



McDONALD INSTITUTE CONVERSATIONS

Fierce lions, angry mice and fat-tailed sheep

Animal encounters
in the ancient Near East

Edited by Laerke Recht & Christina Tsouparopoulou



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& Christina Tsouparopoulou

with contributions from

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Abbreviations and sigla

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

	in the Library of J. Pierpont Morgan, Part 1.) New York: Privately printed.	HSS 14	Lacheman, E.R., 1950. <i>Excavations at Nuzi V. Miscellaneous Texts from Nuzi, Part 2, The Palace and Temple Archives.</i> (Harvard Semitic Studies 14.) Cambridge (Mass.): Harvard Univ. Press.
CAD	<i>The Assyrian Dictionary of the Oriental Institute of the University of Chicago.</i> Chicago: The Oriental Institute, 1956–2010.	HW ²	Friedrich, J. & A. Kammenhuber (eds.), 1975–. <i>Hethitisches Wörterbuch. Zweite, völlig neubearbeitete Auflage auf der Grundlage der edierten hethitischen Texte.</i> Heidelberg: Winter.
CBS	Siglum for objects in the University Museum in Philadelphia (Catalogue of the Babylonian Section).	IB	Siglum for finds from Isin (Isan Bahriyat).
CDLI	Cuneiform Digital Library Initiative, https://cdli.ucla.edu	IM	Siglum for objects in the Iraq Museum, Baghdad.
CHD	Goedegebuure, P.M., H.G. Güterbock, H.A. Hoffner & T.P.J. van den Hout (eds.), 1980–. <i>The Hittite Dictionary of the Oriental Institute of the University of Chicago.</i> Chicago: The Oriental Institute.	ITT 5	de Genouillac, H., 1921. <i>Inventaire des Tablettes de Tello conservées au Musée Imperial Ottoman. Tome V. Époque présargonique, Époque d'Agadé, Époque d'Ur III.</i> Paris: Édition Ernest Leroux.
CM 26	Sharlach, T.M., 2004. <i>Provincial Taxation and the Ur III State.</i> (Cuneiform Monographs 26.) Leiden: Brill.	KAH 2	Schroeder, O. 1922. <i>Keilschrifttexte aus Assur historischen Inhalts, Heft II.</i> (Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft 37.) Leipzig: J.C. Hinrichs'sche Buchhandlung.
CT 22	Campbell Thompson, R., 1906. <i>Cuneiform Texts from Babylonian Tablets in British Museum</i> , vol. 22. London: British Museum.	KBo	<i>Keilschrifttexte aus Boghazköi</i> (Bd. 1-22 in Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft) Leipzig/Berlin, 1916 ff.
CT 32	King, L.W., 1912. <i>Cuneiform Texts from Babylonian Tablets in British Museum</i> , vol. 32. London: British Museum.	KRI	Kitchen, K.A., 1969–1990. <i>Ramesside Inscriptions. Historical and Biographical</i> , 8 vols. Oxford: Blackwell.
CT 55	Pinches, T.G. 1982. <i>Cuneiform Texts from Babylonian Tablets in the British Museum Part 55. Neo-Babylonian and Achaemenid Economic Texts.</i> London: British Museum Publications.	KUB	<i>Keilschrifturkunden aus Boghazköi</i> , Berlin 1921 ff.
CTH	Laroche, E. 1971. <i>Catalogue des Textes Hittites.</i> Paris: Klincksieck.	LAPO 16	Durand, J.-M., 1997. <i>Les Documents épistolaires du palais de Mari, tome I.</i> (Littératures anciennes du Proche-Orient 16.) Paris: Éditions du cerf.
DAS	Lafont, B., 1985. <i>Documents Administratifs Sumériens, provenant du site de Tello et conservés au Musée du Louvre.</i> Paris: Editions Recherche sur les Civilisations.	LAPO 18	Durand, J.-M., 2000. <i>Les Documents épistolaires du palais de Mari, tome III.</i> (Littératures anciennes du Proche-Orient 18.) Paris: Éditions du cerf.
DMMA	Siglum for objects in the Département des Monnaies, médailles et antiques de la Bibliothèque nationale de France.	LD	Lepsius, C.R., 1849–59. <i>Denkmäler aus Aegypten und Aethiopien</i> (plates), 6 vols. Berlin: Nicolaische Buchhandlung.
DUL	Del Olmo Lete, G. & J. Sanmartín, 2015. <i>A Dictionary of the Ugaritic Language in the Alphabetic Tradition.</i> Translated and edited by W.G.E. Watson. Third revised edition. 2 vols. (Handbuch der Orientalistik 112.) Leiden: Brill.	LKU	Falkenstein, A., 1931. <i>Literarische Keilschrifttexte aus Uruk.</i> Berlin: Berlin Staatliche Museen zu Berlin Vorderasiatische Abteilung.
EA	Siglum for the Tell El-Amarna Letters, following the edition of Knudtzon, J. A., 1915. <i>Die El-Amarna-Tafeln.</i> Leipzig: J.C. Hinrichs'sche Buchhandlung.	M	Siglum for texts from Mari.
ePSD	Electronic version of <i>The Pennsylvania Sumerian Dictionary</i> , http://psd.museum.upenn.edu	Moore, Mich. Coll.	Moore, E., 1939. <i>Neo-Babylonian Documents in the University of Michigan Collection.</i> Ann Arbor: University of Michigan Press.
ETCSL	Black, J.A., G. Cunningham, J. Ebeling, E. Flückiger-Hawker, E. Robson, J. Taylor & G. Zólyomi (eds.), 1998–2006. <i>The Electronic Text Corpus of Sumerian Literature.</i> Oxford, http://etcsl.orinst.ox.ac.uk/	MSL VIII/I	Landsberger, B., 1960. <i>The Fauna of Ancient Mesopotamia. First Part: Tablet XIII.</i> (Materialien zum Sumerischen Lexikon VIII/1.) Rome: Pontificium Institutum Biblicum. [with the assistance of A. Draffkorn Kilmer & E.I. Gordon].
FM 2	Charpin, D. & J.-M. Durand (ed.), 1994. <i>Recueil d'études à la mémoire de Maurice Birot.</i> (Florilegium Marianum II.) Paris: Société pour l'étude du Proche-Orient ancien.	MVN 8	Calvot, D., G. Pettinato, S.A. Picchioni & F. Reschid, 1979. <i>Textes économiques du 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 Téglaḫ-Phalasar III à Nabonide</i> . (Textes cunéiformes, Musées du Louvre 12.) Paris: P. Geuthner.
RIME 1	Frayne, D., 2008. <i>Presargonic Period (2700–2350 BC)</i> . (The Royal Inscriptions of Mesopotamia, Early Periods Vol. 1.) Toronto: University of Toronto Press.	TCL 13	Contenau, G., 1929. <i>Contrats néo-babyloniens II. Achéménides et Séleucides</i> . (Textes cunéiformes, Musées du Louvre 13.) Paris: P. Geuthner.
RIME 4	Frayne, D., 1990. <i>Old Babylonian Period (2003–1595 BC)</i> . (The Royal Inscriptions of Mesopotamia, Early Periods Vol. 4.) Toronto: University of Toronto Press.	TRU	Legrain, L., 1912. <i>Le temps des rois d'Ur: recherches sur la société antique d'après des textes nouveaux</i> . (Bibliothèque de l'École des Hautes Études 199.) Paris: H. Champion.
RINAP	The Royal Inscriptions of the Neo-Assyrian Period; Open Richly Annotated Cuneiform Corpus, available at http://oracc.museum.upenn.edu/rinap/index.html	TU	Thureau-Dangin, F., 1922. <i>Tablettes d'Uruk à l'usage des prêtres du Temple d'Anu au temps des Séleucides</i> . (Musée du Louvre. Département des antiquités orientales. Textes cunéiformes.) Paris: P. Geuthner.
RLA	<i>Reallexikon der Assyriologie und vorderasiatischen Archäologie</i> .	U.	Siglum for finds from Ur.
RS	Siglum for documents from Ras Shamra (Ugarit).	UCP 9/1,I	Lutz, H.F., 1927. <i>Neo-Babylonian Administrative Documents from Erech: Part I</i> . (University of California Publications in Semitic Philology Vol. 9 no. 1/I.) Berkeley (CA): University of California Press.
SAA 2	Parpola, S. & K. Watanabe, 1988. <i>Neo-Assyrian Treaties and Loyalty Oaths</i> . (State Archives of Assyria 2.) Helsinki: Helsinki University Press.	UCP 9/1,II	Lutz, H.F., 1927. <i>Neo-Babylonian Administrative Documents from Erech: Part II</i> . (University of California Publications in Semitic Philology Vol. 9 no. 1/II.) Berkeley (CA): University of California Press.
SAA 7	Fales, F.M. & J.N. Postgate, 1992. <i>Imperial Administrative Records, Part I: Palace and Temple Administration</i> . (State Archives of Assyria 7.) Helsinki: Helsinki University Press.	UDT	Nies, J.B., 1920. <i>Ur Dynasty Tablets: Texts Chiefly from Tello and Drehem Written during the Reigns of Dungi, Bur-Sin, Gimil-Sin and Ibi-Sin</i> . Leipzig: J.C. Hinrichs'sche Buchhandlung.
SAA 10	Parpola, S. 1993. <i>Letters from Assyrian and Babylonian Scholars</i> . (State Archives of Assyria 10.) Helsinki: Helsinki University Press.		

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

Preface

Augusta McMahon

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

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

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

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

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

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

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

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

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

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Chapter 14

What was eating the harvest? Ancient Egyptian crop pests and their control

Malwina Brachmańska

In a fragment of a didactic letter describing the sad fate of professions other than that of a scribe, written in the XIX dynasty (c. 1295–1186 BC) *papyrus Anastasi V* and again in the XXI dynasty (c. 1069–945 BC) *papyrus Sallier I*,¹ one can read about the hardships experienced by a farmer. According to this fragment, pests, listed by species, were the main cause of nearly all damage to crops:

Do you not recall the condition of the cultivator faced with the registration of the harvest-tax after the snake has carried off half of the corn and the hippopotamus has eaten up the rest? The mice abound in the field, the locust descends, the cattle devour. The sparrows bring want upon the cultivator (...) (*Sallier I*, 6,2–6,4 = *Anastasi V*, 15,7–16,3 = Gardiner 1937, 83; trans. Caminos 1954, 315–16).

It was this excerpt seen in *p. Sallier I* which initially piqued the author's interest. Further inquiry revealed that other sources verify its reliability and represent the danger particular species posed to the harvest, how they were seen by the Egyptians, and some of the methods used to exterminate them. This article reviews those sources in order to analyse how pests were perceived and controlled in ancient Egypt.

Ancient Egyptian crop pests

According to Caminos, the first animal mentioned in *p. Sallier I* was a snake. That creature, a snake, is also mentioned in another, XX dynasty (c. 1186–1069 BC), didactic letter from *p. Lansing*, where the farmer 'spends time cultivating corn, (while) the snake is after him (and) destroys the seed (when) it is cast to the ground' (*p. Lansing* 6, 7–8 = Gardiner 1937, 105).² However, the

presence of the snake among pests seems peculiar. As was noticed by Egberts (1995a, 341–2), snakes are not harmful to crops; by killing rodents, they even play a beneficial role in the field.

ḥfꜣw, the term used in both texts, usually means *snake* or *serpent* (e.g. Faulkner 1991, 168; Lesko 2002, 309), so it is often translated as such (e.g. Caminos 1954, 390; Simpson 2003, 438). However, ancient Egyptian terminology did not differentiate clearly between snakes and certain other creatures, including worms. Both were part of the class of crawling-creatures, in which snakes were the most prominent of species (Wassel 1991, 15–19). Since there is no general term for worms in Egyptian, some scholars claim that the word *ḥfꜣw* in the texts from *p. Sallier I* and *p. Lansing* should be read as *worm* rather than *snake* (*Wb* III, 73.3; Erman & Lange 1925, 66; Keimer 1933, 101; Vinogradov 1992; Egberts 1995a, 342). This is also true for other texts where terms generally translated as snakes (not only *ḥfꜣw*, but also others, like *ḏdf.t*, *im.w.tꜣ*) are used in the context of their negative influence on the harvest (Egberts 1989; 1995a, 341–4). In this article words used for snakes, when they refer to them in pests' context, are therefore translated as 'worms'. Following in the footsteps of the above-mentioned scholars, this term is used in a colloquial sense and refers to a wide variety of invertebrates (including their larvae forms) as well as some vertebrate creatures which are agricultural pests and which in former zoology were classified as *Vermes* (see Egberts 1995a, 341).³

There are also a few Graeco-Roman inscriptions from the Karnak temple which mention fields free from worms, or where worms were prevented from eating the crops (see Egberts 1995a, 341–2). Moreover, destroying worms is a part of the 'driving of the four calves' ritual (*ḥwt-bḥsw*), which, although older, is attested mainly from the New Kingdom to Graeco-Roman periods (Egberts 1995a, 205–48). The depiction

of the ritual on reliefs (see Egberts 1995b, pl. 74–121) shows the king standing in front of the gods and leading four calves before them in order to make the calves thresh the grain or hide the tomb of Osiris from his enemies (see below). In that act, the king assumes the role of Horus, the son of Osiris. At the same time, he presents himself as the successor of the deceased pharaoh, who protects his tomb from the evil forces of Seth (Ayad 2009, 106). The ritual was used to legitimize the succession of the king but also to ritually ensure a bountiful harvest.

As Egberts (1989) states, the calves were made to thresh the corn, enacting the ‘agrarian’ aspect of the ritual, which was connected with the production of grain. Several Ptolemaic texts from temples state that this process destroyed the worms (see Egberts 1995a, 285, 303, 319). One of them explains that the killing was carried out to prevent damage to the harvest (Egberts 1989, 37–9; 1995a, 341–4): ‘I have cut up the worm, which destroys the grain, I split it in two’ (trans. Egberts 1995a, 285). The destruction of worms in the ritual, as well as connecting the agrarian aspect with the other, ‘Osirian’ one, according to which the calves were treading on the tomb of Osiris to hide it from the enemies and during which those enemies were also led astray or destroyed, reflects how grave the problem of worms was for the Egyptians, and how important it was to eliminate them. According to Egberts, the worms and their mutilation were seen as the reflection of the enemies of Osiris. These enemies could also be seen as worms, although of the corpse-eating kind (Egberts 1989).

Akin to worms, insects were also a harvest plague. Granaries, warehouses and pantries were at risk of their attack. The crops, stored in dark and arid places, provide the herbivore insects with an abundance of food and optimal conditions to increase their population (Levinson & Levinson 1985, 328–36). Tombs, with food offerings laid in them, also fulfilled those conditions. That the problem with insects was serious can be inferred from sources recording the different ways in which Egyptians tried to get rid of them (see below) and from the archaeoentomological material.

Scholars have managed to identify many different insect species, mainly beetles, in a wide range of foodstuffs in houses, tombs, magazines and granaries. Among others, Levinson & Levinson have discussed the origin of insects in storage systems and the means of preventing pests from destroying stored food (1985; 1990; 1994; 1998), while Buckland (1981) and Panagiotakopulu (2001) gathered and reviewed evidence of insect fauna found in Egyptian contexts. The latter, alone and in collaboration with other scholars, has also analysed material from a few specific sites and

artefacts from museum collections (Panagiotakopulu 1998, 2003; Panagiotakopulu & van der Veen 1997; Panagiotakopulu & Buckland 2010a; Panagiotakopulu *et al.* 2010) and has conducted research on the ancient Egyptian insecticides and insect repellents (Panagiotakopulu *et al.* 1995; Panagiotakopulu 2000). Archaeoentomological research is still scarce and little of it is detailed (Panagiotakopulu 2001, 1235; for other research regarding insects in tomb offerings and storage system context and for analysis of insects as a pest, see e.g. Alfieri 1931; Zacher 1937; Solomon 1965; Chaddick & Leek 1972; Burleigh & Southgate 1975; Panagiotakopulu 1999; Borojevic *et al.* 2010; Panagiotakopulu & Buckland 2010b).

Plant eating insect infestations can be identified through their fossils found in crops and wheat products (like flour or bread), as well as by the traces of pests left in the crops. An example can be seen in the loaves of bread from the food offering in the tomb of Kha in Deir el-Medina (XVIII dynasty, c. 1550–1295 BC), which were full of small holes and tunnels – the result of biscuit beetles eating (*Stegobium paniceum* L.) (Levinson & Levinson 1994, 52–3) or in the analogous loaves stored in Turin Museum (Panagiotakopulu 2003, 357–8). Traces of preying insects also come from emmer spikelets deposited in the rock-cut gallery (Cave 3) of Wadi Gawasis, a Middle Kingdom harbour on the Red Sea coast (Borojevic *et al.* 2010, 6–8). Unfortunately, in this instance, the species of the insects has not been identified.

The extent of damage done by insects to stored food can be seen best within the XVIII dynasty’s Amarna house of Ranefer, built on the debris of an earlier household. This created a closed space beneath the house’s final mudbrick floor, where plant waste, insect fossils and traces of pest infestation, among other things, were preserved. The insects include species like grain weevil (*Sitophilus granarius* L.), the lesser grain borer (*Rhizopertha dominica* L.), flour beetles (*Tribolium castaneum* Hbst.), the small-eyed flour beetle (*Palorus ratzeburgii* Wiss.), biscuit beetle and smooth spider beetle (*Gibbium psylloides* Czen.). The damage caused by insects, along with traces of rodent gnawing, were evident in many barley grains found beneath Room 1. Moreover, 1250 date stones were discovered under Rooms 5 and 5b. 73 per cent of them were infested by scolytid (*Coccotrypes dactyliperda* F.), while some had gnawing marks from insects and rodents (Panagiotakopulu *et al.* 2010).

In light of the above-mentioned sources, it seems clear why in the discussed lines from *p. Sallier* I, worms were not only mentioned first but were also seen as the creatures responsible for the destruction of half of the harvest. Worms and insects both posed serious

danger to the harvest and were seen as destructive. It is then all the more interesting that, despite the existence of so many insect species, the ancient Egyptians only have specific names for a few (Kenawy & Abdel-Hamid 2015, 28). One of them, the locust, was mentioned in the *p. Sallier I*.

The locust is a type of grasshopper whose life can be divided into 'solitary' and 'gregarious' phases. Both forms differ morphologically, physiologically and behaviourally. In solitary form, locusts, similarly to other grasshoppers, live as individuals. In the second phase, when their numbers increase rapidly due to favourable conditions, they create dense groups which disperse onto a vast area (Capinera 2008, 1666–7; Simpson & Sword 2008). It seems that ancient Egyptians did not differentiate between these two types. Not only did just one name exist for the locust (e.g. *snḥm*); among occasional depictions of single grasshoppers in the field, garden and marsh environments, as seen in tomb and temple scenes, part of those insects are also portrayed with the 'gregarious' appearance (grasshoppers are, for example, depicted in the tombs of Mereruka (Saqqara, VI dynasty (c. 2345–2182 BC); Sakkara Expedition 1938, pl. 10–13), Kagemni (Saqqara, VI dynasty; Houlihan 1996, fig. 131), Horemheb (TT 78, XVIII dynasty; Keimer 1933, 102; Cherpion 2012, fig. 5), Khonsu (TT 31, XIX dynasty, Cherpion 2012, fig. 9–10), Ramose (TT 166, XX dynasty; Keimer 1933, 102; Cherpion 2012, fig. 7–8), or in the representation of the botanical garden of Thutmose III (temple of Karnak, XVIII dynasty; Beaux 1990, 286–7; for another interpretation of grasshoppers with locust characteristics in those scenes, see Cherpion 2012, 193).

The 'gregarious' locusts are the most destructive. Their swarms are considered a serious danger in Africa and the Near East even today (Nevo 1996, 22–8; Taterka 2012, 56). They may consist of billions of individuals, travelling great distances per day, very quickly covering an area of several hundred square kilometres and leaving almost no crops to harvest (el Magd 2016, 333). It seems hardly surprising that the extensive damage caused by locusts left traces in ancient textual records; even the Bible mentions locusts as the eighth Egyptian plague (*Ex.* 10:12–15; Nevo 1996).

However, the symbolism of the locust, despite the insect being the cause of extensive devastation of the harvest, was mostly connected with the idea of multitude, and through that with wealth and abundance, not with destruction (concerning the significance of the locust, see Keimer 1933; Koek 2015; 2016). A multitude of locusts is already expressed in the Pyramid Texts. The Spell 467 states that the dead

king 'has reached the sky as a locust which shades the sun' (PT § 891d, Sethe 1908, 498). This sentence may be the result of actual observation, since swarms of flying locusts really can darken the sun's view. Furthermore, depictions of locusts and figurative expressions related to them could also be used to symbolize, as stated by Cherpion (2012), the concept of fecundity or transformation and rebirth.

Apart from *p. Sallier I*, there are few sources which present the locust as a field pest. A detail from the Theban tomb of Ramose depicts a man with a bouquet of flowers and ears of cereal which two locusts devour (Keimer 1933, 102). In one of the maxims from *p. Insigner* (XXV.4), the locust is described as the pest of vine bushes: '...The small locust destroys the grapevine' (trans. Lichtheim 1980, 205). A fragment of the Mo'alla tomb inscription of Ankhtifi, a nomarch living during the First Intermediate Period, differs from those as it links locusts with the time of famine: 'The whole land has become like wandering locusts. One going downstream (and) the second upstream' (Pillar IV, 27–29, Vandier 1950, 221; see Assmann 2002, 93–105). Ankhtifi used the locust as a simile of the action of starving people in the time of hunger, referring to the destructive behaviour of swarms, which wander through the whole country looking for food.

The image of a locust also appears in some New Kingdom battle inscriptions as a metaphor for Egyptian foreign enemies (el Magd 2016, 333–4). For example, in the description of the Qadesh battle in the fifth year of his reign, Ramesses II claimed that the Hittites and their allies '...covered the mountains (and) valleys like locusts in their multitude' (KRI II, 19,3), while the inscription of Ramesses III in the temple of Medinet Habu, referring to the Libyan invasion in the eleventh regnal year, states that '...whose right arm [*Ramesses III*] plunging into the battle, slaying 100,000 in their places under (the hooves of) his horses. He sees (their) thick multitude as the locusts' (KRI V, 26,5–26,6). While the destructive nature of locusts is acknowledged, they are also small and easily trampled creatures; therefore, in the context of battle, some scholars see the use of the locust image as a figurative expression referring to the multitude and weakness of enemies (Keimer 1933, 103–5; Malek 1997, 207–19; Morenz 1999, 135–6; cf. e.g. el Magd 2016, 333–4). While the first symbolism is clear, the second brings some doubts, especially in light of the fact that in the Ptolemaic temple inscriptions referring to *ḥrw*-elixir offerings – a liquid which gave strength, courage and perseverance in combat – the image of locusts was used to describe an infinitude of Egyptian soldiers, followers and so on (Cauville 2011, 48–9; Sayed 2018). The New Kingdom battle texts seem to portray foreign

enemies rather as a large, charging, destructive horde covering a vast area, similar to locusts. This kind of figurative expression shows that locusts were seen as a great plague needing to be crushed.

Rodents are well known pests all over the world; ancient Egypt is no exception. A few species of rodents from the *Muridae* family (mouse-like rodents) were known in ancient times (Osborn & Osbornova 1998, 46–52; for the species of the *Muridae* family present in modern Egypt, see e.g. Hoath 2009; for systematics and terminology, see Cichocki *et al.* 2015). They were not differentiated and were known as *pnw* (WB I, 508,8; Faulkner 1991, 89).⁴ Sources other than *p. Sallier I* reflect the damage which mice may have caused either in the field and in storage areas (see Bohms 2013, 237–9; Brachmańska 2017, 70–1).

The destructive activity of the mouse became its iconic feature and as such was used as a symbol in the dreambook written on *p. Chester Beatty III* (Gardiner 1933, 7–23; Bohms 2013, 239). There, one of the dream interpretations states: ‘if the man sees himself bringing mice from the field, bad: the sore heart’ (9,28, Gardiner 1933, pl. 7). The mouse here was a negative omen, a symbol of despair and destruction, appearing in the context of the field. The symbolism of the dream comes from analogy: the mouse which destroys the harvest, when brought from the field, destroys the heart of the bringer. As the great devourer of house supplies, the mouse appeared in a mathematical problem from *p. Rhind*. In this problem, several numbers raised in geometrical progression were written one below the other, each corresponding with one item (Chace 1929, pl. 101). The riddle’s purpose was to calculate a sum of numbers. The problem could be understood as follows: ‘there are seven houses, there are seven cats in each of them, each cat kills seven mice, each mouse could eat seven *hekat* measure of grain. How many items were mentioned?’ (see Chace 1927, 30, 112; Robins & Shute 1987, 56). Archaeological studies have proven that the author of the riddle took inspiration from real life. During the excavation of the XII dynasty (c. 1850–1773 BC) city at el-Lahun, Petrie noticed that nearly every house had mouse holes in the walls, which were ‘stuffed up with stones and rubbish to keep them [mice] back’ (Petrie 1891, 8). Mice truly were that city’s plague. El-Lahun (Borojevic *et al.* 2010, 4, 8) and a few other archaeological sites, like Ranefer House or Wadi Gawasis (see above) also provide evidence of grains and seeds with rodent gnaw marks. This confirms the pest’s presence in human settlements. In literature, the mouse was still directly pointed out as one of the main field pests in the Ptolemaic *Instruction of Ankhsheshonq*, where it can be read that ‘the frogs praise happy, the mice eat the emmer’ (23,20, trans. Lichtheim 1980, 177).

The inscription on the Kawa V stela, recording the great inundation in the sixth year of XXV-dynasty Taharqa’s reign (Gozzoli 2009; reign of Taharqa: 690–664 BC), reflects the impact which all pests described above had on the state of the crops. Worms, rodents and locusts were such a plague that getting rid of them was considered part of the four wonders performed by Amon for Taharqa. The king states: ‘It made [*inundation*] the whole field good, killed the vermin (and) the worms that were in it, kept off the locusts which devour from it (...)’ (Kawa V 11–12; Macadam 1949, pl. 10). The author of the text used two unusual terms for what is here translated as worms and vermin – *im.w.t3* for the first and *hdkk.w(i)*, written with the determinative of the small rodent similar to a mouse, for the latter. *im.w.t3* literally means ‘those who are in the earth’, and *hdkk.w(i)* denotes small creatures such as rodents, insects, and toads (Macadam 1949, 20; Vinogradov 1992, 32). The latter has been translated by different scholars as vermin, rats or insects (e.g. Macadam 1949, 27; Assmann 2002, 162; Kitchen 2004, 169; Gozzoli 2009, 238). It seems likely that the author used both of these unusual phrases to differentiate worms, which are associated with the soil, from creatures walking *on* the ground. In that way, the text would state that Amun got rid of all the pests which are *in* the ground, *on* the ground, and *above* the ground. Here, worms, insects/mice and locusts appear as representative figures for all the destructive pests.

According to *p. Sallier I*, hippopotamuses pose the second greatest threat for harvests. This is not surprising, since the animal is truly one of the most dangerous pests, eating up to 60 kg of grasses per day (Houlihan 1996, 121). This is confirmed by Diodor (I 35.9), who states that the greater fertility of Egyptian hippopotamuses could destroy the nation’s agriculture. It could even be, as Diodor further suggests (I 35.10–11), the main reason for hippopotamus hunting, which was portrayed in Egyptian art from the Naqadian period (Hendrickx 2011). However, this activity, and scenes portraying it, also had a religious significance. Killing hippopotamuses was a symbol of victory over chaotic forces, which they, as Sethian creatures, embody (Säve-Söderberg 1953).

While the other animals mentioned in *p. Sallier I* are indeed pests, causing great damage to the crops, one wonders why its author also included cattle. Some scenes from tombs present cattle nibbling on grain or grass (e.g. Harpur 1987, fig. 132–3), but this is hardly a hindrance. Maybe the animal’s ‘grain devouring’ refers to the fact that cattle and humans partly ate the same food: the former’s diet was supplemented with fodder and special cattle bread dough, especially during the dry season when pastures were not available (Brewer

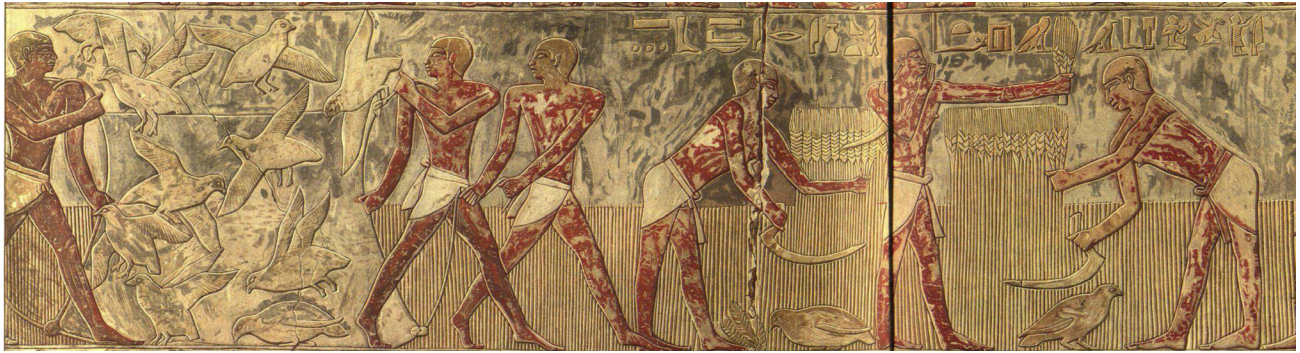


Figure 14.1. Capturing common quails, Tomb of Mereruka, Saqqara, VI dynasty; taken from Sakkara Expedition 1938, pl. 168 (Courtesy of the Oriental Institute of the University of Chicago).

et al. 1994, 86). If the farmer gave part of his crops to cattle, there would be less for himself.

Birds are crop thieves, and are described as such in *p. Sallier I*. The author mentions sparrows specifically, but reliefs from the private tombs and paintings from the New Kingdom ostraca indicate that other species also contributed to the farmers' misery (Harpur 1987, 111, 168; Houlihan 1996, 155–6; Bailleul-LeSuer 2012, 25). Common quails were shown eating grain from the field as early as in the tomb of Mereruka (Fig. 14.1; Sakkara Expedition 1938, pl. 138–9). Starting with the Old Kingdom onwards, a few bird species, like doves, golden orioles and rollers, were occasionally depicted in orchards and gardens, eating the fruit from the sycamore tree and grapevine; crows were painted on New Kingdom ostraca, preying mostly on nuts from the doum palm, while *p. Ebers* mentions black kite as a field pest (see below).

A Ramesside satirical papyrus stored in the Egyptian Museum in Turin (CGT 55001) includes multiple animal scenes. Among them, the hippopotamus and black crow are portrayed as typical orchard pests in a more convoluted way (Houlihan 2001, 67–72, fig. 68). Instead of eating figs from the sycamore tree, both animals are gathering them in a basket – they are harvesting the same way that humans do. This is typical Egyptian satirical sense of humour, presented mostly on Ramesside ostraca and a few papyri. The motifs picture the world 'upside-down', where animals, parodying humans, usually take roles atypical of or even contrary to their nature (Houlihan 2001, 61–120).

Ancient Egyptian pest control

From the tomb scenes depicting birds as pests, we get information not only about their species but also about the techniques employed to cope with the problem

(Houlihan 1996, 155–6; Bailleul-LeSuer 2012, 25). Quails were caught using ground nets. This technique can be seen in the depictions in the tomb of Mereruka and the XVIII dynasty tomb of Nebamun (Fig. 14.1; Sakkara Expedition 1938, pl. 138; Parkinson 2008, fig. 123). To catch songbirds prying on trees, Egyptians used either a spring netting trap or a net hanging between the ground and the tree's crown. The way the latter worked is shown for example in the tomb of Akhethotep (Saqqara, Vth dynasty (c. 2494–2345 BC); Houlihan 1996, fig. 112). Shouting farmers scare away birds preying on a sycamore tree. Departing birds, scared by the noise, fly straight into the net. In the XI dynasty tomb of Baqet III (c. 2055–1985 BC) at Beni Hassan, a unique technique is illustrated, with strings with loops hanging from a tree. The legs of some birds invading the tree are caught in the loop. The trap would probably tighten when the bird would try to fly away (Kanawati & Evans 2018, 36, pl. 43).

Several representations also illustrate people scaring the birds away by making noises or by waving strips of cloth or rope fragments in the air. Houlihan (1996, 155) states that the scenes portraying such activity appear in the New Kingdom as the duty of women or children, but the method is already present in the Giza V dynasty mastabas of Imery and Hetepet as an occupation of the latter (LD II. 53b; Singer *et al.* 1954, fig. 352; for dating the tomb of Hetepet: Woods & Swinton 2013). A boy from the Hetepet tomb seems to be using a slingshot.

Prevention rather than treatment might also be a way of coping with pests. For example, animals (mainly cattle) trampling grain into the ground during ploughing could stop birds and other insects from stealing it (Murray 2000, 519). Egyptians also used magical means to fight birds. *Ebers papyrus*, written in XVIII dynasty (although the papyrus' content was presumably formed in the Middle Kingdom; Bardin

1995, 16–17; Strouhal *et al.* 2010, 14), contains a spell preventing the black kite from plundering:

(a branch of) acacia tree, set to stand up. The man should say: ‘oh, Horus, it has stolen in town (and) in the field; it is thirst for the field of birds [*lit. flying beings*]; let it be cooked and eaten.’ Words to say over (a branch of) acacia tree, (when) *fk*‘-cake is applied to it... (E 848, 98, 3–5; Wreszinski 1913, 203)

Although the formula includes a spell, the proposed method did not shy away from a practical dimension, since it actually refers to the construction of a scarecrow.

This spell is not the only remedy in *p. Ebers* used to get rid of various household pests. Actually, despite being the longest medical papyrus, *p. Ebers* included a whole chapter with advice on how to keep the house clean and free of unwelcome ‘guests’, using various substances as repellents or insecticides (see Ebbel 1937, 113–14). The formulae used also seem to connect practical and magical means, the dividing line between which is sometimes hard to define. Among creatures such as snakes, flies, and mosquitos, a *kkt*-animal appears. Presumably some kind of worm is hidden by this name. Panagiotakopulu *et al.* (1995, 706) see here a mealworm, since that is the most commonly occurring worm in magazines (concerning the meaning of the term *kkt*, see also Dawson 1934, 187). The formula states ‘another (way) to make *keket*-animal not eat wheat from the storeroom: excrements of gazelle, placed over fire in the storeroom, (and) cover its walls and floor with their dirt (mixed with) water...’ (E 849, 98, 6–8; Wreszinski 1913, 203–4).

This is the only known text referring to the prevention of worms. However, protective measures taken against other house pests included in *p. Ebers* are mainly based on strong smelling substances, used also as fumigants, which have pest repelling and killing compounds, as well as on products with desiccating properties (Levinson & Levinson 1998, 140–2; Panagiotakopulu *et al.* 1995, 706). Additionally, sulphur was introduced in the New Kingdom as dust or fumigant (Levinson & Levinson 1985, 336). Among the substances mentioned, plants are a minority. However, despite the lack of sources, it is possible that the Egyptians used some plants with insect repelling properties. One of them might be coriander, whose insect repelling properties were mentioned by Dioskurides (III 71) and Palladius (R. I 19) (Panagiotakopulu *et al.* 1995, 706).

Attention should be paid to using ashes as desiccants. In one of *p. Ebers* formula, ash with *bbt*-plant was

spread on the ground to deal with flies (E 841). Even today, plant ash is added to grain as an insecticide in East Africa because it absorbs water from insects’ bodies and causes their fatal desiccation (Miller 1987). In Egypt, loose ashes spread on the ground, probably as insecticides, were found in several Old to New Kingdom settlements (Lehmann 2012–2013, 84). For example, an ash deposit surrounded silos built within Building E in Giza (Yeomans & Mahmoud 2011, 49). In Amarna, an existing layer of loose ash spread around querns was interpreted by Miller as insecticide used against pests feasting on the flour (1987). Four Ptolemaic tower houses from Tell ed-Dab’a are rather unique. To prevent the insects from entering, horizontal ash layers were placed alongside the walls (Lehmann 2012–2013; Lehmann 2013, 17). In summary, despite the fact that worms and insects were surely a plague and were treated as such, little is noted about the means of fighting them. More can be deduced rather than taken directly from the sources.

Even less is known about locust control. Nevo (1996, 28–9) states that hand collection of locusts was the most effective technique in antiquity. It is possible that the Egyptians also used this method. There are, however, no sources mentioning locust collection specifically. There is a theory that amulets and seals in the shape of locusts used in various periods might magically ward off those insects (Keimer 1937; Kenawy & Abdel-Hamid 2015, 21). However, as some scholars state, they were rather connected with the symbolism of fertility or richness, were used to protect the dead during their journey to afterlife or in general to protect anyone who wore them against illness, evil forces, disasters, daily misfortunes and so on, or were a symbol of regeneration (e.g. Desroche Noblecourt 1984, 889, 891; Cherpion 2012, 199; Koek 2016; Sayed 2018, 585). The latter interpretations find support in the fact that some of the amulets were found on mummies.

Ancient Egyptians were well-aware that the cat is the greatest enemy of the mouse and they used it as such. This is seen in the riddle from *p. Rhind* mentioned above, but also in two representations. The first comes from the XI dynasty tomb of Baqet III at Beni Hassan (Kanawati & Evans 2018, 37, pl. 45a). A detail from its chapel’s southern wall represents a cat and a rodent, identified by Evans as the African grass rat (*Arvicanthis niloticus*, É. Geoffrey), facing each other (for this and older identifications, see Evans 2019). The second is a Ramesside ostrakon from Deir el-Medina, with a painting of a cat holding a mouse in its mouth (Fig. 14.2; IFAO 3617, Vandier d’Abbadie 1937, fig. 2201). These kinds of pictures must have come from observations of daily life.

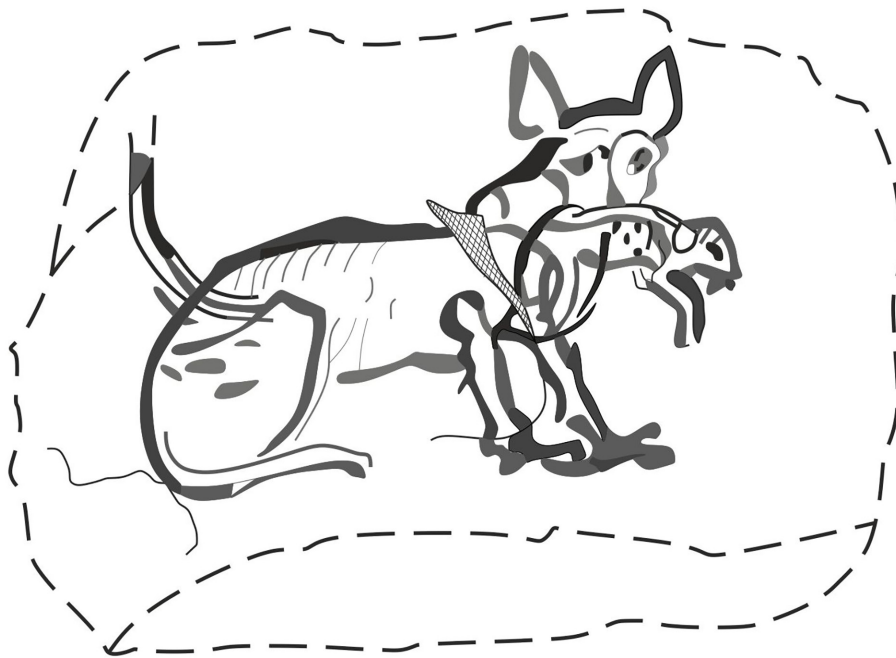


Figure 14.2. Ostracon from Deir el-Medina, Ramesside period, IFAO 3617; drawing taken from Vandier d'Abbadie 1937, fig. 2201.

Actually, it is highly probable that the multitude of mice in food storages and wastes made wild cats wander into human settlements (Malek 1993, 45). This method of coping with mice is also reflected in *p. Ebers*. One formula is based on the cat and mouse antagonism. It states: 'Another (way) to make mice not reach things: The fat of cat. Placed on all things' (E 847, 98, 1–2; Wreszinski 1913, 203). This formula obviously belongs to the area of magical practice but involves a very practical way of coping with rodents.

Acquiring a cat might not have been the only way of getting rid of mice. As Petrie has already mentioned, in the city of Lahun, inhabitants blocked mouse holes in their homes. A clay item interpreted by Petrie as a rat trap was found there (Fig. 14.3; UC 16773, Petrie 1891, pl. V.8). It is also worth mentioning the hypothesis of Evans regarding the representation from the tomb of Baqet III mentioned above. Evans noticed that the rat from the scene is facing left, with its back to an offering shrine and contrary to other animals from the same register. According to her, 'the arrangement of the figures thus suggests symbolic oversight of the potentially dangerous and destructive rodent' (Evans 2019, 158). Evans also claims that writing the name of the rodent next to its representation might be a magical method of trapping it, since the Egyptians believed that they could control a thing whose name was written or recited. The second hypothesis, however, is yet to be researched further, since also the term 'she-cat' was written in the same scene.

For the Egyptians, animals were an integral part of the world; they were present both in the earthly

realm and in the culture, often gaining religious and symbolic significance (Barbash 2013, 20–9). As such, few creatures escaped the attention of the ancient Egyptians (for those, see e.g. Evans 2015). Pests were clearly not among that group. Despite quite a limited number of sources referring more or less directly to some animals as pests, those which do exist clearly indicate that creatures mentioned in the excerpts from *p. Anastasi V* and *p. Sallier I* (apart from cattle, whose presence is rather odd), plus some insect species, were a real threat to the harvest. Moreover, they were perceived as such by the Egyptians, who not only devised various methods of pest control, using either practical knowledge and/or magical thinking, but also included some of them in *p. Ebers*, which in general deals with medical problems.

The negative influence of pests on the harvest and the antagonistic relationship between them and humans in the economic sphere were reflected in the cultural world, and led to an association of pest species with destruction, chaotic forces and enemies. Still, it has to be highlighted that those form only a minor part of the symbolism related to these creatures, and that Egyptians had quite a profound relationship with the animal world. Not only did they not distance themselves from creatures perceived as dangerous, terrifying or creepy, but also the different or even the same characteristics of these particular species often also led them to assign various kinds of symbolism to each animal (see e.g. Säve-Söderbergh 1953; Störk 1984; Barbash 2013, 20–1; Bohms 2013; Evans & Weinstein 2019). Not infrequently did the same animal gain two



Figure 14.3. Mouse trap, el-Lahun, XII dynasty, UC16773 (photo taken in Petrie Museum by the author).

opposite aspects – one positive, and one more negative. For example, the locust could be perceived as destructive as well as be connected with a number of other ideas like multitude, abundance, fecundity, transformation and possibly even protection. Moreover, they were depicted in different forms: they were portrayed in scenes from tombs and temples, in the chapter 125 of the Book of the Death vignette on the coffin of the single of Amon, and on two daggers of King Ahmose; they were represented on Roman lamps, toiletries, scarabs; modelled into amulets, figurines, and so on (Keimer 1937, 143–60; Cherpion 2012). Through those, locusts-grasshoppers existed in many parts of Egyptian life, not only food related ones (for the relationships of the Egyptians with grasshoppers, and also with other invertebrates, see Evans & Weinstein 2019).

Still, due to the limited number of both sources and studies, our knowledge of the pests, pest control, their symbolism and place in the Egyptian culture is limited, and there are still questions to be answered.

One of them is the mysterious sequence of pests listed in *Anastasi V* and *Sallier I* papyri. Is it incidental or is there some reason behind it?

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Notes

- 1 Chronology after Shaw (2003, 480–9). The dates are given for the dynasties, unless stated otherwise.
- 2 Texts in the article are translated by the author, unless otherwise stated (‘trans.’ before the author of translation).

- 3 The existence of only a small number of Egyptian words which may refer to crop-eating worms, their scarce presence in textual sources and the lack of a clear differentiation between at least some species belonging to crawling and creeping classes of creatures in the writing system, make all attempts of classification debatable at best (e.g. Wassel 1991, 15–19, 157–68; Egberts 1989, 34–40; Levinson & Levinson 1998, 138). Efflatoun (in Kevan 1985, 372) suggested the ‘identification’ with a cutworm, while Egberts mentioned wireworm and earthworm (as potential candidates, not a clear identification), as the worms attacking Egyptian fields (1989, 39). The agriculturally beneficial effect of the latter was not always known. In some periods of history, earthworms were treated as field pests (Egberts 1989, 39; Brown *et al.* 2003, 930–2). In ancient Egypt, the beneficial effect of the animal on the soil must have been known in Cleopatra times, as the queen’s decree declared them animals to be revered and put under protection (Brown *et al.* 2003, 930). However, I do not know of any document from Pharaonic times confirming the same attitude to the earthworm.
- 4 For that reason, the Egyptian term has been translated generally as mouse or rat. To avoid confusion in the naming used in this chapter, the world *pnw* will be translated as ‘mouse’, as the genus *Rattus* probably did not appear in Egypt until Ptolemaic times (Osborn & Osbornova 1998, 47).

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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.

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