Atti 8° Convegno Nazionale di Archeozoologia (Lecce, 2015), pp. 255-258.
DOI Code: 10.1285/i9788883051487p255

Francesca Alhaique[1], Licia Romano[2], Federica Gabbianelli[3], Alessio Valentini[3], Franco D'Agostino[2]

A Sumerian equid burial from Abu Tbeirah (Southern Iraq)

Una sepoltura di equide di età sumerica da Abu Tbeirah (Iraq meridionale)

Equid burials were relatively common during the third and second millennium BCE over a wide region from Egypt to Mesopotamia. During the 2013 field season an equid burial, referable to the second half of the third millennium BCE, was discovered at the Sumerian site of Abu Tbeirah (Southern Iraq). The animal was laid in a pit resting on its left side with tightly flexed limbs and the head bent on the right shoulder in an "unnatural" position. Given the poor preservation conditions of the specimen, recovered under a layer of salt crust, archaeozoological investigations, especially species identification, have been supplemented with aDNA analyses. The finding from Abu Tbeirah will be also discussed within the context of coeval equid burials of the Near East.

Le sepolture di equidi sono relativamente comuni nel terzo e secondo millennio a.C. in una vasta area che va dall'Egitto alla Mesopotamia. Durante la campagna di scavo del 2013, una sepoltura di equide è stata scoperta nel sito sumerico di Abu Tbeirah (Iraq meridionale) e riferita alla seconda metà del terzo millennio a.C. L'animale è stato deposto in una fossa poggiato sul lato sinistro con le zampe fortemente flesse e la testa ripiegata sulla spalla destra in una posizione "innaturale". Considerate le pessime condizioni di conservazione del campione, rinvenuto sotto un livello di crosta di sale, le indagini archeozoologiche, soprattutto per ciò che riguarda l'identificazione della specie, sono state integrate dall'analisi del DNA antico. Il ritrovamento di Abu Tbeirah, verrà inoltre discusso nel contesto degli altri ritrovamenti coevi di sepolture di equidi nel Vicino Oriente.

Parole chiave: Sepolture di equidi, Mesopotamia meridionale, III millennio a.C., DNA antico.
Keywords: Equid burials, Southern Mesopotamia, 3rd millennium BCE, aDNA.

Introduction

The site of Abu Tbeirah, located about 15 Km NE of Ur (Nasiriya, Dhi Qar province, southern Iraq), covers a surface of about 42 ha and has been excavated since 2012 by an Iraqi-Italian archaeological mission. The investigations in two different areas of the site evidenced so far some buildings and several human burials dated to the second half of the third millennium, between the end of the Early Dynastic and the beginning of the Akkadian period (D'Agostino *et al.* 2015 and references therein).

In October 2013, during the third field season, an equid burial was found in Area 2 located in the NE part of the site. The pit was dug in the SW corner of room 1 of Building B when such building was no longer in use. In the same area and archaeological level some human graves and a dog burial were also found (Fig. 1); however the latter was possibly associated to a disturbed human interment, while the equid one seems to stand on its own.

Materials, methods and results

The equid was laid in a shallow pit (Fig. 2) resting on its left side with tightly flexed limbs and the head placed on the right shoulder in an "unnatural" upside-down position as if the neck had been forcedly bent or broken. The skeleton was found only few centimeters below the salt crust that covers the surface of the excavation over the whole site and this heavily affected the preservation conditions of the bones that were in fact very fragile and fragmented (Fig. 3). Segments of the body were lifted with the sediment, but very few complete elements survived transport to the laboratory and allowed measurements (see Appendix). The head was left packed with the sediment for future conservation and possible display, only the teeth were cleaned in order to observe their morphology and assess the age at death of the animal.

1. Sezione di Archeozoologia, Servizio di Bioantropologia, Museo delle Civiltà, Roma, francesca.alhaique@beniculturali.it, Department of Anthropology, Washington University in St. Louis, Missouri, USA. 2. Dipartimento Istituto Italiano di Studi Orientali, Sapienza Università di Roma. franco.dagostino@uniroma1.it; licia.romano@unroma1.it. 3. Dipartimento per l'Innovazione dei Sistemi Biologici, Agroalimentari e Forestali, Università degli Studi della Tuscia, Viterbo. federica.gabbianelli@unitus.it; alessio@unitus.it.

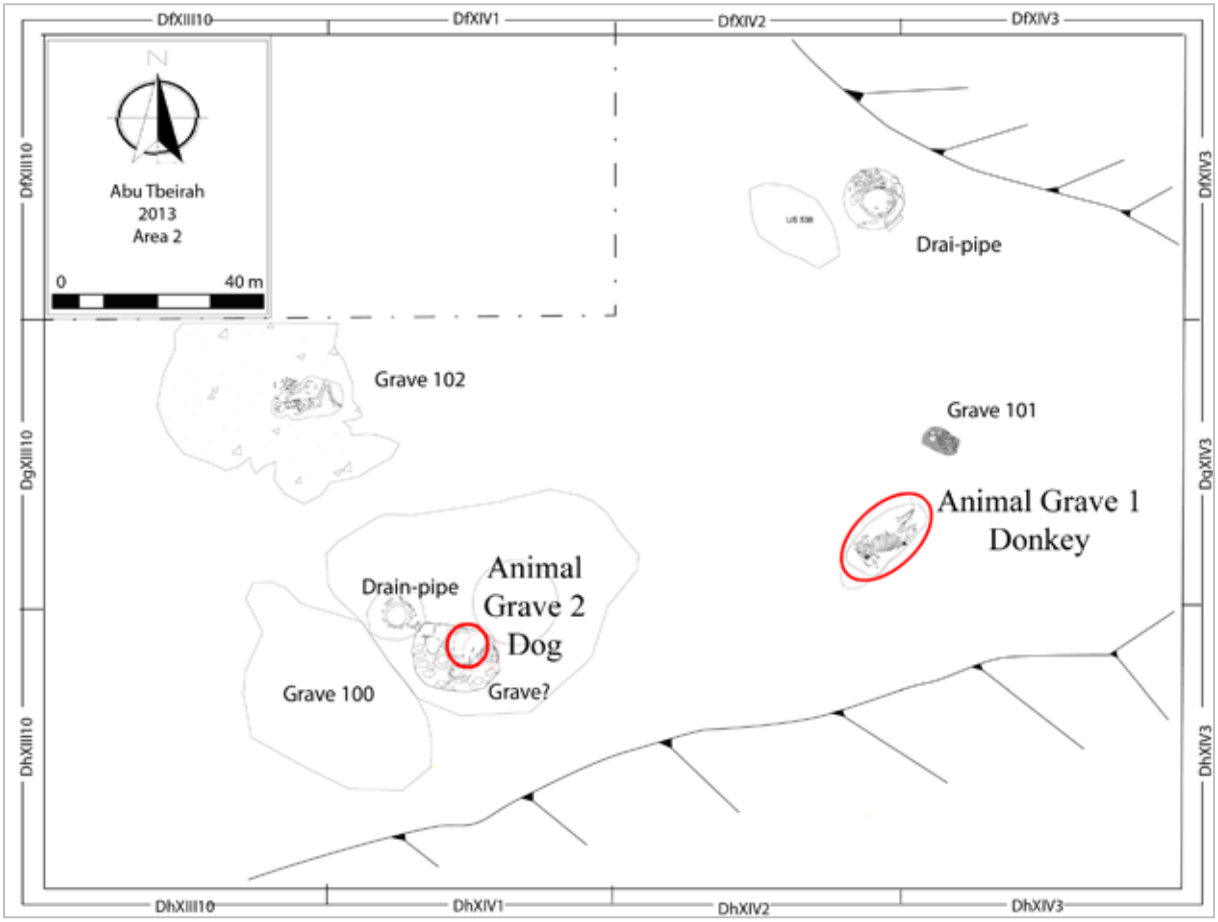

Fig. 1. Map of the Area 2 Cemetery with the location of the graves.

Fig. 2. The equid burial of Abu Tbeirah.

Fig. 3. Detail of the hind limb (note the poor preservation condition of the bones).

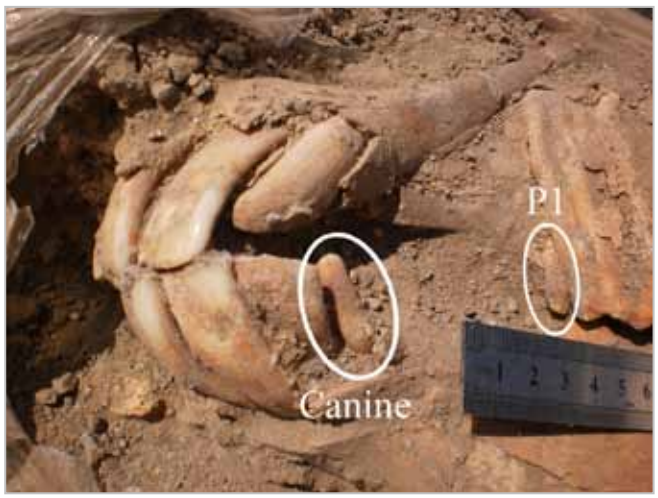

Fig. 4. Detail of the equid teeth.

Based on tooth wear and fusion of the bones (Barone 1981; 1995) the animal was probably 5.5 years old when it died, while the presence of the canines may suggest probably it was a male (Fig. 4). The upper first premolar, the so called "wolf tooth", is a relatively uncommon occurrence displayed in most equid species only by less than 31% of the individuals (Clutton-Brock 1986).

In southern Mesopotamia during the third millennium at least two species of equids were present: *Equus asinus* and *E. hemionus*, while the horse probably appeared in a later period. However, cross-breeds between these two animals are known both from cuneiform texts and zooarchaeological investigations (e.g. Weber 2008; Clutton-Brock 1986; Zarins 1978; 1986). The few measurable bones from the burial were not useful for species identification, but the teeth showed an asinine morphology rather than a hemione one (for a description of the features see Eisenmann 1986: 75-76). However, recent research has shown that species identification in the case of equids may be difficult, even for experienced researchers, when based only on morphological and dimension al data (Geigl, Grange 2012), therefore an upper second premolar was sampled for aDNA analyses; the results of the mtDNA show that the individual was a domestic donkey, at least on the mother side. Future analyses will possibly allow evidencing if the father was another donkey or a hemione, in fact the mtDNA of another equid associated to a human burial in the same area (Grave 100) belonged to *E. hemionus* (Gabbianelli *et al.* 2015).

Discussion

Equid burials were relatively common during the third and second millennium BCE over a wide region from Egypt to Mesopotamia (see Way 2010 for an overview), our finding is therefore not completely unexpected. Intentional burials may be associated to human graves or architectural features (e.g., walls, temples), but they may also stand alone.

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

At any rate there was a special relationship between humans and equids, as also supported by the finding of their remains associated to some of the human graves

at Abu Tbeirah (Alhaique *et al.* 2015). Apparently in many cultures of this period some kind of "Equid cult" seems to have replaced the previous "Cattle cult" and the reasons for such a shift need to be further investigated and discussed.

Acknowledgements

It is a pleasure to acknowledge the cooperation and friendship of the colleagues of the *State Board of Antiquities and Heritage*, who made all the efforts to make our stay in Iraq safe and pleasant, and contributed much to the results of the campaign: Amjad Neama, Thahir Aneid, Haider Nassir, Ghazwan Shaalan, Firas Farhan. At the same time we want to thank here all our workers, without whose enthusiasm it would have been impossible to achieve the information presented here. We also wish to thank our conservator Giulia Barella for the preliminary conservation of the donkey head.

References

Alhaique F., Tafuri M.A., Romano L., D'Agostino F. 2015, *Cibo per i morti e cibo per i vivi, una prospettiva dalla Mesopotamia meridionale all'alba della storia*, in Preatti della 50° Riunione Scientifica dell' Istituto Italiano di Preistoria e Protostoria. http://www.preistoriadelcibo.it/contributi/4_19.pdf

Barone R. 1981, *Anatomia comparata dei mammiferi domestici*, vol. 3, Bologna.

Barone R. 1995, *Anatomia comparata dei mammiferi domestici, Osteologia*, vol. 1, (it. ed. by R. Bortolani and E. Callegari), Bologna.

Clutton-Brock J. 1986, *Osteology of the equids from Sumer*, in R.H. Meadow, H.-P. Uerpmann (eds), *Equids in the Ancient World*, 1, Dr. Ludwig Reichert Verlag, Wiesbaden, pp. 207-29.

D'Agostino F., Romano L., Kadhem A. 2015, Abu Tbeirah, Nasiriyah (Southern Iraq). Preliminary Report on the 2013 Excavation Campaign, in M.G. Biga, J.M. Córdoba Zoilo, C. del Cerro, E. Torres (eds), *Homenaje a Mario Liverani, fundador de una ciencia nueva (II)/ Omaggio a Mario Liverani, fondatore di una nuova scienza (II)*, *ISIMU*, 13, Madrid, pp. 209-221.

Driesch A. von den 1976, A Guide to the Measurement of Animal Bones from Archaeological Sites, *Peaboby Museum Bulletins*, 1, Cambridge Massachusetts.

Eisenmann V. 1986, *Comparative osteology of modern and fossil horses, half-asses and asses*, in R.H. Meadow, H.-P. Uerpmann (eds), *Equids in the Ancient World*, 1, Dr Ludwig Reichert Verlag, Wiesbaden, pp. 67-116.

Gabbianelli F., Alhaique F., Romano L., D'Agostino F., Valentini A. 2015, mtDNA Analysis for the Characterization of Sumerian Equids, *Italian Journal of Animal Science*, 14,1, p. 112.

Geigl E.M., Grange T. 2012, Eurasian Wild Asses in Time and Space: Morphological versus Genetic Diversity, *Annals of Anatomy*, 194, pp. 88-102.

Greenfield H.J., Shai I., Maeir A. 2012, Being an "ass": An Early Bronze Age Burial of a Donkey from Tell es-Safi/Gath, Israel, *Bioarchaeology of the Near East*, 6, pp. 21-52.

Payne S. 1991, Early Holocene *equids from Tall-I-Mushki (Iran) and Can Hasan III (Turkey)*, in Meadow, R.H., Uerpmann H-P. (eds), *Equids in the Ancient World*, 2, Dr. Ludwig Reichert Verlag, Wiesbaden, pp. 132-164.

Scurlock J. 2002, *Animal Sacrifice in Ancient Mesopotamian Religion*, in B.J. Collins (ed), *A History of the Animal World in the Ancient Near East*, Brill, Leiden, pp. 389-403.

Way K.C. 2010, Assessing sacred asses: Bronze Age donkey burials in the Near East, *Levant*, 42 (2), pp. 210-225.

Weber J. 2008, Elite equids: redefining equid burials of the mid- to late 3rd millennium BC from Umm el-Marra, Syria, in E. Vila, L. Gourichon, A.M. Choyke, H. Buitenhuis (eds), *Archaeozoology of the Near East VIII*, *Travaux de la Maison de l'Orient*, 49, Paris, pp. 499-519.

Zarins J. 1978, The Domesticated Equidae of Third Millennium BC Mesopotamia, *Journal of Cuneiform Studies*, 30 (1), pp. 3-17.

Zarins J. 1986, *Equids Associated with Human Burials in Third Millennium BC Mesopotamia: Two Complementary Facets*, in R.H. Meadow, H.-P. Uerpmann (eds), *Equids in the Ancient World*, 1, Dr Ludwig Reichert Verlag, Wiesbaden, pp. 164-193.

Appendix

Tooth measurements follow Payne (1991); bone measurements follow von den Driesch (1976).

* indicates approximate measurements.

Element	Side	Measurements (mm)
Upper 1st Molar	left	OL=*26 Be=22.8 LP=12.4
Upper 2nd Molar	left	OL=24.3 Be=22.4 LP=12
Upper 3rd Molar	left	OL=23.8 Be=18.2 LP=10.7
Upper 2nd Premolar	left	OL=35.4 Be=24.4 LP=8.7
Upper 3rd Premolar	left	OL=27 Be=24.9 LP=10.6
Upper 3rd Premolar	left	OL=*27 Be=25.6 LP==12.3
Maxilla	left	22= 152.8
Mandible	left	6= 152.4
Femur	left	Bd=*74
Fibula	right	GL =*44
1st Phalanx		Bd=38.7
1st Phalanx		GL=78.2 Bp=40.6 Dp=30.8 SD=28.0 Bd=38.5
2nd Phalanx		GL=41.3 Bp=42.8 Dp=27.6 SD=35.8 Bd=40.6
2nd Phalanx		GL=40.9 Bp=42.2 Dp=27.5 SD=36.6 Bd=*40.3
3rd Phalanx		GL=*47.1 GB=*55.8 BF=*36.6