



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
<b>Part I Animal agency and human–animal interactions</b>	
<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
<b>Part II Animals in ritual and cult</b>	
<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
<b>Part III</b>	<b>Blurred lines: humans as animals, animals as humans</b>	
<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**

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

## **Part V Animals in society and as a resource**

<b>Chapter 15</b>	<b>Stews, ewes, and social cues: commoner diets at Neo-Assyrian Tušhan</b>	<b>161</b>
	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
<b>Chapter 16</b>	<b>A new look at eels and their use in Mesopotamian medicine</b>	<b>179</b>
	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
<b>Chapter 17</b>	<b>Wild fauna in Upper Mesopotamia in the fourth and third millennia BC</b>	<b>193</b>
	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**

<b>Chapter 18</b>	<b>Waterfowl imagery in the material culture of the late second millennium BC Southern Levant</b>	<b>207</b>
	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
<b>Part VII</b>	<b>Companions and working animals: equids and dogs</b>	
<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’, <a href="https://www.geschkult.fu-berlin.de/e/babmed/Corpora/index.html">https://www.geschkult.fu-berlin.de/e/babmed/Corpora/index.html</a>
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 <sup>2</sup>	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, <a href="https://cdli.ucla.edu">https://cdli.ucla.edu</a>	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> , <a href="http://psd.museum.upenn.edu">http://psd.museum.upenn.edu</a>	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, <a href="http://etcsl.orinst.ox.ac.uk/">http://etcsl.orinst.ox.ac.uk/</a>	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 Selluš-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 Téglaṭh-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 <a href="http://oracc.museum.upenn.edu/rinap/index.html">http://oracc.museum.upenn.edu/rinap/index.html</a>	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 15

# Stews, ewes, and social cues: commoner diets at Neo-Assyrian Tušhan

Tina L. Greenfield & Timothy Matney

In this chapter, we examine the archaeological and zooarchaeological evidence for the economy and daily diet of commoner households at the Neo-Assyrian city of Tušhan, modern-day Ziyaret Tepe. Specifically, we focus on the concept of the ‘status’ of different food sources with an underlying assumption that different segments of the urban population at Tušhan would have had access to different kinds and different qualities of animal resources for daily consumption. We examine five excavated contexts at the site from which evidence for food production and consumption took place. The five different buildings range from a palace to a materially poor commoner residence.

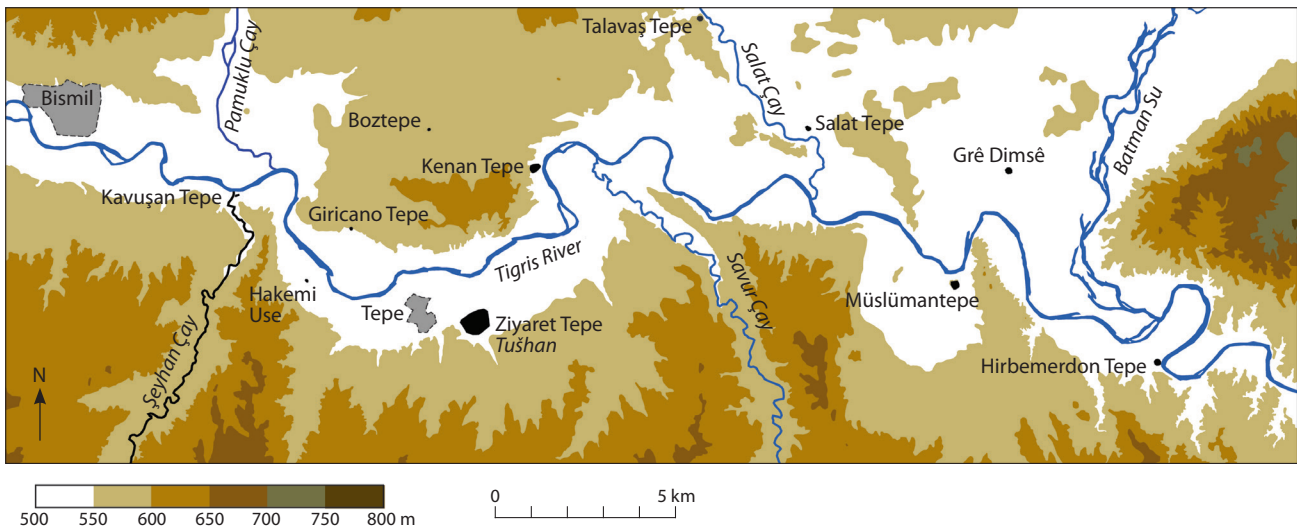
Our analysis begins with two sets of assumptions. Based on the material culture recovered in each area, we assess the overall status of the household looking at the architecture, artifacts, features and non-faunal food resources. Likewise, we also predict the status value of different types of faunal sources, determining which animals would have carried elite status and which would have been considered commoners’ fare. This assessment is based on the quality of meat as a protein and calorie source, the use of wild species utilized by the inhabitants, and our understanding of the role of the Assyrian imperial economy in controlling certain kinds of animal resources. We then test these two sets of assumptions by examining in detail the animal remains found in each location, correlating the expected status based on material culture against our assumptions of which food sources would have carried elite status, and which would have been considered commoners’ fare.

### Background

Over forty years ago, Nicholas Postgate acknowledged that ‘... no detailed work exists on the economy of the Assyrian Empire’ (Postgate 1979: 195–6) and he

suggested that we view the Assyrian economy as divided into three sectors: the palace, government and the private domains. Since then, a significant body of archaeological and epigraphic research on the former two sectors has filled this lacuna (e.g. Dalley & Postgate 1984; Gibson & Biggs 1987; Fales & Postgate 1992, 1995; Morandi Bonacossi 1996; Nemet-Nejat 1998; Zaccagnini 1999; Yamada 2000; Parker 2001; Renger 2001, 409; Kühne 2008; 2010a,b; Matney *et al.* 2009; Fales 2010; Masetti-Rouault 2010; Faust 2011; Matney *et al.* 2011; Greenfield *et al.* 2013; Marom forthcoming). In terms of the private sector, much less is known either from textual or archaeological sources about daily lives of commoners and management at level of the daily household although notable studies have addressed the topic (see Fales & Rigo 2014 for the feeding of citizens at army camps; also Gilboa & Sharon 2008; Matney *et al.* 2009; Kühne 2010b; Matney *et al.* 2011; Lipschits, Gadot & Oeming 2012; Schloen & Fink forthcoming). Specialist paleobotanical and zooarchaeological studies have, likewise, started to provide important new datasets for the assessment of commoners’ diets from a number of Neo-Assyrian contexts (e.g. for zooarchaeological studies see Wilken 1999; Cavallo & Maliepaard 2002; Becker 2008; Lev-Tov 2010; Berthon 2011; Greenfield *et al.* 2013; Greenfield 2014; 2015; 2016; Greenfield & Rosenzweig 2016; Marom forthcoming; for palaeobotanical studies, see Rosenzweig in Matney *et al.* 2011).

This chapter will present a case-study from modern-day Ziyaret Tepe, the Neo-Assyrian provincial capital of Tušhan, excavated by an international team from 1997 to 2014. Ziyaret Tepe is located on the right bank of the Tigris River in the Diyarbakır province of southeastern Turkey. Following the course of the river through the Upper Tigris River valley, Ziyaret Tepe is 14 km downstream (east) of the modern city of Bismil and 30 km upstream of the confluence of the

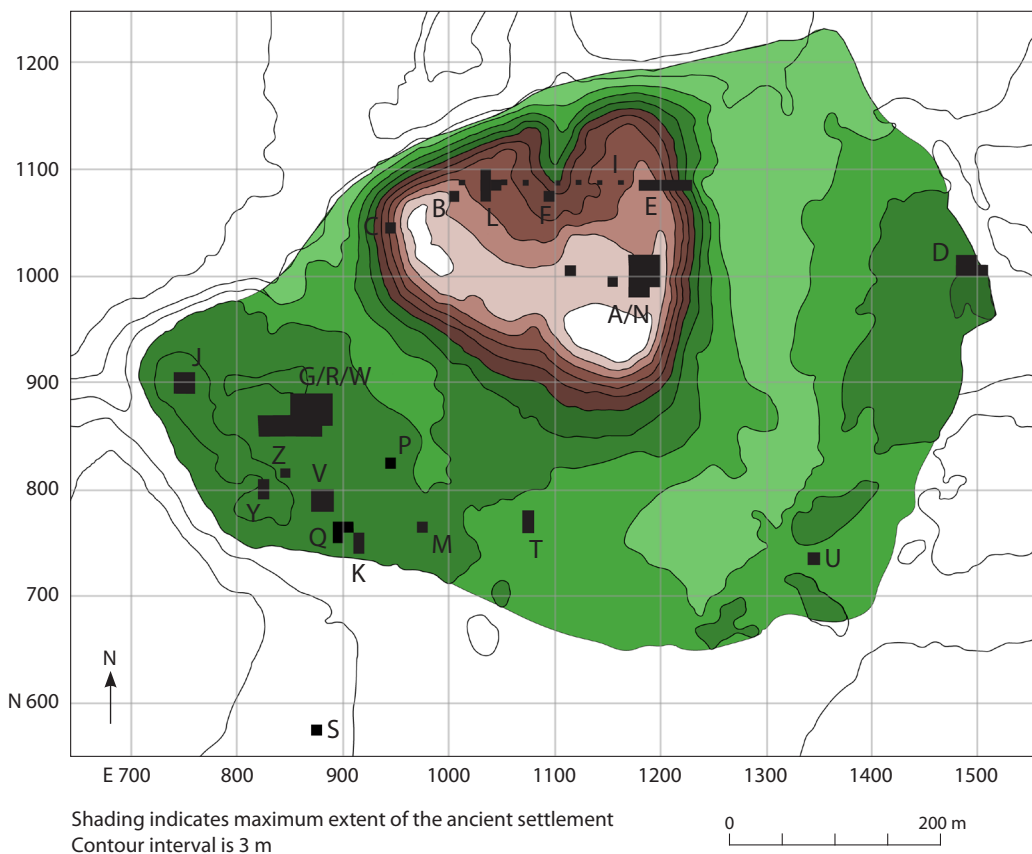


**Figure 15.1.** Location of Ziyaret Tepe.

Tigris with the Batman Su (Fig. 15.1). The ancient site is 32 ha in extent, with a 22 m high mound dominating its northern periphery. During the Neo-Assyrian period, the entire extent of the city appears to have been occupied. Over the course of eighteen field seasons, we excavated in twenty-two different operations

across the high mound and lower city (Fig. 15.2). These included both elite locations (palace, temple archives, fortification walls and gates, and wealthy housing) as well as commoner houses.

In earlier publications, we examined the zoo-archaeological and paleobotanical resources that



**Figure 15.2.** Topographic plan of Ziyaret Tepe.

were available to, and utilized by, inhabitants of Tušhan, focusing on the differences between the elite and commoner contexts at the site (Greenfield 2014; Greenfield & Rosenzweig 2016). Not surprisingly, the elite use-patterns for faunal and botanical resources conformed to a model characterizing an imperial economy: a standardized suite of cereal crops and herded domesticates which were centrally tended, collected, processed, and redistributed. The reliance of the imperial Assyrian economy on such staples is well-attested both archaeologically and in contemporary cuneiform texts. Likewise, the commoner households also relied heavily on this imperially driven economy, but as we shall discuss below, they also supplemented their household economies with animal resources which – while locally available – were apparently undesirable for elite consumption. This chapter explores more fully the evidence for this ‘peasant household economy’ and diet uncovered during our excavations at Neo-Assyrian Tušhan.

#### Textual sources of evidence for peasant household economy and diet

An exceptionally broad epigraphic literature on the general economy of the Neo-Assyrian empire now exists and it is well beyond the scope of this present study to attempt anything more than a few broad statements about the research that has been undertaken since Postgate’s challenge. Unsurprisingly, the bias of the cuneiform textual sources towards elite Assyrian concerns greatly limits their value in determining the daily dietary fare of commoners and this subject is rarely, if ever, the principal focus of the texts (Grayson 1993; Radner 1997; Yamada 2000; Galil 2007; Fales 2009–2010; van Buylaere 2010), although some information can be gleaned from private archives, e.g. those of Dūr-Katlimmu (Radner 2002) and Nimrud (Kinnier Wilson 1972). There is also limited information on prebend provisioning, most of which is for earlier or later periods (Capitanio 2004; Milano 2004; Sasson 2004). These show established systems of meat provisioning in many Iron Age Near Eastern societies, but once again the information is mostly directed towards what the elites received.

A small archive of tablets from Tušhan itself will serve to illustrate the variety and limitations of cuneiform sources as they relate to commoner household economies and diets. During the course of excavations at Tušhan, we recovered thirty-three cuneiform texts or fragments (ZTT 1–33) dating to the Neo-Assyrian occupation of the site, c. 882–611 BC (Parpola 2008; MacGinnis & Matney 2009; MacGinnis 2012). The majority of these texts (n=28) were found in a single

archive in the lower town, located in a large public structure which Parpola believes may have been part of a treasury to the Temple of Ishtar of Nineveh (Parpola 2008, 21). Several other texts were found in the palace located on the eastern high mound. There were no cuneiform tablets found in commoner household contexts at Tušhan.

The Ziyaret Tepe texts deal with the administration of goods, legal records of loans, lists of workers and letters regarding military and trade matters (Fig. 15.3). Six tablets (ZTT 1, 2/3, 10, 11, 23 and 24) were receipts for grain, including those for large quantities of grain received by the royal granaries. Seven hundred and sixty homers of grain were recorded in a single text. Likewise, seven tablets deal with grain distribution for consumption (ZTT 12–18) and one with the loan of grain (ZTT 4/5). These movements of grain took place on an institutional level, with the recipients being institutions at Tušhan, such as the royal harem or the *akītu* house (ZTT 12, ZTT 13), or bakers possibly employed at the temple (ZTT 14). Likewise, texts recording the distribution of materials to religious specialists (ZTT 25) and the collection of woven textiles from the palace (ZTT 33) also focus on the elite administrative functions.



**Figure 15.3.** Photograph of the obverse of cuneiform text ZTT 14, docket for receipt of grain by bakers, possibly employed by the temple.



In short, the Tušhan tablets explicate the minutiae of a standardized, redistributive economy of the imperial city, particularly amongst its elites, including the collection and distribution of barley, metal and textiles, while the quotidian life of commoners is only referenced tangentially. An understanding of how peasant household economies worked in terms of the daily management of the land, water, plant and animal resources, and the production of daily meals requires us to turn to archaeology, material culture, and the physical remains that comprise the primary dataset for commoner activities. Lacking specific written expositions on the household economies of commoners within the cities, towns and villages across the empire, we cannot rely on cuneiform texts alone.

### **Zooarchaeological data on commoner households from Tušhan**

Like most modern archaeological excavations, the Ziyaret Tepe archaeological project routinely conducted systematic sampling and collection of animal bones as a vital source of information on the imperial economy, agricultural, and management practices. The details of our zooarchaeological sample collection, processing, and analytical protocols was the subject of a doctoral dissertation (Greenfield 2014); the reader is directed to this work for a discussion of our methodology. Broadly, a sample of primary contexts – floors, streets, surfaces, pits, hearths and other features, as well as a layer of earth directly above the floors (our ‘suprafloor’) – were dry sieved. An extensive program of flotation using a Shiraf-style flotation tank was also undertaken for recovery of paleobotanical remains and smaller animal bone fragments. Animal bones were ubiquitous during the excavations and were present in nearly all Neo-Assyrian contexts excavated at the site.

The combined faunal assemblage from all the primary Assyrian contexts excavated at Ziyaret Tepe was 10,643 (NISP) specimens, a sample of which is analysed below. Each specimen was identified to the species, or a higher taxonomic category, and element (individual bone within the body) when possible. Mammalian size categories (i.e., small, medium and large) were used for generalized designations when a more specific identification was not possible. Categories of identification included taxon, state of domestication, element, part and face of element, age, sex, fracture patterns, butchering, cultural modification, etc., for each complete element when possible.

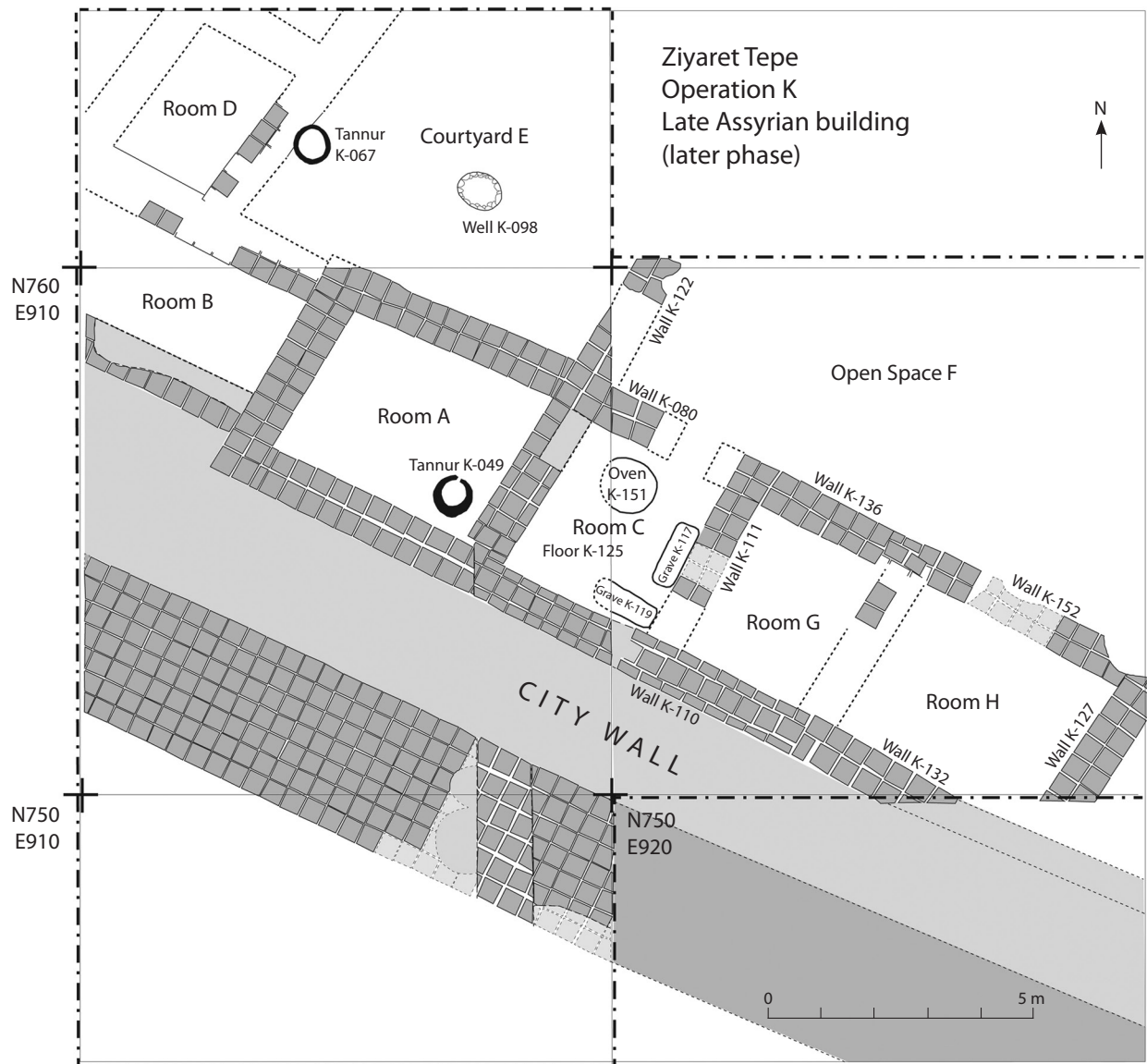
The technique chosen for the quantification of the data was Number of Identified Specimens (NISP; see Grayson 1984). This technique is the most

appropriate measure of abundance for this large sample since it quantifies each unarticulated fragment as a separate individual. It is particularly useful in urban settings and assemblages (Maltby 1979; Grayson 1984; O’Connor 2000; Lyman 2008, 27–8, 214; Reitz & Wing 2008). All NISP counts for the combined and individual body portions are corrected in order to equalize skeletal representation of different species where the number of elements may differ. Wild taxa were separated from domestic on the basis of a combination of metrics (von den Driesch 1976; cf. Walker 1985) including thickness of bone and development of muscle insertion points (cf. Stampfli 1963; Greenfield 1986).

### *Archaeological contexts*

In this section, we will present a brief overview of the archaeological results from five operations at Ziyaret Tepe (Fig. 15.2); the reader is directed to our extensive preliminary publication series for details of the finds from each area (from *Anatolica* see Matney *et al.* 2002; Matney *et al.* 2003; Matney & Rainville 2005; Matney *et al.* 2007; Matney *et al.* 2009; Matney *et al.* 2011; Matney *et al.* 2015; additional reports are found in *Kazi Sonuçları Toplantısı*). Of the five operations, only one (A/N) is located on the high mound; the other four are found within the broad lower city. Operation A/N was a major monumental structure on the eastern high mound that we have nicknamed ‘the Bronze Palace’. Detailed discussion of the Bronze Palace has already been published and does not need to be repeated here (Matney *et al.* 2009, 38–51; Matney *et al.* 2011, 69–83; Matney *et al.* 2015, 127–32). The palace was a monumental mudbrick building with baked brick pavements, elaborate plaster wall paintings, a moveable hearth in the throne room, and five cremation burials filled with metalwork, especially bronze, precious and semi-precious stones, ivory and stone artifacts, and high-status ceramics. It is here that the Neo-Assyrian governor of Tušhan would have resided (see Roaf in Matney *et al.* 2002, 49–51). Operation G recovered a large private residence with thick mudbrick walls, elaborate pebbled mosaic floors and surrounding rooms enclosing a floorplan of roughly 960 sq. m. While the building had been abandoned and revealed few high-status goods during excavation, its location adjacent to the temple treasury argues for its elite status (Matney *et al.* 2002, 69–70; Matney *et al.* 2003, 187–91; Matney & Rainville 2005, 27–31; Matney *et al.* 2009, 57–61).

Operation K was excavated in the southernmost region of the site adjacent to the lower town city wall. Here our excavations recovered the partial remains of six domestic rooms and a large courtyard over an area



**Figure 15.4.** Plan of the Late Assyrian architectural remains from Operation K in its later level of occupation.

of roughly 200 sq. m that appears to be a commoner household based on the artefactual and architectural evidence (Fig. 15.4). We recovered domestic ovens, a well and domestic material, suggesting that food preparation and processing took place here (Matney & Rainville 2005, 31–5; Greenfield *et al.* 2013; Wicke & Greenfield 2013; Matney *et al.* 2015, 132–5).

Also in the lower town, Operation M was excavated over a more limited area of 50 sq. m representing parts of three rooms of a mudbrick structure and an exterior cobbled surface (Matney *et al.* 2015, 139–40, fig. 9). The floors of the building were made of compacted mud and were generally clean of finds. This area produced two intramural graves below the floor

levels. One of those burials (M-134), an adult male, was well-apportioned with rich grave goods including two cylinder seals, stone and iron pendants, blades, earrings, rings, fibulae and nearly 50 beads, including some of carnelian and faience (Matney forthcoming). The grave stands in contrast to the material remains found elsewhere in the Operation M residence (Matney & Rainville 2005, 31–5; Greenfield *et al.* 2013; Wicke & Greenfield 2013; Matney *et al.* 2015, 132–5).

Finally, Operation U was excavated in 2011 over an area of 100 sq. m including parts of five rooms of a well-built mudbrick structure to the east of a cobbled street (Matney *et al.* 2015, 145–6, figs. 14–15). Interior floors were mostly made of compacted mud

while one of the rooms had a compressed grey clay floor containing masses of charcoal, ceramics, broken mudbricks and animal bones. Of particular interest here was a substantial corpus of zooarchaeological remains found on a street surface. The street was covered in animal bones that had themselves been overlain by a thick band of heavy brown clay as a foundation prior to the construction of a later street. The mass of animal bones on the street may be indicative of animal processing and/or public consumption outside of private dwellings. The architecture of the Operation U building appears more substantial than that of Operation K or M, and its location as a clearly free-standing structure (Matney *et al.* 2011, 94, figs. 18–19; Matney *et al.* 2015, 143–7) both suggest an elite residence. However, the lack of luxury items found within our excavation does not preclude viewing the Operation U building as representing a ‘middle ground’ status between the rich buildings of A/N and G and the poorer buildings of K and M. In sum, we posit a three-tiered social hierarchy at Neo-Assyrian Tušhan based on a combination of the building’s location within the city plan, the size and quality of the architectural construction, and the presence and abundance of expensive materials or items of high craftsmanship. Buildings A/N and G are elite, building K is commoner, and buildings U and M are intermediate based solely on archaeological criteria. Below we evaluate this scheme through a detailed analysis of the zooarchaeological remains found at the site.

Note that below we refer to the buildings under evaluation simply by letter designations (A/N, G, K, M and U); the reader is reminded that these letters are, more accurately, understood as the designation for operations, always multi-phase, and often multi-period. Their use here is as shorthand for the primary Neo-Assyrian building found in each operation simply for clarity of exposition.

### Model building: assumptions about the status of food sources

In this section, we present a model for examining ‘status’ based on the zooarchaeological evidence from Neo-Assyrian Tušhan. Differential access to food resources is considered to be a function of status in early states and empires. It is commonly assumed that individuals with elite status would have access to better quality meats than others within a community (Reitz 1987; Zeder 1991; Grant 2002; Lapham 2004; deFrance 2009; Greenfield 2014; 2015). Consequently, the faunal material recovered from elite and commoner buildings is expected to be different in kind and number. For the purpose of addressing the issue of status, a predictive model for the distribution of faunal remains in elite and commoner residences at Tušhan was developed in Table 15.1 (see also Greenfield 2014 and 2015). In this article, we apply the model to the excavated evidence from the five buildings at Tušhan described above.

Inherent within this model is a series of assumptions about what constitutes low and high-status food sources in the Neo-Assyrian city. We start from the premise that neither domestic nor wild foods are exclusive to a status group at the site. In a provincial capital of the empire such as Tušhan, it is highly likely that all inhabitants shared to some degree in the distribution of state-controlled foodstuffs, including grains such as those discussed in the cuneiform texts from Ziyaret Tepe above, and large animal herds controlled by the palace and temple. The large majority (>90 per cent) of zooarchaeological remains from the Neo-Assyrian period were from domesticated species, as discussed below. Thus, the presence of domesticated species in the diet alone is insufficient to determine status.

One indicator of status in ancient complex societies are the cuts of meat that were procured, prepared, and consumed (Grant 2002; Capitanio 2004; Parpola

**Table 15.1.** *Model of expectations for typical patterns of faunal distributions within elite and commoner residences.*

Elite residence	Commoner residence
High status species – large wild and domestic species, exotic wild species	High frequency of small, low status wild and domestic animals
High frequency of heavy meat-bearing elements from domestic and wild animals (good cuts)	High frequency of low meat bearing elements (poor cuts)
Younger aged animals of all species	Older aged individuals of domestic species and wild (if wild is distributed centrally), or younger wild species if hunted
Evidence of conspicuous consumption with significant numbers of exotic species and/or, feasting including display of exotics for show, not only for consumption	Utilitarian use of carcasses (all elements used and/or consumed); low frequency/no evidence of conspicuous consumption associated with status
High frequency of exotic animals	Low frequency/no evidence of exotic animals
Expensive domestic animals (cattle)	Cheap domestic animals (pig)
Expensive body parts of all animals	Expensive body parts of cheap domestic animals



**Table 15.2.** *Utility index of combined body portions and associated element categories for high, medium and low valued meat.*

Quality and value of body portion	Body portion	Elements included
High ('good cuts')	Anterior-Proximal (upper front limb)	scapula, humerus
	Posterior-Proximal (upper hind limb)	pelvis, femur, patella
Medium ('bad cuts')	Anterior-Distal (lower front limb)	radius, ulna
	Posterior-Distal (lower back limb)	tibia, fibula
	Thorax	vertebrae, sternum, clavicle, hyoid, ribs
Low ('ugly cuts')	Cranial	mandible, maxilla
	Distal	metapodials, phalanges, sesamoids, carpals, tarsals

2004; Curet & Pestle 2010; Frame & Waerzeggers 2011; Greenfield 2015). The analysis of body portions of animals thus provides information regarding species taboos, preferences, and wealth displays such as conspicuous consumption. The presence of significant quantities of meat-bearing elements or body portions in a household can often suggest a higher status, at least for some of the inhabitants of a building. The distribution of body portions across a site can inform us about both consumption behaviour and differential access to preferred body portions. Elite diets, in general, are based on a preference for highly desired high-fat meat. In most cultures, this includes the fat-bearing elements (i.e., the proximal end of limbs). It is assumed that the commoners in a society generally had access to the less meaty body portions (i.e., the distal ends of limbs, crania, and portions of the thorax). For ease of analysis in this study, portions of animals are grouped into highly desired, heavy meat-bearing portions (good cuts); less desired, less meat heavy portions (bad cuts) and low desired portions with little or no meat (ugly cuts) as seen in Table 15.2.

A second indicator of status is access to desired species of animal. Determining the 'status' ascribed to an animal species is difficult as food is as much an unwritten cultural preference as it is a cold economic or biological fact. The choice to consume – or to refuse to consume – any species is an exceedingly complex issue. Animals that fell under the jurisdiction of the palace and the temple, such as sheep and goats, were made available in part through complicated redistribution processes. In terms of the wild animals consumed at the site, part of the value of animals as food sources comes from their location in the surrounding landscape. Common wild animals that were in close or direct proximity to Tušhan like turtles, birds and waterfowl (seasonally), hares, fish and possibly dogs probably had low status value assigned to them. Species such as gazelles (*Gazella gazella*), red deer (*Cervus elaphus*), roe deer (*Capreolus capreolus*), fallow deer (*Dama dama*), boar (*Sus scrofa fer.*), wild goat (*Capra sp.*) and wild cattle (*Bos primigenius*) would have been present in the

landscape further afield, requiring greater resources to capture. Figure 15.5 and Table 15.3 provide the status rank and rationale used in this chapter for the wild animals found at Neo-Assyrian Tušhan.

Above we have established a clear set of guidelines for assessing the dietary status of the inhabitants of the five buildings under consideration at Ziyaret Tepe. By analysing the distribution and frequency of the cuts of domestic animals, as well as the distribution and frequency of the wild animals available to the inhabitants of Tušhan, we can determine whether the status of the animals consumed by the inhabitants of the five buildings fits with our reconstruction based on archaeological and other forms of material culture.

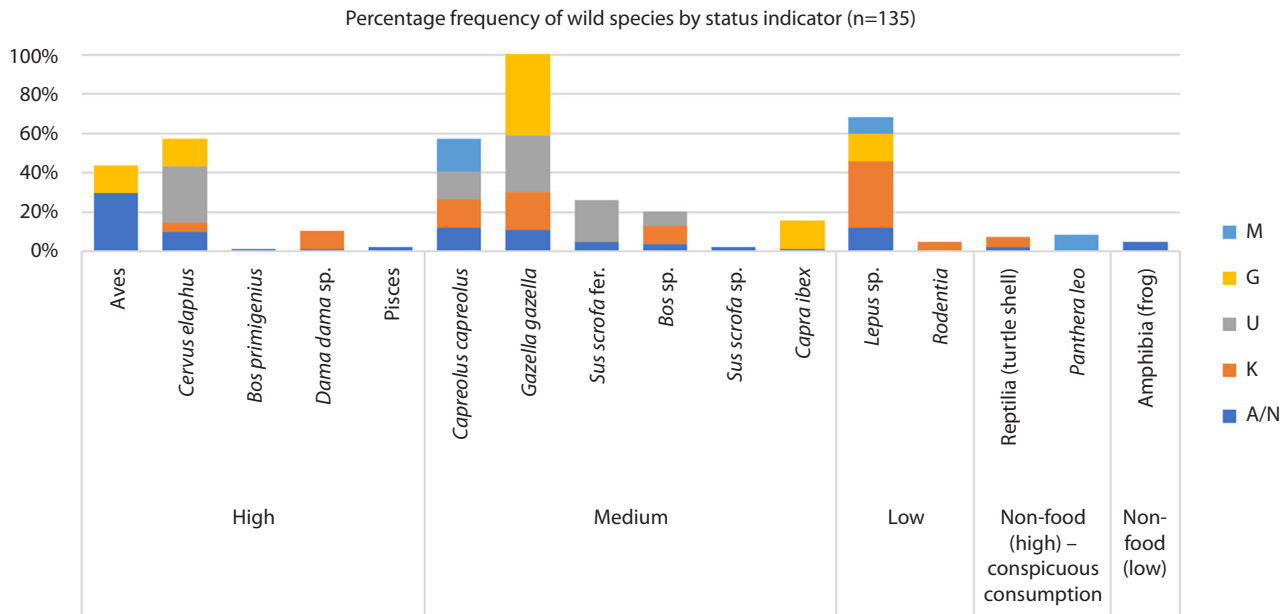
### Datasets: faunal consumption and disposal patterns

In order to observe patterns of domesticate and wild consumption, specimens from primary contexts were analysed to elucidate the spatial distribution of animal remains in both elite and commoner contexts. The total assemblage had a NISP of 7,518 specimens from buildings A/N, G, K, M and U. Included in this number were all species from primary contexts even when a designation of wild or domestic could not be assigned to each taxon. Figure 15.6 and Table 15.4 show the distribution of those individuals that could be definitively assigned to the general categories of 'domestic' or 'wild'. All unidentified specimens were removed in order to provide a more accurate picture of disposal patterns. Basic disposal patterns are evident: there is a relatively similar pattern of disposal for domestic and wild animals within and between each of the buildings. Within each building, the frequency of taxa ranges from 82 per cent domestic/18 per cent wild in Operation U to 96 per cent domestic/4 per cent wild in Operation G. As noted above, the large majority of animal remains represent domestic species (>90 per cent).

At Neo-Assyrian Tušhan, the high percentage of domesticates being consumed is not surprising

**Table 15.3.** Relative percentage frequencies of wild taxa within corrected wild populations in relation to implied status across Operations M, G, U, K and A/N (NISP 135). Only identified taxa are included.

Status	Taxa	A/N	K	U	G	M
High	Aves	29.63%	0.00%	0.00%	14.29%	0.00%
	<i>Cervus elaphus</i>	9.88%	4.76%	28.57%	14.29%	0.00%
	<i>Bos primigenius</i>	1.23%	0.00%	0.00%	0.00%	0.00%
	<i>Dama dama</i> sp.	1.23%	9.52%	0.00%	0.00%	0.00%
	Pisces	2.47%	0.00%	0.00%	0.00%	0.00%
Medium	<i>Capreolus capreolus</i>	12.35%	14.29%	14.29%	0.00%	16.67%
	<i>Gazella gazella</i>	11.11%	19.05%	28.57%	42.86%	66.67%
	<i>Sus scrofa</i> fer.	4.94%	0.00%	21.43%	0.00%	0.00%
	<i>Bos</i> sp.	3.70%	9.52%	7.14%	0.00%	0.00%
	<i>Sus scrofa</i> sp.	2.47%	0.00%	0.00%	0.00%	0.00%
	<i>Capra ibex</i>	1.23%	0.00%	0.00%	14.29%	0.00%
Low	<i>Lepus</i> sp.	12.35%	33.33%	0.00%	14.29%	8.33%
	Rodentia	0.00%	4.76%	0.00%	0.00%	0.00%
non food (high) – conspicuous consumption	Reptilia (turtle shell)	2.47%	4.76%	0.00%	0.00%	0.00%
	<i>Panthera leo</i>	0.00%	0.00%	0.00%	0.00%	8.33%
non-food (low)	Amphibia (frog)	4.94%	0.00%	0.00%	0.00%	0.00%



**Figure 15.5.** Histograms of relative percentage frequencies of wild taxa within corrected wild populations in relation to implied status across Operations M, G U, K and A/N (NISP 135). Only identified taxa are included.

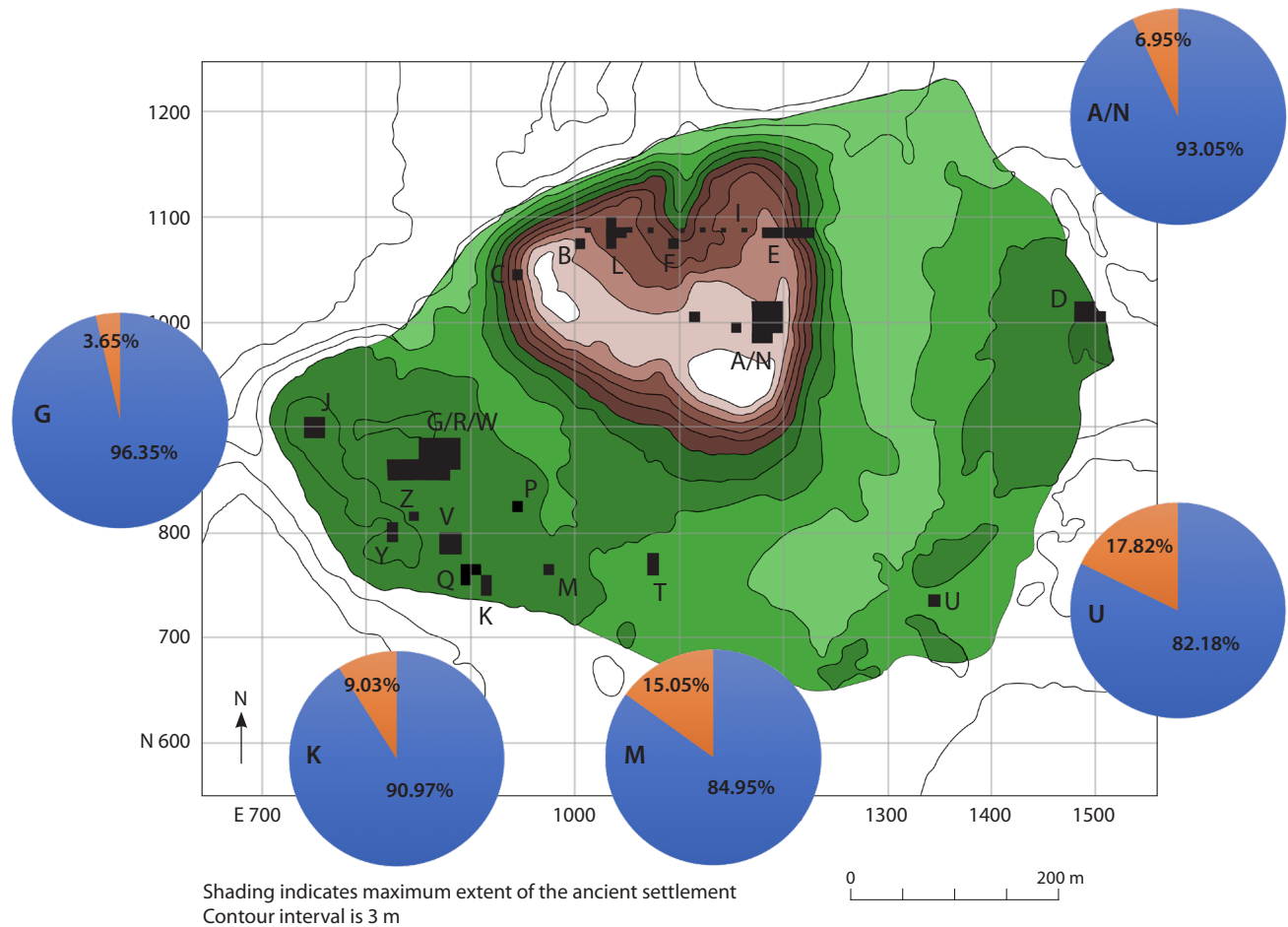
considering the heavy dependence on cattle, sheep, goat, and domestic pig for subsistence in this region for millennia, and the lack of significant change in the husbandry and species exploitation strategies over this timeframe (Zeder 1988; 1991; 1998; 2003; Wapnish & Hesse 1991; Hesse 1995; Wattenmaker 1998; Wilken 1999; Gilbert 2002; Bar-Oz 2004; Berthon

2011; Greenfield-Jongsma & Greenfield 2014). It is clear that the domestic:wild ratio is not important in discriminating between high and low status dietary practices as variation between all contexts is low.

In Figure 15.7 and Table 15.5 we break down the distribution and frequency of domesticates by building. The overall pattern shows that the distribution

**Table 15.4.** Relative percentage frequency of domestic versus wild taxa from within buildings A/N, G, K, M and U.

State of domestication	A/N		G		K		M		U	
	NISP	%	NISP	%	NISP	%	NISP	%	NISP	%
Domestic	884	93.05%	211	96.35%	252	90.97%	79	84.95%	83	82.18%
Wild	66	6.95%	8	3.65%	25	9.03%	14	15.05%	18	17.82%
Total	950	100.00%	219	100.00%	277	100.00%	93	100.00%	101	100.00%


**Figure 15.6.** Relative frequencies of domestic and wild taxa from individual buildings. This figure shows us that more wild animals were being consumed in contexts K, M and U, than in the contexts A/N and G.

and frequency of domestic species is fairly uniform across the site. Percentages of the main dietary staples: sheep/goats, cattle, and pigs vary somewhat but are ubiquitous at all households. Only U shows a significant variant in a higher than expected frequency of pigs at the expense of sheep/goats. The distribution of domestic species appears to be a poor indicator of status when simple bone counts by species are analysed. When we turn to the elite buildings A/N and G there does not appear to be drastic changes from the other buildings; sheep/goats have the highest

frequency in A/N but only by a small margin from K which is a commoner residence. In addition to the expected domesticated species, there is evidence of domesticated chicken (*Gallus gallus*) in A/N that is not present in any other building.

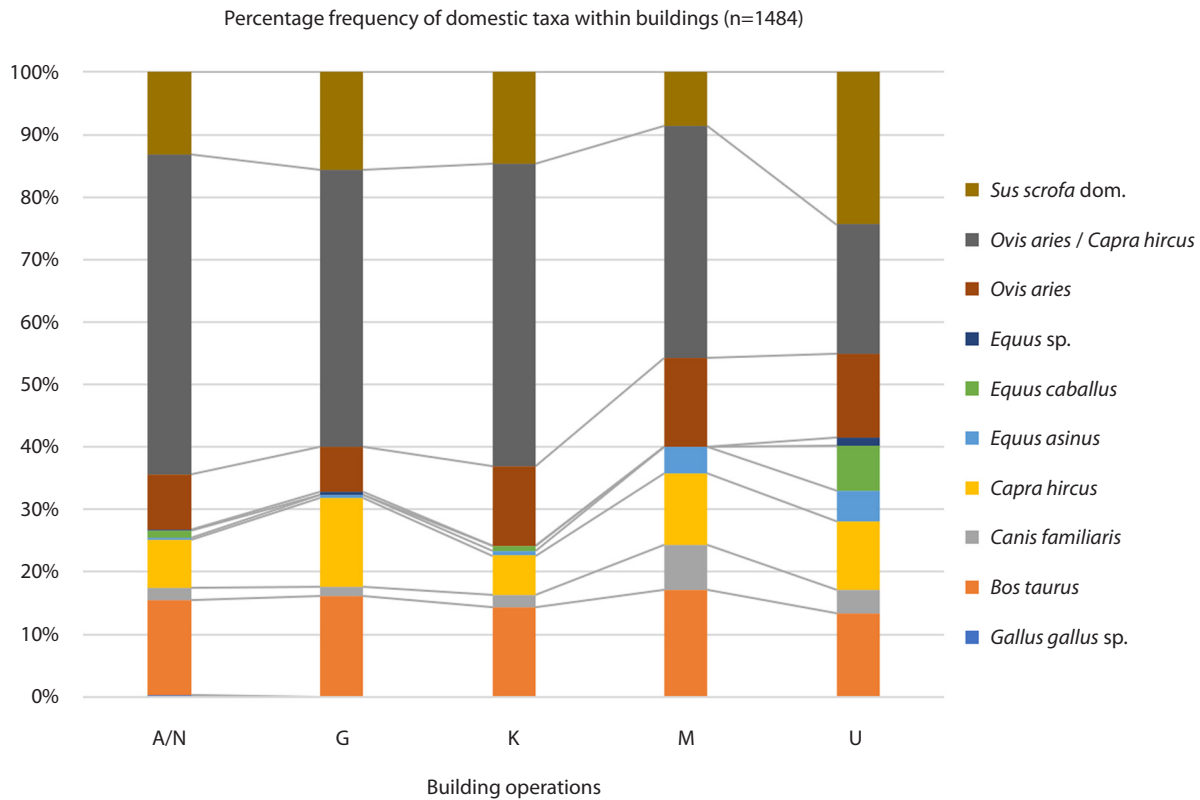
In the following sections, we will turn first to an analysis of distribution and frequencies of different cuts or portions of domesticated animals. As noted earlier, we assume that higher status residences would have access to better cuts of meat from domestic animals. Due to space constraints, we will limit our discussion of

domesticated body parts to sheep/goats (*Ovis/Capra*), as these are the most plentiful zooarchaeological remains at the site. Second, we will look at the distribution and frequencies of wild animals. In this case, we assume

that within the category of wild animal sources, some would have been considered of high status based on the distance and difficulty in procuring them, as well as cultural preferences.

**Table 15.5.** Relative frequency distributions for domestic taxa. Unidentified specimens, small and large ungulates were not calculated in these taxonomic distributions.

	A/N	G	K	M	U
Domestic Taxa (NISP=1484)	% within operation	% within operation	% within operation	% within operation	% within operation
<i>Gallus gallus</i> sp.	0.23%	0.00%	0.00%	0.00%	0.00%
<i>Bos taurus</i>	15.17%	16.19%	14.29%	17.14%	13.41%
<i>Canis familiaris</i>	1.95%	1.43%	1.98%	7.14%	3.66%
<i>Capra hircus</i>	7.70%	14.29%	6.35%	11.43%	10.98%
<i>Equus asinus</i>	0.34%	0.48%	0.79%	4.29%	4.88%
<i>Equus caballus</i>	1.15%	0.00%	0.79%	0.00%	7.32%
<i>Equus</i> sp.	0.23%	0.48%	0.00%	0.00%	1.22%
<i>Ovis aries</i>	8.74%	7.14%	12.70%	14.29%	13.41%
<i>Ovis aries/Capra hircus</i>	51.15%	44.29%	48.41%	37.14%	20.73%
<i>Sus scrofa</i> dom.	13.10%	15.71%	14.68%	8.57%	24.39%
Total	100.00%	100.00%	100.00%	100.00%	100.00%



**Figure 15.7.** Stacked histogram of the combined domestic taxonomic frequencies for each Operation. Data are based on frequencies from within each individual building. Note that domestic Aves (*Gallus gallus*) was less than 1 per cent (.23 per cent n=2) in Operation A/N and not visible in the stacked histogram.

### Body portions of domesticated sheep/goat (*Ovis/ Capra*) and status

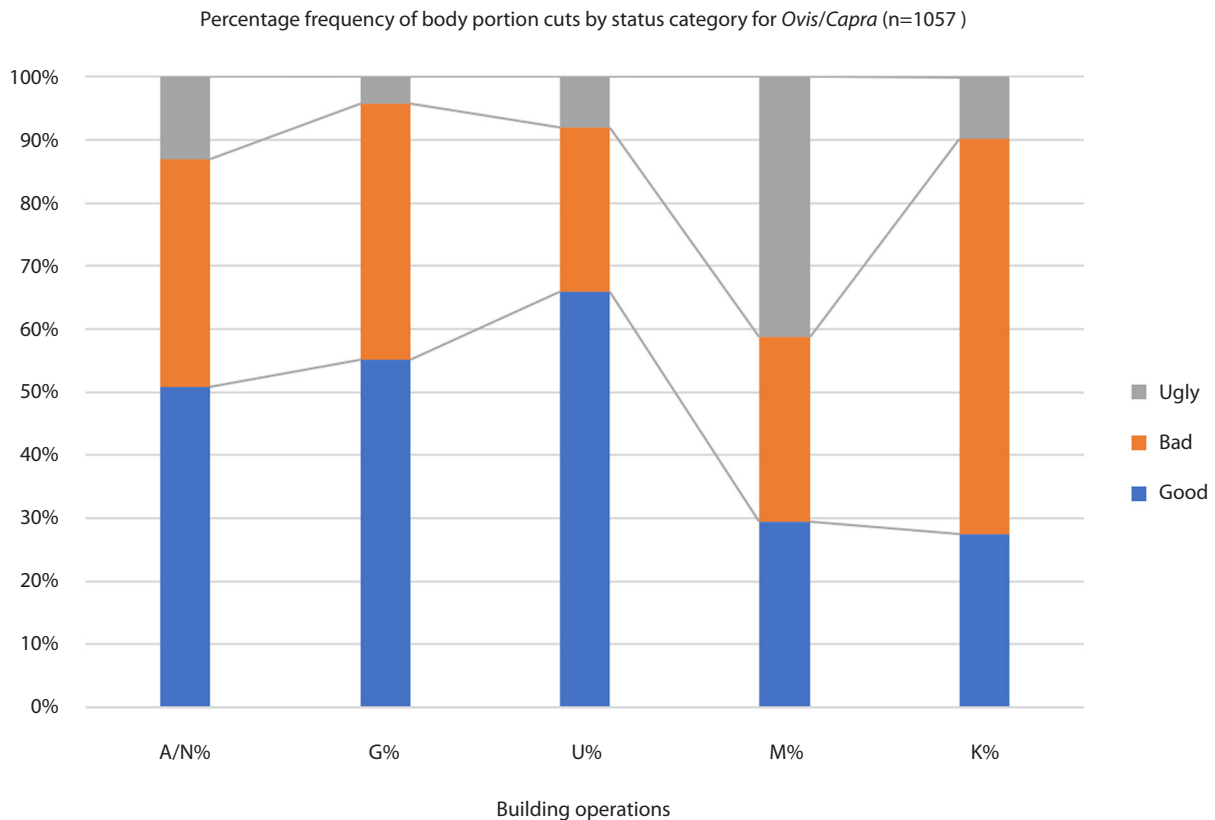
One key factor in determining the status of the consumer households at Neo-Assyrian Tušhan is the distribution and frequency of the body portions consumed within each of the buildings. Our data show that while the overall proportion of the domesticates was somewhat homogeneous across all buildings, each had a unique distribution and frequency of body portion consumption which is at variance with the others (Fig. 15.8 and Table 15.6). This suggests that after the animals were butchered, the distribution of portions was controlled and used to assert status, prestige and one's social standing within the community based on access to a costly or

valued commodity (Costin & Earle 1989; Grant 2002; deFrance 2009; Greenfield 2014).

Each building has a somewhat unique pattern of consumption of sheep/goat body parts; these can be summarized as follows. **K** shows the *Ovis/Capra* body portion distribution heavily favors the bad meat portions with over half of its assemblage frequency coming from this category. The consumption profile for the combined *Ovis/Capra* taxon is different than in the other buildings in many ways. The inhabitants of **K** were consuming just over a quarter of its total from good, heavy meat-bearing body portions – (i.e. Anterior-Proximal elements) and bad/ugly meat weight portions (Cranial and Anterior-Distal) totaling roughly three-quarters of the assemblage which makes the consumption pattern representative of a

**Table 15.6.** Percentage frequencies of body portion categories of good, bad and ugly for *Ovis/Capra*.

<i>Ovis/Capra</i>		A/N %	G%	U%	M%	K%
Cuts	Good	50.91%	55.21%	65.95%	29.41%	27.53%
	Bad	36.06%	40.54%	25.97%	29.41%	62.58%
	Ugly	13.03%	4.26%	8.09%	41.18%	9.88%
Total		100.00%	100.00%	100.00%	100.00%	100.00%



**Figure 15.8.** Stacked bar graph of portions for *Ovis/Capra* by building operations (A/N, G, U, M and K).



very low status commoner diet. **M** has a consumption profile for the combined *Ovis/Capra* taxon that indicates the equal presence of the good and bad body portions and an almost doubled frequency of ugly body portions. While all of the portions appear to be utilized to a large extent, there is a clear consumption pattern geared towards the worst (and cheapest) body parts of the animal. This consumption pattern is similar to **K** and different than **A/N** and **U** where high-status body portions of *Ovis/Capra* prevail. They are consuming a higher frequency of a low status body portions followed by less frequent but high-status body portions. **U** has an *Ovis/Capra* consumption profile that shows a clear preference (i.e. largest frequency) for good cuts associated with high status (heavy meat bearing body portions: anterior-proximal, posterior-proximal and anterior-distal) consumption patterns. Of the three domestic taxa from this building (cattle, sheep/goat and pig) it is the *Ovis/Capra* (sheep/goat) in particular which shows the strongest example of body portions as a status marker. When we look to the other clearly defined elite buildings, **A/N** and **G**, there are some surprises in their consumption patterns. **G** maintains the second highest frequency of good body portions within the building which is to be expected, however there is a significant presence of bad cuts and when combined with the very low percentage of ugly cuts (expected), the bad cuts nearly reach 50 per cent of the consumption pattern. **A/N**, like **G** and **U** maintains a high frequency of high status (good) body portions in the diet, followed by bad and ugly portions at somewhat higher percentages than expected.

### The distribution of wild resources

A second key factor in determining status through dietary practices is the distribution and frequency of wild animals in the domestic households of Neo-Assyrian Tušhan. As noted above, our working assumption is that different wild species held differentially perceived values for the inhabitants as food sources. The relative frequency distributions for wild taxa are shown in Figure 15.9 and Table 15.7.

Importantly, the distributions and frequencies of wild species is quite varied. Unlike the domesticates, there is no standardized pattern of disposal for the wild species. Rather, each building has a unique variety and frequencies of wild animals.

In looking at those species that we consider to be low-status food sources, such as reptiles and *Lepus sp.* (hare), we see that they form a very high percentage of the animal remains in **K** where hares are the dominant food source at 33 per cent and where reptiles are also

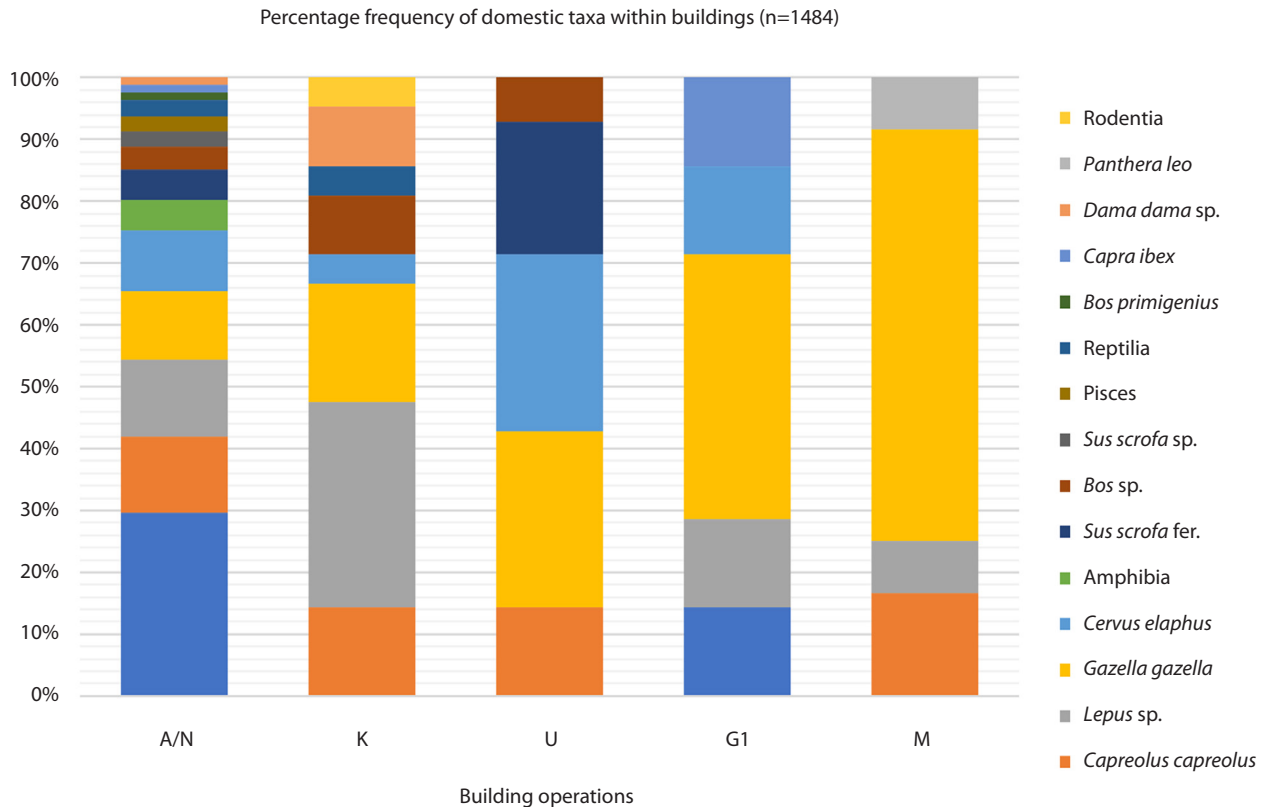
present. The latter are absent altogether in **M** and **U**, while hares are found in a low percentage (8 per cent) in **M** and are unrepresented in **U**. The observation that over 42 per cent of the animal species in **K** are from the lowest status category is in stark contrast with all the other buildings under consideration here. In terms of the consumption of low status food sources in **A/N**, the only significant species to fall into this category is hare with a surprisingly high frequency of 12 per cent. While there is a small frequency for amphibians (frog) and reptiles (tortoise), it can be assumed these were not necessarily consumed. Fish on the other hand could in fact be considered a high-status food aside from the close proximity to the river. It is interesting to note that **G** has only hare as evidence of any low-status food resource and at a slightly higher frequency than found in **A/N**. Again, this is a surprise and not expected from an elite diet.

In terms of the moderate status species, *Gazella gazella* (gazelle) forms a significant percentage of the diets of the inhabitants of **K**, **M** and **U**, but this species represents by far the highest frequency in building **M** with 67 per cent of the wild population, compared to **G** with 43 per cent, **U** with 29 per cent and **K** with 19 per cent. *Capreolus capreolus* (roe deer), another species of moderate status, is present in buildings **K**, **M** and **U** with a frequency range between 14 and 17 per cent with slightly lower values in **A/N**; roe deer is notably absent from **G**. *Capra ibex* (wild goat) is moderately frequent in **G** with 14 per cent from the building followed by just over 1 per cent in **A/N**. It is possible that this species was a more desired moderate status animal in that it would have been located at a further distance from Ziyaret Tepe than either roe deer and gazelle and, thus, possibly scarcer and only accessible to the elite class.

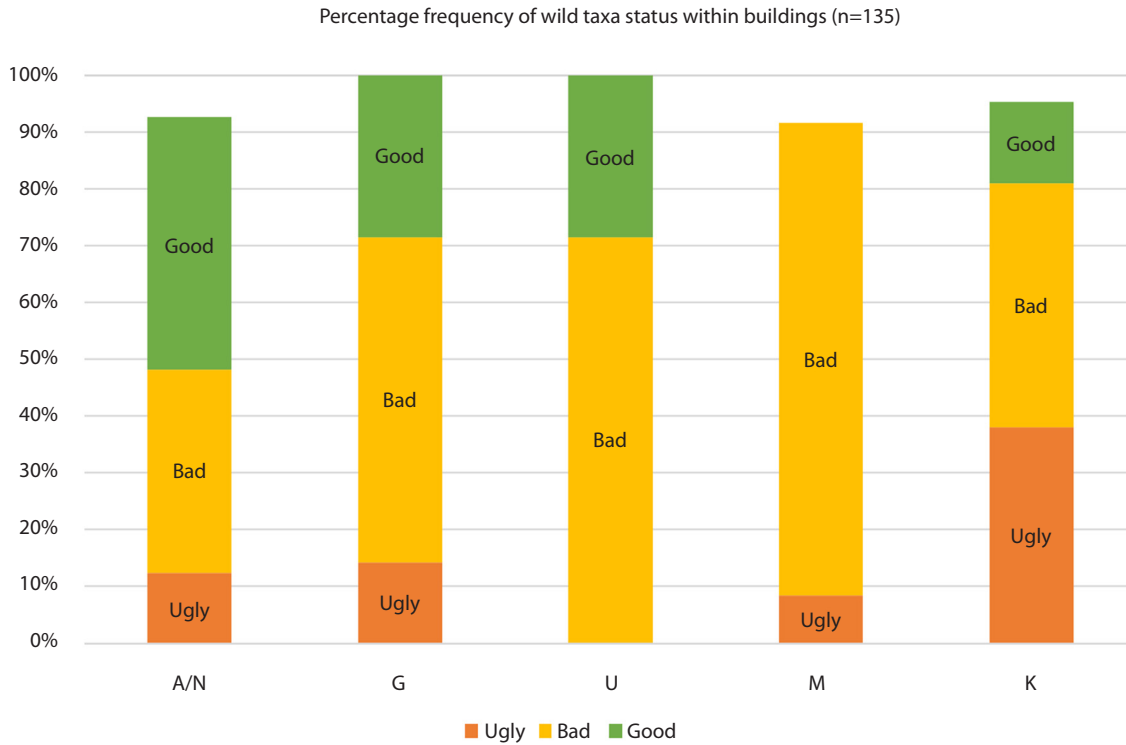
Finally, the distribution of high-status markers is also uneven. In **U**, *Cervus elaphus* (red deer) is the dominant wild species at 29 per cent while **K** has a frequency under 5 per cent and **M** has no evidence of red deer. Both **A/N** and **G** have between a 10–15 per cent frequency for this animal in their assemblages. Significant also is the presence of two wild species that are regarded as higher status: *Panthera leo* (lion) and *Sus scrofa fer.* (wild boar). The former is certainly regarded as an elite animal within the Assyrian world, and evidence of lions at Tušhan is very rare. **M** has evidence (8 per cent) of the wild remains as lion. Wild boar were hunted animals that are not necessarily found in proximity to the city but would have been available in the swampy areas near the river. It takes time and considerable risk to locate and acquire wild boar, and yet this species is less than 5 per cent of the assemblage from **A/N** and is not present in **G**. Perhaps boar in this case has been replaced by *Cervus elaphus*

**Table 15.7.** Relative frequency distributions for wild taxa in commoner buildings (Operations K, M and U) and elite buildings (A/N and G1). Unidentified specimens, small and ungulates were not calculated in these taxonomic distributions. Red is elite status and green is lower status animals.

Taxa (NISP 135)	A/N% of wild (NISP 81)	G% of wild (NISP 7)	K% of wild (NISP 21)	M% of wild (NISP 12)	U% of wild (NISP 14)
Amphibia	4.94%	0.00%	0.00%	0.00%	0.00%
Aves	29.63%	14.29%	0.00%	0.00%	0.00%
<i>Bos primigenius</i>	1.23%	0.00%	0.00%	0.00%	0.00%
<i>Bos</i> sp.	3.70%	0.00%	9.52%	0.00%	7.14%
<i>Capra ibex</i>	1.23%	14.29%	0.00%	0.00%	0.00%
<i>Capreolus capreolus</i>	12.35%	0.00%	14.29%	16.67%	14.29%
<i>Cervus elaphus</i>	9.88%	14.29%	4.76%	0.00%	28.57%
<i>Dama dama</i> sp.	1.23%	0.00%	9.52%	0.00%	0.00%
<i>Gazella gazella</i>	11.11%	42.86%	19.05%	66.67%	28.57%
<i>Lepus</i> sp.	12.35%	14.29%	33.33%	8.33%	0.00%
<i>Panthera leo</i>	0.00%	0.00%	0.00%	8.33%	0.00%
Rodentia	0.00%	0.00%	4.76%	0.00%	0.00%
<i>Sus scrofa</i> fer.	4.94%	0.00%	0.00%	0.00%	21.43%
<i>Sus scrofa</i> sp.	2.47%	0.00%	0.00%	0.00%	0.00%
Pisces sp.	2.47%	0.00%	0.00%	0.00%	0.00%
Reptilia	2.47%	0.00%	4.76%	0.00%	0.00%
Total	100.00%	100.00%	100.00%	100.00%	100.00%



**Figure 15.9.** Relative percentage frequencies of wild taxa within corrected wild populations of each building (NISP 135). Only identified taxa are included.



**Figure 15.10.** Stacked histogram of percentage frequencies of good, bad, and ugly wild species within each Operation (buildings A/N, G, U, M and K). Totals do not add up to 100 per cent because reptile, amphibian and lion specimens were taken out of the equation due to the assumption that they were not for regular consumption and hence did not have an implied status as food.

as the highest status animal marker in these two elite buildings. U has boar present in its corpus with a significant frequency (22 per cent) while K and M do not have any evidence for wild boar. Fish are present, as mentioned above, only in A/N and could be considered an elite marker in Assyrian society. Evidence of fish remains being used as sacrifices to Mesopotamian gods is certainly evident to the south in the Assyrian heartland and beyond. Additionally, only wild birds (*Aves* sp.) were found within elite contexts (A/N and G) and are thought to be more of a conspicuous consumption species used for augury (see Greenfield 2014). There was a high presence especially in A/N with over one-quarter of the assemblage represented by wild birds and a moderate 14 per cent within G.

In sum, while the NISP of these wild species is small, it is clear consumption practices differed markedly between the inhabitants of K, M and U and that it would be unwise to lump all three of these areas together as commoner (Fig. 15.10). K clearly has the lowest-status diet while U, with half of its wild animal resources represented by two higher-status markers (red deer and wild boar) appears to represent a different subsistence strategy. It is U that is most similar in

terms of high-status marker wild animals with buildings A/N and G. Not surprisingly A/N has the highest frequency of high-status animals which include species for consumption and those for display (i.e. conspicuous consumption). G is most similar to U in that they have equal amounts of high-status specimens but it is G that actually has a combination of both medium and low status animals when it was expected that this would be the profile rather for U since it is assumed to be of lower status than G.

#### Discussion: elite and commoner diets

As in other cities within the Assyrian empire, there is a clear distinction in terms of status between the elites and commoners. One venue for status display at Tušhan was through food, particularly animal products. In this discussion of the diets of the commoners at Neo-Assyrian Tušhan, some general patterns were observed. First, we demonstrated that in terms of the consumption of domesticated animals across the site, all households had similar access to the same principal species. However, we also showed that there was a disproportionate distribution of certain

body portions for domestic animals, controlled by a centralized distribution program. Second, differential distribution and consumption of wild species indicates the presence of social inequality between buildings. Each building displays a proportionately small, but varied consumption of wild taxa. The differentiating factor for observing the effect of status is in terms of which wild taxa are present (or not). While the larger wild species and small exotic birds are evidence for status display and conspicuous consumption by the elites, small wild animals (excluding birds) appear to have supplemented the commoner diet.

The frequencies of wild species within each building's wild population yields an accurate picture of which species were differentially exploited over others within each specific building. The private domestic residences (K and M) have no wild pig present. This pattern is a possible indicator that these animals are not hunted by the inhabitants of this building unlike A/N and especially U where there is ample evidence for wild pigs. It appears that the large wild mammals are almost exclusively exploited by the residents of A/N, G and U, potentially hunted by just the elite population for status and possibly larger communal meals or feasts (see Greenfield 2014). There is also a relatively high presence of hare in most buildings, especially in K, except in U, suggesting that this might be a common food source for the entire settlement easily taken from the surrounding fields and gardens.

Turning in conclusion to our initial expectations, we had expected to see that the inhabitants of the A/N palace and the large, well-apportioned residence in G would demonstrate more elite dietary habits. This is borne out in the better cuts of domestic animals and the presence of larger wild game found in these buildings, and in the exotic birds found in the palace. Likewise, our expectation that K would have the humblest fare is shown in the poor cuts of domesticated sheep/goat, as well as a heavy use of low-status wild animals. M and U remain problematic. M has a very high rate of 'ugly' cuts of meat and a preponderance of moderate status gazelle in its wild animal bone assemblage, suggesting that it is a commoner house. However, it also produced a rich grave and a lion bone which are not in keeping with the general dietary pattern. U has a unique pattern with a heavy reliance on both domesticated pig, and on wild pig. It also has a high proportion of the best cuts of sheep/goat (even higher than A/N and G), suggesting an elite occupation. It would seem prudent given current evidence to suggest a three-tier pattern of household status with A/N, G and U representing the elites, M as a middle class, and K as the lowest commoner class represented in the domestic households at Neo-Assyrian Tušhan.

## References

- Bar-Oz, G., 2004. *Epipalaeolithic Subsistence Strategies in the Levant: A Zooarchaeological Perspective*, eds. C.C. Lamberg-Karlovsky, D. Pilbeam & O. Bar-Yosef. (American School of Prehistoric Research Monograph Series.) Boston: Brill.
- Becker, C., 2008. The faunal remains from Dur-Katlimmu – insights into the diet of the Assyrians, in *Archaeozoology of the Near East VIII. ETMO 49*, eds. E. Vila, L. Gourichon, A. Choyke & H. Buitenhuis. Lyon: Maison de l'Orient et de la Méditerranée, 561–80.
- Berthon, R., 2011. *Animal Exploitation in the Upper Tigris River Valley (Turkey) between the 3rd and the 1st Millennia*. PhD dissertation, unpublished. Kiel: Christian-Albrechts University.
- Capitania, P., 2004. Meat, prebends and rank: a short note on the distribution of sacrificial meat in Seleucid Uruk, in *Food and Identity: In the Ancient World*, eds. C. Grotanelli & L. Milano. (History of the Ancient Near East / Studies IX.) Padova: S.A.R.G.O.N. Editrice e Libreria, 257–67.
- Cavallo, C. & R. Maliepaard, 2002. The animal remains, in The Upper Tigris Archaeological Research Project (UTARP): a final report from the 1999 field season, by B.J. Parker, A. Creekmore, C. Cavallo, R. Maliepaard & R. Paine. *Anatolian Studies* 52, 56–9.
- Costin, C.L. & T.K. Earle, 1989. Status distinction and legitimation of power as reflected in changing patterns of consumption in late pre-Hispanic Peru. *American Antiquity* 54, 691–714.
- Curet, L.A. & W.J. Pestle, 2010. Identifying high-status foods in the archaeological record. *Journal of Anthropological Archaeology* 29(4), 413–31.
- Dalley, S.M. & J.N. Postgate, 1984. *Cuneiform Texts from Nimrud: The Tablets from Fort Shalmaneser III*. London: British School of Archaeology in Iraq.
- deFrance, S.D., 2009. Zooarchaeology in complex societies: political economy, status, and ideology. *Journal of Archaeological Research* 17, 105–68.
- Fales, F.M., 2009–2010. On Assyrian 'lower-stratum' families. *State Archives of Assyria Bulletin* XVIII, 163–86.
- Fales, F.M., 2010. Production and consumption at Dür-Katlimmu: a survey of the evidence, in *Dür-Katlimmu 2008 and Beyond*, ed. H. Kühne. (Studia Chaburensia 1.) Wiesbaden: Harrassowitz Verlag, 67–86.
- Fales, F.M. & M. Rigo, 2014. Everyday life and food practices in Assyrian military encampments, in *Paleonutrition and Food Practices in the Ancient Near East: Towards a Multidisciplinary Approach, Proceedings of the International Meeting Methods and Perspectives Applied to the Study of Food Practices in the Ancient Near East Venezia, June 15th-17th, 2006*, eds. L. Milano & F. Bertoldi. Padova: SARGON, 1–30.
- Fales, F.M. & J.N. Postgate, 1992. *Imperial Administrative Records, Part I: Palace and Temple Administration*. (State Archives of Assyria 7.) Helsinki: Helsinki University Press.
- Fales, F.M. & J.N. Postgate, 1995. *Imperial Administrative Records, Part II: Provincial and Military Administration*.



- (State Archives of Assyria 11.) Helsinki: Helsinki University Press.
- Faust, A., 2011. The interests of the Assyrian empire in the west: olive oil production as a test-case. *Journal of the Economic and Social History of the Orient* 54(1), 62–86.
- Frame, G. & C. Waerzeggers, 2011. The prebend of temple scribe in first millennium Babylonia. *Zeitschrift für Assyriologie und Vorderasiatische Archäologie* 101(1), 127–51.
- Galil, G., 2007. *The Lower Stratum Families in the Neo-Assyrian Period*. (Culture and history of the ancient Near East 27.) Leiden: Brill.
- Gibson, McG. & R.D. Biggs, 1987. *The Organization of Power: Aspects of Bureaucracy in the Ancient Near East*. (Studies in Ancient Oriental Civilization.) Chicago: The Oriental Institute.
- Gilbert, A.S., 2002. The native fauna of the ancient Near East, in *A History of the Animal World in the Ancient Near East*, ed. B.J. Collins. Leiden: Brill, 3–78.
- Gilboa, A. & I. Sharon, 2008. Between the Carmel and the sea: Tel Dor's Iron Age reconsidered. *Near Eastern Archaeology* 71(3), 146–71.
- Grant, A., 2002. Food, status and social hierarchy, in *Consuming Passions and Patterns of Consumption*, eds. P. Miracle & N. Milner. Cambridge: McDonald Institute Monographs, 17–23.
- Grayson, A.K., 1993. Assyrian officials and power in the ninth and eighth centuries. *State Archive of Assyria Bulletin* VII(i), 19–52.
- Grayson, D.K., 1984. *Quantitative Zooarchaeology: Topics in the Analysis of Archaeological Faunas*. New York: Academic Press.
- Greenfield, H.J., 1986. *The Paleoeconomy of the Central Balkans (Serbia): A Zooarchaeological Perspective on the Late Neolithic and Bronze Age (4500–1000 bc)*. (British Archaeological reports International Series 304.) Oxford: BAR.
- Greenfield, T.L., 2014. *Feeding Empires: The Political Economy of a Neo-Assyrian Provincial Capital Through the Analysis of Zooarchaeological Remains*. PhD dissertation, unpublished. Cambridge: University of Cambridge.
- Greenfield, T.L., 2015. The palace versus the home: social status and zooarchaeology at Tuşhan (Ziyaret Tepe), a Neo-Assyrian administrative provincial capital in southeastern Turkey. *Journal of Eastern Mediterranean Archaeology and Heritage Studies* 3(1), 1–26.
- Greenfield, T.L., 2016. Feeding empires: provisioning strategies at the Neo-Assyrian provincial capital of Tuşhan, in *The Provincial Archaeology of the Assyrian Empire*, eds. J. MacGinnis, D. Wicke & T.L. Greenfield. Cambridge: McDonald Institute Monographs, 295–307.
- Greenfield, T.L., D. Wicke & T.C. Matney, 2013. Integration and interpretation of architectural and faunal evidence from Assyrian Tuşhan, Turkey. *Bioarchaeology of the Near East* 7, 1–29.
- Greenfield, T.L. & M. Rosenzweig, 2016. Assyrian provincial life: a comparison of botanical and faunal remains from Tuşhan (Ziyaret Tepe), southeastern Turkey, in *Proceedings of the 9th International Congress on the Archaeology of the Ancient Near East, Basel, 9-13 June 2014*, eds. R.A. Stucky, O. Kaelin & H.-P. Mathys. Wiesbaden: Harrassowitz Verlag, 859–75.
- Greenfield-Jongsma, T.L. & H.J. Greenfield, 2014. Bronze and Iron Age subsistence changes in the Upper Tigris: zooarchaeology of Operation E at Ziyaret Tepe, southeastern Turkey, in *Archaeozoology of the Near East X. Proceedings of the Tenth International Symposium on the Archaeozoology of South-western Asia and Adjacent Areas. Ancient Near Eastern Studies Supplement Series 44*, eds. B. De Cupere, V. Linseele & S. Hamilton-Dyer. Leuven: Peeters Publishing, 121–44.
- Hesse, B., 1995. Animal husbandry and human diet in the ancient Near East, in *Civilizations of the Ancient Near East*, ed. J.M. Sasson. New York: Charles Scribner's Sons, 203–22.
- Kinnier Wilson, J.V., 1972. *The Nimrud Wine Lists: A Study of Men and Administration at the Assyrian Capital in the Eighth Century B.C.* London: British School of Archaeology in Iraq.
- Kühne, H. (ed.), 2008. *Environment and Subsistence of the Assyrian city Dür-Katlimmu the Lower Khabur (Syria)*. (Berichte Der Ausgrabung Tall Šeḥ Ḥamad / Dür-Katlimmu 8.) Berlin: Dietrich Reimer Verlag GmbH.
- Kühne, H., 2010a. The rural hinterland of Dür-Katlimmu, in *Dür-Katlimmu 2008 and Beyond*, ed. H. Kühne. (Studia Chaburensia 1.) Wiesbaden: Harrassowitz Verlag, 115–28.
- Kühne, H. (ed.), 2010b. *Dür-Katlimmu 2008 and Beyond*. (Studia Chaburensia 1.) Wiesbaden: Harrassowitz Verlag.
- Lapham, H.A., 2004. Zooarchaeological evidence for changing socioeconomic status within early historic Native American communities in mid-Atlantic North America, in *Behaviour Behind Bones: The Zooarchaeology of Ritual, Status and Identity*, eds. S. Jones O'Day, W. Van Neer & A. Ervynck. Oxford: Oxbow Books, 293–303.
- Lev-Tov, J.S.E., 2010. A plebeian perspective on empire economies: faunal remains from Tel Mique-Ekron, Israel, in *Anthropological Approaches to Zooarchaeology: Colonialism, Complexity, and Animal Transformations*, eds. Campana, D., P. Crabtree, S.D. DeFrance, J. Lev-Tov & A. Choyke. Oxford: Oxbow, 90–104.
- Lipschits, O., Y. Gadot & M. Oeming, 2012. Tel Azekah 113 years after: preliminary evaluation of the renewed excavations at the site. *Near Eastern Archaeology* 75(4), 196–206.
- Lyman, R.L., 2008. *Quantitative Paleozoology*. Cambridge: Cambridge University Press.
- MacGinnis, J., 2012. Evidence for a peripheral language in a Neo-Assyrian tablet from the Governor's Palace in Tuşhan. *Journal of Near Eastern Studies* 71(1), 13–20.
- MacGinnis, J. & T.C. Matney, 2009. Archaeology at the frontiers: excavating a provincial capital of the Assyrian Empire. *Journal of Assyrian Academic Studies* 23(1), 1–21.
- Maltby, M., 1979. *Faunal Studies on Urban Sites: The Animals Bones from Exeter, 1971-1975*. (Exeter Archaeological Reports 2.) Sheffield: Department of Prehistory and Archaeology.
- Marom, N., forthcoming. The animal remains in Areas 5 and 6 Samal 1: excavations at Zincirli Höyük, 2006 to 2011, in *Samal 1: Excavations at Zincirli Höyük, 2006*

- to 2011, eds. J.D. Schloen & A.S. Fink. Chicago: The Oriental Institute.
- Masetti-Rouault, M.G., 2010. Rural economy and steppe management in an Assyrian colony in the west, in *Dūr-Katlimmu 2008 and Beyond*, ed. H. Kühne. (Studia Chaburensia 1.) Wiesbaden: Harrassowitz Verlag, 129–49.
- Matney, T., forthcoming. Grave M-134 at Ziyaret Tepe: an ‘uncommon’ commoner’s burial of the Late Assyrian period, in *Archaeology from Every Angle: Papers in Honor of Richard L. Zettler*, eds. K. Blanchard, Y. Rakic & P. Zimmerman. Philadelphia: The University of Pennsylvania Press.
- Matney, T., T.L. Greenfield, B. Hartenberger, C. Jalbrzikowski, K. Köroğlu, J. MacGinnis, A. Marsh, M.W. Monroe, M. Rosenzweig, K. Sauer & D. Wicke, 2011. Excavations at Ziyaret Tepe, Diyarbakir Province, Turkey, 2009–2010 Seasons. *Anatolica* 37, 67–114.
- Matney, T., T.L. Greenfield, B. Hartenberger, A. Keskin, K. Köroğlu, J. MacGinnis, M.W. Monroe, T. Vorderstrasse, M. Shepperson & D. Wicke, 2009. Excavations at Ziyaret Tepe 2007–2008. *Anatolica* 35, 37–84.
- Matney, T., T.L. Greenfield, K. Köroğlu, J. MacGinnis, L. Proctor, M. Rosenzweig & D. Wicke, 2015. Excavations at Ziyaret Tepe, Diyarbakir Province, 2011–2014 Seasons. *Anatolica* 41, 125–76.
- Matney, T., J. MacGinnis, H. McDonald, K. Nicoll, L. Rainville, M. Roaf, M.L. Smith & D. Stein, 2003. Archaeological investigations at Ziyaret Tepe, 2002. *Anatolica* 29, 175–221.
- Matney, T. & L. Rainville, 2005. Archaeological investigations at Ziyaret Tepe, 2003–2004. *Anatolica* 31, 19–68.
- Matney, T., L. Rainville, K. Köroğlu, A. Keskin, T. Vorderstrasse, N. Findik & A. Donkin, 2007. Report of excavations at Ziyaret Tepe 2006 season. *Anatolica* 33, 23–74.
- Matney, T., M. Roaf, J. MacGinnis & H. McDonald, 2002. Archaeological excavations at Ziyaret Tepe, 2000 and 2001. *Anatolica* 28, 47–89.
- Milano, L., 2004. Food and identity in Mesopotamia: a new look at the Aluzinnu’s recipes, in *Food and Identity: In the Ancient World*, eds. L. Milano & C. Grottanelli. Padova: S.A.R.G.O.N. Editrice e Libreria, 243–56.
- Morandi Bonacossi, D., 1996. ‘Landscapes of power’: the political organisation of space in the lower Habur valley in the Neo-Assyrian period. *State Archive of Assyria Bulletin* X(2), 15–49.
- Nemet-Nejat, K.R., 1998. *Daily Life in Ancient Mesopotamia, Daily Life through History*. Connecticut: Greenwood Press.
- O’Connor, T.P., 2000. *The Archaeology of Animal Bones*. Vol. 4. Texas: Texas A&M University Press.
- Parker, B.J., 2001. *Mechanics of Empire: The Northern Frontier of Assyria as a Case Study in Imperial Dynamics*. Helsinki: The NeoAssyrian Text Corpus Project.
- Parpola, S., 2004. The leftovers of god and king: on the distribution of meat at the Assyrian and Achaemenid imperial courts, in *Food and Identity in the Ancient World*, eds. C. Grottanelli & L. Milano. (History of the Ancient Near East Studies IX.) Padova: S.A.R.G.O.N. Editrice e Libreria, 281–312.
- Parpola, S., 2008. Cuneiform texts from Ziyaret Tepe (Tušhan), 2002–2003. *State Archives of Assyria Bulletin* 17, 1–113.
- Radner, K., 1997. *Die Neuassyrischen Privatrechtsurkunden als quelle für Menschund*. (State Archives of Assyria Studies 6.) Helsinki: The Neo-Assyrian Text Corpus Project.
- Radner, K., 2002. *Die Neuassyrischen Texte Aus Tall Šēḫ Ḥamad*. (Berichte Der Ausgrabung Tall Šēḫ Ḥamad / Dūr-Katlimmu, Vol. 6, Texte 2.) Berlin: Dietrich Reimer Verlag GmbH.
- Reitz, E.J. & E.S. Wing, 2008. *Zooarchaeology, Second Edition, Manual in Archaeology*. Cambridge: Cambridge University Press.
- Reitz, E.J., 1987. Vertebrate fauna and socioeconomic status, in *Consumer Choice in Historical Archaeology*, ed. S.M. Spencer-Wood. New York: Plenum Press, 101–17.
- Renger, J., 2001. Historiography in the cuneiform world, in *Proceedings of the XLV Rencontre Assyriologique Internationale, 1998*, eds. T. Abusch, P.-A. Beaulieu, J. Huehnergard, P. Machinist & P. Steinkeller. Cambridge (MA): CDL Press, 409–15.
- Sasson, J.M., 2004. The King’s table: Food and fealty in Old Babylonian Mari, in *History of the Ancient Near East/Studies*, eds. C. Grottanelli & L. Milano. Padova: S.A.R.G.O.N. Editrice e Libreria, 179–216.
- Schloen, J.D. & A.S. Fink (eds.), forthcoming. *Samal 1: Excavations at Zincirli Höyük, 2006 to 2011*. (Oriental Institute Publications.) Chicago: The Oriental Institute.
- Stampfli, H.R., 1963. Wisent, *Bison bonasus* (LINNÉ, 1758), Ur, *Bos primigenius* (BOJANUS, 1827), und Hausrind, *Bos taurus* (LINNÉ, 1758), in *Burgaschisee-Sud, Teil 3: Die Tierreste*, eds. J. Boessneck, J.P. Jequier & H.R. Stampfli. (Acta Bernensia II.) Bern: Verlag Stämpfli & Cie, 117–96.
- van Buylaere, G., 2010. The role of the *ḫazannu* in the Neo-Assyrian Empire, in *City Administration in the Ancient Near East, Proceedings of the 53rd Rencontre Assyriologique Internationale*, eds. L. Kogan, S. Koslova, S. Loesov & S. Tishchenko. Winona Lake (IN): Eisenbrauns, 229–46.
- von den Driesch, A., 1976. *A Guide to the Measurement of Animal Bones from Archaeological Sites*. (Peabody Museum Bulletin 1.) Cambridge (MA): Peabody Museum, Harvard University.
- Walker, R., 1985. *A Guide to Post-Cranial Bones of East African Animals: Mrs. Walker’s Bone Book*. Norwich: Hylochoerus Press.
- Wapnish, P. & B. Hesse, 1991. Faunal remains from Tel Dan: perspectives on animal production at a village, urban and ritual center. *ArchéoZoologia* 4(2), 9–86.
- Wattenmaker, P., 1998. *Household and State in Upper Mesopotamia: Specialized Economy and the Social Uses of Goods in an Early Complex Society*. Washington (DC): Smithsonian Press.
- Wicke, D. & T.L. Greenfield, 2013. The ‘Bronze Palace’ at Ziyaret Tepe: preliminary remarks on the architecture and faunal analysis, in *New Research on Late Assyrian Palaces*, eds. D. Kertai & P.A. Miglus. (Heidelberger Studien zum Alten Orient 15.) Heidelberg: Heidelberg Orientverlag, 63–124.
- Wilken, B., 1999. Faunal remains from Tell Afis (Syria), in *Archaeozoology of the Near East IV*, eds. M. Mashkour,

- A. Choyke, H. Buitenhuis & F. Poplin. Groningen: ARC, 29–39.
- Yamada, S., 2000. *The Construction of the Assyrian Empire: A Historical Study of the Inscriptions of Shalmanesar III Relating to His Campaigns in the West*. (Culture & History of the Ancient Near East 3.) Leiden: Brill.
- Zaccagnini, C., 1999. Economic aspects of land ownership and land use in northern Mesopotamia and Syria from the late 3rd millennium to the Neo-Assyrian period, in *Urbanization and Land Ownership in the Ancient Near East*, eds. M. Hudson & B. Levine. Cambridge (MA): Peabody Museum of Archaeology and Ethnology, 331–52.
- Zeder, M.A., 1988. Understanding urban process through the study of specialized subsistence economy in the Near East. *Journal of Anthropological Archaeology* 7, 1–56.
- Zeder, M.A., 1991. *Feeding Cities: Specialized Animal Economy in the Ancient Near East*. Washington: Smithsonian Institution Press.
- Zeder, M.A., 1998. Regional patterns of animal exploitation in the Khabur Basin, 7000 to 1500 B.C., in *Man and the Animal World: Studies in Archaeozoology, Archaeology, Anthropology, and Palaeolinguistics in Memoriam Sándor Bökönyi, Series Major Vol. 8*, eds. P. Anreiter, L. Bartosiewicz, E. Jerem & W. Meid. Budapest: Archaeolingua, 569–82.
- Zeder, M.A., 2003. Food provisioning in urban societies: a view from northern Mesopotamia, in *The Social Construction of Ancient Cities*, ed. M. Smith. Washington: Smithsonian Press, 156–83.

# 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

