On Neolithic funerary practices: were there "necrophobic" manipulations in 5th-4th millennium BC Arabia?

Vincent Charpentier and Sophie Méry

Summary

This paper reviews the evidence for Neolithic burial practices in SE Arabia, focusing in particular on sites in the Ja'alan region of eastern Oman. Attention is given to the nature of material buried with human remains, including jewellery and, most interestingly, the bones and shells of green turtles in the burials of Ra's al-Hamra 5 and 10. The paper concludes with a discussion of the possible evidence for "necrophobia" at the 5th millennium BC Neolithic necropolis of Suwayh 1.

Introduction

In the Persian Gulf, archaeological research of the past fifty years has concentrated on the Bronze Age, on the Dilmun and Magan cultures, and their relations with the regions located between Mesopotamia and the Indus Valley. Archaeologists have paid less attention to the late prehistory of the Gulf, except in relation to exchange between this region and the Ubaid culture of lower Mesopotamia.

Excavations concerning the Neolithic period in Arabia are rare; twenty sites at most have been excavated between Kuwait and the Sultanate of Oman. Most of these are coastal occupations, in the form of large shell-middens. Only a dozen Neolithic necropolises have been identified in the Oman peninsula, as unlike the monumental collective tombs of the early Bronze Age, the necropolises of the 5th-4th millennia are located within the settlements themselves and are particularly discreet, thus difficult for the archaeologist to detect. In the province of Ja'alan (Sultanate of Oman) only three are known, in spite of more than twenty years of intense research. They are Suwayh SWY-1, Ruways RWY-3, Ra's al-Khabbah KHB-1 and perhaps Ra's al-Wuddaya WD-58.

It is in this context that we present a funerary practice so far not identified in the Neolithic of Arabia, and we propose to relate it to an ideology of "necrophobia". At this point it is only a working hypothesis, and rests upon the data from the excavation of tombs in three necropolises of the 5th-4th millennia, particularly that of Suwayh 1, which is the earliest known necropolis in the Sultanate of Oman. Its excavation is quite recent and was carried out during a program begun in 1996 on a series of shell-middens on the shores of the Indian Ocean (Charpentier 2008; Charpentier, Marquis & Pellé 2003).

Why collect the dead together?

In Arabia, well before the advent of our modern GIS and teams of funerary archaeologists, Joseph Halévi in Yemen, as well as Bertram Thomas in Oman, St. John Philby and Reverand Zemmer in Saudi Arabia, noticed that the protohistoric funerary monuments occupied outstanding points on the land (Halévi 1873; Philby 1939; Thomas 1931; Zwemmer 1900). Following Colin Renfrew in Great Britain or Claude Masset in France,

work in Arabia today tends to demonstrate that beyond their sepulchral role, these tombs are above all the affirmation of the living and the marker of a new social order (Cleuziou 2006). We know less whether the preferred location of necropolises on high points predates the early Bronze Age. However, beginning in the 5th millennium, they occupy knolls or promontories, as at Ra's al-Khabbah, Ruwayz, Suwayh, Ra's al-Hamra and Wadi Shab in Oman and UAQ-2 in the United Arab Emirates. They are also sometimes found at the foot of jebels and near springs, as at Buhais-18 or Faye NE-15, two necropolises which are, with that of Suwayh 1, the oldest in the Oman peninsula. On the other hand, we know nothing yet of the funerary practices of the hunter groups of the early Holocene (11th-8th millennia BC), nor of the possible continuation of their tradition during the Neolithic. In any case, and for the same reasons as the creation of trade over long distances, grouping of the deceased and the necropolis are characteristic of the Neolithic and are indicative of new social relations.

Primary, multiple, secondary but never collective

In the Neolithic, funerary structures are always graves dug in the substratum. Except for a few partly burned skeletons at al-Buhais (Kiesewetter 2006) and Ruwayz, incineration was unusual and the only funerary practice was inhumation. The graves were filled after deposit of the body (laid on the right or left side, legs folded or in a constrained position, sometimes an arm bent, hand near the face). The burials are often simple (Fig. 1:1) but can also be multiple (Fig. 1:3), and groups of 2 to 5 individuals, adults and children, are in evidence at al-Buhais-18 and at Ra's al-Hamra-5, for example. Successive primary burials are also attested at Buhais-18 and at Umm al-Quwain-2 (Kiesewetter 2003, 2006; Phillips 2002), while empty spaces were reserved in certain tombs of Wadi Shab 1 (Gauthier *et al.* 2005).

Other types of burial existed in parallel, as indicated by the succession of some forty primary deposits on a large sandy hillock in Umm al-Quwain-2, while complex primary and secondary deposits have recently been recognized at Buhais-18 (Kieswetter 2006; Kutterer, this volume and pers. comm.). It has been suggested that these are collective burials (Cleuziou 2005; Cleuziou and Tosi 2007), but we do not agree, as a collective burial is by definition a closed and empty space which is accessed many times (Leclerc 2003). As voluminous as it is,



Figure 1. 1: Simple burial G 93 at Ra's al-Hamra (after Salvatori 2007); 2: secondary burial; 3: multiple burial at Jebel Buhais (after Kiesewetter 2006).

structure 43 of Ra's al-Hamra 5 (Fig. 1:4) (Salvatori 2007) is not a collective burial either but a group of successive deposits dug into the earth, for which the interpretation remains to be made. And we think that it is in these particular types of deposits that one of the origins for collective burials at the beginning of the early Bronze Age (Hafit period) should be looked for.

In the Neolithic, manipulations after deposit of the body or bodies were also practised within burials in eastern Arabia. This is the case for tomb 68 inf. of Ra's al-Hamra 5, which contained the bones of 5 individuals, and structure 6 of Wadi Shab 1, with an incomplete skeleton in connection; these are interpreted by the excavators as decarnation pits (Salvatori 1996, 2007; Gauthier *et al.* 2005). The process of de-fleshing appears to have been "passive" as no traces of voluntary stripping of the bones (traces of cutting, etc.) have been identified.

Secondary burials are definitely present, but generally in the minority in the necropolises (less than 10% at Ra's al-Hamra RH-5). They are the result of a process over a particular period of time, and imply several funerary manipulations and temporary locations. Buried in its definitive grave, the deceased then no longer possesses funerary objects, except in rare cases, as at Jebel al-Buhais 18 (Fig. 1:2) (Uerpmann, forthcoming).

Funerary objects and deposits in the primary burials of the 5^{th} - 4^{th} millennia BC

The objects discovered in the Neolithic burials are individual, not collective as in the case especially of the Jemdet Nasr vessels in the Hafit period tombs (Méry 1995). As in other regions in the same periods, individual ornaments played an important role in eastern Arabia in the funerary context, with various compositions of

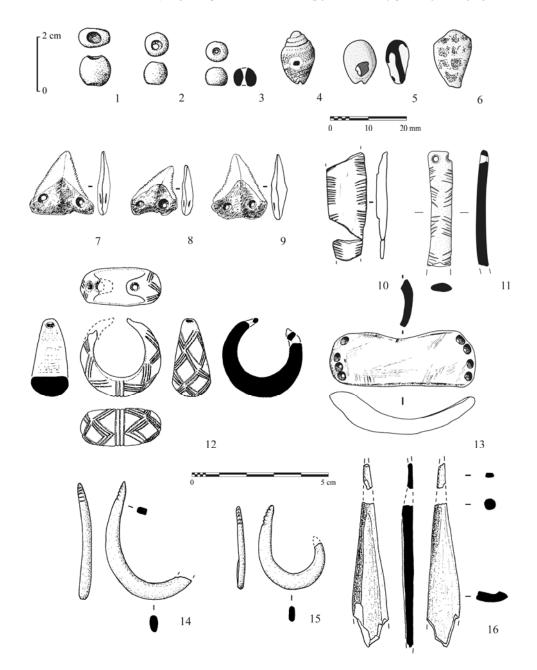


Figure 2. 1-3: pearls, Suwayh 1 (1, tomb 4; 2-3, sect. 6); 4-6: shells beads, al-Haddah BJD-1: 4. *Engina mendicaria*, 5. *Prunum terverianum*, 6. *Conus* sp; 7-9: shark tooth arrowheads, Suwayh 1; 10: laurel leaf shaped pendant, Suwayh 2; 11: shell pendant, Suwayh 10;12: chlorite earring, Suwayh 2; 13: element of composite bracelet, *Conus* Sp, Ruwayz 1; 14-15: shell fishhooks, Suwayh 2; 16: bone awl, Suwayh 2. (Drawings G. Devilder; H. David).

necklaces, bracelets and anklets, as well as belts, headdresses and hairnets (de Beauclair, Jasim & Uerpmann 2006; Kiesewetter, Uerpmann & Jasim 2000; Salvatori 2007). In these assemblages, the chlorite and shell beads are by far the most numerous, assembled in ornaments of black and white. In the 5th millennium, *Ancilla farsiana* is the most numerous shell in the burials of al-Buhais 18, while *Engina mendicaria* appears to be more frequent in the assemblages of the 4th millennium on the Omani shores of the Indian Ocean (Fig. 2:4). Also present are composite bracelets in *Conus* sp. (Fig. 2:13), laurel leaves in mother-of-pearl of *Pinctada margaritifera* (Fig. 2:10) at Buhais 18 and Ra's al-Hamra 5 and 10, for example. At the end of the 5th millennium,

long tubular beads appear to become more frequent, and decorated chlorite earrings appear in the assemblages (Fig. 2:12).

The presence of remarkable, even exceptional pieces also characterises the assemblages dated to the 5th-4th millennia, which leads us to believe that these Neolithic societies were more "inegalitarian" than some have suggested in the past, that is, they were organised on hierarchical lines other than just those of age and sex. Fine beads in the necropolises of Suwayh 1 (Fig. 2:1-3), Buhais 18, Jebel Faya NE-15 and Ra's al-Hamra 5, but also cornelians found in those of al-Buhais and Faya may be included among these prestigious objects (de

Beauclair, Jasim & Uerpmann 2006; Charpentier, Marquis & Pellé 2003; Kiesewetter, Uerpmann & Jasim 2000; Kutterer & de Beauclair 2008). A very large laurel leaf made from the distal part of a P. margaritifera, discovered at the foot of a tomb of Ruwayz 3, and a chloritite bracelet of exceptional size from Suwayh 1 are part of this category of objects and are also finely worked. Among the weapons, the axes of al-Buhais 18 are also included in this group (Jasim, Uerpmann & Uerpmann 2005; Kutterer this volume), as well as projectile points made from the teeth of very large sharks (Carcharhinus leucas) (Fig. 2:7-9) (Charpentier et al. 2009), which come from the necropolises of Ra's al-Khabbah and Ra's al-Hamra 5 and 10 (Salvatori 1996, 2007; Santoni 1987, 2002. Cavulli, Munoz & Scaruffi 2008).

Other instruments and tools, more ordinary or more finely worked, accompanied the deceased in the hereafter and constituted, we believe, strong marks of identity for the Neolithic groups of eastern Arabia. These are mother-of-pearl fishhooks in roughout form or as finished pieces (Fig. 2:14-15), at Buhais 18, Ra's al-Hamra 5, 10 Wadi Shab 1, and flint or schist blades at Ra's al-Khabbah 1, Wadi Shab 1 and Ra's al Hamra 5 (Gauthier *et al.* 2005; Kiesewetter, Uerpmann & Jasim 2000; Salvatori 2007; Santoni 1987). Finally, needles, punches etc. are present in most of the necropolises (Fig. 2.16) (Buhais, UAQ-2, Ra's al-Hamra, Wadi Shab) (Gauthier *et al.* 2005; Jasim, Uerpmann & Uerpmann 2005; Phillips 2002; Salvatori 2007).





Figure 3. Conch shells. 1: Fasciolaria trapezium (grave deposit), Suwayh 1; 2: Lambis truncata sabae, Suwayh 20.

Several types of shell were deposited beside the deceased, sometimes in front of them. These are the valves of *P. margaritifera*, *Callista* sp., shells of *Thonna* sp. and large conches of *Fasciolaria trapezium* (Fig. 3:1) *Lambis truncata sabae* (Fig. 3:2) and *Tutufa tutua bardeyi*. The deceased may hold a discoid or oval pebble in one hand (Ra's al-Hamra 5, Wadi Shab 1) (Gauthier *et al.* 2005; Salvatori 1996, 2007).

The deposit of skulls of green turtles (*Chelonia midas*) near the face of the deceased is probably one of the most spectacular discoveries made at Ra's al-Hamra 5 and 10

(Biagi & Salvatori 1986; Salvatori 1996; Santoni 1987) (Fig. 4:1-3). Another reference to the turtle, little white pebbles similar to turtle eggs cover the remains of certain individuals in these two necropolises, and bone elements of Chelonia mydas or even entire turtle shells were integrated with the covering slabs. The importance of this marine reptile in the idéel world (Godelier 1998) of the Omani coastal societies of the 5th and 4th millennia is thus a remarkable fact, which we believe has to do with identity (Méry et Charpentier, forthcoming). The skulls of turtles and of F. trapezium, T. tutufa bardeyi, and L. truncata sabae were deposited on the top of several tombs of Ra's al-Hamra and Suwayh 1; these deposits were certainly related to the funeral ceremonies. A grave at Ra's al-Hamra 5 contained twelve turtle skulls (Salvatori 2007, Frazier 2005).

Finally, although the presence of ashy levels in the tombs or in the hearths situated nearby was often reported, that of deposits of exceptionally large fish (*Tuna*, etc.) on the top of the tombs is rarer but attested at Ra's al-Hamra 5 and at UAQ-2. These different deposits are interpreted as possible "funerary banquets" (Salvatori 2007; Gauthier *et al.* 2005; Uerpmann & Uerpmann 2003).

What do we learn from the necropolis of Suwayh?

Suwayh 1, the only 5th millennium necropolis identified in the Sultanate of Oman, was destroyed during the construction of the coastal road in 2003. A second necropolis, dated to the 4th millennium, which we also identified at Ruwayz 3, suffered the same fate during the construction of a house in 2005-2006.

Dated to 4400-4200 BC, the four tombs of Suwayh 1 were dug in the 5th millennium levels and sealed by an occupation dated to 4200 BC (Charpentier, Marquis & Pellé 2003). These individual burials dug directly into the earth contained two adults and two children. Except for a partially faced large grave, burial 3 was covered with stones in its central part, upon which a hearth was installed. Another particularity of burial 2 lies in the covering slabs indicating its location. The installation of this covering was certainly associated with the burial, as a piece of slab refits with another, the latter found placed directly on the individual.

A necrophobic practice in the Omani Neolithic?

The tombs of Suwayh 1 are especially distinguished by the slabs deposited directly on the bodies of the deceased. Thus, a heavy stone covered the mandible and the top of the thorax of the individual of tomb 2 (Fig. 5:1-2), which was laid on the left side in a slightly flexed position. Tomb 1 contained an adult in a constrained position, lying on the right side, the right hand near the face and the left hand crushed by a stone slab (Fig. 5:3-5). The very young child of burial 3 had a slab on the hand. The blocks laid on the individuals are of hard limestone or calcarenites of local origin, but they do not come directly from the site, where only eolianites are present.







Figure 4. 1: skull of turtle (*Chelonia mydas*) deposited in grave 66 at Ra's al-Hamra 5 (courtesy of the Italian Archaeological Mission in Sultanate of Oman and Maurizio Tosi); 2: skull of turtle and fish-bones of a big tuna fish, Ra's al-Hamra 5; 3: skull of turtle deposited in grave 31, Ra's al-Hamra 5 (after Salvatori 2007). The skull of the turtle was complete and was lying on the left parietal of the deceased.

Rubbed smooth, the block of tomb 1 probably comes from an ancient shore, while the blocks of tombs 2 and 3 could have come from the only nearby limestone massif, Suwayh 5, which is 900 m distant as the crow flies. Moreover, the decomposition of individuals 1, 2 and 3 took place in filled-in space and no body was disturbed – except for that of tomb 1, the skull of which was accidentally moved during the digging of the grave of tomb 2.

The deposit of a stone directly on the deceased is thus not fortuitous in these burials; on the contrary it is an

intentional act intended to hold the deceased in place. This practice has already been recognized in the 4th millennium necropolises of Ra's al-Hamra 5 and 10 (Salvatori 1996, 2007, Santini 1987), and perhaps Wadi Shab 1 (Gauthier *et al.* 2005). On the other hand it has not been identified in the necropolis of Jebel al-Buhais (pers. comm. H.-P. & M. Uerpmann 2002, 2008).

We pointed out this practice in 2003 (Charpentier, Marquis & Pellé) and return to this subject today, to propose the possibility of necrophobic practices in the Omani Neolithic.

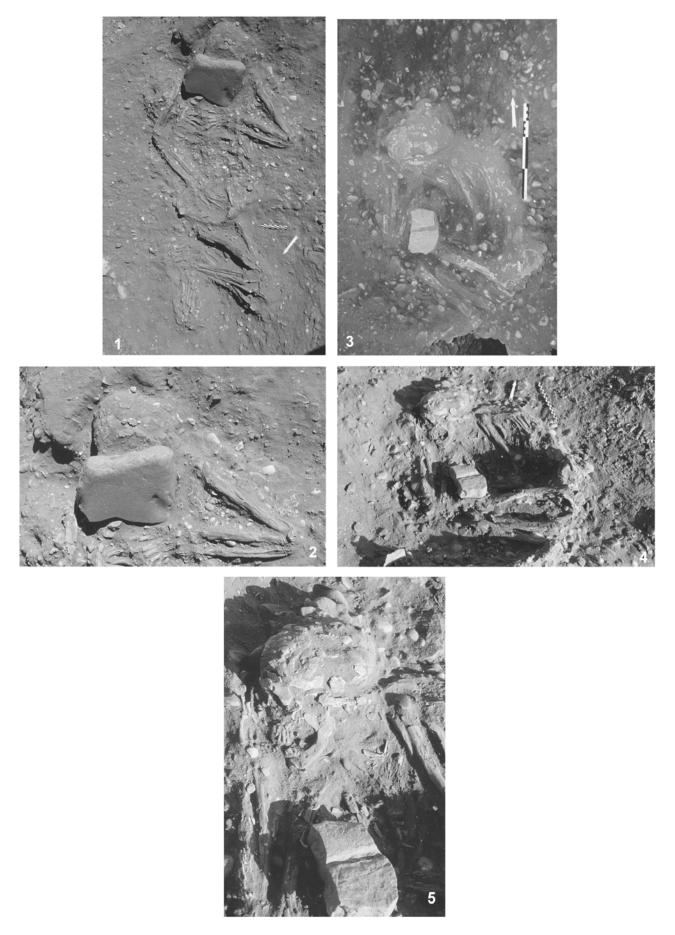


Figure 5. Suwayh 1 necropolis (around 4400-4200 BC). 1-2: grave no. 2; 3-5: grave no. 1. (Photos Vincent Charpentier).

To understand the possible relation between pinning the deceased to the ground and a practice of necrophobic type, it must be remembered what necrophobia is and what its manifestations are in an archaeological context. Necrophobia is the fear held by the living that the dead will interfere in their space, and necrophobic practices cover all the procedures intended to prevent this supposed return of the dead. These procedures, widely described in popular literature, are varied, and can affect not only the burial but also the dwelling and the objects belonging to the deceased. We will mention for example the cremation of shoes, intended to prevent the possible walking about of the dead (pers. comm. Charlier 2007). The deposit of a stone in the burial is another act, but it is not always related to necrophobia. In medieval and modern Europe, a stone is sometimes placed under the mandible of the deceased to prevent what is called "the sardonic smile", due to the post-mortem slipping of the jaw (pers. comm. V. Delattre, F. Gentili 2008).

For the early periods, necrophobic practices have been pointed out by various authors – Iron Age Italy, even the Levant in the Neolithic – although diagnostic elements remain rare. Khirokitia, a Neolithic Cypriot site, is the case that is the closest to Suwayh, as many skeletons were found covered with natural blocks or more rarely, seed querns, on the thorax or the skull. Although Alain Lebrun, director of this excavation, only mentions an "anchoring to the ground" (Lebrun 1989), Saponetti *et al.* (2007) have recently interpreted these manipulations as necrophobic. Does this practice of the Cypriot Neolithic find an echo in the Omani Neolithic of Suwayh and Ra's al-Hamra?

In any case, a single additional element could reinforce the necrophobia hypothesis in eastern Arabia. At Ra's al-Hamra, Alfredo Coppa reports a very particular manipulation on this site: the voluntary breaking of human mandibles, whose fragments are then turned around in some secondary burials of the necropolis (Salvatori 2007). This act is intentional according to A. Coppa, but it is to be noted that certain specialists in funerary archaeology doubt the anthropic nature of this breakage (pers. comm. O. Munoz 2008), proposing rather natural breaking under the weight of the burial coverings.

By way of a conclusion

In the Oman peninsula, during the Neolithic, a variety of manipulations were practised during the primary burial but also afterward, and up to the secondary burial, which appears to complete, at least for certain individuals, the funerary process (Munoz, this volume). In a coastal environment, funerary practices reflect beliefs strongly related to the sea, in which the turtle *Chelonia mydas* held an important place, and covers both a symbolic and a

¹ Let us remember that the lower jaw in humans was long considered to be the joining of two bones and that its single character was not discovered until 1535 by Andreas Vasalius (Vésale) (1543), thus putting an end to the dogma of Galenism.

social dimension, by contributing to the cohesion of certain groups.

Could other beliefs, in this case necrophobic, have existed in the local Neolithic? The hypothesis deserves to be put forth, but remains to be demonstrated as the confirmation of necrophobic manipulations is delicate, as in the case of the Cypriot Neolithic. Other reasons could explain such deposits associated with the deceased.

References

- de Beauclair R., Jasim S.A. & Uerpmann H-P. 2006. New results on the Neolithic jewellery from al-Buhais 18, UAE. *Proceedings of the Seminar for Arabian Studies* 36: 175-187.
- Charpentier V. 2002. Archéologie de la côte des Ichtyophages: coquilles, squales et cétacés du site IVe-IIIe millénaires de Ra's al-Jinz. Pages 73-99 in S. Cleuziou, M. Tosi & J. Zarins (eds), *Essays on the late Prehistory of the Arabian Peninsula*. Rome: Serie Orientale XCIII.
- Charpentier V. 2008. Hunter-gatherers of the "empty quarter of the early Holocene" to the last Neolithic societies: chronology of the late prehistory of southeastern Arabia (8000–3100 BC). *Proceedings of the Seminar for Arabian Studies* 38: 93-116
- Charpentier V., Marquis P. & Pellé E. 2003. La nécropole et les derniers horizons Vème millénaire du site de Gorbat al-Mahar (Suwayh SWY-1, Sultanat d'Oman): premiers résultats. *Proceedings of the Seminar for Arabian Studies* 33: 11-19.
- Charpentier V., Méry S., Fortini E., & Pellé E. 2009. « Un chef est un requin qui voyage par terre ». Fonctions et statuts des armatures de projectile en dent de *Carcharhinus leucas* et aiguillon caudal de raie dans l'Arabie des VI^e-III^e millénaires av. notre ère. *Arabian Archaeology and Epigraphy* 20: 9-17.
- Cleuziou S. 2005. Pourquoi si tard? Nous avons pris un autre chemin. L'Arabie des chasseurs-cueilleurs de l'Holocène au début de l'Age du Bronze. Pages 123-148 in G. Guilaine (ed.), Au marges des grands foyers du Néolithique. Périphéries débitrices ou créatrices? Paris: Errance.
- Cleuziou S. 2006.La société de Magan à l'Age du Bronze : Entre tribu et État 2006. Pages 43-66 in P. Charvát, B. Lafont, J. Mynářová & P Lukáš (eds), L'État, le pouvoir, les prestations et leurs formes en Mésopotamie ancienne. Actes du Colloque assyriologique franco-tchèque. Univerzita Karlova v Praze: Filozofická fakulta.
- Cleuziou S. & Tosi M. 2007. In the Shadow of the Ancestors: the prehistoric foundation of the early Arabian civilisation in Oman. Muscat: Ministry of Heritage and Culture.
- Frazier F. 2005. Marine turtles the ultimate tool kit: A review of worked bones of marine turtles. Pages 359-382 in H. Luik, A.-M. Choyke, C. Batey & L. Lõugas (eds), From Hooves to Horns, from Mollusc to Mammoth, Manufacture and Use of Bone Artefacts from Prehistoric Times to the Present. Proceedings of

- the 4th Meeting of the ICAZ Worked Bone Research Group. Tallinn.
- Godelier M. 1998. L'idéel et le Matériel, pensée, économies, sociétés. Paris: Fayard.
- Halévi J. 1873. Voyage au Nedjran. *Bulletin de la Société de Géographie*, série 6.6: 5-31; 249-273; 581-606.
- Kiesewetter H. 2003. The Neolithic population at Jebel al-Buhais 18: Remarks on the funerary practices, paleodemography and paleopathology. Pages 36-43 in D. Potts, H. Al-Naboodah & P. Hellyer (eds), Archaeology of the United Arab Emirates, Proceedings of the first International Conference on the Archaeology of the U.A.E. London: Trident.
- Kiesewetter H. 2006. Analyses of the human remains from the Neolithic cemetery at al-Buhais 18 (excavations 1996-2000). Pages 103-259 in H.-P. Uerpman, M. Uerpman and S.A. Jasim (eds), Funeral monuments and human remains from Jebel al-Buhais. The Archaeology of Jebel al-Buhais, 1. Sharjah: Dept. of Culture and Information, Government of Sharjah, United Arab Emirates.
- Kiesewetter H., Uerpmann H.-P. & Jasim S.A. 2000. Neolithic jewellery from Jebel-al Buhais 18. Proceedings of the Seminar for Arabian Studies 30: 137-146.
- Kutterer A. & de Beauclair R. 2008. FAY-NE15 another Neolithic graveyard in the central region of the Sharjah Emirate? *Arabian Archaeology and Epigraphy* 19: 133-142.
- Le Brun A. 1989. Le Néolithique de Chypre et sa relation avec le PPNB du Levant. *Paléorient* 15/1: 161-167.
- Leclerc J. 2003. Sépulture collective, espace sépulcral collectif. Pages 321-322 in P. Chambon & J. Leclerc (eds), Les pratiques funéraires néolithiques avant 3500 av. J.-C. en France et dans les régions limitrophes. Paris: Mémoire de la Société préhistorique française XXXIII.
- Méry S. 1995. Archaeology of the borderlands: 4th millenium BC Mesopotamian pottery at Ra's al-Hamra RH-5 (Sultanate of Oman). *Annali* 55: 193-206.
- Méry S. & Charpentier V. 2002. Around Suwayh (Ja'alan): a summary of some recent discoveries from coastal shell-middens of Eastern Arabia. *Journal of Oman Studies* 12: 181-195
- Philby H. St. J.-B. 1939. *Sheba's daughters*. London: Methuen.
- Phillips C. S. 2002. Prehistoric middens and a cemetery from the southern Arabian Gulf. Pages 169-186 in Cleuziou, S., Tosi, M. & Zarins, J. (eds), *Essays on the Late Prehistory of the Arabian Peninsula*. Rome: Serie Orientale XCIII.
- Salvatori S. 1996. Death and ritual in a population of coastal food foragers in Oman. Pages 205-222 in G. Afanas'ev, S. Cleuziou, R. Lukacs & M. Tosi (eds) The Prehistory of Asia and Oceania, Colloquium XXXII, Trade as a Subsistence Strategy. Post-Pleistocene Adaptations in Arabia and Early Maritime Trade in Indian Ocean. XIII International Congress of Prehistoric and Protohistoric Sciences: Forli Abaco.

- Salvatori S. 2007. The Prehistoric graveyard of Ra's al-Hamra 5, Muscat, Sultanate of Oman. *Journal of Oman Studies* 14: 5-202.
- Santini G. 1987. Site RH-10 at Qurum and a preliminary analysis of its cemetery: an essay in stratigraphic discontinuity. *Proceedings of the Seminar for Arabian Studies* 17: 179-198.
- Santini G. 2002. Burial Complex 43 at the prehistoric graveyard of Ra's al-Hamra in the northern Oman. Pages 147-167 in Cleuziou, S. Tosi, M. & Zarins, J. (eds), *Essays on the Late Prehistory of the Arabian Peninsula*. Rome: Serie Orientale XCIII.
- Saponetti S., Scattarella F., De Lucia A. & Scattarella V. 2007. Paleobiology, palaeopathology and necrophobic practices in Early Iron Age burials (IX–VII Century BC) in Capo Colonna, Trani, Apulia, Southern Italy the state of health of a small sample from Iron Age. *Coll. Antropol.* 31/1: 339-344.
- Thomas B. 1931. *Alarms and excursions in Arabia*. London: G Allen & Unwin.
- Uerpmann M. Forthcoming. *The Holocene Stone Age in Southeast Arabia A Reconsideration*.
- Uerpmann H.-P. & Uerpmann M. 2003. Stone Age Sites and their Natural Environment, the Capital Area of Northern Oman, Part III. Beihefte zum Tübinger Atlas des vorderen Orients, Reihe A (Naturwissenschaften) Nr. 31/3.
- Vésale A. 1543. *De humani corporis fabrica Libri septem*. Bâle: Johannes Oporinus.
- Zwemmer S.M. 1900 [1986]. Arabia, the cradle of the Islam. London: Darfd.

Authors' addresses

Vincent Charpentier
Inrap, ArScAn UMR 7041 du CNRS
Maison René Ginouvès de l'Archéologie et de
l'Ethnologie
21, allée de l'Université
92023 Nanterre cedex, France
emails: vincent.charpentier@mae.u-paris10.fr /
vincent.charpentier@inrap.fr

Sophie Méry ArScAn UMR 7041 du CNRS Maison René Ginouvès de l'Archéologie et de l'Ethnologie 21, allée de l'Université 92023 Nanterre cedex, France email: sophie.mery@mae.u-paris10.fr