 1993. <i>Correspondance des gouverneurs de Qatṭunân</i> . (Archives royales de Mari 27.) Paris: Lib. Paul Geuthner.		
ARM 28	Kupper, J.-R., 1998. <i>Lettres royales du temps de Zimri-Lim</i> . (Archives royales de Mari 28.) Paris: Lib. Paul Geuthner.		

	in the Library of J. Pierpont Morgan, Part 1.) New York: Privately printed.	HSS 14	Lacheman, E.R., 1950. <i>Excavations at Nuzi V. Miscellaneous Texts from Nuzi, Part 2, The Palace and Temple Archives.</i> (Harvard Semitic Studies 14.) Cambridge (Mass.): Harvard Univ. Press.
CAD	<i>The Assyrian Dictionary of the Oriental Institute of the University of Chicago.</i> Chicago: The Oriental Institute, 1956–2010.	HW ²	Friedrich, J. & A. Kammenhuber (eds.), 1975–. <i>Hethitisches Wörterbuch. Zweite, völlig neubearbeitete Auflage auf der Grundlage der edierten hethitischen Texte.</i> Heidelberg: Winter.
CBS	Siglum for objects in the University Museum in Philadelphia (Catalogue of the Babylonian Section).	IB	Siglum for finds from Isin (Isan Bahriyat).
CDLI	Cuneiform Digital Library Initiative, https://cdli.ucla.edu	IM	Siglum for objects in the Iraq Museum, Baghdad.
CHD	Goedegebuure, P.M., H.G. Güterbock, H.A. Hoffner & T.P.J. van den Hout (eds.), 1980–. <i>The Hittite Dictionary of the Oriental Institute of the University of Chicago.</i> Chicago: The Oriental Institute.	ITT 5	de Genouillac, H., 1921. <i>Inventaire des Tablettes de Tello conservées au Musée Imperial Ottoman. Tome V. Époque présargonique, Époque d'Agadé, Époque d'Ur III.</i> Paris: Édition Ernest Leroux.
CM 26	Sharlach, T.M., 2004. <i>Provincial Taxation and the Ur III State.</i> (Cuneiform Monographs 26.) Leiden: Brill.	KAH 2	Schroeder, O. 1922. <i>Keilschrifttexte aus Assur historischen Inhalts, Heft II.</i> (Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft 37.) Leipzig: J.C. Hinrichs'sche Buchhandlung.
CT 22	Campbell Thompson, R., 1906. <i>Cuneiform Texts from Babylonian Tablets in British Museum</i> , vol. 22. London: British Museum.	KBo	<i>Keilschrifttexte aus Boghazköi</i> (Bd. 1-22 in Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft) Leipzig/Berlin, 1916 ff.
CT 32	King, L.W., 1912. <i>Cuneiform Texts from Babylonian Tablets in British Museum</i> , vol. 32. London: British Museum.	KRI	Kitchen, K.A., 1969–1990. <i>Ramesside Inscriptions. Historical and Biographical</i> , 8 vols. Oxford: Blackwell.
CT 55	Pinches, T.G. 1982. <i>Cuneiform Texts from Babylonian Tablets in the British Museum Part 55. Neo-Babylonian and Achaemenid Economic Texts.</i> London: British Museum Publications.	KUB	<i>Keilschrifturkunden aus Boghazköi</i> , Berlin 1921 ff.
CTH	Laroche, E. 1971. <i>Catalogue des Textes Hittites.</i> Paris: Klincksieck.	LAPO 16	Durand, J.-M., 1997. <i>Les Documents épistolaires du palais de Mari, tome I.</i> (Littératures anciennes du Proche-Orient 16.) Paris: Éditions du cerf.
DAS	Lafont, B., 1985. <i>Documents Administratifs Sumériens, provenant du site de Tello et conservés au Musée du Louvre.</i> Paris: Editions Recherche sur les Civilisations.	LAPO 18	Durand, J.-M., 2000. <i>Les Documents épistolaires du palais de Mari, tome III.</i> (Littératures anciennes du Proche-Orient 18.) Paris: Éditions du cerf.
DMMA	Siglum for objects in the Département des Monnaies, médailles et antiques de la Bibliothèque nationale de France.	LD	Lepsius, C.R., 1849–59. <i>Denkmäler aus Aegypten und Aethiopien</i> (plates), 6 vols. Berlin: Nicolaische Buchhandlung.
DUL	Del Olmo Lete, G. & J. Sanmartín, 2015. <i>A Dictionary of the Ugaritic Language in the Alphabetic Tradition.</i> Translated and edited by W.G.E. Watson. Third revised edition. 2 vols. (Handbuch der Orientalistik 112.) Leiden: Brill.	LKU	Falkenstein, A., 1931. <i>Literarische Keilschrifttexte aus Uruk.</i> Berlin: Berlin Staatliche Museen zu Berlin Vorderasiatische Abteilung.
EA	Siglum for the Tell El-Amarna Letters, following the edition of Knudtzon, J. A., 1915. <i>Die El-Amarna-Tafeln.</i> Leipzig: J.C. Hinrichs'sche Buchhandlung.	M	Siglum for texts from Mari.
ePSD	Electronic version of <i>The Pennsylvania Sumerian Dictionary</i> , http://psd.museum.upenn.edu	Moore, Mich. Coll.	Moore, E., 1939. <i>Neo-Babylonian Documents in the University of Michigan Collection.</i> Ann Arbor: University of Michigan Press.
ETCSL	Black, J.A., G. Cunningham, J. Ebeling, E. Flückiger-Hawker, E. Robson, J. Taylor & G. Zólyomi (eds.), 1998–2006. <i>The Electronic Text Corpus of Sumerian Literature.</i> Oxford, http://etcsl.orinst.ox.ac.uk/	MSL VIII/I	Landsberger, B., 1960. <i>The Fauna of Ancient Mesopotamia. First Part: Tablet XIII.</i> (Materialien zum Sumerischen Lexikon VIII/1.) Rome: Pontificium Institutum Biblicum. [with the assistance of A. Draffkorn Kilmer & E.I. Gordon].
FM 2	Charpin, D. & J.-M. Durand (ed.), 1994. <i>Recueil d'études à la mémoire de Maurice Birot.</i> (Florilegium Marianum II.) Paris: Société pour l'étude du Proche-Orient ancien.	MVN 8	Calvot, D., G. Pettinato, S.A. Picchioni & F. Reschid, 1979. <i>Textes économiques du Sélouš-Dagan du Musée du Louvre et du Collège de France (D. Calvot). Testi economici dell'Iraq Museum Baghdad.</i> (Materiali per il Vocabolario Neosumerico 8.) Rome: Multigrafica Editrice.
Hh	<i>The Series HAR-ra='hubullu'</i> , Materials for the Sumerian lexicon (MSL), 5, 6, 7, 9, 10 & 11. Rome: Pontificium Institutum Biblicum, 1957–.	MVN 11	Owen, D.I., 1982. <i>Selected Ur III Texts from the Harvard Semitic Museum.</i> (Materiali per il Vocabolario Neosumerico 11.) Rome: Multigrafica Editrice.
		MZ	Siglum for finds from Tell Mozan.
		NBC	Siglum for tablets in the Nies Babylonian Collection of the Yale Babylonian Collection.

NCBT	Siglum for tablets in the Newell Collection of Babylonian Tablets, now Yale University, New Haven.	SAA 11	Fales, F.M. & J.N. Postgate, 1995. <i>Imperial Administrative Records, Part II: Provincial and Military Administration</i> . (State Archives of Assyria 11.) Helsinki: Helsinki University Press.
OIP 99	Biggs, R.D., 1974. <i>Inscriptions from Tell Abu Salabikh</i> . (Oriental Institute Publications 99.) Chicago: The University of Chicago Press.	SAA 12	Kataja, K. & R. Whiting, 1995. <i>Grants, Decrees and Gifts of the Neo-Assyrian Period</i> . (State Archives of Assyria 12.) Helsinki: Helsinki University Press.
OIP 115	Hilgert, M., 1998. <i>Cuneiform Texts from the Ur III Period in the Oriental Institute, Vol. 1: Drehem Administrative Documents from the Reign of Šulgi</i> . (Oriental Institute Publications 115.) Chicago: The Oriental Institute.	SAA 13	Cole, S.W. & P. Machinist, 1998. <i>Letters from Assyrian and Babylonian Priests to Kings Esarhaddon and Assurbanipal</i> . (State Archives of Assyria 13.) Helsinki: Helsinki University Press.
OIP 121	Hilgert, M., 1998. <i>Cuneiform Texts from the Ur III Period in the Oriental Institute, Volume 2: Drehem Administrative Documents from the Reign of Amar-Suena</i> . (Oriental Institute Publications 121.) Chicago: The Oriental Institute.	SAA 17	Dietrich, M., 2003. <i>The Neo-Babylonian Correspondence of Sargon and Sennacherib</i> . (State Archives of Assyria 17.) Helsinki: Helsinki University Press.
P	CDLI (Cuneiform Digital Library Initiative) number.	SAA 19	Luukko, M. 2012. <i>The Correspondence of Tiglath-pileser III and Sargon II</i> . (State Archives of Assyria 19.) Helsinki: The Neo-Assyrian Text Corpus Project.
PDT 1	Çig, M., H. Kizilyay & A. Salonen, 1956. <i>Die Puzris-Dagan-Texte der Istanbul Archäologischen Museen Teil 1: Texts Nrr. 1-725</i> . (Academia Scientiarum Fennica Annales, série B, tome 92.) Helsinki: Academia Scientiarum Fennica.	SAA 20	Parpola, S. 2017. <i>Assyrian Royal Rituals and Cultic Texts</i> . (State Archives of Assyria 20.) Helsinki: The Neo-Assyrian Text Corpus Project.
PKG 18	Orthmann, W., 1985. <i>Der alte Orient</i> . (Propyläen Kunstgeschichte 18.) Berlin: Propyläen Verlag.	SAT 2	Sigrist, M., 2000. <i>Sumerian Archival Texts. Texts from the Yale Babylonian Collection 2</i> . Bethesda: CDL Press.
PTS	Siglum for unpublished texts in the Princeton Theological Seminary.	SF	Deimel, A., 1923. <i>Schultexte aus Fara</i> . (Wissenschaftliche Veröffentlichung der Deutschen Orientgesellschaft 43.) Leipzig: J.C. Hinrichs'sche Buchhandlung.
RGTC	<i>Répertoire géographique des textes cunéiformes</i> . (Beihefte zum Tübinger Atlas des Vorderen Orients, Reihe B.) Wiesbaden: Reichert, 1974–.	SP	Alster, B., 1997. <i>Proverbs of Ancient Sumer</i> . Bethesda: CDL Press.
RIMA 2	Grayson, A.K., 1991. <i>Assyrian Rulers of the Early First Millennium BC I (1114–859 BC)</i> . (The Royal Inscriptions of Mesopotamia, Assyrian Periods Vol. 2.) Toronto, Buffalo & London: University of Toronto Press.	TCL 12	Conteneau, G., 1927. <i>Contrats Néo-Babyloniens I, de Téglaḫ-Phalasar III à Nabonide</i> . (Textes cunéiformes, Musées du Louvre 12.) Paris: P. Geuthner.
RIME 1	Frayne, D., 2008. <i>Presargonic Period (2700–2350 BC)</i> . (The Royal Inscriptions of Mesopotamia, Early Periods Vol. 1.) Toronto: University of Toronto Press.	TCL 13	Contenau, G., 1929. <i>Contrats néo-babyloniens II. Achéménides et Séleucides</i> . (Textes cunéiformes, Musées du Louvre 13.) Paris: P. Geuthner.
RIME 4	Frayne, D., 1990. <i>Old Babylonian Period (2003–1595 BC)</i> . (The Royal Inscriptions of Mesopotamia, Early Periods Vol. 4.) Toronto: University of Toronto Press.	TRU	Legrain, L., 1912. <i>Le temps des rois d'Ur: recherches sur la société antique d'après des textes nouveaux</i> . (Bibliothèque de l'École des Hautes Études 199.) Paris: H. Champion.
RINAP	The Royal Inscriptions of the Neo-Assyrian Period; Open Richly Annotated Cuneiform Corpus, available at http://oracc.museum.upenn.edu/rinap/index.html	TU	Thureau-Dangin, F., 1922. <i>Tablettes d'Uruk à l'usage des prêtres du Temple d'Anu au temps des Séleucides</i> . (Musée du Louvre. Département des antiquités orientales. Textes cunéiformes.) Paris: P. Geuthner.
RLA	<i>Reallexikon der Assyriologie und vorderasiatischen Archäologie</i> .	U.	Siglum for finds from Ur.
RS	Siglum for documents from Ras Shamra (Ugarit).	UCP 9/1,I	Lutz, H.F., 1927. <i>Neo-Babylonian Administrative Documents from Erech: Part I</i> . (University of California Publications in Semitic Philology Vol. 9 no. 1/I.) Berkeley (CA): University of California Press.
SAA 2	Parpola, S. & K. Watanabe, 1988. <i>Neo-Assyrian Treaties and Loyalty Oaths</i> . (State Archives of Assyria 2.) Helsinki: Helsinki University Press.	UCP 9/1,II	Lutz, H.F., 1927. <i>Neo-Babylonian Administrative Documents from Erech: Part II</i> . (University of California Publications in Semitic Philology Vol. 9 no. 1/II.) Berkeley (CA): University of California Press.
SAA 7	Fales, F.M. & J.N. Postgate, 1992. <i>Imperial Administrative Records, Part I: Palace and Temple Administration</i> . (State Archives of Assyria 7.) Helsinki: Helsinki University Press.	UDT	Nies, J.B., 1920. <i>Ur Dynasty Tablets: Texts Chiefly from Tello and Drehem Written during the Reigns of Dungi, Bur-Sin, Gimil-Sin and Ibi-Sin</i> . Leipzig: J.C. Hinrichs'sche Buchhandlung.
SAA 10	Parpola, S. 1993. <i>Letters from Assyrian and Babylonian Scholars</i> . (State Archives of Assyria 10.) Helsinki: Helsinki University Press.		

VA	Siglum for objects in the Vorderasiatisches Museum, Berlin (Vorderasiatische Abteilung).		<i>et d'Histoire in Genf</i> . Naples: Istituto orientale di Napoli.
VAT	Siglum for objects/tablets in the Vorderasiatisches Museum, Berlin (Vorderasiatische Abteilung. Tontafeln).	YBC	Siglum for tablets in the Yale Babylonian Collection.
VS 1	Ungnad, A. & L. Messerschmidt, 1907. <i>Vorderasiatische Schriftdenkmäler der Königlichen Museen zu Berlin</i> . Vol. 1, Texts 1–115, Königliche Museen zu Berlin. Sammlung der Vorderasiatischen Altertümer. Leipzig: J.C. Hinrichs'sche Buchhandlung.	YOS 7	Tremayne, A., 1925. <i>Records from Erech, Time of Cyrus and Cambyses (538-521 B.C.)</i> . (Yale Oriental Series, Babylonian Texts, vol. 7.) New Haven: Yale University Press.
VS 16	Schröder, O., 1917. <i>Altbabylonische Briefe</i> . (Vorderasiatische Schriftdenkmäler der königlichen Museen zu Berlin 16.) Leipzig: J.C. Hinrichs'sche Buchhandlung.	YOS 8	Faust, D.E., 1941. <i>Contracts from Larsa, dated in the Reign of Rim-Sin</i> . (Yale Oriental Series, Babylonian Texts, vol. 8.) New Haven: Yale University Press & London: H. Milford, Oxford University Press.
VS 17	van Dijk, J. 1971. <i>Nicht-kanonische Beschwörungen und sonstige literarische Texte</i> . (Vorderasiatische Schriftdenkmäler der Königlichen Museen zu Berlin 17.) Berlin: Akademie Verlag.	YOS 11	van Dijk, J., A. Goetze & M.I. Hussey, 1985. <i>Early Mesopotamian Incantations and Rituals</i> . (Yale Oriental Series, Babylonian Texts, vol. 11.) New Haven: Yale University Press.
WB	Erman, A. & H. Grapow (eds.), 1971. <i>Wörterbuch der ägyptischen Sprache</i> , 5 vols. Berlin: Akademie Verlag.	YOS 17	Weisberg, D.B., 1980. <i>Texts from the Time of Nebuchadnezzar</i> . (Yale Oriental Series, Babylonian Texts, vol. 17.) New Haven: Yale University Press.
WMAH	Sauren, H., 1969. <i>Wirtschaftsurkunden aus der Zeit der III. Dynastie von Ur im Besitz des Musée d'Art</i>	YOS 19	Beaulieu, P.-A., 2000. <i>Legal and Administrative Texts from the Reign of Nabonidus</i> . (Yale Oriental Series, Babylonian Texts, vol. 19.) New Haven: Yale University Press.

Preface

Augusta McMahon

The chapters in this volume invert traditional approaches to past human-animal relationships, placing animals at the forefront of these interactions and celebrating the many ways in which animals enriched or complicated the lives of the inhabitants of the ancient Near East. The authors embrace insights from text, archaeology, art and landscape studies. The volume offers rich evidence for the concept that ‘animals are good to think’ (Levi-Strauss 1963), enabling humans in categorizing the world around us, evaluating our own behaviours, and providing analogies for supernatural powers that are beyond humans’ control. However, totemism has never fit the ancient Near East well, because most animals had varied and endlessly complicated relationships with their human associates, as these chapters vividly describe. Taboos on eating or handling animals ebbed and flowed, and the same animal could have both positive and negative associations in omen texts. Animals were good (or bad) to eat, good (or bad) to think, good (or bad) to live with (Kirksey & Helmreich 2010) and good (or bad) to be. Through detailed, theoretically informed and well-supported case studies, this volume moves the study of human-animal-environment interactions forward, presenting animals as embedded actors in culture rather than simply objectified as human resources or symbols.

The chapters in the first section emphasize the agency of animals via their abilities to resolve crises for humans and deities and to shift between animal and human worlds. Animals have paradoxical affects: as metaphors for wilderness and chaos, or as valued companions, helpers, or votive sacrifices. The variety of interactions and assumptions cautions us to treat animals, as we do humans, as individuals. Reconstruction of animals in past rituals has a long history, usually focused on animals associated with the gods and/or animals used in formal religious sacrifice. But the chapters in the second section also examine

the impact of lesser-known animals and less formal encounters, e.g., in the landscape or in funeral contexts within the home. The value and meanings of animals could vary with context.

The fascination engendered by hybrid or composite figures is also well represented. The persistence of composite figures in the Near East, from fourth millennium BC human-ibex ‘shamans’ on northern Mesopotamian Late Chalcolithic seals to *lamassu* and *mušhuššu* of the first millennium BC, suggests that the division and recombination of animal body elements fulfilled a human need to categorize powerful forces and create a cosmological structure. The anthropomorphizing of animals is another facet of the flexibility of animal identifications in the past. The authors here also grapple with the question of whether composite images represent ideas or costumed ritual participants.

The chapters also cover the most basic of animal-human relations, that of herd management, use in labour, and consumption, digging deeply into details of mobility, breeding and emic classifications. Economic aspects of the human-animal relationship are currently being rejuvenated through archaeological science techniques (e.g., isotopes, ZooMS), which give us unparalleled levels of detail on diet, mobility, herd management, and species. Matching these insights from science, the issues raised here include the value of individual animals versus that assigned to species, the challenges of pests, the status ascribed to and reflected by different meat cuts, animals as status and religious symbols, and animals’ tertiary products or uses (e.g., transport versus traction, bile). These studies allow a more detailed reconstruction of Near Eastern economy and society, as well as emphasizing the flexibility of the relationships between animals, as well as between human and animal.

The authors implicitly advocate for a posthumanist multispecies ethnography, which incorporates

nonhumans and argues for equal care to be given to nonhumans in the realms of shared landscapes, violence, labour and especially ecology (Kirksey & Helmreich 2010; Kopnina 2017; Parathian *et al.* 2018). This approach advocates for nonhumans' agency in creating shared worlds, in contrast to the traditional approach to animals as symbols or resources in the service of humans. Going forward, the challenge will be to convert the acknowledgement of equal cultural contribution into support for nonhuman species to speak for themselves; this shift from passive subject of research inquiry to genuine active agency in academic writing does not have an easy or obvious path, and many nonhuman animals may be overlooked. Indeed, multispecies ethnography ideally seeks to incorporate plants, microbes, stones and more (Ogden *et al.* 2013; Smart 2014), many of which are ephemeral in the archaeological record and all but omitted in ancient texts. However, ancient texts do support a new approach which questions our modern boundaries between species. Our perpetual struggle to translate terms for different species of equids, to distinguish whether a word refers to rats or mice, or to link zooarchaeological remains to lexical lists, reinforces the complexity and flexibility of these concepts, and the futility of attempts at absolute categorization.

The chapters in this volume should inspire colleagues to grapple with animals, nonhumans and contexts that could not be included here. For instance, the snake has as lengthy a history of human engagement in the Near East as does the lion and had similarly unusual powers. While the lion was an icon of strength, the perfect symbol for the proximity of the emotions of awe and fear, the snake has the sneaky ability to slither

between worlds, to avoid capture, and to deliver an almost imperceptible lethal injury. Fear of the snake conquers awe. Like the fox, the presence or actions of the snake, as listed in *Šumma ālu*, may be positive or negative omens. The snake was present at key moments in both Mesopotamian and Biblical literature; its actions (stealing the plant of immortality, offering the fruit of the tree of knowledge) changed the fate of humans forever. Whether represented coiled and copulating on Late Chalcolithic seals, grasped by Late Uruk 'Masters of Animals' or first millennium BC *lamaštu*, snakes and their paradoxical nature deserve deep scrutiny. There are many other nonhuman animals deserving of similar problematization and integration, and the eclectic and exciting research stream represented by this volume shows us the way.

References

- Kirksey, S.E. & S. Helmreich, 2010. The emergence of multispecies ethnography. *Cultural Anthropology* 25(4), 545–76.
- Kopnina, H., 2017. Beyond multispecies ethnography: engaging with violence and animal rights in anthropology. *Critique of Anthropology* 37(3), 333–57.
- Levi-Strauss, C., 1963. *Totemism*. Boston: Beacon Press.
- Ogden, L., B. Hall & K. Tanita, 2013. Animals, plants, people and things, a review of multispecies ethnography. *Environment and Society* 4(1), 5–24.
- Parathian, H., M. McLennan, C. Hill, A. Frazão-Moreira & K. Hockings, 2018. Breaking through interdisciplinary barriers: human-wildlife interactions and multispecies ethnography. *International Journal of Primatology* 39, 749–75.
- Smart, A., 2014. Critical perspectives on multispecies ethnography. *Critique of Anthropology* 34(1), 3–7.

Chapter 7

Between sacred and profane: human–animal relationships at Abu Tbeirah (southern Iraq) in the third millennium BC

Francesca Alhaique, Licia Romano & Franco D'Agostino

The medium sized city of Abu Tbeirah, Iraq (30° 98' 43.93" E, 46° 26' 97.35" N) flourished during the third millennium BC in southern Mesopotamia. At this time, the region was a marshy area near the ancient Gulf shoreline (Milli & Forti 2019; Romano 2019). Since 2012, the archaeological investigations have aimed at understanding the last occupational phases of the city as well as reconstructing human–environment relations using an interdisciplinary approach.

The bilobed settlement (Fig. 7.1) was characterized by an interesting hydraulic system: a main canal was running northwest-southeast, dividing the town in two halves. It fed an artificial basin (a harbour in Area 5, D'Agostino & Romano 2018) from which a secondary canal ran parallel to the main one toward the southeast. In the southeastern part of the site (Area 1), two phases of occupation of a huge household (Building A) have come to light. The discoveries in Building A Phase 1 and Phase 2 provide evidence of the everyday life of a Sumerian household, with its installations (e.g. *tannur* and firing structures), production activities, and burial practices (e.g. sub-pavement graves). The structures of the household were then cut by several graves and garbage pits in the latest phase of occupation of the area (Romano 2019).

In the northeastern part of the site (Area 2), a similar situation occurred. The domestic structures belonging to the end of the third millennium BC were cut by graves (one of them particularly rich) that were in turn severely disturbed by later activities, possibly belonging to a now eroded upper phase (D'Agostino & Romano 2015).

Materials and methods

A relatively large faunal assemblage was recovered during the excavations in the different areas of the settlement; the materials presented in this chapter were

handpicked, but such collection was very accurate since also small elements (e.g. fish bones) were recovered. The zooarchaeological and taphonomic analysis of the animal remains is still in progress, but has been completed for the material from the latest phases of Area 1. The remains mainly come from a burial ground and from the most recent phase (Phase 1) of use of the very large Building A (Alhaique 2019). Evidence from the earlier phase (Phase 2) in Area 1 as well as some interesting contexts from Area 2 will also be discussed here.

The preservation of the assemblage is relatively poor, with a high degree of fragmentation. This is the result of not only common pre- and post-depositional events (e.g. butchery, carnivore activity, trampling, sediment pressure), but also of the presence of salt crystals that, growing within the microfractures already present on bones and teeth, further splintered the specimens. Such fragmentation has resulted in a high number of unidentifiable remains, in addition to specimens only attributable to more general size categories (i.e. medium mammal, large mammal). Moreover, salt and calcium carbonate incrustations that covered the bones often limited the possibility of observing any modifications produced by humans, animals or other natural agents. A further problem in the analysis was the identification of traces of burning; indirect chemical analyses have shown that many of the bones that were black and apparently burnt were instead accidentally stained by manganese (E. Peverati, pers. comm.). The age at death of domestic taxa was calculated according to existing archaeozoological literature (e.g. Silver 1969; Payne 1973; Barone 1981; Bull & Payne 1982; Grigson 1982; Barone 1995).

Faunal assemblage from Area 1

In Area 1, samples associated with the graves of the cemetery, from a large pit under Graves 15 and 16,

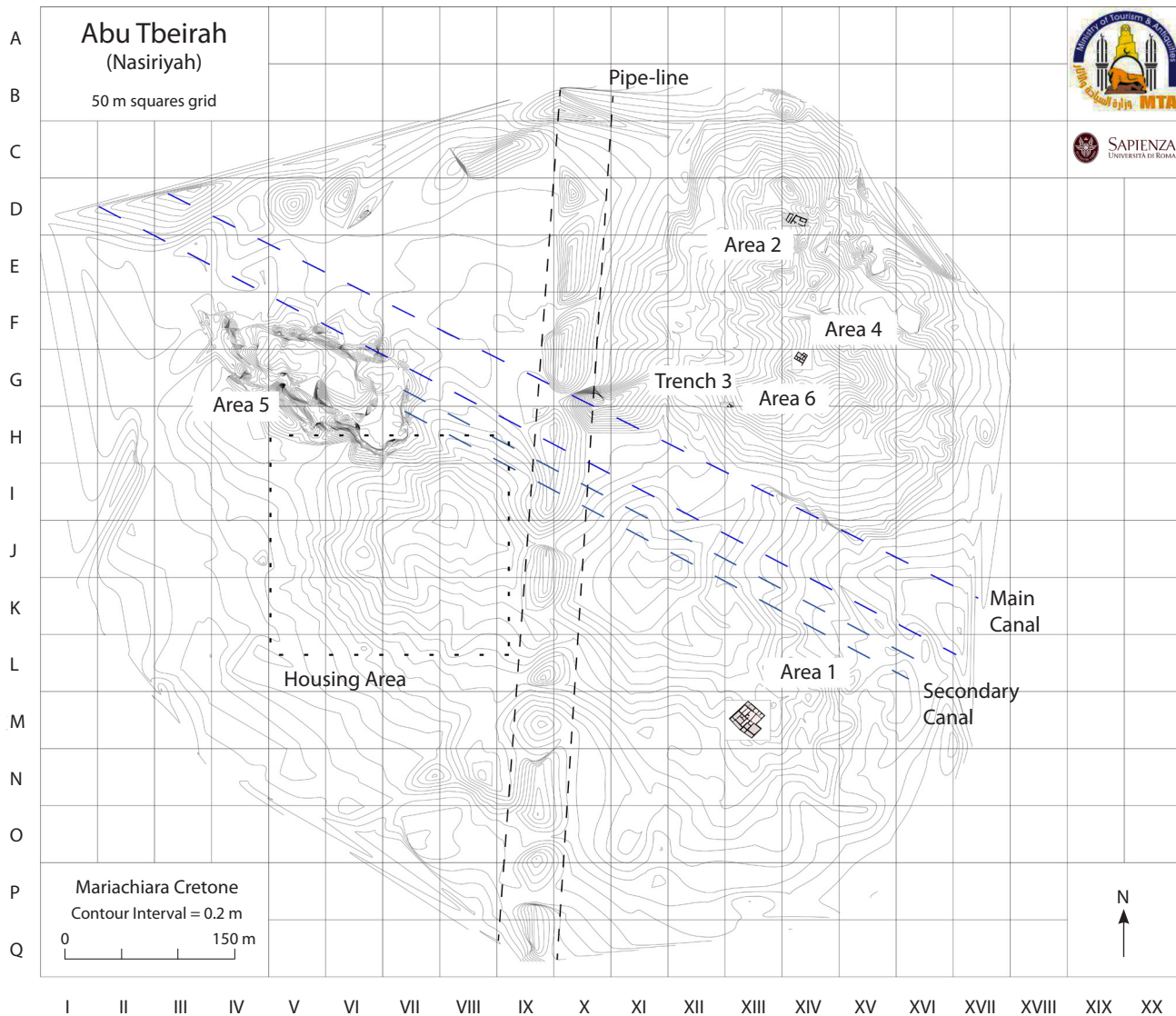


Figure 7.1. Plan of the site with excavation areas and canals.

and from other activities of the latest phase (Fig. 7.2) share a very similar faunal spectrum. Ovicaprines, followed by pigs, are the main species and fish and mollusks are also relatively abundant (Table 7.1). *Bos taurus* remains are instead much less frequent, being found only in the pit under Graves 15 and 16 and in the sample representing other activities of the latest phase. Equidae and *Sus scrofa* were only present in the cemetery and in the pit. Along with the occurrence of scattered human bones, the latter may support the hypothesis that this pit may in fact be, at least in part, a disturbed grave. Furthermore, the cemetery data suggest that specific skeletal elements may have had special significance in the funerary rituals. This is in particular the case with the radius, which occurs in the

instance of the very young equid in Grave 15, where it represents the only specimen for that taxon, and is 'over-represented' for the ovicaprids in Graves 16 and 21: in Grave 16 three out of seven elements of sheep/goat are radii, while in Grave 21 all the eight bones identified are ovicaprids and two of them are radii, one perhaps originally still articulated with humerus and carpals. Furthermore, in the latter grave, one side (the right) may also have been important. Although it is not common and the meaning is difficult to assess, a selection of body portions in funerary and ritual contexts has been documented in different time periods and regions (e.g. Alhaique 2002; Davis 2008).

The assemblage from the first phase of use in Building A (Fig. 7.3) includes both faunal remains

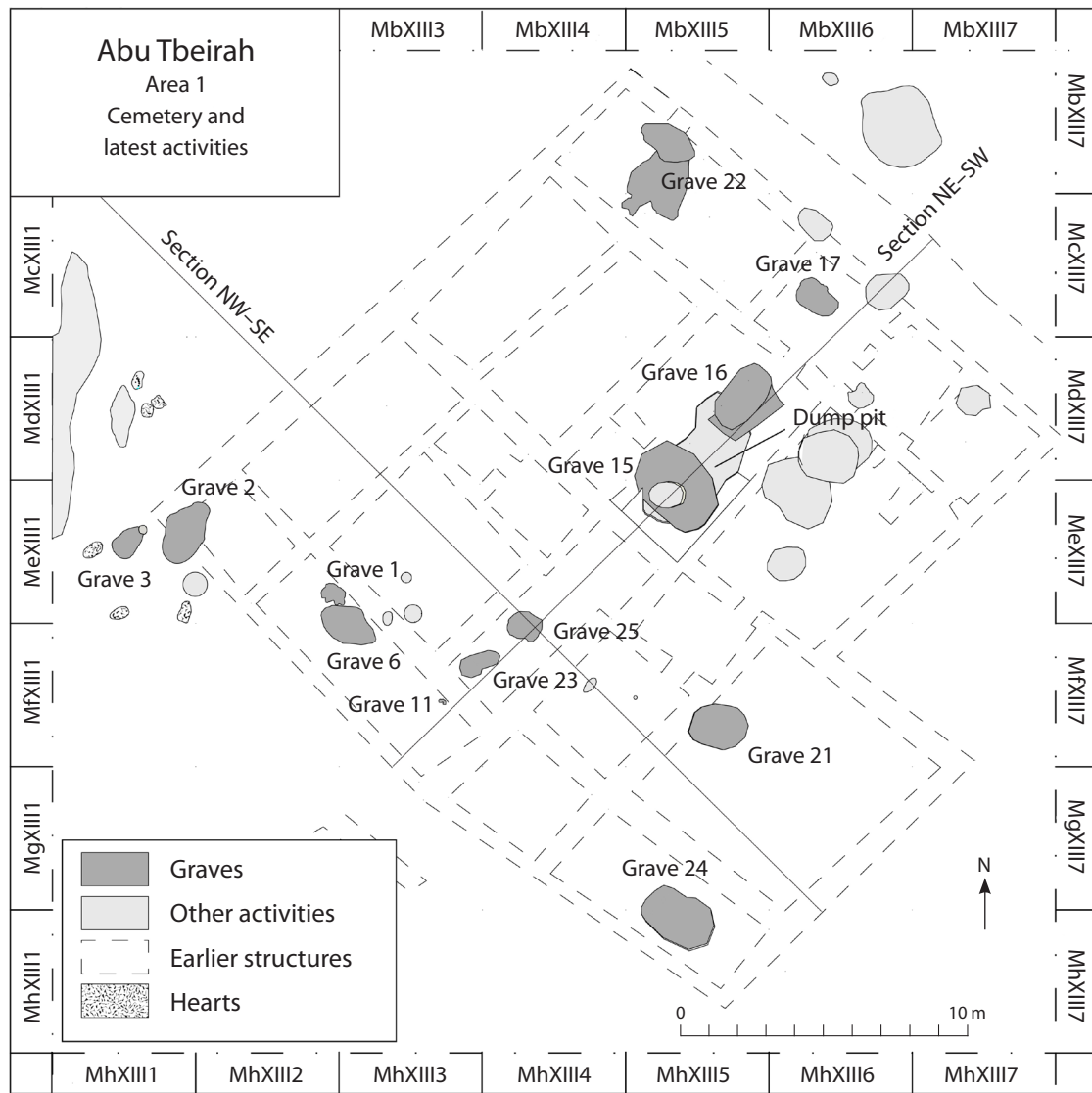


Figure 7.2. Plan of Area 1 Cemetery and latest activities.

associated with graves located under the floors inside and outside the building, and those from living contexts (Table 7.1). Most of the remains from the graves of Phase 1 came from outside the northeastern part of Building A and most likely represent a funerary banquet (or banquets) for the individuals buried in Graves 4, 5 and 13. This is indicated not only by the faunal assemblage (e.g. abundance of specimens in contrast to other burials, many individuals represented for each species, presence of rare species), but also by other archaeological evidence (Romano & al Hosseini 2019). Fewer faunal remains were associated with Graves 20 and 12, inside the building. In general, *Ovis vel Capra* and *Sus domesticus* are the most frequent mammals, and mollusks (both freshwater and marine)

are also abundant, especially in Grave 12, where some *Cardiidae* have been used as ‘cosmetic shells’. The other species recovered, all from the graves outside the building, are fish and, more rarely, *Equus* sp. and cattle. As far as the remains related to activities inside the rooms are concerned (Table 7.1), there are some apparent anomalies because of the presence in Room 1 of a large dish, found upside-down, still full of fish bones, probably belonging to a single individual of *Cyprinidae*, and of a dog burial found in Room 22. Other than that, the building contexts appear relatively similar to the funerary ones except for the presence of a few equid specimens only in the graves and some gazelle bones in Rooms 14 and 15 of the building. The only other gazelle (cf. *Gazella dorcas*) element recovered

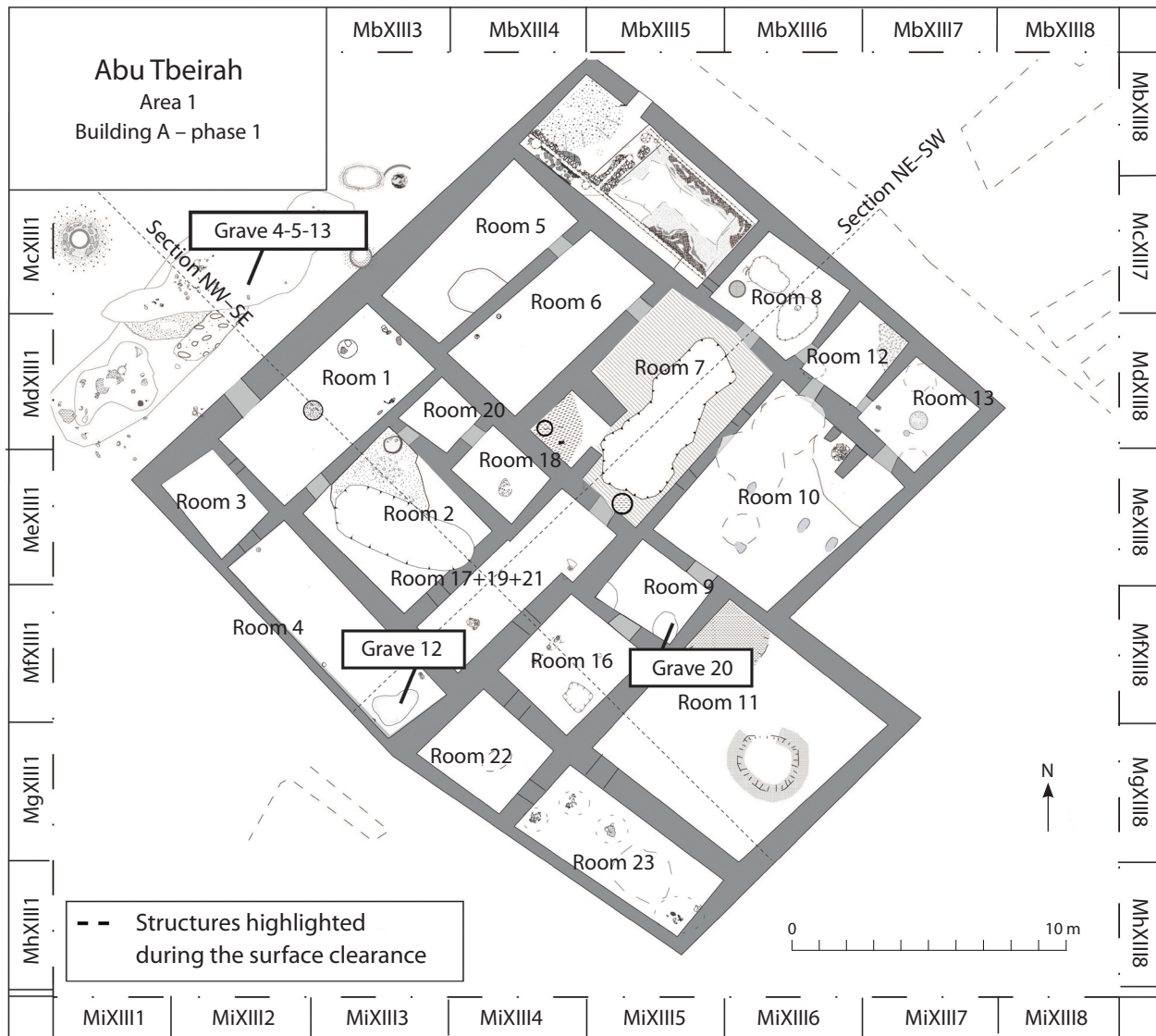


Figure 7.3. Plan of Area 1 Building A with location of sub-pavement graves.

so far at the site is a horn fragment from this same building, but from the earlier Phase 2.

The faunal assemblage from Grave 100 Area 2

A large faunal assemblage (Table 7.1) was recovered from Grave 100 in Area 2 (Fig. 7.4). This grave was a very rich burial, but unfortunately heavily disturbed. The human body itself was missing, but important equipment, consisting of several pottery and copper alloy vessels, a toilet-set, and three long carnelian beads, was found eroding out of the surface and in part scattered and displaced inside a rainfall gully that cut and damaged the stratigraphy of the context (D'Agostino *et al.* 2011). In this grave, *Ovis vel Capra* is the most

abundant taxon, with sheep being more frequent than goat. Of the five individual ovicaprids identified at least one is a goat and two are sheep. One of the latter is represented by the skeleton of a young lamb, which appears to have been deposited with the legs tightly flexed, probably tied up, as indicated by the position of the lower limb bones, 'frozen' in position by concretions.

At least three of the ovicaprids had been killed when they were between four and six years old, while the last one was younger, two-three years old. Unexpectedly, equids are the second most common taxon in terms of number of specimens; although not all the skeletal elements were present (possibly due to later disturbances in that part of the site), there were at least two individuals of different size, based on dimensional

Table 7.1. Faunal remains from relevant contexts in Abu Tbeirah (N= Number of remains; medium mammal = sheep, goat, pig, dog, and animals of similar size; large mammal = equids, cattle and other large ungulates).

Species	AREA 1										AREA 2	
	Latest Activities						Phase 1				Grave 100	
	Cemetery		Pit under Graves 15 &16		Other Late Activities		Building A		Sub-pavement Graves			
	N	%	N	%	N	%	N	%	N	%		
Marine Mollusk	11	4.9	2	0.8	3	2.2	16	2.3	24	4.6	2	0.2
Freshwater Mollusk	16	7.1	6	2.4	4	3.0	40	5.7	63	12.0	3	0.2
Pisces	14	6.2	30	12.1	6	4.5	93	13.3	18	3.4	14	1.1
Testudinae											1	0.1
Micromammal									1	0.2		
Canis familiaris							199	28.4			23	1.9
Vulpes vulpes											3	0.2
Equus sp.	2	0.9	13	5.2					2	0.4	65	5.3
Sus scrofa	3	1.3	2	0.8							1	0.1
Sus domesticus	19	8.5	13	5.2	10	7.5	54	7.7	70	13.3	62	5.0
Gazella dorcas cf							6	0.9				
Ovis vel Capra	27	12.1	42	16.9	21	15.7	57	8.1	70	13.3	121	9.9
Bos taurus			4	1.6	4	3.0	2	0.3	2	0.4		
Medium mammal	13	5.8	25	10.1	15	11.2	40	5.7	46	8.7	47	3.8
Large mammal	12	5.4	1	0.4	1	0.7	2	0.3	2	0.4	52	4.2
Unidentifiable	107	47.8	110	44.4	70	52.2	191	27.3	228	43.3	834	67.9
Total	224	100	248	100	134	100	700	100	526	100	1228	100

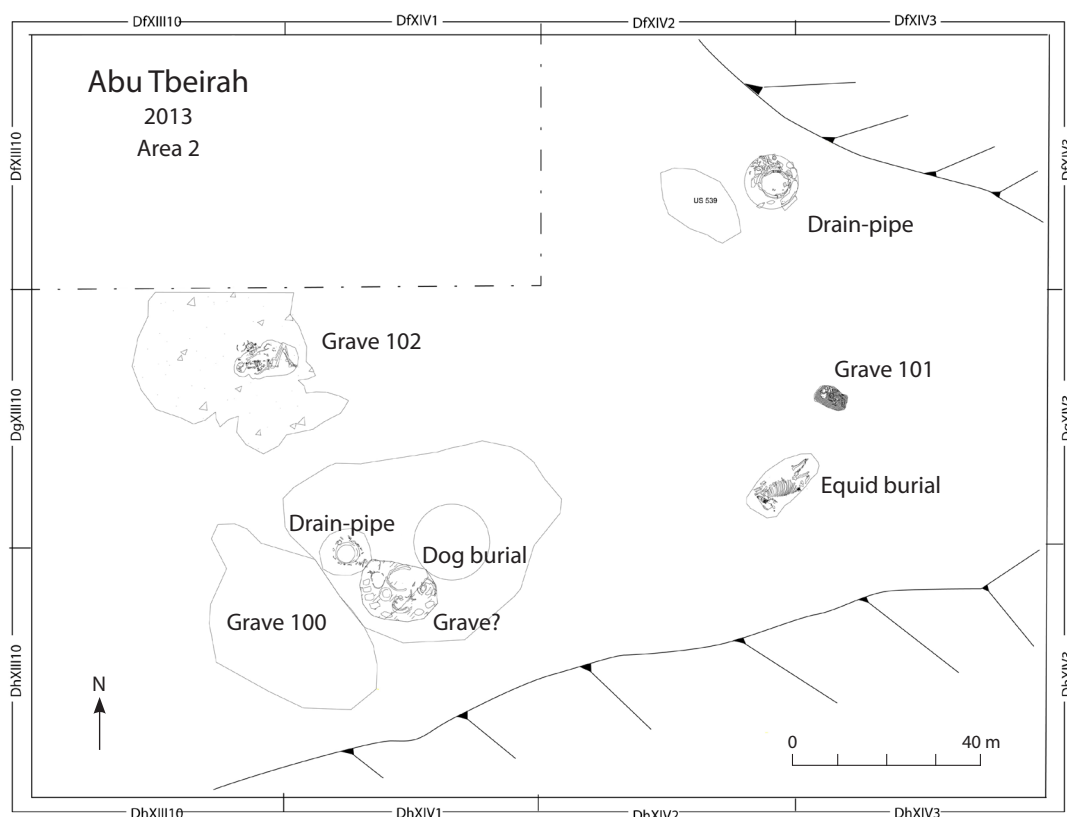


Figure 7.4. Plan of Area 2 with location of Grave 100, the equid burial, the dog burial, and other graves.

differences between two proximal femurs, and age: one was 4–5 years old, while the other 11–12 years old. Genetic analyses on the mtDNA of a lower second premolar belonging to the younger animal has shown that it was either a pure *Equus hemionus* or a cross-breed between a female hemione and a male donkey (Gabbianelli *et al.* 2015). It was possible to estimate (May 1985) a shoulder height of about 120 cm for only one of the two individuals on the basis of a complete metatarsal although it is not possible to assign this specimen to the younger or the older animal.

The third taxon for number of specimens, but second in terms of number of individuals is *Sus domesticus*. In this case, the remains represent at least four animals, none of them older than 30 months. Some dog elements were also present, belonging to a single adult individual. Rare taxa are represented by wild boar, fox, and tortoise; so far, this is the only context with fox and tortoise from the site. Marine and freshwater mollusks were also present, as were fish. The contextual archaeological data indicate a very rich and peculiar inhumation, but the grave has been heavily disturbed by later activities. The faunal information

further suggests an affluence of the deceased, but may also possibly suggest a funerary banquet, as in the cases of Graves 4, 5 and 13, as discussed above.

Discussion on dog findings

Dog remains are in general rare in the faunal assemblage from Abu Tbeirah, although gnawing, probably produced by dogs, is attested, suggesting the presence of these animals in everyday life. All the bones of this species recovered so far were either associated with human graves or their largely complete bodies were intentionally buried as isolated depositions, as for example in the case of the burial (Fig. 7.5) in Room 22 of Building A mentioned above. The animal in this interment was still in anatomical position, lying on its left side facing northeast and with the limbs slightly flexed. Notwithstanding the general completeness of the skeleton, the head (cranium and mandible) and cervical vertebrae were completely missing. The zooarchaeological analysis revealed that the individual was about two years old and had a withers height between 52 and 55 cm. It was not possible to assess the sex of the animal:

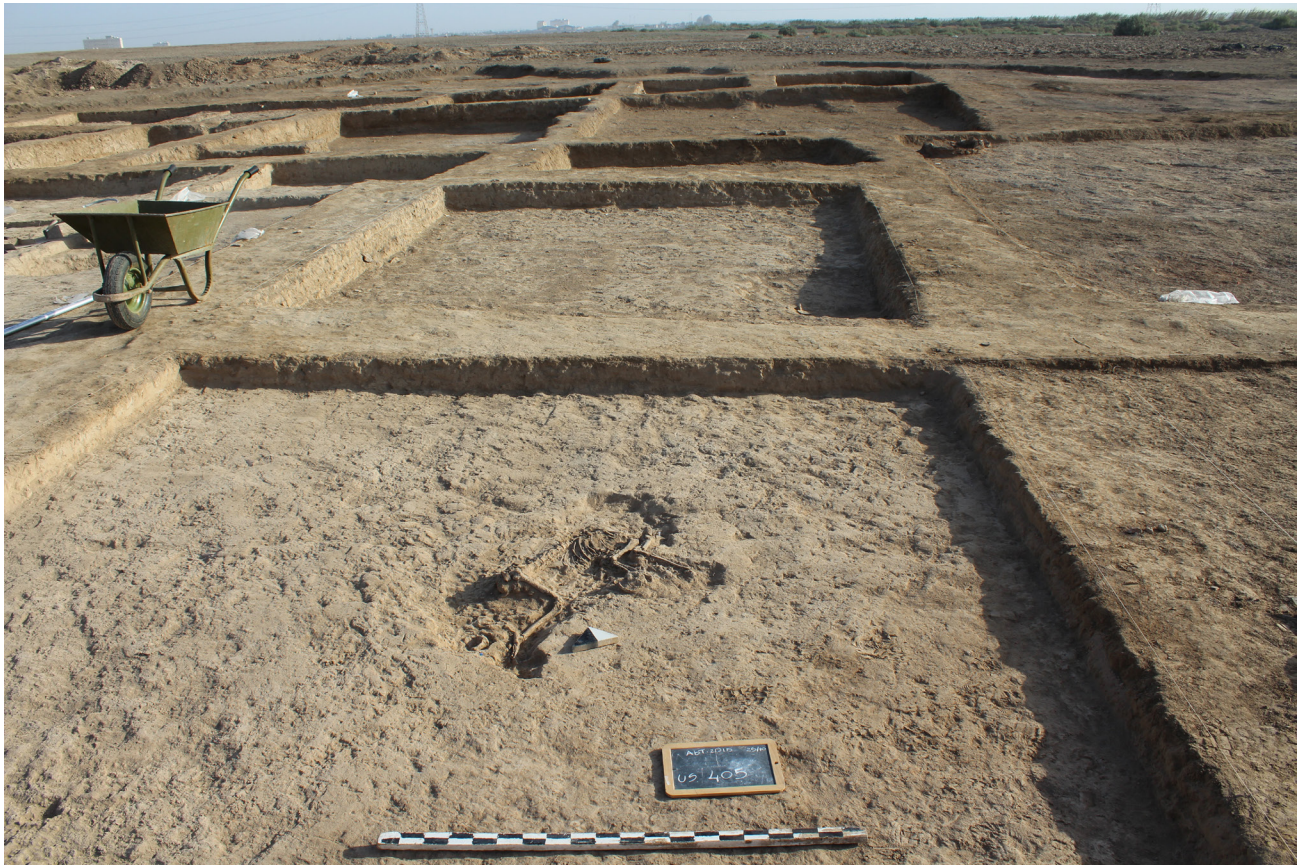


Figure 7.5. Dog burial in Room 22 – Building A (Area 1).

although the baculum was missing, it could have been lost during excavations. No bone modifications were detected on the dog skeleton and the black colour of many of the elements was not related to burning, but to accidental manganese staining, as is the case of many other animal and human bones from the site.

This dog skeleton, notwithstanding the absence of a well-defined pit, but given the absence of head and neck, very likely represents a ritual interment, possibly suggesting the sacrifice of the animal; the orientation of the animal is different from that of the human graves (Romano 2020). This practice is widely attested in the ancient Near East (Ramos-Soldado 2016) and over all the Mediterranean region, and might be interpreted both as offering and/or as protection for the building. The only other dog remains recovered so far at the site come from Area 2. At least one adult animal, represented by relatively few skeletal elements and with a shoulder height of about 50 cm, was associated with Grave 100, mentioned above. A second dog was a 5–6 months old puppy and was found in the fill of a pit (Fig. 7.4); it may represent an animal burial, or have been associated with a disturbed human grave.

Textual sources attest to a wide range of attitudes towards dogs, based on their role in domestic contexts as well as on their healing properties connected to the cult of Gula (Ramos-Soldado 2016; Tsouparopoulou 2020; Nett, this volume). Dogs are also present in Mesopotamian literature and frequently mentioned in proverbs and fables, emphasizing both their positive aspects (guarding, shepherding, hunting, etc.) and negative ones (Gordon 1958; Wu 2001; Tsouparopoulou 2012; Tsouparopoulou & Recht, this volume). Although the seated dog only clearly became a divine symbol in the Old Babylonian period, third millennium iconography also depicts dogs in a range of contexts. An Early Dynastic votive plaque from Nippur shows a dog in a typical domestic scene under the chair of a banqueting character (Hansen 1963, Plate V); in contrast, the Sargon Stele Sb1 shows domestic dogs and vultures devouring and dismembering the bodies of the enemies (Tsouparopoulou & Recht, this volume). In any case, beside the religious and cultural role of this species for the Sumerians, the data from Abu Tbeirah suggest a special care for this animal connected with the nature of the close relationship between humans and dogs.

Discussion on equid findings

Another taxon that appears to be important in Sumerian culture, not only for utilitarian purposes, is Equidae. In the Near East, during most of the third millennium, at least two species of equids were present: *Equus asinus* and *E. hemionus*, while the horse probably appeared

only at the end of this period. Furthermore, cross-breeds between these animals are known from cuneiform texts and suggested by zooarchaeological investigations (e.g. Weber 2008; Clutton-Brock 1986; Zarins 1986).

At Abu Tbeirah, in Area 2, besides the already mentioned *Equus* remains from Grave 100, an equid burial was also found (Fig. 7.6), possibly dated to the Akkadian period. The pit was dug in the southwest corner of Room 1 of Building B, when the building was no longer in use. In the same area and archaeological level, several human graves, including Grave 100, and the dog puppy burial mentioned above were also identified (Fig. 7.4). The animal had been placed in a pit (Fig. 7.6), resting on its left side with tightly flexed limbs and the head placed on the right shoulder in an ‘unnatural’ backwards position, as if the neck had been forcedly bent or broken. The skeleton was found only a few centimetres below the salt crust that covers the surface of the excavation over the whole site. This heavily affected the preservation of the skeleton, which was in fact very fragile and fragmented.

The few measurable bones were not useful for species identification, but the teeth showed an asinine morphology rather than a hemione one (Eisenmann 1986). However, recent research has shown that species identification in the case of equids may be difficult, even for experienced researchers, when based only on morphological and dimensional data (Geigl & Grange 2012), therefore an upper second premolar was sampled for aDNA analysis. The results of the mtDNA show that the individual was a domestic donkey, at least on the mother side. Future analyses will possibly be able to show whether the father was another donkey or a hemione (Gabbianelli *et al.* 2015). Based on tooth wear and fusion of the bones (Barone 1981; 1995), the animal was probably 5.5 years old when it died, while the canine suggests that it was a male. The presence of the upper first premolar, the so called ‘wolf tooth’, is a relatively uncommon feature displayed in most equid species only by less than 31 per cent of the individuals (Eisenmann 1986).

Equid burials were relatively common during the third and second millennium BC over a wide region from around the Mediterranean to Mesopotamia (Recht 2018; see also Way 2010 and references therein for an overview), and our finding is therefore not completely unexpected. The intentional burials may be associated with human graves or architectural features (e.g. walls, temples), but they may also stand alone. For this latter case, in the absence of other archaeological or taphonomic evidence, some authors (e.g. Milevski & Horwitz 2019), prefer to interpret them as deliberate interment of animals not used as food, but with no special ritual meaning.



Figure 7.6. *Equid burial in Area 2.*

Although equids may bend their relatively long necks and turn their head backwards, the position of the head of our individual does not seem completely natural and may recall the tradition of donkey sacrifices mentioned in the Mari texts and in the Bible (Scurlock 2002; Way 2010). In the latter case the animal was killed just by breaking its neck (see Exodus 34:20). In archaeological contexts similarities in the position of the head may be found for example with a donkey from Tel es Safi/Gath (Greenfield *et al.* 2012), or with an onager/cross-breed from Abu Salabikh (Clutton-Brock 1986). This latter example has not been considered a deliberate burial, but rather an accidental or natural occurrence (i.e. an animal trapped in a burning building), but the position of the head may indicate that this interpretation needs a reevaluation. However, the possibility that in our case the position of the legs and the head was only related to the fact that the animal should fit into a small pit, for ritual or disposal practices, cannot be ruled out completely.

In Area 1 equid remains are rare. In the cemetery, a fragment of the radius of a foal was associated with Grave 15, while a carpal bone was collected from Grave

24. A few skeletal elements of a single individual, some still articulated, but with cut marks on the proximal end of the metatarsal, were recovered in the pit under Graves 15 and 16. This pit was probably, at least in part, a disturbed human burial. The equid was 119.4 cm at the withers, very close to the height of the equid from Grave 100. Another radius, this time belonging to an adult, was among the remains of the funerary banquet(s) outside Building A. At any rate, as in the case of dogs, there was a special relationship between humans and equids in this region, as also the possible exclusive presence of equids in burial contexts at Abu Tbeirah seems to support.

Discussion on aquatic taxa

The analysis of the faunal assemblage from all the different contexts described so far indicates that aquatic species (mollusks and fish) played an important role both in daily life and in funerary rituals. This is of course related to the environment that surrounded the site in the third millennium BC, when Abu Tbeirah was crossed by a canal and had a relatively large

harbour. The area was richer in water, similar to the present-day Iraqi marshes and much closer to the sea (D’Agostino & Romano 2018; Jotheri 2019; Milli & Forti 2019).

The preliminary data on fish identification suggest that most of them were freshwater Cyprinidae (including the specimens from Room 1), mainly belonging to the genus *Luciobarbus* and *Barbus*. Among the latter, the presence of *Barbus grypus* can be attested (Fig. 7.7a). The remains of this family mainly fall within a size range between 40–50 and 60–70 cm, although in a few cases they are smaller, about 20–30 cm. Among the freshwater species, there is also the *Silurus triostegus*; some individuals are about 40–50 cm, but in one case a size of 80–90 cm was reached (Fig. 7.7b). Marine taxa are rarer, and include Carangidae of the genus *Scomberoides* (Fig. 7.7c), in one case reaching 80–90 cm. One of the most curious fish finds occurred during the 2013 excavation campaign: in the fill of a *tannur* located just outside Building A in Phase 2, three chevron ‘comb-like’ burned elements were found (Fig. 7.7d). The analysis of the specimens indicated that they were three lower dental plates of an eagle ray belonging to the genus *Aetobatus*. Based on current biogeographical data, the species that now live in the Persian Gulf area

are *Aetobatus flagellum* and *Aetobatus cf. ocellatus*, with the former being more frequent. These Chondrichthyes are marine species, but are able to go upstream and enter rivers and estuaries, especially *A. flagellum* (White *et al.* 2010; White & Moore 2013; White pers. com.). The same is also true for the *Scomberoides* mentioned earlier. This fits well with the coastline being much closer to the site in the third millennium, and the sea nearly reaching Ur.

Compared to modern specimens, the dimensions of the *Aetobatus* plates indicate that the individual recovered was about 42–45 cm wide (White, pers. com.). The presence of these remains inside the oven suggests that they had probably been used as a source of food and later, as indicated by the complete burned state of the specimens, the leftovers ended up in the *tannur*, either intentionally discarded or accidentally.

The identification of the eagle ray remains at Abu Tbeirah provides a clue for a more precise identification of the ray mentioned in a Sumerian literary composition known as ‘The home of fish’ (Civil 1961; Vanstiphout 1982). Leaving aside the discussions about the general interpretation of this text (e.g. Civil 1961; Thomsen 1975), we can here underline the fact that in this composition, there are 11 lines (84–94) dedicated



Figure 7.7. Fish specimens: a) *Barbus grypus* pharyngeal bone fragment (estimated animal length 60–70 cm); b) *Silurus triostegus* quadrate bone portion (estimated animal length 80–90 cm); c) *Scomberoides* sp. premaxilla (estimated animal length 80–90 cm); d) *Aetobatus* sp. lower dental plates (estimated animal width 42–45 cm).

to the ray, defined as *mur*-fish, compared to the 2–3 lines used for all the other fish species mentioned in the text. This may suggest a use of this taxon in Sumerian culture not only for utilitarian purposes.

The first line of the text quotes ‘The head, a hoe, the teeth, a comb’ (Civil, 1961); already on the basis of this first mention, Civil (1961) tentatively attributes the ray to the genus *Dasyatis* for the similarity in shape with the tool mentioned in the Sumerian text, also compared to the findings of such an artifact from Ur (see for example Woolley 1934, pl. 230). However, this genus does not have the comb-like teeth, which are instead a characteristic only of *Aetobatus*. Furthermore, the long and detailed description of the animal reported in the text shows the deep and probably direct knowledge that the Sumerians had of the anatomical features of this fish. For example, to observe the comb part of the dental plates, it is necessary to take apart the different plates. Moreover, since no spots on the skin of the animal are mentioned in the long description, the ray cited in ‘The home of fish’ is more likely *Aetobatus flagellum* rather than *Aetobatus* cf. *ocellatus*.

Although only occasionally attested so far, fish bones found at Abu Tbeirah had also been used to produce tools, usually, only slightly modified, expediency ones.

The mollusks found belong to both freshwater species (*Unio tigridis*), as well as marine and brackish-water taxa such as Cardiidae, Conidae, and Spondylidae. Some of the larger taxa may have been imported for craft purposes. On some occasions, the shells had been used as containers, as in the case of ‘cosmetic shells’ found associated with Grave 12, mentioned above, and Grave 24, or as raw materials for producing objects such as rings or seals.

General conclusions

In general, the faunal composition does not show particular differences in the use of the main species in daily life, as evidenced by the remains found in Area 1 in Building A, and in funerary rituals both in the sub-pavement burials of Phase 1 of the building and in the cemetery in Area 1 as well as in Grave 100 in Area 2.

Sheep/goat and pigs are most common in all contexts, but some subtle differences between ‘sacred’ and ‘profane’ settings may be suggested by looking at the age at death. The funerary contexts display a wide age range from young or very young to senile, with younger animals probably representing offerings for the deceased since they were mainly found inside ceramic vessels or in close association with the body of the deceased or were represented by complete

skeletons or limbs (i.e. not consumed), while older ones (often recovered on top of or around the burial), may be more related to ritual banquets. In the domestic contexts, sheep/goat are represented only by adult animals, and pigs by young and adult individuals, but for both species senile specimens are absent.

The comparable abundance of ovicaprines and pigs in all contexts may seem an anomaly considering the relatively low frequency, especially in some periods, of textual and iconographic evidence of domestic pigs compared to that of sheep and goat (e.g. Breniquet 2002; Scurlock 2002; Dahl 2006; Grigson 2007; Redding 2015). At least for the textual sources, such an anomaly could be explained by the fact that swine herds were possibly managed more at a local, family level, not needing registration in official documents; although other explanations are also possible (D’Agostino & Spada, in press; Dahl 2006). Moreover, pigs were probably kept within the city boundaries, avoiding crossbreeding with the very large local wild boar (*Sus scrofa attila*; an individual from Grave 15 has an estimated shoulder height of c. 90 cm), as suggested by the very small size of Sumerian pigs documented not only at Abu Tbeirah (c. 64 cm at the shoulder), but also at other sites (e.g. Clutton Brock & Burleigh 1978; Grigson 2007).

There is a general scarcity of cattle, both in ritual and domestic contexts. This could be explained by the environmental characteristics of the land around the site, which was probably not suitable for the kind of large-scale agriculture for which such animals would have been useful. Another possibility is that cattle, if employed mainly for traction and transport, was not used as a source of meat and therefore was not discarded with the other food debris. However, the lack of burials or other ritual associations of cattle (in comparison with equids, which may have had a similar use), suggests that the environmental hypothesis may be more appropriate.

The presence of aquatic taxa (marine and freshwater) in all contexts indicates a strong influence of the surrounding environment on everyday life and ritual practices in southern Mesopotamia during the third millennium BC. Shells, and in a few cases also fish bones, were used not only as food, but also as raw material for making tools and objects or, in the case of mollusks, as containers. It is likely that ‘cosmetic shells’ found in burials are related to the social identity of the deceased. They are associated with both females, as in Grave 12 and at other sites (e.g. Abu Salabikh, Martin *et al.* 1985, 42 – Grave 3, 49–50, Grave 10; Ur, Woolley 1934, PG/777, PG 779), and with males, as in Grave 24 (Tafari 2019).

Wild mammals are extremely rare. Wild boar was almost exclusively found in graves and its presence is

possibly related to the activity (or some of the activities) of the deceased in life, for example the robustness of the adult man in Grave 15 associated to the presence of this wild taxon may hint to the hunting abilities of the inhumated. Remains of gazelle were only found in Building A of Area 1, but in both Phase 1 and Phase 2, representing another piece of evidence for occasional hunting activities. Given the location, this was probably only for meat acquisition and not for rituals purposes. The presence of fox and tortoise in Grave 100 may indicate some particular meaning for these species, although the remains are too scanty to be confident of this interpretation.

Although carnivore gnawing is documented, indicating the probable presence of dogs in the daily lives of the inhabitants of Abu Tbeirah, actual canid remains are very rare from domestic contexts. They are instead found in ritual settings, suggesting an important symbolic role in Mesopotamian culture, as also indicated by iconographic and literary sources. Both domestic donkeys and *Equus hemionus* or *Equus hemionus*-donkey hybrids have been discovered. With the possible exception of the remains collected from the pit below Graves 15 and 16, they are so far all associated with human burials or were interred in their own grave.

One taxon that is apparently missing in the Abu Tbeirah faunal assemblage are birds, whose bones are not present in the samples described in this chapter, and are extremely rare at the site overall. However, micro-debris analyses (Cereda & Romano 2018; Cereda 2019) carried out on the floors of some rooms of Building A in Area 1 revealed in all instances the presence of eggshell fragments. This suggests that, although the meat of birds was not or rarely used, this was not the case for the eggs, which were probably collected from nests in the surrounding environment.

In general, as far as the burials are concerned, there seems to be no relationship between the amount of faunal remains recovered, the burial method, the sex and age of the deceased and the number of inhumed individuals (Tafari 2019).

Funerary banquets have been suggested by both more strictly archaeological data (e.g. rich and abundant grave goods compared to other graves) and faunal remains (e.g. high number of specimens and individuals in contrast to other burials, presence of rare species) in the case of Graves 4, 5 and 13 in Area 1, and Grave 100 in Area 2. The ritual probably involved the consumption of not only meat, but also of liquids, as indicated by the high number of drinking vessels recovered in association with the sub-pavement graves outside Building A (Romano & al-Hosseini 2019). It is also possible that some of the faunal remains from

other burials at Abu Tbeirah represent smaller funerary banquets or that the funerary ritual involved only the use of liquids, which would not leave clear traces except for the containers employed for drinking. These were sometimes found piled up (therefore presumably empty) as part of the burial goods (e.g. in Graves 6, 15 and 16, see Romano & Ghanim 2019). Some kind of banquet shared with the deceased may also be suggested in other burials, explaining the presence of containers for eating or drinking made of organic materials (Grave 6) or ceramic (Grave 16) found in or near the hands of the skeletons (Romano & al-Hosseini 2019). Similar findings, this time not only made of pottery, but also stone or metal, have been documented for example at Abu Salabikh and Ur (Woolley 1934; McMahon 2006).

The information collected so far at Abu Tbeirah seems to indicate that there were no marked differences between the animals in the ‘sacred’ and the ‘profane’ contexts, but only subtle variations, for example in the selection of the age of the animals. However, some taxa, such as dogs and equids, likely played a more significant role in the cultural sphere. Other animals, like wild boar and mollusks, although still related to the funerary ritual, were probably more connected to the identity of the deceased. Along with archaeological, geological and botanical information from Abu Tbeirah (D’Agostino & Romano 2018; Celant & Magri 2019; Jotheri 2019; Milli & Forti 2019; Romano 2019), the faunal data are increasingly documenting how the lives of the people of southern Mesopotamia during the third millennium BC were strongly related to water, exploiting in different ways marine and freshwater resources, and how the subsequent climatic and environmental variations deeply influenced the economic, cultural and social conditions in this region.

Acknowledgements

Most of the fish remains have been identified by Valentina Caleca at the Royal Belgian Institute of Natural Sciences under the supervision of Prof. W. Van Neer and Dr. W. Wouters whose help is gratefully acknowledged. We are also grateful to Dr. Will White of the CSIRO (Commonwealth Scientific and Industrial Research Organisation, Australia) for confirming the identification of the eagle ray specimens and for relevant information on the different modern species.

References

- Alhaique, F., 2002. Archaeozoology of funerary structures, in *Sand, Stones and Bones: The Archaeology of Death in the*

- Wadi Tanazzuft Valley (5000–2000 BP), eds. S. Di Lernia, G. Manzi. (Arid Zone Archaeology Monographs 3.) Florence: Edizioni All'Insegna del Giglio, 181–96.
- Alhaique, F., 2019. Faunal remains, in *Abu Tbeirah Excavations I. Area 1 Last Phase and Building A – Phase 1*, eds. L. Romano & F. D'Agostino, Rome: Sapienza University Press, 419–38.
- Barone, R., 1981. *Anatomia comparata dei mammiferi domestici*, vol.3. Bologna: Edagricole.
- Barone, R., 1995. *Anatomia comparata dei mammiferi domestici*, vol.1. Bologna: Edagricole.
- Breniquet, C., 2002. Animals in Mesopotamian art, in *A History of the Animal World in the Ancient Near East*, ed. B.J. Collins. Leiden: Brill, 145–68.
- Bull, G. & S. Payne, 1982. Tooth eruption and epiphyseal fusion in pigs and wild boar, in *Ageing and Sexing Animal Bones from Archaeological Sites*, eds. B. Wilson, C. Grigson & S. Payne. (British Archaeological Reports British Series 109.) Oxford: BAR, 55–71.
- Celant, A. & D. Magri, 2019. Palaeoenvironment, climate, and land use in southern Mesopotamia/Nasiriyah Area, in *Abu Tbeirah Excavations I. Area 1 Last Phase and Building A – Phase 1*, eds. L. Romano & F. D'Agostino. Rome: Sapienza University Press, 39–48.
- Cereda, S., 2019. Micro-debris analysis of Building A – Phase 1 Room 23, in *Abu Tbeirah Excavations I. Area 1 Last Phase and Building A – Phase 1*, eds. L. Romano & F. D'Agostino. Rome: Sapienza University Press, 311–22.
- Cereda, S. & L. Romano, 2018. Peering into the dusty corners: micro-debris analysis and use of space at the site of Abu Tbeirah (Nasiriyah, Iraq). *Iraq* 80, 79–111.
- Civil, M., 1961. The home of the fish: a new Sumerian literary composition. *Iraq* 23(2), 154–75.
- Clutton-Brock, J., 1986. Osteology of the equids from Sumer, in *Equids in the Ancient World*, 1, eds. R. H. Meadow & H.-P. Uerpmann. Wiesbaden: Dr. Ludwig Reichert Verlag, 207–29.
- Clutton-Brock, J. & R.J. Burleigh, 1978. The animal remains from Abu Salabikh: preliminary report. *Iraq* 40, 89–100.
- D'Agostino, F., M. Vidale, L. Romano & M. Angelozzi, 2011. Abu Tbeirah: preliminary report of the first campaign (January–March 2012). *Rivista degli Studi Orientali Nuova Serie* 84, 17–34.
- D'Agostino, F. & L. Romano, 2018. The harbor of Abu Tbeirah and the southern Mesopotamian landscape in the 3rd mill. BC: preliminary considerations. *Rivista degli Studi Orientali Nuova Serie* 91, 19–31.
- D'Agostino, F., L. Romano & A. Kadhém Ghanim, 2015. Abu Tbeirah, Nasiriyah (southern Iraq): preliminary report on the 2013 excavation campaign, in *Homenaje a Mario Liverani, fundador de una ciencia nueva (II)/Omaggio a Mario Liverani, fondatore di una nuova scienza (II)*, eds. M.G. Biga, J. Córdoba, C. Del Cerro & E. Torres. (ISIMU Revista sobre Oriente Próximo y Egipto en la antigüedad 13; 2011.) Madrid: Universidad Autónoma de Madrid. Centro Superior de Estudios de Oriente Próximo y Egiptología, 209–21.
- D'Agostino, F. & S. Spada, in press. Animal husbandry, in *A Handbook of Ancient Mesopotamia*, ed. G. Rubio. Berlin & New York: De Gruyter.
- Dahl, J., 2006. Early swine herding, in *De la domestication au tabou: Le cas des suidés dans le Proche-Orient ancien*, eds. B. Lion & C. Michel. (Travaux de la Maison René-Ginouvès 1.) Paris: Éditions De Boccard, 31–8.
- Davis, S.J.M., 2008. 'Thou shalt take of the ram ... the right thigh; for it is a ram of consecration...' some zooarchaeological examples of body-part preferences, in *Uomini, piante e animali nella dimensione del sacro*, *Atti del Seminario di Studi di Bioarcheologia, Cavallino (Lecce) 28–29 giugno 2002*, eds. F. D'Andria, J. De Grossi Mazzorin & G. Fiorentino. Bari: Edipuglia, 63–70.
- Eisenmann, V., 1986. Comparative osteology of modern and fossil horses, halfasses and asses, in *Equids in the Ancient World*, 1, eds. R.H. Meadow, H. & P. Uerpmann. Wiesbaden: Dr. Ludwig Reichert Verlag, 67–116.
- Gabbianelli, F., F. Alhaique, L. Romano, F. D'Agostino & A. Valentini, 2015. MtDNA analysis for the characterization of Sumerian equids. *Italian Journal of Animal Science* 14, 112.
- Geigl, E.M. & T. Grange, 2012. Eurasian wild asses in time and space: morphological versus genetic diversity. *Annals of Anatomy* 194, 88–102.
- Gordon, E.I., 1958. Sumerian animal proverbs and fables: 'Collection Five' (conclusion). *Journal of Cuneiform Studies* 12(2), 43–75.
- Greenfield, H. J., I. Shai & A. Maeir, 2012. Being an 'ass': an Early Bronze Age burial of a donkey from Tell es-Safi/Gath, Israel. *Bioarchaeology of the Near East* 6, 21–52.
- Grigson, C., 1982. Sex and age determination of some bones and teeth of domestic cattle: a review of the literature, in *Ageing and Sexing Animal Bones from Archaeological Sites*, eds. B. Wilson, C. Grigson & S. Payne. (British Archaeological Reports British Series 109.) Oxford: BAR, 7–24.
- Grigson, C., 2007. Culture, ecology, and pigs from the 5th to the 3rd millennium BC around the fertile crescent, in *Pigs and Humans 10,000 Years of Interaction*, eds. U. Albarella, K. Dobney, A. Ervynck & P. Rowley-Conwy. Oxford: Oxford University Press, 83–108.
- Hansen, D.P., 1963. New votive plaques from Nippur. *Journal of Near Eastern Studies* 22(3), 145–66.
- Jotheri, J., 2019. The environment and landscape archaeology of the Abu Tbeirah region in *Abu Tbeirah Excavations I. Area 1 Last Phase and Building A – Phase 1*, eds. L. Romano & F. D'Agostino. Rome: Sapienza University Press, 49–58.
- Martin, H., J. Moon & J.N. Postgate, 1985. *Abu Salabikh Excavations, 2. Graves 1 to 99*. London: British School of Archaeology in Iraq.
- May, E., 1985. Widerristhöhe und Langknochenmasse bei Pferden – ein immer noch aktuelles Problem. *Zeitschrift für Säugertierkunde* 50, 368–82.
- McMahon, A., 2006. *Nippur V, The Early Dynastic to Akkadian Transition. The Area WF Sounding at Nippur*. (Oriental Institute Publications 129.) Chicago: The Oriental Institute.
- Milevski, I. & L.K. Horwitz, 2019. Domestication of the donkey (*Equus asinus*) in the southern Levant: archaeozoology, iconography and economy, in *Animals and Human Society in Asia. Historical, Cultural and Ethical Perspectives*,

- eds. R. Kowner, G. Bar-Oz, M. Biran, M. Shahar & G. Shelak-Lavi. London: Palgrave Macmillan, 93–148.
- Milli, S. & L. Forti, 2019. Geology and palaeoenvironment of Nasiriyah area/southern Mesopotamia, in *Abu Tbeirah Excavations I. Area 1 Last Phase and Building A – Phase 1*, eds. L. Romano & F. D’Agostino. Rome: Sapienza University Press, 19–38.
- Payne, S., 1973. Kill-off patterns in sheep and goats: the mandibles from Aşvan Kale. *Anatolian Studies* 23, 281–303.
- Payne S., 1991. Early Holocene equids from Tall-I-Mushki (Iran) and Can Hasan III (Turkey), in *Equids in the Ancient World*, 2, eds. R.H. Meadow & H.-P. Uerpmann. Wiesbaden: Dr. Ludwig Reichert Verlag, 132–64.
- Ramos-Soldado, J.L., 2016. *Structured Deposition of Animal Remains in the Fertile Crescent during the Bronze Age*. Oxford: Archaeopress Publishing.
- Recht, L., 2018, ‘Asses were buried with him’: equids as markers of sacred space in the third and second millennia BC in the Eastern Mediterranean, in *Sacred Space: Contributions to the Archaeology of Belief*, eds. L.D. Nebelsick, J. Wawrzeniuk & K. Zeman-Wisniewska. Warsaw: Institute of Archaeology, Cardinal Stefan Wyszyński University in Warsaw, 65–94.
- Redding, R.W., 2015. The pig and the chicken in the Middle East: modeling human subsistence behavior in the archaeological record using historical and animal husbandry data. *Journal of Archaeological Research* 23(4), 325–68.
- Romano, L., 2019. Abu Tbeirah and Area 1 in the second half of the 3rd millennium 1, in *Abu Tbeirah Excavations I. Area 1 Last Phase and Building A – Phase 1*, eds. L. Romano & F. D’Agostino. Rome: Sapienza University Press, 59–91.
- Romano, L., 2020. Heading West: considerations on grave orientation in 3rd millennium Mesopotamia. *Traces in Time* 10, 1–21.
- Romano, L. & A.K. Ghanim, 2019. Area 1: cemetery and other activities, in *Abu Tbeirah Excavations I. Area 1 Last Phase and Building A – Phase 1*, eds. L. Romano & F. D’Agostino. Rome: Sapienza University Press, 93–188.
- Romano, L. & T. al-Hosseini, 2019. Building A – Phase 1, in *Abu Tbeirah Excavations I. Area 1 Last Phase and Building A – Phase 1*, eds. L. Romano & F. D’Agostino. Rome: Sapienza University Press, 189–310.
- Scurlock, J., 2002. Animal sacrifice in ancient Mesopotamian religion, in *A History of the Animal World in the Ancient Near East*, ed. B.J. Collins. Leiden: Brill, 389–403.
- Silver, A., 1969. The ageing of domestic animals, in *Science in Archaeology*, eds. D.R. Brothwell & E.S. Higgs. London: Thames & Hudson, 283–302.
- Tafari, M.A., 2019. The human remains, in *Abu Tbeirah Excavations I. Area 1 Last Phase and Building A – Phase 1*, eds. L. Romano & F. D’Agostino. Rome: Sapienza University Press, 389–418.
- Thomsen, M.L., 1975. ‘The Home of the Fish’: a new interpretation. *Journal of Cuneiform Studies* 27, 197–200.
- Tsouparopoulou, C., 2012. The ‘K-9 Corps’ of the Third Dynasty of Ur: the dog handlers at Drehem and the army. *Zeitschrift für Assyriologie und vorderasiatische Archäologie* 102(1), 1–16.
- Tsouparopoulou, C., 2020. The healing goddess, her dogs and physicians in the late third millennium Mesopotamia. *Zeitschrift für Assyriologie und vorderasiatische Archäologie* 110(1), 14–24.
- Vanstiphout, H.L.J., 1982. An essay on ‘The home of the fish’, in *Studia Paulo Naster oblata* 2, ed. J. Quaegebeur. (Orientalia Lovaniensia Analecta 13.) Leuven: Departement Orientalistiek / Uitgeverij Peeters, 311–19.
- Way, K.C., 2010. Assessing sacred asses: Bronze Age donkey burials in the Near East. *Levant* 42(2), 210–25.
- Weber, J., 2008. Elite equids: redefining equid burials of the mid- to late 3rd millennium BC from Umm el-Marra, Syria, in *Archaeozoology of the Near East VIII*, eds. E. Vila, L. Gourichon, A.M. Choyke & H. Buitenhuis. (Travaux de la Maison de l’Orient et de la Méditerranée 49.) Lyon: Jean Pouilloux, 499–519.
- White, W.T. & A.B.M. Moore, 2013. Redescription of *Aetobatus flagellum* (Bloch & Schneider, 1801), an endangered eagle ray (Myliobatoidea: Myliobatidae) from the Indo–West Pacific. *Zootaxa* 3752(1), 199–213.
- White, W.T., P.R. Last, G.J.P. Naylor, K. Jensen & J.N. Caira, 2010. Clarification of *Aetobatus ocellatus* (Kuhl, 1823) as a valid species, and a comparison with *Aetobatus narinari* (Euphrasen, 1790) (Rajiformes: Myliobatidae), in *Descriptions of New Sharks and Rays from Borneo*, eds. P.R. Last, W.T. White & J.J. Pogonoski. (CSIRO Marine & Atmospheric Research Paper 032.) Hobart: CSIRO Marine and Atmospheric Research, 141–64.
- Woolley, C.L., 1934. *Ur Excavations II. The Royal Cemetery*. London & Philadelphia: Trustees of the British Museum and the Museum of the University of Pennsylvania.
- Wu, Y., 2001. Rabies and rabid dogs in Sumerian and Akkadian literature. *Journal of the American Oriental Society* 121(1), 32–43.
- Zarins, J., 1986. Equids associated with human burials in third millennium BC Mesopotamia: two complementary facets, in *Equids in the Ancient World*, 1, eds. R.H. Meadow & H.-P. Uerpmann. Wiesbaden: Dr. Ludwig Reichert Verlag, 164–93.

Fierce lions, angry mice and fat-tailed sheep

Animals have always been an integral part of human existence. In the ancient Near East, this is evident in the record of excavated assemblages of faunal remains, iconography and – for the later historical periods – texts. Animals have predominantly been examined as part of consumption and economy, and while these are important aspects of society in the ancient Near East, the relationships between humans and animals were extremely varied and complex.

Domesticated animals had great impact on social, political and economic structures – for example cattle in agriculture and diet, or donkeys and horses in transport, trade and war. Fantastic mythological beasts such as lion-headed eagles or Anzu-birds in Mesopotamia or Egyptian deities such as the falcon-headed god Horus were part of religious beliefs and myths, while exotic creatures such as lions were part of elite symbolising from the fourth millennium BC onward. In some cases, animals also intruded on human lives in unwanted ways by scavenging or entering the household; this especially applies to small or wild animals. But animals were also attributed agency with the ability to solve problems; the distinction between humans and other animals often blurs in ritual, personal and place names, fables and royal ideology. They were helpers, pets and companions in life and death, peace and war. An association with cult and mortuary practices involves sacrifice and feasting, while some animals held special symbolic significance.

This volume is a tribute to the animals of the ancient Near East (including Mesopotamia, Anatolia, the Levant and Egypt), from the fourth through first millennia BC, and their complex relationship with the environment and other human and nonhuman animals. Offering faunal, textual and iconographic studies, the contributions present a fascinating array of the many ways in which animals influence human life and death, and explore new perspectives in the exciting field of human-animal studies as applied to this part of the world.

Editors:

Laerke Recht is Professor of Early Eastern Mediterranean Archaeology at the University of Graz, Austria, and a former Marie Skłodowska-Curie Fellow at the McDonald Institute of Archaeological Research, University of Cambridge. She is particularly interested in and has published on human–animal relations in the ancient Near East, Cyprus and Aegean.

Christina Tsouparopoulou is Assistant Professor in Near Eastern Archaeology at the Polish Academy of Sciences, Warsaw, Poland, Senior Research Associate and Marie Skłodowska-Curie Fellow at the McDonald Institute of Archaeological Research and Fellow of Wolfson College, Cambridge. She specializes in the material and textual culture of the Near East and Eastern Mediterranean in the third and second millennia BC.

*Published by the McDonald Institute for Archaeological Research,
University of Cambridge, Downing Street, Cambridge, CB2 3ER, UK.*

The McDonald Institute for Archaeological Research exists to further research by Cambridge archaeologists and their collaborators into all aspects of the human past, across time and space. It supports archaeological fieldwork, archaeological science, material culture studies, and archaeological theory in an interdisciplinary framework. The Institute is committed to supporting new perspectives and ground-breaking research in archaeology and publishes peer-reviewed books of the highest quality across a range of subjects in the form of fieldwork monographs and thematic edited volumes.

Cover design by Dora Kemp and Ben Plumridge.

ISBN: 978-1-913344-05-4

