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The earliest phase of introduction of Southwest Asian domesticated animals into Africa. New evidence from the Fayum Oasis in Egypt and its implications

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ABSTRACT

The oldest records for Southwest Asian domesticated livestock species in Egypt date to the late 7th but mainly the 6th millennium cal BC and are among the earliest known evidence from the African continent as a whole. The records were obtained from Egypt's Eastern and Western Desert, where only cattle and caprines are present, and are not associated with evidence for cultivated crops. It takes until the 5th millennium cal BC before significant numbers of sites, with significant numbers of bones of domesticated species appear. In the Fayum Oasis, the sites of Kom K and Kom W date to this period and these have generally received most attention in the context of early stock keeping. However, older evidence for domesticated stock has also been found in the Fayum. We describe new faunal data from the early and middle Holocene, at and around the E29H1 locality, including the oldest remains of domesticated caprines recorded from the Fayum up to now (ca. 5600 cal BC). Based on the new finds, we emphasise the need to also investigate surface sites. We argue that much of the earliest history of stock keeping in Egypt is skewed by a lack of evidence. The remaining fauna from E29H1 shows the importance of fish. This is a common feature of all prehistoric sites of the Fayum and indicates adaptations to the local environment.

1. Introduction

The Fayum Oasis in northern Egypt (Fig. 1) is a natural depression separated from the Nile Valley by a ridge known as the Nile-Fayum divide (Sandford and Arkell, 1929). In the course of the Holocene, Nile floodwaters are thought to have repeatedly reached the height of the channel cut in this divide, and transformed the depression into a series of lakes (Said, 1993), of which the present Lake Qarun is a remnant. In 2008, salvage archaeology work was carried out at locality E29H1at the northern edge of Fayum (Fig. 2), in the concession of the **U**niversity of California, Los Angeles, USA, the **R**ijksuniversiteit Groningen, the Netherlands, and the **U**niversity of Auckland, New Zealand (URU). In 2012 the wider area around E29H1 was also investigated. The investigations were undertaken in the framework of large scale archaeological work in the north of the Fayum Oasis, in order to understand prehistoric land use and occupation (Holdaway and Wendrich, submitted for publication). Faunal remains collected were studied by the first author as part of a postdoctoral research project on the transition to food production in northeastern Africa. Unexpectedly, at E29H1 evidence from the earliest phase of appearance of Southwest Asian domesticated animals in Egypt was found. This evidence and more importantly its implications for the study of early stock keeping in Egypt are presented below.

1.1. Current state of evidence for early stock keeping in Egypt

The area within the borders of modern Egypt is very important for the reconstruction of the spread of stock keeping over Africa as a

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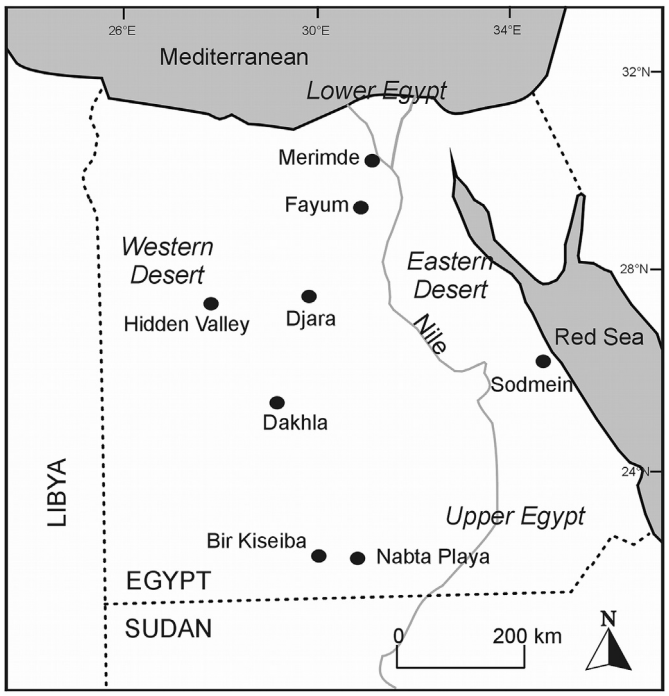

Fig. 1. Map of Egypt with indication of sites and regions mentioned in the text and tables. See Fig. 2 for the location of sites inside of the Fayum.

whole. There is a general consensus that this area served as an overland corridor through which domesticates from Southwest Asia passed before they reached other parts of the continent (Blench and MacDonald, 2000). However, recent archaeological data suggest that in coastal areas of northern Africa, the expansion of agricultural economies was accomplished through several waves of seafaring, as in other parts of the Mediterranean (Zeder, 2008; Barich, 2014). The current evidence also suggests that farming and stock keeping reached the west of North Africa (Morocco) at the same time or earlier than the eastern parts of North Africa (modern day Egypt), pointing to independent routes of dispersal (Barich, 2014).

In order to understand the significance and meaning of newly excavated and studied, large animal bone assemblages from the Fayum "Neolithic" sites Kom K and Kom W (ca. 4500 cal BC), we have recently made a critical assessment of the available archaeozoological evidence for early stock keeping in Egypt (Linseele et al., 2014) (Table 1). These data suggest that there were two phases in the appearance of animal domesticates in Egypt. In the late 7th, but mainly in the 6th millennium cal BC, undisputable evidence for domesticated animals first appears. The numbers of bones recorded for this phase are very limited and all come from the Egyptian deserts, where people with apparently mobile lifestyles had caprines (*Ovis aries* and *Capra hircus*) and some cattle (*Bos taurus*). Key sites and areas include Nabta Playa/Bir Kiseiba (Gautier, 2001) and Hidden Valley Site in the Farafra Oasis (Gautier, 2014) for the Western Desert, and Sodmein for the Eastern Desert (Vermeersch et al., 2015) (Fig. 1). At this stage, there is no evidence for the cultivation of crops. Not all sites in the Western Desert dating to the 6th millennium cal BC have evidence for domestic stock (Pöllath, 2009). However, from the 5th millennium cal BC, numbers of Egyptian sites with domestic animals significantly increase and these also appear in the Nile Valley. The pig (*Sus domesticus*) is added to the list of domesticated species found. Cultivated crops from Southwest Asia are from then onwards also present in the Egyptian archaeological record. Before the appearance of Southwest Asian domesticates, there was a phase with possible management of local wild species in northern Africa. This is proposed for aurochs/wild cattle (*Bos primigenius)* at Nabta Playa/Bir Kiseiba (late 9th/8th millennium cal BC) and this has resulted in the hypothesis that cattle were also locally domesticated (Gautier, 1984, 2002), although this remains highly controversial. In the Acacus in Libya, management of Barbary sheep (*Ammotragus lervia*) at ca. 6000 cal BC is hypothesised (Di Lernia, 2001). This is less controversial than for the African aurochs because the Barbary sheep was never domesticated. In Southwest Asia the major livestock species were domesticated from about the middle of 9th millennium cal BC (Vigne, 2011) and by the 5th millennium cal BC, farming economies reached the western borders of continental Europe (Crombé and Robinson, 2014). Considering its proximity to Southwest Asia, domesticates from this region appear comparatively late in Egypt and this remains one of the key issues in the archaeology of Holocene northern Africa.

Table 1
Egyptian sites dating to the 6th millennium cal BC with numbers of bones of domesticated animals recorded. X = present but numbers not reported. For a summary of the context and more details of these finds see Linseele et al. (2014).

Site	Approximate date (cal BC)	Cattle	Sheep/goat	of which sheep	of which goat	References
QS XI/81 (Fayum)	5400	–	5	1	–	von den Driesch, 1986
QS IX/81 (Fayum)	5350	10	46	7	1	von den Driesch, 1986
Hidden Valley	6200–5500	–	15	min. 1	min. 4	Gautier, 2014
Djara	6500–5900 + 4900	–	1? + 1	1?	–	Kindermann et al., 2006
Dakhla Oasis	6500–5600/5400	x	x			McDonald, 1998, 2013; Churcher et al., 2008
Nabta Playa/Bir Kiseiba	6100–5400	35	120	Mainly sheep		Gautier, 2001
Sodmein	6200–3700	–	10	–	1	Vermeersch et al., 2015

1.2. E29H1 and the archaeology of the northern shore of Lake Qarun in the Fayum Oasis

Apart from the two famous sites Kom K and Kom W, prehistoric traces on the north shore of Lake Qarun generally occur as surface artefact scatters and form a continuous cultural landscape within which there are areas with different types and quantities of features. Despite the shallow nature of deposits, preservation of material is remarkable. The earliest Holocene traces date to ca. 7400 cal BC. Previously, the prehistory of the Fayum was subdivided into an Epipalaeolithic, also described as Fayum B or Qarunian, and a Neolithic phase, Fayum A, in which farming and herding appeared, separated by a gap in the first half of the 6th

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