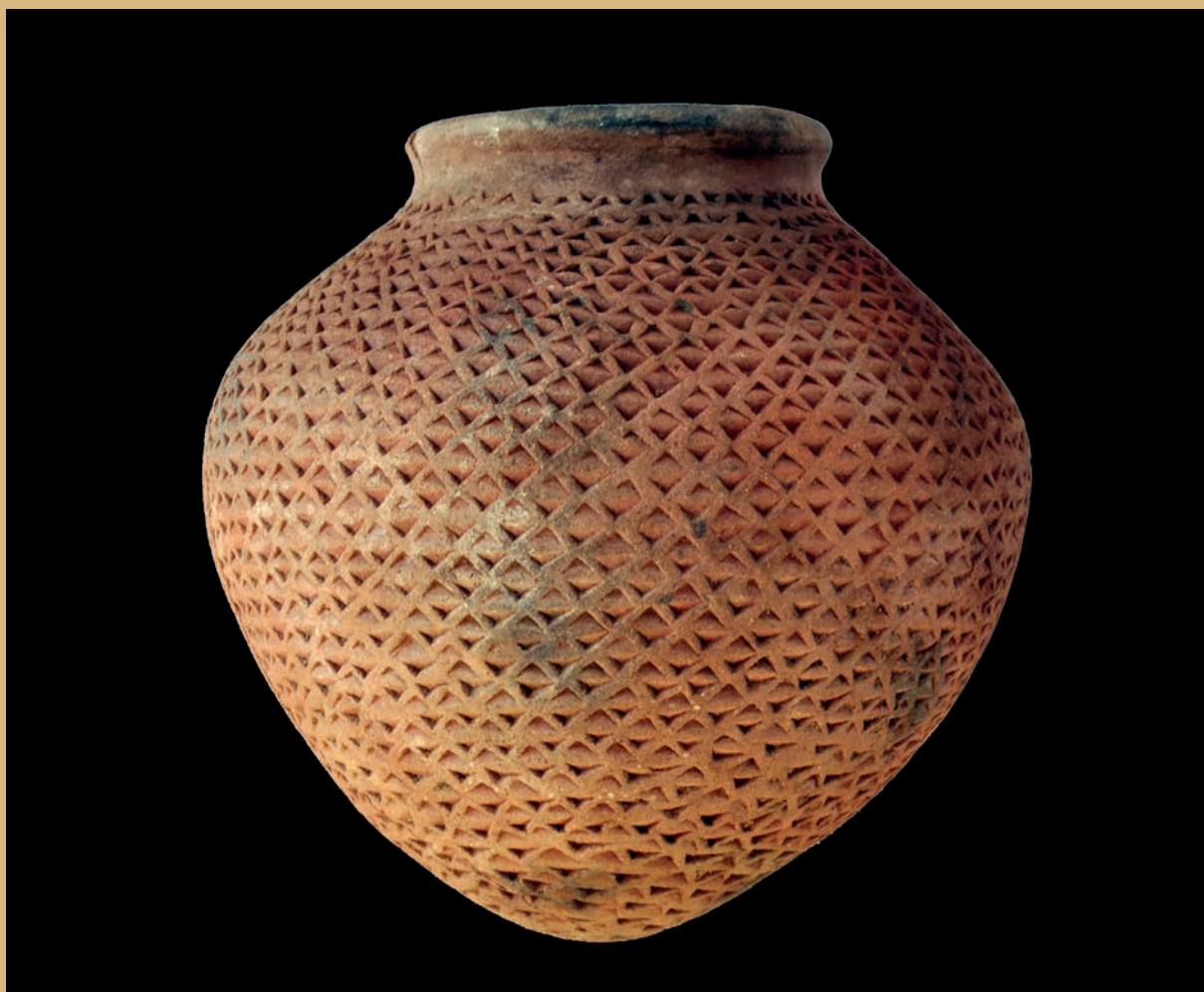


K E R M A

2015-2016 and 2016-2017

SOUDAN

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Louis Chaix • Bastien Jakob • Jérôme Dubosson



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Cover figure: Early Kerma pottery found in the tomb T672, Sector CE29 (ca. 2100 BC).
Photo: Matthieu Honegger

FROM THE MESOLITHIC TO THE BEGINNING OF THE NEOLITHIC IN UPPER NUBIA: THE SEQUENCE OF WADI EL-ARAB (8300-5400 BC CAL)

The site of Wadi El-Arab is located 15 km east of the Nile in the region of Kerma (figure 31). It is interesting in offering a continuous sequence stretching from 8300 to 5400 BC, which allows us to follow some of the stages in the neolithisation process of the area. The site was excavated during seven seasons between 2005 and 2013. Preliminary results have already been published in the *Kerma Magazine* (Honegger 2010, 2011, 2012, 2013; Honegger and Jakob 2009; Jakob 2015; Liseele 2012; Williams 2012), as well as in an article dealing with the occupation of the Region of Kerma (Honegger and Williams 2015). Several researchers have been implicated in the study and publication of the site, notably the study of the faunal (Veerle Linseele), the skeletal remains from the sepulchres (Isabelle Crèvecoeur) and the sedimentation processes (Martin Williams and Michel Guélat). As regards the study of the archaeological remains, Bastien Jakob has picked up the baton and is making it the subject of his doctoral thesis. The present article is drawn from a communication presented at the 23rd biennial Meeting of the Society of African Archaeologists (SAFA) held at the Jean-Jaurès University (Toulouse, 26 June-2 July 2016).

During the last two decades, the subject of neolithisation has been a particular focus of interest for archaeologists, so that several regions of North-East Africa have been studied from this perspective. Amongst the most important, we need to mention Nabta Playa and Bir Kiseiba (Wendorf and Schild 2001), the western desert explored by the team from the University of Cologne (Kuper and Riemer 2013), as

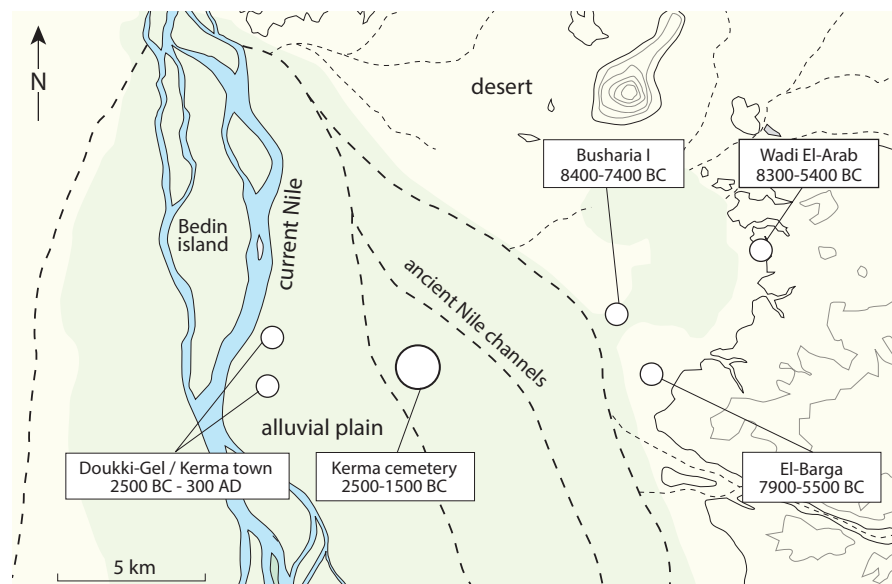


Figure 31/ Localisation of
Wadi El-Arab in the Kerma
Basin.



Figure 32/ Objects deposited in the Neolithic tombs of El-Barga (6000-5500 BC). Earrings, beads, pendent and lip-lugs.

well as Central Sudan (Usai 2014). Generally speaking, the sites in the Egyptian Nile Valley are rare, and do not allow the sequence of events to be followed during the neolithisation process, whilst this region should be playing a central role. It is thought that most of the sites have been buried under the river-born sediments, eroded or destroyed by agricultural practices. In this context, the site of Wadi El-Arab is of particular interest, since it is a source of new information, and fills a gap for the Nile valley and Upper Nubia.

Previous studies on the occupation of the region have demonstrated that that up until 5400 BC, the human settlements were located on the fringes of the alluvial plain, above the Nile flood-waters. The period which is of greatest interest to us lies between 6500 and 5500 BC. It is during this period that we can observe the first changes associated with the neolithisation process. Two sites cover this period. On the one hand the site of El-Barga, which is made up of two cemeteries, one of which belongs to the Mesolithic and the other the beginning of the Neolithic; on the other, the site of Wadi El-Arab at which there is a sequence of habitations including a few tombs.

At El-Barga (Honegger 2004, 2005), the Mesolithic cemetery is dated between 7800-6900 BC and comprises some 50 inhumations in pits without grave goods, unless we include a single shell in two tombs and a few beads made of ostrich eggshell in another. The Neolithic cemetery extends further south and is made up of over 100 tombs which date from 6000-5500 BC. One of the sepulchres was capped by the bucranium of a cow, which confirmed its appurtenance to the Neolithic. Important changes in the funerary rituals and in the morphology of the skeletons occur, whilst

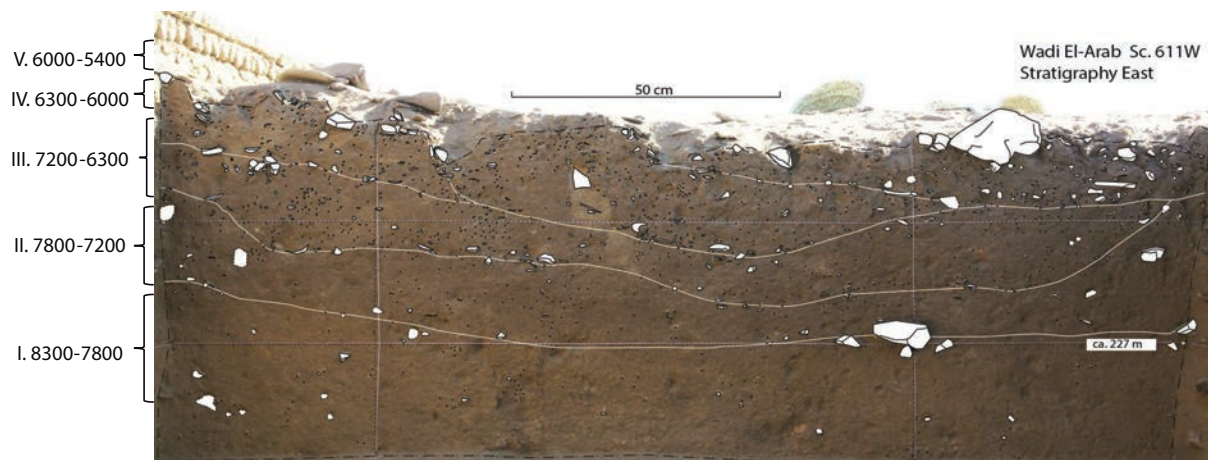


Figure 33/ Stratigraphy of Wadi El-Arab with the principal occupational phases.

all the graves continue to be individual inhumations in pits. The presence of grave-goods, largely new to the region, occurs almost systematically in the Neolithic graves. These are characterised by the presence of polished stone objects: axe heads, labrets and ear-rings; by several items of burnished pottery devoid of printed decoration; by bracelets made of hippopotamus ivory and simple make-up palettes (figure 32). The occasional object harps back to the previous period, such as two bone harpoons and pottery with printed decorations. At the anthropological level, the contrasts are also striking (Crèvecoeur 2012); the Mesolithic individuals are extremely robust, and exhibit strong muscular attachments on the cranium, long and wide mandibles with spina mentalis exceptionally developed, higher dental diameters, etc. They are close to Epipalaeolithic populations. The Neolithic skeletons are more gracile with shorter and narrower mandibles. They are close to Neolithic populations of the 5th millennium. All these elements speak for important changes involving the arrival of new populations, and give the impression of a certain rupture, rather than a slow transformation. It is in relation to this apparent rupture that we examine the sequence from the site of Wadi El-Arab. We ascertain what elements of the material culture change at this habitation site, which is contemporaneous with El-Barga, in order to determine whether the rates of change in this context appear to be slow or rapid.

The site of Wadi El-Arab is located on the fringe of the alluvial plain, with the Nile floods lapping the edge of the site at the beginning of the Holocene. One of the principal attraction of the site is the fact it has preserved sediments one metre thick, with a crust at their summit and carbonate infiltrations which protect them. The site extends over more than three hectares. Two main sectors were excavated. The

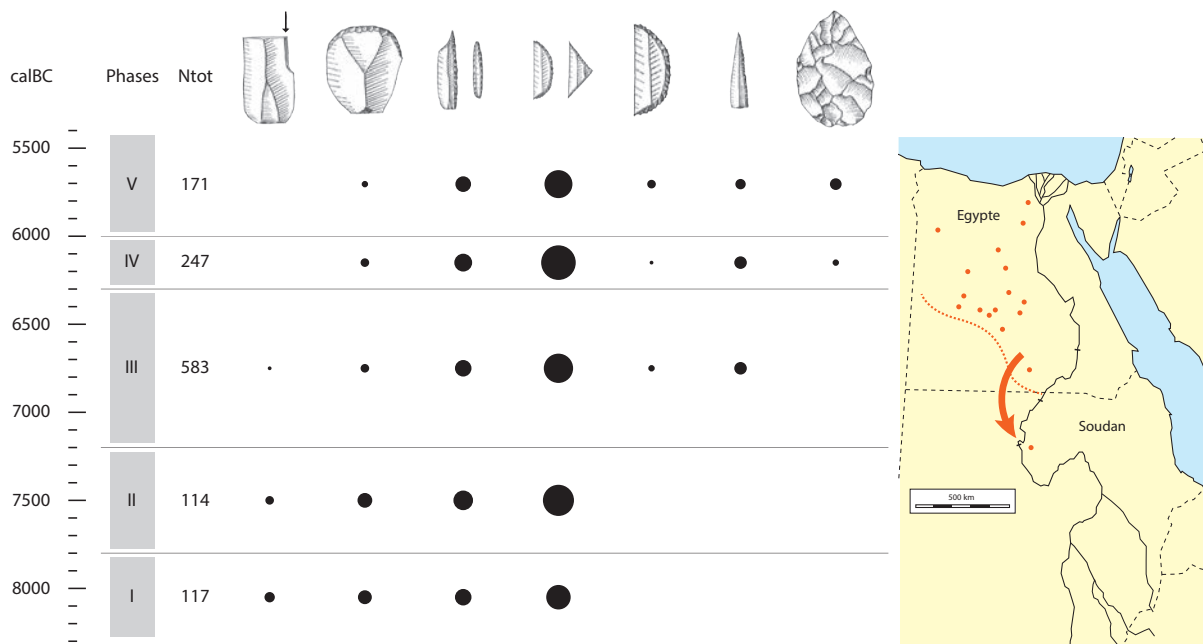


Figure 34/ Main types of the knapped lithic industry in Wadi El-Arab with their chronological evolution. The map shows the distribution of lithic bifacial tools in Egypt and Sudan (after Riemer 2007)..

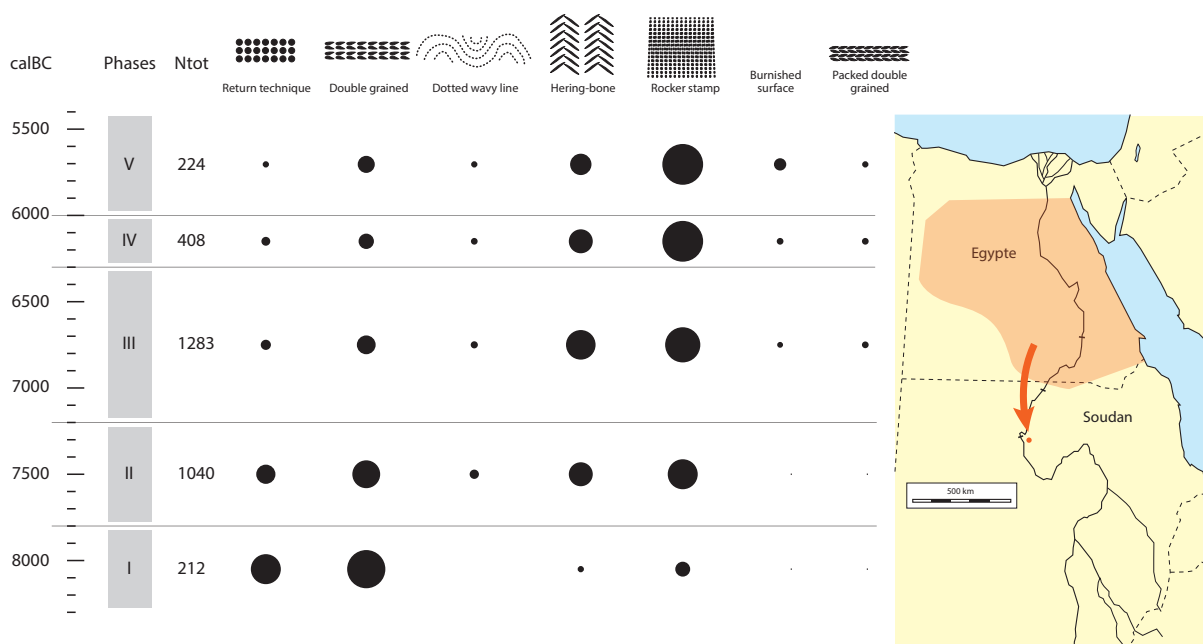


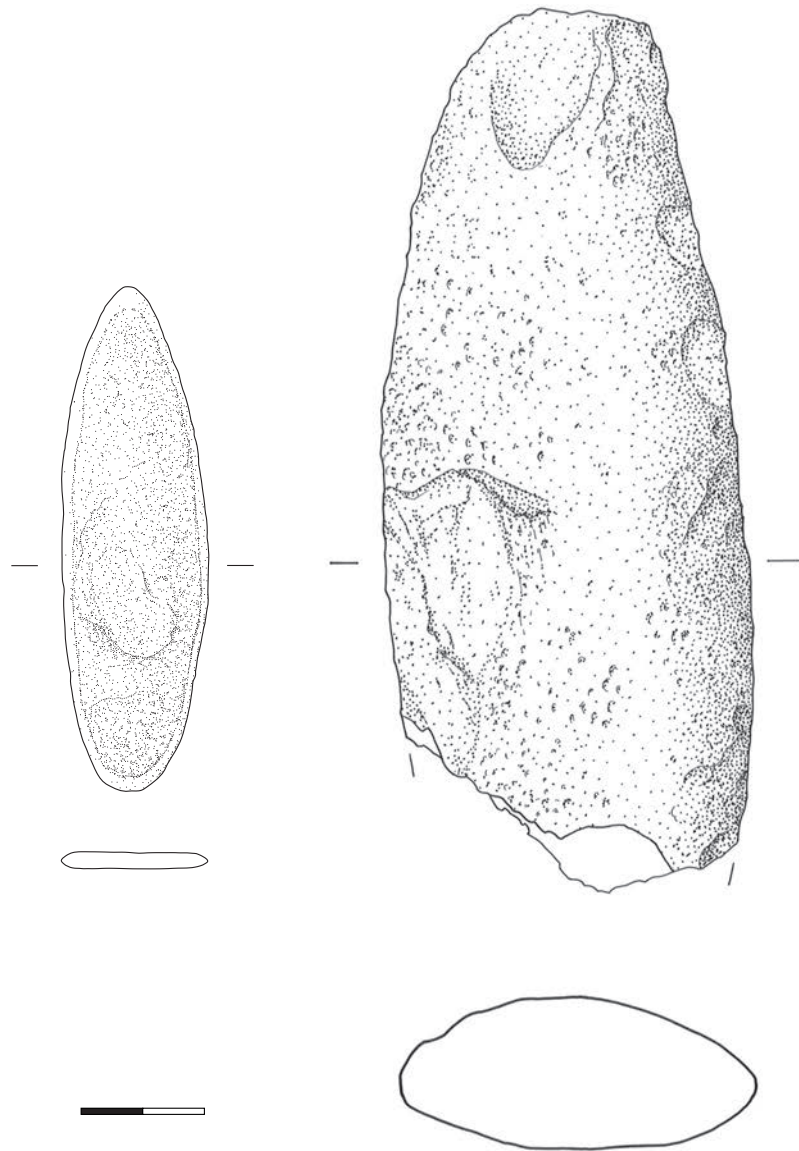
Figure 35/ Chronological evolution of the pottery decoration and surface treatment in Wadi El-Arab. The map shows the distribution of burnished pottery in the 6th millennium BC in Egypt and Sudan (after Riemer 2007)..

sedimentary sequence is poorly contrasted, but cross-referencing the stratigraphic, chronological and cultural data has permitted the identification of five phases spread between 8300-5400 BC (figure 33). These five phases cover the entire Mesolithic and the Initial Neolithic. It is clear that post-depositional phenomena do not permit as fine a vision as one obtains in closed contexts. The main evolutionary tendencies can however be interpreted, as well as certain cultural breaks. Phases 2 and 3 are the thickest and best preserved, whilst phases 4 and 5 at the top of the stratigraphic sequence have suffered most from erosional effects, and are quantitatively less important. Faunal remains are particularly poorly preserved at the top of the sequence, which could explain why no remains of domesticated fauna were found, with the exception of a bovine metapode fortuitously discovered on the surface. The evolution of the knapped lithic industries is relatively homogeneous and shows no evident signs of ruptures (figure 34). The presence in particular of geometric microliths – segments of circles and triangles – borers and drills, pieces with regular retouch – with abrupt retouch in particular – as well as irregular retouch, are constants. It is interesting to note that burins were only found in the earlier phases and that the large segments of circle and backed points only appear starting in phase 3. The most important rupture is marked by the use of a new technique in phase 4 with the appearance of points made by invasive bifacial shallow retouch. In fact, traditionally, Nubian lithic industries produce microliths with abrupt retouch. The appearance of these bifacial pieces in the mid-7th millennium BC is indicative of contacts with Egypt, where this type of point is diffused at the same time (Riemer et al. 2013). Wadi El-Arab is located much further south than the limit of the area covered by the sites which produced bifacial points.

The pottery at Wadi El-Arab evolves in several “Sudanese” styles of Impressed Ware (figure 35). It shows clear affinities in particular with the Nubian sequences and with those from the region of Nabta Playa in particular. The earliest decorative styles are produced using the alternative pivoting stamp technique (APS) and the return technique in particular. During the intermediary phases, the famous dotted wavy line and the herring-bone pattern appear. The rocker stamp technique is the most prevalent starting in phase 2. At the end of the sequence burnished and particularly fine pottery appears in the final ensemble. This last pottery style once again echoes Egypt, where, during the 7th millennium BC, burnished pottery appears, which would progressively supplant the regional traditions (Riemer et al. 2013). A fragment of beaker was also found at the top of the sequence, in a context dated to the 6th millennium BC, which is a type of pottery which would evolve particularly starting in the Middle and Final Neolithic (Jesse 2007).

At the top of the sequence, a few items made of polished stone make a discreet appearance (figure 36). These few objects echo the numerous polished stone axe-heads and body ornaments discovered in the necropolis of the nearby Neolithic site of El-Barga. The technique of polished stone appears in the region of Kerma at the advent of the Neolithic. The origin of this technique is problematic and as-yet not clearly established for North-East Africa. Does it come from the north with the

Figure 36/ Polished point and axe made from metamorphic stone from the upper level of Wadi El-Arab.



other components of the Neolithic, or does it originate elsewhere? From Niger for example, where Roset appears to have found a very early production of polished stone objects at the site of Tagalagal (Roset 1983). It is difficult to make a clear determination at present, and more research may help clarify the situation.

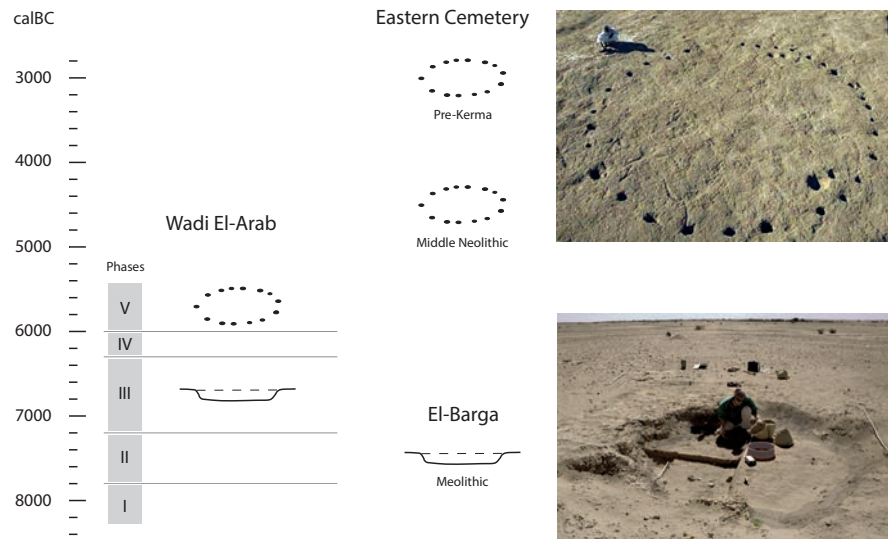
The evolution of the habitations at the site of Wadi El-Arab, shows a marked difference between the 7th and 6th millennia BC (figure 37). A tradition of semi-subterranean huts gives way to huts built with a wood-post frame. Similar semi-subterranean huts were found in the region of Nabta Playa (Wendorf and Schild 2001), as well as the nearby site of El-Barga (Honegger 2004) and in Central Sudan at the site of El-Khiday (Salvatori et al. 2014). As for the circular wood-post huts,

these can be found in the region at sites dating from the Middle Neolithic until the period of the Kingdom of Kerma (Honegger 2006). It is possible that this change in the type of habitation was generalised and symptomatic of an important transformation, which was tied to the establishment of the Neolithic.

The sequence of Wadi El-Arab reveals numerous changes in the 6th millennium. These changes however, seen quantitatively, do not appear to give the impression of major ruptures. They give the appearance of being progressive, with a strong continuation of the underlying Mesolithic culture. The contrast is greater in the funerary context at the site of El-Barga, where a clearer rupture can be observed. This observation is not however necessarily contradictory. The choice of objects deposited as grave-goods at El-Barga appears to have accentuated the differences, especially as regards body ornaments, which are in complete contrast to the preceding Mesolithic. The few examples of pottery at El-Barga emanate from two traditions (Impressed Ware of Sudanese tradition and Burnished Ware). The chipped stone industry, which is poorly represented in the tombs, cannot be used as a basis of comparison in a similar manner. Finally, it must also be acknowledged that the Wadi El-Arab sequence has to date not yielded much material from the 6th millennium occupation levels. Further research should allow us to fine-tune our initial reflections.

To conclude, the neolithisation process in Nubia comes across as being similar to other north-east African regions. It is characterised by the gradual introduction of Neolithic attributes: bovines, most likely followed by caprines, then by agriculture, which last is very poorly attested. We can assume the arrival of new populations starting in the early 6th millennium BC, which merged with the Mesolithic substrate, bringing about progressive changes in the material culture and more marked contrasts in the area of funerary rituals.

Figure 37/ Chronological evolution of the habitation structures from the Mesolithic to the Neolithic in the region of Kerma.



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