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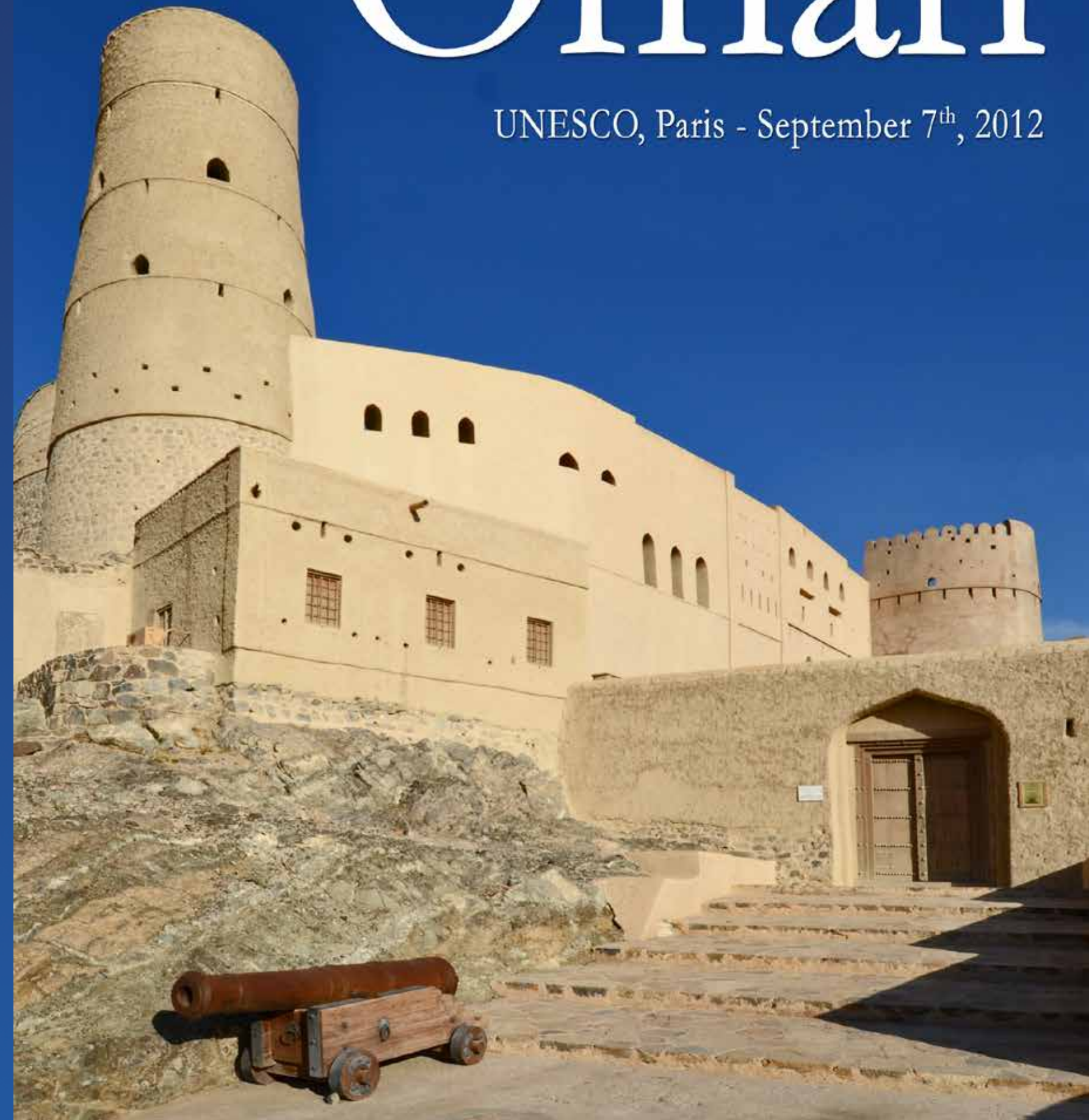
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# The Archaeological Heritage of Oman

UNESCO, Paris - September 7<sup>th</sup>, 2012



**Proceedings of the Symposium**

**THE ARCHAEOLOGICAL  
HERITAGE OF OMAN**

September 7<sup>th</sup> 2012

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**United Nations Educational, Scientific  
and Cultural Organization**



**Ministry of Heritage & Culture  
Sultanate of Oman**

# Life and Death in Prehistoric Oman: Insights from Late Neolithic and Early Bronze Age Funerary Practices (4<sup>th</sup> - 3<sup>rd</sup> mill. BC)

*Eugenio Bortolini and Olivia Munoz*

This paper aims to give an overview of the change recorded in funerary practices of eastern Arabia from the late Neolithic, when human settlements were concentrated in coastal refuges, to the end of the third millennium BC, when the appearance and development of proper agricultural systems can be documented for the first time. During these millennia the societies of the Oman Peninsula adapted to profound changes in their environment, mostly related to aridification started around 4500 BC (*inter alia* Bar-Matthews *et al.* 1997; Fleitmann *et al.* 2003, 2007; Fuchs and Buerkert, 2008; Gupta *et al.*, 2003; Lézine 2009; Lézine *et al.* 2002; 2010; Mayewski *et al.* 2004; Parker *et al.* 2006; Staubwasser *et al.* 2002). Over the last 40 years, archaeologists investigating the origins of Oman have indeed documented a rich heritage: evidence of daily activities, subsistence, material culture, ritual and funerary practices (for a comprehensive overview see Cleuziou and Tosi 2007; Potts 1990). In the Oman Peninsula, funerary structures offer a privileged perspective on these economic and social transformations: their distribution, architecture, furniture, as well as the human remains they contain, are all critical to explore lifestyles, social organization, technological innovations and forms of intra-and inter-regional exchange.

## THE LATE NEOLITHIC

During the 5th and 4th millennium BC, material culture and funerary evidence seems to indicate a fair degree of cultural homogeneity, allowing to draw a general picture of the way of life of these communities. Just a few sites have been identified in

the interior, and archaeological investigations mostly gravitated around coastal areas, where anthropogenic environments usually take the form of large shell middens. In Oman, these settlements are often located close to wadi mouths or mangroves (Berger *et al.* 2005; Biagi 1988; Biagi and Maggi 1990;) [Fig. 1]. In a period of increasing aridity, these places were particularly attractive to human populations, as they could provide a broad range of animal and vegetal resources (Biagi and Nisbet 2006).

Excavations documented numerous domestic structures and activities such as dwellings and huts, waste pits, and fireplaces (e.g. Biagi *et al.* 1984; Charpentier *et al.* 1998; 2000; 2003; Cavulli 2004; Marcucci *et al.* 2011). According to bioarchaeological studies, the economy was mainly based on the exploitation of marine and coastal resources such as fish, shellfish, marine mammals and turtles, although breeding of goat and sheep was also practiced; hunting of land mammals seems to have played a minor role in subsistence (Uerpmann 2003; Uerpmann and Uerpmann 2003). The exploitation of plants as fuelling material, as well as for construction, basketry, and food is also well attested by charcoals, mineralized remains, and carbonized fruit seeds (Biagi and Nisbet 1992; Munoz forthcoming). The recovered artifacts testify to a variety of stone, shell and bone industries and specialised tools, especially for fishing (e.g. Cleuziou and Tosi 2007; Charpentier 2008; Tosi and Usai 2003) [Fig. 2A-B]. They demonstrate also a special investment in the production of non-utilitarian goods, such as jewellery (Isetti and Biagi 1989; Salvatori 2007; Usai Forthcoming) [Fig. 2C-E].

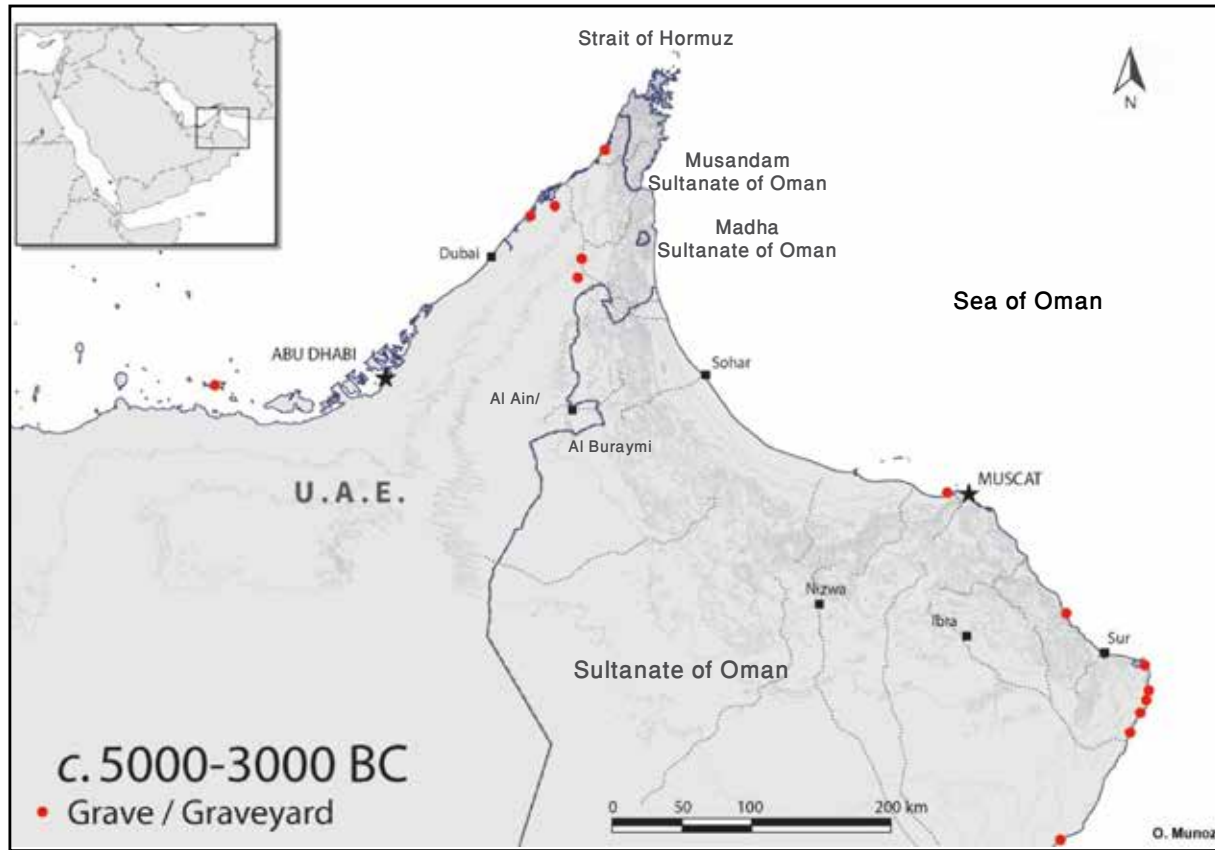


FIGURE 1. Distribution of known Neolithic graveyards in the Oman peninsula (O. Munoz).

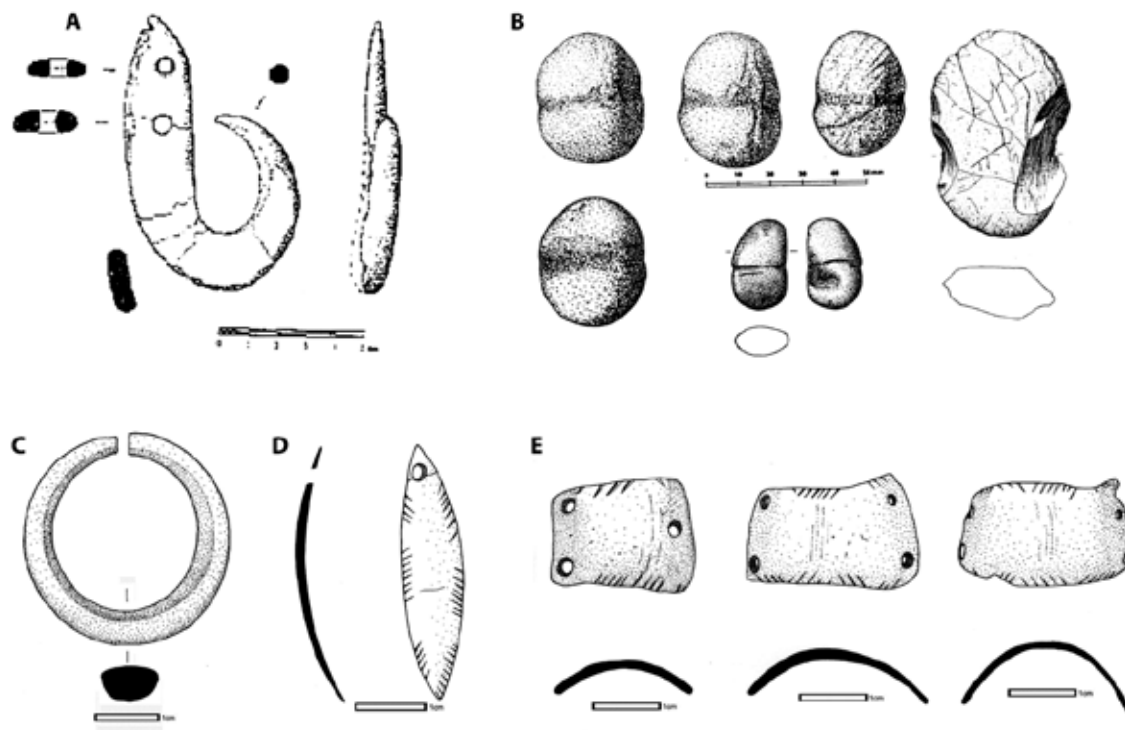


FIGURE 2. Material culture, Late Neolithic period. A) Hook made of mother-of-pearl, from Khor Milk KM-1, Oman (Charpentier & Méry 1997; fig.3, p.150); B) Stone net sinkers from Saruq, Muscat, Oman (Uerpmann & Uerpmann 2003: fig.5.13, p.92); C) Soft stone earring from Ra's al-Hamra RH-5 (L. Cenci); D) Mother-of-pearl pendant from Ra's al-Hamra RH-5 (L. Cenci); E) Bracelet made of shell from Ra's al-Hamra RH-5 (L. Cenci).

All the Neolithic graveyards known in Oman are associated with settlements, and show the will to group the deceased in the same place, within the dwelling area (Munoz submitted). The installation and use of a burial space over a considerable period of time probably reflects the will to anchor these locations by Neolithic communities, in order to create a powerful symbolic attachment to the area and thereby legitimize their access to resources (see Binford 1971; Parker Pearson 2009: 124-141; Saxe 1970).

However, not all the deceased were buried in graveyards. For instance at Ra's al-Hamra RH-5, where about 250 individuals have been brought to light so far, infants and children younger than five years old are strongly underrepresented if compared to an expected archaic mortality pattern (Coppa and Cucina 2007).

In Oman, most of the graves represent primary burials, taking place soon after death and consisting of a single-stage process [Fig. 3A-C]. The deceased are deposited in a pit on one side, preferentially the right one, in a variably flexed position and generally with one or both hands close to the face (e.g. Santini 1987; Charpentier *et al.* 2003; Gaultier *et al.* 2005; Salvatori 2007; Munoz *et al.* 2010). Some variants in the position of hands and legs may exist, supporting individual expression of mortuary behaviour. In many cases, it appears that the corpse was artificially forced into a strongly contracted position [Fig. 3A]. This implies the utilization of ropes or funerary bags to maintain the dead.

In primary burials a part of the deceased were adorned with rather standardized ornamental objects such as necklaces, bracelets, or earrings, regardless of age or sex [Fig. 2C-E]. In addition to the dead itself, both artifacts and unprocessed natural materials (such as faunal remains, plants and minerals) have been found. Faunal deposits are very frequent in Neolithic graves of Oman. They consist mainly of marine fauna, namely fish, shells and turtle and to a lesser extent of terrestrial mammal portions. They could have been deposited as offerings, or be the remains of a funeral banquet. At Ra's al-Hamra RH-5, the possible role of marine turtle in community eschatology has been discussed (Salvatori 2007): more than half of the graves contained turtle remains, and in 13% of them

one or more skulls have been deposited close to the deceased.

The last seasons of excavation at RH-5 have also brought to light several elements of mineralized processed plant fibers deposited in the graves (Munoz forthcoming: fig. 2). They evidence objects and craft techniques usually absent from archaeological data, such as cords or basketry.

Once this complex, stratified deposition was completed, the deceased was more often covered by stones, but several varieties of grave covering exist. The oldest graves contain only a few stones, whose position may vary: one stone on the chest or on the hands (Suwayh SWY-1), four stones at the corners of the pit (Ra's al-Khabbah KHB-1), or a circular alignment around the deceased (Ra's al-Hamra RH-6). In more recent graves, the covers can take more elaborate forms, and have often required a more consistent investment. At Ra's al-Hamra RH-5 for example, one third of the graves were covered with exogenous wadi stones.

There is also evidence of multiple inhumations, containing up to five individuals buried at the same time. At RH-5, in Grave 320, where five individuals are buried together, people who disposed the corpses in the grave placed the arms of each individual on the body of the one in front of him, as if to indicate an affective bond between them [Fig. 3B]. These multiple inhumations reflect mortality crisis scenarios for which we can only hypothesize some causing events: epidemics, poisoning, accident, conflicts, intra or intergroup violence.

Few evidences of violence are known at Ra's al-Hamra RH-5 where a projectile point was recovered in a human vertebra (Santini 2002: fig. 5), while at al-Buhais 18 (Sharjah Emirate), a high proportion (13.9%) of skulls showing injuries suggests that interpersonal violence was more frequent (Kieswetter 2006; Kutterer and Uerpmann 2012).

There are also secondary deposits, where the remains of the dead have been moved after decomposition of the flesh to rest in a secondary, final grave (Salvatori 2007; Santini 2002) [Fig. 3D]. Several factors could have dictated a different treatment of the dead: cause of death, place of death, status of the individual, to quote just some. It is also a possible evidence of funeral ceremonies extended in time.



FIGURE 3. Examples of Neolithic burials, Ra's al-Hamra RH-5 (Muscat, Oman). A) Primary individual burial of an adult male in Grave 411 (O. Munoz); B) Primary multiple burial of five individuals in Grave 320 (O. Munoz); C) Primary individual deposit of a neonate in Grave 410 (O. Munoz); D) secondary deposit in Grave 48 (S. Salvatori).

Furthermore, recent excavations at RH-5 have shown that sometimes, selected defleshed human bones were deposited in primary burials. This means that some special bones could be kept and used by the community of the living before being definitively buried. An amazing evidence comes from the graveyard from al-Buhais 18, where a string of beads was recovered wrapped around a human clavicle (De Beauclair 2008: fig. 7). Again, this testifies to the strong relationships between the living and their dead, and to a complex approach to death.

To conclude on the Neolithic, the practices evidenced so far show a complexity in mortuary treatment, as well as several common traits suggesting that some rules prevailed, possibly constrained by common traditions and a structured social organization. Variability is mostly visible in terms of energy expenditure and in terms of deposited artifacts. This might indicate that, despite common traditions, the community was open to individual expression in mortuary behavior and may signify a certain degree of social differentiation.

Through the Oman Peninsula, the homogeneity of the material culture and ritual practices on a wide area suggests a sharing of values and beliefs among communities, but also direct exchanges of objects and contacts between individuals and groups.

#### THE EARLY BRONZE AGE – HAFIT PERIOD

At the end of the 4th millennium BC there still were many elements of continuity with the previous phase – especially in terms of daily activities and patterns of movement of human groups, which seem to be consistently semi nomadic and relying on pastoralism. There are nonetheless many instances of discontinuity and change: i) occupation of the interior, ii) intensification of fishing and sea mammal hunting on coastal sites, iii) new techniques of food conservation, iv) specialized craftsmanship and trade, v) irrigation, farming and permanent architecture, vi) long-distance exchange, vii) exploitation of copper ores, viii) population growth and ix) new monumental tombs.

By comparing the map relative to this period [Fig. 4] with the previous one referring to the Neolithic [Fig. 1], it is clear how all the territory of northern Oman and the Emirates had been increasingly populated and exploited. In fact, from the end of the 4th millennium BC eastern Arabia developed increasing social complexity and trade routes, as well as highly-specialised subsistence strategies, designed to face the local, unpredictable environment. However, this region recorded a remarkable absence of the features most commonly associated with coeval Near Eastern contexts: archaeologists have found neither the clear signs of some conventional form of state organization, nor any evidence of proto-urban centres. It is therefore possible, and yet to be proven, that the peculiar development of Omani prehistoric societies was built on a wider and more fluid system of kinship, alliances and regional complementarity (Cleuziou 2002; Cleuziou and Tosi 2007).

In this phase human activities were aided by domesticated cattle and, from this moment onwards, domesticated donkeys (Uerpmann and Uerpmann 2012). An intensification of fishing and sea mammal hunting, accompanied by the development of new techniques of food conservation, such as smoking, drying and salting has also been hypothesised; this possibly allowed for the development of local networks of exchange between inland groups and coastal ones (El Mahi 1998; Cleuziou and Tosi 2007).

One of these coastal sites, HD-6, in Ra's al-Hadd, Ja'alan, also yielded data on the formation of communal productive compounds which testify to the exploitation of marine as well as lacustrine resources. It provided evidence of local craftsmanship (intensive bead production) and exchange activities with inland centres that were emerging at the time (Cattani and Tosi 1997; Cleuziou 2009).

The best example of incipient farming and water management in this region was uncovered in the site of Hili 8 (Abu Dhabi, UAE). Here archaeologists have documented the development of mud-brick, tower-like structures that became more frequent later on in the 3rd millennium. The latter yielded clear evidence of cereal (wheat and barley), but, more importantly, date palm exploitation, in addition to the first traces of local pottery production (Cleuziou 1989; 1996; 2002; Cleuziou and Tosi 2007). Aside from Hili 8 and HD-6, archaeological evidence dated to the first quarter of the millennium consists of concentrations of lithic materials and ephemeral traces of non-permanent structures, which support the hypothesis that greater mobility and flexibility in subsistence were maintained at the same time.

Ceramics are indeed rarely found in productive or residential contexts – as they are scarce in funerary contexts. Most of the materials consist of Jemdet Nasr or Early Dynastic I-II vessels imported from Southern Mesopotamia [Fig. 5], which testify to stable connections between eastern Arabia and this region (Cleuziou and Méry 2002; Méry 2000; Mynors 1983). The importance of these pieces is clear considering that they constitute the only ceramic type ever found in Omani tombs dated to this period.

During the first half of the millennium there are also traces of incipient exploitation of copper ores located in the Omani ophiolites. In this phase archaeologists have just been able to document a trial-and-error approach to extraction, smelting and production, which could hint at a local technical development under external influence and demand (Weisgerber 1980; 1983; Weeks 2003).

#### *Monumental tombs*

All the above mentioned evidence suggests that a considerable population growth may have taken place in this period, that was at the same time cause and effect of the many changes just presented (Shennan 2001).



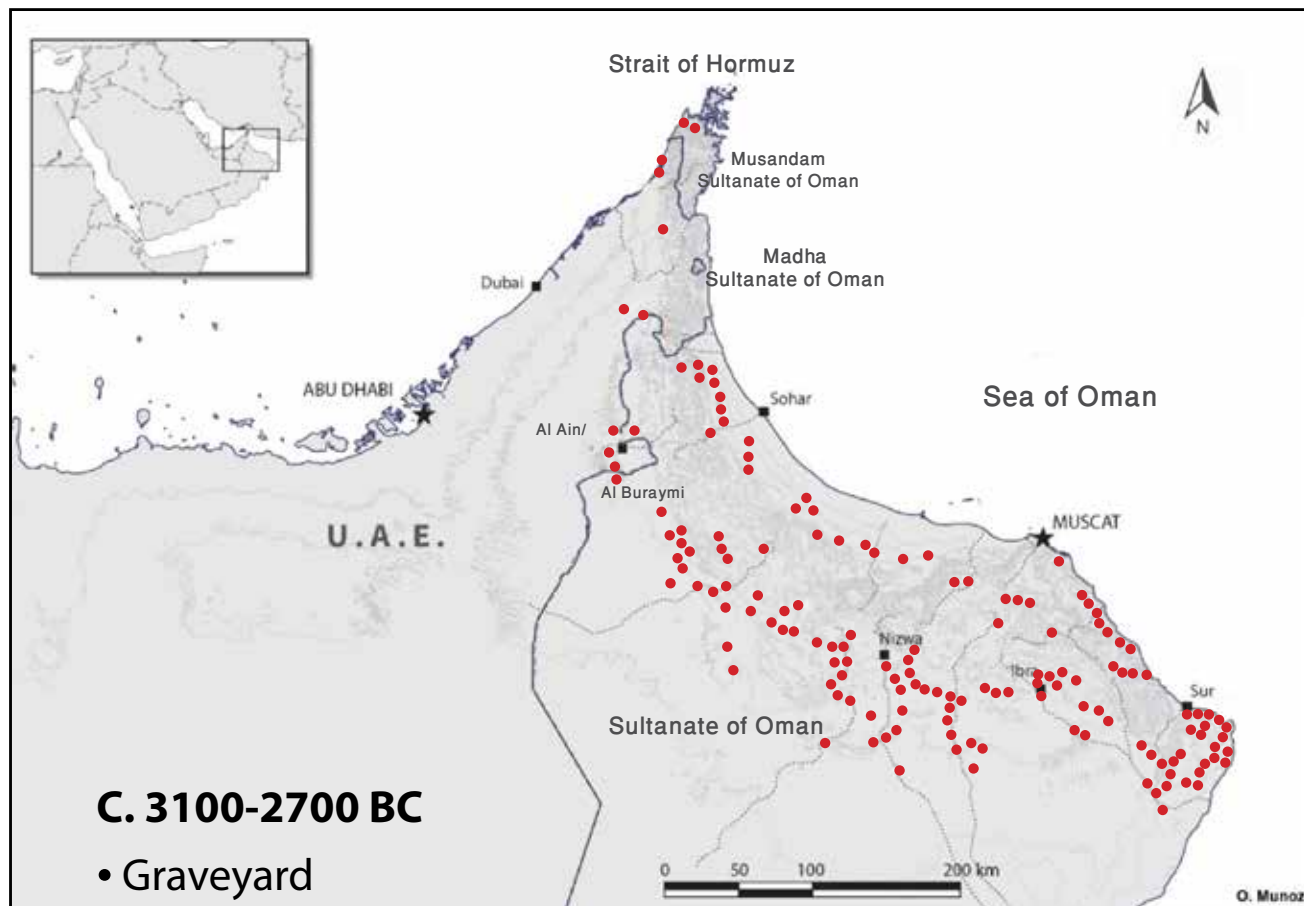


FIGURE 4. Distribution of Hafit-period graveyards in the Oman peninsula (O. Munoz).



FIGURE 5. Examples of Southern Mesopotamian (Jemdet Nasr and Early Dynastic I-II) small biconical jars from Hafit type tombs, Jebel Hafit (Potts 2001: fig. 3, p. 38, after Frifelt 1970: fig.12a, 17a, 22a and 22b, p.366-373).

But the most striking evidence for this consists of the tens of thousands of new, monumental tombs that literally filled the territory over a period of four hundred years. Tombs dated to this period are truncated-cone towers, formed by two or three concentric ringwalls built around a central chamber [Fig. 6E]. Walls were erected mainly using local stone: slabs of limestone or other local sediments were detached near the area chosen for tomb erection. These flat rocks were just partially worked and usually maintained an irregular shape. The chamber was usually slightly elliptic and its main axial orientation was determined by the entrance. The latter was usually sealed by erecting the outer ring wall, or possibly closed with movable stones. Structures of this kind have an average height of about 4-5 metres, but they could also be up to 8 metres high (Yule and Weisgerber 2002). These tombs have been referred to as “Hafit-type” after their first discovery (1959) and their systematic investigation carried out since 1962 at Jebel Hafit (Abu Dhabi, UAE, Bibby 1969:282-306; Frifelt 1968; 1975a).

The apparent homogeneity of these structures masks their actual great variability: we have indeed different types of entrances [Fig. 6B, 6D], different appearance determined either by deliberate choice of the constructor or by the quality and workability of local building materials. In some cases there are also different levels of inner articulation, which is visible both in plan and section (Bortolini 2012). In particular, their location has always captured the interest of archaeologists. Thousands of these tombs are towering on top of mountain ridges all over eastern Arabia, suggesting further expansion in territorial occupation, marking of the landscape and signaling resource use [Fig. 6A]. Prominence and visibility had great importance, as well as vicinity to seasonal water and availability of limestone - the most commonly used material (Giraud 2009). Dating the construction and estimating the time-span in which these monuments were used is a difficult task for archaeologist, as they often have been plundered or re-used during the following periods.

These *cairns*<sup>1</sup> were collective tombs; unfortunately, the usual bad state of preservation of human remains dated to this period prevented in most cases a full anthropological investigation of the exact funerary practices and the act of dead deposition. Based on the available evidence it is possible to say that they usually contained from 1 to 5 individuals deposited in subsequent events, although in coastal Ja’alan (eastern Sharqiya) some tombs contained up to 20-30 individuals with no apparent sex or age selection (Benton 2006; Benton and Potts 1994; Munoz 2011; Santini 1992). The dead were deposited on one side in crouched position, often in close association with a variety of grave goods: highly standardised beads obtained from stone and other materials (shell, faience, steatite, hematite, radiolarite, carnelian and limestone, just to quote some, copper implements such as hooks, pins, rivets, rings or daggers, as well as the already mentioned pottery imported from southern Mesopotamia (Benton and Potts 1994; Cleuziou *et al.* 2011; Frifelt 1970; 1975a; 1975b; Salvatori 2001).

#### THE BRONZE AGE – UMM AN-NAR PERIOD

Moving towards the half of the millennium, archaeological evidence collected so far points at a more substantial consolidation of the socio-economic system that had emerged in the previous centuries. An intensification of inland occupation is especially indicated by a strong aggregation in potentially more attractive areas, as opposed to the great dispersion seen in the first half of the millennium, when traces of human occupation were almost evenly scattered all over northern Oman [Fig. 7]. This further leap required a higher degree of work specialisation and greater effort in actively changing the local environment. The whole process was possibly triggered by the previously suggested population growth, in addition to a more visible increase in population density.

<sup>1</sup>*Cairn* is a term employed in the first archaeological reports on the megalithic graves of eastern Arabia. It is derived from Scottish Gaelic and usually refers to artificial piles of stones (not necessarily linked to mortuary practices) located

on top of hills and mountains. The word was chosen for the striking similarity existing between collapsed Hafit-type tombs and the better known prehistoric stone tumuli of Northern Europe and the British Islands.

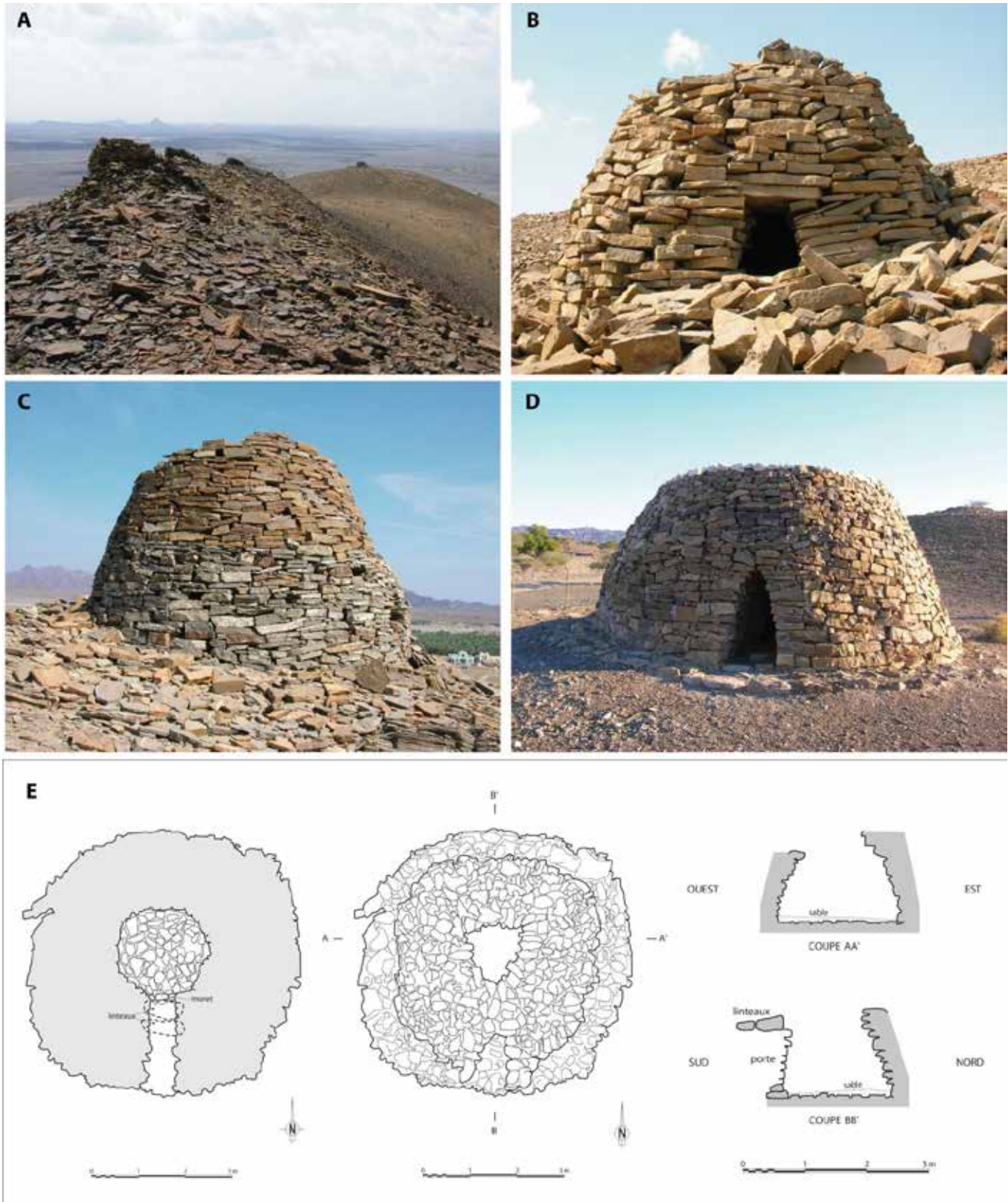


FIGURE 6. Examples of Hafit type tombs. A) view of funerary structures on top of Jebel Safra, Zukayt, Ad Dakhiliyah, Oman; B) Zukayt, Ad Dakhiliyah, Oman; C) Zukayt; D) Unesco Heritage site at Bat, Al Dhahira, Oman (restoration by Manfred Boehme (photos A-D: E. Bortolini); E: Plan and section of Cairn 1 at Jebel Hafit, Abu Dhabi (Cleuziou *et al.* 2011: figs. 8-10, p. 14-16).

The documented settlements of this phase consist of structured villages with permanent buildings (Cleuziou and Tosi 2000). The most renowned feature of this transition is the further development of the so-called “Towers”. These monumental circular structures, usually found in groups of two to five, were built using heavy stone and/or mud bricks and have a compartmented plan with rooms arranged around a central well. These have been dated to half of the millennium (Frifelt 1976; 1985; 1989; 2002), with some well known (such as Hili 8, Cleuziou 1982; 1989) and some still under-study exceptions (Bat, Posschl *et al.* 2010). Their location and connection with external elements offer plausible archaeological evidence that they were related to increasing sedentarisation, agriculture and, possibly, water management (Al-Jahwari 2009; Cleuziou 1998; Cleuziou and Tosi 2007; Potts 1990).

The initial development of the oasis system could have taken place at the beginning of the second half of the millennium. In this period, areas of high biomass density might have started to be transformed into partially artificial, multi-layered environments of high productivity, where palms created local cooler

conditions and changed external environmental pressures for a number of living organisms –including man [Fig. 8A]. The emergence of such conceptually modern oases is linked to the progressive use of increasingly complex solutions for water management and irrigation (Cleuziou 2002). The origin of the typical local irrigation systems (*aflaj*, Fig. 8B) is still debated: on the one hand there are documented cases of channels which have been lowered to reach the decreasing water table already in prehistoric contexts (Al Tikriti 2002; Cleuziou 2009; see also Orchard and Orchard, this volume), but the strongest available evidence for cereal and date cultivation is dated to the Iron Age (Al Tikriti 2002; Nelson *et al.* 1999). This system may have been introduced later than the 3rd millennium BC, it might have been adopted in many, subsequent diffusion waves, and the necessary technology could have been borrowed from abroad (especially considering the striking similarity with Persian *qanat*; Laureano 2001; for an extensive discussion on dating and interpretation see Al Tikriti 2011; Boucharlat 2003; Wilkinson 1973).

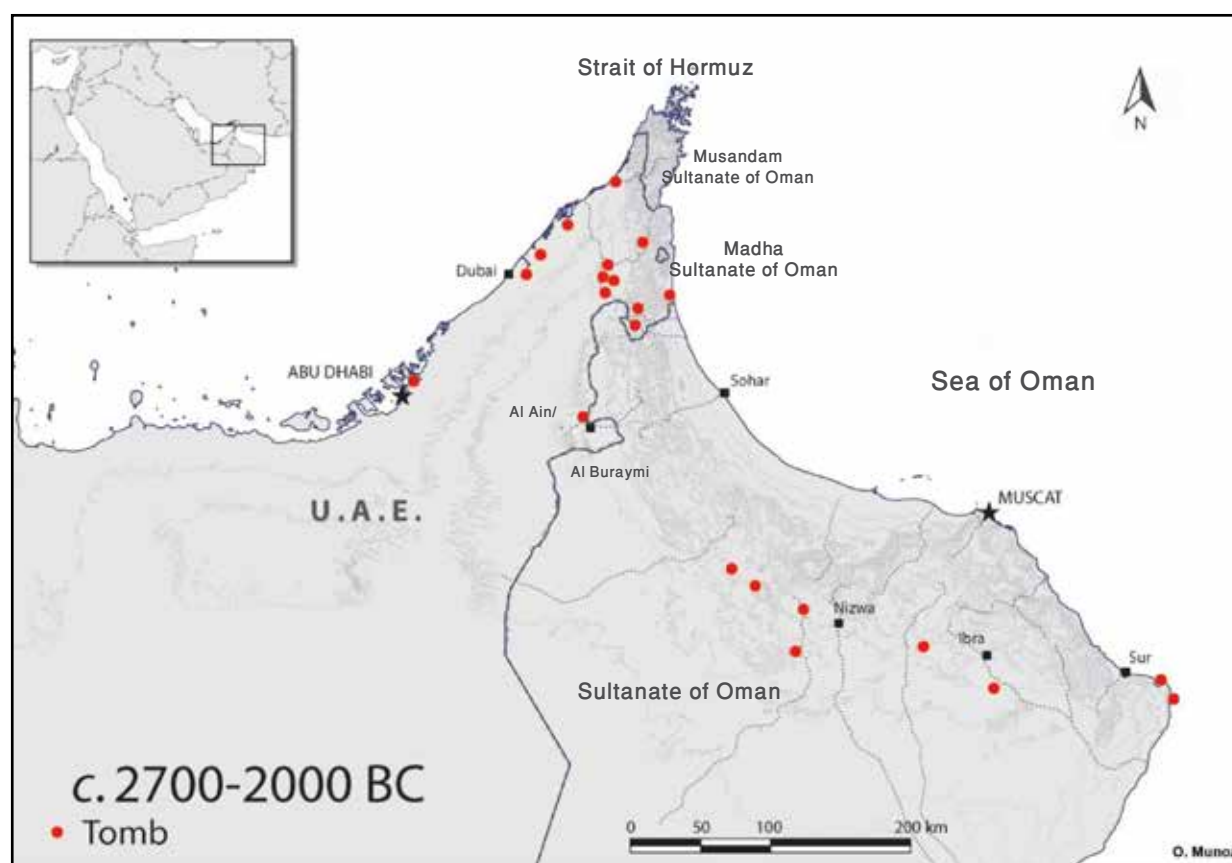


FIGURE 7. Distribution of excavated Umm an-Nar graves in the Oman peninsula (O. Munoz).



FIGURE 8. A) An example of oasis agriculture; B) A segment of falaj, the traditional Omani irrigation system (photo: E. Bortolini).

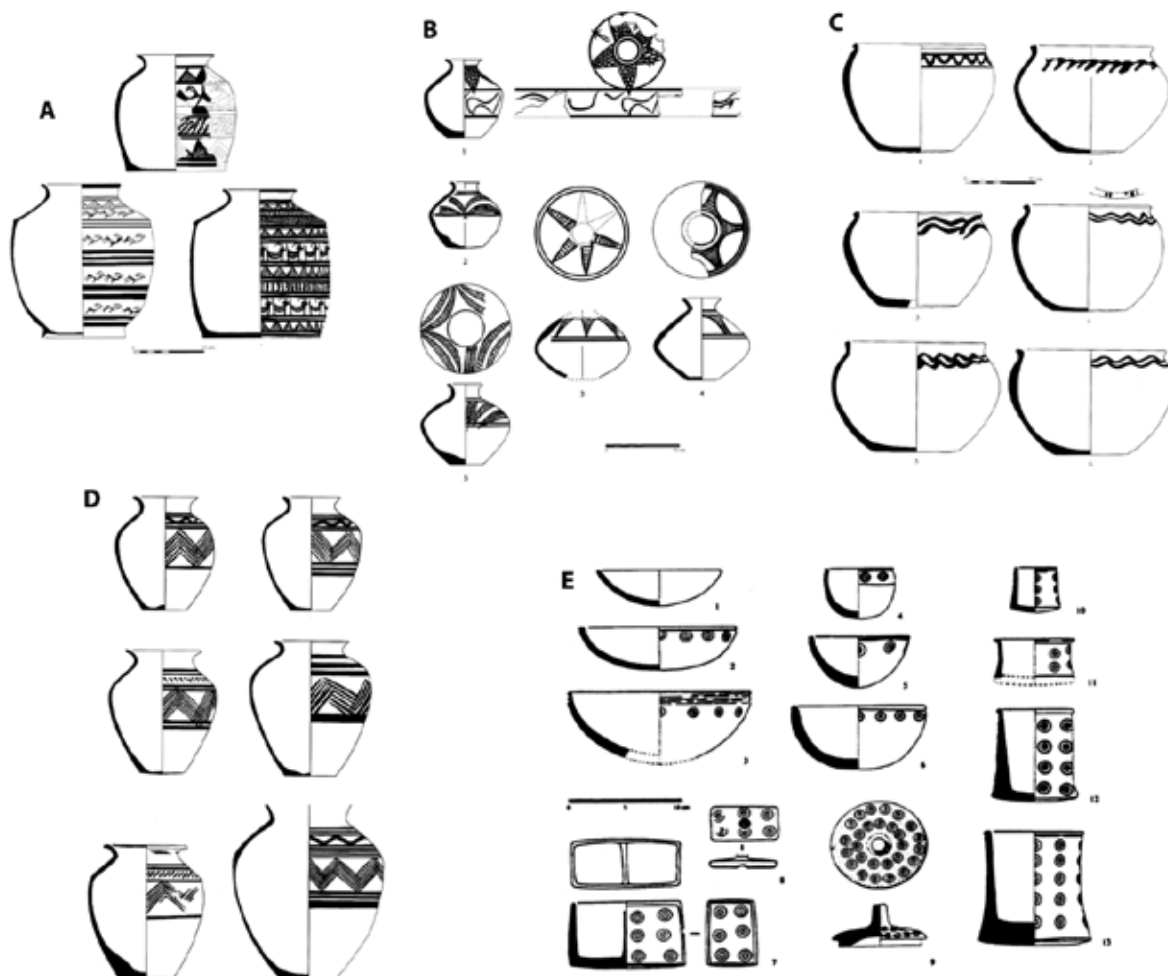


FIGURE 9. Examples of pottery and soft stone vessels dated to the Umm an-Nar period. A) Fine Grey ware from Tomb M, B and 1059, Hili, Abu Dhabi (Méry 2000: fig.122 p.196); B) Iranian Fine Red ware from Tomb A, Hili North, Abu Dhabi (Cleuziou *et al.* 2011: fig. 202); C) Sandy Red ware from Tomb A, Hili North, Abu Dhabi (Méry 2000: fig.80, p.137); D) Fine Red ware from Tomb A, Hili North, Abu Dhabi (Méry 2000: fig.49, p. 83); E) Soft stone vessels from Tomb A, Hili North, Abu Dhabi (David 1996: fig. 5, p. 36, drawings by P. Gouin).

These systems can offer the constant water supply mandatory for date palm cultivation and oases development, so they should be considered a critical trigger for social complexity in the present context.

At the same time, a conspicuous intensification of specialised craftsmanship and trade can be appreciated in the archaeological record. These involve both ceramic and copper production. As far as Ceramics are concerned, it is possible to see an increase in the adoption and distribution of pottery as a commodity. There is evidence of both locally produced and imported pottery.

The former consists of fine black-on-red wares [Fig. 9D] – most commonly found in funerary contexts – and sandy domestic wares [Fig. 9C]. Fine ceramics were also imported from south eastern Iran and Pakistan [Fig. 9B]. Towards the half of the millennium there is indeed clear evidence of intense contacts with the Indus Valley, exemplified by the many vessels and beads we found in archaeological deposits (Blackman and Méry 1989; Méry 1996; 2000; 2010; Potts 2005).

Turning to metal production and working, in the second half of the 3rd millennium mining and extraction activities spread over the region, leading to the emergence of centres specialised in copper production (Cleuziou and Tosi 2007; Weisgerber 1983). The use and trade of metals increased globally, and it was based both on household and larger-scale production and trade, possibly to the expense of local vegetation (Weeks 2004).

As expected, this picture of great change is also mirrored by further mutation in funerary practices.

#### *Monumental tombs*

A new burial type is thought to appear around 2700 BC and to last until the end of the millennium. These tombs have been documented for the first time by P. V. Glob and G. Bibby in 1958 on the island of Umm an-Nar (Abu Dhabi, UAE; Bibby 1965; 1966; Frifelt 1991). They presented many innovations: a considerably larger diameter (ranging between 5 and 10 meters, with some exceptional cases comprised between 12 and 14 m [Fig. 10A-C]); greater structural articulation, with inner partitions dividing the tomb in two or more chambers located on both sides [Fig. 10C]; different and more variable entrance types, both among themselves and compared to previous

tower tombs. Some tombs present two diametrically opposite entrances; The entrance itself was usually sealed by specially worked stones and placed above the ground level.

Inner walls were built with local, undressed stone-slabs, while external ring-walls were made using squared and variably polished limestone blocks. These more tensile stones were imported from more distant quarries. This change has been assumed to represent a higher energy expenditure obtained through the control of a wider labour-force, perhaps obtained through the final establishment of a kinship-based social structure. Umm an-Nar-type tombs seem to have been either one or two-storey structures (Cleuziou and Vogt, 1983; 1985). It is clear how these monuments required both individual skill and a considerable amount of labour force: their dimensions and the subdivision of deposition space in separate chambers hint at a complex social structure potentially able to convey a collective effort in their planning and construction.

Each of these tombs contained from a few dozens to several hundred individuals (Benton 1996; Blau 2001; Gatto *et al.* 2003; Kunter 1991; Méry *et al.* 2001; McSweeney *et al.* 2008; Munoz and Cleuziou 2008; Munoz *et al.* 2012). The dead were disposed in crouched position. Children under the age of 5 are generally underrepresented and evidence from settlements suggests that they might have been buried in houses (RJ-2, Cleuziou and Tosi 2000). The use of a tomb, for at least one century, implied several re-organizations of its inner space, in order to make place for the newcomers. Disarticulation after total or partial decomposition, rearrangement, selective piling and the final use of fire are also attested from the second half until the end of the millennium (Bondioli *et al.* 1998; Cleuziou and Vogt 1983; 1985; Cleuziou *et al.* 2011).

Many extra-mural deposits of human bones around these monumental graves have also been uncovered. Examples of such practices are well known from both the Emirates as well as inland and coastal Oman and testify to an increasing need for space for managing the cumulative amount of bones (for a comprehensive overview see Munoz *et al.* 2012). The most important thing to remember is that the area surrounding monumental tombs hosted intense human activity, and deserves therefore the same amount of attention as standing structures.

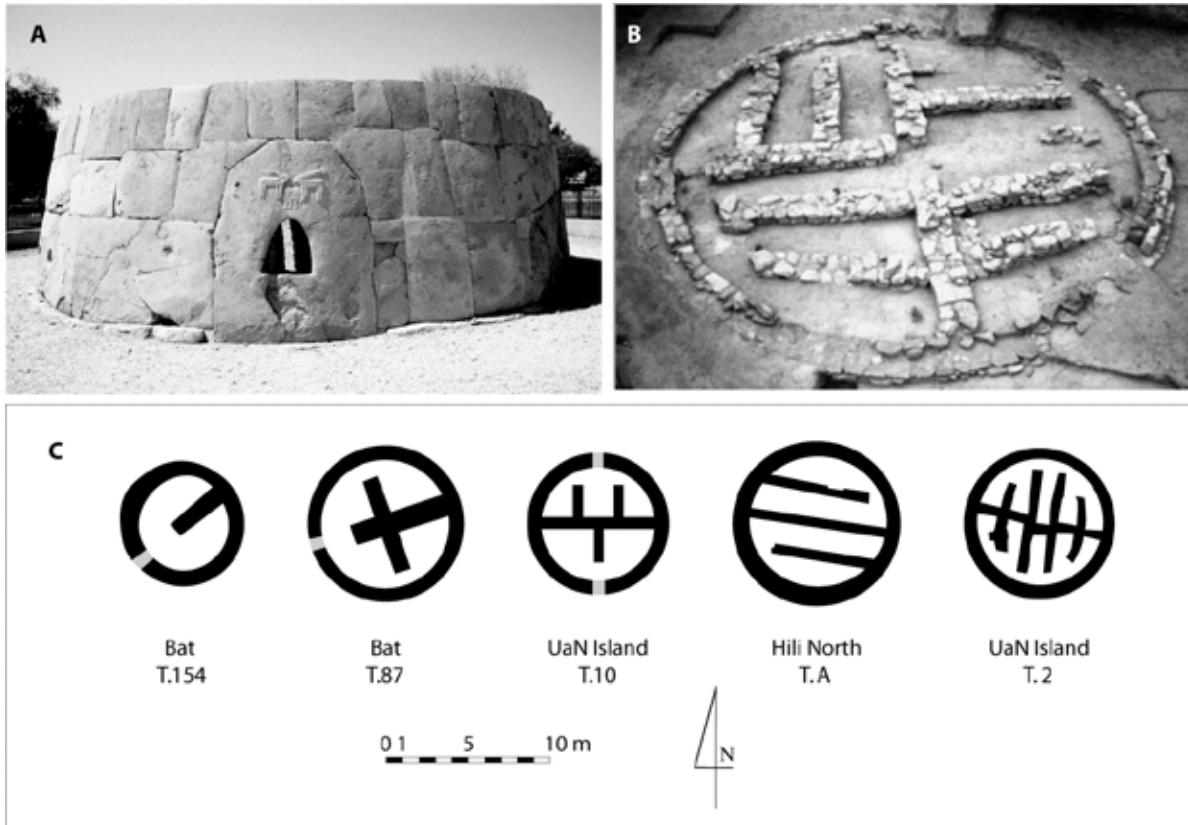


FIGURE 10. Examples of Umm an-Nar type tombs. A) Hili “Grand” Tomb 1059, Abu Dhabi (Photo: French archaeological Mission to Abu Dhabi); B) Shimal Unar2, Ra’s al-Khaimah (Blau 2001: fig.3, p. 562); C) Plan of a sample of Umm an-Nar type graves showing their inner structural articulation (O. Munoz).



FIGURE 11. Example of Wadi Suq-period tombs located in Bowshar, Muscat, Oman (Cleuziou & Tosi 2007: fig. 285, p. 269, photo: Department of Excavation and Archaeological Studies of Oman).

Objects deposited with the dead are particularly interesting and diverse in this phase: in addition to pottery, ornaments and grave goods are abundant with both locally produced and imported items.

Among the former the most common are shell, steatite, radiolarite and faience beads, followed by more probably imported carnelian beads, pearls, rock crystals, silver and golden ornaments (Cleuziou and Tosi 2007; Cleuziou *et al.* 2011). The numerous copper implements, such as rings, earrings, pins, fish hooks and “razors” were also local products. Another important local production consists of soft stone vessels [Fig. 9E], which in this period are semi-circular or rectangular chlorite vases with *série récente* decorative patterns (Miroschedji 1973; David 1990; 1996; 2002a; 2002b; 2011).

#### THE BRONZE AGE – WADI SUQ PERIOD

This impressive socioeconomic development didn’t last long after the end of the 3rd millennium. In the first half of the second millennium we have indeed clear evidence of another major change involving funerary practices, material culture and the underlying socio-economic context (Cleuziou 1981; Carter 1997a; 1997b).

These changes are accompanied by increasingly arid conditions, due to constantly lower precipitation and to a weakening summer Monsoon (Mayewski *et al.* 2004: 243).

A reorganization of the complex system established in the previous centuries took place, with possibly higher dispersion of human groups and a return to less articulated burials – whose location and building techniques hint at more opportunistic choices, less affected by prominence [Fig. 11]. Despite a homogenous material culture, tombs show higher structural variability, with both monumental, collective burials and more modest individual ones. The former are preferentially distributed in the northern part of the Oman peninsula, while the latter are located on piedmonts, low terraces, and coastal areas from Musandam to Masirah Island (Righetti 2012).

The fine potteries of the previous phase give way to generally coarser wares with simpler decorative patterns (Méry 1991; 2000).

This complicated and interesting phase – referred to as Wadi Suq period – is unfortunately still poorly known and less investigated. It certainly deserves

more attention by researchers in the coming years for this picture implies a profound mutation in the relation between human groups and the environment that hosted them.

#### OMANI FUNERARY HERITAGE: FACING THE BIG QUESTIONS

After this overview of almost three thousand years of extraordinarily complex and ever changing funerary practices it is clear how this vast amount of information is highly significant to answer some of the substantive questions of Arabian archaeology, but it also has wider resonance with higher-level questions on the human culture and society.

For example, the analysis of tomb structural development, can help us in refining the relative chronology of funerary monuments, in assessing construction techniques and their relation with the catchment of local or non-local building materials (with implications in terms of territoriality, work specialization and social stratification). At the same time it allows for building hypotheses on the mechanisms of cultural transmission responsible for the spread of specific structural, technical or stylistic variants to the expense of others (Bortolini 2012; Boyd and Richerson 1985; Cavalli Sforza and Feldman 1981; Frifelt 1975b; Gagnaison *et al.* 2004; Méry 2010; Shennan 2001; Shennan and Wilkinson 2001; Steele *et al.* 2010). The study of the different goods contained in tombs can help answer similar questions: the materials deposited in association with the dead form a precious interpretive bridge between the local perspective of eastern Arabia and a wider regional scale, where Oman played a key role in linking Mesopotamia and the Indus within a network of trade and exchange (During-Caspers 1970; Méry 1996; 2000; Potts 2005; Tosi 1976).

However, it is because of the people that were buried in them that these tombs were erected. The results and data reported in the present work exemplify how a careful in situ examination of palaeoanthropological material can offer very good insights on the mortuary practice itself. The thorough in-field recording of human remains – when they are still in their context – is indeed the only way to approach and document mortuary behaviours, as well as to understand the mode and tempo of depositional and post-depositional processes.



In the laboratory, the study of human remains informs us on age, sex, health status, everyday activities and demography. Chemical analyses can also offer insights on dietary habits and possible migrations, telling us about regional and transregional mobility (Gregoricka 2013; Zazzo *et al.* submitted). Eventually, the study of discrete morphological traits in osteological and dental remains and, possibly, the few traces of ancient DNA they might contain, will make increasingly possible to test hypotheses on kinship and tribal alliances. These analyses do not offer straightforward answers for the present context of interest. Nevertheless, they can help in casting the still emerging picture of prehistoric Arabia (Tosi 1986) into a broader perspective.

#### CONCLUSION

To conclude, the present work aimed to stress the value of funerary evidence, in particular when analysing the past of eastern Arabia and Oman, where it still constitutes the most conspicuous if not the best evidence at hand on the prehistory of the region (Cleuziou 2002). Tombs can provide an incredible amount of information on material culture, economic processes, past societies and human culture as a whole – with important implications for the present. This really concise overview anyway made clear the uniqueness of an archaeological record that was not produced by an imported or peripheral culture, but by a relevant and articulated system, with its own cultural and historical identity.

A continuing if not increasing involvement of scholars and institutions is therefore needed at many levels, from documentation to analysis, from conservation to explanation, from scientific dissemination to public engagement, in order to ensure the study of this critical corner of human history.

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