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The Reuse of Tombs in Eastern Arabia

Stephanie Döpper

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Stephanie Döpper, Frankfurt am Main, November 2022

1 Introduction

Reuse of ancient monuments and other sites is a well-known phenomenon in all periods all over the world. People in the past were always confronted with surviving remains from previous periods, and reacted to and engaged with them in most varying ways. This is particularly true for liminal places like tombs. Reused structures are by definition used.[1] This can be unmarked and thus neutral in meaning, but if intentional and conscious, significantly value-laden.[2] It is the latter that this study concentrates on. Reuse differs from continuous use by a period of non-use and can take destructive and additive forms. The former is characterised by (partially) destroying and/or taking away human remains, grave goods or the architectural structure of the tombs itself. Additive reuse refers to the adjoining of objects or even complete burials to an older tomb after a significant gap in the occupation, in some cases when the original monument was already in a state of ruin.

Reuse and other later activities at tombs can range from a few changes of the inventory to the complete emptying of it.[3] For the archaeologist, identifying such later activities is challenging, not least because one and the same action can result in very different archaeological records.[4] Likewise, it is possible that very differently motivated actions can lead to the same visible changes in the archaeological material. For example, a completely empty grave could be the result of a secondary burial at another location, or grave robbery. Furthermore, natural, non-anthropogenic influences, such as the decomposition of the body, animal burrows or the collapse of the tomb structure, can generate disturbances within the tomb and are often difficult to differentiate from anthropogenic ones.[5] In addition, not all anthropogenic influences have to be intentional, for example, ploughing.

The majority of research on reuse of tombs has focused so far on Europe, with special emphasis on megalithic architecture in its north and the medieval period.[6] Despite how tombs have been the main focus of archaeological research in Eastern Arabia, i.e., the north of the Sultanate of Oman and the United Arab Emirates, in the past decades, reuse of tombs has received only little attention. Oftentimes, it is discounted as an exceptional case not worthy of further exploration or it is often over-simplified as grave robbery, although there is plenty of evidence contradicting this interpretation, as will be argued in this study. When mentioned in publications, it is mostly in the form of a negative comment about the disturbance to the actual focus of research, i.e., the first use of the tomb. This relates to the still dominant perception of archaeological sites as static entities belonging to a specific time period and not as ever-changing entities within a multi-layered world. In consequence, reuse has never received the same appreciation as the first use of a tomb. This results in later objects found within older tombs being rarely described or illustrated in detail in the publications of the excavations, rendering it impossible to reconstruct their depositional contexts and time period. Further, it makes it distinctly possible that some evidence is not recorded at all.[7]

This attitude to archaeological sites might be the reason why so far no comprehensive research has been undertaken on reuse in Eastern Arabia, neither into the temporal and nor into the spatial range of this phenomenon. Ignoring the complex use-history of such tombs, however, prevents not only understanding the burial customs of a specific time period, but more importantly the social conditions of the past communities that favoured or prevented such activities. The present work will investigate the phenomenon of reused tombs in Eastern Arabia from the beginning of the Early Bronze Age around 3100 BC until the end of the Sasanian period around AD 630, when the onset of Islam in Eastern Arabia profoundly changed the burial customs, in order to understand the underlying purposes and social context of this

1 Kinney 2011: 3.
2 Kinney 2011: 2.
3 Aspöck 2003: 230.
4 Baitinger 1992: 337 fig. 4; Aspöck 2015a: 24.
5 Baitinger 1992: 336.
6 Bradley 2002: 112–148
7 For similar handling of this phenomenon by archaeologists in other regions of the world, see Vejby 2012: 8.

praxis. For this, all published evidence for reuse of tombs in this region was collected and statistically analysed. Different ideas concerning the underlying research question of why tombs in Eastern Arabia were reused will be discussed. These include grave robbery, change of status of the deceased, offerings and other depositions of single objects as well as reusing tombs as burial sites. Most of these can be placed in the context of cultural memory.

2 Reusing tombs – the theoretical background

To approach some of the motives behind the reuse of ancient tombs, three processes of people in the past are, according to Bradley,[8] of special importance: interpretation, confrontation and legitimation. As these processes are all interlinked with cultural memory, it is first necessary to discuss the theoretical background of this concept and its application in archaeology.

2.1 Collective memory and cultural memory

Memory is defined in the Encyclopaedia Britannica as "the encoding, storage, and retrieval in the human mind of past experiences".[9] This definition comes with the notion of memory being something very personal and belonging to individuals. It also refers to memory as a technique of remembrance, based on the idea that the information that is stored in the memory can be retrieved as the same.[10] Memory here is a form of art (*ars memoriae*), which allows the exact recall of the memory with the help of mnemonics. The founding myth to this concept of memory is Cicero's *De Oratore*. In this study, the story of the Greek poet Simonides of Keos is told, who was able to identify the guests of a dinner party that died in a catastrophe because he had memorised the places where they were seated. The principle behind mnemonics is to place images of things that are supposed to be remembered in a series of real or imagined places. Later, you can walk alongside these places in your mind to recollect the images and thus the memories as Simonides did in the story. Cicero promotes this technique as a way to memorise speeches.[11]

Concerning the reuse of tombs, however, another concept of memory is relevant, that of memory as being social and collective.[12] Although some earlier mentions of the term collective or social memory can be found,[13] the French sociologist Maurice Halbwachs (1877–1945), a student of Émile Durkheim, is generally credited with establishing the concept of collective memory (*mémoire collective*). Since the 1920s, he published three books dealing with this topic. In 1925, *Le cadres socieaux de la mémoire* appeared, in 1941, *La topographie légendaire des évangiles en terre sainte*, and posthumously in 1950, his unfinished book *La mémoire collective*. Central to his publications is the idea that memory is a social phenomenon that is acquired in society.[14] It develops through interactions with other people within their framework of social conditions (*cadre sociaux*), because people do not live as individuals but are always parts of different groups, whose shared concerns, values, experiences, narratives and memories they also adopt.[15] Collective memories are thus not only the product of what people remember through their own autobiographical experiences, but they incorporate a constructed past with constitutes of the social group or groups with which they identify themselves.[16] Only because people are part of social groups can they position, interpret and remember st events,[17] as memories only assume relevance when they are placed in a social setting.[18]

8 Bradley 2002: 147.
9 Britannica 2019: Memory.
10 Assmann 1999: 31–38.
11 Erll 2005: 62; Fentress – Wickham 1992: 11.
12 Besides excluding the study of unconscious social memory (Donald 1991; Mithen 1996), collective memory in evolutionary studies of human cognition and the development of human consciousness, in the way in which archaeology itself influences collective memory (Michel-Rolph 1996; Hodder 2000; Holtorf 2001; Jones 2001; Van Dyke – Alcock 2003: 3–4; Yoffee 2007: 4–6; Van Dyke 2011: 250–253) as well as material culture as pure memory tools to store exact information, such as tokens, jetons, stone discs, etc. (Goonatilake 1991; D'Errico 1998; Kielt Costello 2002) are further omitted.
13 Olick – Robbins 1998: 107.
14 "*Cependant c'est dans la société que, normalement, l'homme acquiert ses souvenirs, qu'il se les rappelle, et, comme on dit, qu'il les reconnaît et les localise*" Halbwachs 1952: vi. ("It is in society that people normally acquire their memories. It is also in society that they recall, reorganise, and localise their memories".) Translation: Halbwachs 1992: 38.
15 Halbwachs 1967: 1–33; Assmann 2006: 224.
16 Chadwick – Gibson 2013: 9.
17 "*C'est en ce sens qu'il existerait une mémoire collective et des cadres sociaux de la mémoire, et c'est dans la mesure où notre pensée individuelle se replace dans ces cadres et participe à cette mémoire qu'elle serait capable de se souvenir*." Halbwachs 1952: vi. ("There exists a collective memory and social frameworks for memory; it is to the degrees that our individual thought places itself in these frameworks and participates in this memory that it is capable of the act of recollection".) Translation: Halbwachs 1992: 38.
18 Kansteiner 2002: 190.

The function of a collective memory is to make sense of the world, inform how to interpret new situations and learn how to understand our cultural identity in the present,[19] as this is where remembering takes place.[20] This present is, however, largely experienced through connections with past events, objects and places.[21] Collective memory, contrary to the idea of the art of memory, does not preserve the past as such, but is a continually reorganised version of it fitting to the framework of social conditions in the present.[22] Memory reflects society's needs rather than the real events that once took place.[23] This makes memory subjective, highly selective, dependent on the situation[24] and specific to the group in which they are recalled.[25] Memory is dependent on variables such as gender, ethnicity, class and religion.[26] Therefore, memory is never fixed, but flexible and can create a multiplicity of meanings, or as Lefebvre calls it, "horizons of meanings".[27] Further, memory is not neutral; it is highly selective in what is remembered in a society and what is forgotten,[28] as remembering and forgetting are both fundamental to memory.[29] Memory is always constructed. Groups can deliberate, forget or alter their collective memory to take account of changing social or political circumstances.[30] They can and most likely will invent traditions, as Hobsbawm[31] has convincingly demonstrated. What is remembered about a particular place is dependent on many different factors. Sometimes by the efforts of certain persons attempting to define for others what should be remembered and sometimes evoking the opposite reaction.[32] Attempts to influence future memories seldom succeed, because the meanings and understandings change, defying or denying the intentions of those who created them.[33] Collective memory is nevertheless not separated from individual memory; both are in mutual dependence.[34] While people recall and organise their memories in society,[35] it is individuals that remember.[36] In other words, it is the individual who has the memory, while it is the society who creates it collectively.[37] However, as Kansteiner points out, collective memory can be studied by other means than through the individual.[38]

Despite Halbwachs' ground-breaking ideas, memory studies were not the focus of scholarly interest in the decades following his publications. Since the 1980s, however, they have been booming.[39] Memory is one of the key themes in various disciplines from philosophical, poetic and literary studies to cognitive neuroscience, psychology, history, sociology, anthropology and ethnography.[40] Archaeological interest in memory began to gain momentum during the 1990s with Barrett's "Fragments from Antiquity"[41] (1994) as well as Bradley and Williams' edited World Archaeology issue "The Past in the Past" (1998), and escalated after the turn of the millennium.[42] This boom in memory studies may be not least because this topic, as only a few others, can bridge disciplines from the humanities and the social and natural sciences.[43] The main reasons listed in the literature for this boom happening at this specific time are that the generation of witnesses to the Shoah and the Second World War are dying out and thus the oral tradition surrounding these events is being interrupted with a breakdown of the "great narrative" with the end of the cold war and the ideologies connected with this, the postcolonial situation and new electronic media for external storage.[44] This increase in memory studies also leads to a vast and confusing number of labels and concepts connected to memory, often using different terms for the same idea,[45] for example the terms "social memory" and "collective memory". While some use the term social memory or cultural memory instead of collective memory in order to avoid the notion that the individual is passively obeying an interiorised collective will[46] or a collective consciousness,[47] seeing it as different names for the same content, others assert that social memory refers to the influence of social factors upon individual and group memory, whereas collective memory constitutes the wider memory of a society.[48] Others still say that social memory is the non-intentional part of cultural and communicative memory,[49] or that collective memory refers to remembering by people who do not all know each other but who remember the same thing, while social memory derives

19 Kielt Costello 2002: 37; Assmann 2011: 28; Jones 2013: 55.
20 Berliner 2005: 200–201; Erll 2005: 7.
21 Connerton 1989: 2.
22 Halbwachs 1992: 46–51; Assmann 2011: 27.
23 Gedi – Elam 1996: 40.
24 Erll 2005: 7.
25 Erll 2005: 15–16.
26 Van Dyke – Alcock 2003: 3.
27 Lowenthal 1985: 206; Lefebvre 1991: 222.
28 Assmann 2011: 22–23; Van Dyke 2011: 237.
29 Eckardt 2004; Erll 2005: 7; Mills 2008.
30 Alcock 2001: 323; Assmann 2011: 26; Truc 2011: 153; Chadwick – Gibson 2013: 11.
31 Hobsbawm 1983.
32 Rubertone 2008: 13.
33 Bradley 2002: 82–86, 109–111; Knapp 2009: 48–49.
34 Erll 2005: 16.
35 Halbwachs 1992: 38.
36 Olick – Robbins 1998: 111.
37 Assmann 2011: 21.
38 Kansteiner 2002: 185.
39 Winter 2001.
40 Chadwick – Gibson 2013: 2.
41 Barrett 1994.
42 Van Dyke 2011: 238.
43 Erll 2005: 2.
44 Erll 2005: 3; Assmann 2006: 212; Assmann 2011: vii.
45 Beiner 2008.
46 Fentress – Wickham 1992: ix.
47 Olick – Robbins 1998: 111.
48 Paez – Basabe – Gonzalez 1997: 147.
49 Erll 2005: 52.

from a basis in shared experiences, shared histories or places, or shared projects.[50]

The boom in memory studies is further criticised by the thought that it led to a "memory craze",[51] diminishing memory to a "catch-all category".[52] Many see the danger of the overextension of the term memory, making it indistinguishable from identity and culture,[53] or tradition,[54] and that every little trace of the past in the present could be designated as memory.[55] "My impression here is that, by a dangerous act of expansion, memory gradually becomes everything which is transmitted across generations, everything stored in culture, 'almost indistinguishable' then from the concept of culture itself."[56] The term collective memory is seen as a misleading name for myth, folk history, popular history, oral history or public history.[57] It is believed to be used as a synonym for history in order to humanise the subject and to make it more accessible, as it sounds less distant.[58] Memory is generally seen as a new, fancy label rather than content, offering no true explanatory power,[59] comparable to the overuse of the term chiefdom in archaeology in the 1970s and the term ancestor in the 1990s,[60] and also as misleading.[61] With regard to archaeology, the use of the term memory is criticised when seen as having historical agency, directing us in a new era "in which archives remember and statues forget". [62] Thus, a widespread conclusion within the critiques of the use of collective memory in archaeology is, "that the concept of 'memory' is ill-applied in archaeological analyses, confusing recollection with active, cultural creation".[63] Further, it is criticised that archaeologists tend to identify memory too easily and nearly in every context. The general problem behind these critiques is that the definition of collective/cultural memory used in archaeological and other studies is too broad, as it is often supposed to include everything that is transmitted across generations, everything stored in a culture,[64] and that memory studies in archaeology lack critical reflection on methods and theory, as well as a systematic evaluation of the field's problems, approaches and objects of study.[65] Therefore, in the following, the definition and the identification of cultural memory in the archaeological record as applied within this study will be presented.

50 Casey 2004: 23.
51 Berliner 2005: 199.
52 Zelizer 1995: 235.
53 Fabian 1999: 51; Berliner 2005: 198.
54 Cancik – Mohr 1990: 300.
55 Berliner 2005: 200–201.
56 Berliner 2005: 203; Roddick – Hastorf 2010: 172.
57 Gedi – Elam 1996: 47; Klein 2000: 128.
58 Klein 2000: 129.
59 Confino 1997: 1388; Greenhalgh 2011.
60 Whitley 2002: 119.
61 Gedi – Elam 1996: 43.
62 Klein 2000: 136.
63 Moore 2010: 399.
64 Berliner 2005: 202–203.
65 Confino 1997: 1387; Winter 2001: 65; Kielt Costello 2002: 49.

2.1.1 Definition of cultural memory

The most useful definition of cultural memory as an applicable category for archaeologists to work with and also to distinguish it from concepts of culture, (oral) history, tradition and myth, is Van Dyke's notion of social memory, which is always linked to intentionality,[66] i.e., the meant consequences of an action.[67] Thus, this is the concept of memory that will be used within this work for the study of reuse of tombs in Eastern Arabia. Although information about the past is everywhere around us, all the time, this information is not equally meaningful.[68] Van Dyke is fully aware that unconscious, habitual memories are also always present and influential, and unintentional consequences can lead to profound long-term changes.[69] She writes: "This is not to say that unreflective liturgies, habitual practices and unforeseen consequences play no role in social continuity and change. Nor is it suggested that it is possible or desirable to disentangle the discursive from the practical."[70] But for her it is crucial "that we should hold investigations of 'social memory' separate from inquiries into 'tradition', 'culture', or 'practical consciousness', so that memory retains its analytical utility".[71] She further points out that unconscious and conscious memories are far from being mutually exclusive.[72] However, "if memory is meant as something other than a synonym for culture, we cannot escape engagement with intentionality."[73]

In the same line, Jones[74] argues that unconscious memories are not habitually reevaluated and thus become part of the general disposition of the community. This is a concept that Nora also states in his book series *Les lieux de mémoire*: "*Que manque cette intention de mémoire, et les lieux de mémoire sont des lieux d'histoire*"[75], and Geary in his book *Phantoms of Remembrance: Memory and Oblivion at the End of the First Millennium*: "All memory [...] is memory for something, and this political (in a broad sense) purpose cannot be ignored".[76] Van Dyke further relies on to Connerton's[77] distinction be-

66 Van Dyke 2011: 246.
67 Bernbeck 2003: 207.
68 Van Dyke 2009: 222.
69 Giddens 1984: 8–14; Pauketat 2000; Van Dyke 2011: 245.
70 Van Dyke 2011: 245.
71 Van Dyke 2011: 245.
72 Alcock 2002: 28; Van Dyke 2009: 223; see also Connerton 1989.
73 Van Dyke 2009: 241.
74 Jones 2013: 55.
75 Nora 1984: xxxv.
76 Geary 1994: 12.
77 Connerton 1989.

tween inscribed memory and incorporated memory. Inscribed memory is manifested in materially visible commemorative activities such as the construction of monuments, while incorporated memory encompasses bodily rituals and behaviour and lends itself to fleeting acts.[78] To Van Dyke, these distinctions, while being too simple, highlight the fact that social memory involves both intentional acts as well as habitual practices.[79] According to her, this distinction can also be found in Gidden's differentiation between discursive and practical social memory.[80] Discursive social memory would refer to the intentional construction of pasts and counter-pasts, while practical memory would involve the unthinking activities, the doxic practices that comprise much of social life.[81] Although not explicitly mentioned, one could also add to these distinctions Bourdieu's explicit and implicit pedagogy.[82] Thus, social memory to be studied as a distinct topic for the archaeologist is, according to Van Dyke, what Connerton labels "inscribed memory" or what Giddens describes as "discursive memory".

Van Dyke's concept of an intentional social memory generally overlaps with Assmann's idea of a cultural memory in opposition to a communicative memory. Communicative memory, also referred to as generational or biographical memory, comprises, according to him, memories related to the recent past, those memories that the individual shares with his contemporaries. It concerns personal experiences and their framework. Those memories are formed, vouched for and communicated solely by way of personal experiences and based on everyday communication. They are informal, arise from everyday interaction and span only a horizon of 80 to 100 years.[83] Cultural[84] memory, also referred to as foundational memory, on the other hand, in Assmann's definition, deals with events in the absolute past and with mythical histories or origins.[85] They are transmitted through organised, formal and ceremonial communication such as festivals and rites and have a fixed content and specialised tradition bearer to interpret it.[86] Cultural memory is codified or institutionalised through external means such as material culture and monuments, as well a social praises such as rituals, festivals and commemorative events.[87] All these fixed objectifications are kinds of sign systems and have mnemonic functions.[88] Those mnemomics help to keep memory alive over generations, as it is not transmitted biologically, and guarantees continuity and identity to the society.[89] Cultural memory, unlike communicative memory, is a matter of institutionalised mnemonics.[90] Cultural memory creates the material and institutional conditions that people can use to refer to a long gone past and can expect that people in the far future will remember them. Institutions and larger social groups, such as nations, states, the church, or a firm do not *have* a memory; they *make* one for themselves with the aid of memorial signs such as symbols, texts, images, rites, ceremonies, places and monuments. It resides in material media, symbols and practices, which have to be engrafted into the hearts and minds of individuals.[91] Cultural memory is imbued with an element of the sacred. The figures are endowed with religious significance and commemoration often takes the form of a festival; the collective identity needs ceremony – something to take it out of the daily routine, the ceremony as a means of communication, itself a forming influence, as it shapes memory by means of texts, dances images, rituals and so on. One might therefore compare the polarity between communicative and cultural memory to that between everyday life and the festival.[92] Participation in cultural memory is always highly differentiated. This even applies to illiterate and egalitarian societies. Cultural memory always has its special carriers. They include shamans, bards, priests, teachers, artists, scribes, scholars and others. The extraordinary (as opposed to the everyday) nature of these cultural memories is reflected by the fact that these specialist carriers are separated from everyday life and duties. In illiterate societies, the forms of their specialisation will depend on what is required of the memories. The most demanding requirement is a word-for-word rendition.[93] In contrast to communicative memory, cultural memory does not spread itself around spontaneously but must be thoroughly prepared and vetted. Its distribution is controlled and whereas on the on hand it makes participation obligatory, on the other it withholds the right to participate. "In its temporal dimension, the polarity of collective memory corresponds to that between the festival and the everyday life; in its social dimension, it is that between a knowledgeable elite, the specialists in the field and the ordinary members of the group".[94] Cultural

78 Bradley 2002: 12–14; Van Dyke – Alcock 2003: 4.
79 Joyce 2008.
80 Giddens 1984: 45–51; Joyce 2008.
81 Van Dyke 2009: 222.
82 Bourdieu 1977: 94–95.
83 Assmann 2011: 36, 41.
84 "Cultural" does not refers to culture in its broader sense as the totality of human expressions in a given context, but to culture as staged, stylised culture directed to the observer (Erll 2005: 113–114); "It is 'cultural' because it can only be realised institutionally and artificially" (Assmann 2011: 9).
85 Assmann 2011: 41.
86 Assmann 2011: 41.
87 Assmann 2011: 41.
88 Holtorf 1997: 47; Assmann 2011: 37.
89 Assmann 2011: 72.
90 Assmann 2011: 37.
91 Assmann 2006: 217.
92 Assmann 2011: 38.
93 Assmann 2011: 39.
94 Assmann 2011: 40.

memory is the transmission of meanings from the past,[95] that is, explicit historical reference and consciousness.[96] It generates meaning for larger groups of memory communities such as religious groups.[97] Here, factual history does not count but remembered history does. This does not make it unreal – on the contrary, this is what makes it real, in the sense that is becomes a lasting, normative and formative power.[98] Assmann[99] is nevertheless mindful that there is no sharp distinction between communicative memory and cultural memory and that both can overlap. One and the same event in a given historical context can be at the same time part of the cultural and of the communicative memory of a society.[100] According to Assmann,[101] his distinction between communicative memory and cultural memory comes close to Halbwachs' differentiation between memory and tradition, as he works on the question of how living memory (*mémoire vécue*) transforms into history and tradition, taking on a canonical, commemorative substance. Others, however, see Halbwachs incorporating both of Assmann's concepts of commemorative and cultural memory.[102] Commemorative memory is the subject of his discussions of memories in the family.[103] Cultural memory can be found in his studies of the memory of a religion and in his book *La topographie légendaire des évangiles en terre sainte*.[104]

2.1.2 Why should archaeologists study cultural memory?

Before entering the discussion on cultural memory as an interpretative background for the reuse of tombs in Eastern Arabia, a final question must be asked. What is the benefit of archaeologists studying cultural memory? A starting point for this discussion can be Assmann's observation that humans' basic, natural disposition favours forgetting rather than remembering and thus remembering always shows deliberate efforts.[105] This leads to the question of why people invest in recording and resuscitating the past.[106] It is likely that people in every time period had questions such as "What were the inhabitants of the past like? How did they build such gigantic monuments? Why are these beings no longer alive? Why are their works in ruins? What is the cosmological relationship between 'their' past and 'our' present and what caused the transition from one to the other?"[107] It is a fact that history mattered to people in prehistory,[108] but cultural memory is never a mirror of the past but a meaningful indicator for the needs and concerns of the remembering people in the present. Thus, cultural-historical memory studies do not focus primarily on the remembered pasts but mainly on the presence of the rememberers.[109] The main focus of archaeological studies of cultural memory is therefore how the creation of collected memory affected a culture in question,[110] examining the decisive changes within the connective structure of a given society,[111] to investigate why a certain past was received or rejected, why people prefer some image of the past over another.[112] Cultural memory can reveal much information concerning the beliefs and social structures of the communities.[113] As pointed out by Van Dyke, "Memory encourages us to think of the past as inhabited by thinking, feeling people".[114] It humanises the past.[115] As archaeologists deal first and foremost – if not exclusively – with material culture, this provides a unique opportunity to access the material aspects of memory.[116] While other disciplines such as psychology, cultural anthropology or history, which rely on oral and written accounts to understand and reconstruct cultural memory, can only cover the present and recent past, material culture offers the chance to go all the way back to the origins of humankind. Further, early written accounts are especially in danger of offering a limited, mainly elite point of view.[117]

Cultural memory is, although not exclusively, connected to power.[118] Through control of a society's memory, the hierarchy of power is seen to be conditioned.[119] Therefore, memory studies in archaeology allow researchers to study the negotiation of power in ancient societies.[120] As the materialisation of cultural memory externalises outside of the mind, it is more available to manipulation and control.[121] Thus, exploring cultural memory can be a means of studying ideology, domination and resistance.[122] It allows researchers to explore how the construction of the past affected the relation-

95 Assmann 2011: 5–7.
96 Olick – Robbins 1998: 111–112.
97 Erll 2005: 116–117.
98 Assmann 2011: 37–38.
99 Assmann 2011: 40–41.
100 Erll 2005: 115.
101 Assmann 2011: 48.
102 Erll 2005: 15.
103 Halbwachs 1992: 54–83.
104 Halbwachs 1992: 193–235.
105 Assmann 2011: 51.
106 Assmann 2011: 51.
107 Harmann 2002: 354.
108 Gosden – Lock 1998: 3.
109 Erll 2005: 7.
110 Kielt Costello 2002: 46.
111 Assmann 2011: 10.
112 Confino 1997: 1390.
113 Williams 1998b: 90.
114 Van Dyke 2011: 243.
115 Van Dyke 2011: 240.
116 Kielt Costello 2002: 46.
117 Alcock 2001: 326.
118 Confino 1997: 1393.
119 Connerton 1989: 1.
120 Van Dyke 2009: 240.
121 Kielt Costello 2002: 48.
122 Kielt Costello 2002: 48.

ship of power within society.[123] Knowledge of the past enables actions in the present to be legitimated and at certain times manipulated by those who claim to possess such knowledge.[124] On the other hand, cultural memory can raise awareness of the paramount importance of the group, where individual desires, instincts and goals are subordinate, ensuring that the common good has predominance over individual agendas.[125] Remembrance of the past may also give rise to insights dangerous to the ruling group. In a world where the government forces all its subjects to toe the party line, memory offers access to a different world, facilitating detachment from the absolutism of the present given reality.[126] Memory can challenge dominant historical narratives in the name of repressed groups and attack the conceptual underpinnings of linear historicity, truth and identity.[127] The past is thus a stake in the struggle for power.[128] It is manipulated by ruling elites[129] and memory is especially vulnerable to manipulation as it is externalised.[130] Power legitimises itself retrospectively and immortalises itself prospectively.[131] And material culture as tangible links to the legitimation of those powers that may not be equally accessible to the different members of a community, is of chief importance.[132] Archaeological memory studies can allow researchers to identify individual memory makers. Maybe the easiest examples are rulers that want to be remembered and commemorate their own deeds by monuments, ensuring that their glory will be narrated, sung, performed, immortalised or at the very least recorded in archives.[133] They have the potential to examine the ways in which memory may have affected the way that the landscape was structured and individual sites inhabited over extended periods of time.[134] Memory studies in archaeology also explore how different cultural traditions perceive, represent and utilise the concept of time.[135]

Of course, archaeologists cannot get inside the minds of people in the past and thus never know what people consciously thought about the past in their culturally specific context,[136] but cultural memory is a useful and meaningful theory for archaeological studies and distinct from concepts such as culture as it refers to intentional references to the past that explicitly communicate meaning, though not everybody in the past society might have agreed with it.[137] To this concept it will be referred to in this study using Assmann's labelling as cultural memory.

2.1.3 Identifying cultural memory in the archaeological record

2.1.3.1 The material background

When we want to identify cultural memory in the archaeological record that is in the material remains from the past, we first have to recall that because material culture can indeed inform us about past societies that form the relationship between the people and the artefacts that remain from ancient societies, we can learn about the life in the past.[138] Material culture is thus integral to society and not only an incidental background to it.[139] Hodder[140] has convincingly argued that material culture is always meaningfully constructed and can be understood as operating in a meaningful way when it is implicated with a particular region of social practice. Through the interaction of people and material culture, meaning is encoded with things, which would themselves have no meaning.[141] This can result in the development of a deeply personalised relationship between people and things, "which work in a manner different from linguistic experience because it is a physical, synesthetic, material experience threatening to overwhelm the sense and inbuilt in to the thing (usually) is the passage of time in its making, exchange, uses, movements and modes of consumption".[142] Through symbolic codes, objects invoke representation of the past that inform people's action, allowing the archaeologist to read the material record comparably to reading a text.[143] But texts are to be interpreted by different people in different ways.[144] Material culture is no closed category. It is unstable, mutable from one context to another.[145] "Reading material culture as meaningfully constituted forming a signifying field inevitably involves the archaeologist in a complex process of interpretation, decoding or translation. [...] Material culture patterning is not a reality to be questioned in the way in which a hypothetic-deductive analysis might suggest but a reality that has to be constructed in the process of translative, interpretative analysis."[146] Therefore, "we have to follow the things themselves, for their meanings are inscribed in their forms, their uses, their trajectories.

123 Confino 1997: 1393.
124 Jones 2013: 55.
125 Assmann 2011: 121.
126 Assmann 2011: 69.
127 Olick – Robbins 1998: 108.
128 Van Dyke 2011: 237.
129 Alcock 2002: 17.
130 Kielt Costello 2002: 1–2.
131 Assmann 2011: 54.
132 Lillios 1999: 236.
133 Assmann 2011: 54.
134 Jones 2013: 55.
135 Van Dyke 2011: 242.
136 Williams 2006: 20.
137 E.g., Mills – Walker 2008a: 17.
138 Schiffer 1999: 7.
139 Graham 1998: 3; Gosden – Marshall 1999: 169.
140 Hodder 1982; see also Thomas 1996: 59–64.
141 Tilley 1999: 76.
142 Tilley 1999: 272.
143 Hodder 1986: 122–124.
144 Hodder 1988: 69–70, 74.
145 Hodder 1986: 118–146; Bradley 1998: 71.
146 Shanks – Tilley 1987: 115.

It is only through their analysis of these trajectories that we can interpret the human transactions and calculations that enliven things."[147]

Secondly, we have to act on the assumption that cultural memory must be (at least partially) reflected in the material culture of past societies to enable archaeologist to recover it. This is exactly what Assmann argues to separate it from other forms of memory as demonstrated in chapter 2.1.1. The possibility to externalise cultural memory out of the brain is also what is distinguishingly human.[148] Material culture includes, most generally speaking, objects and places. Material objects and places, however, do not preserve or communicate memories. They are no straightforward substitutes of memories.[149] They may evoke remembrance,[150] but only if those objects or places play a role in the cultural memory of the group. Their meaning is never fixed by the author. Instead, they always demand interpretation. The act of reading is both creative and situational. The reader is situated within specific cultural contexts. Individual reads are therefore encultured based on one's own life experience. Bearing that in mind, material culture cannot be seen as a storehouse or bank of past experience any more than the human mind can be.[151] Thus, the meaning of places and objects must be maintained and communicated to further generations and this generally happens through commemorative rituals.[152] Therefore, the role of places and objects on the one hand and commemorative rituals on the other hand will be discussed in the following two chapters.

2.1.3.1.1 Places and objects

It is widely recognised that cultural memory needs to be given substance through a particular setting in time and place.[153] It must be attached to objects, buildings or landscape features, in which the memory of the social group can be stored, in order for it to become real to the society and thus survive. This physical background is what Halbwachs[154] refers to as the material framework (*cadre materiel*) in which memories come into being. This material framework forms, as Johnson[155] phrases it, "geographies of remembrances", or in the words of Thomas,[156] "landscapes of memory", which guides the observer. Cultural memories pass down using natural or anthropogenic landscape features or other material objects as prompts to recount myths, genealogies, historical events, tenurial information, customs, legal codes and so forth. Symbols utilised in those frameworks, for example on rock art and on ceramics, basketry, fabrics and other media, are capable of instantiating memories, even if the design appears purely abstract or geometrical.[157] In the words of Assmann,[158] they are raised to the status of sights, meaning that they are semioticised. As a result, places and objects can summon up or discourage memories.[159] They are the form through which cultural meaning that goes beyond their practical purpose is both handed down and brought to present life.[160] This is, however, not to say that objects contain or store memory; they rather provide the grounds for humans to experience memory.[161] And while a memory might be pure invention, it can nearly always be precisely located in a place.[162] Real places especially support the belief in the memory when it was not personally experienced.[163] However, it also has to be assumed that how the past is stored affects what is remembered and thus that a change in the storage can cause a change in the content.[164]

Material things and places further have the potential to endure time in a different way to human beings. Artefacts and places can outlast time well beyond a single human lifespan or they can be destroyed or disposed of immediately after construction.[165] Fowler[166] differentiates between enduring monuments and such that are intentionally destroyed shortly after their construction. In the first case, the memory functions through being projected forward in time due to the permanence of the monument.[167] In the latter, the memory is imprinted on the people who witness or take part in its destruction through the very act of it. The monument will be remembered during the following construction and destruction or any other commemorative rituals at this place or another. In both events, through the monuments, the memory associated with them will be projected into the future in the expectation that either the monument will be still there, or another one referring to it or another ceremony

147 Appadurai 1986: 5.
148 Laland – Rendell 2013: 740.
149 Forty 1999.
150 Chadwick 2013: 293.
151 Jones 2007: 13.
152 Connerton 1989.
153 Halbwachs 1952: 187; Nora 1984; Nora 1989; Tilley 1994: 59; Assmann 1999: 298–339; Knapp – Ashmore 1999: 13–14; Crumley 1999: 271; Bradley 2002; Kielt Costello 2002: 1; Guggenheim 2009: 41; Graves – Rechniewski 2010: 8; Assmann 2011: 24; Harmanşah 2012: 107; Hoaen – Loney 2013: 125; Vieira 2013: 259.
154 Halbwachs 1992: 200.
155 Johnson 2003.
156 Thomas 2000: 79.
157 Chadwick – Gibson 2013: 17.
158 Assmann 2011: 44.
159 Alcock 2001: 326.
160 Assmann 2011: 5–7.
161 Jones 2007: 22, 24–25.
162 Truc 2011: 148.
163 Halbwachs 1992: 201; Borić 2010: 50–51; Truc 2011: 152.
164 Geary 1994: 10.
165 Fowler 2003: 56.
166 Fowler 2003: 56.
167 See also Bradley 2002: 82, 86.

remembering it.[168] Relating to places, Truc[169] distinguishes therefore between "memory of places" and "places of memory". According to him, places of memory tend to evolve and live after the past event, where the memory of the place is grounded. This creates a tension between the actual material place that is continually changing and the memory of the place that preserves it as it was while the event happened, a tension between the real and the symbolic form of the place.

Most archaeological studies of memory have tended to emphasise large-scale, ritual and high prestige monuments as the intention in their creation to remember something seems self-evident. The word "monument" derives from the Latin verb *monere*, to remind.[170] "As the word 'monumental' implies, the builders of monuments are always thinking in some sense about representing pasts for the future."[171] Monuments are memorials to people and events, and in preliterate societies their meanings would be passed down in the form of stories, myths and legends.[172] Although, as Bradley[173] points out, monuments evoke multiple, contested meanings and are subject to continual reinterpretation over time; their builders are engaged in memory-making, attempting to project ideas about the past into the future. Their material presence makes it highly likely to inspire groups that encounter the monuments way after their construction to include them in their group's collective memory.[174] Or, as Gibson phrases it, "old things still mattered, even when their original meanings may have been forgotten".[175] However, while some see monumental buildings as mediators of the past through their sheer powerful presence,[176] it has to be remembered that they, as all other material things, do not possess memory by themselves. It can only be ascribed to them. The function of monumental buildings is often seen as to shape the relationships of power and inequality between those who dwell in or use such buildings and those who do not.[177] Monuments are thus considered to be the physical manifestations of the social order, the display of the achievements of the elites, maintained, alive and present, in perpetuity.[178] They are deemed to be built as integrative strategies to counter political collapse,[179] as signs and symbols of community and of a political identity,[180] the official codification of cultural grammar[181] or as an expression of the collective will.[182] They can be the attempt of the ruling class to fix meaning through the canonisation of building.[183] But their signifying power depends upon the viewer's ability to recognise why they are built and which event they commemorate.[184] As this is no longer the case, their power becomes ineffectual.[185] This implies that the study of cultural memory in archaeology mostly focuses on its use by different groups of elites, "not because their use of the past is more important or more widespread than non-elites', but because they were in a better position to inscribe their version of the past in enduring ways susceptible to recover by archaeologists".[186]

Notwithstanding that monuments, including tombs, are the focus of archaeological engagement with memory, many other objects and places can function as the external materialisation of cultural memory as well,[187] for example simple dwellings[188] or ritual deposits (chapter 5.1.4).[189] The possibilities of which objects or places are turned into items of cultural memory of any given society are unlimited.

2.1.3.1.2 Commemorative rituals

As material culture does not pass on memory on its own, it must be conveyed and sustained through commemorative rituals,[190] which are understood as the formal re-enactment of the past.[191] In his book *How Societies Remember*, Connerton claims that "if there is such a thing as social memory, we are likely to find it in commemorative ceremonies."[192] Cultural memory involves remembering together, an interplay or dynamic between people and things.[193] It is connected to repetitive actions rather than to materiality.[194] There is no other way to participate in cultural memory than by personal presence.

168 Fowler 2003: 56.
169 Truc 2011: 149.
170 Holtorf 1997: 47; Bradley 2002: 82.
171 Van Dyke 2009: 221.
172 Hoaen – Loney 2013: 138.
173 Holtorf 1997: 47; Bradley 2002: 82–111; Van Dyke 2009: 223.
174 Bradley 1998: 71–72; Ferrari 2002: 27–28; Jones 2003: 66; Knapp 2009: 48; Gibson 2013: 117–118.
175 Gibson 2013: 117–118.
176 Harmanşah 2012: 2.
177 Fisher 2006: 125; Knapp 2009: 47.
178 Ferrari 2002: 27–28; Knapp 2009: 47; Assmann 2011: 126.
179 Assmann 2011: 127.
180 Assmann 2011: 127.
181 Assmann 2011: 267.
182 Knapp 2009: 47.
183 Assmann 2011: 160–161.
184 Ferrari 2002: 27–28.
185 Ferrari 2002: 27–28.
186 Button 2007: 79.
187 Gilchrist 2013.
188 E.g., Carsten – Hugh-Jones 1995; Joyce – Gillespie 2000; Kujit 2001; Meskell 2004: 66–69; Watkins 2012.
189 Mills – Walker 2008b; Chaffey – Barclay 2013: 208.
190 Connerton 1989; Brockmeier 2002: 18; Jones 2007: 44–46; Kontopodis 2009: 6.
191 Fentress – Wickham 1992.
192 Connerton 1989: 71. Connerton's fundamental statement in his work, that performativity cannot be thought without a concept of habit and habit cannot be thought without a notion of bodily automatism is not relevant for this research as although habitual behaviour is present in all commemorative rituals, it is the part of the ritual that belongs to the habitual and not to the cultural memory.
193 Jones 2003: 84.
194 Furholt 2012: 125.

Consequently, occasions must be established in any given society to bring about gatherings.[195] Without commemorative rituals, cultural memory cannot be passed on from one generation to the next.[196] Those rituals link cultural memory to places and objects. They are performed "whilst moving past or gesturing to particular landscape features, or utilising items of material culture as citational devices".[197] Commemorative rituals transmit shared memories and create an arena where they could be absorbed and argued.[198] Through such ritual performances, images and knowledge of the past are conveyed and sustained[199] and social integration is promoted.[200] They give value and meaning to those who perform them.[201] Collective experience confers communal, social and emblematic memories to the participant.[202] Commemorative ceremonies often include references to myths and recall events that have taken place at some historical date or in the mythical past.[203] They further refer as well to social and political events just outside living memory as to more distant events from centuries or millennia ago such as myths where precise details of the event may be lacking.[204] The explicit reference to prototypical persons and events is what makes them distinguishable from all other rituals, irrespective of whether the persons and events are historical or mythical.[205] Uniting past and present, rituals establish and maintain associations with ancestors and the supernatural through the use of particular categories of places in the landscape. Generally, commemorative activities are most visible in the realm of the elite, so it is their version of the past that most frequently will be recorded and preserved.[206] This does not, however, exclude that more pluralistic memories of the common people can be found in the archaeological record as well.

Another aspect of commemorative rituals is that they are repetitive and, according to Connerton[207], repetition automatically implies and reinforces continuity with the past. Archaeologically this may be detected through a highly structured mode of deposition.[208] Repetition guarantees that the lines of action will not branch out into infinite variations but instead will establish themselves in recognisable patterns immediately identifiable as elements of a shared culture.[209] As Bradley[210] highlights, "people did not make artefacts or build structures according to a traditional format because they were unable to think of anything else. Rather, they did so as one way of adhering to tradition and maintaining links with what they knew of their past." But rites do not simply imply continuity with the past, they explicitly claim such continuity.[211] Each ritual is linked to its predecessor. It does not only repeat the ceremony from the previous occasion by following the same pattern but also re-presents or presentifies an event from the remote past.[212] "We would underestimate the commemorative hold of the rite, we would minimise its mnemonic power, if we were to say that it reminded the participants of mythic events, we should say rather that the sacred event was re-presented, the participants in the rite gave it ceremonially embodied form. The transfigured reality of the myth was again and again re-presented when those who took part in the cult became so to speak contemporaries with the mythic event", says Connerton.[213] This re-enactment is of cardinal importance in the shaping of communal memory.[214] Ritual is not solely confined to the repetition of a fixed procedure, it also realises a meaning that is to be preserved and made present.[215] If this dimension of reference and presentification was not present, then we would not be dealing with rites as such, but with ritualised routines – mere actions that are prescribed for purely rational, practical purposes.[216] According to Assmann,[217] the stricter the established order is, the more dominant the aspect of repetition in rituals, and the more freedom is given to individuals in general, the more the aspect of representation comes to the fore.

The performances of rituals are encoded in formalised, stylised and stereotyped language in storytelling, songs or poems, bodily movements such as postures, gestures and movements and so forth. They become materially visible in the archaeological record through evidence for activities like processions, mortuary treatments, abandonments, feasting and votive depositions.[218] Such rituals require the continuing investment of resources.[219] In contrast to everyday situations, this pattern is not flexible, but restricted, and hence easy to repeat at the next ritual occasion.[220] All this ensures the ritual's effectiveness

195 Assmann 2011: 42.
196 Connerton 1989: 38–40; Assmann 2011: 123; Bollmer 2011: 459.
197 Chadwick 2013: 307.
198 Connerton 1989.
199 Connerton 1989: 4.
200 Chadwick – Gibson 2013: 10.
201 Connerton 1989: 45.
202 Roddick – Hastorf 2010: 172.
203 Connerton 1989: 45.
204 Chadwick 2013: 294.
205 Connerton 1989: 61.
206 Alcock 2002: 18, 97.
207 Connerton 1989: 45.
208 Richards – Thomas 1984: 215.
209 Assmann 2011: 3.
210 Bradley 2002: 11.
211 Connerton 1989: 45.
212 Connerton 1989: 43; Assmann 2011: 3.
213 Connerton 1989: 43.
214 Connerton 1989: 61.
215 Assmann 2011: 73.
216 Assmann 2011: 74.
217 Assmann 2011: 4.
218 Van Dyke – Alcock 2003: 4.
219 Demarrais – Castillo – Earle 1996: 17–18.
220 Connerton 1989: 61.

as mnemonic system.[221] A bombardment of the senses during such rites can provide an additional mnemonic device itself (a flashbulb memory), especially important for infrequent events and creating strong memories subject to much significant distortion compared to average memories.[222] Commemorative ceremonies set into motion richly textured interactions in which individuals and groups can assert identities, craft social memories and repair the social fabric of the community.[223] This makes rituals much easier to identify as activities related to memory, and other, more idiosyncratic ones, that tend to produce intelligible patterning.[224]

Rites generally occur at specific places at fixed times.[225] They are staged for different group events, ritual performances and commemorative ceremonies. Material spaces and objects provide such stages for these rituals.[226] This begins with the creation of the object or building itself, where the often long-term commitment as well as the ability to control resources and labour must, according to Knapp,[227] have created a sense of group identity, or of different group identities: those who create it and those who commissioned it. As people invest their time, energy and emotions into objects, buildings or landscape features, this investment consequently creates a strong bond between people and things.[228] One very visible example of this in the archaeological record is conspicuous consumption.[229] By this, the meaning is mainly communicated and kept alive through rituals staging at the material space or with the objector referring to it. Later, when the material space loses its original use, it can be incorporated into new group memories by referring to the monument by construction new buildings or objects in relation to it, depositing objects there with explicit reference to it or staging new rituals at this place.[230] As in the initial building of the monument, this again requires considerable investment of time, resources and labour, creating a new sense of group identity. The same is true for the new performances involved in the reuse of the building. The places chosen for ritual performance may have been invested with liminal or sacred qualities and have influenced the movement and expectations of participants and onlookers. The antiquity and monumentality of a locale can be important resources, integral to the symbolism and organisation of ritual practices and important for the reproduction of social relations and identities in past societies.[231]

The continuous, repeated use of a site or an object does include the use of a replica of a site or an object of which the original was destroyed, is lost or for other reasons no longer accessible, just like reuse as an invented repetition after a long period of time also includes the creation of a replica of an invented original. What is valued in these cases it not the real object or place but the memory thereof. Value is thus not attributed to the object but to the memory of their imagery.[232] This concept is often referred to as citations.[233] If the object that is remembered is destroyed without replication, this is referred to as incorporation. What they signify is remembered only through their absence, through recollection of the object and the events which removed them from circulation.[234] A continuous, repeated use of a site or an object is referred to as an inscription. It is the intention to guide memory in future acts of interpretation by creating lasting traces of edifices that represent what is to be remembered and believed.[235] Reuse as an invented repetition also mostly incorporates the disruption of the current belief. This kind of mnemonic editing takes some effort, designed to transform the old continua into a series of seemingly unattached blocks of time.[236] This might involve systematically uprooting people, destroying historical monuments and removing certain holidays from the calendar.[237] Then it is possible to establish a new beginning and create a new narrative that is based on the continuity with another past.[238] Hobsbawn famously called this the "invention of tradition". Those inventions either refer to past events, persons or institutions that played no significant role in the cultural memory of the group before, or they are genuinely invented. In any case, ancient materials are used to construct invented traditions for new purposes.[239] By generating new traditions that nevertheless seem old, such revivals are designed to create the illusion of historical continuity since time immemorial.[240] Various mnemonic strategies we use to help us create the illusion of historical continuity typically involve some mental bridging. These techniques typically involve some mental editing to produce an illusory quasi-continuity that can help offset the actual temporal gaps between non-contiguous points in history. Such mnemonic pasting helps us mentally transform series of

221 Connerton 1989: 58–59.
222 Williams 2003b: 104; Noble 2006: 57–58; Thomas 2007: 262–266; Hamilakis 2010: 193–194; Jones 2013: 56.
223 Chesson 2001a: 100.
224 Button 2007: 90.
225 Chadwick – Gibson 2013: 10.
226 Cosgrove 1993: 1.
227 Knapp 2009: 47.
228 Hoaen – Loney 2013: 127.
229 Thomas 2000: 86.
230 Chadwick 2013: 291.
231 Williams 1998a: 71.
232 Küchler 1987: 240.
233 Joyce 2000: 474; Jones 2007: 55, 61, 80–81, 146, 182; Chadwick 2013: 294.
234 Garwood 2007: 46.
235 Garwood 2007: 46.
236 Zerubavel 2003: 82.
237 Zerubavel 2003: 90.
238 Zerubavel 2003: 89.
239 Hobsbawm 1983: 6.
240 Zerubavel 2003: 45.

non-contiguous points in time into seemingly unbroken historical continua. Despite the fact that mnemonic bridging is basically a mental act, we often try to ground it in some tangible reality.[241] Indeed, one of the most effective ways of bridging the gap between non-contiguous points in history is by establishing a connection that allows them to literally almost touch one another. Constancy of place is a formidable basis for establishing a strong sense of sameness. In providing us with some sense of permanence, they help promote the highly reassuring conservative illusion that nothing fundamental has really changed.[242] Constancy of place also allows us to virtually "see" the people who once occupied the space we now do.[243] Yet, mnemonic connectedness needs not depend on constancy of place. After all, even strictly physical mnemonic bridges can be detached from actual places, as exemplified by souvenirs, mementos and other memorabilia. Despite how they are not tied to a specific location, the actual material essence of such portable relics helps to provide some physical continuity, which is why they are indeed used almost exclusively, as their etymology suggests, for storing memories.[244]

Repetition over a long time is clearly visible in the deposition of sediments and the accumulation of objects within them, i.e., in the archaeological record.[245] But how to distinguish an intentional, conscious repetition that refers to the past from an unintentional, habitual one? Often the sheer fact that certain objects were used again and again, that people kept returning to a place and interacted with it – with or without larger time gapes in between actions –is seen as an indicator for "making deliberate, specific references to past features, materials and events",[246] independent of if the original meaning of specific features was remembered over time or if those features were invested with historical or mythic significance.[247] Or, as Blake puts it: "A rash of recent archaeological work finds social memory under every stone. If something stays the same over time, it is memory; if it changes, it is erasure. If a building is reoccupied, it is in reference to the past; if it is avoided, it is to negate or deny the past."[248] But long-lived practices or reuse do not necessarily equate with cultural memory.[249] It might be an unconscious collective memory that makes people behave this way, an appropriate, habitual action to be undertaken in given circumstances.[250] Practical reasons like favourable environmental factors might make people resettle the same place, technical qualities that people are using the same type of tools, or simply taking advantage of the fact that older structures or objects are already present, saving the effort of making them anew. They might also be purely accidental and thus meaningless. Blake, for example, showed in a case study about the reuse of Bronze and Iron Age hypogea as modest dwellings and Christian chapels in Sicily in Byzantine times that the people were not trying to align themselves with the past, but rather to participate in a contemporary Mediterranean trend.[251] In fact, regarding every old thing as demonstrating the presence of cultural memory is dangerous for archaeological interpretation. "If we consider every temporal palimpsest to represent a constructed connection with the past, at best we may be missing much of the story; at worst, we may be quite wrong."[252] Actually, most of what we find in the archaeological record might be the result of unconscious, habitual practices that lead to the accumulative patterns we find. For instance, through the continuing use of particular areas in settlements for middens or perhaps even building one house over another and thus repeating the same outline, the long continuities of such practices become rendered visible. Such links to the past derive from everyday memory but do not utilise the past through a conscious act of remembering. The exact meanings of these practices are often not emphasised and practices are taken for granted.[253]

A continuous repeated use of a site or an object can be identified in the archaeological record if a site or an object of an earlier period is used in a younger archaeological context. A reuse of a site or an object presents itself when there is a significant gap in time between the earlier use of the object or site and the later. In order for both to be a conscious and intentional reference to the past from which the object comes from, it has to be demonstrated that the object was kept in circulation or was reused and the site was kept in use or reused not only because it is economical and practical or habitual to do so,[254] or because they are only by chance present in the younger context and have not been used at all. "Intentionality is always a problem for archaeologists" states Joyce[255] very correctly. Archaeologists cannot consult past actors over their rationalisation, but this rationalisation was always there and we have to consider it.[256] Intentional use is the case when there is a contrast to everyday situations,[257]

241 Zerubavel 2003: 40.
242 Zerubavel 2003: 41.
243 Zerubavel 2003: 42.
244 Zerubavel 2003: 43.
245 Van Dyke 2011: 239–240.
246 Joyce 2003: 108; Lucas 2005: 87; Harmanşah 2012: 4; Chadwick – Gibson 2013: 5; Gibson 2013: 99.
247 Chadwick – Gibson 2013: 7.
248 Blake 2003.
249 Blake 2003; Hodder – Cessford 2004: 32; Button 2007: 77; Düring 2007: 132; Van Dyke 2009: 222; Van Dyke 2011: 244.
250 Jones 2013: 71.
251 Blake 2003; Van Dyke 2011: 244.
252 Van Dyke 2011: 244–245.
253 Borić 2010: 50.
254 Lillios 1999: 243; Düring 2005: 6.
255 Joyce 2008: 33.
256 Joyce 2008: 33.
257 Williams 2003b: 105.

for example when the objects are made of different raw materials, sizes and forms than their day-to-day counterparts.[258] Therefore, precise stratigraphic analyses and dating, placing the objects of reuse or continuous use in its context, are most relevant in identifying intentional continuous use and reuse over time.[259] By all this, one always has to be aware, that most things, besides ritual deposits and burials, only enter the archaeological record when they have lost their meaning to society.[260]

2.1.3.2 Stakeholders and contents of cultural memory

Having identified intentional continuity in the archaeological record and thus the presence of cultural memory does not by itself add significantly to our knowledge about and understanding of the past. As cultural memory is essential for creating and maintaining social groups, it must be present in every society. No physical object or trace is an autonomous guide to the past, or as Lowenthal[261] phrases it: "Memory pin-points only certain things as relics; the rest of what lies around us seems simply present, suggesting nothing past." Therefore, in a second step, specific questions about the social role of cultural memory must be asked for every individual case study, every different context. How and where is something remembered? What kind of commemorative rituals took place? Which features were involved in these rituals? Who remembered and who created the memory?[262] To what ends were the memories created?[263] How effectively were other versions of the past masked or erased? How many alternative, and possibly competitive, memory communities can be discerned?[264] And finally, although it is questionable how far archaeologists can succeed in this task,[265] what is remembered, who commemorated, who obliterated and why?[266] In other words, one has to identify the arenas, the socio-political spaces, in which is remembered, the mode of articulation, the agents and stakeholders of memory, i.e., the memory makers and memory users, and the narratives.[267] By this, we always have to allow for a multitude of meanings and changes over time.[268] They are temporally and spatially distinct.[269] Social memories can be highly local, ignoring the ebb and flow of great events.[270] Even the continuity of a ritual practice does not in itself prove the continuity of a religious belief.[271] In order to do so, again, detailed contextual analyses are of crucial importance. The composition of votive assemblages can, for example, give insights into who worshipped. The nature and symbolic connotations of the object that they had in the time of their deposition might inform us about the social standing of the people offering it and about their aspiration.[272] Thus, archaeology is able to reconstruct the frameworks that guided memory and the constraints placed upon it, observing what was remembered and what consigned to oblivion.[273]

The greatest challenge is the question, "What was remembered?". It is believed that in illiterate societies, the narratives that are told in cultural memory focus only on the socially relevant aspects of their own history, as there is no space for more,[274] in the form of a master narrative.[275] This is supposed to include ideologically charged myths of origin, genealogies of the ruling families and technological and practical knowledge[276] as well as deference to people's links with supernatural beings or ancestral people.[277] Cultural memories are said to cluster around particular paradigmatic events or around particular charismatic figures.[278] Those cultural memories can be divided into retrospective memories focusing on the remembered and invented past by group biographies, genealogies, ancestors, legends and myths; and prospective memories focusing on the aspired futures by social identity, inheritance and prosperity, group continuity, ancestral status and afterlife destination.[279]

2.2 Destructive reuse

This chapter will narrow its focus to the aspect of the destructive reuse of tombs, which is in some, but not all forms, a clear expression of cultural memory. As a result, parts of the inventory of the tomb are removed or its structural integrity is damaged. Different angles of interpretation for cases of destructive reuse of tombs will be discussed including grave robbery, fear of revenants, intentional destruction of grave goods and the tomb structure, and secondary burial at another place. The notion of grave robbery that is often quick at hand for explaining this phenomenon will especially be critically

258 Lillios 1999: 252.
259 Borić 2010: 49; Van Dyke 2011: 246.
260 Lillios 1999: 257.
261 Lowenthal 1985: 238.
262 Graves – Rechniewski 2010: 7.
263 Van Dyke 2011: 246.
264 Alcock 2002: 32.
265 Kansteiner 2002: 192; Zerubavel 2003: 46; Williams 2006: 20.
266 Graves – Rechniewski 2010: 7; Van Dyke 2011: 246.
267 Kansteiner 2002: 197; Rubertone 2008: 13; Graves – Rechniewski 2010: 7.
268 Knapp 2009: 48.
269 Hewer – Roberts 2012: 176.
270 Fentress – Wickham 1992: 96.
271 Kyriakidis 2007: 16.
272 Prent 2003: 88.
273 Alcock 2001: 328.
274 Erll 2005: 53.
275 Connerton 1989: 71.
276 Le Goff 1992: 88–89; Kielt Costello 2002: 181; Erll 2005: 127.
277 Bradley 1987; Hutton 2011: 2.
278 Alcock 2002: 17.
279 Williams 2006: 33.

examined. It has, however, to be kept in mind that both destructive and additive reuse (chapter 2.3) can occur at the same tomb simultaneously.

2.2.1 Grave robbery

Generally, grave robbery is the most prominent explanation for later activities at tombs encountered by archaeologists all over the world.[280] In this study, it is understood as intentional and illegal removal of valuable objects from the tombs for economic benefits.[281] Metal, weapons and jewellery are generally thought to be of main interest for the grave robbers,[282] not the least because other grave goods made of organic materials, especially clothing, would be irretrievably soiled by bodily decomposition and must in many cases have been in an advanced state of decay by the time graves were robbed.[283] Therefore, they were no longer usable. Except for specific environments, only non-organic materials such as gold, stones and pottery can survive over a longer time span.[284] Evidence for grave robbery is believed to be present when (parts of) the skeleton are moved or missing,[285] the grave goods appear to be in an unorderly fashion or (partly) missing[286] or secondary access to the tomb is visible.[287] It is often assumed that grave robbery took place in times of warfare, when law and order is unsustainable and the population can no longer take care of their cemeteries,[288] or in other exceptional circumstances such as political, religious or social upheavals.[289] In particular, the arrival of new people in a region is emphasised in this regard that might know the burial rites of the indigenous community but are not part of it.[290] In times of economic stress, people could use cemeteries as banks. Klevnäs,[291] however, points out that this would require a very particular form of economic crisis, where looted grave goods could be exchanged for life's necessities. Generally, one must ask the question who the buyer for the looted goods would be.[292] Some scholars such as Baumeister[293] even developed complex theories about the role of grave robbery in society.[294] He assumes that the elites could economically control the market by having access to most of the resources. Their subjects on the other hand could sustain their independency through recycling material that they removed from graves. Taboos were then an attempt by the elites to prohibit grave robbery and by this to keep control on the flow of goods. It has also been suggested that grave robbery occurred more frequently in societies with religious diversity as one could target the tombs of members of other religions without having to fear moral consequences.[295] Behm-Blancke[296] assumes that grave robbery might have been initiated by smiths, longing for metal. The fact that many of the allegedly robbed tombs are not completely emptied and often even precious objects are left behind is commonly explained by robbers being in a hurry and had to pursue their illegal business in the dark night to avoid getting caught.[297] Another explanation for this phenomenon is that a taboo was put on specific objects, for example items with religious symbols, so that they were not taken by the robbers.[298] It has also been proposed that objects that were not taken by the grave robbers facilitated the journey to the netherworld such as chariots or horse harnesses.[299] Another idea is that the plunderers might have thrown part of the (damaged) objects back into the grave for unknown reasons.[300] Sometimes single younger artefacts that are found within disturbed tombs are interpreted as objects lost by the grave robbers.[301] This adheres to the question of whether the single later objects found in tombs in Eastern Arabia (chapter 5.1.4) can be associated with plundering activities in antiquity.

There are, however, many things that contradict the assumption of grave robbery.[302] One of the strongest ar-

280 Müller 1976: 221–225; Driehaus 1978; Raddatz 1978; Roth 1978; Thrane 1978; Steuer 1982: 498–500; Savage 1995: 126–128; Bofinger – Przernyslaw 2008.
281 Neugebauer 1991: 113; Kümmel 2008: 481; Zintl 2017: 241.
282 Stoll 1939: 8; Bertemes 1989: 124–127; Neugebauer 1991: 113, 125; Härke 2000; Baumeister 2004.
283 Aspöck 2003: 238; Klevnäs 2011: 58, 142; Van Haperen 2017: 171–172.
284 Van Haperen 2017: 172.
285 Some caution regarding missing bones is required as they can also disappear as a consequence of natural decomposition. Therefore, their absence can only be used as evidence for actual removal if durable bones are missing while more fragile ones remain (Van Haperen 2010: 9).
286 Savage 1995: 128; Raddatz 1978: 48; Van Haperen 2010: 9.
287 Raddatz 1978: 48; Van Haperen 2010: 9.
288 Müller 1976: 124; Aspöck 2003: 238; Steuer 2004: 203.
289 Müller 1976: 225; Pauli 1981: 472–474; Steuer 1982: 499; Randsborg 1998: 114; Aspöck 2003: 238.
290 Adler 1970: 145–146; Müller 1976: 225; Chapman 1981: 122; Neugebauer 1991: 128; Bertemes 1989: 129–130; Aspöck 2003: 237.
291 Klevnäs 2011: 51.
292 Schneider 1983: 128.
293 Baumeister 2004: 193–194.
294 Aspöck 2003: 238.
295 Rittershofer 1987: 8.
296 Behm-Blancke 1973: 143.
297 Raddatz 1978: 49; Bertemes 1989: 127; Neugebauer 1991: Knaut 1993: 31; Novák 2008: 227–228; Van Haperen 2010: 5; 126.
298 Koch 1973; Roth 1978: 73; Schneider 1983: 126; Grünewald 1988: 37–38; Neugebauer 1991: 126; Dannhorn 1994: 299; Stork 1997: 429–430; Brather 2008: 165; Bofinger – Przernyslaw 2008: 57; Klevnäs 2011: 143.
299 Rittershofer 1987: 8–9.
300 Peška 2002: 62.
301 Koch 1973; Stork 1997: 428–429; Bofinger – Przernyslaw 2008: 57.
302 This is why, if uncertain, the term "grave robbery" should be avoided as it is already judgmental and instead terms such as reopening or secondary opening should be used (Zintl 2019: 13).

guments against it is the targeting of specific artefacts that do not necessarily have the highest material value while leaving valuable objects behind.[303] Especially in Europe, where the phenomenon is much better studied than on the Arabian Peninsula, we can see that it was not always the aim to remove as many artefacts as possible[304] and many objects that were taken were in poor condition, falling apart when lifted.[305] For this region of the world, experimental studies have shown that within a month to a year, iron objects suffer from severe corrosion.[306] While this process in the dryer climate conditions of Eastern Arabia might take longer, effects will be noticeable after a few years. Silver and copper alloys take slightly longer to corrode but also sustain considerable damage after a few years.[307] If the corrosion has not affected the whole object, they could nevertheless be melted down and thus be used as raw material for other objects.[308] However, one has also to consider that while a grave robber may do his job to earn money, for the receiver of the objects they may have a special meaning.[309] Leaving this aside, if the value of objects is the main reason for opening tombs, this should increase when more items of value are being buried with the dead.[310] There is another thing that makes the idea of profit-orientated grave robbery even more doubtful. If the aim was only to take valuable objects, there is no reason for the severe ransacking of a tomb that leads to the distribution of human bones and grave goods all over the place. Another argument against grave robbery is that, at least in some cases, the efforts were so time-consuming that they could not have been undertaken clandestinely in a single night, for example, if large amounts of earth have to be removed to access the tomb.[311] Thus, the local community must have been aware of the activities. Additionally, at some cemeteries in some regions of the world, it is clearly evident that care was taken while reopening the graves, such as refilling the secondary entrance to the tomb,[312] making materialistically motivated, criminal activities by strangers unlikely.[313] Rather, the reopening was performed by the same people who carried out the initial burials. As repetition is a characteristic of ritual activities, the frequency of grave reopening could also be an indicator against grave robbery.[314] At least at some European cemeteries, there is evidence that the reopening took place shortly after the burial.[315] Relevant areas of the tomb were specifically targeted. It is assumed that this was undertaken by the same social group as the deceased because settlements are often located nearby and their inhabitants must have been aware of these activities. Grünewald[316] points out that despite the awareness in the population, no countermeasures were taken such as stone packing covering the tomb. There was also not the idea to no longer outfit the deceased with (valuable) grave goods.[317] Therefore, the reopening of the tomb must have been sanctioned by the local community. For medieval graves in Europe, it was suggested that following the adoption of Christianity and the founding of churchyard burials, robbing of pagan graves might have been sanctioned and an important process to record histories and memories.[318] Finally, one has to consider that many non-intentional and often non-anthropogenic processes, like the collapse of a container, tree roots growing through the grave, animals burrowing, scavengers (as long as the corpse is fresh), erosion or farmers ploughing can also alter a burial,[319] and can result in the displacement of the human remains and the grave goods. This is also influenced by the decay and disintegration of the corpse. This is all the more relevant if the corpse is placed into a hollow and not covered directly by earth, but less so if it is wrapped tightly.[320]

Another interesting point to consider is that grave robbery implies that the dead had a general right to their grave goods, that those objects were their property.[321] This might very well be a rather modern, Western attitude. There is, for example, the idea that the grave goods were only given to the dead for a limited period of time, that is, as long as the body is still intact[322] or only during the funeral rites.[323] Afterwards, the objects were meant to return to the living and therefore removed from the tombs as their "'spirit identity' may have thought to be departed".[324] Some researchers even go as far as to highlight the right of the heirs to take the objects back.[325] Successive family members are seen in these situations as "temporary guardians, who [...] were responsible for

303 Ladenbauer-Orel 1960: 26; Van Haperen 2010: 14; Klevnäs 2011: 58; Klevnäs 2015a: 163.
304 Codreanu-Windauer 1997: 32–34; Klevnäs 2011: 157.
305 Codreanu-Windauer 1997: 33; Klevnäs 2011: 196, 208; Klevnäs 2015a: 164–165.
306 Van Haperen 2017: 172.
307 Van Haperen 2017: 172; Zintl 2019: 60–61.
308 Van Haperen 2017: 172.
309 Aspöck 2015a: 23.
310 Savage 1997: 253.
311 Rittershofer 1987: 6.
312 Sági 1964: 391; Dannhorn 1994: 299.
313 Aspöck 2011: 313.
314 Primas 1977: 106–107; Brather 2008: 164.
315 Stoll 1939: 8; Grünewald 1988: 40; Brather 2008: 164–165.
316 Grünewald 1988: 40.
317 This is explained by Pauli, however, as struggle between the religious believes about the afterlife, taboos and material interests (Pauli 1981: 475).
318 Eckardt – Williams 2003: 144.
319 Van Haperen 2010: 8; Zintl 2019: 50–52.
320 Noterman 2015: 156–157; Zintl 2019: 53.
321 Kümmel 2008: 482; Klevnäs 2015a.
322 Müller 1976: 225; Hänsel – Kalicz 1986: 52; Rittershofer 1987: 10; Neugebauer 1991: 113.
323 Brather 2008: 165.
324 Perkins 1991: 163.
325 Schneider 1983: 128–129; Stork 1997: 430.

the proper transmission of the objects"[326] from one generation to the next. This transmission took most likely place at an important moment in life of an individual family member, such as their death, in which the whole family participated.[327] Valuable objects could be taken in order to rebury them at another place, for example in the form of a hoard,[328] changing and altering the object biographies.[329] All this implies that the later activities at the tomb were not illegal, but on the contrary sanctioned by the community.[330] Objects taken out of older tombs might have had special meaning precisely because of their unclear provenance and travel through time.[331] Coming from tombs, it made them suitable to define the relations between the living community and the past. By this, they could, for example, generate a relationship with the dead that did not exist before.[332] Removing grave goods from tombs could also be part of a test of courage that would lead to an increase in prestige of the one who has successfully undertaken it as one would have to face and possibly fight the dead.[333]

2.2.2 Revenants

In societies which believe in supernatural forces of dead bodies that can influence the living, actions must be taken against revenants out of fear of the dead that can lead to the destructive reuse of the tombs,[334] i.e., the "powerful dead".[335] These actions can include the destruction of weapons with which the deceased could attack the living,[336] and manipulating the dead body, for example, removing the head.[337] This can especially be seen as a way to re-kill the corpse.[338] For Anglo-Saxon cemeteries, the following characteristics were identified for deviant burials: decapitation, amputation, stones on the top of the body, a prone position and restraints in the form of tied limbs.[339] This demonstrates the power of certain living actors to control the dead.[340] Although technically anybody can become a revenant, it is believed that certain people such as people who died by suicide, murder victims, alcoholics, etc., run a higher risk.[341] The same is true for unusual deaths such as accidents and especially deaths that result from epidemics.[342] Grave openings might also have been instrumental for the transformation of liminal and potentially harmful dead community members into beneficial ancestors.[343] At the same time, parts of the skeleton could have been removed for ancestor worship or that of saint relicts.[344] Likely, it was the main purpose of some grave openings to remove parts of the skeletons and artefacts that touched those remains, making the relationship between the dead body and the grave goods an important factor in the choice to open particular sections of a grave.[345]

2.2.3 Change of status and the destruction of the grave and grave goods

Grave reopening can take destructive forms such as purposefully vandalising the grave goods or grave furniture (*Grabfrevel*) and, by this, disturbing the peace of the dead.[346] In some cases, a selection of the fragments have been taken away while the rest have been left scattered in the tomb. In Western Asia we encounter the deliberate destruction of grave goods, for example at Resuloğlu in Turkey,[347] as well as at Shams ed-Din[348] and Umm el-Marra[349] in Syria. Occasionally, specific objects have been removed from tombs due to their symbolic value.[350] One aim could have been to remove the objects from the realm of the dead, to diminish the power and prestige of dead ancestors, and by this, harm living descendants by damaging family prestige.[351] Klevnäs[352] interprets the reopening of graves and removal of grave goods as "a weapon in small-scale, festering communal violence". Especially at monumental tombs that were meant to consolidate the political power through making the rulers' version of history manifest (see chapter 2.1.3), removal of objects from and destruction of these tombs can be seen as a conscious destruction of this message, to denigrate the deceased's

326 Kars 2013: 102.
327 Kars 2013: 99.
328 Bartelheim – Heyd 2001: 263.
329 Kopytoff 1986.
330 Zintl 2019: 30.
331 Van Haperen 2017: 167.
332 Van Haperen 2017: 177.
333 Rittershofer 1987: 6; Neugebauer 1991: 113.
334 Grünewald 1988: 43; Reynolds 1997; Tempelmann-Mązyńska 1998; Bartelheim – Heyd 2001: 267–269; Murphy 2008; Klevnäs 2011: 52.
335 Parker Pearson 1993.
336 Czarnecka 2003: 283.
337 Chopovsky – Dušek – Polla 1960: 57–58; Harman – Molleson – Price 1981: 166–168; Grünewald 1988: 38; Neugebauer 1991: 127; Caciola 1996; Aspöck 2003: 227; Czarnecka 2003: 283; Littleton – Frohlich 2012; Klevnäs 2015b: 196–200.
338 Klevnäs 2015b: 192, 196.
339 Reynolds 2009: 38–52; Klevnäs 2015b: 193.
340 Klevnäs 2015b: 204.
341 Barber 2010: 38; Aspöck 2015b: 104.
342 Barber 2010: 34–35.
343 Van Haperen 2010: 20.
344 Rozoy 1987: 57–64; Van Haperen 2013: 90.
345 Van Haperen 2013: 90.
346 Stoll 1939: 8; Grünewald 1988: 38; Neugebauer 1991: 112–113; Droberjar – Peška 1994: 283; Peška 2002: 56; Kümmel 2008: 481; Van Haperen 2010: 2; Klevnäs 2011: 8; Van Haperen 2015: 133–134.
347 Zimmermann 2010.
348 Meyer 1991: 21.
349 Schwartz 2007; Schwartz 2013.
350 Bertemes 1989: 122; Aspöck 2003: 238.
351 Bertemes 1989: 123; Codreanu-Windauer 1997: 34; Randsborg 1998: 133, 121; Steuer 2004: 203; Klevnäs 2011: 196, 208.
352 Klevnäs 2011: 196; Klevnäs 2015a: 167–168.

social status, and with it, that of their offspring.[353] It was a means to mark a discontinuity of decent lines or affinal relations, like marriage ties, for example, ancestors whose decent line was no longer productive or who had founded a settlement that ceased to prosper.[354] Thus, removal or manipulation of the body can also be interpreted as a sort of denial of the burial[355] and, as Savage[356] suggests, "an attempt to equate a relatively high-status individual with lower elements of society". In this context, the destruction of the body can be seen as an act of body desecration.[357] However, this does not necessarily have to represent an act of desecration or intentional destruction. People may have been redefining the traditions of past constructions in their own terms and reinventing the burial monuments.[358]

The removal of grave goods could, however, also take place in order to transfer the legitimation of power by taking objects that are associated with a former ruler or to gain apotropaic objects.[359] What is not important in this context is whether such objects were understood in the same ways by the people who took them out of the tombs as by the people who originally placed them into it.[360] Van Haperen[361] remarks that if the reopening of graves involved the redistribution of the grave goods among the participants that took part in the reopening, this could be viewed as "a distribution of the power of the kin group to each single member, subgroup or nuclear family". Reopening of the tombs is a way to construct the identities of ancestors and their relations with the living. [362] If the living were no longer acquainted with the dead and do not remember what they had been like, they may have needed a way to form a new relationship with them to reintegrate them into their community and thus reactivate their cultural memory.[363] Generally, with the removal of objects or human bones, characteristics of the deceased such as social, legal and religious claims can be transferred, but also the objects themselves can be used as medicine, magic remedies and relics.[364] Generally, human remains found in the tombs would presumably be interpreted in terms of the views held by the people who reopened the tombs.[365] Very rarely, cannibalism is presented as an explanation for the reopening of graves.[366]

Concerning the destruction of grave goods, one cannot exclude that fragmented objects found within tombs were not complete when they were deposited as grave goods.[367] There is, for example, evidence of intentionally placing sherds of Roman glass into Germanic tombs.[368] Often, those fragmented objects are seen as symbolic representations of complete objects,[369] while others argue for their amuletic function or them being a symbol, a memento or favourite keepsake that recalled the dead person's family or place of origin.[370] For others, the act of destruction stands in the foreground, charging the actual fragments with a symbolic meaning.[371] Likely, the objects were destroyed in order to prevent them from being used again, to symbolically kill them so that they could accompany the dead person to the afterlife,[372] to free them of impurity and the ill effects of death[373] or for any other ritual activity.[374] Zimmermann[375] suggest that the breaking of grave goods could be associated with ecstatic funeral banquets, where the mourners ceremonially destroy the objects. For Tilley,[376] disarticulated and rearranged human remains as well as broken or crushed pottery in Neolithic tombs in southern Sweden can be explained by the intention to break down the natural and cultural order to destroy the individuality or wholeness of form of these items. A more profane explanation is that the objects were intentionally destroyed in order to inhibit grave robbery,[377] so that the very case that objects were destroyed is taken simultaneously as an argument for grave robbery and for actions to prevent it. The ultimate goal of this practice was, in a very Marxist sense, "an attempt to achieve a semblance of resonance and unity between individuals and the material products of the production-process and so, simultaneously, serve as a denial of asymmetrical social relationships in life and the social appropriation of the labour-product".[378]

2.2.4 Secondary burial

The transfer of the deceased to a new and more appropriate resting place has also been suggested as an explanation for grave reopening and the loss of grave goods

353 Ladenbauer-Orel 1960: 26; Randsborg 1998: 115; Bill – Daly 2012: 809.
354 Van Haperen 2017: 21.
355 Savage 1997: 253.
356 Savage 1995: 131.
357 Frohlich *et al.* 2010.
358 Hingley 1996: 241.
359 Müller 1976: 225; Aspöck 2003: 227; Bill – Daly 2012: 809.
360 Borić 2010: 49.
361 Van Haperen 2013: 92.
362 Van Haperen 2017: 168.
363 Van Haperen 2017: 165.
364 Chopovsky – Dušek – Polla 1960: 57; Bertemes 1989: 123.
365 Hingley 1996: 233.
366 Chopovsky – Dušek – Polla 1960: 57; Bertemes 1989: 123.
367 See for example Duerr 2013.
368 Ethelberg 2000: 33; Ekengren 2009: 159–174.
369 Hunter 1977: 32–33; Lund Hansen 1987: 247; Laser – Leinenweber 1991: 199; Ethelberg 2000: 125; Schön 2003: 46; Ekengren 2009: 177; Dietrich 2014; Hansen 2016.
370 Lund Hansen 2000: 338–339.
371 Ekengren 2009: 177; Tilley 1996: 303.
372 Wegewitz 1972: 211; Nebelsick 1997: 40; Stilborg 1997: 208; Andrzejowski 1998: 103; Czarnecka 2003: 283.
373 Hodder 1980: 166.
374 Wegewitz 1972: 211.
375 Zimmermann 2010: 371.
376 Tilley 1984: 137.
377 Wegewitz 1972: 234.
378 Tilley 1984: 139.

and human remains.[379] There are plenty ethnological examples for the belief that inappropriate burial treatment can result in misfortune for the whole community, such as bad weather. In order to counter this, the corpse has to be removed from its original position.[380] When death is a gradual process, reopening of graves can be part of a burial rite sanctioned by the community concerned, such as ancestor worship.[381] This is supported by the fact that secondary activities at tombs often happen during the use period of the cemeteries.[382] Some assume that when people left a region, they took their deceased with them and therefore reopened the tombs,[383] for example when they left due to hostile actions and wanted to save their deceased or the grave goods.[384] One also has to take into account the possibility that a longer time passed between death and burial, likely because the person died far away from the proper burial ground.[385] Reasons for this could be trading trips, wars or the general mobile lifestyle of a community.

2.3 Additive reuse

Another way of acting out cultural memory in the reuse of tombs is additive reuse. It presents itself in the form of single younger objects or burials within an older tomb. The former is often labelled in the archaeological documentation as stray finds as they do not fit the timeframe of the construction and first use of the tomb. In the following, other explanations are discussed.

2.3.1 Deposition of single objects

Although single younger objects attested in tombs are sometimes interpreted as accidentally left behind by grave robbers (chapter 2.2.1) or by other people visiting the tombs, thus unintentional and intrusive elements entering the tomb after its abandonment,[386] it is to be assumed that most of these objects come into the tombs purposefully, as there is a certain pattern visible in what kind of single objects are found in tomb (chapter 6.2.1).[387] Such intentional deposits can be of diverse character. Generally, they can be divided, analogous to hoard finds, into ritual and non-ritual. Non-ritual hoards and depositions, on the other hand, are characterised by unspecialised locations, a high proportion of tools, if weapons and ornaments, then they are in simple forms, and the artefacts are often damaged and/or broken and include metalworking residues and freshly made objects.[388] Those objects are thought to be in locations where they can be recovered as they are thought to be stored, for example as a metal cache for later re-melting or concealing items in times of danger.[389] However, some have suggested that in ranked societies, metal and other precious objects were deliberately taken out of circulation in order to reduce the stock of valuable items, preventing inflation and thus preserving the power of elite groups.[390] By this, depositions acted as a "regulatory factor in social and economic organisation".[391] Bradbury[392] criticised this argument as he could not see if the elites were able to display their status effectively through the offerings, how any levelling mechanisms could have operated. Instead, he explains this phenomenon with gift exchange without generating obligations and debts in other gift exchanges. "Votive offerings provide an unparalleled theatre for competitive consumption through the simple fact that the valuables that are offered are taken out of circulation. This has a marked advantage over competitive gift exchange, which permits the same wealth items to move back and forth among the contending parties."[393]

Criteria for identifying ritual depositions are their specialised placement, the restricted range of items, often with a high proportion of weapons, ornaments and ceremonial objects, food remains such as animal bones and containers, the fact that the objects are in good condition and whole when they were deposited, as well as the formal arrangement of their deposition.[394] The special location can be marked by a wet place such as a well or spring, a deposition at a considerable depth or covered by a large stone, in a grave mound, which limits access through ritual sanctions, or special natural places.[395] The high proportion of ornaments as indicators for a ritual deposition can be explained by the fact that although technically any object may be a sacred symbol, ornaments and weapons are more likely to be imbued with symbolic values because of their close association with important social differences.[396] Ritual depositions are also referred to in the literature as votive depositions, dedications or offerings.[397] Sacred objects like cult paraphernalia could not, in most societies, turned into an object of daily use when they were no longer needed in cultic practices.

379 Bill – Daly 2012: 809.
380 Goody 1962: 151–152.
381 Aspöck 2003: 227; Spatzier 2007: 243; Kümmel 2008: 481.
382 Perkins 1991: 164; Klevnäs 2011: 199.
383 Zintl 2019: 31.
384 Adler 1970: 145–146.
385 Müller 2015: 37–38.
386 Cleuziou – Méry – Vogt 2011: 195.
387 Hughes 2014: 15.
388 Levy 1982: 22; Bradley 1990: 14.
389 Bradley 1990: 5.
390 Bradley 1990: 37; Garfinkel 1994: 179.
391 Levy 1982: 117.
392 Bradley 1990: 38.
393 Bradley 1990: 39.
394 Levy 1982: 21–22; Bradley 1990: 14.
395 Levy 1982: 21.
396 Levy 1982: 23.
397 Osborne 2004: 5.

Therefore, they were often buried in hoards.[398] Single younger objects found in tombs can be offerings for the veneration of ancestors, supernatural beings or whoever is thought to have created/be buried within the tomb.[399] Even today, people regularly bring flowers to the tombs of their beloved ones. As the offering is conceived of as a gift to some superior power, for example the dead ancestors transformed into supernatural beings, the gift should be worthy of its recipient, which is more likely when the object is in a good condition than not.[400] Offerings to supernatural beings establishes a very special model of reciprocity, as it may be impossible to measure the return against the investment.[401] Nevertheless, the exchange of material goods for supernatural returns such as health or a good harvest are socially and economically significant in many societies.[402] Another criterion for the classification of ritual deposit is when the artefact is difficult or impossible to retrieve.[403] The to-be-dedicated object can either have been made precisely for its deposition, such as miniatures, or it could be an object of everyday use that is converted into an item that is employed in an exchange with supernatural powers.[404] Therefore, it often remains unclear whether the offerings are made to the deceased or on behalf of them to supernatural beings. Another interpretation of later objects is that they are remains of commemorative rituals such as feasts. Pottery sherds found in the upper layers of the fill of tombs or the access shaft could indicate ritual eating and drinking,[405] as well as deposits of animal bones. Interpreting Neolithic pits in Britain, Thomas[406] assumes that the deposition of food, charcoal and ash evokes the continuity between past and present "in terms of the continuity of the kin group, those who shared hearth and food". He separates this from other types of deposits like hoards, bog and river deposits, as he sees the former as connoting the domestic and the transformational and the latter concerned with the manipulation of material wealth.[407] The latter no longer contains elaborations of domestic artefacts but objects that are unknown from settlement contexts. To him, changes in the depositional practices mark major shifts in cultural orientations.[408] Both the ritual offerings as well as the commemorative rituals are meant to establish relationships with the past and thus generate and maintain the cultural memory of the community. There might be the need to appease the dead or an exchange of gifts required to incorporate them into the community.[409]

Within such a ritual process the method of communication is of obvious significance since the maintenance of the social order depends on general acceptance of the belief system upon which it is based.[410] Therefore it is not surprising that it seems that depositional practices most frequently occur in times of significant cultural changes in past communities. For Western Asia it is assumed that they began in the Neolithic, the formative era of cult and mythology.[411] Those myths and cult practices were developed at that time as a means of enhancing social cohesion in a rapidly changing world. Similarly, the pit deposits in Neolithic Britain are interpreted as a means of domesticating the wild in early stages of domesticity.[412] For Peltenburg,[413] deposits of politically charged objects such as figurines are associated with a crisis in society, in which ideological and political systems suffered upheaval. In this regard, it is interesting to note that many of the early deposits are composed of objects that were involved in the transformation of a cultured nature, for example, products of the field, or clothing.[414] There is, however, also evidence for the opposite: older objects in younger graves. Possibly these were regarded as amulets or more profane items as cheap substitutes for contemporary items.[415]

2.3.2 Reuse as a new burial place

The possibly most obvious commemorative ritual (chapter 2.1.3.1.2) in the archaeological record where the past is remembered and evoked is the funeral.[416] At least, it is the most investigated domain for commemorative rituals and memory in the discipline.[417] Funeral rites are deemed to be "a pre-eminent example" of such ceremonies.[418] Their repetitive character contributes to the construction of cultural memory.[419] The cultural continuity between past and present is here presented as based on alleged biological continuity.[420] The notion of descent connects us not only to our ancestors but to numerous contemporaries as well.[421] Remembrance is actualised through mortuary practices, which refer to a deep tem-

398 Garfinkel 1994: 179.
399 Whitley 2002: 123.
400 Levy 1982: 23.
401 Osborne 2004: 2–3.
402 Gregory 1980: 646; Osborne 2004: 2.
403 Bradley 1990: 5.
404 Osborne 2004: 2.
405 Bartelheim – Heyd 2001: 262.
406 Thomas 1991: 76.
407 Thomas 1991: 77.
408 Thomas 1991: 77.
409 Van Haperen 2017: 177.
410 Richards – Thomas 1984: 190–191.
411 Garfinkel 1994: 180.
412 Thomas 1991: 76.
413 Peltenburg 1989: 117.
414 Hill 1995: 108.
415 Eckardt – Williams 2003: 147.
416 Manning 1998: 40.
417 Chesson 2001b: 1; Williams 2006; Chadwick – Gibson 2013: 1.
418 Torres-Rouff – Pestle – Daverman 2012: 194; see also Hamilakis 1998.
419 Jones 2003: 81; Torres-Rouff – Pestle – Daverman 2012: 195.
420 Zerubavel 2003: 56.
421 Zerubavel 2003: 63.

poral tradition by similarity[422] and underscores cultural continuity. Death is seen as one of the most crucial moments in which communities define and negotiate social relationships.[423] Here, the relationship between time, human practice and consciousness can be examined.[424] Further, death signifies the rupture between yesterday and today in its primal form, in which the choice to obliterate or preserve must be considered.[425] Performing mortuary rituals can help to forget the individual death and instil new memories of ongoing social life in the community. However, Fowler[426] asserts that these rituals do not (primarily) serve to memorialise the recently deceased person. They have more reiterative social roles, highlighting collective concerns and shifting attention away from dead individuals and thus creating cultural memory. They are one way to craft and maintain the local community for the living, as all funerary rituals are made for the living.[427] Therefore, the memory of the dead occupies an intermediate position between communicative memory and cultural memory.[428] While the former mostly concerns personal memories of the deceased individual, the latter is represented by the rituals performed and the institutions involved. There is a difference between the autobiographical memory of the individual looking back from a certain vantage point over their own life and the posthumous commemoration of them by posterity and it is this distinction that brings out the specifically cultural element of cultural memory.[429]

Funerary rituals, as all commemorative rituals, and cultural memory are always linked to material culture.[430] It is present in the places where they are performed and the objects they are performed with.[431] For example, specific objects found in graves can symbolise political or social affiliations and promote myths of origin and common ancestry.[432] On certain occasions, the whole assemblage of the grave, and the relationships between graves, can be designed to encourage particular ways of remembering.[433] More than simply a political platform for negotiating memory, however, the burial place is also a locus for the emotions of the mourners and society.[434] Burials can be places inside residential structures, highlighting elements of continuity and standardisation over multiple generations and thus anchoring the architecture to the social landscape as a focus of ritual action, creating, in the end, social memory within the community.[435] Or, they can be places in monuments, including older burials, involving the congregation of many people from distant places that perform and re-enact links with the past, with the ancestors, alien races and with the supernatural through the burial of the dead.[436] Elite groups especially can use this means to symbolise their exclusive links to divine ancestry and supernatural power, associating themselves with powerful forces and a distant past that may help them to legitimise political strategies in the present.[437] Generally, graves as liminal places always take a prominent position in the mythical geography of the landscape that existed in both the past and the present, the world of the living and the world of the dead.[438] All these links could have been important in several ways, supporting claims and rights over land, wealth and other material and human resources.[439] The overall mortuary homogeneity of burials can foster a common cultural memory by promoting a sense of equality and belonging.[440] Funerals can even more explicitly refer to collective memories as they are places over ruins of formerly used places. This may reflect a desire to create links back to ancient beings or perceived ancestral features and to fabricate histories for their communities, an "inherited legitimacy" justifying their own presence in the landscape or rights of tenure.[441] Through a patterned disposal of the dead, people can organise, categorise and interpret the world they live in in order to make it appear timeless, universal and inevitable.[442] Placing burials in the ruins of an old order also allows the possibility of forgetting and ultimately creating a new social order and memory.[443] By this, claims to power can be legitimised and tied in with (assumed) traditions.[444] This does not, however, mean that all mortuary rituals are about ancestral cults.[445] Ancestors have to be linked to the present though rituals that emphasise the idea of continuity. A meaning must be transmitted. This leads Whitley[446] to the conclusion "that not all the dead are ancestors and not every fragment of human bone found in a barrow, cursus, causewayed enclosure or henge can be construed as evidence that these monuments were ancestral". Human bodies buried in unusual places or sub-

422 Jones 2003: 81.
423 Arnold 2001: 211; Kuijt 2001: 81.
424 Mizoguchi 1993: 224.
425 Assmann 2011: 19.
426 Fowler 2003: 57.
427 Torres-Rouff – Pestle – Daverman 2012: 201.
428 Assmann 2011: 45–46.
429 Assmann 2011: 19.
430 Hallam – Hockey 2001.
431 Bradley 1998: 53; Williams 2003a: 15–16; Van Dyke 2011: 239.
432 Williams 2003a: 15–16.
433 Williams 2003a: 16.
434 Torres-Rouff – Pestle – Daverman 2012: 195.
435 Kuijt 2001: 93.
436 Williams 1998b: 103; Whitley 2002: 123.
437 Williams 1998b: 103.
438 Roymans 1995: 4; Williams 1997: 25.
439 Williams 1998b: 103.
440 Torres-Rouff – Pestle – Daverman 2012: 200.
441 Chadwick 2013: 295.
442 Pader 1982: 14–15; Arnold 2001: 215.
443 Whitley 2002: 124; Torres-Rouff – Pestle – Daverman 2012: 195.
444 Zintl 2019: 33.
445 Morris 1991.
446 Whitley 2002: 122.

jected to unusual treatment are more likely to be social outcasts.[447] Ancestors are not always of importance for society. In many places in modern Southeast Asia, the absence of ancestors is standard in society[448] to eliminate differences between newcomers to a group, to emphasise conformity and similarity,[449] and to make a place for new relations of kinship.[450] Furthermore, if it is assumed that specific actions are directed towards ancestors, one has to ask why they are not done to everybody within the community.[451]

Reuse burials can also be seen in connection with the arrival of new groups of people. In the Late Merovingian in the southern Netherlands, Theuws[452] could observe that members of the first generation of newcomers were not buried in the regular cemetery. The old burial ground stood for the old local resident group that by that time was losing some of its significance. By differentiating burial grounds for diverse types of the community a new society with new interdependencies was developed.[453] Williams[454] discusses the situation of immigrant Germanic groups to Anglo-Saxon England. He suggests that "the reuse of older monuments may have been used to portray themselves as the legitimate heirs of the ancient peoples and supernatural beings that originally built these structures". Furthermore, the reuse could have evoked memories of imagined homelands. By controlling the interpretation and experience of the ancient places, groups would legitimise their status. In a similar line, it had been suggested for Great Britain and the Iberian Peninsula after the Roman conquest that in these circumstances of cultural adaption, native inhabitants suffered from a sense of separation from the past[455] and reacted with a strong impulse to reconnect with "numinous places and impressive monuments associated with pre-Roman ritual activity and thus a mythical past which still embodied and mediated a relationship with the land, could be increasingly potent".[456] Comparable to this, manipulation of the mortuary landscape in Greece is, according to Button,[457] concomitant with the growth and increased centralisation of new elites several centuries after the destruction of Mycenae in the 12th century BC. They might have used mythical genealogies in the impressive physical traces of the earlier tombs as sources of legitimacy and power.[458]

447 Whitley 2002: 122.
448 Carsten 1995: 324.
449 Carsten 1995: 326.
450 Carsten 1995: 229.
451 Bertemes 1990: 123.
452 Theuws 1999: 345.
453 Theuws 1999: 346.
454 Williams 1998b: 104.
455 García Sanjuán 2010: 93–97; Vejby 2012: 207.
456 Hutton 2011: 17.
457 Button 2007: 77.
458 Parker Pearson 1982: 112; Bradley 1987: 3; Weiss-Krejci 2015.

3 The mortuary monuments of Eastern Arabia

The deep history of complex societies in Eastern Arabia has produced a landscape filled with the physical remains of previous inhabitants. One of the most abundant and most visible elements are mortuary monuments of different time periods. As reuse can only be understood mirrored by the contemporaneous regular burial customs and cultural contexts,[459] both will subsequently be illustrated. The aim is to describe "normal" burial practices to lay the background for identifying reuse and to set the cultural background against which reuse of tombs was practiced. The time frame of the studied tombs ranges from the Hafit period in the Early Bronze Age (3100–2700 BC) until the beginning of the Islamic period around AD 630 (Tab. 1).

Period	Absolute Date
Hafit	3100–2700 BC
Umm an-Nar	2700–2000 BC
Wadi Suq	2000–1600 BC
Late Bronze Age	1600–1200 BC
Iron Age	1200–300 BC
Iron Age I	1200–1100 BC
Iron Age II	1100–600 BC
Iron Age III	600–300 BC
Samad/PIR	300 BC–AD 300
Sasanian	AD 300–630

Tab. 1: Chronology of Eastern Arabia.

3.1 Hafit period (3100–2700 BC)

The Hafit period in Eastern Arabia is associated with the beginning of large-scale copper processing,[460] long-distance trade along the Arab-Persian Gulf and the Gulf of Oman,[461] and monumental architecture. It is the time when the first so-called towers appear at, amongst other places, Hili,[462] Bat[463] and Al-Khashbah.[464] They are circular structures made of stone or mud-brick with diameters on average between 20 and 30 m. Their original height seems not to have been more than 5 m, making the term "tower" rather ill-fitting. It nevertheless took hold. Some of the towers feature an internal structure of small, doorless compartments that once could have been filled resulting in a solid platform. Other, however, seem to have been completely empty in their interior. The function of these towers is the matter of a long-standing debate and ranges from defensive structures, or keeps, for protection against hostilities,[465] to residences of elites,[466] resting places at a distance of a day's ride,[467] marketplaces[468] and cultic structures.[469] Domestic architecture in this period is extremely rare and mostly confined to the site of Ras al-Hadd HD-6 at the eastern coast of Oman.[470] Here, several mud-brick buildings surrounded by a stone wall were excavated. Due to the lack of known settlement sites, it is controversial whether the Hafit period already represents the transition from mobile pastoralism to sedentary agriculture.[471] Evidence in favour of this theory is the tower of Hili 8, whose earliest levels date to 3100–2800 BC. Here, Cleuziou[472] excavated a series of channels and ditches that he interpreted as simple version of a *falaj* irrigation system. Due to the dry climate of the region, irrigation is necessary to practice agriculture in Eastern Arabia. However, while some support the idea of third millennium BC *falaj* systems,[473] most archaeologists firmly reject that *falaj* irrigation was adopted in the region before the Iron Age as there is no certain earlier

459 Veit 2013: 17.
460 Giardino 2017; Döpper – Schmidt 2019; Schmidt – Döpper 2020.
461 Potts 1986; Méry – Schneider 1996; Schmidt – Döpper 2020.
462 Cleuziou 1989.
463 Thornton 2016.
464 Schmidt – Döpper 2019.
465 Frifelt 1976: 59; Weisgerber 1981: 198–204; Jorgensen – Al-Tikriti 2002.
466 Cleuziou – Tosi 2007: 147.
467 Frifelt 2002: 109
468 Frifelt 2002: 110
469 Hastings – Humphries – Meadow 1976: 13; Reade 2000: 135–136; Orchard – Orchard 2002: 230–232.
470 Cleuziou – Tosi 2007: 92–94.
471 Magee 2014: 96.
472 Cleuziou 1998; Cleuziou 2004; Cleuziou 2009: 730.
473 Frifelt 1989: 107; Orchard – Orchard 2007: 149–151.

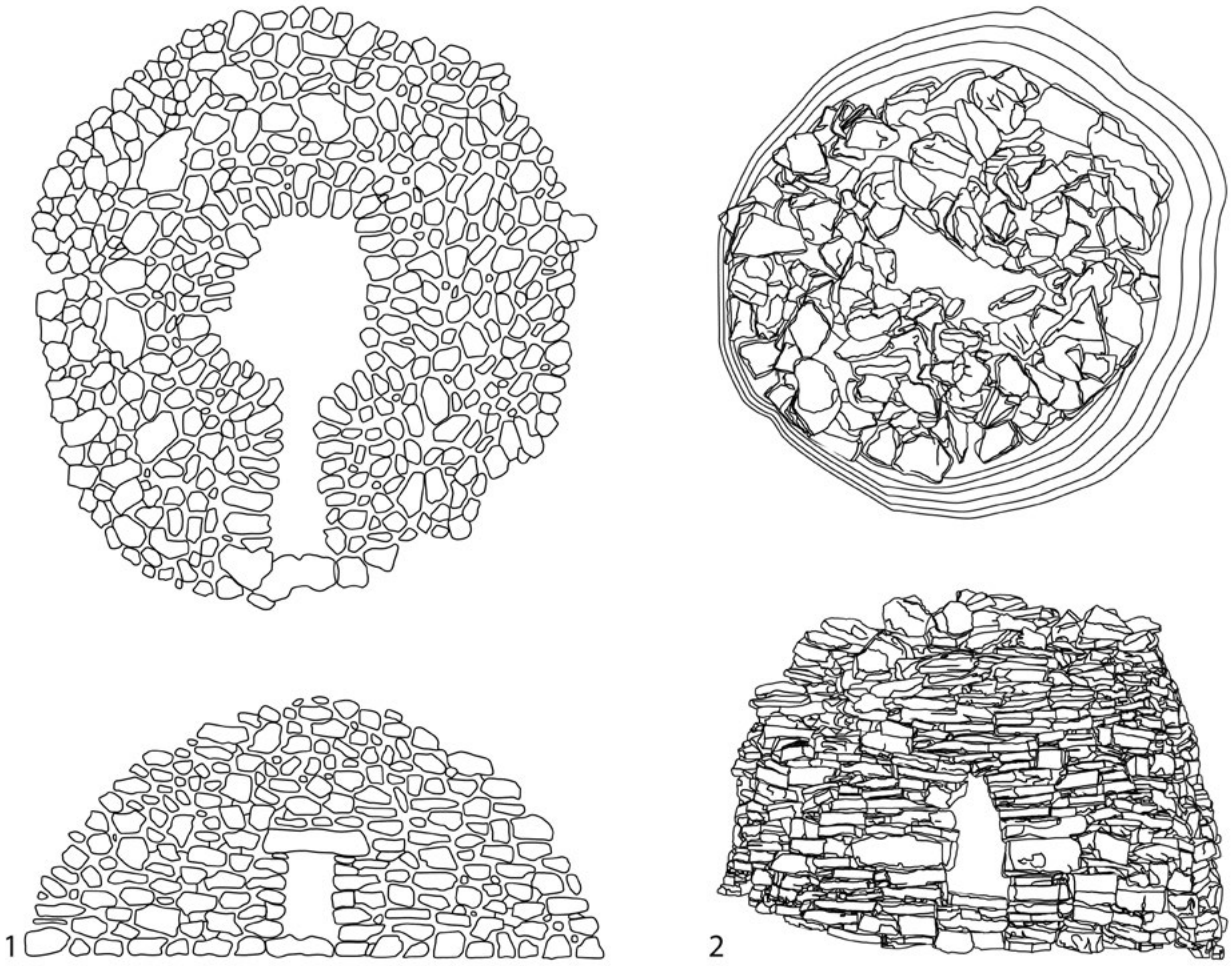


Fig. 1: Hafit period graves (1. adapted from Potts 1990: 75 fig. 8e, 2. Döpper 2021b: Abb. 244).

evidence for it.[474] Despite this, irrigation by simpler means such as small dams of stone or earth (*gabarbands*) or animal powered irrigation wells (*zajaras*) could have watered fields.[475] Again, there is no evidence that they existed in the third millennium BC. Another, albeit indirect, argument is the distribution of Hafit period tombs. They seem to be located in areas where oasis garden agriculture is possible, at least in the Ja'alan.[476]

Hafit period tombs are, other than contemporary settlements, abundantly present in the archaeological record of Eastern Arabia. They are circular, or almost circular, above-ground dry-stone structures (Fig. 1). Their external diameters range between 4 to 8 m, while the inner burial chamber is much smaller and normally has a diameter of only 1 to 2.5 m.[477] One or two, or in rare cases three, ring walls surround the chamber, constructed of boulders or rubble stones of different sizes based on local availability of raw materials.[478] The stones are laid in irregular layers. In section, these tombs show a beehive or truncated cone shape. Roofing was carried out by false vaulting. The tombs were accessible by small triangular or rectangular openings in the external ring walls. Although only rarely preserved, the openings were blocked after the original use, leaving a more or less even façade.[479] Generally, Hafit period tombs can be encountered on the ridges or slopes of hills and on wadi terraces, thus in prominent and highly visible positions.[480] While attempts were made to distinguish Hafit cairns (Fig. 1.1) from beehive graves (Fig. 1.2) and inferring a chronological order from this classification,[481] no clear-cut definition of either category is possible.[482] The diversity in their morphology is more likely due to their different, locally available building materials such as wadi pebbles and limestone slabs.[483] Consequently, they are treated in this study as a single type.

474 Wilkinson 1983; Potts 1990: 131–132; Boucharlat 2003: 161–172; Al-Tikriti 2010; Charbonnier 2015.
475 Costa 1983: 287–288.
476 Giraud 2009; Giraud – Cleuziou 2009; Giraud 2012.
477 Potts 1990: 78.
478 Vogt 1985: 72.
479 Döpper 2017: 192.
480 Vogt 1985: 61–62; Cleuziou – Tosi 2007: 116–117; Giraud 2010: 72.
481 Frifelt 1975b: 69; de Cardi – Collier – Doe 1976: 148; Potts 1986: 132; Potts 1990: 77–79.
482 Vogt 1985: 58.
483 Giraud 2010: 72.

Inhumation in Hafit period graves were few, normally ranging between one and four individuals, and in some cases, such as in the tombs of Ras al-Jinz and Ras al-Hadd, up to 30 individuals.[484] It has been argued that Hafit period cairns were collective tombs for a family or other social group incorporating individuals of both sexes and all ages.[485] Williams[486] suggested that the difference in the number of individuals buried in the tombs could be explained by different mortuary practices between the coast and inland during the Hafit period. Originally, the dead were placed on one side in a flexed position and later pushed aside when new individuals were interred.[487] Typical grave goods of the Hafit period include Jemdet Nasr pottery imported from Mesopotamia, personal adornments such as small beads or copper rings, and a few other small copper objects like pins, rivets and daggers.[488] Compared to tombs in other periods in Eastern Arabia, those of the Hafit period are relatively well researched with numerous examples excavated.

3.2 Umm an-Nar period (2700–2000 BC)

The Umm an-Nar period is considered a time of flourishing oases of sedentary people, in which agriculture was practiced alongside animal husbandry,[489] whereby it remains a point of discussion to which extent sedentism and agriculture was practiced by the different parts of the community.[490] Long-distance trade along the Arab Persian Gulf and the Gulf of Oman continued to exist and even intensified,[491] as did copper processing.[492] In Mesopotamian texts, the region is referred to as Magan and appreciated for its copper resources.[493] Akkadian and Ur III texts also mention 32 lords (*en*) and a king (*lugal*) of Magan, which lead some scholars to wrongly believe in the emergence of a secondary state in Eastern Arabia during the Umm an-Nar period as a result of trade with more complex neighbours.[494] As archaeological evidence to back up the claims from the texts is missing, the Mesopotamian titles are to be seen as an attempt to render the local structures into a familiar fashion, likely to facilitate trade between both regions.[495] The Umm an-Nar period is also the time when local pottery production becomes widespread.[496] Compared to the Hafit period, there are more sites known with domestic architecture, e.g., at Umm an-Nar Island,[497] Asimah,[498] Dahwa,[499] Al-Tikhah,[500] Bat,[501] Al-Zebah,[502] Al-Ghoryeen,[503] Maysar,[504] Al-Ayn[505] and Ras al-Jinz,[506] as well as several sites in the Wadi Jizzi area,[507] but still less than contemporaneous monumental towers.[508] Generally, the Umm an-Nar period is associated with the onset of sedentary agriculture and thus a significant change in the way of life along with an increase in population size.[509] Domesticated plants such as barley, wheat, dates and melons are attested at some sites, amongst others, at Hili,[510] Maysar,[511] Bat,[512] Umm an-Nar Island,[513] Tell Abraq[514] and Ras al-Jinz.[515] The scale of the agriculture (opportunistic and small scale vs. full-fledged multi-story oasis gardens) and its relevance for subsistence alongside hunting and gathering of marine and terrestrial resources is still disputed.[516]

As their forerunners in the Hafit period, Umm an-Nar period tombs are above-ground stone structures with a circular plan, but with diameters between 5 and 12.5 m larger than their predecessors (Fig. 2).[517] Other differences are that the interior of the tombs are divided into two or more chambers and they feature only one external ring wall. The number of chambers ranges from two to ten, featuring very different layouts with a variety of internal partitioning walls.[518] There can be free-standing cross-walls, bounded on each end by a passage or joining with the external ring wall of the tomb. The façade of the tombs is built out of carefully dressed stones. Sometimes white limestone, called sugar lumps, are employed. According to Cleuziou and Tosi, a façade of white limestone

484 Cleuziou – Tosi 2007: 112.
485 Magee 2014: 94.
486 Williams – Gregoricka 2013: 146.
487 Cleuziou – Tosi 2007: 114.
488 Potts 1990: 74; Magee 2014: 94.
489 Cleuziou – Tosi 2007; Méry 2013; Magee 2014.
490 Schmidt 2018a.
491 Magee 2014: 109–118.
492 Weisgerber 1980; Weisgerber 1981; Weeks 2004; Begemann *et al*. 2010; Magee 2014: 114–118.
493 Potts 1990: 113–125, 133–149, Magee 2014: 115–118.
494 Edens 1992; Reade 2008: 17.
495 Magee 2014: 118.
496 Méry 2000.
497 Frifelt 1995; Kluge 2018.
498 Vogt 1994: 152–159.
499 Al-Jahwari *et al*. 2018.
500 Kennet – Deadman – Al-Jahwari 2016: 159–160.
501 Frifelt 1976: 60, pl. 9–10, Frifelt 1985: 99, 100 fig. 6; Brunswig 1989: 19; Kerr 2016; Swerida 2018.
502 Schmidt 2018a; Schmidt 2018b.
503 Al-Jahwari – Kennet 2010: 167, 168 fig. 8–9; Al-Jahwari – Douglas – Hesein 2020.
504 Weisgerber 1980: 77–89; Weisgerber 1981: 191–196; Abar in preparation.
505 Blin 2007; Blin 2012.
506 Cleuziou – Tosi 2000; Azzarà 2009; Azzarà 2018.
507 Costa – Wilkinson 1987; 97, 99, 105; Düring – Botan 2018.
508 Döpper 2018.
509 Cleuziou – Tosi 2007: 139–159; Al-Jahwari 2008: 303; Magee 2014: 102–107.
510 Cleuziou – Berthoud 1980; Cleuziou 1989: 79–80.
511 Weisgerber 1981: 197.
512 Frifelt 2002.
513 Willcox – Tengberg 1995.
514 Potts 2000: 66.
515 Cleuziou – Tosi 2000: 44; Costantini – Audisio 2000.
516 Al-Jahwari 2008: 323–324; Magee 2014: 103–107; Charbonnier 2017.
517 Vogt 1985: 107; Potts 1990: 95.
518 Blau 2001: 560.

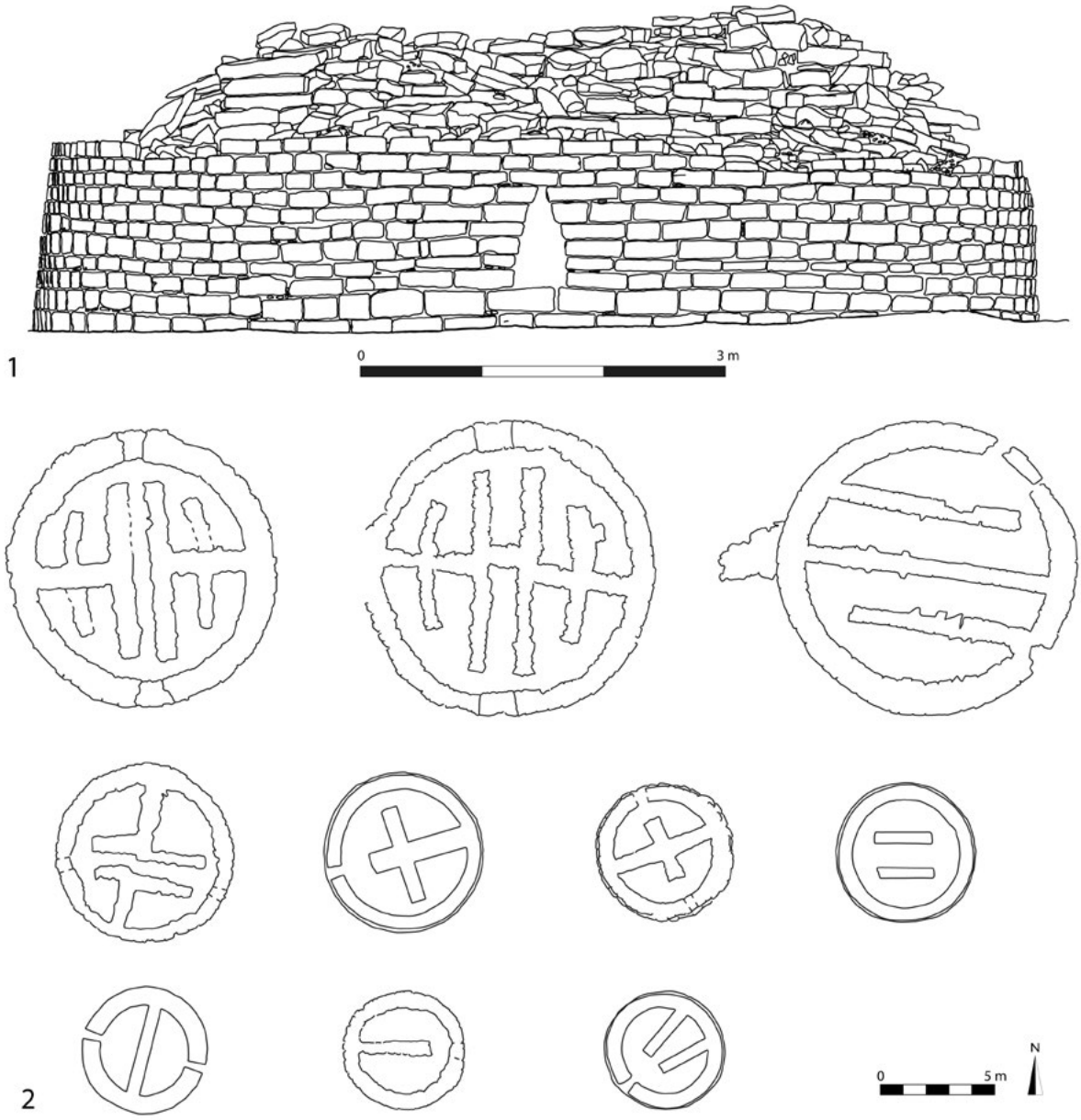


Fig. 2: Umm an-Nar period tombs (1. Döpper 2021b: Abb. 91, 2. adapted from Potts 1990: 96 fig. 12).

is characteristic of earlier Umm an-Nar period tombs of the time, around 2500–2400 BC.[519] In most cases, the stones of the ring wall are set on a plinth,[520] a new feature introduced in the Umm an-Nar period.[521] A few tombs, for instance Tomb 1059 at Hili, are made of monumental, well-cut ashlars with relief decoration. Méry[522] was able to develop a chronological sequence of the way the façade stones were dressed and what size of stones were used for the tombs at Hili. She demonstrated that the earliest tombs had small facing stones only worked on the edge and superficially dressed, while over the course of time the stone used for the construction of the tombs grew larger and had parallel edges carefully worked at five sides. Although no preserved roof was found, it can be assumed that Umm an-Nar tombs were either roofed with a false vault or had a flat cap made out of large stone slabs.[523] In some cases, chambers of the tomb or the whole tomb were built on two levels, the lower one at least partly below ground.[524] Umm an-Nar tombs mainly occur in groups in the plains or on flat terraces.[525] They exist in very different environmental zones all over Eastern Arabia.[526] Umm an-Nar period tombs could be entered by one or two small, triangular to trapezoidal entrances in

519 Cleuziou – Tosi 2007: 125.
520 Munoz – Ghazal – Guy 2012: 453.
521 Cleuziou – Tosi 2007: 125.
522 Méry 2010.
523 Potts 1990: 95; Cleuziou – Tosi 2007: 125.
524 Potts 1990: 95; Blau 2001: 566.
525 Vogt 1985: 107; Giraud 2010: 79.
526 Blau 2001: 557.

the external ring wall of the tomb.[527] Those entrances are about 60 to 70 cm in height. Some of the tombs were found with closed entrances but outfitted with handles for easy re-opening.[528] There seems to be no formalised orientation of the entrance.[529]

Umm an-Nar tombs incorporate multiple collective burials from a dozen individuals up to 400 of both sexes and all ages.[530] It is assumed that each tomb was in use for about one to three centuries.[531] The typical original position for the buried is lying on their side – more frequently on the right than on the left – with knees bent and hands raised to the face.[532] However, due to the collective use of the tomb, where previous bodies were pushed aside to make room for new interments, most human remains were found fragmented and disarticulated. Sometimes the bones show traces of cremation.[533] Grave goods include Black-on-Red and other pottery vessels such as grey wares imported from south-eastern Iran or south-western Pakistan, decorated soft-stone vessels of the *série récent*, personal adornment as well as some copper objects.[534] Interestingly, sacrifices, e.g., of animals, which are common in contemporaneous societies in neighbouring regions, are absent from Umm an-Nar tombs. This is explained, according to Magee,[535] by how a resource which belonged to the community could not be given to an individual in death as this would encourage a loss of social cohesion.

Another type of grave that existed during the Umm an-Nar period are secondary burial pits in close vicinity to the above-ground stone tombs.[536] Such pits were found, amongst others, at Al-Sufouh,[537] Shimal,[538] Bahla,[539] Ras al-Jinz[540] and Bat.[541] In those pits, the human remains, together with the grave goods, were relocated there from the above-ground tombs. In general, no anatomical order was preserved, although primary inhumations could be found as well. A special type of Umm an-Nar period tombs are large, stone-lined subterranean pits such as Hili N,[542] which dates to the very end of the Umm an-Nar period around 2000 BC and Moweihat B.[543] In the upper layers of Tomb Hili N, many articulated bones were found, indicating that the individuals were buried here soon after their death.[544] Méry[545] assumes that, at least in the upper layers, primary interments were attested at Hili N.

3.3 Wadi Suq period (2000–1600 BC) and Late Bronze Age (1600–1200 BC)

The terminology and chronology for the Middle and Late Bronze Age in Eastern Arabia is subject to ongoing discussions. Within this study, Velde's 2003[546] chronology is followed, differentiating between the Wadi Suq period from 2000–1600 BC and the Late Bronze Age from 1600–1200 BC. Velde's Wadi Suq period corresponds largely to Carter's[547] classical Wadi Suq. In the literature, the term Wadi Suq is, however, frequently used for any material of the second millennium BC. A great help in that regard is Righetti's 2015 PhD thesis[548] that offers a catalogue of most second millennium burials in Eastern Arabia, differentiating between Wadi Suq and Late Bronze Age finds. For tombs not listed in this catalogue, Velde's[549] distinction between Wadi Suq and Late Bronze Age material culture is followed as far as possible, despite being aware that the treatment of copper alloy[550] arrowheads as characteristics of the Late Bronze Age has especially been challenged recently.[551]

The Wadi Suq period is often associated with the collapse of complex societies of the Early Bronze Age and a "step backwards" to a mobile and less complex lifestyle as well as the abandonment of agriculture, although likely not along the coast of the United Arab Emirates.[552] The material culture of this period is characterised by a regionally diverse spectrum, which goes along with the idea of different degrees of complexity and sedentism/mobility between the communities.[553] These changes were, however, not all a sudden and there are clear links between the Umm an-Nar and Wadi Suq periods.[554]

527 Cleuziou – Tosi 2007: 128.
528 Cleuziou – Tosi 2007: 128.
529 Blau 2001: 560.
530 Cleuziou – Tosi 2007: 129; Méry 2010: 33.
531 Munoz – Cleuziou 2008: 628; Méry 2010: 33.
532 Blau 2001: 567; Cleuziou – Tosi 2007: 129; Munoz – Ghazal – Guy 2012: 453.
533 Blau 2001.
534 Vogt 1985: 140; Cleuziou – Tosi 2007: 129.
535 Magee 2014: 121.
536 Cleuziou – Tosi 2007: 130.
537 Benton 1996.
538 Blau 2001: 558.
539 Cleuziou – Tosi 2007.
540 Munoz – Cleuziou 2008; Munoz – Ghazal – Guy 2012.
541 Döpper – Schmidt 2013; Schmidt – Döpper 2014; Schmidt 2020.
542 Méry *et al.* 2001; Gatto *et al.* 2003; Méry *et al.* 2004; McSweeney – Méry – Macchiarelli 2008.
543 Haerinck 1991.
544 Méry *et al.* 2001: 173.
545 Méry *et al.* 2001: 173.
546 Velde 2003.
547 Carter 1997.
548 Righetti 2015b.
549 Velde 2003.
550 As for all periods after the Early Bronze Age, where only pure copper objects were known from Eastern Arabia, it is impossible to differentiate between copper or bronze without dedicated analyses. These objects are referred to as copper alloy in this study.
551 De Vreeze – Düring – Olijdam 2020: 141; Yule – Vogt 2020.
552 Potts 1990: 257; Carter 1997: 108; Cleuziou – Tosi 2007: 270–271.
553 Blackman – Méry – Wright 1989; Brunswig 1989: 39; Méry 1991; Peltenburg *et al.* 1997: 75-78; Al-Jahwari 2008: 339.
554 Potts 1990: 234; Al-Jahwari 2008: 336.

There also seems to be a dichotomy between a more conservative and persistent north, where settled agricultural life concentrated in a "Wadi Suq enclave", and the south, where the break between the two periods is sharper.[555] Here, agriculture seems largely to have been abandoned and a return to a mobile lifestyle is witnessed. Bronze working is at its heyday and new types of weapons such as socketed spearheads and daggers appear, although copper mining is rarely attested in the archaeological record.[556] Settlements are not numerous and are found, except for the sites of Ras al-Jinz RJ1[557] and Tawi Said in the Sultanate of Oman,[558] predominantly on the coast of the United Arab Emirates and the Batinah.[559] This had been associated with a general drop in population during the Wadi Suq period, [560] which is, however, rather unlikely due to the large number of tombs known from this period.[561] Monumental architecture such as from the previous Umm an-Nar period is so far mainly attested in the United Arab Emirates, e.g., Tell Abraq and Kalba, where Early Bronze Age structures continued to be in use.[562] Generally, a contradiction of settlements towards the northern parts of the peninsula can be observed.[563] According to Carter,[564] the people of the Wadi Suq period "do not appear to have possessed a particularly complex society", as they are lacking, amongst other things, urbanism, true public architecture and specialisation in the manufacture of artefacts and tombs.

The Late Bronze Age as an individual period has been considerably less researched compared to the Wadi Suq period. The most important sites for the Late Bronze Age are Shimal and Tell Abraq in the United Arab Emirates; no settlement sites dated to this period are known from inland Oman,[565] where the population seems to have turned to full-fledged mobility, possibly associated with a reduced use in pottery vessels.[566] Architecture is mainly ephemeral with *barasti* occupation.[567] As the data is very limited, neither subsistence nor settlement patterns can be accessed.[568] The material culture gets less standardised and simpler than in the previous Wadi Suq period.[569] New types of metal objects appear that are characteristic for the Late Bronze Age, including long swords and copper alloy arrowheads.[570] Generally, a progressive reduction in complexity is associated with this period.[571]

In both the Wadi Suq period and the Late Bronze Age, a range of different types of tombs is attested, of which a comprehensive discussion is available in Carter's[572] 1997 and Righetti's[573] 2015 PhD theses. This stands in sharp contrast to the very uniform and standardised tomb types of the previous Hafit and Umm an-Nar periods. According to Carter,[574] the implication could be that the population in the Wadi Suq period was not homogeneous and that this variety is reflected in the burial practises or that there was simply no tradition of standardisation in tomb architecture. He also identifies regional differences in the distribution of tomb types that may reflect differences in lifestyle.[575] The simplest version of Wadi Suq period tombs are subterranean cist burials that were used for single or double burials (Fig. 3.1).[576] A more complex variant of this type are cist burials with one or more above-ground ring walls surrounding the top course of the cist wall (Fig. 3.2).[577] In some cases, they can take the appearance of a low cairn. A third type are sub-circular or rectangular collective above-ground tombs, called Ghalilah type after its type-site in the United Arab Emirates (Fig. 3.3).[578] More unusual are partitioned, round, collective, above-ground tombs as there were excavated, for instance, at Qarn Bint Saud (Fig. 3.4).[579] Collective subterranean or semi-subterranean long burials form the fifth of Carter's tomb types (Fig. 3.5).[580] One of the best-preserved examples of this category is Bidya-1.[581] These stone-lined cists are roofed with large stone slabs. Likely the best-known type, however, are collective above-ground long tombs, called Shimal type after its type site (Fig. 3.6).[582] More than 150 of these tombs were documented so far. This type was constructed during the Wadi Suq period as well as during the Late Bronze Age.[583]

Other tomb types are small, single or double above-ground burials, rectangular or oval in structure (Fig. 3.7),[584] round, above-ground tombs with diameters under

555 Al-Jahwari 2008: 339–340.
556 Potts 1990: 256; Velde 2003: 109–110.
557 Cleuziou – Tosi 2007: 262–265.
558 Döpper 2020.
559 Carter 1997; Magee 2014: 186–187.
560 Cleuziou 1981: 292; Carter 1997: 121; Cleuziou 2007: 222; Cleuziou – Tosi 2007: 257; Al-Jahwari 2008: 340, 345.
561 Potts 1993: 194; Carter 2003: 40.
562 Carter 1997: 74.
563 Carter 1997: 75.
564 Carter 1997: 234.
565 Carter 1997: 76; Al-Jahwari 2008: 336.
566 Cleuziou 1981: 292; Carter 1997: 76.
567 Carter 1997: 237.
568 Magee 2014: 190.
569 Carter 1997: 237.
570 Velde 2003: 110–111; but see de Vreeze – Düring – Olijdam 2020: 141 and Yule – Vogt 2020.
571 Carter 1997: 55.
572 Carter 1997.
573 Righetti 2015b.
574 Carter 1997: 51–52.
575 Carter 1997: 54.
576 Vogt 1985: 209–212; Potts 1990: 237; Carter 1997: 31–32. For the differentiation between Wadi Suq and Samad period cist burials see Yule 1994.
577 Carter 1997: 33–35.
578 Vogt 1985: 199–205; Potts 1990: 242; Carter 1997: 35–36.
579 Vogt 1985: 186–190; Carter 1997: 36–37.
580 Vogt 1985: 190–193; Carter 1997: 37–38.
581 Al-Tikriti 1989a.
582 Vogt 1985: 194–199; Potts 1990: 241–242; Carter 1997: 39–40.
583 Carter 1997: 38.
584 Carter 1997: 43–44.

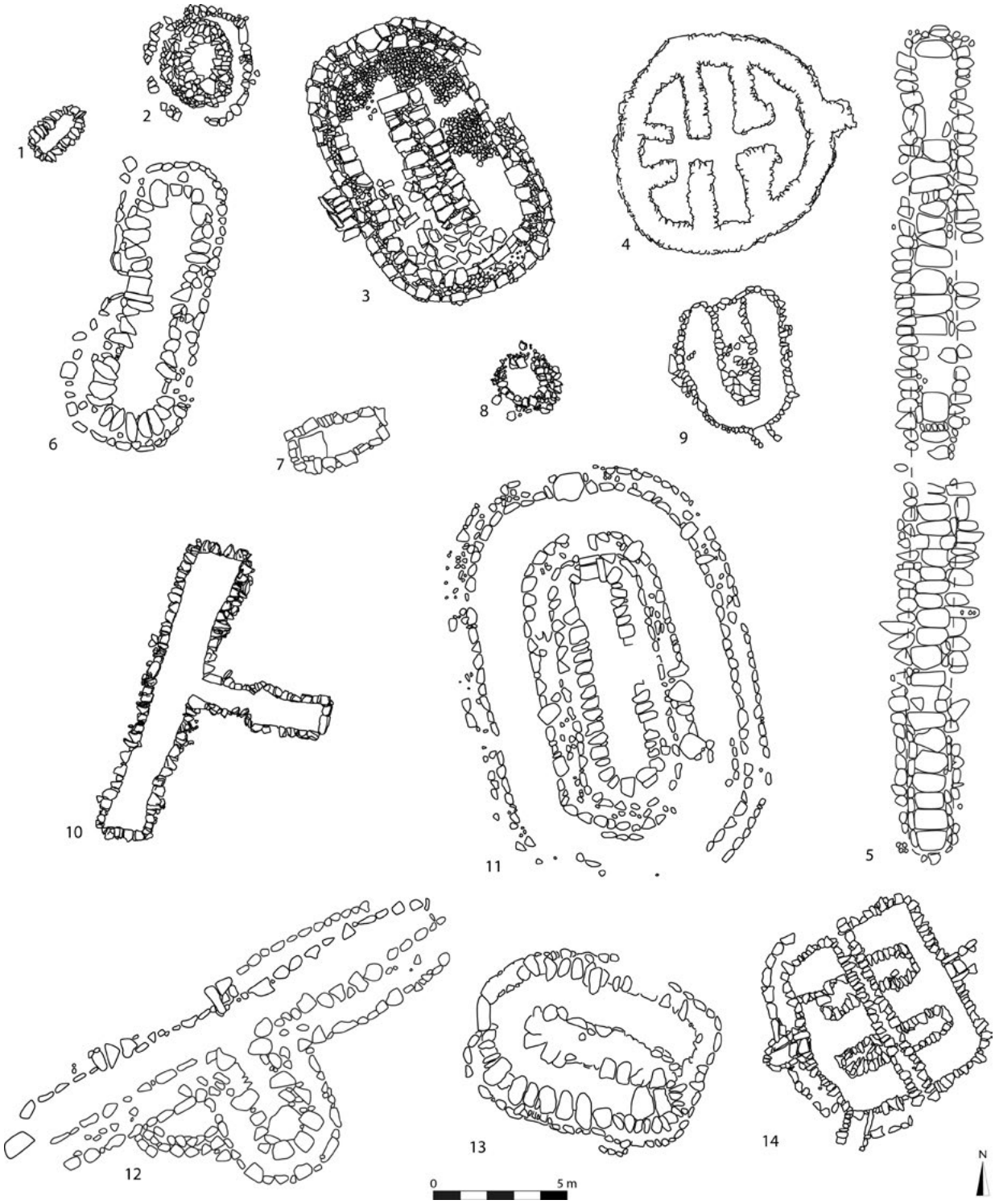


Fig. 3: Different types of Wadi Suq period tombs.
1 = Righetti type IS1a (adapted from Yule 2001: Taf. 195), 2 = Righetti type Is1b (adapted from Righetti 2015a: fig. 518), 3 = Righetti type CM3b (adapted from Donaldson 1984: 296 fig. 16), 4 = Righetti type CP1 (adapted from Vogt 1985: Taf. 78), 5 = Righetti type CM2b (adapted from Al-Tikriti 1989a: pl. 61), 6 = Righetti type CM2a (adapted from Kästner 1991: 234 fig. 1), 7 = Righetti type IG2 (adapted from Donaldson 1985: 138 fig. 1), 8 = Righetti type IG 3 (adapted from Yule 2001: Taf. 40), 9 = Righetti type CM4d (adapted from Jasim 2006: 38 fig. 46), 10 = Righetti type CM2e (adapted from Corboud *et al.* 1996: 17 fig. 16), 11 = Righetti type CM3a (adapted from Righetti 2015a: fig. 55), 12 = Righetti type CM2f (adapted from Righetti 2015a: fig. 17), 13 = Righetti type CM4a (adapted from Kästner – Sahm – Velde 1988: fig. 3), 14 = Righetti type CP3 (adapted from Phillips 1997: 210 fig. 4).

three meters of the Masirah type (Fig. 3.8)[585], U-shaped, stone-lined subterranean collective graves as they are found in the Wadi al-Qawr (Fig. 3.9),[586] T-shaped subterranean collective graves as they are found in Bitnah (Fig. 3.10),[587] ring-chambered, collective above-ground burials of the Khatt type (Fig. 3.11),[588] long, collective above-ground tombs with annexes as Tomb Dh2 in Dhayah (Fig. 3.12),[589] composite subterranean and above-ground collective tombs as Sh404 in Shimal (Fig. 3.13)[590] and square, multi-chambered collective above-ground tombs such as found in Wa'ab (Fig. 3.14)[591]. For all of these latter types it is uncertain whether they should be attributed to the Wadi Suq period or to the Late Bronze Age. Further, there are some Wadi Suq period and Late Bronze Age tombs that are of a rather opportunistic nature, using pre-existing features so that the construction efforts were minimal.[592] These types of tombs include rock shelters, where natural features form the tomb.[593] Pre-existing features also include tombs of both the Hafit and the Umm an-Nar period, whereby in the case of Umm an-Nar period tombs it is not always clear whether they were reused or continuously used.[594] Generally, there seems to be a rough separation line between the north and the south.[595] In Oman, cemeteries with subterranean single burials dominate, while the northern peninsula displays a much wider variety of tomb types and occupation. The large collective tombs in the northern part of the Oman Peninsula required large amounts of time and labour in their construction, while the simple tombs for single inhumations required much less effort.[596] Further, during the Late Bronze Age, tomb building appears to decrease and the reuse of older structures and natural features for burials becomes more common.[597]

The great variety in tomb architecture is followed by the presence of different numbers of individuals per tomb, ranging from single or double inhumations to collective burials with over 60 individuals.[598] Overall, individual tombs outnumber the collective ones.[599] The re-introduction of single burials that were completely absent in the Early Bronze Age is remarkable.[600] Bodies were placed on their side in a crouching position with varying orientations.[601] Collective tombs held individuals of both sexes and all ages without any obvious preferences.[602] Grave goods include pottery – mainly beakers, bowls and jars – soft-stone vessels of the *série tardive*, personal adornment and copper alloy weaponry like socketed spearheads, arrowheads, daggers, knives and swords, in addition to copper alloy vessels and jewellery.[603] Metal is much more common in the second millennium BC tombs than in those of the Early Bronze Age.[604] The increase in weapons deposited in tombs could be interpreted as an increase in intra-group violence, but Potts,[605] following Härke,[606] argues that the number of weapons found in burials has a ritual significance during a time of relative peace. The relative lack of trauma in the few analysed skeletons of second millennium BC date[607] supports this assertion.[608] The composition of the set of grave goods does not differ much between the various types of tombs.[609]

3.4 Iron Age (1200–300 BC)

The earliest part of the Iron Age, Iron Age I (1200–1000 BC), was mainly identified at some of the major sites in the United Arab Emirates such as Tell Abraq, Shimal and Kalba.[610] Here, postholes and crude, handmade pottery without decoration were identified. Information on subsistence strategies is limited and hint at animal husbandry. The Iron Age II (1000–600 BC) witnessed an unparalleled settlement intensification throughout Eastern Arabia, facilitated by the newly invented *falaj* irrigation system that allowed people to occupy all environmental zones.[611] This also led to a larger concentration of agricultural land to facilitate water transport, in contrast to the Umm an-Nar period, where agriculture was more likely organised on a small scale, in individual plots scattered thought the landscape.[612] Iron Age *aflaj* were, among other places, excavated at Hili,[613] Al-Thuqaibah[614] and Salut.[615] The domestication of the camel further permitted long-distance overland trade and considerably eased movement between the coast and inland, with the result

585 Vogt 1985: 206–207; Carter 1997: 44–45.
586 Carter 1997: 45.
587 Carter 1997: 45–46.
588 Potts 1990: 243; Carter 1997: 46–47.
589 Carter 1997: 47.
590 Carter 1997: 47.
591 Carter 1997: 48.
592 Carter 1997: 50; Righetti 2012: 381.
593 Carter 1997: 40–41.
594 Potts 1990: 237; Righetti 2015b: 155.
595 Vogt 1998: 275; Righetti 2015b: 192–193.
596 Carter 1997: 54.
597 Carter 1997: 237.
598 Carter 1997: 52; Cleuziou – Tosi 2007: 269.
599 Righetti 2015b: 128.
600 Vogt 1985: 206; Cleuziou – Tosi 2007: 268.
601 Cleuziou – Tosi 2007: 268–269; Righetti 2015b: 173–175.
602 Righetti 2015b: 175.
603 Vogt 1998: 275.
604 Carter 1997: 97.
605 Potts 1998: 203.
606 Härke 1990: 37.
607 Blau 1999: 199.
608 Magee 2014: 183–184.
609 Cleuziou – Tosi 2007: 269.
610 Cleuziou – Tosi 2007: 281.
611 Potts 1990: 389; Al-Tikriti 2002; Magee 2014: 214–215.
612 Charbonnier 2017: 66–67.
613 Boucharlat – Lombard 1985; Al-Tikriti 2010.
614 Córdoba 2003.
615 Avanzini – Phillips 2010.

that coastal settlement expanded greatly.[616] The Iron Age II features ritual sites, which were up to that time nearly unknown to the archaeology of Eastern Arabia. They are characterised by the presence of ceramics with appliqué snakes, cast copper alloy snakes and other representations of serpents, as well as bridge-spouted vessels.[617] It is believed that these rituals were a new way of communicating social cohesion to the population in these times of changes.[618] Other innovations are evidenced by the emergence of fortified settlements on hilltops, amongst other places, at Lizq and Salut, as well as columned buildings such as at Bida Bint Saud, Rumeilah and Muwailah.[619] According to Magee,[620] the new columned buildings could have functioned as communal meeting halls and "provided an opportunity to maintain social cohesion and avert political and economic disharmony". Rituals performed at these halls were likely intended as commensal politics to establish and maintain regional (trading) links.[621] Interestingly, it seems that elites all over the region employed similar rituals to maintain and project their authority.[622] Still, it is not possible to identify private rooms of the local elites in any of the pillared buildings.[623] These structures seem to be devoted purely to collective activities including sharing drinks, as indicated by small pottery bowls and bridge-spouted vessels, sharing food cooked in large pits nearby, and burning substances in braziers.[624] As many of the pillared buildings were found next to a *falaj*, several scholars see them also associated with the control and management of the water for the oasis agriculture.[625] Thus, despite the appearance of singled-out buildings, individual members of the elite are elusive. One exception is the mentioning of Pade, King of Kade from the City of Izke in a neo-Assyrian inscription from Niniveh dating to around 640 BC.[626] Izke is identified with the modern city of Izki in central Oman, putting, according to Potts,[627] "Iron Age Oman on the historical map for the first time". However, the denomination of this individual as a king might again be seen as a Mesopotamian attempt to make sense of the local structures. In this context, it is interesting to note that administrative objects, still rare in the Bronze Age, increased in numbers during the Iron Age in the form of stamp seals.[628] Following Benoist,[629] the Iron Age was a society "in which collective discussion played a central part in decisions and where the group was of some importance in terms of regulation of power and authority".

Excavations at the Iron Age fort of Salut in the Sultanate of Oman lead Phillips[630] to a different internal division of the Iron Age chronology from that which is commonly used with in the United Arab Emirates. He found painted pottery typical for the Iron Age II in layers that provided radiocarbon dates around 1300 BC and thus in the Iron Age I. Therefore, he assumes that Iron Age I and II are not chronological entities but groups of different material cultures and merges them together as the Early Iron Age. Phillips further thinks that in the Sultanate of Oman, painted pottery first appears in central Oman, where it marks the beginning of the Iron Age, and only later came to coastal sites in the United Arab Emirates. The Iron Age III (600–300 BC; the Late Iron Age according to Phillips) does not differ much from the Iron Age II but represents a gradual decline as some of the major sites such as Rumailah and Muwailah are abandoned.

Our knowledge of Iron Age burial practices is relatively sparse compared to other periods despite a rather large number of excavated tombs. Consequently, a differentiation between Iron Age I–III within the tombs has not been established and will not be attempted here. Iron Age burials are characterised by a variety of different types, some of them already known from the second millennium BC.[631] There are chamber graves cut into the bedrock like the ones found at Al-Qusais (Fig. 4.1), above-ground cairns (Fig. 4.2) and graves that exploit natural rock crevices (Fig. 4.3).[632] Additionally, rows or ordered groups of above-ground hut- or pillar-box tombs were found, for instance, in Wadi al-Jizzi or at Jebel Salaili (Fig. 4.4).[633] Those tombs are often located in the plain or on the feet of a mountain, approximately 2 × 2 m in size and 1.70 high. Doe[634] describes them as single-chambered walled tombs constructed of river boulders or hewn stone slaps with flat tops. At the same time, large, stone-built communal tombs continue to exist, primarily in the mountains.[635] An exceptional cemetery composed of 81 small cairn graves made of stone boulders and arranged in a honeycomb pattern was investigated at Bawshar, near Muscat (Fig. 4.5).[636] Additionally, Iron Age II burials are often found within earlier Wadi Suq collective tombs. Here, according to Cleuziou and To-

616 Magee 2014: 226.
617 Magee 2014: 237–240.
618 Magee 2014: 240.
619 Benoist 2010; Magee 2014: 231.
620 Magee 2014: 237.
621 Magee 2003: 186.
622 Magee 2003: 186.
623 Benoist 2010: 129.
624 Benoist 2010: 130.
625 Boucharlat – Lombard 2001: 226–227; Al-Tikriti 2002: 129; Benoist 2002: 65.
626 Potts 1990: 393.
627 Potts 1990: 394.
628 Potts 1990: 387–389.
629 Benoist 2010: 139.
630 Phillips 2010.
631 Magee 2014: 240; Yule 2014: 34.
632 Potts 1990: 359–360; Cleuziou – Tosi 2007: 289-290; Taha 2009; Fritz 2010: 101; Jasim 2012: 292; Magee 2014: 24.
633 Yule 1994: 545–547; Yule 2014: 34.
634 De Cardi – Collier – Doe 1976: 148.
635 Cleuziou – Tosi 2007: 290.
636 Cleuziou – Tosi 2007: 290.

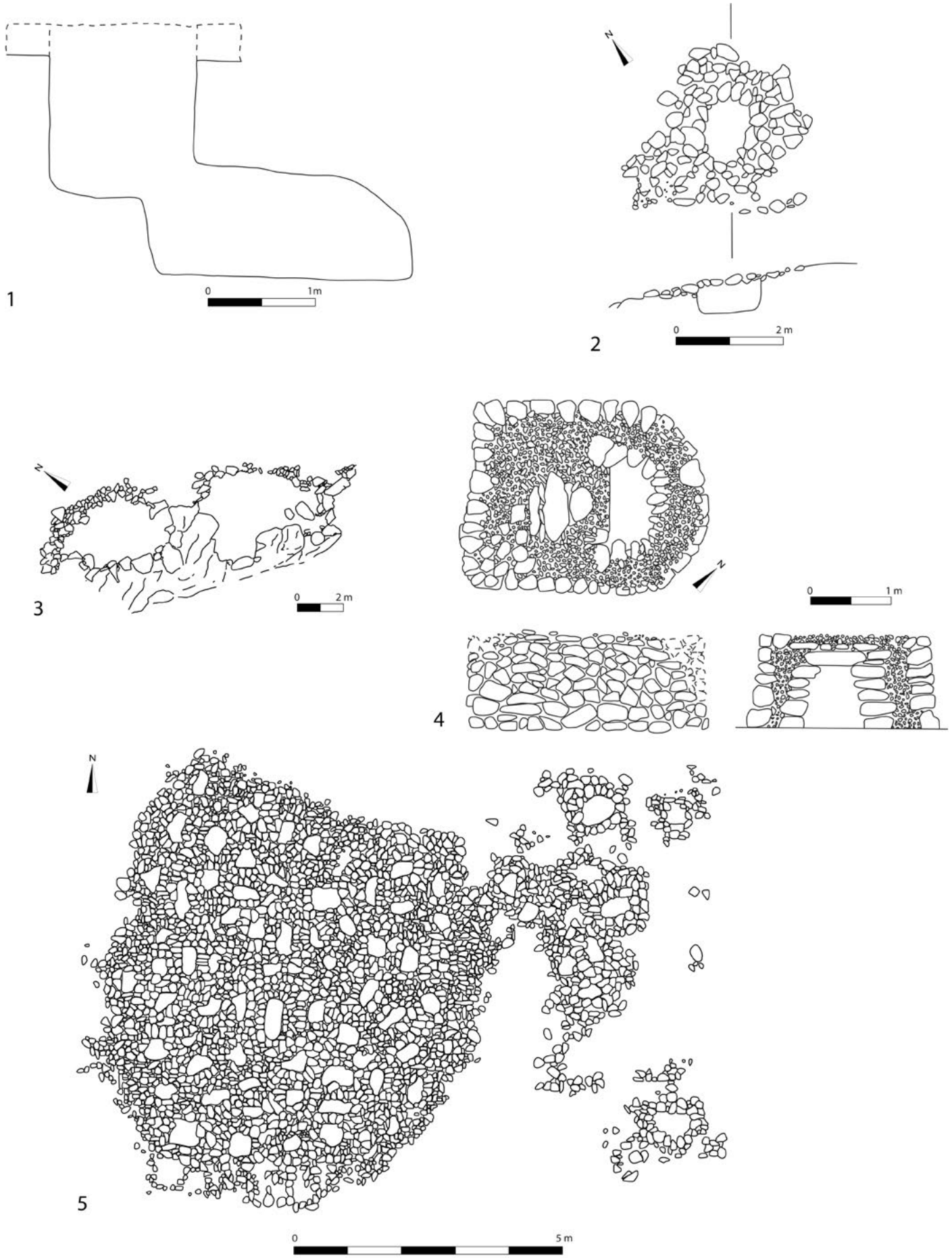


Fig. 4: Different types of Iron Age tombs (1. adapted from Taha 2009: 229 pl. 12B, 2. adapted from Jasim 2012: 53 fig. 63, 3. adapted from Jasim 2012: 38 fig. 38, 4. adapted from Yule 1994: Abb. 8 and 5. adapted from Yule 2014: fig. 13.1).

si,[637] they seem to be individual burials within an existing monument rather than the result of continuous use. Generally, there are no elaborate tombs or evidence for funeral ceremonies that would allow both the deceased and the survivors to emphasise their own claims to their social status.[638]

Information on the position of the skeletons within the tombs is sparse, but placing the dead in a flexed position seems common practice.[639] Orientation of the body can vary from one tomb to another. At Jebel Buhais Tomb BHS12, it was observed that males were buried on their right sides while females on their left side, but that is a too limited dataset to draw general conclusions from.[640] The small cists of the honeycomb cemetery at Bawshar only showed the dead in a tightly crouched position.[641] Grave goods were very rich in the larger tombs and included copper alloy objects like arrowheads, painted, spouted and other pottery vessels, alabaster and large quantities of soft-stone vessels as well as pieces of personal adornment.[642] In many cases, soft-stone vessels outnumber the pottery ones.[643] The bronze metallurgy of the Iron Age produced mainly hammered vessels and only rarely cast ones, in addition to personal ornaments, weaponry and domestic tools.[644] Single interments usually held one to three vessels and occasionally copper alloy arrowheads.[645] Notably, iron as a material is almost absent from Iron Age tombs.[646] At least some of the graves seem to be associated with ritual areas that contain snake figurines and vessels with serpent appliqué.[647]

3.5 Late pre-Islamic (PIR) and Samad periods (300 BC–AD 300)

The time after the Iron Age has different labels in the Sultanate of Oman and the United Arab Emirates including the northern tip of the Sultanate, likely relating to two different cultural spheres, which is, however, disputed.[648] In Oman, this era is referred to as the Samad period after the type-site in central Oman; in the United Arab Emirates it is called *pré-islamique récente* (PIR), the late pre-Islamic period. Some publications also refer to parts of this time period as Hellenistic, Seleucid or Parthian, linking Eastern Arabia to the terminology of neighbouring regions. Within this study, the terms PIR and Samad will be employed. Just as the labelling of the period is not agreed upon, neither is the time range. Various attempts were made, putting the Samad period into a chronological frame ranging in its maximum from the fourth century BC to the fourth century AD.[649] The chronology of the PIR is more certain. Most scholars date it from the third century BC to the first quarter of the fourth century AD. Here, a time range of 300 BC to AD 300 for both periods will be followed.

In the whole region, new material culture emerged from the third century BC onwards including the use of iron for making tools and weapons as well as the import of glass vessels and metal coinage.[650] This gives evidence to a flourishing trade incorporating the Mediterranean, the Arabian Peninsula and the Indian Ocean. Camels became the most important domesticated animal and occasionally received their own burials, sometimes alongside humans.[651] For the first time, writing appears in Eastern Arabia, at least in the United Arab Emirates. Some Iron Age sites, including their *falaj* systems, continued to be in use during the Samad and PIR, while at others only postholes indicating more ephemeral structures were found.[652] Overall, the people seem to be, in the majority, settled agriculturalists.[653] Generally, this period is flourishing on the northern coasts of the United Arab Emirates and in the Sultanate of Oman, but less so in the south, but this might also be a bias in the available data.[654] Most important settlement sites for the PIR are Ed-Dur and Mleiha in the United Arab Emirates. Here, mud-brick villages, forts and cemeteries, as well as a temple dedicated to the sun god Shamash, were found. Numerous imports underline the role of the sites as major trading hubs. Some scholars link this period to the arrival of new populations from Western Arabia, while many others disagree.[655]

For the PIR, generally two major categories of tombs can be distinguished: small, simple graves (Fig. 5.1) and monumental tomb towers built of stone or mud-brick (Fig. 5.2).[656] The monumental tombs, as they were found for instance at Mleiha, feature elaborate, above-ground square to rectangular constructions, reconstructed as being up to 4 m in height. These towers or platforms cover

637 Cleuziou – Tosi 2007: 290.
638 Bradley 1990: 39; Cleuziou – Tosi 2007: 291.
639 Potts 1990: 360; Jasim 2012: 293.
640 Jasim 2012: 293.
641 Yule 2014: 34.
642 Potts 1990: 360; Cleuziou – Tosi 2007: 290; Jasim 2012: 293–298; Magee 2014: 240.
643 Magee 2014: 240.
644 Potts 1990: 383.
645 Fritz 2010: 101.
646 Boucharlat – Lombard 1985: 60; Magee 1998: 114–115; Lombard 1989; Weeks 2000: 184-185; Elmahi – Al-Jahwari 2005: 65.
647 Potts 1990: 360–361; Magee 2014: 240.
648 Mouton – Schiettecatte 2014; Yule 2014; Yule 2016.
649 Yule 2016: 34 Tab. 1.
650 Potts 1990: 272; Cleuziou – Tosi 2007: 298.
651 Cleuziou – Tosi 2007: 298.
652 Cleuziou – Tosi 2007: 298.
653 Yule 2018: 443.
654 Al-Jahwari 2008: 362.
655 Cleuziou – Tosi 2007: 298.
656 Yule 2014: 55.

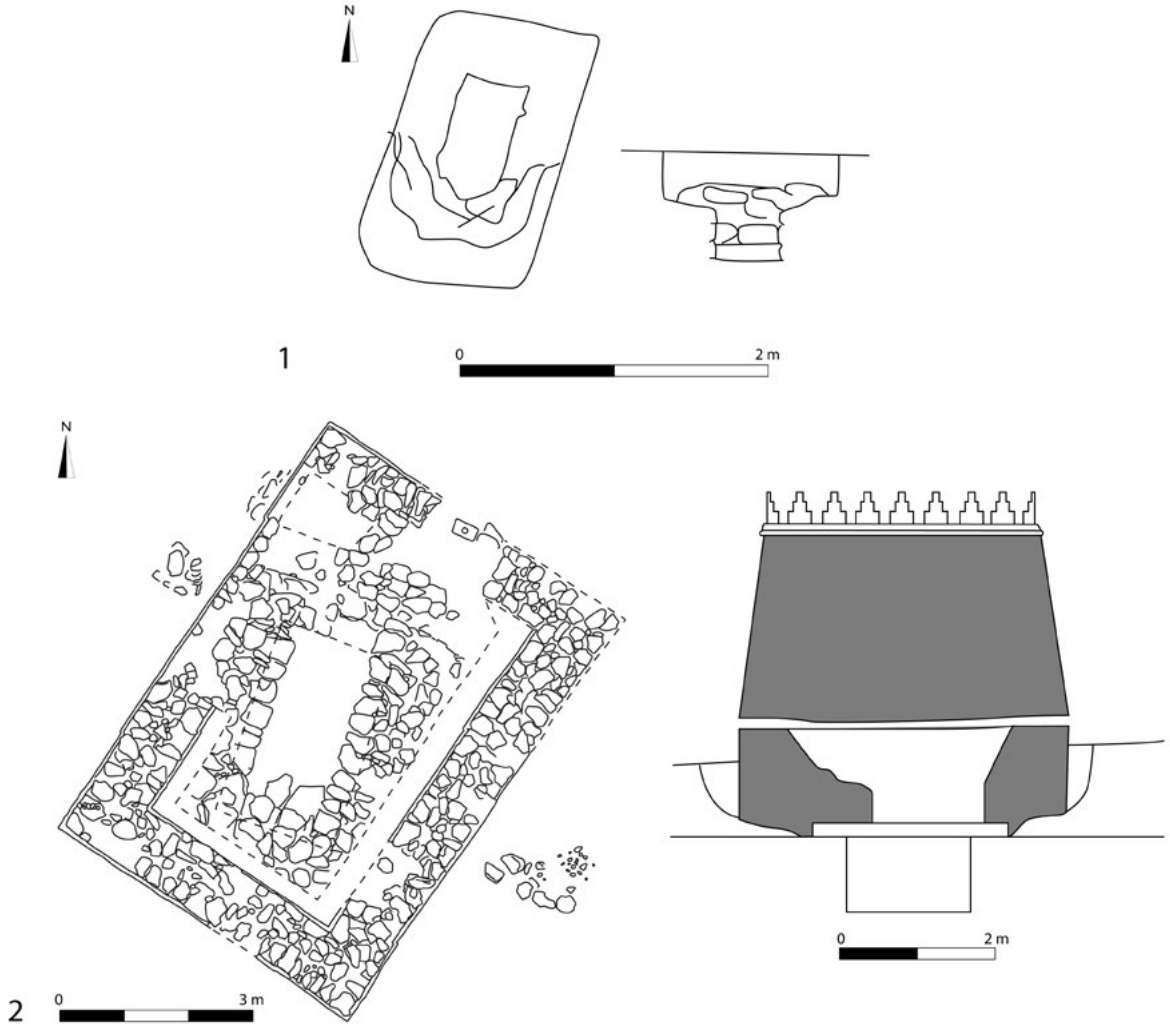


Fig. 5: PIR tomb: a. simple grave (adapted from Boucharlat – Mouton 1998: 18 fig. 3), b: monumental tomb tower (adapted from Boucharlat – Mouton 1998: 23 fig. 7; Overlaet – Haerinck 2014: 209 fig. 4).

underground funerary pits.[657] The simple, subterranean stone chambers are built of dry stone walls topped by one or more capstones.[658] Larger stone-chambered tombs exist as well, for example at Ed-Dur, which was entered via a shaft which was blocked up after the internment of the bodies.[659] As skeletal material was often lacking, little is known of the position of the bodies in PIR graves.[660] At Ed-Dur, skeletons were places in a flexed position but with no order in their orientation visible.[661] Mouton[662] assumes that single inhumations were the norm. The only case of a collective tomb is G.5156 at Ed-Dur, where 15 skulls were discovered.[663] Typical grave goods include iron weapons such as daggers, swords and arrowheads, copper alloy bowls, soft-stone, calcite and glass vessels as well as pieces of personal adornment including gold beads.[664] For the first time, elements of horse harnesses are encountered within the tombs.[665]

Samad period tombs are simple, stone-lined underground cists that are covered by large stone slabs (Fig. 6). According to Yule,[666] a bar wall roof is characteristic. Skeletons are buried lying on their side in a flexed position.[667] Yule[668] is of the opinion that he can differentiate between male individuals lying on the right side and female individuals on their left. This differentiation is, however, based on only very few anthropologically identified skeletons and thus not very reliable. Grave goods are comparable to those of PIR graves and include iron weapons, soft-stone vessels, albeit less than in the previous periods, and pieces of personal adornment, mainly beads. The pottery from Samad period graves is distinct

657 Potts 1990: 268; Mouton 2008: 37–40.
658 Potts 1990: 282–287.
659 Potts 1990: 282–287.
660 Potts 1990: 268.
661 Mouton 2008: 237.
662 Mouton 2008: 236.
663 Mouton 2008: 236.
664 Potts 1990: 268, 282–287; Mouton 2008: 49–58, 236–237.
665 Yule 2014: 58.
666 Yule 2014: 56.
667 Yule 2014: 67.
668 Yule 2014: 67.

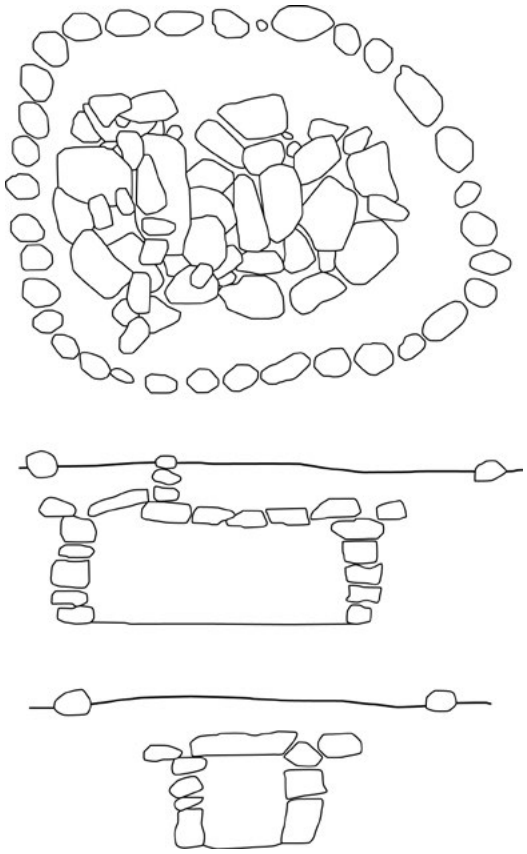


Fig. 6: Samad period tomb (adapted from Yule 2001: 30 Abb. 4.2).

to those of PIR and includes pilgrim bottles and balsamaria.

3.6 Sasanian period (AD 300–630)

The period from AD 300 until the advent of Islam in Eastern Arabia is referred to as the Sasanian period, although a Sasanian presence or domination of most of the region is not attested, as only a very patchy record of Sasanian activities in Eastern Arabia exists, both from written sources as well as from the material record. Shapur I (AD 240/242–270), the second Sasanian king, lists 'Uman as a province of his empire on the Naqsh-i Rustam inscription, but it was already omitted again by the province list of Kartir, Shapur I's priest.[669] In AD 575 the king Khusraw I (AD 531–579) built, according to Omani oral tradition, a fort at Rustaq,[670] indicating some more direct control of the Sasanians over the Oman Peninsula during that time. Through the latter part of the Sasanian period, there seems to have been a treaty between the Sasanians and the local Arab rulers, as later historical sources suggest, that divided the land into areas of Arab control and areas of control of a Sasanian governor.[671] Among the few sites known from the archaeological record are Khatt,[672] Jazirat al-Ghanam[673] and Kush,[674] all located on the north-western tip of the Musandam Peninsula in the United Arab Emirates, as well as Fulayj in the Batinah.[675] These sites were possibly actual Sasanian outposts meant to control the seafaring trade in the strait of Hormuz. Another possible important site of the Sasanian period is Sohar,[676] although its date being attributed to the Sasanian period is strongly rejected by Kennet.[677] The copper mines of Arja near Sohar provided two radiocarbon dates of the fifth and/or sixth centuries AD, placing their use in the Sasanian period.[678] Arja Site 1 also yielded a radiocarbon date around cal. AD 530/510 associated with large quantities of handmade cooking pots, indicating the presence of a domestic building from the late Sasanian or early Islamic period before the large building known from the site today.[679] Further Sasanian presence is attested in Area F of Ed-Dur,[680] in and around the fort of Mleiha[681] and at Bur al-Jasah.[682] From the interior of the Sultanate of Oman, very little is known about the Sasanian period. However, in 1979, a coin hoard was found in a green-glazed jar dating to the Sasanian period, which yielded, besides seven Sasanian drachms, nearly 900 early Islamic coins.[683] Further Sasanian coins are known from Tell Abraq,[684] Ghallah[685] and Fujairah.[686]

Against the background of this sparse evidence, Kennet[687] concludes that the Sasanian period followed a dramatic decline at the end of the PIR/Samad period, most likely caused by a deterioration in both economic activity and population across the region. According to him, there is no sign of recovery until at least the seventh or eighth century AD. Wilkinson,[688] however, comes to a different conclusion. He argues that it was the Sasanian period when Eastern Arabia achieved its greatest agricultural development thanks to the establishment of the *falaj* irrigation system, especially in those regions that he thought to be of direct Sasanian control. Kennet[689] contradicts this by pointing out that, based on archaeo-

669 Kennet 2007: 87.
670 Kennet 2007: 88.
671 Kennet 2007: 88.
672 Kennet 1998.
673 De Cardi 1972.
674 Kennet 1997.
675 Al-Jahwari *et al.* 2018.
676 Potts 1990: 296; Kervran 2004.
677 Kennet 2007: 97–99.
678 Weisgerber 1987: 148–149.
679 Costa – Wilkinson 1987: 136.
680 Lecomte 1993.
681 Benoist – Mouton – Schiettecatte 2003.
682 Kennet 2007: 90.
683 Lowick 1983.
684 Potts – Cribb 1995: 130.
685 Potts – Cribb 1995: 129.
686 Hellyer 1995.
687 Kennet 2007: 106.
688 Wilkinson 1977: 130–133.
689 Kennet 2007: 107.

logical evidence, *falaj* irrigation was already widespread during the Iron Age. In consequence, the Sasanian period in Eastern Arabia presents itself as one of little settlement or other activities. Reasons named for this decline are the establishment of a direct sea trade between India and the Red Sea, by-passing the Oman peninsula and the general weakening of Roman trade with the East.[690] Kennet[691] assumes that there were mainly Arab nomadic tribes that occupied the land during the Sasanian period with only some true Sasanian sites such as Fulayj.

Sasanian burials are virtually unknown from Eastern Arabia. Therefore, no information is available on tomb types, position of the skeletons, and grave goods. In the sand dunes near Jebel Buhais, two unmarked burials were discovered that were attributed to the middle Sasanian period by radiocarbon dating.[692] The skeletons were associated with several pieces of jewellery made of different materials, and Sasanian stamp seals. Strontium isotope analyses determined that they were immigrants to the area, likely from Iran or Mesopotamia. In Wadi al-Jizzi, some terraced cairns up to 1 m in height with a clear outer wall and a narrow corbelled grave chamber were found that were associated with substantial amounts of turquoise glazed pottery dating to the Sasanian period.[693] Other objects discovered near these tombs are metal artefacts and fragments of glass vessels. The terraced cairns can occur singly, in rows or in clusters. Additionally, up to 50 Sasanian tombs were discovered at Liwa north of Sohar.[694] Kennet[695] points out that the low number of Sasanian burials may reflect changes in burial practices, but when considering the Sasanian burials from other regions of Arabia, no major changes in burial practices are visible. Other evidence of Sasanian burial practices comes from reused tombs, for example in in Jebel al-Emalah (chapter 4.1.15), Shimal (chapter 4.1.3) and Sharm (chapter 4.1.6).[696]

690 Kennet 2007: 108.
691 Al-Jahwari *et al.* 2018: 738.
692 Kutterer – Jasim – Yousif 2015.
693 Düring – Olijdam 2015: 101–103.
694 Al-Jahwari *et al.* 2018: 738.
695 Kennet 2007: 103.
696 For recently published tombs reused in the Sasanian period see also Laurenza – Bianchi – Di Michele 2020.

4 Reuse of tombs in Eastern Arabia from the Bronze Age to the beginning of the Islamic period

Reuse as understood in this study clearly differs from continuous use, such as carrying out commemorative rituals or the interment of deceased members of one group over a long period of time in collective tombs.[697] Continuous use and commemorative rituals that took place after a person's death are widely attested in the whole of Western Asia across all time periods[698] and attested at the collective tombs of most periods in Eastern Arabia. Reuse, which can assume the form of very different types of activities, on the other hand, is characterised by an interruption in use. This means that there is a considerable gap in time between the initial use of the tomb and reuse activities. The latter are often dismissed by archaeologists as disturbances to the part of the archaeological record that is interesting to them, i.e., the primary use of the tomb. When studying reuse, unclear chronological sequences pose a real obstacle in order to distinguish between continuous use and commemorative activities on the one hand and discontinuous reuse on the other hand.[699] Thäte[700] therefore defines reuse as occurring when there is a gap of at least one period between the construction and first and secondary uses of the tomb, a definition that will be followed in this study insofar as reuse during the same period is not considered unless clear stratigraphical evidence indicates a break between the two uses. Another challenge is that tombs could be completely emptied before reuse so that nothing of the material from the first occupation remains. This "total reuse"[701] can hinder identifying the reuse at all if the tomb architecture is not time specific or badly preserved.

Reuse can take additive as well as destructive forms. While the latter removes parts of the inventory of the tomb or damages its structural integrity, in the first, objects and/or burials are added to the original content of the tomb. Both destructive and additive reuse can occur at the same tomb simultaneously or consecutively. This study will mainly deal with the additive forms of reuse as they are a more prominent phenomenon in Eastern Arabia, and evidence for destructive reuse, often generalised as grave robbery in antiquity, is, contrary to the common opinion, relatively rare in the region before modern times (chapter 6.1.1).

In this chapter, sites with excavated tombs in Eastern Arabia (Fig. 7), where reuse was identified, will be presented, beginning with the northern tip of the Oman Peninsula, moving southwards through the United Arab Emirates and northern Oman to finally reach the eastern coast of Oman (chapter 4.1). For each site, the number of tombs excavated as well as their date will be listed. Special attention is given to reused tombs, which are described in more detail. Reused tombs that are known from survey activities will only exceptionally be considered as supplement to the data from the excavations (chapter 4.2) as their data is more partial and therefore less reliable. For each site reused tombs are displayed in graph that illustrates the timeframe of the initial use as well as that of the reuse and provides information on the tombs' architecture as well as the finds from the reuse. Those graphs differentiate between use as burial and single objects, i.e., objects that were found without associated human remains, labelled here as stray finds.

4.1 Evidence from excavated tombs

4.1.1 Ghalilah

Four tombs were excavated at Ghalilah in 1976.[702] Two of them date from around 100 BC to AD 100; for one, the date is unknown, and one tomb, Tomb Gh2, was built during the Wadi Suq period and used in the Late Bronze and Iron Ages as well as in the PIR. Originally, Donaldson[703] dated Tomb Gh2 to the Iron Age, around 1000 to 600 BC. This date was, however, revised by de Cardi who identified the tomb as being first used in the

697 Thäte 2007: 8; Kümmel 2009: 57.
698 Tsukimoto 1985; Pfälzner *et al.* 2012.
699 Sopp 1999: 4–14.
700 Thäte 2007: 9.
701 Lombard 1985: 166.
702 Donaldson 1985: 132 tab. 18.
703 Donaldson 1984: 239.

Fig. 7: Map of Eastern Arabia with archaeological sites mentioned in the text.

second millennium BC and continuously used until the Iron Age.[704]

Tomb Gh2 is a collective Wadi Suq period tomb with an oval plan and a central dividing wall. It is approximately 10.5 m long and 7.2 m wide (Fig. 8).[705] The inside of the tomb is separated into two long chambers. Human remains of approximately 50 individuals were found distributed over the whole chamber. Only in the south-eastern corner, two individuals were found partly *in situ*, lying on their back (Fig. 8, marked in red). These are the only individuals still in anatomical order. According to Vogt,[706] this indicates reuse of the tomb in the first millennium BC because the stone floor is missing below these two individuals, and before the first millennium BC, no burials of skeletons lying on their back are known. Several artefacts were found spread throughout the tomb including an iron blade (Fig. 8b), nine copper alloy arrowheads, one copper alloy spearhead, various other copper alloy objects, a great number of beads including a few glass beads, eight soft-stone vessels and eleven lids, as well as pottery sherds.[707] A glazed pilgrim bottle that was found outside the tomb has stylistic comparisons in the first century AD (Fig. 8a). From what is published in the reports, it seems that the tomb was continuously used from the Wadi Suq period to the Iron Age and then as evidenced by the iron blade and the pilgrim bottle, reused in the PIR. Although not associated directly with the PIR artefacts, it can be assumed that the two skeletons from the south-eastern corner are of a PIR date.

4.1.2 Dhayah

The Dhayah cemetery consists of approximately 30 tombs.[708] Five of these were excavated by the *Seminar für Vorderasiatische Archäologie* of Göttingen University between 1985 and 1987. Three tombs, Tombs Dh2, Dh4 and Dh9, date only to the Wadi Suq period, while Tomb Dh1 was built in the later part of the Wadi Suq period and likely reused during the PIR, and Tomb Dh3 was also built in the later part of the Wadi Suq period,

704 De Cardi 1988: 45; see also Schreiber 2010: 84.
705 Donaldson 1984: 221–223; Vogt 1985: 201.
706 Vogt 1985: 205.
707 Donaldson 1984: 257–259.
708 Kästner 1990; Kästner 1991.

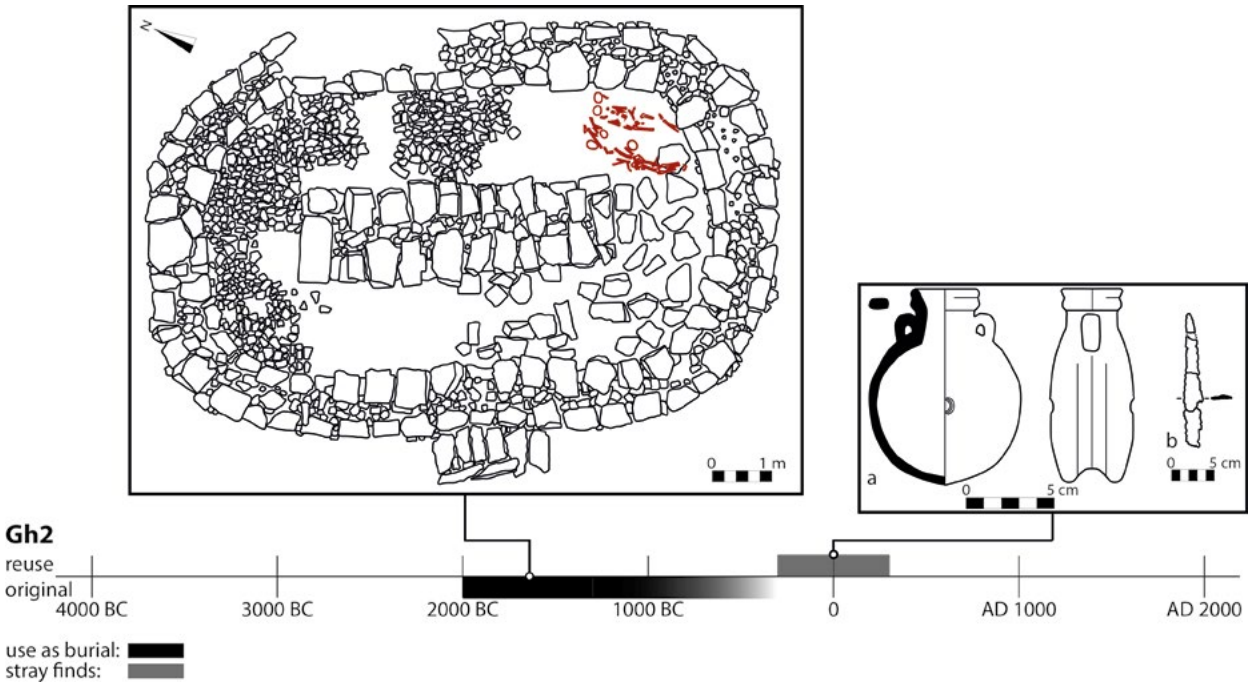


Fig. 8: Chronological timeframe of reused tomb at Ghalilah (adapted from Donaldson 1984: fig. 16, fig. 17, fig. 22.118, fig. 28.35).

but then reused during the Iron Age.[709] Additionally, it is reported that the wall of the Wadi Suq period tomb Dh9 "is extremely damaged by grave robbers".[710]

Tomb Dh1, which is possibly identical to site 39a tomb from de Cardi's survey, is made of two Shimal type tombs, i.e., collective rectangular, semi-subterranean tombs, of which the eastern one was built against the earlier western structure (Fig. 9).[711] According to Carter,[712] this type of tomb dates to the second half of the second millennium BC, which is the Late Bronze Age. Righetti,[713] however, dates it to the later part of the Wadi Suq period (Wadi Suq II, 1300–1600 BC). One of the vertical standing entrance stones of the tomb is supported by a reused facing stone, belonging to the outer façade of an Umm an-Nar period tomb. Inside both, the earlier western part of the tomb and the later eastern part, only a few finds from the Wadi Suq period were discovered. These were pottery beakers, rings, beads and a small amount of human bones. Parts of the stone paved floor were missing. According to Kästner,[714] they were removed while the tomb was plundered. Outside in the south, where the walls of the two tombs meet, a miniature spear or pike head, 6 cm long, was discovered.[715]

In the southern third of the chamber of the later eastern part of the tomb, quite an unusual concentration of beads came to light, including, in addition to shell and chalcedony beads, two etched carnelian beads (Fig. 9a). While Kästner[716] dates the beads to the beginning of the Wadi Suq period due to similarities with beads from Qattarah and their finding in a similar location to a very early second millennium vessel within the tomb, de Waele and Haerinck[717] assume that the beads belong to a secondary PIR burial by comparing them to Sasanian beads,[718] a notion that is followed in this study. ***Tomb Dh3***, a collective, above-ground tomb, measures 9 m in length and 7 m in width (Fig. 9).[719] It is oval in shape and consists of a two faced wall with a core of gravel. An internal wall divides the tomb into two chambers. Besides grave goods from the later part of the Wadi Suq period,[720] two pottery vessels are of an Iron Age date. These are a bowl (Fig. 9b) and a flask which were found side by side.

4.1.3 Shimal

The cemetery of Shimal consists of 150 to 200 tombs.[721] The bulk of them are above-ground constructions of different layouts that were built during the Wadi Suq pe-

709 Kästner – Sahm – Velde 1988: 6–7.
710 Kästner – Sahm – Velde 1988: 7–8.
711 Carter 1997: 39.
712 Carter 1997: 39.
713 Righetti 2015a: 22–25.
714 Kästner 1990: 342.
715 Kästner 1991: 243 fig. 7.
716 Kästner 1991: 241.
717 De Waele – Haerinck 2006: 37–38.
718 Simpson 2003: 66.
719 Kästner – Sahm – Velde 1988: 6–7.
720 Righetti 2015a: 30–32.
721 Vogt – Franke-Vogt 1987: 17.

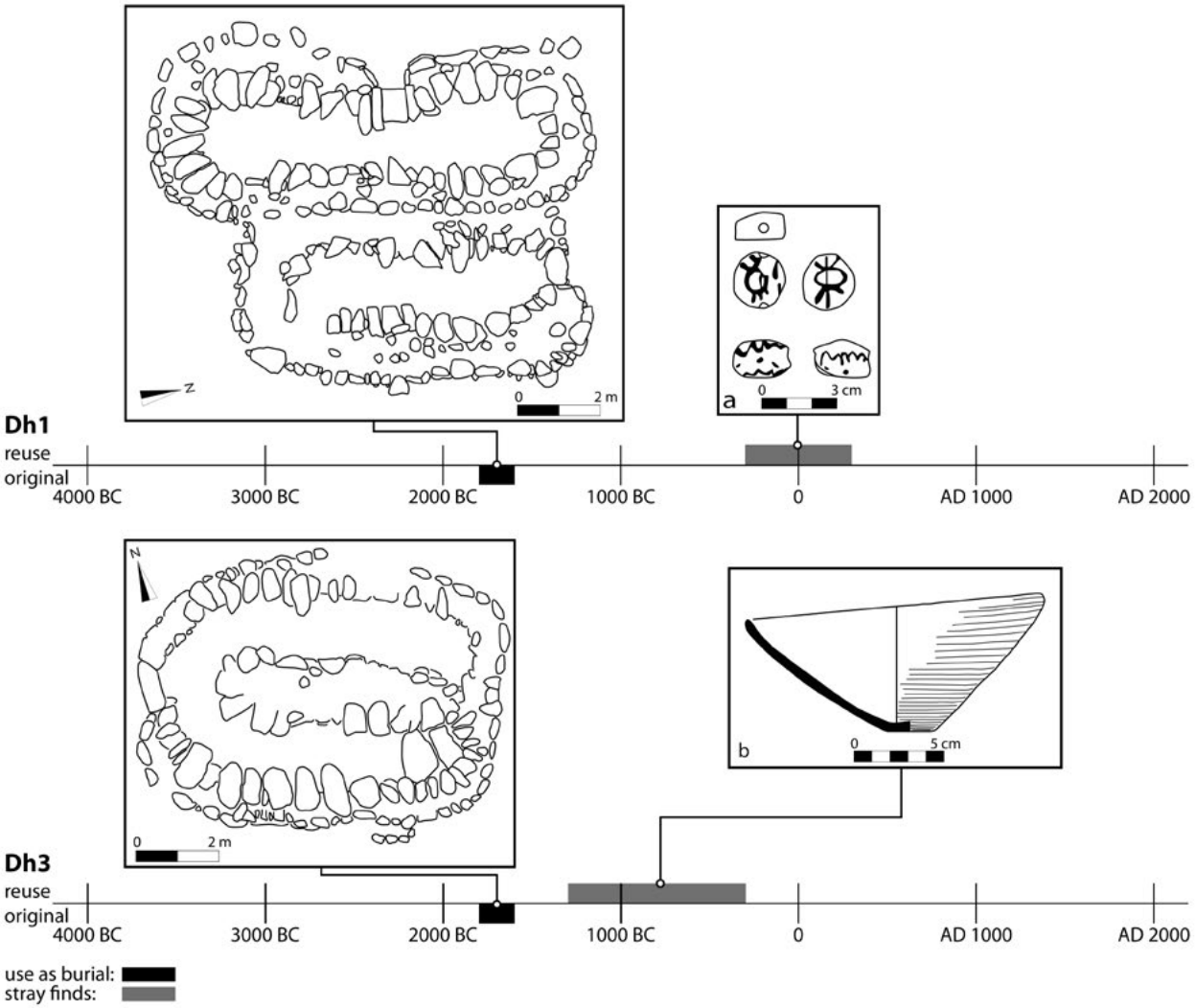


Fig. 9: Chronological timeframes of reused tombs at Dhayah (adapted from De Waele – Haerinck 2006: 5.3a-b; Kästner 1991: 234 fig. 1; Kästner – Sahm – Velde 1988: fig. 3, fig. 15.4).

riod.[722] So far, ten tombs were excavated in the central part of the cemetery,[723] six in the northern part[724] and one in the area of the settlement.[725] Most of the tombs were constructed and used during the Wadi Suq period or continuously from the Wadi Suq period to the Late Bronze Age. Tomb Sh99 yielded finds from the Wadi Suq period and, albeit in much lesser quantity, from the Iron Age. Tomb Sh100 was built during the Wadi Suq period and reused in the Sasanian period, and Tomb Sh102, also built during the Wadi Suq period, was continuously used until the Iron Age and then reused in the PIR. Both tombs also had medieval material on their surface. The Umm an-Nar period Tomb Sh222 shows signs of an unspecific reuse in "later periods" and features a socketed spearhead most likely dating to the Wadi Suq period.[726] Within Tomb Sh502, material from the Wadi Suq period, Late Bronze Age and Iron Age, as well as from reuse of the tomb in the PIR A is attested.[727] Additionally, Tomb Sh402 yielded no grave goods, and to the excavators it looked as if "not only the stones of this tomb but also the inventory has been robbed from those people who erected SH401".[728]

Tomb Sh99 is a collective, above-ground, oblong funerary chamber, surrounded by a second oval wall (Fig. 10).[729] It measures nearly 16 × 11 m. The northern half of the tomb contained bones of at least 40 individuals, one third of them from children below the age of one. Despite a wealth of Wadi Suq period material, two Iron Age metal objects were discovered.[730]

722 Vogt – Franke-Vogt 1987: 19.
723 Donaldson 1984; Vogt – Franke-Vogt 1987; Kästner – Sahm – Velde 1988: 21–24.
724 Kästner – Sahm – Velde 1988: 10–14.
725 Kästner – Sahm – Velde 1988: 16–18.
726 Kästner – Sahm – Velde 1988: 3.
727 Righetti 2015a: 148.
728 Kästner – Sahm – Velde 1988: 12.
729 Vogt – Franke-Vogt 1987: 49–54.
730 Righetti 2015a: 101.

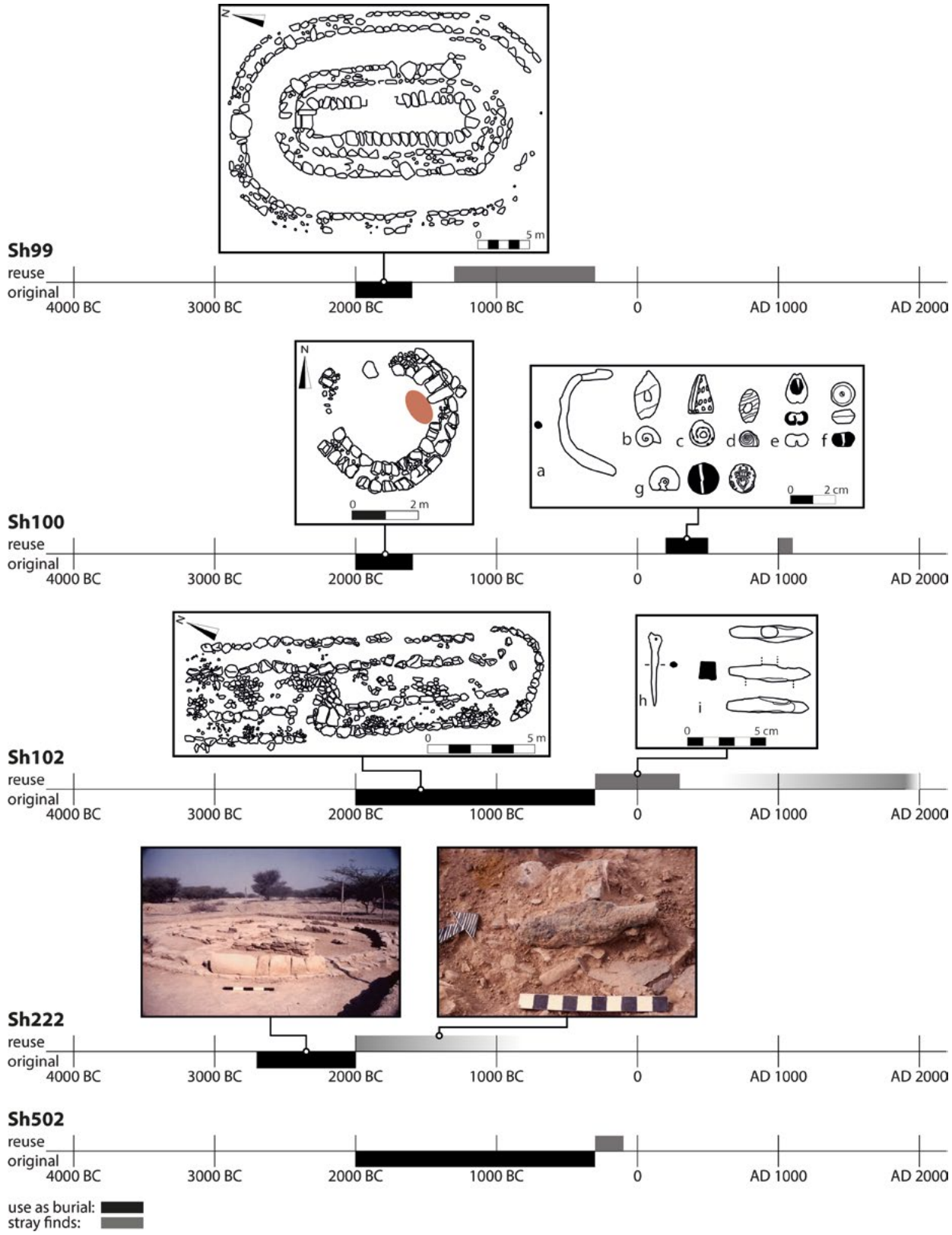


Fig. 10: Chronological timeframes of reused tombs at Shimal (adapted from Kästner – Sahm – Velde 1988: pl. 1.1–2; Vogt – Franke-Vogt 1987: fig. 7, fig. 18.7–8, fig. 29, fig. 30.1, 5–10).

The collective, round above-ground Wadi Suq period ***Tomb Sh100*** is situated in the easternmost part of the Shimal middle cemetery.[731] The circular plan of this tomb has a diameter of 4.3 to 4.5 m and its internal chamber measures about 2.6 m across (Fig. 10). The tomb's content was heavily mixed up at the beginning of the excavation. The north-western half of the chamber was almost bare of finds, whereas the south-eastern half produced some objects and fragments of human bones of at least nine individuals including five children.[732] In a small area west of the entrance, a disturbance in the eastern wall segment is associated with a secondary burial (Fig. 10, marked in red). It was carried out when the superstructure of the tomb was already destroyed. The grave goods belonging to this burial are five beads, of which three are pierced marine snails (Fig. 10b–d), one is a cowry shell (Fig. 10e) and one is a squat biconical chalcedony bead (Fig. 10f), half of an iron bracelet (Fig. 10a) and a spherical stamp seal made of dark green stone which can be dated to the third to fifth century AD (Fig. 10g).[733] In addition, Partho-Sasanian pottery was found within the tomb.[734] A silver coin was discovered on the floor of the burial chamber, which shows a very general affinity with Islamic silver coins from the 11th century AD.[735] ***Tomb Sh102*** is a typical elongated semi-subterranean tomb of the Shimal type (Fig. 10).[736] Its maximum preserved length is about 16.5 m, the average width 5.0 m. The northern end of the tomb was completely washed away by floods from the wadi close by. Within the tomb were found masses of minute, fragmented human bones of at least 121 individuals as well as a large amount of artefacts, including Wadi Suq and Late Bronze Age pottery sherds, soft-stone fragments, items of personal adornment, but also some isolated Iron Age pottery sherds, a possible Iron Age soft-stone vessel, decorated shell buttons that have similarities to artefacts from ninth to eighth century BC Nimrud, an iron pin (Fig. 10h), the crossbar of a PIR iron dagger (Fig. 10i) and a number of medieval and recent pottery sherds. According to the excavators, the iron objects are either stray finds or relics of secondary use,[737] while the medieval pottery sherds most likely belonged to the medieval village that was built at the place of the cemetery. Thus, we deal most likely with a tomb that has continuously been used from the Wadi Suq period until the Iron Age and then reused in the PIR as well as medieval periods, although the medieval reuse is likely to be unintentional. ***Tomb Sh222*** measures 11.5 m in diameter has two faced walls and worked stones as it is typical for the Umm an-Nar period (Fig. 10).[738] Within, besides Umm an-Nar period finds and a great number of human bones, many of them burned, pottery "dating to later periods" and a socketed spearhead, most likely of a Wadi Suq period date, were found.[739] Due to the relatively few finds, especially few metal objects, the excavators assumed that the tomb was plundered (but see chapter 6.1.1). Situated at the northern end of the Shimal necropolis, the collective, above-ground oval ***Tomb Sh502*** with a central dividing wall yielded severely disturbed accumulations of artefacts from the second and first millennia BC.[740] Despite Wadi Suq period pottery sherds, soft-stone vessels and metal objects, Late Bronze Age, Iron Age I, II and III pottery sherds and metal objects were found as well. A reuse of the tomb is attested in the PIR A in the form of two small pottery flasks, three iron arrowheads and carnelian beads.

4.1.4 Qarn al-Harf

At Qarn al-Harf, situated about 15 km southeast of the old town of Ras al-Khaimah, over 70 tombs were recorded, most of them dating to the Hafit period.[741] In 2001, the National Museum of Ras al-Khaimah excavated the Wadi Suq period tomb QaH67, and in 2013, three monumental Wadi Suq period tombs were investigated along with seven smaller collective tombs of the same time period by Durham University. QaH1 actually consists of four heavily disturbed tombs on a ridge. QaH2 and QaH2A could be identified as Shimal type long tombs. QaH5 is an oval-shaped tomb with double internal walls of the Ghalilah type, and QaH6 is a sub-circular tomb with internal divisions.[742] A large variety of objects were found inside the tombs, including metal objects such as spearheads, arrowheads, razors, pendants and blades, beads, pottery and soft-stone vessels. The ceramics of Tombs QaH1, 2, 2A, 5 and 6 provided, according to de Vreeze,[743] evidence for reuse/continuous use in the Iron Age and pre-Islamic period, but the results of the excavations of these tombs still await publication. Tomb QaH67 was constructed in the Wadi Suq period and then reused in the Iron Age as well as in the PIR.

Tomb QaH67 belongs to the Ghalilah type, featuring an elongated ground plan with rounded ends.[744] It measures 9.5 m in length and 5.6 m in width. A middle partition wall divides the structure into two halves, each 1.3 m wide. The single entrance to the tomb was on its

731 Vogt – Franke-Vogt 1987: 45–46.
732 Vogt – Franke-Vogt 1987: 46.
733 Vogt – Franke-Vogt 1987: 47–48.
734 Vogt – Franke-Vogt 1987: 46–47.
735 Vogt – Franke-Vogt 1987: 47.
736 Vogt – Franke-Vogt 1987: 23–36; Vogt *et al.* 1989.
737 Vogt – Franke-Vogt 1987: 33.
738 Kästner – Sahm – Velde 1988: 2.
739 Kästner – Sahm – Velde 1988: 3.
740 Righetti 2015a: 101.
741 Hilal 2005; de Vreeze 2016: 247; Kennet 2018.
742 De Vreeze 2016: 247.
743 De Vreeze 2016: 247.
744 Hilal 2005: 41.

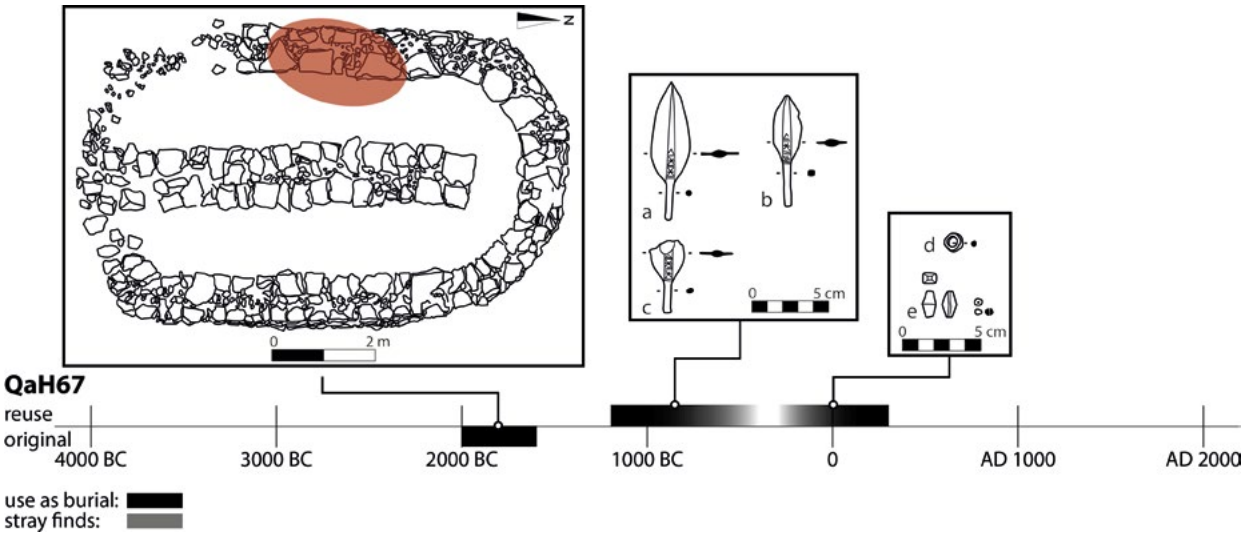


Fig. 11: Chronological timeframe of reused tomb at Qarn al-Harf (adapted from Hilal 2005: 42 fig. 6, 46 fig. 10.1–3, 7, 46 fig. 11.16, 21–22).

northern side. Four distinct phases could be differentiated within the tomb's accumulations. The first phase from the Wadi Suq period represents the earliest context of the tomb. Numerous fragments of human bones associated with pottery sherds and soft-stone vessel fragments were discovered.[745] The second is an intermediate phase before the reuse of the tomb in the Iron Age and in the PIR. The material of the third phase comprises some well-preserved bones in the western chamber that are either associated with the Iron Age or PIR objects (Fig. 11, marked in red). Finds from the Iron Age are three incised, leaf-shaped copper alloy arrowheads (Fig. 11a–c). Other metal finds from phase 3 were a copper alloy fishhook, a copper alloy needle, a pottery rim sherd, an iron earring (Fig. 11d) as well as some unidentifiable iron scraps.[746] In addition, there was a round bead of an unidentified green stone, a faceted biconical bead and a glass bead (Fig. 11e).[747] All these beads, as well as the iron objects, can be associated with reuse in the PIR. The chronological association of the fishhook and the needle is not clear. Phase 4 encompasses the activities that happened after the abandonment of the tomb.

4.1.5 Dadna

In 1995, a U-shaped, long subterranean tomb was subject to a rescue excavation at Dadna after the installation of a cable had cut through it.[748] The tomb produced a high quantity of material including pottery, soft-stone vessels, copper alloy arrowheads, one copper alloy bowl and several pieces of personal adornment. The date of these grave goods ranges from the Wadi Suq period until the end of the Iron Age. Although large quantities of human bones were found within the tomb, ancient dislocation and modern disturbances due to construction work did not allow associating grave goods with specific skeletons.[749] The excavators see Dadna not as a reused tomb, but as a continuously used tomb[750] and as such it will be treated this way in this study.

4.1.6 Sharm

During the excavation of a Late Bronze Age tomb of the Shimal type at Sharm by a team from the University of Sydney in 1997, numerous finds dating to periods later than the Late Bronze Age were made. Among them were pottery sherds, soft-stone vessels, beads, metal artefacts and various other objects that were found throughout the fill. 37 % of the registered pottery assemblage belong to the Late Bronze Age, 6% to the Iron Age I, 55 % to the Iron Age II, 1.3 % to the Iron Age III and 4.9 % to the PIR (Fig. 12c–h).[751] Four of the six vessels from the PIR have in the most similarities to the PIR C (first to second centuries AD) or PIR D (*c.* 225 to early fourth century AD), and another in the early PIR A (third to second centuries BC).[752] For the soft-stone vessels, two belong to the *série ancient* in the Early Bronze Age, i.e., the Umm an-Nar period (Fig. 12a–b, findspots marked in green), 19 to the Late Bronze Age, eleven to the transitional Late Bronze/Iron Age, 102 to the Iron Age and three to the

745 Hilal 2005: 39.
746 Hilal 2005: 44.
747 Hilal 2005: 47.
748 Benoist – Ali Hassan 2010.
749 Benoist – Ali Hassan 2010: 86.
750 Benoist – Ali Hassan 2010: 96.
751 Petrie 2000; Barker 2002.
752 Petrie 2000: 84.

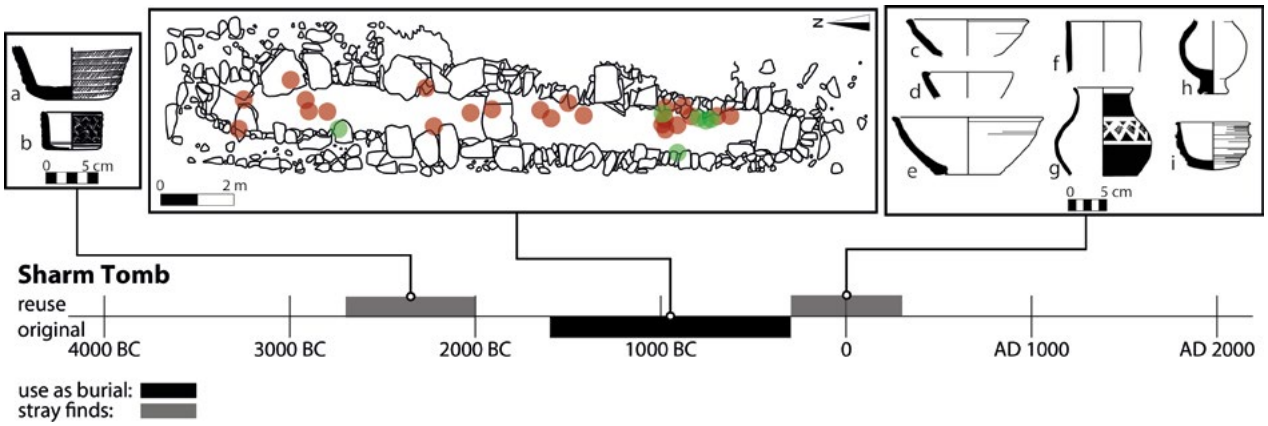


Fig. 12: Chronological timeframe of reused tomb at Sharm (adapted from Petrie 2000: fig. 1, fig. 4-5; Ziolkowski 2001: fig. 19, fig. 22, fig. 33, fig. 52, fig. 80). Findspots of PIR material marked in red, findspots of Umm an-Nar material in green.

PIR (Fig. 12i).[753] Thus, the tomb was continuously used from the Late Bronze Age to the Iron Age III, whereby finds from the Late Bronze Age and the Iron Age II are most numerous. Additionally, some older material in the form of fragments of two Umm an-Nar period soft-stone vessels ended up in the tomb as well. The material from PIR (Fig. 12, findspots marked in red) belongs, according to Petrie,[754] most likely to a single or multiple later intrusive burial, even though no single depositional event was able to be identified in the stratigraphy of the tomb.

4.1.7 Bidya

From 1987 to 1988, Al-Tikriti investigated four tombs at Bidya.[755] These included three round to oval, above-ground tombs and one subterranean collective Wadi Suq period long tomb. The latter, Bidya-1, was in use until the end of the second millennium BC and reused during the first century AD.[756]

Tomb Bidya-1 is 30.7 m long and about 2 m wide (Fig. 13). Most of the human bones from its fill were not found in anatomical order, but rather as small fragments concentrated largely along the western side of the tomb, including twelve badly preserved skulls. Al-Tikriti assumes that this is only a fraction of the original number of individuals that were initially buried within the tomb. These bones all come from a thin layer 5 to 10 cm above the tomb's stone-paved floor. Other finds from the tomb include pottery, soft-stone and copper alloy vessels as well as copper alloy spearheads. The pottery consists of four typical Wadi Suq period beakers with flaring rims and flat or rounded bases and an upper part of another vessel. Most of the 14 soft-stone vessels and three stone lids have clear parallels in the Wadi Suq period. One vessel might be of a slightly later date, as its shape rather resembles Iron Age forms. Al-Tikriti dates it to the end of the second millennium BC. Two undecorated copper alloy vessels found within the tombs are most likely of a Wadi

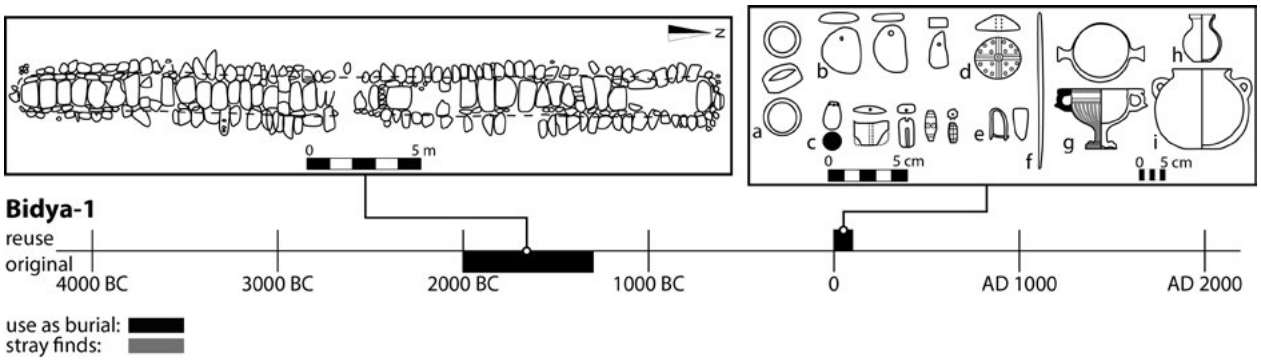


Fig. 13: Chronological timeframe of reused tomb at Bidya (adapted from Al-Tikriti 1989a: pl. 61, 75-77)

753 Ziolkowski 2001: 35.
754 Petrie 2000: 85.
755 Al-Tikriti 1989a.
756 Al-Tikriti 1989a: 102–107, pl. 61–62.

Suq period date. Furthermore, there are three copper alloy socketed spearheads dating to the second millennium BC. Other finds are an electrum pendant in the shape of two goats standing back-to-back. Below the stone paved floor, a small chamber of 40 × 40 cm was found, clad with small uncut stones. It contained several copper alloy bowls and a wide, flat copper alloy blade with a hole at one end. Skeletons of five further individuals were found at a depth of 10 to 15 cm in the fill of the tomb and thus in the layer above most finds. Their bones were in notably better condition that the bones from the second millennium burials. They were accompanied with blades of iron swords and iron arrowheads, all badly corroded, and very few pottery vessels. Among them is a kylix with a green glaze (Fig. 13g) that has a handle similar to one found at Ed-Dur, a jar of a coarse, reddish clay (Fig. 13i) of uncertain date that was found above the skull of one of the skeletons, and another, smaller and finer jar (Fig. 13h) that was found associated with some beads (Fig. 13c), rings (Fig. 13a) and pendants (Fig. 13b) as well as a spindle whorl decorated with dot-in-circles (Fig. 13d), a rivet (Fig. 13e) and a metal pin (Fig. 13f).[757] The objects belonging to the later burials all date to the first century AD, i.e., in the PIR.

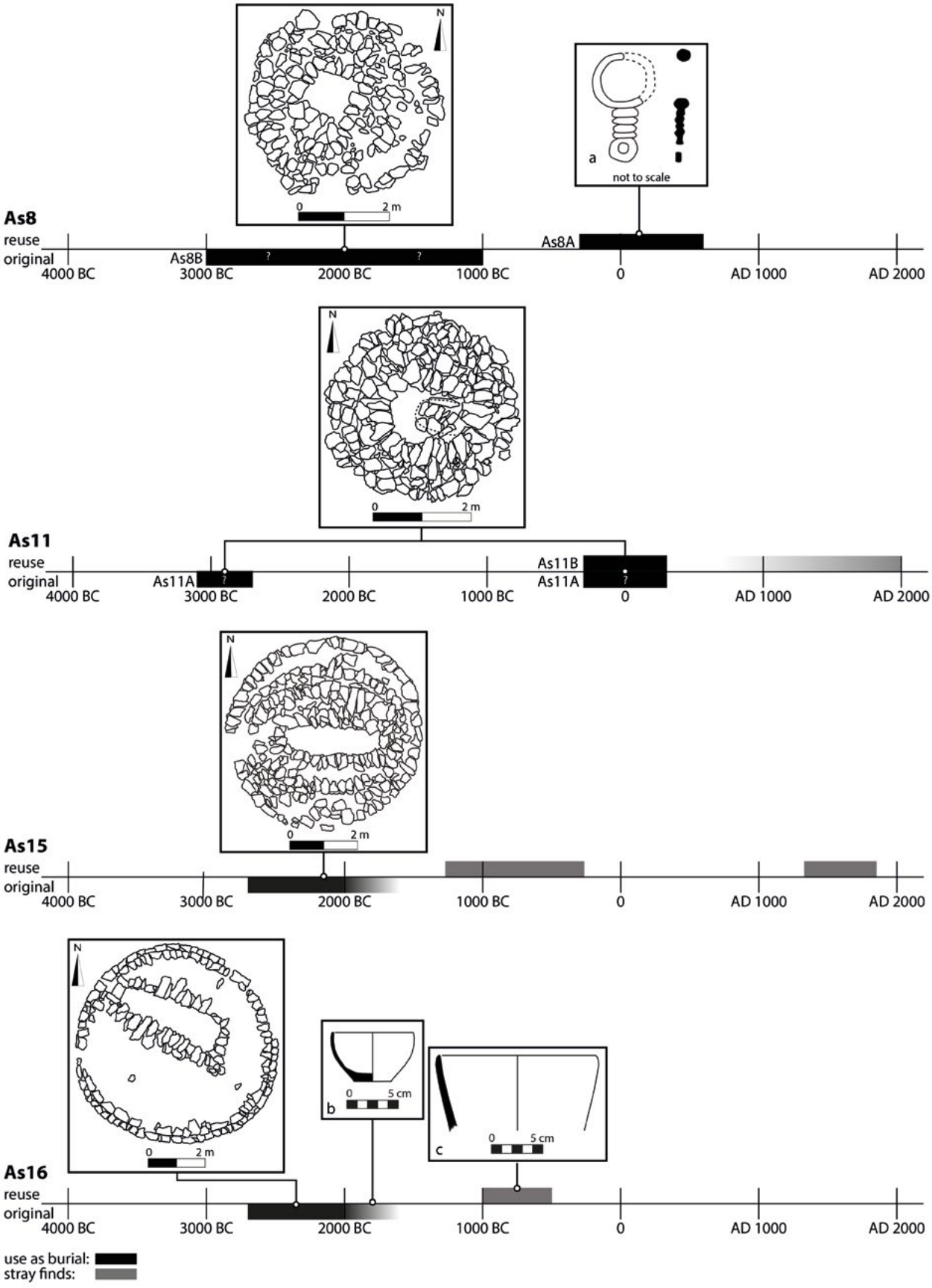
4.1.8 Asimah

The Asimah cemetery is not a coherent graveyard but consists of several separate groups of tombs and single burial monuments.[758] During a rescue excavation in winter 1987/1988 under the direction of Burkhard Vogt, 27 tombs were investigated. Among these, seven tombs are more or less certainly attributed to the Umm an-Nar period, seven tombs to the PIR, two tombs to the Wadi Suq period, another two tombs either to the Wadi Suq or to the Umm an-Nar period and for three tombs the date is unknown. Further, there are two third millennium tombs that show signs of reuse in the PIR to Sasanian period (Tomb As8) respectively in the PIR (Tomb As11), three tombs that were used during the Umm an-Nar period, the Wadi Suq period as well as the Iron Age (Tombs As15, As16 and As100) and one tomb that was used during the Umm an-Nar and Wadi Suq periods as well as the PIR (Tomb As21). Additionally, Tombs As11 and As15 yielded medieval to modern pottery sherds on their surfaces that likely come, however, from unintentional reuse.

Tomb As8 (Cairn 13 by de Cardi) consists of two tombs, a lower small tumulus labelled As8B and an upper cairn grave, labelled As8A. When the latter was built on top, the earlier one was already disturbed and its roofing stones were incorporated as pavement in the upper tomb. The dating of the older tomb As8B is difficult as it was heavily affected by stone removal. The excavators suggest a date somewhere in the third or second millennium BC.[759] Four Umm an-Nar period pottery sherds were found at 2 m distance from the tomb. Tomb As8A dates to the PIR and/or Sasanian period. Generally, finds from the tombs are, besides human bones, two gritty coarse ware pottery sherds possibly from the PIR, one glazed body sherd of a Parthian-Sasanian (?) bowl, six green and seven yellow glass beads, one red and one black stone bead, two copper alloy and one silver ring as well as one silver earring (Fig. 14a).

A similar sequence of tombs is present at ***Tomb As11***. As11A is a cairn grave, circular in plan that, according to its architecture, belongs to the Hafit period. Within, a stone covered burial pit, As11B, was found, that is dated by the excavator to the PIR.[760] The only finds were human and animal bones in addition to some medieval pottery sherds from the surface and uppermost chamber fill. ***Tomb As15***, a circular tomb with four concentric walls from the Umm an-Nar or possibly Wadi Suq period, shows signs of reuse in the Iron Age.[761] Inside the chamber of the tomb, human bones, a miniaturised copper alloy spearhead and four Umm an-Nar period pottery sherds were found, outside and on the surface, four Late Islamic pottery sherds of Bahla ware, fragments of an ostrich egg, two Iron Age sherds and one Umm an-Nar period sherd. ***Tomb As16*** is the largest tomb in the cemetery. It is circular in plan with a sack-shaped, unpaved chamber.[762] It was built during the Umm an-Nar period, continuously used in the Wadi Suq period and reused in the Iron Age in the first half of the first millennium BC. Within the chamber, fragmented human bones, a copper sheet, carnelian beads, Umm an-Nar period pottery sherds, one Barbar bowl of the second millennium BC (Fig. 14b) as well as one Iron Age pottery sherd (Fig. 14c) were found. Outside of the tomb, five more Iron Age pottery sherds as well as three Umm an-Nar pottery sherds were collected. ***Tomb As21*** is another circular Umm an-Nar tomb that was likely continuously used until the Wadi Suq period.[763] Five Umm an-Nar period pottery sherds were found within the allegedly plundered tomb and three Wadi Suq period pottery sherds were found outside of it. At a later stage, a supporting wall was added (Fig. 14, marked in red) and a subterranean pit was dug into the tomb, in which a PIR burial was placed. It contained some human bones, a pierced triangular shell object (Fig. 14e), a single, handmade, yellowish brown pottery sherd with small black and brown inclusions that might date to the

757 Al-Tikriti 1989a: pl. 77.
758 Vogt 1994.
759 Vogt 1994: 29–31.
760 Vogt 1994: 36–37.
761 Vogt 1994: 46–48.
762 Vogt 1994: 49–51.
763 Vogt 1994: 61–64.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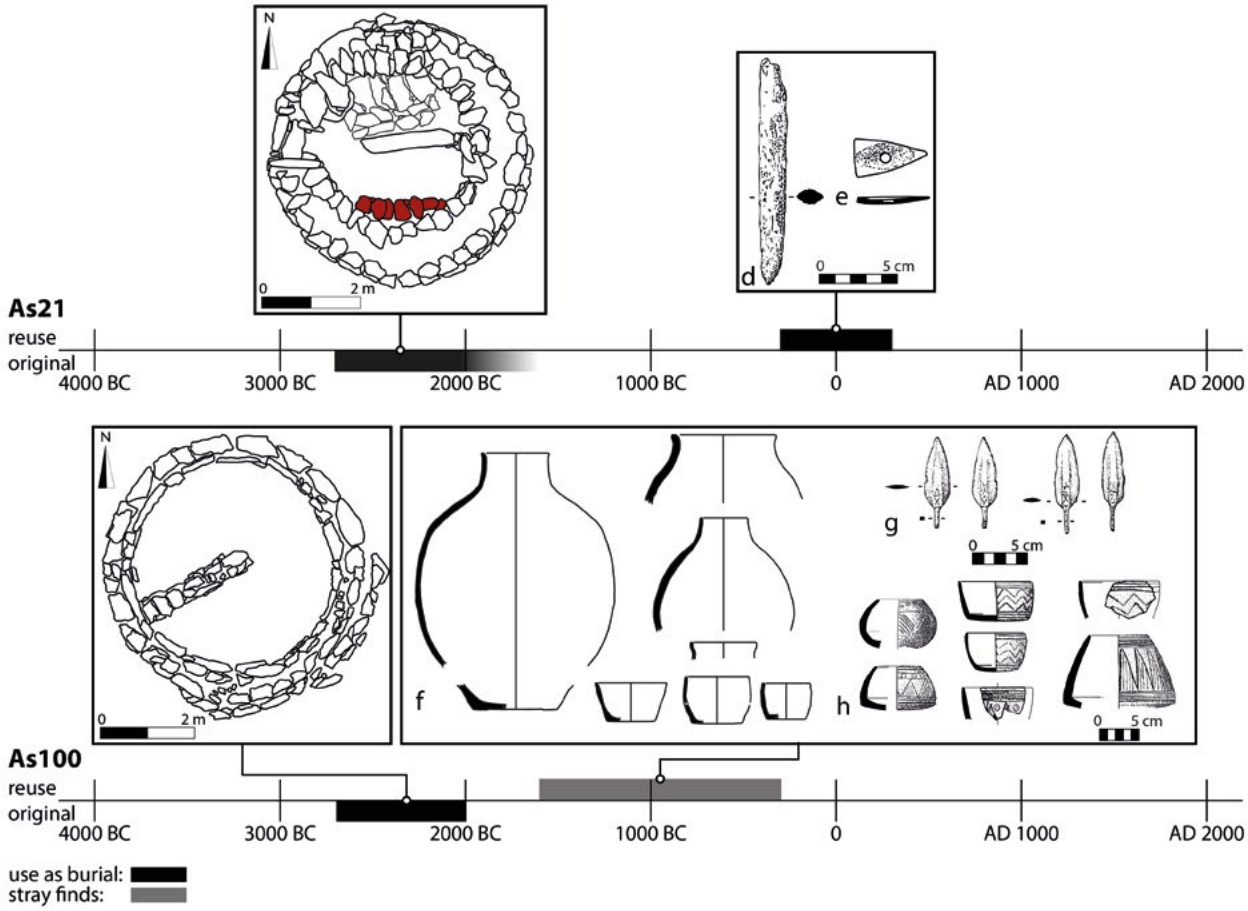


Fig. 14: Chronological timeframes of reused tombs at Asimah (adapted from Vogt 1994: fig. 13, 16, 20.1, 21–22, 23.3–4, 29, 30.4–5, 39, 40.8, 12, 41.1, 6–7, 11, 42.1–2, 7–10, 12, 44.1–2).

PIR, and an iron dagger (Fig. 14d). The Umm an-Nar period ***Tomb As100*** is located on the slope of a hill near the Umm an-Nar period domestic remains of Asimah North and As99.[764] It has an outer diameter of 5.5 m and an inner chamber divided by a single partition wall. From the Umm an-Nar period, only very few finds were encountered in the southern half of the tomb, including pottery and soft-stone vessels as well as two copper alloy rings and a couple of beads. Most finds, especially the pottery (Fig. 14f), soft-stone vessels (Fig. 14h) and arrowheads (Fig. 14g), date to the Late Bronze Age or to the transition from the Late Bronze to the Iron Age.[765] Thus the excavators distinguish three occupations, the first in the Umm an-Nar period, the second in the Late Bronze Age and the third in the transition from the Late Bronze to the Iron Age.[766] Vogt[767] assumes that the objects of the third millennium BC were carefully taken out of the tomb in order to free space for new burials, a practice that can be observed at several other Umm an-Nar period tombs as well.

4.1.9 Qidfa

From the horseshoe-shaped Wadi Suq period tomb at Qidfa,[768] several unpublished short swords are known from the Fujairah Museum, indicating that it was continuously used up to the Iron Age.[769] Within the tomb, besides classical Wadi Suq period pottery, Iron Age pottery was found as well. As in her report de Cardi only mentions the later pottery, it has often mistakenly been considered to be an Iron Age tomb. The excavator, Al-Tikriti,[770] refers to a large collection of stone, pottery and copper alloy vessels as well as many copper alloy weapons, stone beads and copper alloy bracelets from the tomb, which allowed him to date the assemblage to the second half of the second millennium BC, i.e., the Late Bronze Age. Carter,[771] however, mentions classic Wadi Suq period pottery coming from the tomb as well. This tomb is not incorporated in the analyses of this study as it was continuously used and not reused.

764 Vogt 1994: 81–96.
765 Vogt 1994: 86–96; Carter 1997: 43.
766 Vogt 1994: 94.
767 Vogt 1994: 83.
768 De Cardi – Doe 1971: 256; Potts 1990: 374.
769 Potts 1998: 193.
770 Al-Tikriti 1989a: 102 footnote.
771 Carter 1997: 80.

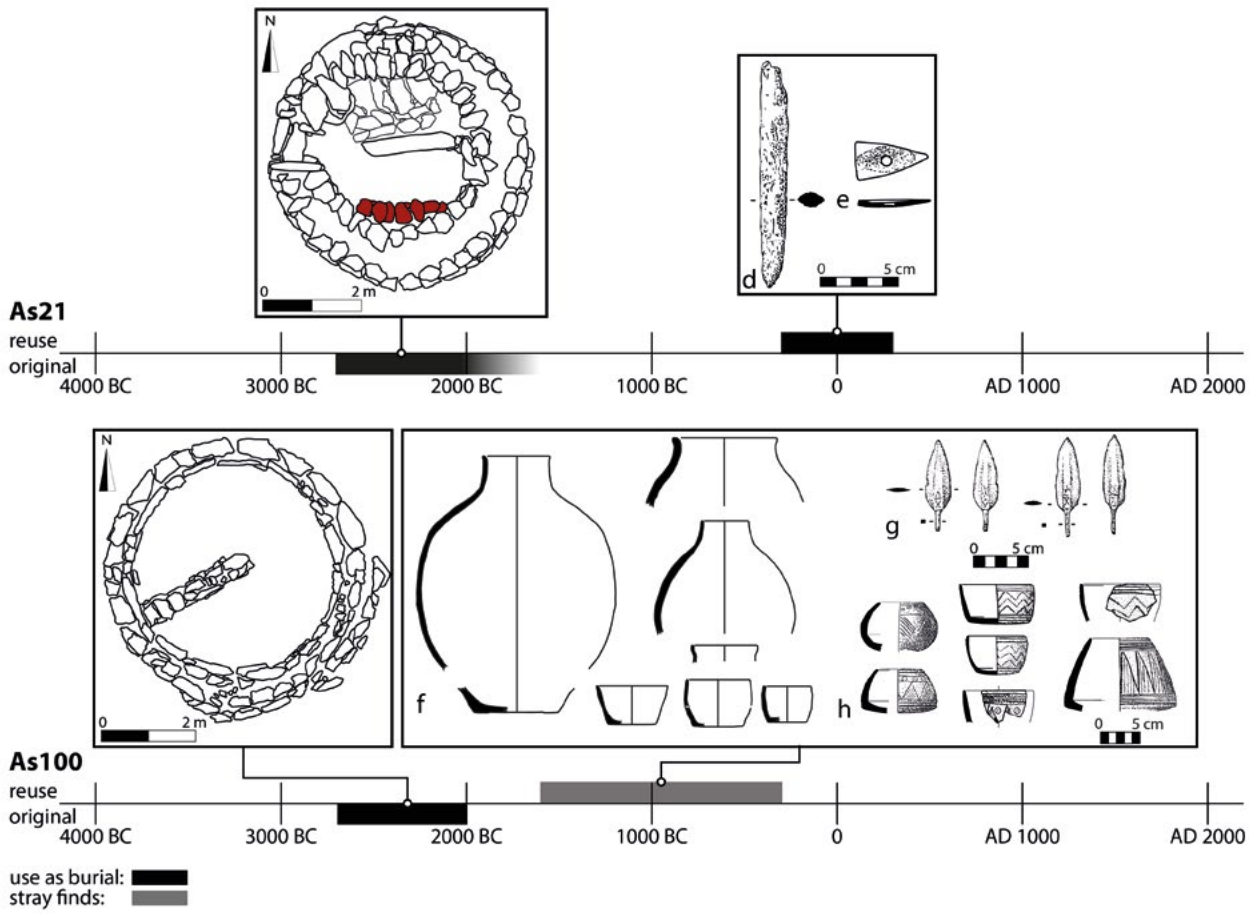


Fig. 15: Chronological timeframe of reused tomb at Ajman (adapted from Al-Tikriti 1989b: pl. 37–38, pl. 43.C–D, pl. 44).

4.1.10 Ajman

In 1986, two Umm an-Nar period burials, Tomb A and Tomb B, were excavated at Ajman by the Department of Antiquities and Tourism in Al Ain and Ghent University.[772] Both show that they were still in use or reused during the Wadi Suq period, whereby reuse is, at least for Tomb A, more likely than continuous use.

Tomb A is a typical circular Umm an-Nar period tomb with characteristic finds of this period. Just to the outside of its ring wall, an infant burial was found. It was buried inside a large pottery jar (Fig. 15c) dating to the early second millennium BC and accompanied by two beakers of Wadi Suq style (Fig. 15a–b).[773] ***Tomb B*** is a rectangular, subterranean collective grave that contained, along with large quantities of Umm an-Nar period material, at least one beaker of a probable Wadi Suq period date.[774] This small quantity of Wadi Suq period finds can be taken as an indicator that the tomb was continuously used until the beginning of the Wadi Suq period rather than reused, especially as subterranean tombs are a characteristic feature of the final Umm an-Nar period.

4.1.11 Al-Qusais

Three seasons of excavations were conducted at Al-Qusais between 1974 and 1979.[775] One collective tomb each was excavated in areas A and B. They are both long burials with an entrance on the long side and rounded ends, partly dug into the ground and covered by corbelling stones.[776] These tombs were constructed in the Wadi Suq period and continuously used until the Iron Age as indicated by soft-stone vessels[777] and pottery sherds[778] of all periods. Additionally, in the Iron Age secondary tombs were added to the tomb in Area A, indicating reuse. In Area C, approximately 80 to 130 tombs from the Iron Age II period were excavated. No signs of reuse were reported here.[779]

772 Al-Tikriti 1989b; Haerinck 1991.
773 Al-Tikriti 1989b: 92.
774 Carter 1997: 42.
775 Lombard 1985: 167; Yule 2001: 396; Taha 2009: 63.
776 Cleuziou 1981: 284–285.
777 Cleuziou 1981: fig. 10.
778 Vogt 1985: 193; Schreiber 2010: 84.
779 Taha 1983.

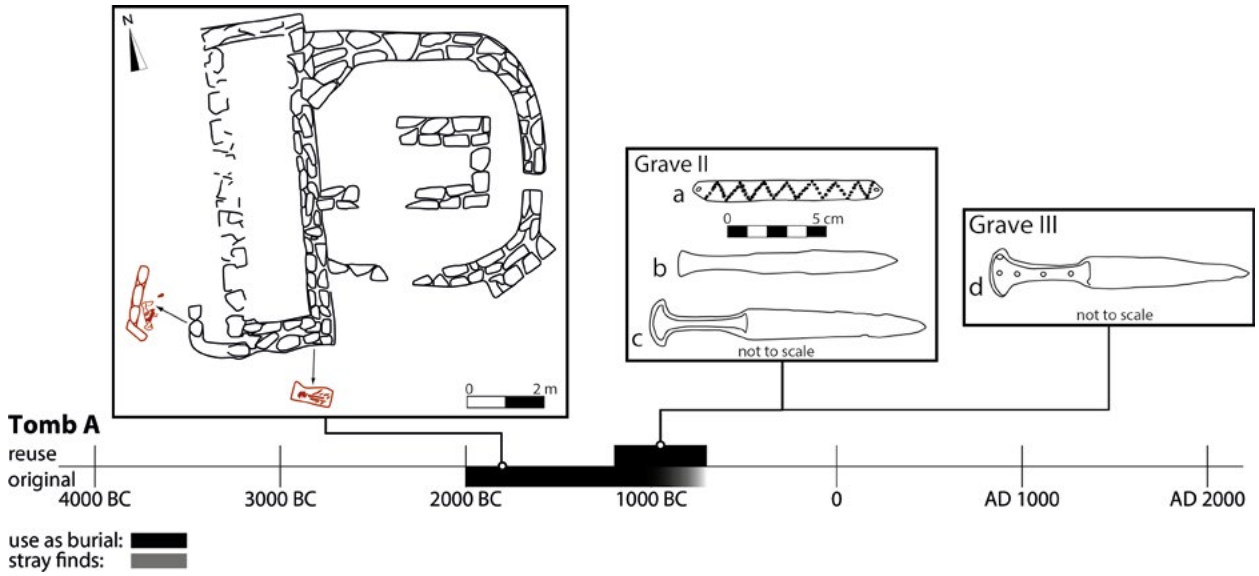


Fig. 16: Chronological timeframe of reused tomb at Al-Qusais (adapted from Taha 2009: pl. 2, pl. 40A–C, pl. 50G).

To the ***tomb in Area A***, a collective, rectangular, subterranean cist made of farush, Grave II, was added to one end of the long side of the collective tomb during the Iron Age (Fig. 16, marked in red).[780] It was covered by three stone slabs and yielded a skeleton in a flexed position with its hands below the skull. Grave goods included two copper alloy daggers (Fig. 16b–c), 35 copper alloy arrowheads and a silver headband with one hole at each end (Fig. 16a). Another pit burial from the Iron Age, Grave III, was dug just next to the collective tomb (Fig. 16, marked in red). No other architectural elements were present except for a cover of farush slabs.[781] The pit measured 1.5 × 0.5 m and yielded a copper alloy dagger (Fig. 16d) and seven copper alloy arrowheads.

4.1.12 Bitnah

Four tombs were excavated at the necropolis of Bitnah 14.[782] Tombs 1 and 2 are located on a terrace on top of a low hill at a distance of about 12 m from each other. A third, smaller tomb is situated a bit further down the hill. All tombs yielded badly preserved human bones but no characteristic artefacts. Therefore, the excavators could only assign them according to their layout and construction either to the Wadi Suq period or the PIR.[783] For Tomb 4, three main phases of use were identified. The first was from the Late Bronze to the Iron Age II, the second one from the Iron Age II to Iron Age III and the last one from the first century AD to the second century AD in the PIR. Only the last one is regarded here as reuse as continuous use between the first two phases is likely, despite the fact that the excavators assume that the tomb was robbed (for the likelihood of tomb robbery see chapter 6.1.1) and cleared out of human remains between these two episodes.

The largest tomb, ***Tomb 4***, is T-shaped with a 10.5 m long and 1.6–1.8 m wide subterranean funerary chamber that is accessible through a corridor and dromos.[784] The tomb shows two earlier phases of use during the Late Bronze Age[785] and the Iron Age up to 550/450 BC, from which only very fragmented human remains survived. In the PIR C in the first to second centuries AD, several skeletons were inhumed, the last of them lying lengthwise in a pit at the southern end of the chamber (Fig. 17, marked in red). Finds from the PIR are a few isolated pottery sherds (Fig. 17a),[786] copper alloy rings (Fig. 17b), iron objects including arrowheads (Fig. 17e),[787] blades (Fig. 17f), a tang with mineralised remains of wood (Fig. 17g) and other iron fragments that might belong to weapons or furniture (Fig. 17h), beads made of glass or frit (Fig. 17c)[788] as well as the bottom part of a brown glass vessel (Fig. 17d).[789]

780 Lombard 1985: 169; Taha 1981: 69; Taha 2009: 75.
781 Taha 1981: 69; Taha 2009: 75.
782 Potts 1990: 358; Corboud *et al.* 1996: 10.
783 Corboud *et al.* 1996: 13–14.
784 Corboud *et al.* 1996: 16–22.
785 The excavator refers to this as Wadi Suq period, but states that it is the very end of the Wadi Suq period in the second half of the second millennium BC. Therefore, it is labelled here as Late Bronze Age.
786 Corboud *et al.* 1996: 104.
787 Corboud *et al.* 1996: 105.
788 Corboud *et al.* 1996: 86.
789 Corboud *et al.* 1996: 79.

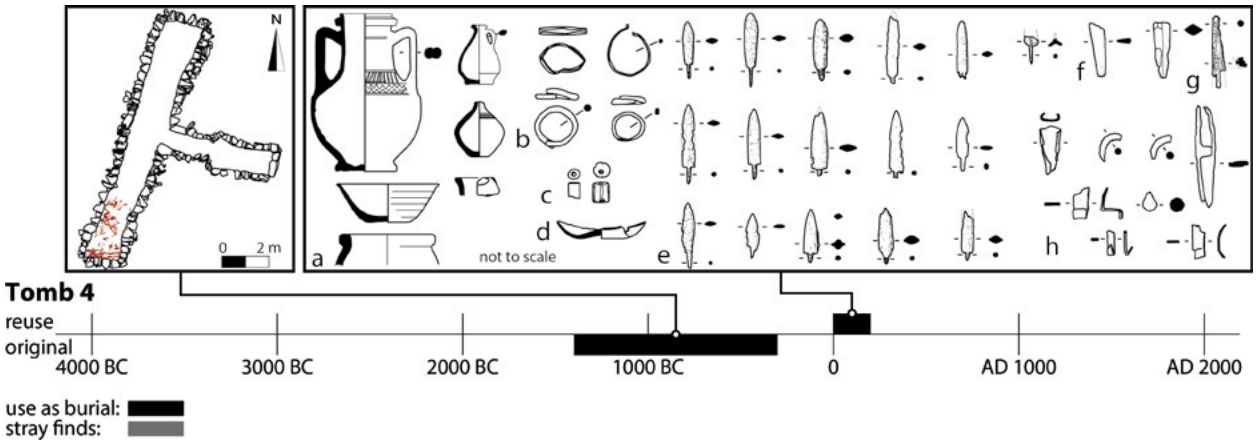


Fig. 17: Chronological timeframe of reused tomb at Bitnah (adapted from Corboud *et al*. 1996: fig. 16, 36, 65, pl. 13, 24.18–21, 25.1–11,65, 26, pl. 13, 24.28–21, 25.1–11, 26, 29.13, 19).

4.1.13 Mleiha

Over 120 tombs were documented within the large cemeteries of Mleiha by various missions. Most of them were built and used during the PIR.[790] One Umm an-Nar period tomb, Mleiha 3, as well as twelve PIR tombs in Area AV, Sector P were excavated by the Belgian Mission to Mleiha.[791] These include seven monumental tomb towers and five simple pit graves. In two of them, Buildings 4 and 5, younger burials were encountered in the upper part of the fill of the graves.[792] According to the excavators, most Mleiha tombs were looted in the past,[793] a claim that is further discussed in chapter 6.1.1.

Tomb 4 is an almost square mud-brick tower or platform, whose construction dates to the PIR A.[794] Later on, skeletal remains of new burials were inserted through a horizontal tunnel that had been dug from the southern side towards the edge of the burial pit. In view of the distances and positioning of the bone fragments, it seems the corpse was placed in a squatting, slightly upright position facing west. No grave goods were associated with the human remains. An alabaster vessel and some

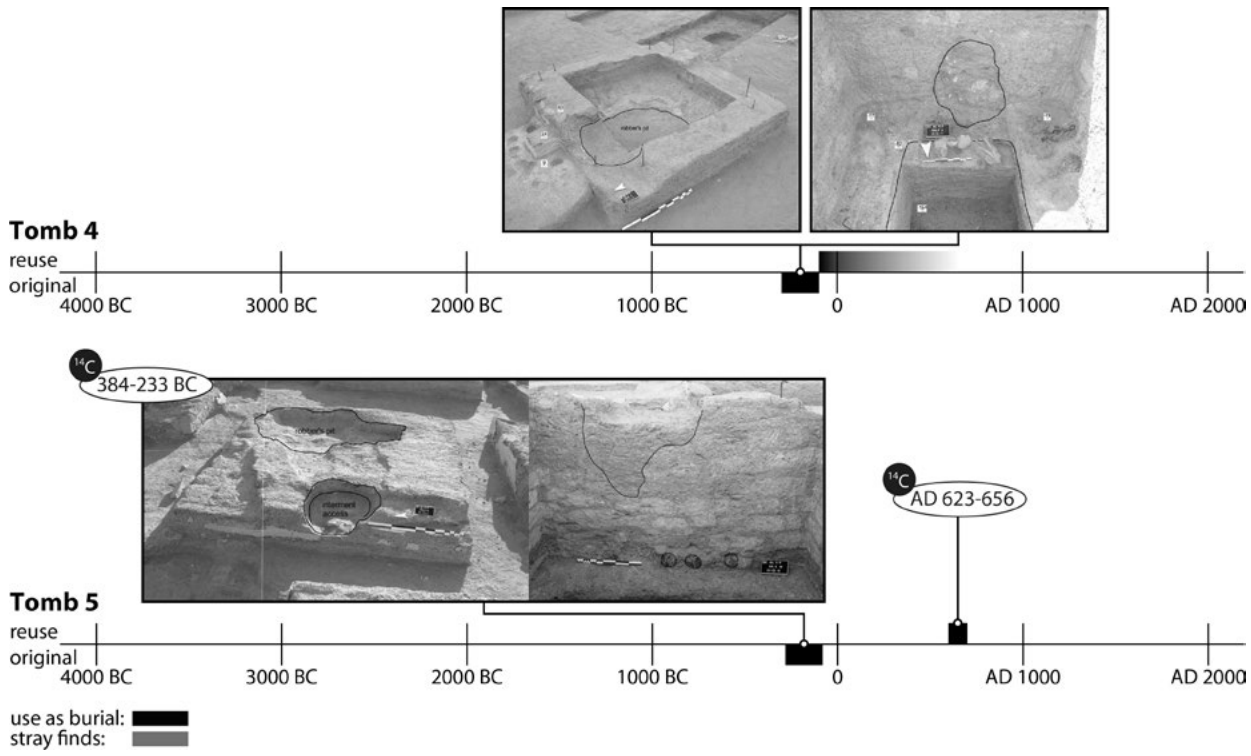


Fig. 18: Chronological timeframes of reused tombs at Mleiha (adapted from Kutterer *et al*. 2014: fig. 3–5).

790 Sharjah 2016.
791 Overlaet – Haerinck 2014; Overlaet 2015.
792 Kutterer *et al.* 2014: 179–180.
793 Potts 1990: 268; Overlaet – Haerinck 2014: 209.
794 Kutterer *et al.* 2014: 177–178.

fragments from the fill were of a PIR A date and thus belong to the original burials in this area. The individual in Tomb 4 is male (?) and between 50 and 60 years of age.[795] ***Tomb 5*** is also an almost square mud-brick tower or platform. A roughly circular hole was visible at the eastern side, which the excavators took as an indication of looting.[796] Skeletal remains were discovered on top of the fill of the original burial chamber but with no grave goods. A second skeleton of a female, adult individual was also introduced to the tombs through a tunnel.[797] A radiocarbon sample from the human remains dates to AD 623–656, i.e., the end of the Sasanian period. A radiocarbon date of 384–233 BC for a wooden beam from the tomb, however, showed clearly that it was originally constructed during the PIR A.

4.1.14 Jebel Buhais

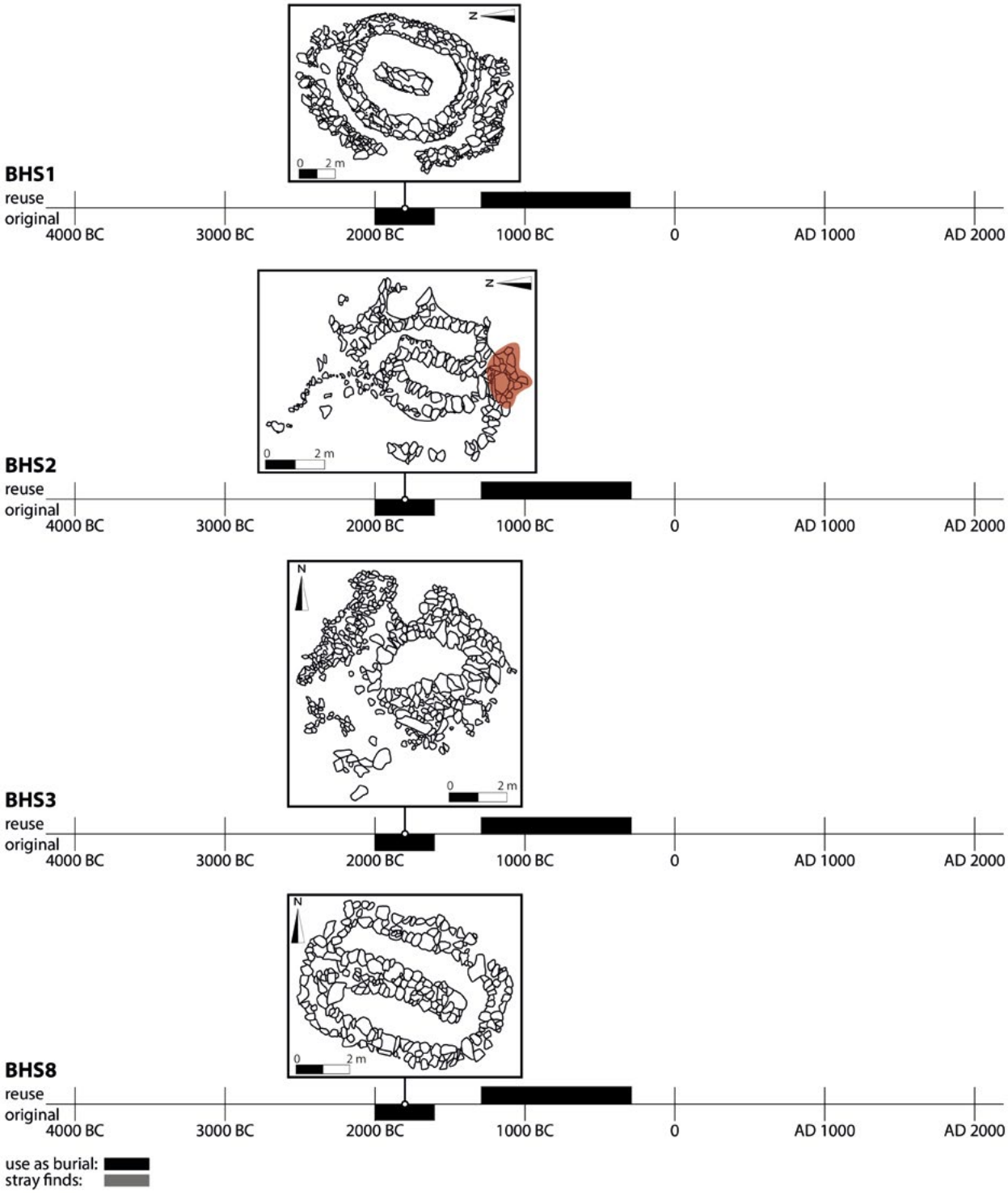
Thirty excavated tombs at the slopes and peaks of Jebel Buhais dating between the third millennium BC and the PIR period are published.[798] Of these, one tomb is ascribed to the Hafit period, two tombs to the Umm an-Nar period, eleven tombs to the Iron Age and two tombs to the PIR period. The rock shelter Tomb BHS30 might date to the Late Bronze Age, albeit it was interpreted by its excavators as a habitation site.[799] Further, one Hafit tomb (Tomb BHS64), one third millennium tomb (Tomb BHS67), one Umm an-Nar period tomb (Tomb BHS71) and nine Wadi Suq period tombs (Tombs BHS1, BHS2, BHS3, BHS8, BHS19, BHS20, BHS37, BHS61 and BHS66) are present that were all reused or continuously used during the Iron Age, as well as a Wadi Suq period tomb (Tomb BHS12) that was reused or continuously used during the Iron Age and the PIR. In addition, iron artefacts were found in five Iron Age tombs. Within Tomb BSH46 an iron dagger was present, within Tomb BSH20 an iron arrowhead, within Tombs BSH27 and BSH10 iron knives and within Tomb BSH85 an iron spearhead.[800] Thus, we must assume that we are dealing with six Iron Age tombs and a further five Iron Age tombs which were reused during the PIR, rather than with eleven Iron Age tombs.

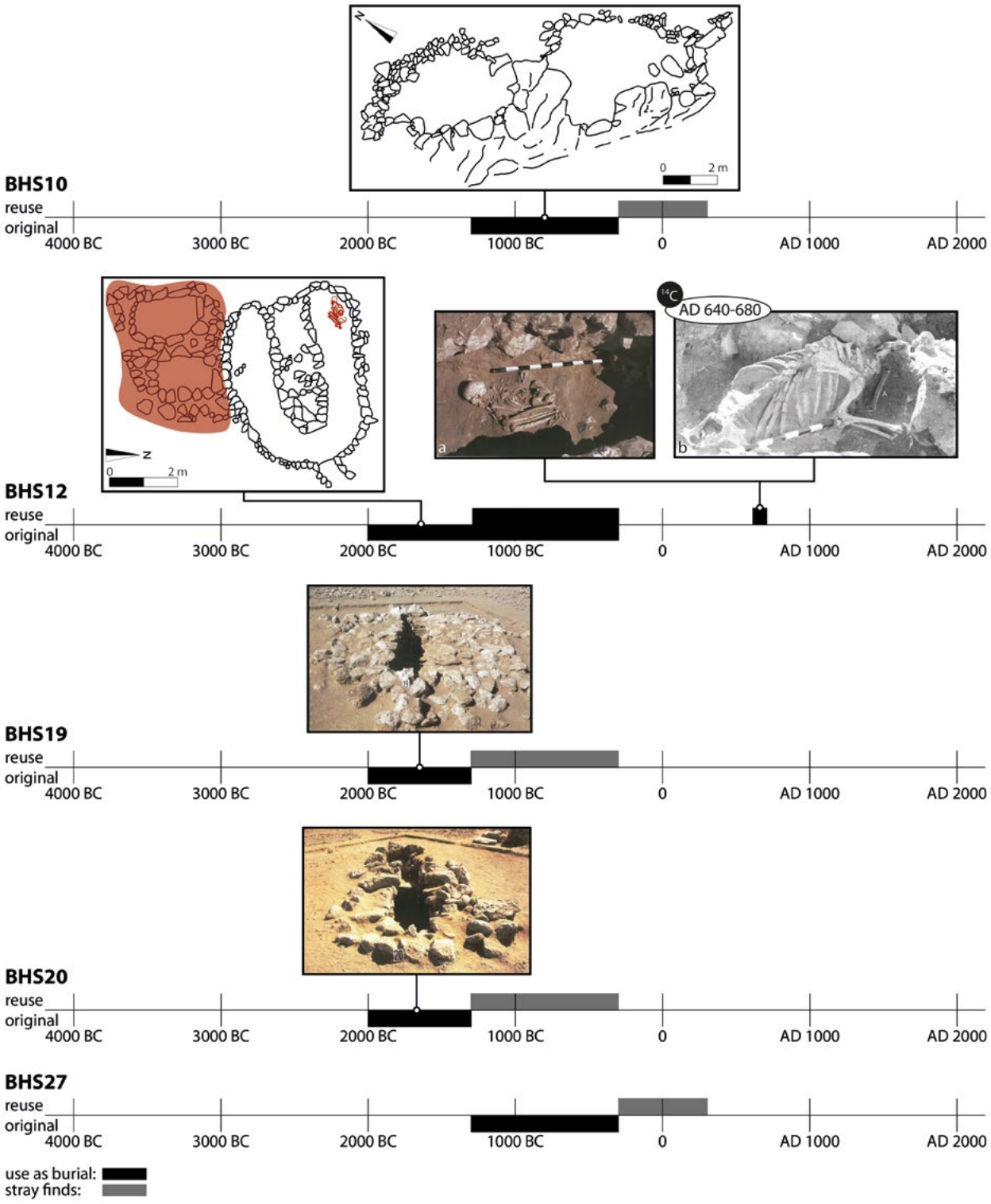
Tomb BHS1 is a collective, oval, above-ground Wadi Suq period tomb with a central dividing wall and internal dimensions of 6 × 4.5 m (Fig. 19).[801] The burial chamber is encircled by an external wall constructed of irregular shaped stones. Large quantities of fragmented human bones were found scattered all over the floor and a fully articulated skeleton in a flexed position was found in the north-eastern corner of the burial chamber. Placed next to the skeleton were two copper alloy bowls, a pottery bowl, and a complete necklace made of gold, electron and carnelian beads. Other Wadi Suq period grave goods were pottery, soft-stone vessels, copper alloy objects and personal adornments. A small subsidiary grave was found attached to the outer wall at the western side of the tomb. This grave contained the skeleton of a small child, and the material associated with it dates to the Iron Age. ***Tomb BHS2*** is an individual, subterranean cist with a superstructure from the Wadi Suq period.[802] Within the tomb, some skeletal remains as well as soft-stone vessels and copper alloy spearheads were discovered. An outer wall surrounds the burial chamber, in which a subsidiary burial was embedded (Fig. 19, marked in red). It was associated with Iron Age material. Within another individual subterranean Wadi Suq period cist, ***Tomb BHS3***, two burial levels were identified.[803] The lower one belongs to the Wadi Suq period and contained several human skeletons as well as grave goods including a Dilmun-type seal and two copper alloy spearheads. The upper layer contained only a few skeletal remains together with some pottery sherds, a plain pottery bowl and a large jar, which are of an Iron Age date. A similar picture is present at the collective, horseshoe-shaped Wadi Suq period ***Tomb BHS8***, which features a central dividing wall (Fig. 19).[804] Here, the lower level contained 15 human skeletons together with a variety of Wadi Suq period objects including pottery, soft-stone vessels, copper alloy bowls, weapons and ornaments. Within the upper layer, Iron Age objects such as arrowheads and soft-stone vessels together with skeletal remains were found. ***Tomb BHS10*** is a burial within a rock shelter.[805] In a B-shaped stone arrangement, a few skeletal remains together with Iron Age pottery, soft-stone vessels, beads, arrowheads and other copper alloy tools were found. In addition, an iron knife was present in the burial,[806] indicating reuse in the PIR, although Jasim[807] explains it as an exceptional presence of iron in the Iron Age. ***Tomb BHS12*** is a large, collective, U-shaped, subterranean Wadi Suq period tomb. Four successive burial layers could be identified within.[808] The lowest two layers date to the Wadi Suq and Late Bronze Age[809] and featured human remains and grave goods of this period. In the third level, Iron Age objects including arrowheads and soft-stone bowls were found. In the up-

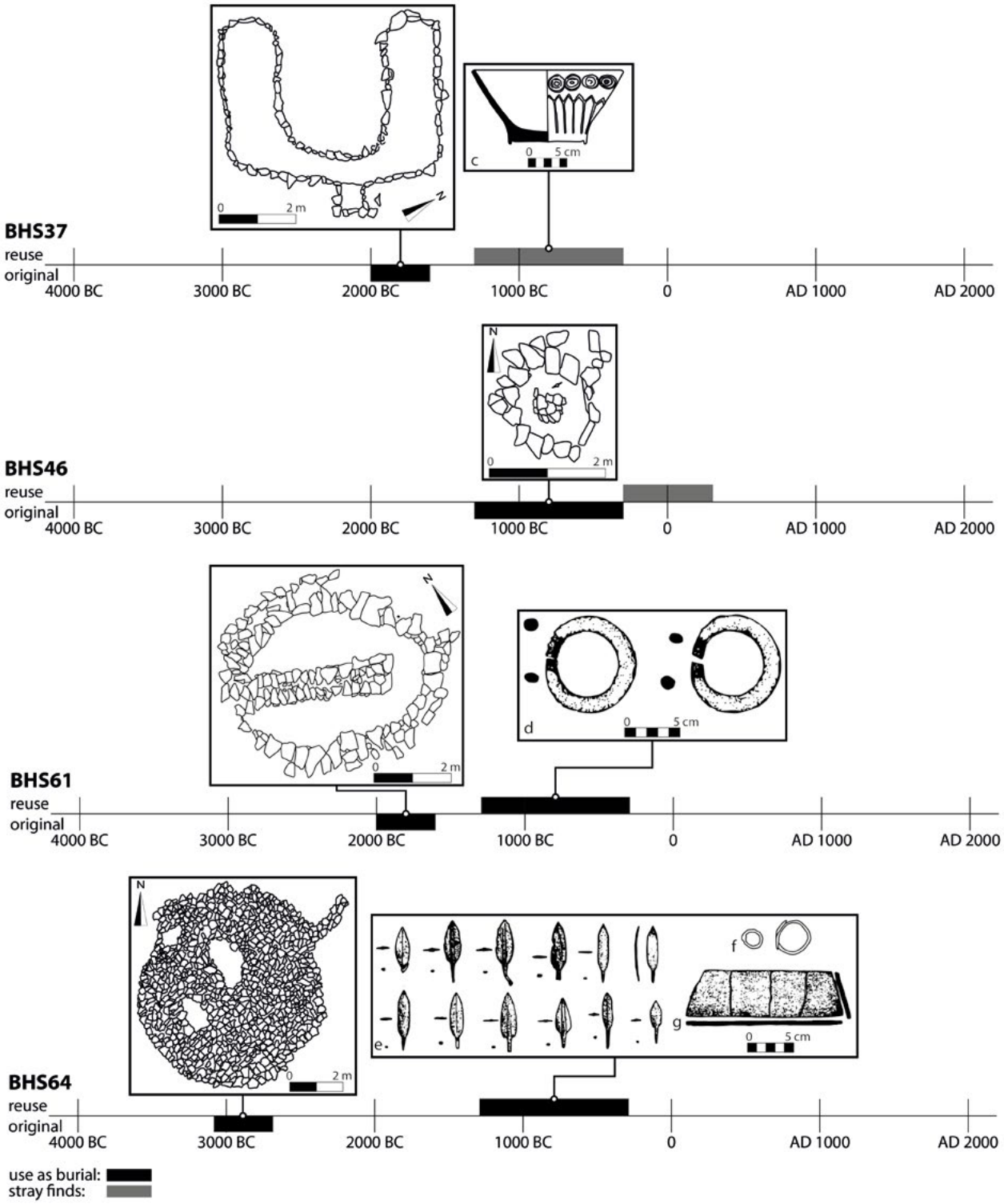
795 Kutterer *et al.* 2014: 183.
796 Kutterer *et al.* 2014: 178.
797 Kutterer *et al.* 2014: 183.
798 Jasim 2006: 13.
799 Carter 1997: 41.
800 Jasim 2006: 45.
801 Jasim 2006: 22.
802 Jasim 2006: 25.
803 Jasim 2006: 27–29.
804 Jasim 2006: 29.
805 Jasim 2006: 48.
806 Jasim 2006: 45.
807 Jasim 2006: 63.
808 Jasim 2006: 29–33.
809 Righetti 2015a: 344.

permost layer was a fully articulated skeleton associated with iron arrowheads.[810] The skeleton belongs to an adult male that was buried on his right side in a crouched position in the north-western part of the old grave chamber (Fig. 19a, marked in red). The layer with the skeleton is separated from the earlier burials by about one meter of sandy sediments. Some meters away from the human skeleton, near the entrance of the tomb, the skeleton of a camel was found in the same level (Fig. 19b). In order to be able to put it inside the tomb, the entrance had to be enlarged.[811] All evidence points towards the animal being led into the tomb alive and killed on the spot. Radiocarbon dates from the stomach contents of the camel fall around AD 640–680, i.e., the Sasanian period.[812] In addition, two Iron Age graves were found attached to the southern side of the burial chamber (Fig. 19, marked in red).[813] ***Tombs BHS19*** and ***BHS20*** are both individual subterranean cist tombs with a superstructure from the second millennium BC that also contained some Iron Age finds.[814] As none of the material is published, it remains unclear whether this represents continuous use or reuse. The fact that both are individual cists points towards reuse, however. ***Tomb BHS27*** was placed within a rock shelter.[815] It contained disturbed skeletal remains, Iron Age pottery and soft-stone vessels, copper items as well as an iron knife with a copper alloy sheath affixed to a rivet. The latter indicates reuse in the PIR. ***Tomb BHS37*** is another collective, U-shaped, subterranean Wadi Suq period tomb with large quantities of Wadi Suq material found within, associated with human bones.[816] The finds include pottery, soft-stone vessels, copper alloy tools and beads. In addition, a pottery bowl with incised decoration of an Iron Age date was discovered (Fig. 19c). ***Tomb BHS46***, a semi-circular subterranean chamber surrounded by a row of stones on the surface, yielded Iron Age pottery and soft-stone vessels as well as some beads and an iron dagger.[817] The latter indicates reuse in the PIR, although Jasim[818] again argues for the presence of iron objects in the Iron Age. ***Tomb BHS61*** is a collective, oval, subterranean Wadi Suq period tomb with a central dividing wall.[819] Two layers of accumulation could be differentiated within its burial chamber. The lower layer contained several human skeletons and large quantities of Wadi Suq period finds including pottery, soft-stone vessels and carnelian beads. The second layer was uncovered approximately 0.5 m above the tombs floor. It yielded scattered skeletal remains found associated with Iron Age materials including pottery sherds and two heavy copper alloy rings or anklets (Fig. 19d). ***Tomb BHS64*** is a Hafit period tomb with a diameter of approximately 7 m located on top of a low hill.[820] The cairn comprises two irregular shaped burial chambers. A few skeletal remains without any associated material were found inside the central chamber. The second chamber was completely empty. Just outside the central chamber the skeleton of an adult male in a flexed position facing west was found. It post-dates the original construction of the tomb. Twelve Iron Age copper alloy arrowheads (Fig. 19e), two copper alloy rings (Fig. 19f) and a rectangular shaped polished soft-stone whetstone (Fig. 19g) were associated with this burial. ***Tomb BHS66*** is yet another collective Wadi Suq period tomb.[821] It is clover-shaped, subterranean and consists of four burial chambers. An entrance at the eastern side leads to a central passage through which access to the four chambers is provided. In chamber A, all finds from two burial levels date to the second millennium. In chamber B, the upper of the two burial levels is associated with the Iron Age. In this upper layer, an adult female was found in a flexed position on her left side (Fig. 19h). She was accompanied by a child burial. In chamber C, the lower level is of a second millennium date, while the upper one again dates to the Iron Age. A cranium, which is thought to be female, and limbs from disturbed burials, as well as a complete skeleton with two copper alloy bracelets still in position on the wrist, were found within the upper layer. The uppermost layer of chamber D dates to the Iron Age. At least five burials were found here. The second and third level are of a Wadi Suq and Late Bronze Age date. As the layers are clearly separated, this tomb might rather represent reuse in the Iron Age than continuous use, but that remains unclear. The circular ***Tomb BHS67*** dates to the third millennium BC and has a diameter of 9.3 m.[822] No skeletal remains were found within the tomb and only one copper alloy needle and two other large copper alloy tools can be assigned as grave goods. However, subsidiary burials were attached to the eastern side of the tomb that are believed to be of an Iron Age date (Fig. 19, marked in red). The circular, above-ground Umm an-Nar period ***Tomb BHS71*** measures 8.4 m in diameter and is divided unequally into two chambers.[823] A few items were recovered from the tomb including a vessel with a zebu motive. A small subsidiary tomb, thought to date to the Iron Age, was located at its eastern side. ***Tomb BHS85*** is a rock burial located on the south-western slope of Jebel Bu-

810 Uerpmann – Uerpmann 1999.
811 Uerpmann – Uerpmann 1999: 455.
812 Uerpmann – Uerpmann 1999: 456.
813 Jasim 2006: 29–33.
814 Jasim 2006: 27.
815 Jasim 2006: 48–50.
816 Jasim 2006: 33.
817 Jasim 2006: 45.
818 Jasim 2006: 63.
819 Jasim 2006: 33–40.
820 Jasim 2006: 14.
821 Abboud 1997; Jasim 2006: 40.
822 Jasim 2006: 16.
823 Jasim 2006: 16–17.


BHS1
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
BHS2
BHS3
BHS8
use as burial:
stray finds:


BHS10
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
0 2 m
BHS12
AD 640-680
a
b
BHS19
BHS20
BHS27
use as burial:
stray finds:


BHS37
reuse
original
4000 BC
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AD 1000
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0 5 cm
BHS46
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BHS61
reuse
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4000 BC
3000 BC
2000 BC
1000 BC
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AD 1000
AD 2000
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BHS64
reuse
original
4000 BC
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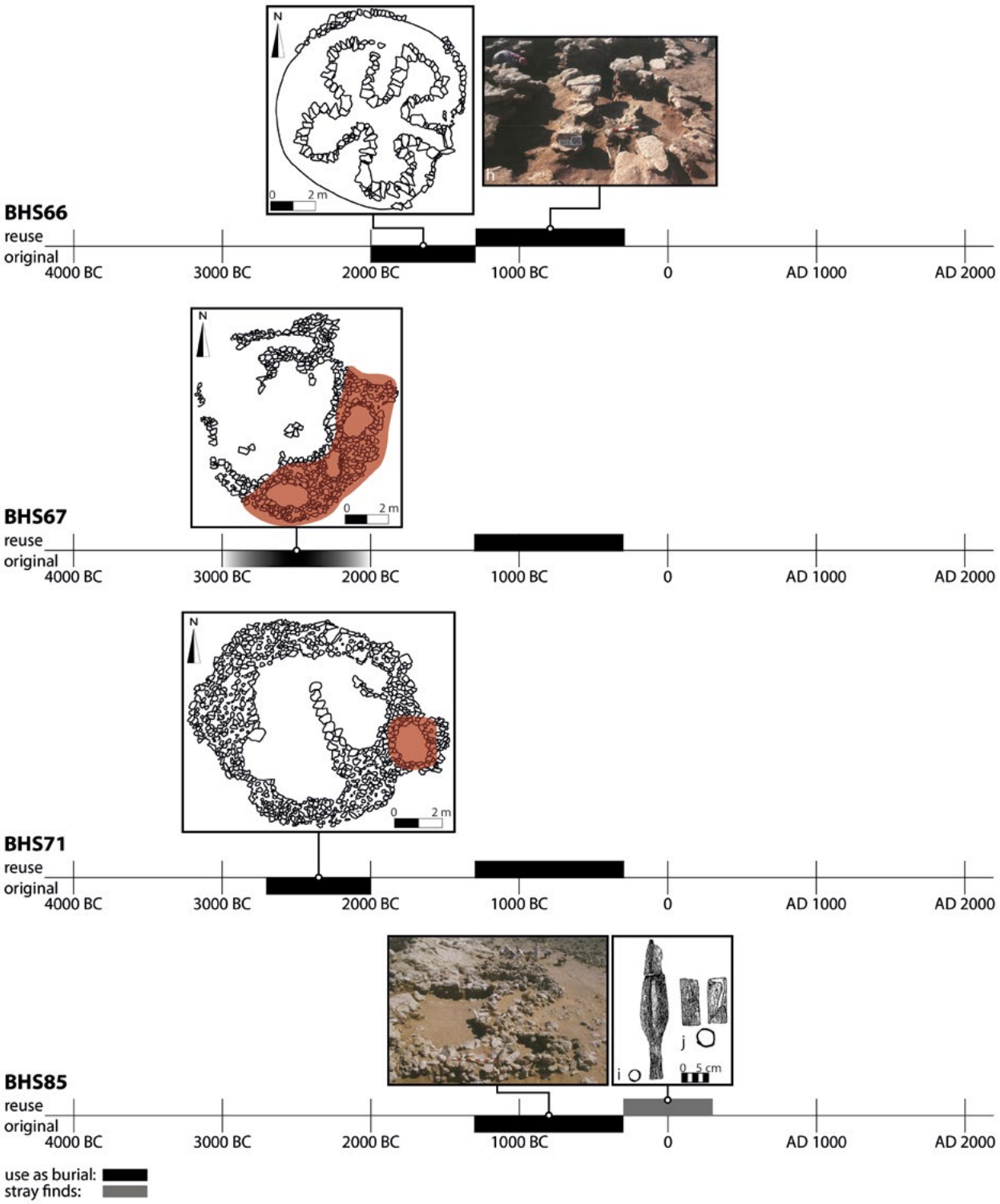


Fig. 19: Chronological timeframes of reused tombs at Jebel Buhais (adapted from Jasim 2006: fig. 4–6, 11, 19, 27, 31a–b, 32, 41, 44, 46, 48.4, 51, 53, 55, 61, 64b, 65, 69, 87, 93; Uerpmann – Uerpmann 1999: fig. 1).

hais.[824] Within six burial chambers, five individuals were found associated with large quantities of Iron Age material including pottery and soft-stone vessels, copper alloy arrowheads and beads. A long-socketed iron spearhead (Fig. 19i) was found close to the second individual, the uppermost skeleton in the grave. This points towards reuse in the PIR.

4.1.15 Jebel al-Emalah

The site of Jebel al-Emalah consists of four circular stone-built tombs, which a team from the University of Sidney excavated in 1994.[825] The three largest of these tombs with diameters between 7 to 12 m date to the Hafit period; the fourth tomb is an oval structure with a diameter of 2.5 m containing the skeleton of a camel. The excavators date it to any time in or after the PIR period. All three Hafit period tombs were reused. One of them, Tomb IV, was reused in the Umm an-Nar period, the Late Bronze Age and the Iron Age, Tomb III in the Iron Age and the Sasanian period and Tomb I in the Sasanian period.

Within ***Tomb I***, a circular tomb with four chambers and a diameter of 6.5 m, whose initial use dates to the end of the Hafit or more likely to the beginning of the

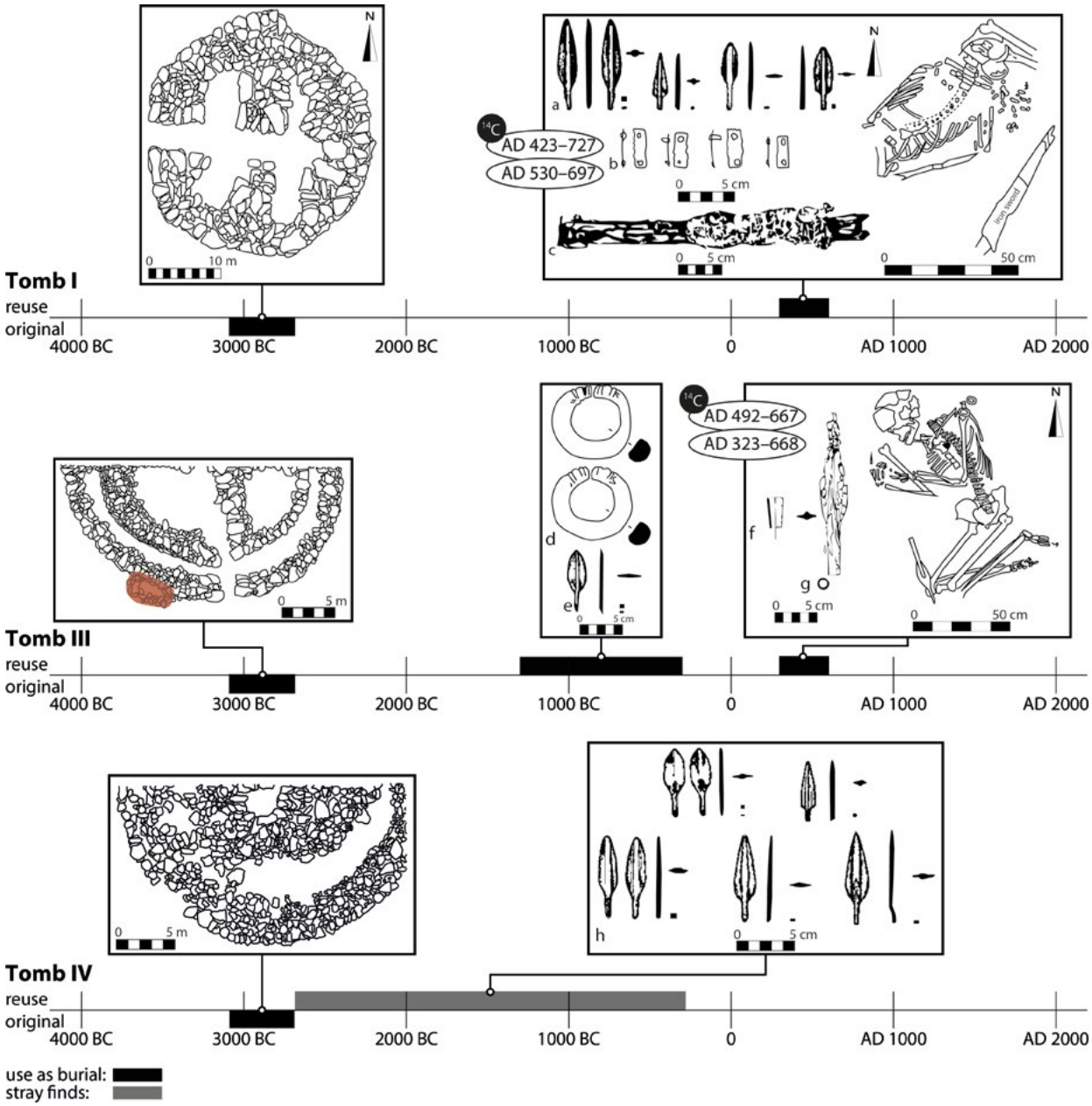


Fig. 20: Chronological timeframes of reused tombs at Jebel al-Emalah (adapted from Benton – Potts 1994: fig. 9, 19, 25, 28, 36, 41–42, 91, 94).

824 Jasim 2006: 54.

825 Benton 1994; Potts 1997b; Potts 1998: 189; Potts 2012: 374–376.

Umm an-Nar period, a pit was dug into the centre in the Sasanian period. Within the pit, a male individual aged 34 to 39 years was buried together with a 70 cm long iron sword (Fig. 20c), copper alloy plates with iron rivets (Fig. 20b) and copper alloy arrowheads (Fig. 20a). The individual in Tomb I demonstrated healed fractures of the collar bone, ribs and wrist. It was in an extended position with the left arm across the body, in an east-west orientation. The burial had itself been disturbed later on as both the head and lower legs were absent. A radiocarbon date from its femur ranges from 423–727 and 530–697 2σ cal. AD and thus in the Sasanian period.[826] To the largest of the Hafit period tombs, ***Tomb III***, a small squarish structure was built up against the exterior wall (Fig. 20, marked in red). The rectangular chamber measures 1.7 × 0.8 m and was preserved to a height of 50 cm.[827] Two decorated copper alloy bracelets (Fig. 20d) were recovered from this tomb, but only very small and degraded human remains. Whether this is due to bone preservation or represents an actual lack of an original burial is not clear. Similarities for the bracelets can be found for instance at Rumeilah period II, giving them a secure Iron Age date. Fitting to this date is a fragment of an Iron Age soft-stone bowl that was found on the surface of the north-eastern quadrant of Tomb I.[828] In the Late Sasanian period, another burial was placed into the entryway of the tomb.[829] It belongs to a male individual, 25 to 29 years of age. The skeleton in Tomb III was outfitted with a lance head and pike (Fig. 20e–f).[830] He was buried lying on his right side in a flexed position. Judging by the position of the individual's hands, it appeared as if he had been buried clutching the weapon's shaft. The fact that the weapon was placed pointing downwards near the feet suggests that it was being grasped in an inverted position. A radiocarbon date from the femur of this individual ranges from 492–667 to 323–668 2σ cal. AD, placing it in the Sasanian period. ***Tomb IV***, the second largest tomb, contained, besides a pottery jar from the Hafit period, three Umm an-Nar period pottery jars and a copper alloy knife. Arrowheads from the second and first millennia BC (Fig. 20h) were found on the surface scattered around the tomb.[831] As arrowheads were not attested in the Wadi Suq period and only introduced in the Late Bronze Age,[832] the date of reuse can be narrowed to the second half of the second millennium. The tomb is a low stone cairn of approximately 12 m in diameter. Its oval chamber is located off centre. Within the chamber, the lower 40 cm of the fill contained human remains and grave goods, all in a disturbed state.

4.1.16 Wa'ab

Fifteen small mounds are located on either side of a track between the modern villages Al-Huwaylat and Munay'i. Four of these tombs were excavated by Phillips between 1988 and 1989.[833] Wa'ab 1, 2 and 3 were empty and most likely date to the second millennium BC. Tomb Wa'ab 4 is a Wadi Suq period tomb that was continuously used into the Iron Age as well as possibly reused in the PIR.

Tomb Wa'ab 4 is a collective, subterranean, stone-lined, roughly rectangular tomb with two chambers.[834] It has four entrances, one at each corner, and is unique in its layout (Fig. 21).[835] Finds from the tomb include pottery, soft-stone vessels, metal and shell objects as well as frag-

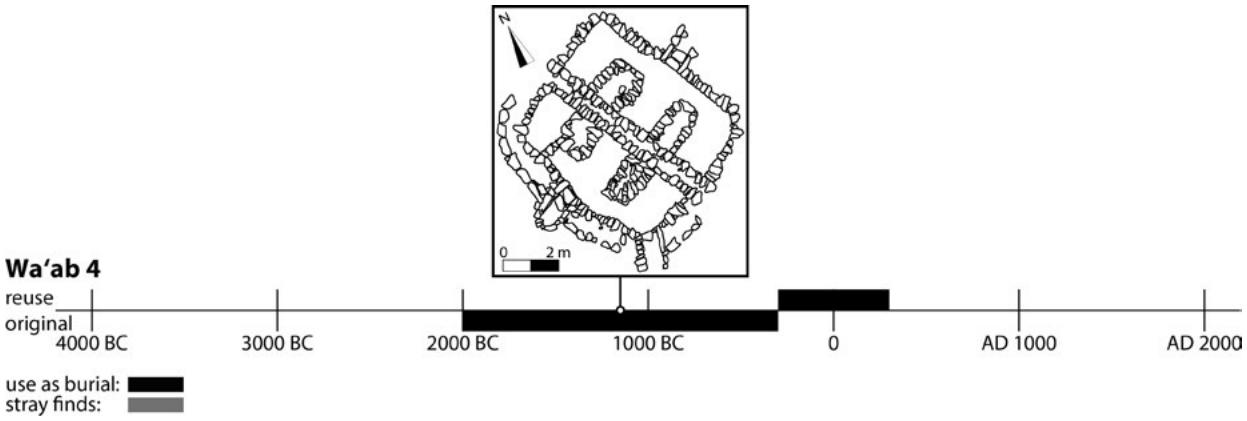


Fig. 21: Chronological timeframe of reused tomb at Wa'ab (adapted from Fritz 2010: fig. 2).

826 Potts 1997a; Potts 1998: 189.
827 Benton – Potts 1994: 23.
828 Benton – Potts 1994: 57, fig. 87.
829 Potts 1997a: 130.
830 Benton – Potts 1994: 25–26; Potts 1997a: fig. 6–7.
831 Benton – Potts 1994: 13–14, 15–20, 13 fig. 9.
832 Velde 2003: 112; but see de Vreeze – Düring – Olijdam 2020: 141 and Yule – Vogt 2020.
833 Fritz 2010.
834 Fritz 2010: 103.
835 Carter 1997: 48.

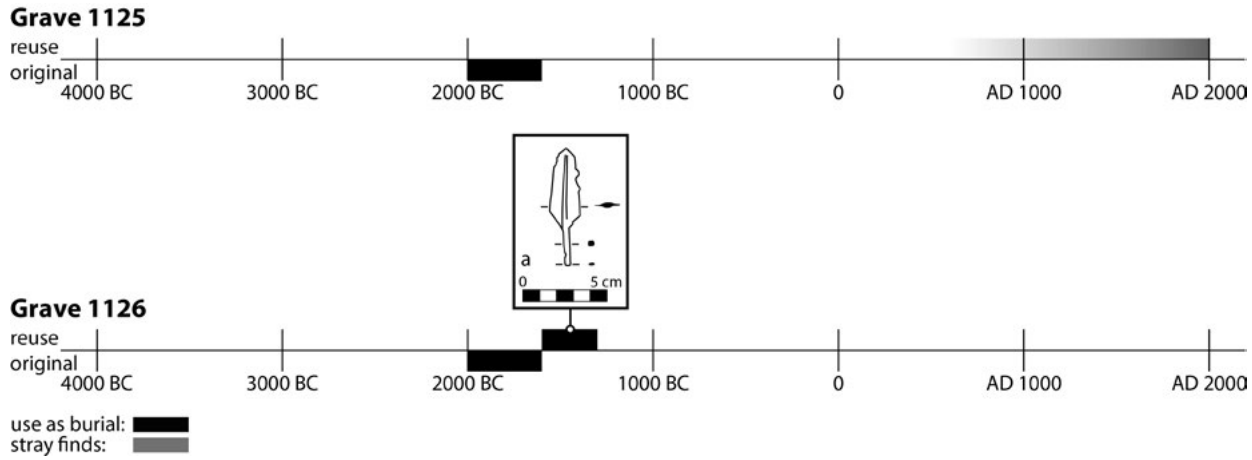


Fig. 22: Chronological timeframes of reused tombs at Wadi Suq (adapted from Frifelt 1975a: fig. 24f).

mentary human remains. According to Fritz,[836] most of the finds date to the Iron Age, but a limited amount of Wadi Suq material is attested as well. Therefore, he concludes that Tomb Wa'ab 4 is a Wadi Suq tomb that was continuously used in the Iron Age. According to de Cardi quoting Phillips, a PIR burial of a female individual associated with a pottery jar decorated with black paint was found in the tomb.[837] De Waele and Haerinck also report an Iron Age tomb in the Wadi al-Qawr that was reused for a first to second century burial where a PIR-type bead was found,[838] but it remains unclear if the same tomb is meant by all authors.

4.1.17 Wadi Suq

Seven Iron Age tombs were excavated on the east-west ridge of the eponymous Wadi Suq by the Danish expedition and six Wadi Suq period tombs in a cemetery along the southern ridge.[839] Two of these tombs, Tomb 1121 and Tomb 1124, show indications of a second use in the Wadi Suq period, which will not be considered here, as continuous use is as likely as reuse, while Tomb 1125 features evidence for (unintended) reuse in the Islamic period and Tomb 1126 in the Late Bronze Age.

Tomb 1125 consists of an above-ground stone circle and a long, narrow subterranean part.[840] No remains of human bones were found, but pottery sherds were, mostly from the upper layers of the fill. They date in the majority to the Islamic period and thus their association with the tomb is likely to be unintentional (Fig. 22). ***Tomb 1126*** is constructed in the same way as the other tombs of the necropolis as a subterranean individual cist.[841] In the bottom layer of the underground tomb, scattered human remains of an adult individual were found. The grave goods, mainly soft-stone vessels and pottery, date it to the Wadi Suq period. About 25 cm above this level, the skeleton of a child was discovered. A leaf-shaped copper alloy arrowhead with flat midrib and square shaft was found in the same level as the child burial (Fig. 22a), indicating reuse in the Late Bronze Age.[842]

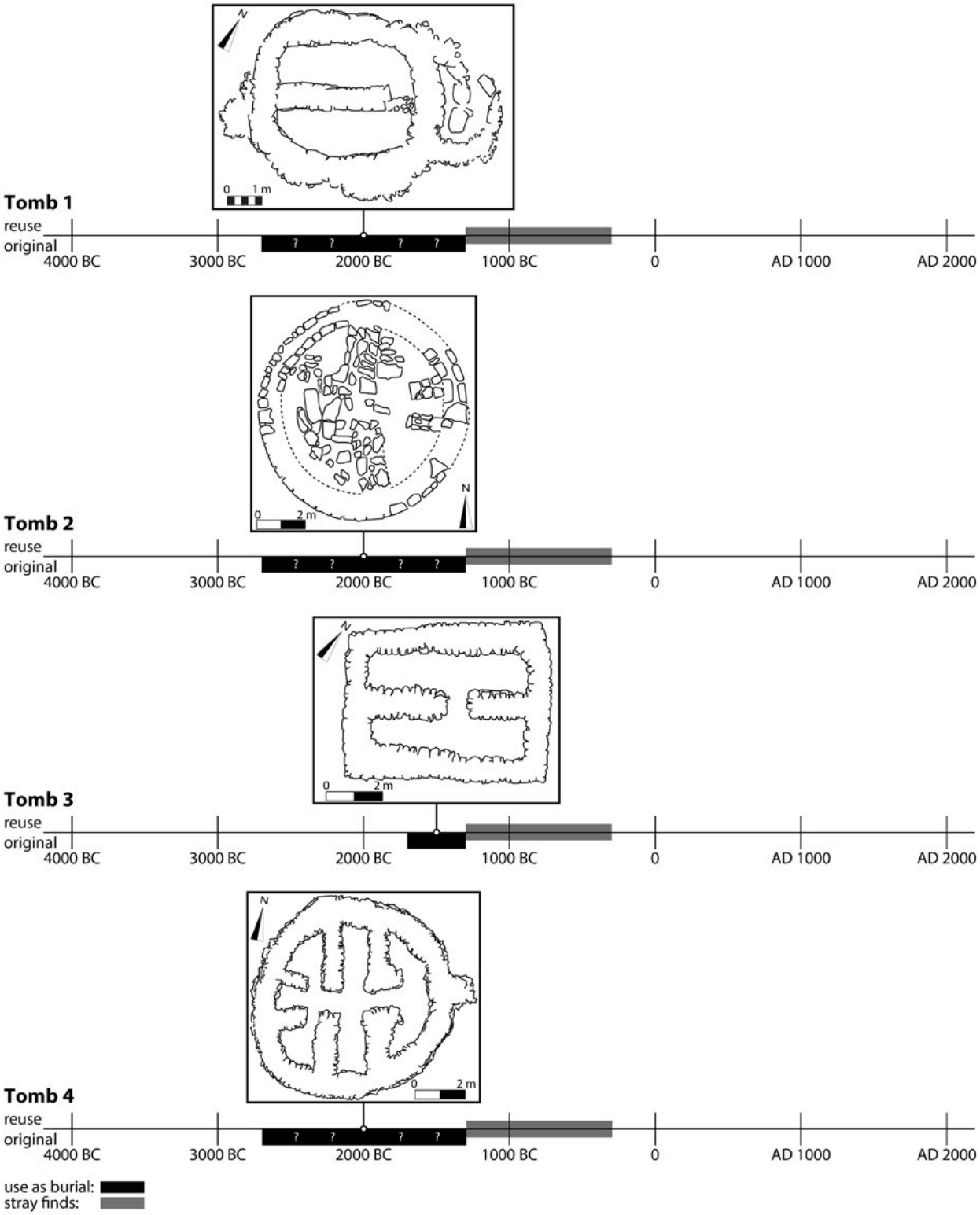
4.1.18 Saruj

Near the village of Saruj, on a rocky slope, several cairns are present. One of these consists of two chambers and is built of head-size pieces of local limestone.[843] It is oval in structure with a diameter of 3 to 4 m. Within the tomb, besides fragments of human bones, including an identifiable skull, fragments of badly corroded iron arrowheads, a large snail and a balsamarium were found, clearly dating the burial to the Samad period. As it is unclear whether the burial was placed into an older grave structure or whether the grave was built for the occasion of the Samad period burial,[844] the Saruj tomb will not be further considered in the analyses conducted in this study.

4.1.19 Qarn bint Saud

During the Danish excavations at Qarn bint Saud from 1970 to 1972 several Bronze and Iron Age tombs were investigated.[845] Further excavations were conducted by an Iraqi team from 1973 to 1974 and by the local au-

836 Fritz 2010: 103.
837 De Cardi 1996: 83.
838 De Waele – Haerinck 2006: 38.
839 Frifelt 1975a: 373, 377.
840 Frifelt 1975a: 407.
841 Frifelt 1975a: 408.
842 Righetti 2015a: 398.
843 Costa *et al.* 1999: 82–84; Yule 2001: 402–403.
844 Costa *et al.* 1999: 82.
845 Frifelt 1971: 378; Yule 2001: 394–395.


Tomb 1
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
Tomb 2
Tomb 3
Tomb 4
use as burial:
stray finds:

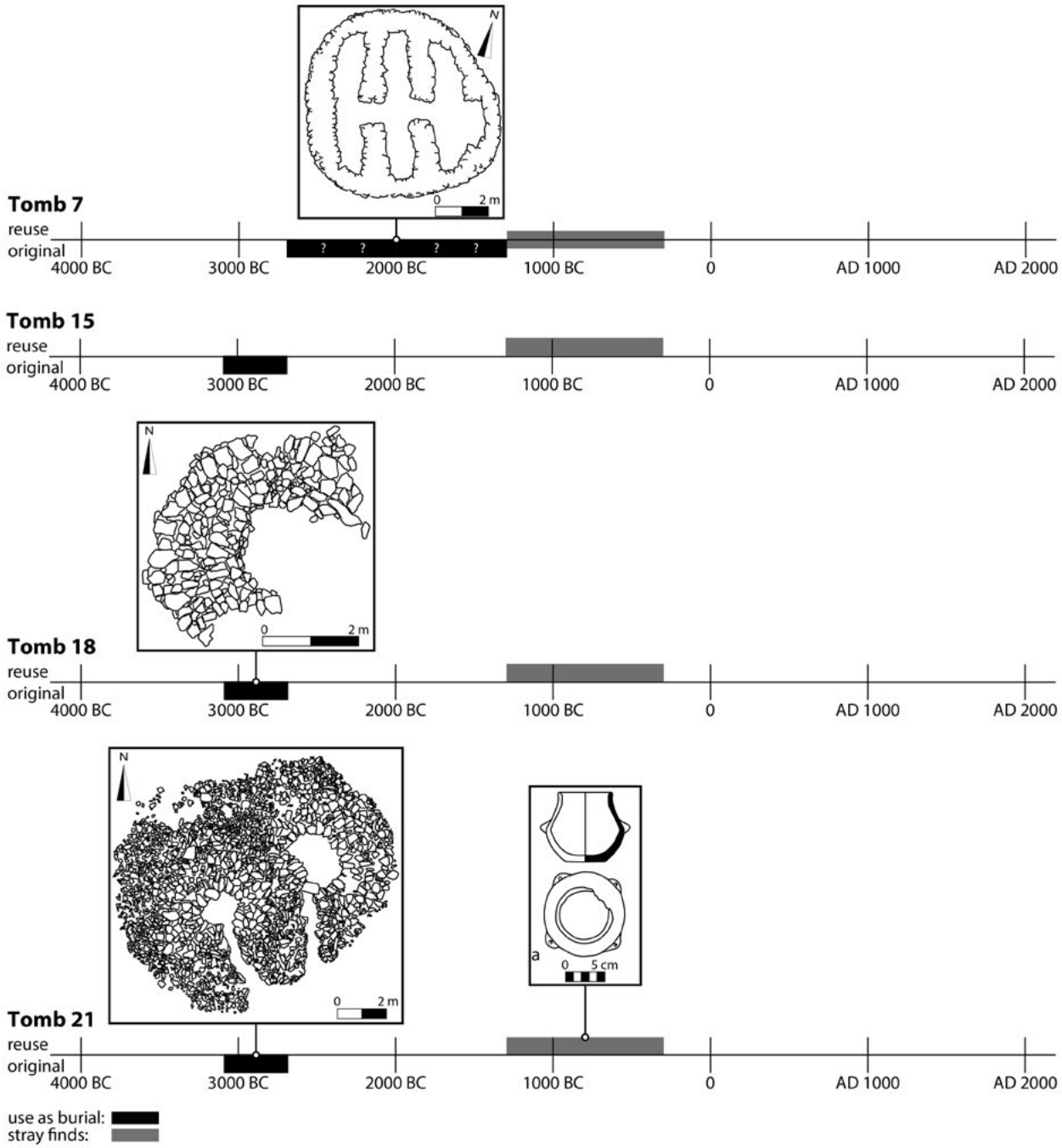


Fig. 23: Chronological timeframes of reused tombs at Qarn bint Saud (adapted from Al-Tikriti 1981: pl. 21, 23, 58b; Vogt 1985: Taf. 77, 78, 80).

thorities in 1976.[846] Lombard[847] refers to early Iron Age reuse of seven of the Bronze Age tombs (Tombs 1–4, 7, 15 and 18); however, continuous use from the Wadi Suq or Late Bronze Age until the Iron Age is also possible. Vogt[848] identifies reuse of Tomb 21. Additionally, there is probable reuse of two pill-box tombs, Tombs 5 and 6, in the Iron Age,[849] but most likely their construction date is in the Iron Age as well. Therefore, these two tombs will not be further considered. Generally, the identification of possible reuse of the tombs at Qarn bint Saud is significantly hindered by the fact that the material from the excavations is only very partially published and a date of the original construction and first use of most tombs is uncertain. All possible reuse will be discussed below.

Tomb 1, a collective, above-ground oval tomb with a central dividing wall (Fig. 23), possibly dates to the Umm

846 Al-Tikriti 1981: 68–75.
847 Lombard 1985: 166.
848 Vogt 1985: 88.
849 Lombard 1985: Tab. X.

an-Nar period,[850] but Righetti[851] sees its architecture as typical for the Wadi Suq period. Despite how no finds were made, Lombard[852] refers to it as being reused during the Iron Age. ***Tomb 2*** is a circular tomb with internal divisions made of two L-shaped walls and a diameter of 6 m (Fig. 23). It yielded Iron Age finds such as soft-stone vessels, pottery and copper alloy arrowheads,[853] and has thus been asserted by Al-Tikriti[854] as an Iron Age tomb. According to Righetti[855] and Vogt,[856] it is a Wadi Suq period tomb that was used from the beginning of the second millennium BC until the Iron Age. This would make it a continuously used rather than a reused tomb. However, the construction of the tomb could also date to the Umm an-Nar period, but Vogt points out that no Umm an-Nar period finds were made in the whole area and that the upright stones used in the walls are a clear indicator of a Wadi Suq period date.[857] ***Tomb 3*** (1070 in Frifelt's numbering) is a collective, above-ground, rectangular tomb with two interconnected rooms. Four daggers found within date to the Late Bronze Age,[858] but Iron Age material was present as well. According to Lombard,[859] the tomb was constructed during the second millennium BC and then reused in the Iron Age, but continuous use is likelier. Al-Tikriti[860] refers to it again as an Iron Age tomb. ***Tomb 4*** is a circular, collective above-ground tomb with a diameter of 8.2 m, whose interior is divided into seven spaces by four walls running north–south and two smaller walls running east–west.[861] While it has originally been dated to the Umm an-Nar period by Frifelt, it is, according to Righetti[862] and Vogt,[863] a Wadi Suq period tomb used until the Iron Age. Al-Tikriti,[864] however, asserts it is of an Iron Age date due to its Iron Age finds. Again, we deal with a continuously used tomb rather than a reused tomb. ***Tomb 7*** (1078 in Frifelt's numbering) is another circular to oval, collective above-ground tomb with a diameter of 7 to 7.3 m. Here, again, the funeral chamber is divided into six spaces by the construction of four cross walls. No finds were made. Frifelt dated it to the Umm an-Nar period, Righetti[865] and Vogt[866] consider the architecture to be typically Wadi Suq and Al-Tikriti places it in the Iron Age. According to Lombard[867] it is a Bronze Age tomb that was reused in the Iron Age. ***Tomb 15*** (1074 in Frifelt's numbering) and ***Tomb 18*** (1087 in Frifelt's numbering) were built, according to Frifelt, in the Hafit period and then reused in the Iron Age. In Tomb 18 an Iron Age soft-stone vessel was found associated with a Jemdet Nasr pottery jar, and in Tomb 15 only Iron Age objects were found. Therefore, Al-Tikriti[868] considers Tomb 15 to be an Iron Age tomb, which is unlikely due to its ground plan. The Hafit ***Tomb 21*** consists of two burial chambers, each having a separate entrance facing south.[869] In the western chamber A, many beads was found together with fragments of a Jemdet Nasr pottery jar and fragmented human bones; in the eastern chamber B Jemdet Nasr pottery sherds as well as more beads were found. Vogt[870] points to reuse of this tomb as he identified a lugged jar made of brownish clay from chamber B that might date to the first millennium BC (Fig. 23a).

4.1.20 Hili

In total, 14 tombs were investigated at Hili by different missions. In 1968, a Danish team under the direction of Frifelt excavated the Umm an-Nar period tomb 1059.[871] No signs of reuse were present. The Iraq Archaeological Mission explored the Umm an-Nar period tombs A–H, J, N and Z as well as the Wadi Suq period Tomb K.[872] Tomb N and Tomb A North, situated about 1 km to the north of the main group of tombs, were further studied by a French mission.[873] The majority of the Umm an-Nar period tombs also indicated use only during that period, but three tombs (Tomb 1059, Tomb A North, Tomb B) might also have been used in the Wadi Suq period and one, Tomb H, in the Iron Age.

The Umm an-Nar period ***Tomb 1059***, dated by Méry[874] to 2400–2200 BC, is divided by two cross-walls into four chambers.[875] It is famous for its stone reliefs depicting animals and human figures. Vogt[876] identified two artefacts within the otherwise Umm an-Nar period grave goods of Tomb 1059 that he believes to be of a Wadi Suq period date. These are a soft-stone lid (Fig. 24a) and a soft-stone vessel with incised horizontal lines

850 Yule 2001: 395.
851 Righetti 2015a: 410.
852 Lombard 1985: Tab. X.
853 Al-Tikriti 1981: 321.
854 Al-Tikriti 1981: 69–70.
855 Righetti 2015a: 400–401.
856 Vogt 1985: 189.
857 Vogt 1985: 187, 189.
858 Righetti 2015a: 408.
859 Lombard 1985: Tab. X.
860 Al-Tikriti 1981: 69.
861 Vogt 1985: 188.
862 Righetti 2015a: 402.
863 Vogt 1985: 189.
864 Al-Tikriti 1981: 71.
865 Righetti 2015a: 404–405.
866 Vogt 1985: 189.
867 Lombard 1985: 166.
868 Al-Tikriti 1981: 70.
869 Al-Tikriti 1981: 73–75.
870 Vogt 1985: 88.
871 Frifelt 1968; Frifelt 1975a: 367–368.
872 Righetti 2015a: 412–413.
873 Méry *et al.* 2001; Méry *et al.* 2004; Méry *et al.* 2008; Cleuziou – Méry – Vogt 2011.
874 Méry 2010: 40 fig. 12.
875 Al-Tikriti 1981: 105.
876 Vogt 1985: 184.

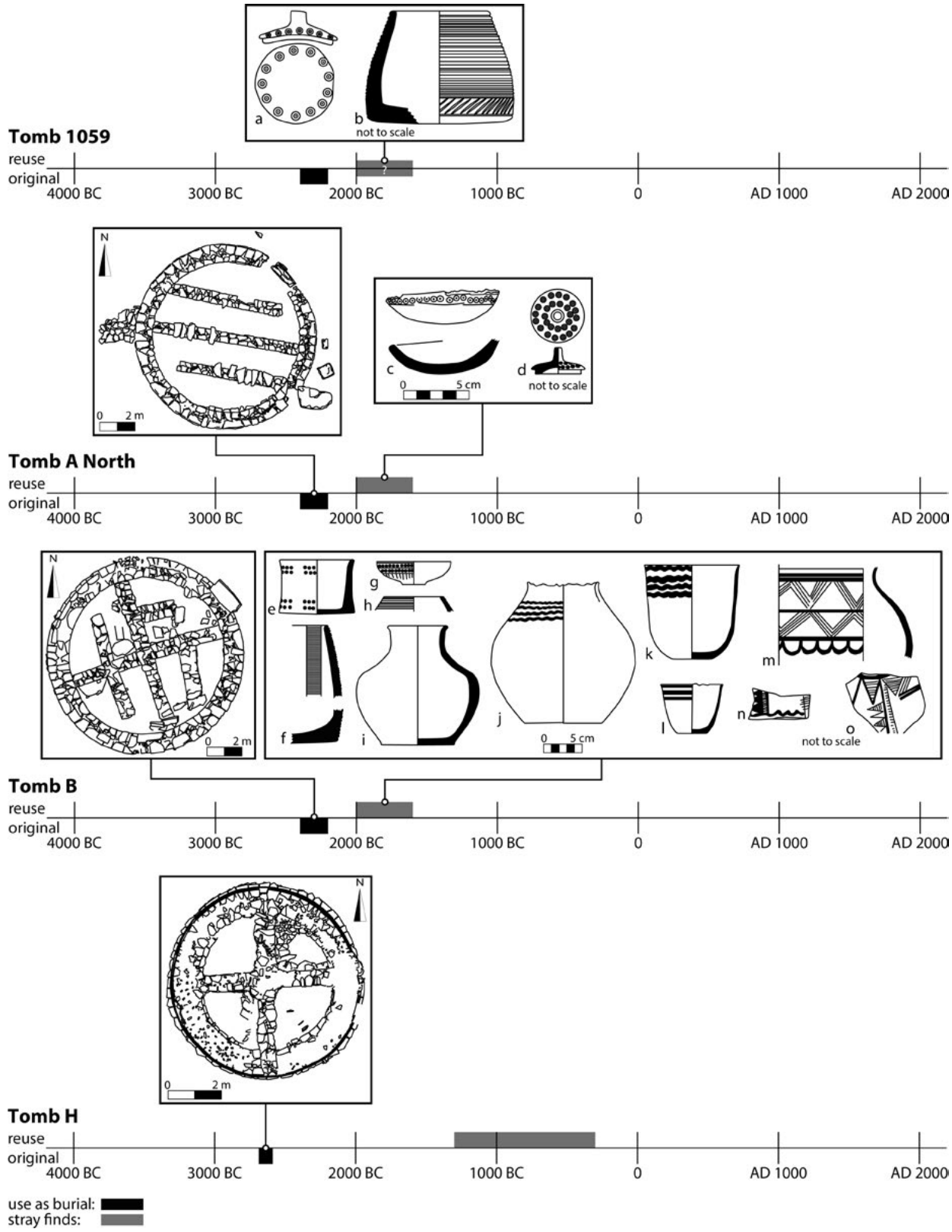


Fig. 24: Chronological timeframes of reused tombs at Hili (adapted from Frifelt 1979: fig. 12; Al-Tikriti 1981: pl. 31, 35, 92D, 94D, G, 102H–K, 140A, O–Q, 141G; Vogt 1985: Taf. 114.4; Cleuziou – Méry – Vogt 2011: fig. 84, fig. 226.DLA/m89).

(Fig. 24b). According to Carter,[877] these objects are, however, equally likely to date to the Umm an-Nar period. Thus, reuse cannot be attributed with any certainty. ***Tomb A North***, situated about 1 km to the north of the main group of Umm an-Nar tombs at Hili, has a diameter of 10.2 to 10.3 m.[878] Three internal walls divide the tomb into four elongated chambers. Inhumations were placed on two levels, one above and one below ground, separated by a floor made of stone slabs. Large quantities of typical Umm an-Nar period grave goods such as pottery and soft-stone vessels, as well as pieces of personal adornment, were found together with remains of at least 300 individuals. The grave goods give a date for the use of the tomb around 2400–2200 BC.[879] Among the finds are, however, a soft-stone bowl (Fig. 24c),[880] soft-stone sherds and a lid (Fig. 24d) discovered just outside the tomb,[881] all dating to the Wadi Suq period, although the latter could also belong to the Umm an-Nar period. The soft-stone bowl is explained by the excavators as an intrusive element entering the tomb after its abandonment as it was discovered in the destruction layers of the eastern part of chamber 3. As the tomb is not dated to the very end of the Umm an-Nar period, the Wadi Suq period soft-stone vessel sherd represents reuse of the tomb instead of continuous use.

At 11.4 m in diameter, ***Tomb B*** is the largest Umm an-Nar period tomb excavated at Hili.[882] The interior of the tomb is divided into two sections, each subdivided into four chambers. Within the tomb, some soft-stone vessels might either be of an Umm an-Nar or a Wadi Suq period date (Fig. 24e–h),[883] but a couple of pottery sherds (Fig. 24i–o) show all characteristics of Wadi Suq period pottery.[884] Tomb B is dated by Méry[885] to around 2400–2200 BC, and thus the Wadi Suq period pottery indicates later reuse. The circular, Umm an-Nar period ***Tomb H*** has a diameter of 7.25 m and is divided into four equally sized chambers by two cross-walls.[886] According to Méry,[887] it is among the oldest Umm an-Nar period tomb at Hili, dating to around 2700–2600 BC. Just outside of the tomb, some fragments of Iron Age soft-stone vessels were discovered, indicating reuse of the tomb.[888]

877 Carter 1997: 41.
878 Cleuziou – Méry – Vogt 2011: 72–217.
879 Cleuziou – Méry – Vogt 2011: 215.
880 Carter 1997: 41; Cleuziou – Méry – Vogt 2011: 195.
881 Vogt 1985: 184.
882 Al-Tikriti 1981: 109.
883 Vogt 1985: 184; Carter 1997: 41.
884 Al-Tikriti 1981: pl. 102; Cleuziou 1981: 285, fig. 6; Carter 1997: 41.
885 Méry 2010: 40 fig. 12.
886 Al-Tikriti 1981: 112.
887 Méry 2010: 41.
888 Al-Tikriti 1981: 112; Lombard 1985: Tab. X.

4.1.21 Qattarah

The Wadi Suq period tomb of Qattarah in the northern part of the Al-Ain oasis was discovered under a low sand dune that was levelled by bulldozers.[889] Due to the modern destruction, it remains unclear whether the tomb was a semi-subterranean stone cist or an above-ground tomb of the Shimal type.[890] Righetti[891] attributes it to being a collective, rectangular subterranean tomb. Materials from the tomb were recovered in a rescue excavation. The finds, which comprised of many soft-stone vessels, jewellery including beads and gold objects, as well as swords, date to the Wadi Suq period, Late Bronze and Iron Ages. Thus, continuous use rather than reuse is more likely. No pottery was found within the tomb. Interestingly, Umm an-Nar sugar lumps are widely reused in the inner facing of the walls and door sides.

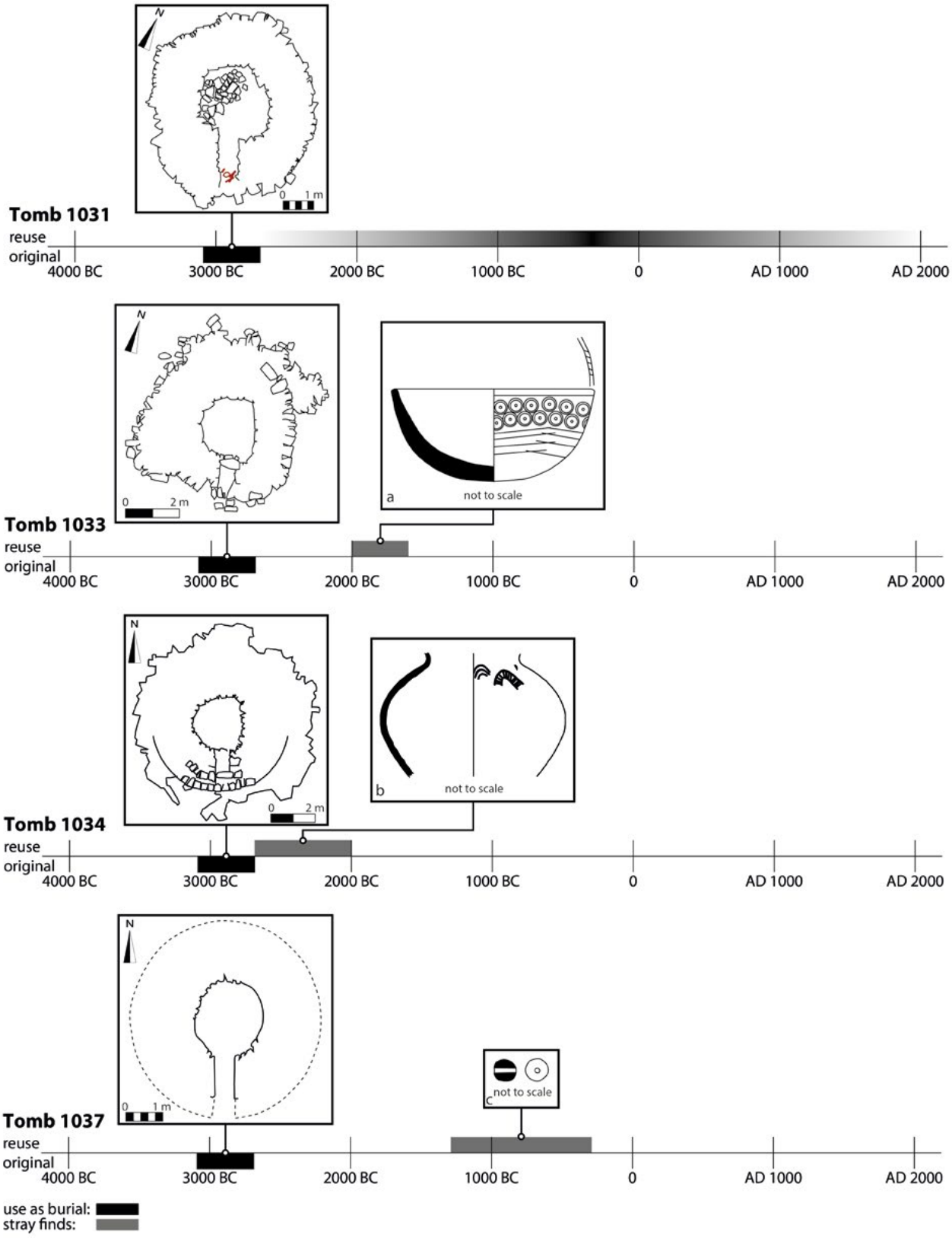
4.1.22 Jebel Hafit

In the northern part of Jebel Hafit,[892] 47 of the multitude of Hafit period cairns were excavated by a Danish mission between 1961 and 1971 (Tombs 1030–1054, 1300–1321 by Madsen, Cairns 1–25 by Frifelt),[893] two by amateurs (Buraimi I–II), three more by Al-Tikriti in 1975 (Tomb A–C/36–38) and a total of 28 by other archaeologists from the Department of Antiquities in Al-Ain.[894] Between 1977 and 1984, six tombs (Cairns 1–6) were subject to archaeological research by the French mission.[895] Of these 86 Hafit period tombs the vast majority only features evidence for use in the period of their construction or were found empty. Three of these Hafit period tombs also feature material from the Umm an-Nar period (Tombs 1035, 1310 and 1312), two from the Wadi Suq period (Tomb 1031 and Cairn 2), two from the Late Bronze Age (Tomb 1051 and Cairn A/36), four from the Iron Age (Tombs 1037, 1043, 1049 and 1311) and one from the Sasanian period (Tomb 1303). In Tomb 1031, a second burial of an unknown date was placed; in Tomb 1053, a later cist was put into the Hafit tomb and in Tomb 1045 undated later pottery was recorded. Additionally, Al-Tikriti[896] reports on Umm an-Nar soft-stone vessel fragments and pottery sherds discovered on the tip of the eastern ridge of Area C, that might originate from an Umm an-Nar period tomb.

889 Cleuziou 1981: 284; Vogt 1985: 193–194.
890 Vogt 1985: 193.
891 Righetti 2015a: 414.
892 Labelled Area C by Al-Tikriti 1981 and Area A–D by Madsen 2017.
893 Madsen 2017: 31.
894 Al-Tikriti 1981: 63.
895 Cleuziou – Méry – Vogt 2011.
896 Al-Tikriti 1981: 42.

The Hafit period ***Tomb 1031*** (Cairn 2) was damaged by stone removal.[897] The oval burial chamber measured 2.4 × 2.2 m and was paved with stone slabs. The main group of finds was found directly on the floor together with badly preserved human remains. A secondary burial was found in the upper part of the blocked entrance passage, approximately 0.5 m above the floor, just inside the stones used in the obstruction (Fig. 25, marked in red). It consists of very badly preserved human bones, disarticulated and heaped around the cranium. No grave goods were associated with this burial, which makes it impossible to date. ***Tomb 1033*** (Cairn 4) was heavily damaged, especially on its external wall.[898] The burial chamber is oval to asymmetrical in plan, measuring 2.3 m in length and 1.9 m in width. A bowl of grey soft-stone decorated with two rows of dotted circles above bunches of oblique lines was found at the northern end of the chamber, 0.8 m above the floor (Fig. 25a).[899] It is attributed by Vogt[900] to the Wadi Suq period. ***Tomb 1034*** (Cairn 5) contained a large, oval chamber measuring 2.4 × 2.3 m.[901] The floor was found unpaved, or, as Madsen[902] suggests, paving had been removed by secondary activities. The only find from this tomb was a Black-on-Red pottery vessel fragment dating to the Umm an-Nar period (Fig. 25b), apparently in a secondary level, 0.1 to 0.15 m above the floor. ***Tomb 1037*** (Cairn 8), a round to oval mound with a diameter of 8 m and an oval burial chamber that formed a continuation to the entrance passage, was almost empty of finds, except for a Jemdet Nasr pottery vessel from the floor level and a spherical green glass bead found in the disturbed upper part of the fill (Fig. 25c).[903] According to Madsen,[904] this bead is likely of an Iron Age date. In ***Tomb 1043*** (Cairn 14),[905] besides Hafit period finds, a fragment of a coarse handmade pot of red grit-tempered ware with an everted thin rim was found in the fill,[906] dating to the Iron Age (Fig. 25d).[907] While all other finds were lying on the floor level, together with crushed human bones, the Iron Age pottery sherd was found out of context. In ***Tomb 1045*** (Cairn 16) only the chamber was excavated due to its general bad state of preservation.[908] Just above the floor, a Jemdet Nasr pottery jar was found, and at a higher level, approximately 0.75 m above the floor, a large base of a handmade, reddish, coarse, sand-tempered pottery vessel of an unspecified date (Fig. 25e). ***Tomb 1049*** (Cairn 20) has an oval chamber, measuring 2.0 × 2.2 m.[909] In the southernmost part of the chamber, in front of the entrance, a human skeleton was found, mostly in anatomical order, approximately 0.4–0.5 m above the floor. The human bones, although badly preserved, indicate that it was placed on its side with the head towards the east (Fig. 25f). According to Frifelt,[910] the Iron Age burial was introduced through the passage into the tomb as it was found just inside the entrance from the passage to the chamber. After placing the burial within the cairn, the structure would have been carefully closed again. However, Madsen[911] points out that the skeleton was placed at a level too high to be accessed from the passageway. Thus, he assumes that this was established by breaking though the corbelled roof or by making a shaft through the upper ring wall. Tomb 1049 contained the richest inventory of all tombs excavated at Jebel Hafit.[912] Close to the head of the skeleton, two copper bowls and a soft-stone bowl were found stacked together (Fig. 25f). Near the thigh or the knee was a large, polished shell button (Fig. 25k), and north of it a copper sword. A copper hook (Fig. 25l) was found to the north of the head. For the copper alloy bowls (Fig. 25h–i), similar artefacts date to the Iron Age.[913] The decoration and shape of the soft-stone bowl places it also firmly within the Iron Age (Fig. 25j).[914] For the sword (Fig. 25k), similarities can be found in 13th–14th century BC Luristan.[915] Thus, Iron Age reuse of this cairn is clearly demonstrated. The large chamber of ***Tomb 1051*** (Cairn 22) has an almost circular plan and a diameter of 2.6 m.[916] Most of the grave goods were placed close to the wall, likely because they were pushed aside when a secondary burial was added to the tomb. On a protruding wall-stone, a few centimetres above the floor, a leaf-shaped copper alloy arrowhead dating to the Late Bronze Age was found, indicating secondary use (Fig. 25m).[917] No skeletal material was present. ***Tomb 1053*** (Cairn 24) is a typical Hafit period tomb with a central to oval burial chamber.[918] The outer remains of this tomb had a preserved diameter of 6–7 m. Later in time, an oblong, cist-like chamber (Tomb 1053B) oriented east–northeast was placed into the tomb, measuring 2.3 to 2.4 m in length and 0.9 m in width (Fig. 25). Due to its overall bad preservation, it remains unclear whether the structure had an entrance or was accessible from the top. Ac-

897 Madsen 2017: 46–51.
898 Madsen 2017: 55–58.
899 Frifelt 1971: fig. 14, 379; Madsen 2017: 55.
900 Vogt 1985: 87.
901 Madsen 2017: 59–62.
902 Madsen 2017: 59.
903 Madsen 2017: 68–70.
904 Madsen 2017: 221.
905 Madsen 2017: 82–84.
906 Frifelt 1971: 381.
907 Madsen 2017: 82.
908 Madsen 2017: 86–87.
909 Madsen 2017: 98–103.
910 Frifelt 1971: 380.
911 Madsen 2017: 235.
912 Bibby 1965: 109; Frifelt 1971: fig. 9.
913 Yule 2001: 85–86.
914 Ziolkowski 2001: S-53 and S192+382+372+287.
915 Bibby 1965: 109; Frifelt 1971: 377; Yule 2001: 117–118.
916 Madsen 2017: 106–110.
917 Bibby 1965: 109; Frifelt 1971: 379; Vogt 1985: 88.
918 Madsen 2017: 115–116.


N
0 1 m
Tomb 1031
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
N
0 2 m
a
not to scale
Tomb 1033
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
N
0 2 m
b
not to scale
Tomb 1034
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
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AD 1000
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N
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c
not to scale
Tomb 1037
reuse
original
4000 BC
3000 BC
2000 BC
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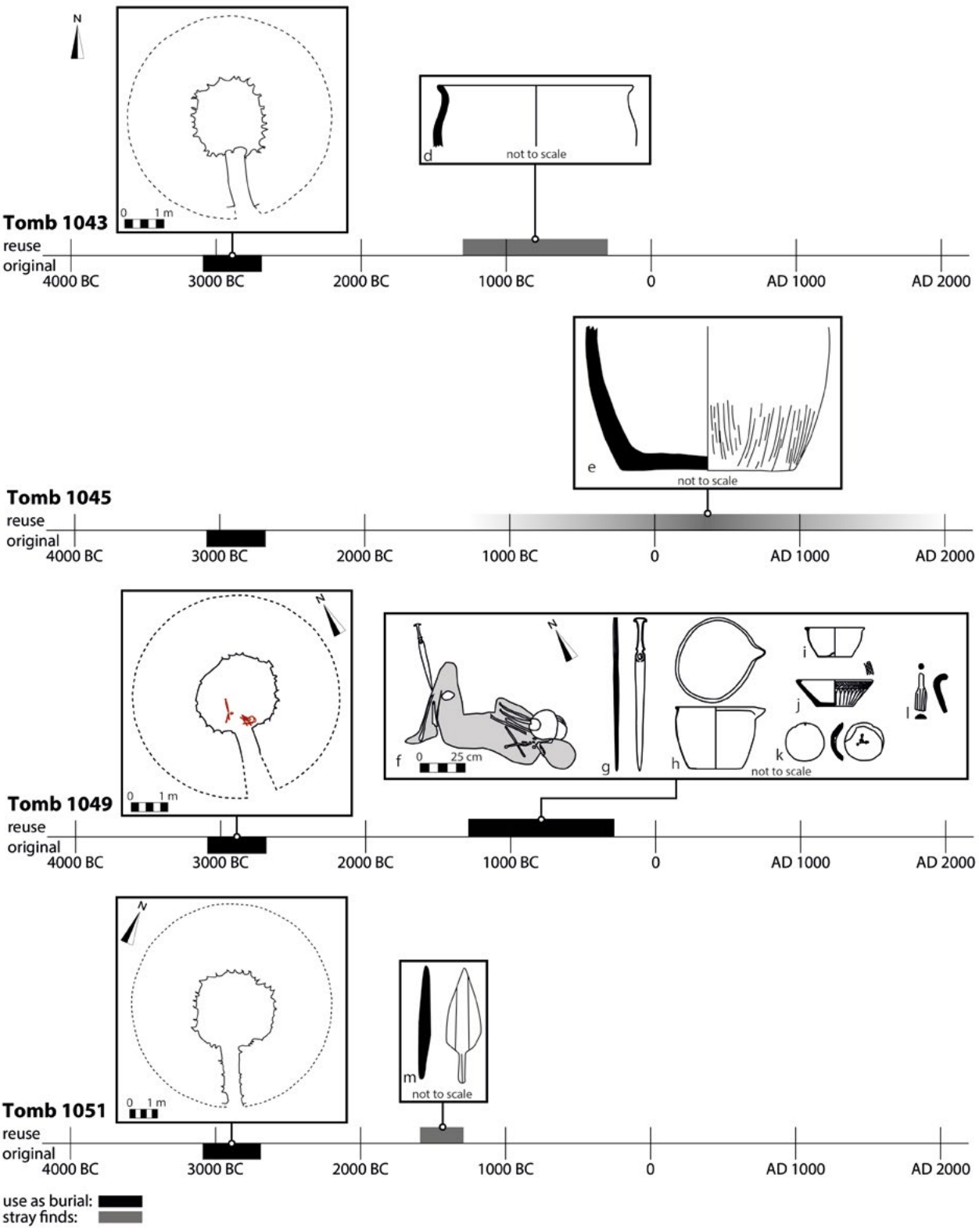
AD 1000
AD 2000
use as burial:
stray finds:


N
0 1 m
Tomb 1043
reuse
original
d
not to scale
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
Tomb 1045
e
not to scale
Tomb 1049
f
0 25 cm
g
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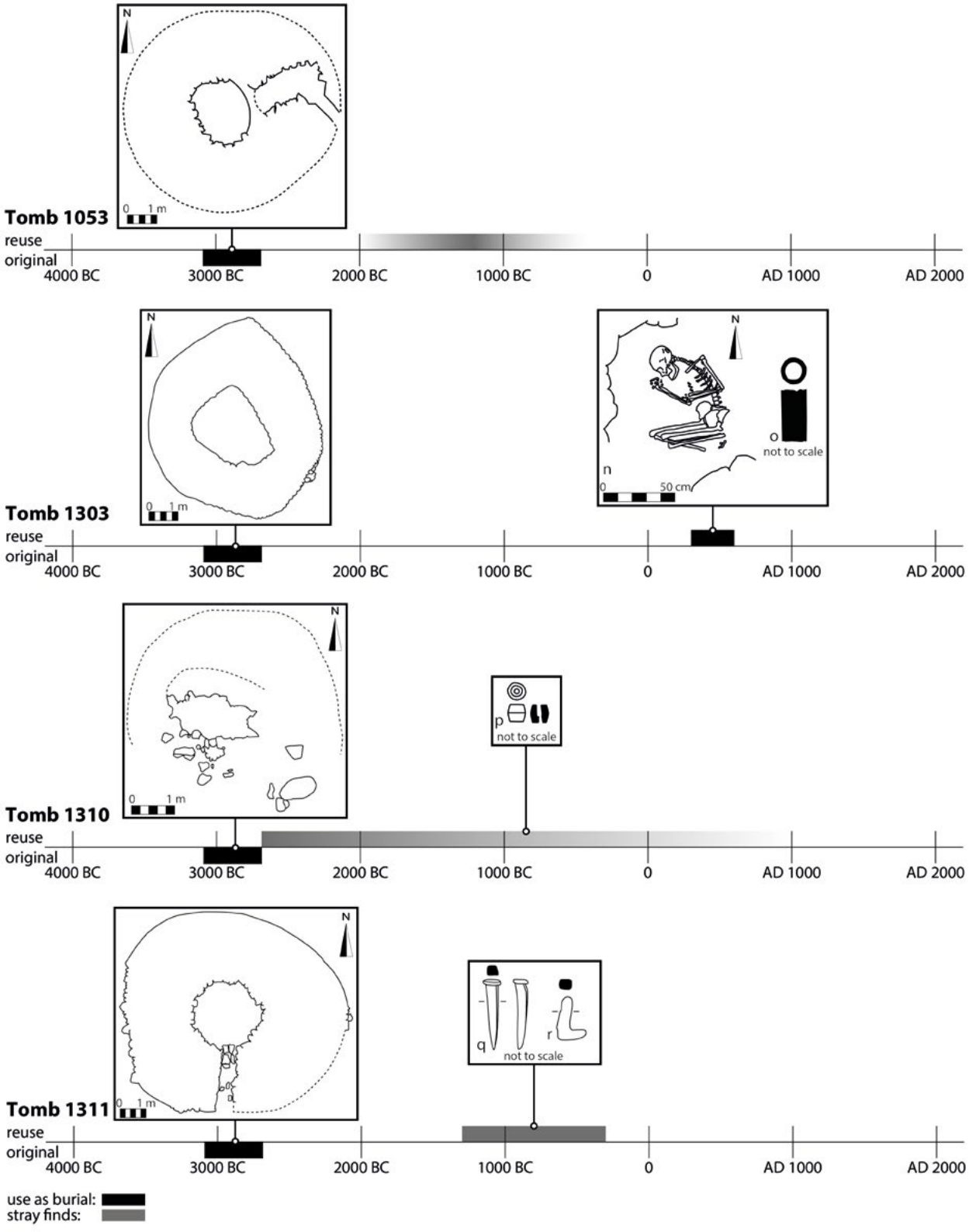
i
j
k
l
not to scale
Tomb 1051
m
not to scale
use as burial:
stray finds:


N
0 1 m
Tomb 1053
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
N
0 1 m
Tomb 1303
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
N
o
not to scale
n
0 50 cm
N
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p
not to scale
Tomb 1310
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
N
0 1 m
Tomb 1311
reuse
original
4000 BC
3000 BC
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use as burial:
stray finds:

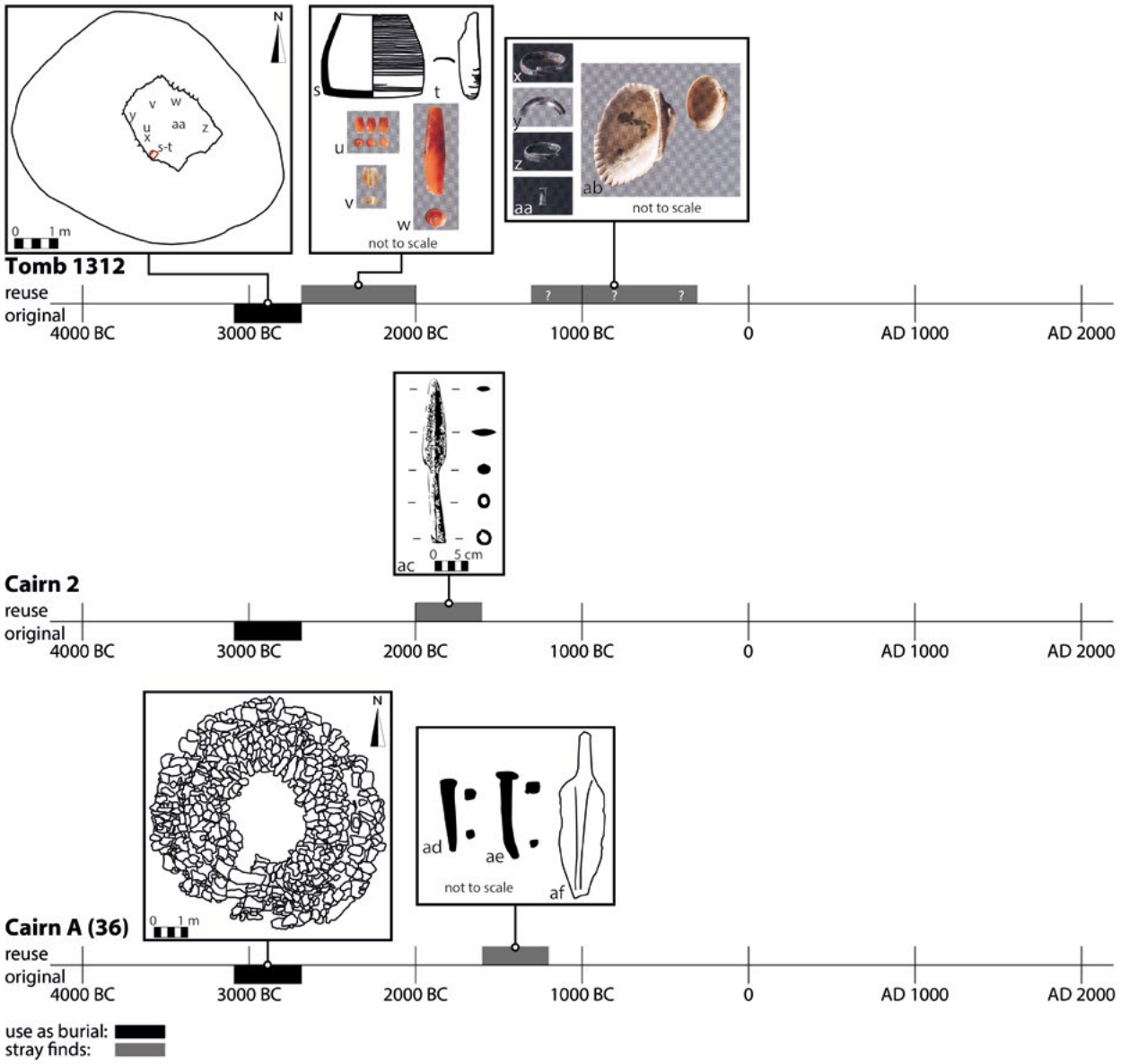


Fig. 25: Chronological timeframes of reused tombs at Jebel Hafit (adapted from Cleuziou 1977: pl. 16.1; Al-Tikriti 1981: pl. 53B-D; Cleuziou – Méry – Vogt 2011: fig. 14, Frifelt 1971: fig. 9, 14, 19E, 21D, Madsen 2017: fig. 129, 131–132, 146, 173, 203, 205, 208, 254, 261, 267, 270–271, 273, 277–287).

cording to Madsen,[919] the tomb resembled Wadi Suq or Iron Age cists. Fragments of two limb bones were found close to the southern chamber wall. ***Tomb 1303***, positioned on the western mountain ridge, has a rectangular chamber measuring 2.8 m in length and 2.2 m in width.[920] Approximately 0.8 to 1.0 m above the floor, a well-preserved skeleton of a young adult of about 20 years of age was recovered lying in a flexed position. The body was placed on the right side with the head towards the north (Fig. 25n). Above its right hand, a badly preserved iron object was found and another one at the feet (Fig. 25o). Possibly they belonged to a socketed spearhead and rivets. From the position of the skeleton, it is clear that it entered the tomb not through the passageway but through the ceiling. The tomb's reuse is compared by Madsen[921] to tombs from Jebel al-Emalah (chapter 4.1.15), which date to the Sasanian period. ***Tomb 1310*** was almost completely destroyed when excavated.[922] Besides typical Hafit period finds such as Jemdet Nasr pottery jars, a biconical carnelian bead (Fig. 25p) was found that, according to Madsen,[923] dates to after the Hafit period. About 30 cm above the floor of ***Tomb 1311*** a circular zone, 60 cm in diameter, where charcoal particles were

919 Madsen 2017: 115.
920 Madsen 2017: 130–135.
921 Madsen 2017: 221.
922 Madsen 2017: 159–164.
923 Madsen 2017: 220.

found, indicating the presence of a fireplace.[924] On its western side it was bordered by four stones. Some scattered finds, among them a glass bead, a thick copper nail (Fig. 25q) and a small bent copper rod (Fig. 25r), indicate, according to Madsen,[925] that the feature belonged to "very late", likely Iron Age, activities in the tomb. Most of the upper construction of ***Tomb 1312*** was already removed when excavated.[926] The chamber has a rectangular plan with a length of 2 m and a width of 1.6 m. Just above the bedrock, a complete Umm an-Nar period soft-stone beaker (Fig. 25s)[927] was found west of the entrance of the tomb with a jack-knife clam (Fig. 25t) resting in it. Other finds from the floor level were four carnelian beads (Fig. 25u, w) and one agate bead (Fig. 25v), likely also dating to the Umm an-Nar period. On an upper level, 0.5 m above the floor, additional finds were made that are, according to Madsen,[928] either of an Umm an-Nar or an Iron Age date. These are four copper rings (Fig. 25x–aa), three pottery sherds and one sherd from a soft-stone vessel. Mixed in the accumulation within and outside the tomb, further pottery sherds were recorded, some of them clearly dating to the Umm an-Nar period, a copper rivet and a seashell with traces of green, cupreous pigment, possibly eye-makeup (Fig. 25ab). ***Cairn 2*** from the French excavations is a typical Hafit period tomb with two external ring walls and an outer diameter of 7 m.[929] The burial chamber is more or less circular and measures 2.5 m in diameter. Within the fill, 20 cm above the floor, a socked spearhead made of copper was found (Fig. 25ac), indicating reuse of the tomb. It dates to the very end of the third millennium BC or to the beginning of the second millennium BC.[930] Differently to Lombard,[931] Cleuziou[932] argues that the spearhead does not date to the Iron Age as it is made of pure copper and not tin bronze as is usual for Iron Age spearheads. The Hafit period ***Cairn A*** (number 36) features a double ring wall and a circular burial chamber.[933] Besides Jemdet Nasr pottery sherds, two rivets (Fig. 25ad–ae), an arrowhead (Fig. 25f) and a collection of small copper alloy fragments were found, including very thin sheets together with fragments of pins.[934] This points towards reuse in the Late Bronze Age.[935]

4.1.23 Mazyad

Six Hafit period tombs were excavated by Frifelt in Mazyad (Tombs 1317–1321),[936] also referred to as Area D of the Jebel Hafit by Al-Tikriti, and another 12 or 13 by the Department of Antiquities and Tourism in Al-Ain between 1974 and 1975.[937] Frifelt mentions no signs of reuse in her reports, but at Tomb 1317 a stone slab pavement has possibly been added in front of the entrance at an unspecified point in time.[938] Additionally, a round Gulf seal was found within one of the cairns at Mazyad. According to Cleuziou,[939] it is comparable to Kjaerum's earlier group on Failaka and dates to the beginning of the second millennium BC (Fig. 26a). The excavations of the Department of Antiquities and Tourism remain unpublished, which makes it impossible to estimate the number of tombs reused at this site.

4.1.24 Qumayrah

A Polish team has been investigating the site of Qumayrah since 2015. Here, the Umm an-Nar period **Tomb QA 1-1** was excavated.[940] It has an external diameter of 10.8 m and was preserved up to 0.90 m above-ground level. The interior of the tomb is divided into four chambers. In the two quarters excavated to date, large quantities of human bones were found, in most cases disarticulated, as well as Umm an-Nar period pottery and

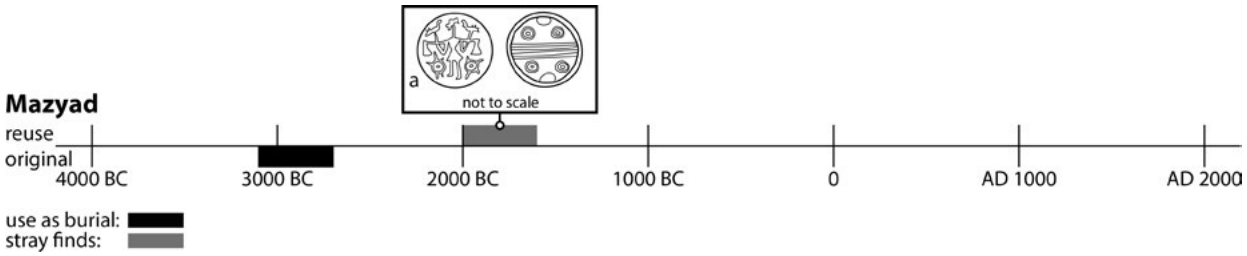


Fig. 26: Chronological timeframe of reused tomb at Mazyad (adapted from Cleuziou 1981: fig. 8).

924 Madsen 2017: 165–168.
925 Madsen 2017: 165, 221.
926 Madsen 2017: 169–172.
927 See also Vogt 1985: 87.
928 Madsen 2017: 170.
929 Cleuziou – Méry – Vogt 2011: 18–22.
930 Cleuziou 1977: 18; Cleuziou 1981: 285; Cleuziou – Méry – Vogt 2011: 32–35.
931 Lombard 1985: Tab. X.
932 Cleuziou 1981: 288.
933 Al-Tikriti 1981: 63–64.
934 Al-Tikriti 1981: 64.
935 Vogt 1985: 88.
936 Frifelt 1975b; Madsen 2017: 193–215.
937 Al-Tikriti 1981: 42, 63.
938 Madsen 2017: 235.
939 Cleuziou 1981: 285, fig. 8.
940 Rutkowski 2017; Rutkowski 2020.

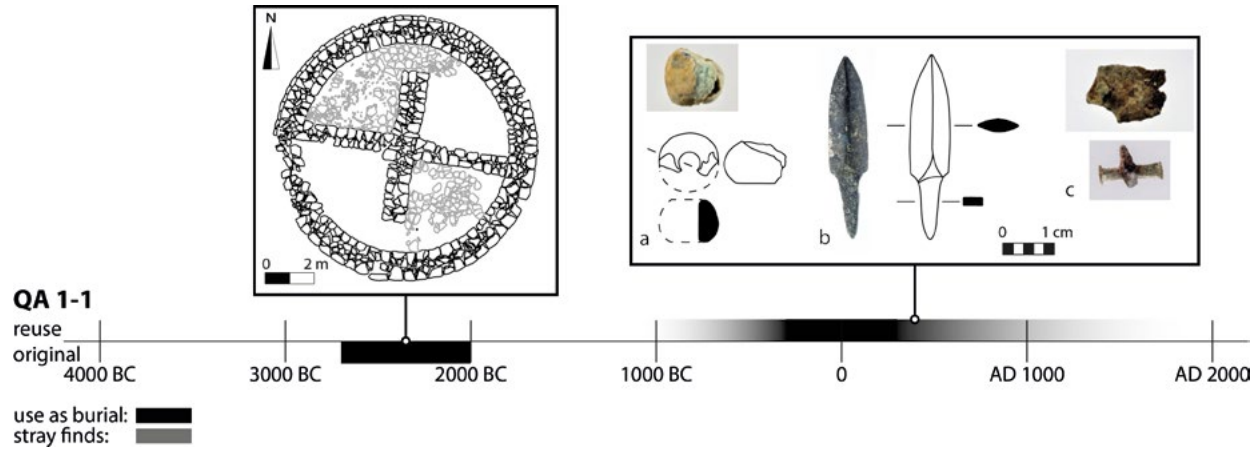


Fig. 27: Chronological timeframe of reused tomb at Qumayrah (adapted from Rutkowski 2017: fig. 12, 13; Rutkowski 2020: 309 fig. 3).

soft-stone vessels and beads. Among the beads there is one blue glass or frit bead that is clearly of a later date than the third millennium BC (Fig. 27a). The excavators compare it to the eye-beads that are known from the Iron Age onwards and were very popular in the Islamic period. There are also three Wadi Suq-style soft-stone vessels.[941]

Additionally, a complete copper alloy arrowhead (Fig. 27b) as well as riveted scraps of iron (Fig. 27c) were found, that both indicate later reuse, most likely in the Samad period. As there are no direct comparisons elsewhere for the arrowhead, only a generic comparison into the Iron Age is assumed by the excavator. The remains of an adult individual were found in the south-eastern quarter of the tomb, stratigraphically in the upper part of the chamber's fill. It was associated with a set of *Dentalium octangulatum* shell beads and a copper alloy rivet, which differs, according to the excavators, from the typical Umm an-Nar period grave goods from this tomb.[942] As objects of all periods from the Umm an-Nar to Samad period were found, the tomb could have been continuously used, but the individual burial from the upper layer speaks of at least one event of reuse.

4.1.25 Dhank

4.1.25.1 Al-Khutma

More than 120 tombs have been identified at the necropolis of Al-Khutma situated to the east of the modern town of Dhank. One tomb, ***Tomb S002-001***, was excavated by the SoBo project.[943] The tombs was constructed in the Hafit period to which the burial interred directly on the bedrock belongs. Radiocarbon dates from bioapatite of the bones of this skeleton date 2σ calibrated around 3340 to 3100 BC. Approximately 30 cm above this individual, another skeleton was found. It belongs to a subadult individual and was lying in a flexed position facing south with the hands near the chest. Eighteen beads of soft-stone, jade, quartz and hematite were interred with this individual (Fig. 28a). A radiocarbon date based on bioapatite from this skeleton gave a date of 2σ calibrated AD 255 to 410 in the Samad period.

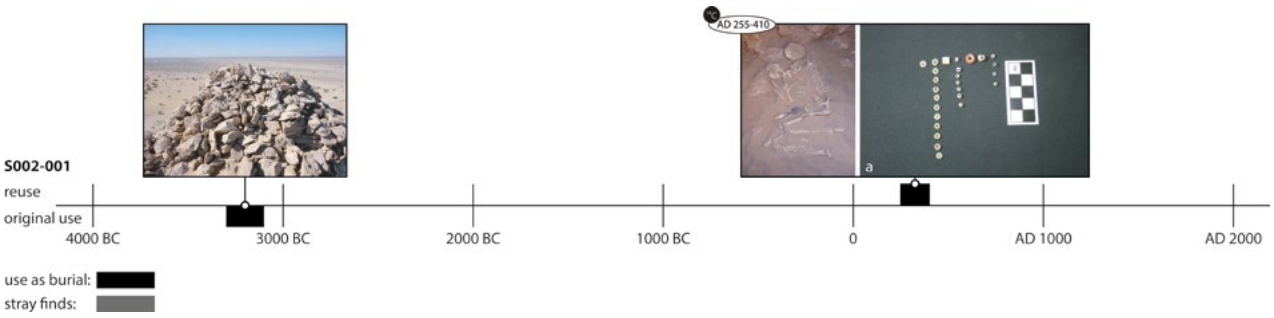


Fig. 28: Chronological timeframe of reused tomb at Al-Khutma (adapted from Williams – Gregoricka 2013: fig. 8b, 9, 10a).

941 Rutkowski 2020: 316 FN4.
942 Rutkowski 2020: 316.
943 Williams – Gregoricka 2013: 138–141.

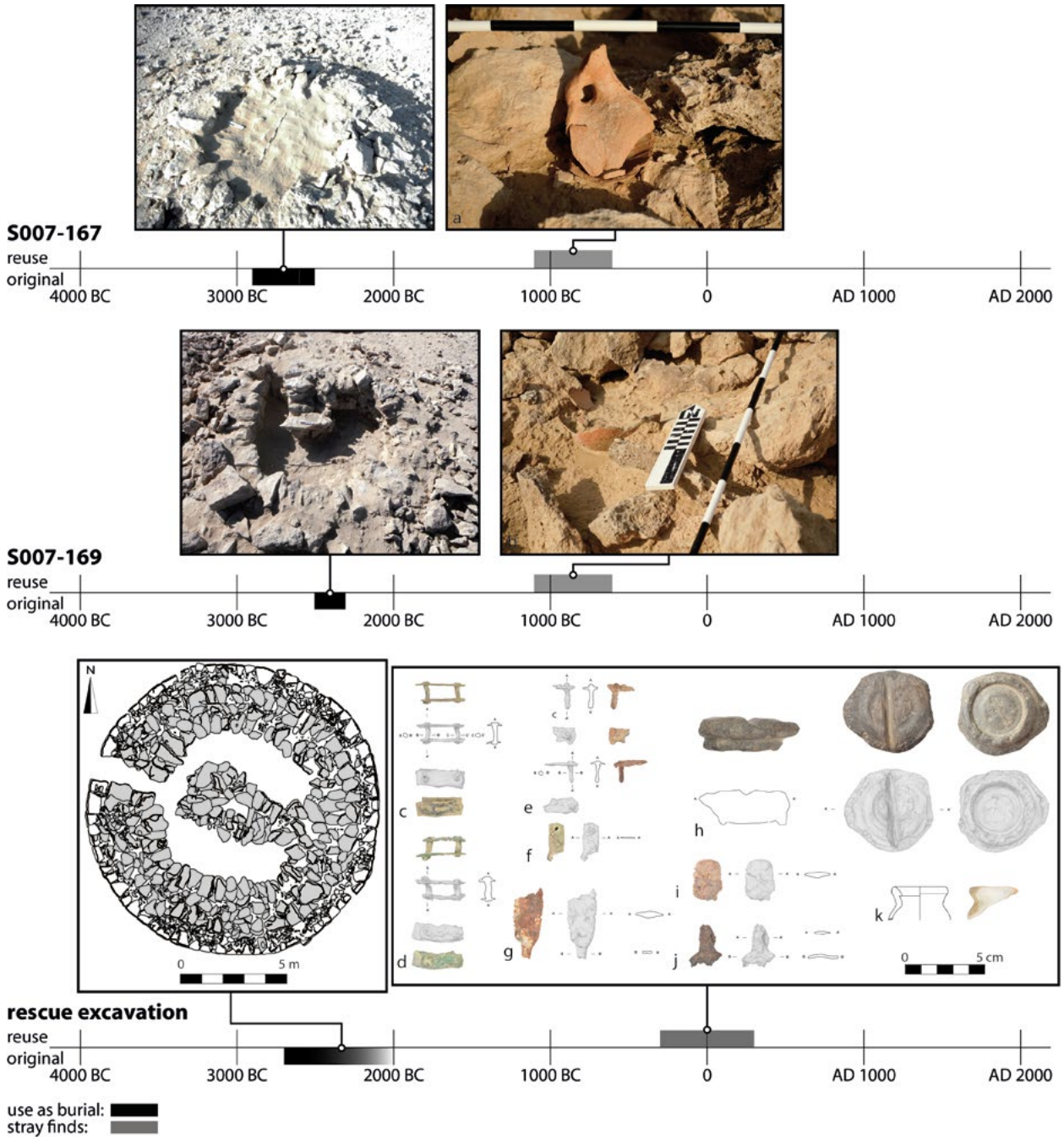


Fig. 29: Chronological timeframes of reused tombs at Khubayb (adapted from Döpper 2017: fig. 4, 9–10, 13–14; Williams – Gregoricka 2020: fig. 2–5).

4.1.25.2 Al-Khubayb

The Al-Khubayb necropolis is located approximately 11 km away from the town of Dhank and contains a total of more than 400 tombs. Four Hafit type cairns, two transitional tombs, i.e., tombs from the late Hafit or early Umm an-Nar period, and two tumuli were excavated by the SoBo project.[944] Tomb S007-167, constructed at the transition from the Hafit to the Umm an-Nar period, and Tomb S007-169, built during the Umm an-Nar period, were both reused in the Iron Age. Additionally, an early Umm an-Nar period tomb was subject of a rescue excavation, where the author participated, in connection with the construction of a new road near the village of Al-Khubayb in 2015.[945] This tomb was reused during the Samad period.

Tomb S007-167 is roughly circular in shape with a diameter of 3 m.[946] Its external walls are stepped and comprise of four courses of unworked stones with smaller

944 Williams – Gregoricka 2013: 141–146; Williams – Gregoricka 2019: 82–97; Williams – Gregoricka 2020: 105–110.

945 Döpper 2017.

946 Williams – Gregoricka 2020: 106–108.

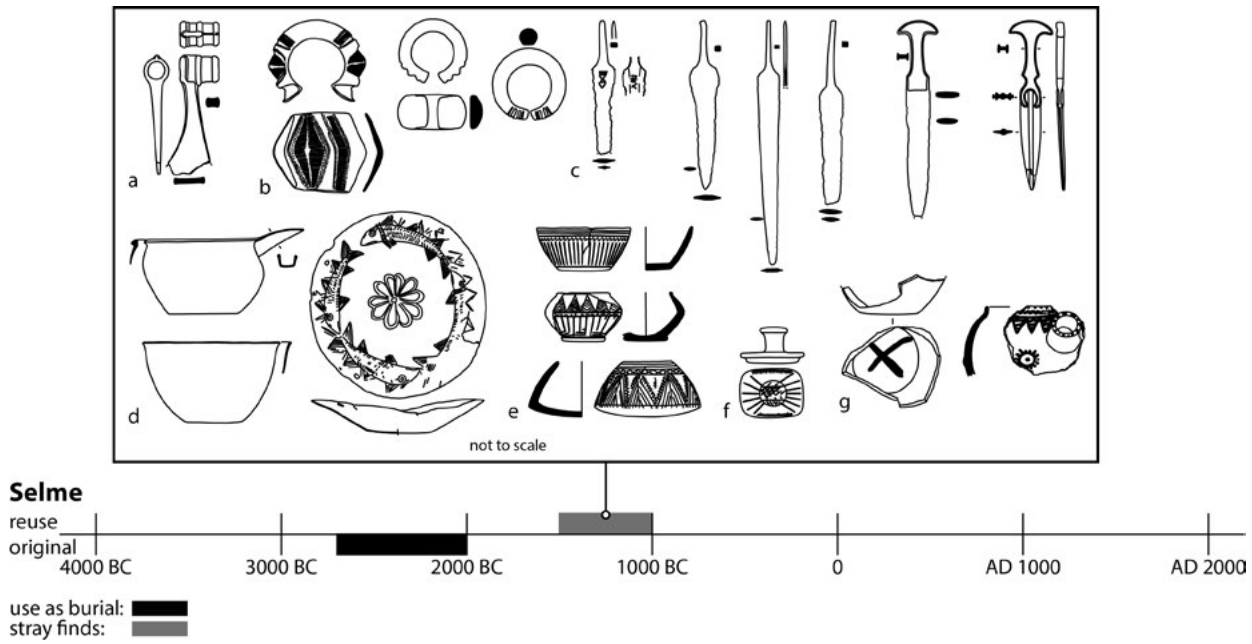


Fig. 30: Chronological timeframe of reused tomb at Selme (adapted from Yule – Weisgerber 2001: pl. 1.1, 3, 7–8, 12, pl. 2.19–20, pl. 3.37, 41, pl. 7.66, pl. 14.147, pl. 23.237, pl. 31.297, pl. 45.513, 515, pl. 46.522–523, pl. 50. 585–586).

stones filling the spaces between the ring walls. This tomb differs from the Hafit period cairns in the region as it is lacking corbelled walls. Bone samples from the adult individuals that were interred just beneath the capstone of the tomb produced radiocarbon dates in the early Umm an-Nar period between 2624–2479 cal. BC. On the bedrock floor, remains of the second individual were found, providing a slightly older Hafit period radiocarbon date of 2871–2583 cal. BC. According to Williams,[947] this indicates reuse of the tomb in the Umm an-Nar period, but as both time ranges overlap, it rather appears to be continuous use of a transitional tomb. On top of the exterior walls, several pieces of pottery including a bridge-spouted vessel from the Iron Age II (Fig. 29a) as well as small fragments of human and animal bones were discovered. Generally, Iron Age pottery sherds are a common feature found on top of tumuli tombs at the Al-Khubayb necropolis.[948] **Tomb S007-169** is another tomb similar in layout to Tomb S007-167, but with an external diameter of 6 m, it is larger.[949] It has a C-shaped burial chamber. One individual was interred in the tomb in a flexed position, providing a radiocarbon date of 2468–2300 cal. BC in the Umm an-Nar period. A base of a poorly fired redware ceramic vessel was discovered atop the centre capstone (Fig. 29b), and a white conus shell on the exterior western wall indicated, in comparison with Tomb S007-167, reuse in the Iron Age. The **tomb from the rescue excavation** has an external diameter of 5.45 m and is divided by an internal wall into two semi-circular chambers. Its façade is made of carefully dressed limestones. The entrance located in the northwest was found blocked. Finds occurred mixed throughout the fill with a concentration in the north-eastern quarter of the tomb, especially with the metal objects. They included one undiagnostic pottery sherd, flint tools, the base of a stone vessel that was reused as a polishing stone (Fig. 29h), the rim of a glass vessel (Fig. 29k), a seashell, copper alloy and iron rivets (Fig. 29c–f), fragments of iron arrowheads (Fig. 29g, i–j) as well as various metal scraps. All diagnostic finds have similarities to the Samad period. The human bones, belonging to at least two individuals of which one was below the age of 20, were in bad condition and none of them survived intact. Although no articulated skeleton could be found, the concentration of finds associated with human bones indicates that the tomb was reused as a burial site.

4.1.26 Selme

In 1979, Sheikh Abdullah brought large quantities of metal objects that he discovered on his farmland to the Ministry of Heritage and Culture (now Ministry of Heritage and Tourism) of the Sultanate of Oman.[950] Dressed stones, including sugar lumps collected in the vicinity of this finds, indicate that they originate from an Umm an-Nar period tomb. The date of the tomb is further supported by the discovery of Umm an-Nar period pottery

947 Williams – Gregoricka 2020: 107.
948 Williams – Gregoricka 2020: 106.
949 Williams – Gregoricka 2020: 108–110.
950 Yule – Weisgerber 2001.

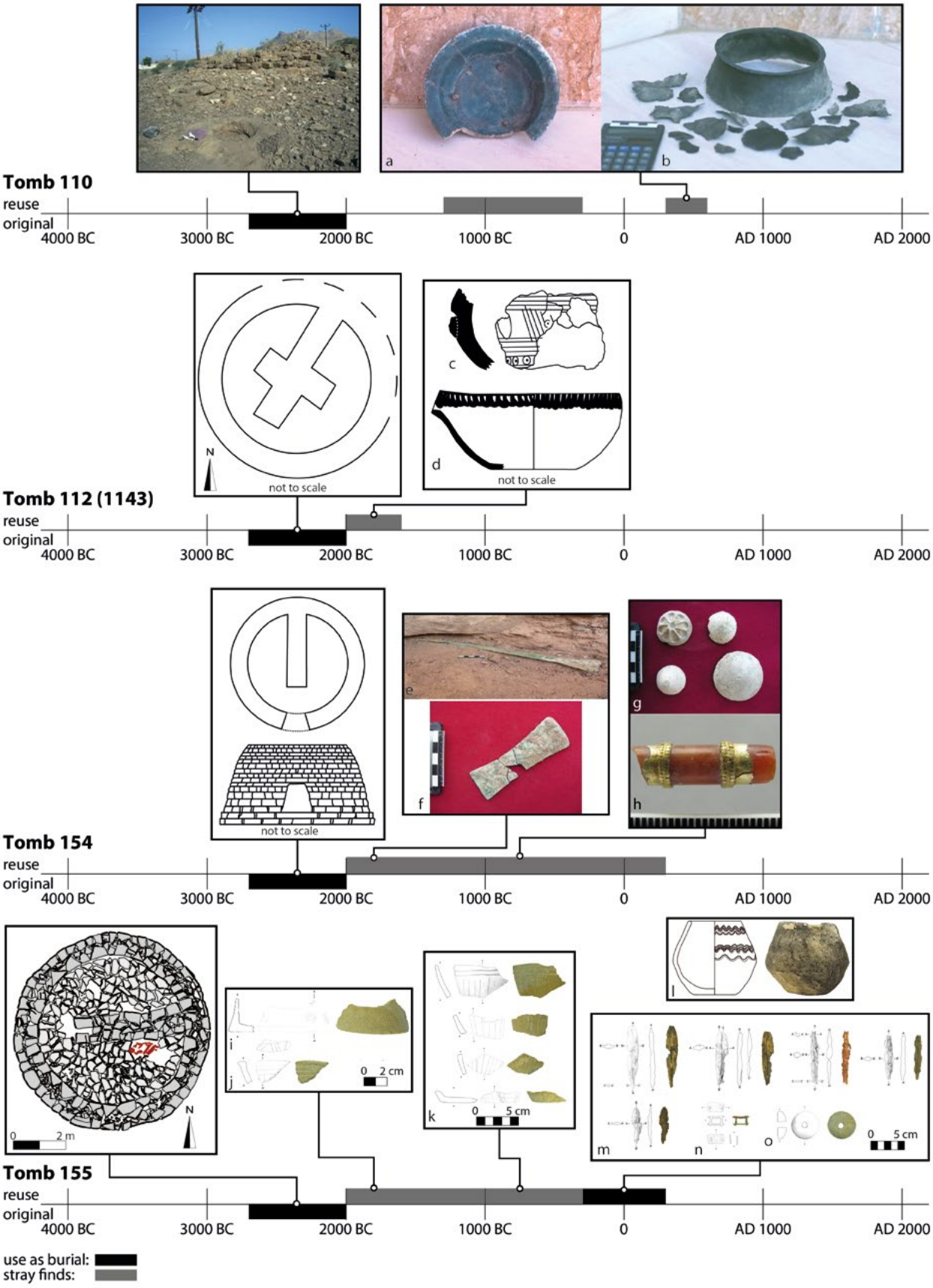
sherds. A second tomb of the same period was discovered close by, but also heavily affected by the agricultural work. Until 1986, several more artefacts were handed over to the ministry. This famous metal hoard of Ibri/Selme can be dated to the Late Bronze Age or Iron Age I period[951] and is a clear reuse of the tomb. It contained a shaft-hole axe (Fig. 30a), a spearhead, 101 bangles (Fig. 30b), 32 daggers and fragments thereof (Fig. 30c), more than 370 vessels (Fig. 30d) and fragments of copper, 15 soft-stone vessels (Fig. 30e), lids (Fig. 30f) and fragments, as well as four pottery vessels (Fig. 30g). Yule[952] assumes that it was a grave robber's hoard, an interpretation that must remain pure speculation (see also chapter 6.1.1).

4.1.27 Bat

A total of 19 tombs were excavated by Danish, German, Japanese and American missions since 1972 in the necropolis of Bat, which incorporates several hundred tombs, mainly from the third millennium BC.[953] These are three Hafit period tombs, two Umm an-Nar period tombs, one Wadi Suq period tomb and five Iron Age tombs, the latter including a burial of a camel. Furthermore, Tomb 903 could either be of a second millennium BC date or belong to the Samad period.[954] Some of the younger tombs used stones of the third millennium BC tombs in their construction.[955] In addition to the non-reused tomb there is one Hafit period tomb (Tomb 110) that was reused in the Sasanian period, two Hafit period tombs (Tombs 601 and 603) that yielded Umm an-Nar or possibly Wadi Suq period finds, one Umm an-Nar period tomb (Tomb 112) that was used in the Wadi Suq period, one Umm an-Nar period tomb (Tomb 154) in the Wadi Suq period and the Iron Age, two Umm an-Nar period tombs (Tombs 155 and 156) in the Wadi Suq period, Iron Age and Samad period and one Umm an-Nar period tomb (Tomb 301) which yielded pottery sherds from the 11th century AD. In addition, the excavators of the Wadi Suq period tomb suspect that the interment could be of a younger date due to the complete lack of grave goods.[956]

In 2005, a few meters to the south of the Umm an-Nar period ***Tomb 110***, the German Mining Museum Bochum excavated a small pit, Tomb 110C, containing a metal needle with a broken eye, a fragmentary copper-alloy vessel (Fig. 31a) and a small, blue glazed ceramic bowl (Fig. 31b).[957] The bowl gave a date to the inventory to the Sasanian period. As no skeletal remains were present, the excavators interpret the finds as an offering, likely to one of the burials within the tomb. Tomb 110 itself has not been investigated, but surface survey recorded a copper alloy arrowhead, as well as Iron Age pottery sherds, indicating reuse.[958] The Umm an-Nar period ***Tomb 112*** (no. 1143 in Frifelt's numbering), excavated by Frifelt in 1972/1973, yielded, besides Umm an-Nar period finds, a fragment of a soft-stone suspension vessel with incised lines and dotted circles (Fig. 31c) and a rim-spouted bowl of a coarse grit-tempered ware (Fig. 31d).[959] Both date to the Wadi Suq period. Whether this represents reuse or continuous use remains unclear. The Umm an-Nar period ***Tomb 154*** (no. 1144 in Frifelt's numbering) was investigated between 2007 and 2008 by the German Mining Museum Bochum.[960] At the beginning of their work, the exterior wall of the tomb was preserved to a height of 1.80 m. The fill of the tomb was excavated in four quadrants. In the sections, it became clear that the fill was disturbed by several occasions of re-digging. The external façade of white sugar lump stones was reopened at some point in time close to the entrance and then closed again in a less careful manner using stones that can be attributed by their size to the upper layers of the tomb.[961] The excavators see this as a suggestion of grave robbing (but see chapter 6.1.1) or as measurement to reuse the tomb for burials and as an explanation for finding objects from the Bronze and Iron Age mixed together in the same layers.[962] Finds from the tomb are not yet fully published, but include, besides the rich inventory of the Umm an-Nar period, a Wadi Suq period razor blade (Fig. 31f),[963] a Late Bronze Age triangular copper sword with several rivet holes at the end for the handle (Fig. 31e),[964] a second millennium BC cylinder seal,[965] fragments of Iron Age soft-stone vessels,[966] a variety of different types of copper alloy arrowheads,[967] a granulated gold bead (Fig. 31h),[968] Iron Age carnelian pendants[969] and inlayed shell discs (Fig. 31g).[970] Additionally, at least one iron ar-

951 Weisgerber – Yule 1989; Weisgerber 1991; Carter 1997: 42–43; Yule 2001: 379–381; Yule – Weisgerber 2001.
952 Yule 2001: 381.
953 Frifelt 1974; Frifelt 1975b; Frifelt 1976; Böhme – Heckes – Weisgerber 2008; Nette 2008b; Nette 2008a; Weisgerber – Böhme – Heckes 2008; Böhme 2011; Böhme – Ali Al-Sabri 2011; Döpper – Schmidt 2011; Döpper – Schmidt 2013; Döpper 2014; Schmidt – Döpper 2014; Döpper 2015; Williams – Gregoricka 2016.
954 Weisgerber – Böhme – Heckes 2008: 12.
955 Yule 2001: 368.
956 Williams – Gregoricka 2016: 308.
957 Weisgerber 2010b.
958 Weisgerber *et al.* 2005.
959 Frifelt 1974: 29; Frifelt 1975a: 389, fig. 28f, fig. 29d.
960 Böhme – Heckes – Weisgerber 2008: 22–29; Böhme 2012b.
961 Böhme 2009.
962 Weisgerber – Böhme – Heckes 2007: 7.
963 Weisgerber 2010a.
964 Böhme – Heckes – Weisgerber 2008: 25; Weisgerber 2010a.
965 Weisgerber 2010a.
966 Böhme – Heckes – Weisgerber 2008: 30.
967 Böhme – Heckes – Weisgerber 2008: 30.
968 Böhme – Heckes – Weisgerber 2008: 31.
969 Böhme – Heckes – Weisgerber 2008: 29.
970 Böhme – Heckes – Weisgerber 2008: 32.


Tomb 110
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
a
b
Tomb 112 (1143)
N
not to scale
c
d
not to scale
Tomb 154
not to scale
e
f
g
h
Tomb 155
0 2 m
N
i
j
0 2 cm
k
0 5 cm
l
m
n
o
0 5 cm
use as burial:
stray finds:

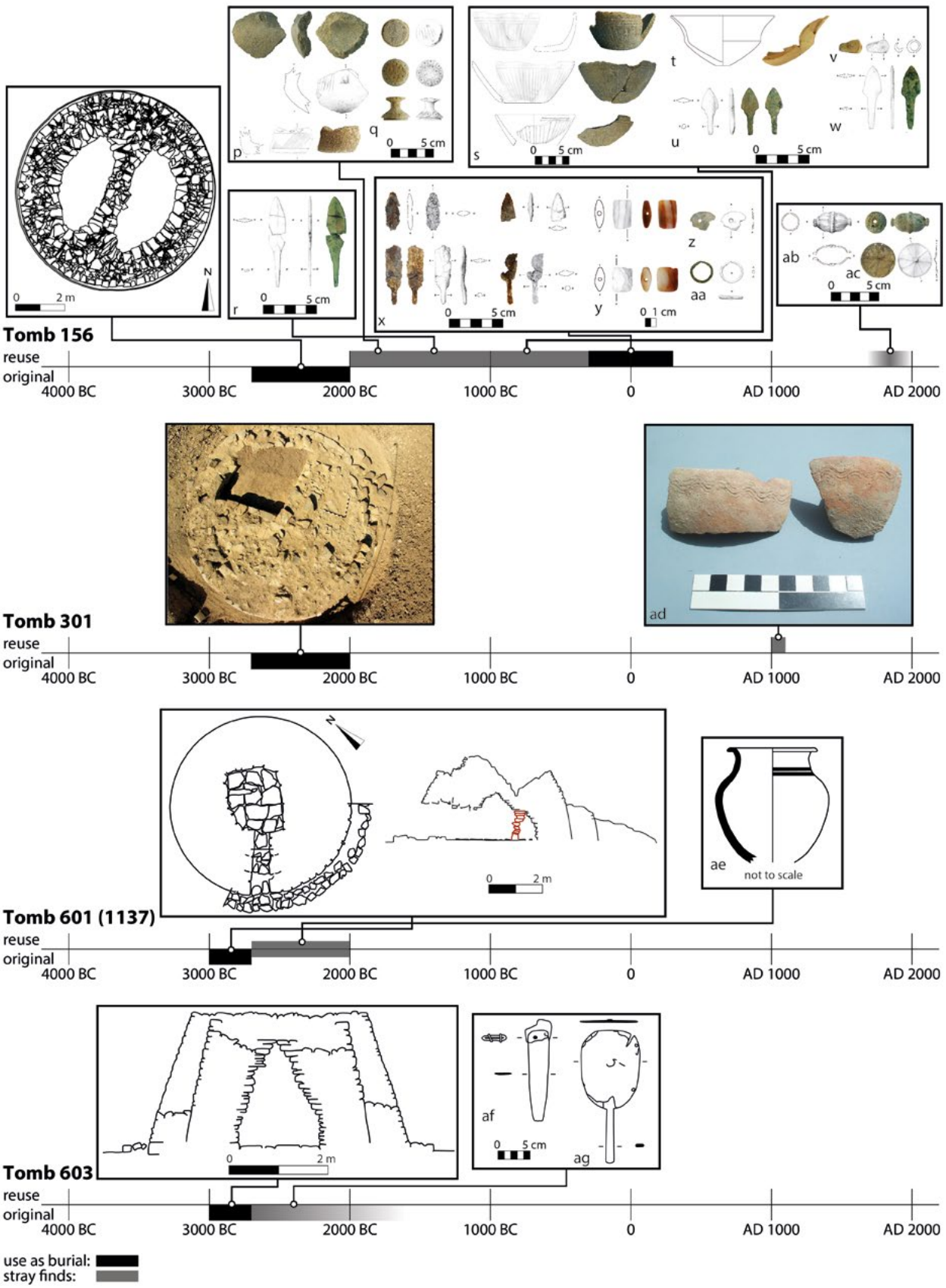


Fig. 31: Chronological timeframes of reused tombs at Bat (adapted from Frifelt 1975a: fig. 6, 8, 28c, f, 29d; Nette 2008a: fig. 14, 25; Weisgerber – Böhme – Heckes 2008: 25, 33–34; Böhme 2011: fig. 2–3).

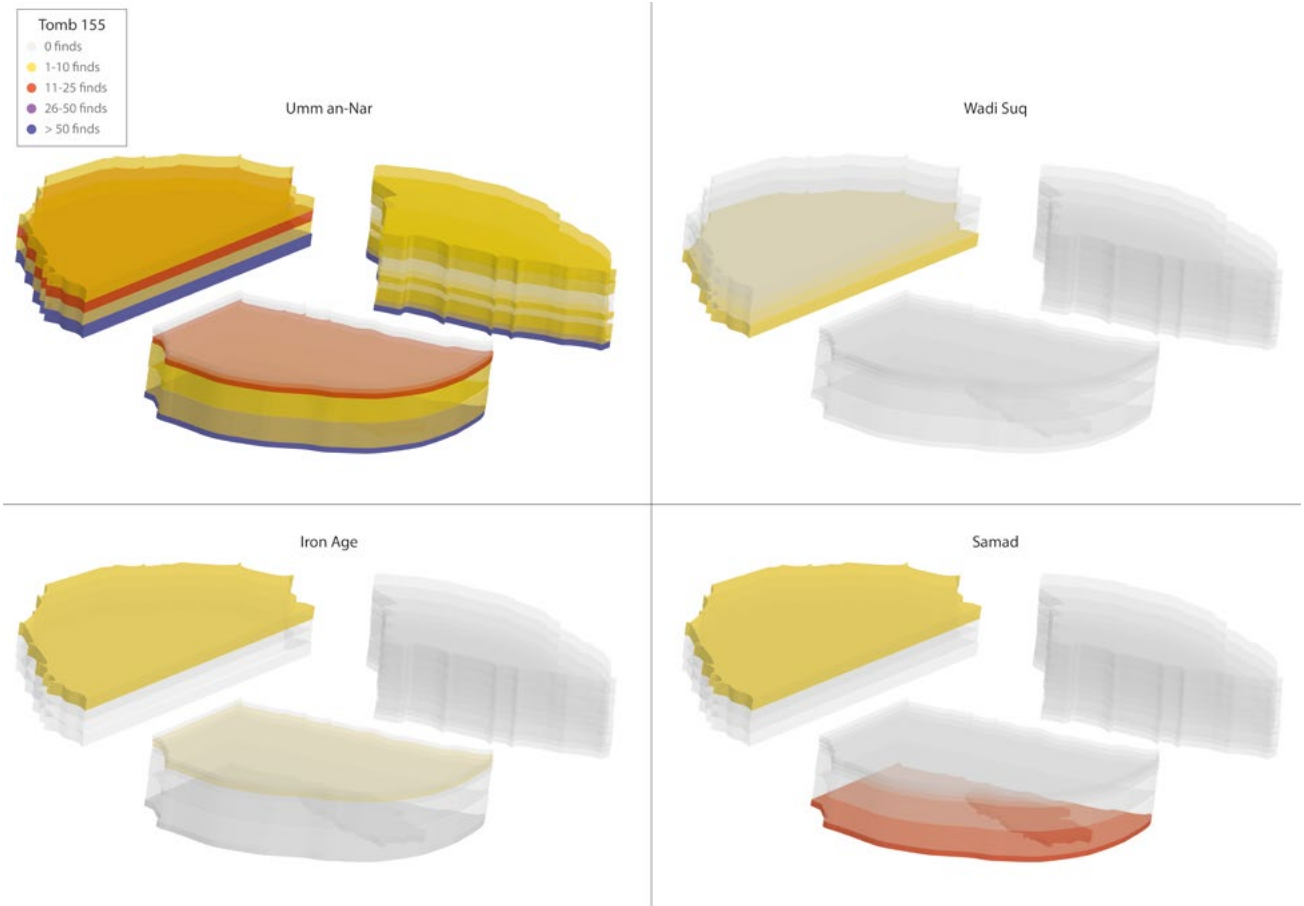


Fig. 32: Distribution of finds according to period in Tomb 155.

rowhead was found, indicating that reuse also occurred during the Samad period. Located approximately 7 m to the south-east of Tomb 154 lies ***Tomb 155***. This Umm an-Nar period tomb with an external diameter of 7.5 m was excavated by the University of Tübingen between 2013 and 2014 with participation of the author.[971] Besides large numbers of Umm an-Nar period finds, Wadi Suq, Iron Age and Samad period material was present as well. The Wadi Suq period material includes a soft-stone base (Fig. 31i) and an incised soft-stone rim sherd (Fig. 31j). They originate from the lowest layer in the western half of the tomb close to the entrance (Fig. 32). The small quantity of Wadi Suq period finds might be a hint that the tomb was continuously used into the Wadi Suq period rather than reused. Other soft-stone vessels can be dated to the Iron Age (Fig. 31k). A soft-stone spindle whorl (Fig. 31o) is comparable to finds from Iron Age and PIR/Samad contexts,[972] and most likely dates to the Samad period.[973] A complete pottery cup with incised decoration (Fig. 31l) is also clearly of a later date than the Bronze Age, although no exact parallels are known. The same is true for three coarse mineral tempered pottery sherds. Of special interest is a complete inhumation from the Samad period. In the south-eastern part of the wall along the internal dividing wall, a gap of 1.6 × 1.0 m was recorded in the stone-paved floor. Here, a complete skeleton in a flexed position was interred (Fig. 31, marked in red). The head of the skeleton was pointing to the west. The individual was associated with many iron objects including at least five arrowheads (Fig. 31m) and a rivet (Fig. 31n). The skeleton belongs to, most likely, a female adult between 18 and 25 years of age. The complete pottery cup was possibly placed intentionally on the top of the remains of the tomb at the time of the Samad period inhumation.

Belonging to the same ensemble as Tombs 154 and 155 is the Umm an-Nar period ***Tomb 156***, situated about 10 m to the north-west of Tomb 155. The tomb, with an external diameter of 8.10 m, is divided into two semi-circular chambers, each with its own entrance. In 2008 the German Mining Museum Bochum excavated the exterior of the tomb and restored its outer façade.[974] The untouched interior of the tomb was investigated between 2010 and 2011 by the University of Tübingen, with participation of the author.[975] Within the mixed fill of the

971 Döpper 2021b.
972 Boucharlat – Lombard 1985: pl. 61.8–9; Al-Tikriti 1989a: 107 Taf. 77D; Costa *et al.* 1999: 67 fig. 21.122.
973 Yule 2001: 123.
974 Böhme – Heckes – Weisgerber 2008.
975 Döpper 2021b.

tomb, objects from various periods were encountered. A complete soft-stone lid (Fig. 31q), as well as two other soft-stone fragments (Fig. 31p), date to the Wadi Suq period. Other Wadi Suq period finds were found at different levels in Tomb 156, but generally in small numbers. Thus, both continuous use from the Umm an-Nar to the Wadi Suq period as well as reuse in the Wadi Suq period is possible. The copper alloy arrowhead BAT11A-i0269 (Fig. 31u) can be dated to the Late Bronze or Iron Age,[976] the copper alloy arrowhead BAT11A-i0427 (Fig. 31r) seems to be a Late Bronze Age type.[977] Other Iron Age finds include fragments of four stylistically very similar soft-stone bowls (Fig. 31s) and a specific type of pottery vessel, an Achaemenid Cream Bowl (Fig. 31t) dating to the Iron Age III. Additionally, all 117 coarse mineral or chaff tempered pottery sherds must post-date the Bronze Age. Iron Age finds come exclusively from the middle and lower layers of Room B, and none were discovered in Room A (Fig. 33). Outside of the eastern entrance a small assemblage of Iron Age pottery sherds were found as well as a small pit with burned animal bones of sheep or goat, which could date to the Iron Age as well.[978] Samad period finds are the most numerous and include ten iron arrowheads (Fig. 31x), rivets with iron pins or sheets, as well as several iron fragments. The copper alloy rings (Fig. 31aa) have close similarities to Samad period contexts.[979] The same is true for some long rectangular beads (Fig. 31y)[980] and an oval mother of pearl pendant (Fig. 31z).[981]Additionally, two copper alloy arrowheads (Fig. 31w) and a conical object of disputed function (Fig. 31v), possibly a hilt or pulley,[982] could be of an Iron Age or Samad period date. During the excavations of the German Mining Museum, a Samad period burial (Tomb 156W) was encountered on top of a collapsed part of the external wall, comparable to that of Tomb 155.[983] The skeleton was in a flexed position with the right arm stretched out before the skull.[984] Grave goods that accompanied the skeleton included six iron arrowheads, five metal rivets, an iron blade, likely of a dagger, as well as two stone beads.[985] On the basis of the grave goods, the excavators assume that the buried individual was male,[986] but when considering the reuse burial from Tomb 155, this need not be the case. The distribution of Samad period finds reveals a clear distinction between both chambers of the tomb. While in Room A only a few finds were found in the lowest layers of the southern half, and their concentration is much higher in Room B. Seventy finds in total come from two layers in the northern part of this room alone. This is interesting insofar as the secondary burial was discovered by the German Mining Museum in another part of the tomb. Most likely there was another secondary burial in the northern part of Room B, which could, due to later activities, not be identified as such. Two other objects, a large copper alloy bead (Fig. 31ab) and a decorated copper alloy disc (Fig. 31ac), which are typical for modern Bedouin jewellery of the region, were found in the tomb as well, indicating that reuse occurred also in Late Islamic to modern times.

Another Umm an-Nar period tomb, ***Tomb 301***,[987] of which one quarter was excavated by the German Mining Museum in 2008, shows some sings of reuse. Two pottery sherds were found with a wavy line pattern (Fig. 31ad) that dates, according to the excavators, to the 11th century AD.[988] A red glass pearl, which was found in the same context, could be of a comparable date. The Hafit period ***Tomb 601*** (no. 1137 in Frifelt's numbering) has a diameter of 7 to 8 m and a wall thickness of 2.5 m.[989] It was accessible via a triangular entrance in the south-west. Within its fill, two fragments of a Black-on-Red pottery jar (Fig. 31ae) were found.[990] One fragment originates from the passage, and the other comes, together with a biconical bead of mottled black-green serpentine, from the western and southern part of the chamber. They were associated with a few badly preserved human bone fragments that could either belong to the original burials in the Hafit period tomb or to the reuse in the Umm an-Nar period. Böhme[991] interprets this as continuous use rather than reuse of the tomb, but reuse seems equally likely. There is an inner dividing wall in the chamber (Fig. 31, marked in red) that is associated by Frifelt[992] with the original construction of the tomb in order to support the corbelled roof, but more recent investigations demonstrate that it is a later addition to the architecture of the tomb.[993] Another Hafit period tomb with indications of reuse is ***Tomb 603***.[994] This tomb measures 5.3 to 5.7 m in diameter and is thus slightly oval. It has an oval grave chamber with a stone-paved floor. The dimensions of the grave chamber are 1.6 × 2.4 m. Within the accumulations, a copper alloy plate with a handle (Fig.

976 Yule 2001: 102–109, 105 Abb. 5.10.1.
977 See comparisons in Vogt – Franke-Vogt 1987: fig. 21.2; Weisgerber 1991: 323 Abb. 2.5–6; Yule 2001: 108.
978 Böhme – Heckes – Weisgerber 2008: 65.
979 Donaldson 1984: 307 fig. 27.26; Al-Tikriti 1989a: 106–107, Taf. 77B; Lecomte – Boucharlat – Culas 1989: 47 fig. AI.2, 5; Yule 2001: 116, 240, Taf. 58, 101.1, 498.15–17, 26.27.
980 Yule 2001: Taf. 89.2.1, Taf. 90.4, Taf. 441.1.10.
981 Yule 2001: Taf. 203.4.
982 Vogt – Franke-Vogt 1987: 32–33; Yule 2001: 299; Barker 2004: 115–116.
983 Böhme – Heckes – Weisgerber 2008: 65.
984 Nette 2008b.
985 Nette 2008b; Weisgerber – Böhme – Heckes 2008: 9–10.
986 Nette 2008b.
987 Nette 2008a.
988 Nette 2008a: fig. 25.
989 Frifelt 1975a: 383–386.
990 Frifelt 1975a: 385-386, fig. 28c.
991 Böhme 2009.
992 Frifelt 1975a: 384.
993 Böhme 2011: 1 footnote 3.
994 Böhme 2011.

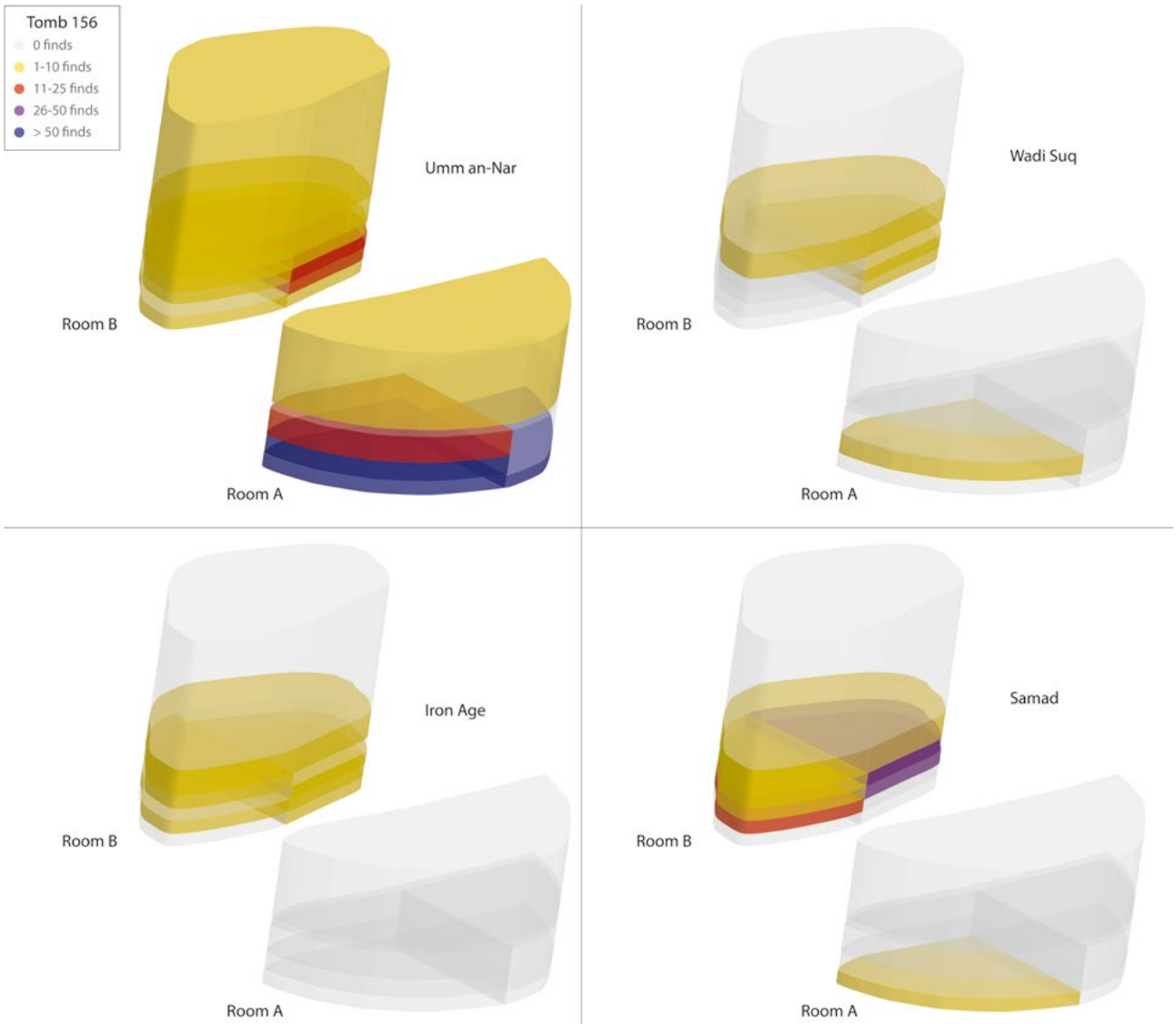


Fig. 33: Distribution of finds according to period in Tomb 156.

31af) was discovered, that is of an Umm an-Nar or Wadi Suq period date.[995] Additionally, a dagger (Fig. 31ag), possibly also of an Umm an-Nar period date, originates form the tomb. The dagger was broken at its point and a notch was cut in the plate. Böhme[996] interprets this as intentional damage to disable it as a weapon and deprive the instrument of its function. He sees in both finds an intentional deposition in the earlier tomb.

Interestingly, the reuse of monuments in Bat as a burial place for later periods does not seem to restrict itself to tombs. During the investigations of the Umm an-Nar period Tower 1145, several soft-stone objects were found as well as three arrowheads that all date to the second millennium BC.[997] According to Carter,[998] these objects may represent the grave goods of an intrusive burial.

4.1.28 Al-Ayn

The tombs of Al-Ayn were first mentioned by de Cardi, Collier and Doe in 1976.[999] In 2010 and 2011, two of the 19 tombs of the main group of tombs at Al-Ayn were excavated by the University of Tübingen with participation of the author.[1000] While Tomb 06 only yielded finds from the Hafit period, including a sherd of a Jemdet Nasr pottery jar, Tomb 07 shows signs of reuse in an unspecified, later period.

995 Weisgerber 2010a; Böhme 2011: 5.
996 Böhme 2011: 6.
997 Frifelt 1976: 59, 65, fig. 4.
998 Carter 1997: 42.
999 De Cardi – Collier – Doe 1976: 168–169.
1000 Döpper 2021b.

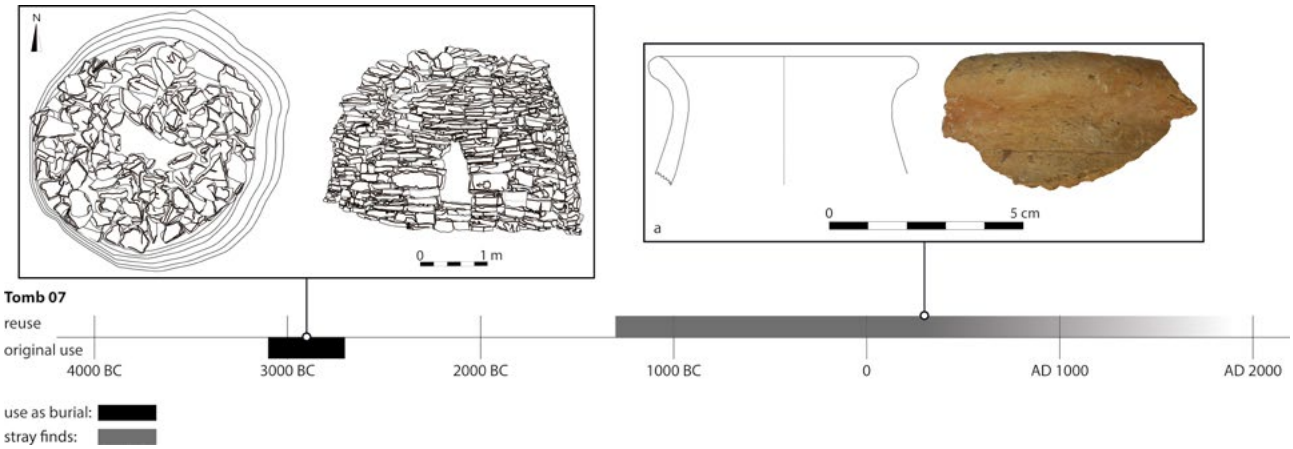


Fig. 34: Chronological timeframe of reused tomb at Al-Ayn.

Tomb 07 has a single external ring wall with a diameter of 3.85 m and is accessible through a rectangular entrance, which was partially blocked by carefully placed stones (Fig. 34). Accumulations within the tomb were 50 cm high. A total of 62 beads, two copper alloy rings, two copper alloy pins, a copper alloy sheet, a seashell and several pottery sherds were found. Unfortunately, none of the finds are diagnostic but at least the pottery sherds clearly post-date the Bronze Age due to their coarse mineral and chaff tempers (Fig. 34a).

4.1.29 Amlah

In winter 1975/1976, the British Archaeological Expedition excavated the largest out of four third millennium BC tombs at the site of Amlah-1, a low mound of 38 m by 22 m.[1001] The diameter of the tomb is 8.3 m and it features an inner and an outer wall with a boulder fill as is typical for the Umm an-Nar period. Fragments of white stones, apparently chippings from ashlar facings of the tomb, were found nearby. The floor of the tomb consists of cobbles. Generally, the tomb suffered severely from later removal of stones. Finds included human remains, three beads, fragments of alabaster and soft-stone bowls, several shells, pieces of very corroded metal objects as well as typical Umm an-Nar period pottery including Black-on-Grey ware. However, Iron Age pottery, mainly bowls, was attested as well, indicating later reuse (Fig. 35a–e).[1002]

4.1.30 Bisya

According to Vogt,[1003] one of the unpublished Umm an-Nar period tombs in the Wadi Bahla contained typical Wadi Suq period painted sherds and several metal objects that are also of a probable Wadi Suq and Late Bronze Age date. These include triangular sword blades with rivets and spearheads. In addition, a small, square stamp seal with the image of a zebu and a scorpion was found. The

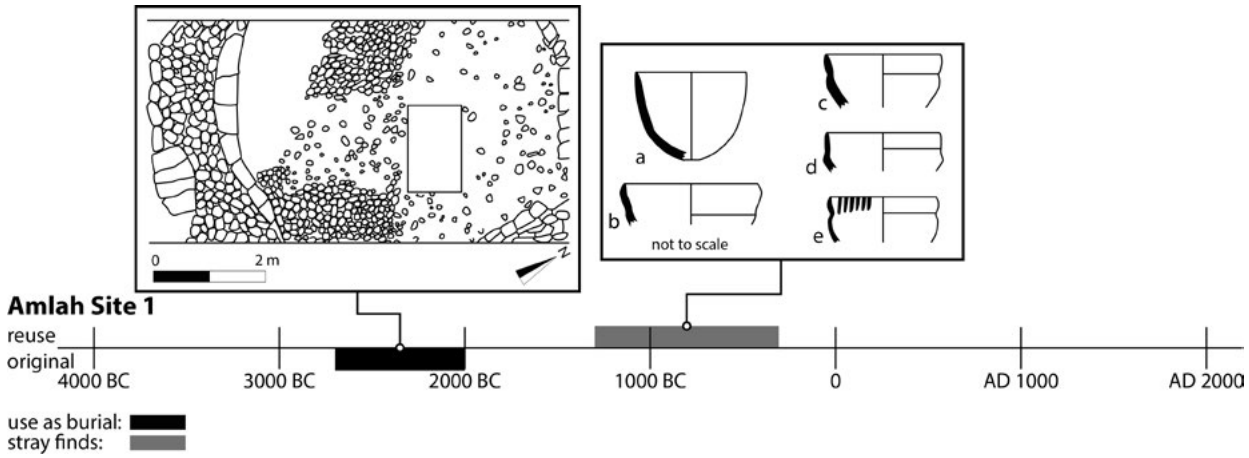


Fig. 35: Chronological timeframe of reused tomb at Amlah (adapted from de Cardi – Collier – Doe 1976b: fig. 5, 18.83–87).

1001 De Cardi – Collier – Doe 1976: 104–107, 165.

1002 De Cardi – Collier – Doe 1976: 128–129; Lombard 1985: 140, tab. 10.

1003 Vogt 1985: 185.

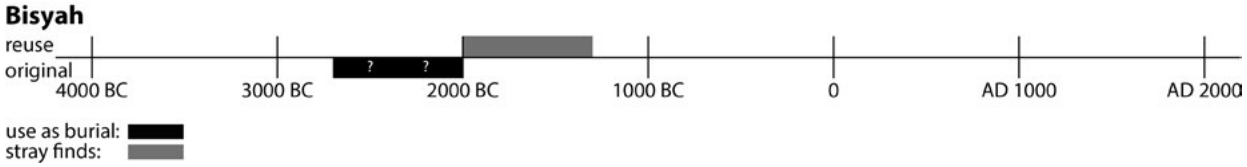


Fig. 36: Chronological timeframe of reused tomb at Bisya.

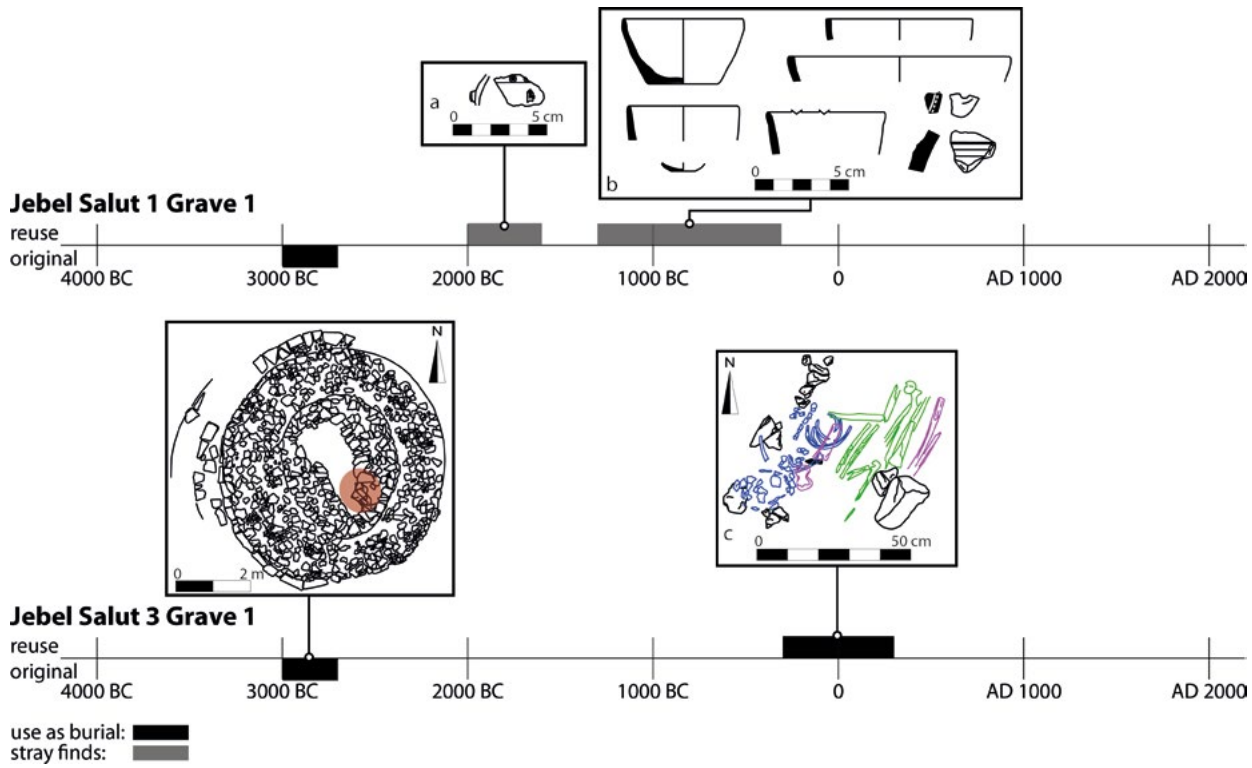


Fig. 37: Chronological timeframes of reused tombs at Jebel Salut (adapted from Condoluci – Degli Esposti 2015: pl. 2, 3, pl. 17.79, 18, 19). Blue = burial 1, green = burial 2, pink = burial 3.

grave goods were associated with the remains of six to eight individuals. As no definite Umm an-Nar period artefacts were discovered within the tomb, Vogt speculates whether this could be an early Wadi Suq period tomb built in Umm an-Nar fashion instead of being a reused tomb. Weisgerber[1004] reports on a dagger in a triangular shape with rivet holes at its end for a handle, a dagger cast with blade and hilt in one piece as well as a socketed spearhead that were all found in a tomb at Bisya. Most likely this is the same tomb mentioned by Vogt. The daggers date to the Late Bronze Age, and the spearhead to the Wadi Suq period.[1005]

4.1.31 Jebel Salut

Ten tombs were excavated on different hills at Salut by the Italian Mission to Oman from the University of Pisa.[1006] Among them were four Hafit and two Wadi Suq period tombs. Two of the Hafit period tombs show signs of reuse in the Wadi Suq period and Iron Age (Jebel Salut 1 Grave 1) or in the Samad period (Jebel Salut 3 Grave 1).

Jebel Salut 1 Grave 1 was most likely constructed during the Hafit period, but nothing of its original content remains. The circular tomb has an outer ring wall with a diameter of 5 m. Outside the tomb, above the bedrock, several Iron Age pottery sherds (Fig. 37b) were discovered as well as a fragmented Wadi Suq period soft-stone suspension vessel (Fig. 37a).[1007] ***Jebel Salut 3 Grave 1***, another Hafit period tomb, features two ring walls with a maximum diameter of 6 m. The burial chamber is sub-rectangular with rounded corners measuring 1.7 × 2.4 m. Again, nothing remained of the initial content of the tomb.[1008] In a layer of light brown loam with a large amount of medium to large stones, three burials were found that clearly belong to a later reuse. Burial 1 (Fig.

1004 Weisgerber 1991: 327–328.
1005 Velde 2003: 111–112.
1006 Condoluci – Degli Esposti 2015.
1007 Condoluci – Degli Esposti 2015: 15–16.
1008 Condoluci – Degli Esposti 2015: 28–31.

37c, marked in blue), an adult female, and burial 2 (Fig. 37c, marked in green), an individual above 25 years of age, were both placed in a flexed position. Of the third burial (Fig. 37c, marked in pink), only a tibial diaphysis and the distal half of the left femur remained.[1009] The excavators therefore assume that these burials were displaced by looters (but see chapter 6.1.1). Grave goods associated with the burials were two copper alloy plaques tied by two rivets, called a strap-end, a biconical carnelian bead and an iron leaf-shaped spearhead with a central rib.[1010] Those finds, especially the iron spearhead, date the reuse to the Samad period.

4.1.32 Adam

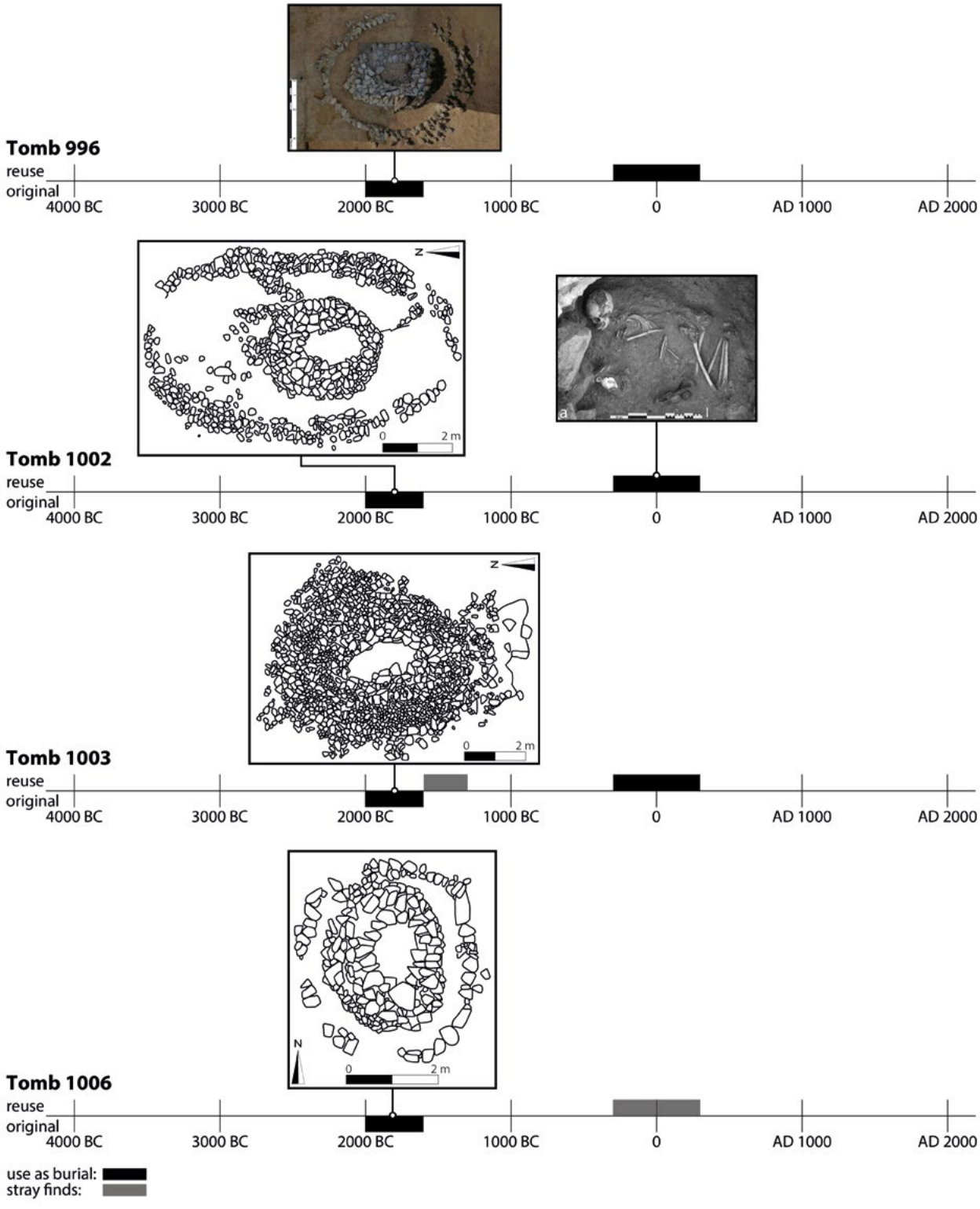
4.1.32.1 Adam North

The cemetery of Adam North is situated between the foothills of Jebel Mudhmar and Wadi Adam. During the French survey, a total of 138 graves were discovered of which 36 were excavated.[1011] Among these, three tombs are dated more or less securely to the Umm an-Nar period, 24 to the Wadi Suq period and one to the Iron Age II. In addition, there are eight Wadi Suq period tombs that were reused in the Samad period (Tombs 996, 1002, 1003, 1006, 1015, 1016, 1017 and 1024).

Tomb 996 is a simple subterranean cist with an oval burial chamber measuring 1.5 × 0.8 m.[1012] Finds from the tomb include a flint tool, a mother-of-pearl ring and several beads, shells and copper alloy fragments. None of them are diagnostic enough to be attributed to a specific time period. Two burials were identified. The burial in the lower layer belongs to an infant of about one year of age, whose bones were highly fragmented. The one in the upper levels of the funerary chamber was found in a flexed position on its right side with the head pointing north. It is a 7.5 to 12.5 year old individual. This is, according to the excavators, a Samad period inhumation.[1013] ***Tomb 1002*** represents a subterranean cist with a superstructure and a circular surrounding wall.[1014] It was placed in the southern part of an oval space encompassed by a stone wall and superimposes an earlier Umm an-Nar period tomb. Two oval features adjoining the tomb to the north are possibly Iron Age or Samad period graves. Two distinct layers were discovered in the tomb, the lower one dating to the Wadi Suq period and the upper one to the Samad period.[1015] In the upper layer, the burial of an individual aged between 12 and 18 was found in a flexed position on its right side with the head to the west (Fig. 38a). It was outfitted with an iron awl, an iron rod, a gold earring, a stone mortar used to grind ochre, a stone pestle, a shell, two copper alloy bowls, two glasses and several other beads as well as further copper alloy fragments.

Another cist with an oval tumulus as a superstructure is ***Tomb 1003***.[1016] It measures 6 m in length and 4.8 m in width. Like Tomb 1002, it superimposes the remains of an earlier Umm an-Nar period tomb. Gernez and Giraud[1017] refer to the tomb as being reused in the Samad period, while Righetti[1018] believes that the tomb has not been reused but looted. ***Tomb 1006*** is an individual subterranean cist with a circular surrounding wall.[1019] Within the burial chamber two fragments of iron tools and a copper alloy arrowhead were found alongside Wadi Suq period objects such as a socketed spearhead and a soft-stone lid. The iron tools indicate reuse in the Samad period,[1020] and the copper alloy arrowhead in the Late Bronze Age.[1021] No human bones were identified. ***Tomb 1015*** is a circular tumulus of small and medium sized stones built over a subterranean oval cist.[1022] It has a diameter of 5.1 to 5.3 m. Grave goods include three pottery sherds, one hammer stone, eleven riveted copper alloy plates, an iron spearhead, an iron arrowhead and a shell ring, all of them associated with a burial in the upper level. This is an adult individual in a flexed position on their right side with the skull facing east. It dates to the Samad period.[1023] ***Tomb 1016*** consists of a subterranean cist with an above-ground perimeter wall separated from the burial chamber by a space of 0.5 m.[1024] Besides some finds from the original Wadi Suq levels, several iron fragments and an iron plate were found associated with inhumations of two adults just outside the tomb. They date to the Samad period.[1025] ***Tomb 1017*** is a small oval stone construction built over a pit dug into the ground.[1026] It was almost empty, except for some Wadi Suq period soft-stone vessels. Several iron fragments associated with small pieces of human bones found in the fill of the grave suggest reuse in the Samad period.[1027] ***Tomb 1024*** is a subterranean cist with a circular surrounding wall made of medium sized blocks.[1028] Besides two pottery sherds and three beads dating to the Wadi Suq period from the lowest layer, level

1009 Condoluci – Degli Esposti 2015: 31–32.
1010 Condoluci – Degli Esposti 2015: 28–31.
1011 Gernez – Giraud 2015: 112–121.
1012 Righetti 2015a: 844.
1013 Gernez – Giraud 2015: 117.
1014 Righetti 2015a: 856.
1015 Gernez – Giraud 2015: 117.
1016 Righetti 2015a: 860.
1017 Gernez – Giraud 2015: 117.
1018 Righetti 2015a: 860.
1019 Righetti 2015a: 864.
1020 Gernez – Giraud 2015: 117.
1021 Righetti 2015a: 866.
1022 Righetti 2015a: 882.
1023 Gernez – Giraud 2015: 117.
1024 Righetti 2015a: 884.
1025 Gernez – Giraud 2015: 117.
1026 Gernez – Giraud 2015: 115.
1027 Gernez – Giraud 2015: 117.
1028 Righetti 2015a: 898.


Tomb 996
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
Tomb 1002
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
Tomb 1003
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
Tomb 1006
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
use as burial:
stray finds:

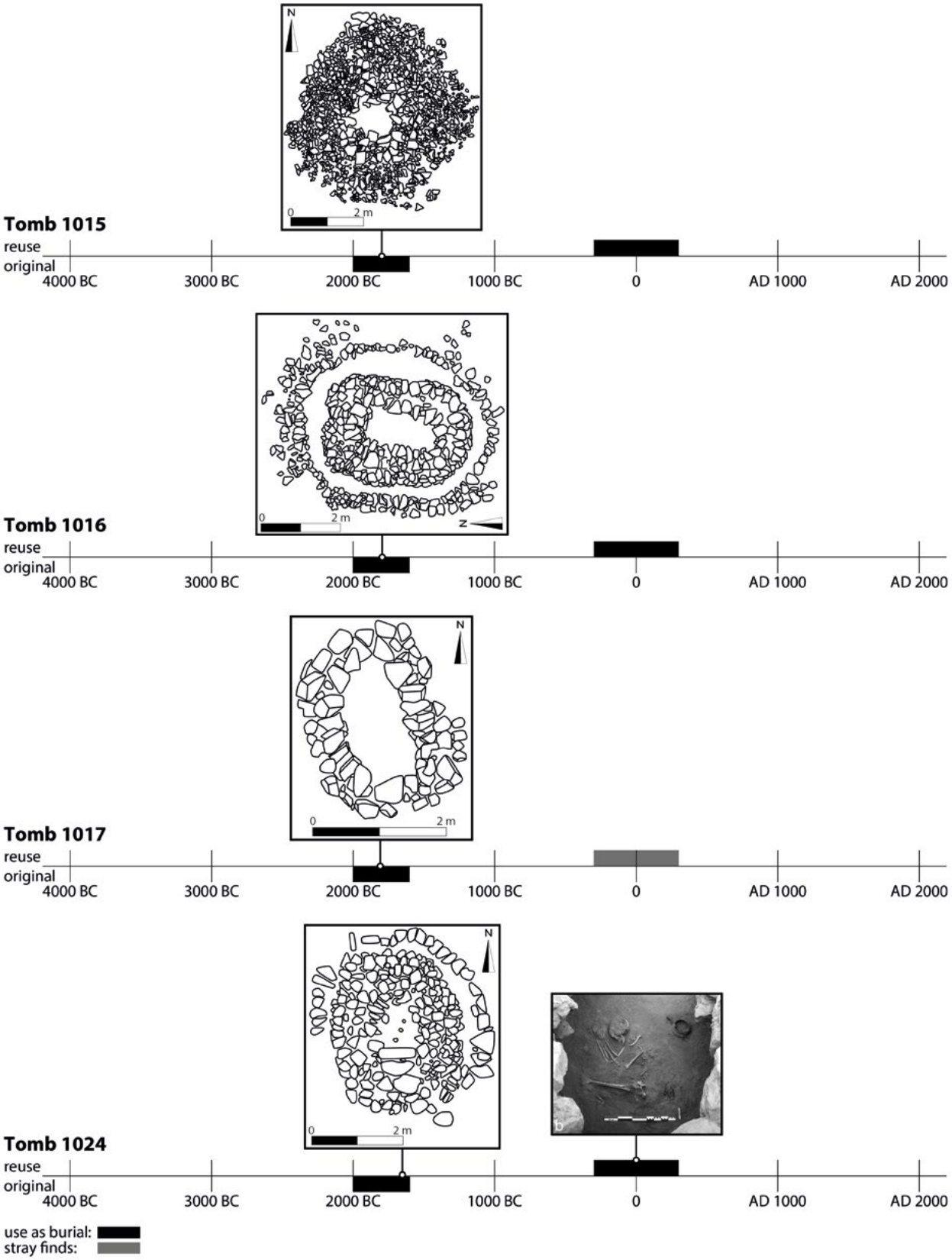


Fig. 38: Chronological timeframes of reused tombs at Adam North (adapted from Gernez – Giraud 2015: fig. 11–12; Righetti 2015a: fig. 504, 511, 514a, 518, 534, 536, 540, 550).

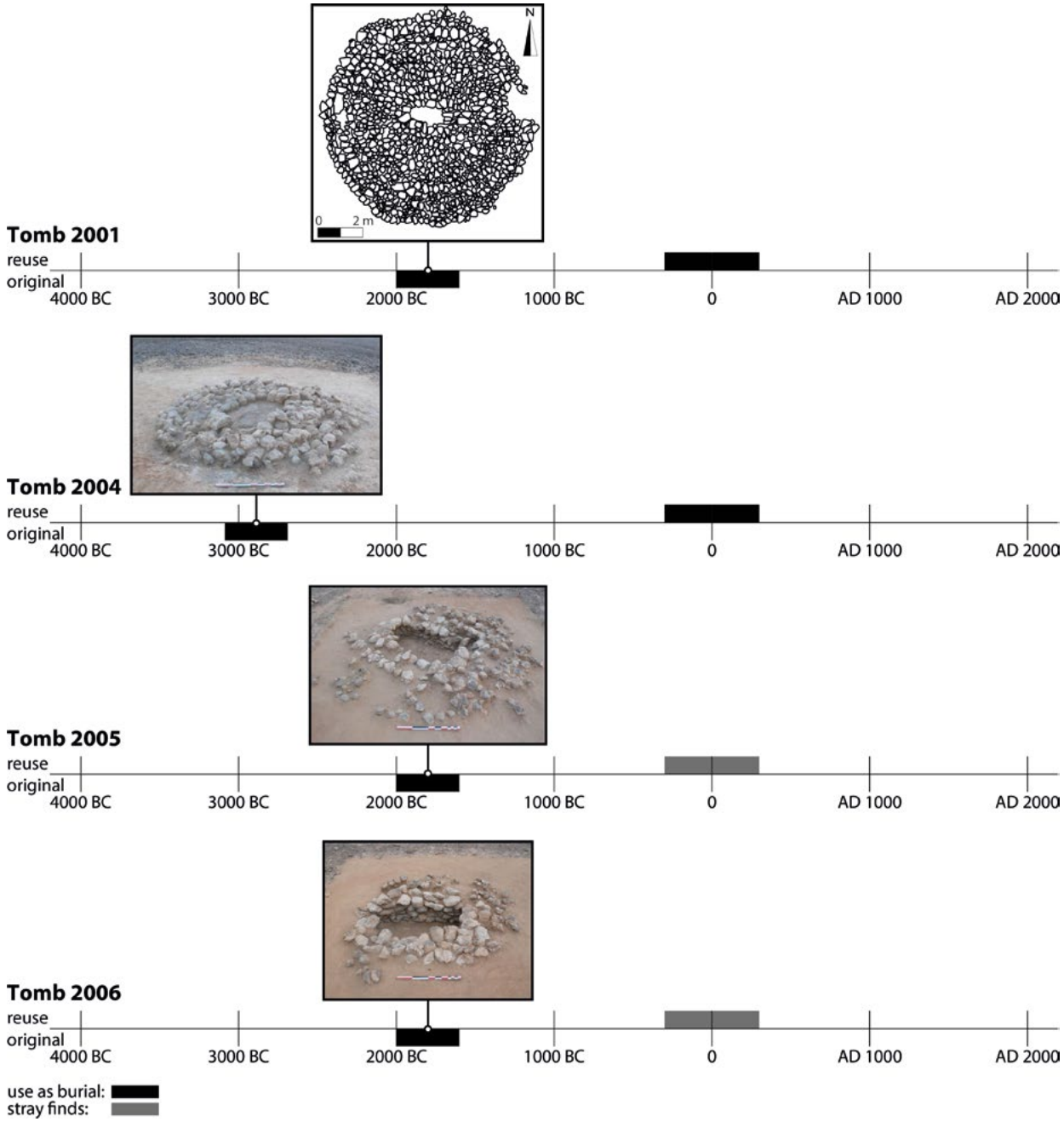


Fig. 39: Chronological timeframe of reused tombs at Adam South (adapted from Gernez 2016: fig. 16, 18–20).

3 revealed 18 iron arrowheads, likely originally grouped in a quiver, and a copper earring associated with a burial (Fig. 38b). Another burial comes from the topmost level 4 associated with a clay weight. A copper alloy bowl and an iron spearhead were placed between level 3 and 4, so that they cannot be clearly attributed to one of the two individuals. The individual in level 3, approximated to be 25 years of age, lies in a flexed position on its right side with its head to the west.[1029] The inhumation from level 4 does not disturb the one from level 3. It is in a flexed position on its left side with its head to the north. Both burials date to the Samad period.[1030]

4.1.32.2 Adam South

In 2008, a small necropolis with 44 structures, most of them funerary, was identified near Jebel Hinaydil.[1031] It was labelled Adam South. The majority of its tombs date to the Wadi Suq period or the Iron Age. In 2015, eight Bronze Age tombs were excavated. One of these tombs dates exclusively to the Umm an-Nar period, three to

1029 Gernez – Giraud 2015: 118.

1030 Gernez – Giraud 2015: 117.

1031 Gernez – Giraud 2015: 107–112; Gernez 2016.

the Wadi Suq period and another three tombs were constructed in the Wadi Suq period, of which one was reused in the Iron Age (Tomb 2006) and two in the Samad period (Tombs 2001 and 2005). In addition, Tomb 2004 was built in the Hafit and reused in the Samad period.

Tomb 2001 is the largest and best-preserved tomb of Adam South.[1032] It is a tumulus of 10 m in diameter, constructed of medium-sized stones. The burial chamber itself is rectangular, measuring 1.5 × 0.9 m. Due to its general layout, the tomb has been dated by the excavators to the Wadi Suq period. The fill of the tomb was mixed and finds were found scattered throughout the tumulus. These were human bones and fragments of iron arrowheads. The latter indicates reuse of the tomb in the Samad period. ***Tomb 2004*** is a small cairn situated on a slope of a hill and dates most likely to the Hafit period.[1033] It measures 4.5 m in diameter and a 1.4 m wide wall encompasses an oval burial chamber measuring 1.9 × 1.2 m. Besides human bones, iron arrowheads and copper alloy rivets and sheets were found scattered throughout the fill, providing evidence for reuse in the Samad period. ***Tomb 2005*** consists of a subterranean rectangular chamber of 1.8 m by 1.0 m surrounded by a circle of stones.[1034] Within the fill, human remains, a small copper alloy fragment, a carnelian bead and an iron arrowhead were found. None of them were in their original position. According to its layout, the tomb can be dated to the Wadi Suq period, while the finds point to reuse in the Samad period. ***Tomb 2006*** is a rectangular stone lined grave chamber of the second millennium BC.[1035] Within the undisturbed part, a Wadi Suq period pottery jar was found. In younger layers, beads made of shell and stone and coarse tempered pottery were discovered that are difficult to date, but possibly belong to the Samad period.[1036]

4.1.33 Maysar

4.1.33.1 Maysar-8

Maysar-8 is a small Iron Age and Samad period cemetery with 40 circular stone-built tombs.[1037] Three of them were excavated by the German Mining Museum Bochum in 1988. Tombs M801 and M802 were only used during the Samad period while Tomb M803 was built during the Iron Age and reused in the Samad period.

Tomb M803 is a circular, Iron Age tomb with an external diameter of 5.2 m. It yielded large quantities of Iron Age material including pottery, soft-stone vessels, copper alloy weapons and pieces of personal adornment. In the Iron Age, a secondary burial was placed between the inner and the outer row of stones (*Nachbestattung* 1, Fig. 43a, marked in blue). It yielded the disturbed remains of a single individual in a flexed position on its left side with the head in the southwest facing west. Grave goods associated with this burial were a trapezoid, decorated bone plate, possibly belonging to a bracelet (Fig. 43d), small fragments of Iron Age pottery sherds and seashells (Fig. 43b–c). In the Samad period another burial (*Nachbestattung* 2, Fig. 43e, marked in green) was placed between the inner and outer rows of stones in the south of the tomb. It has a length of 1.3 m and a width of 0.6 m. Accompanying grave goods are two Samad period pot-

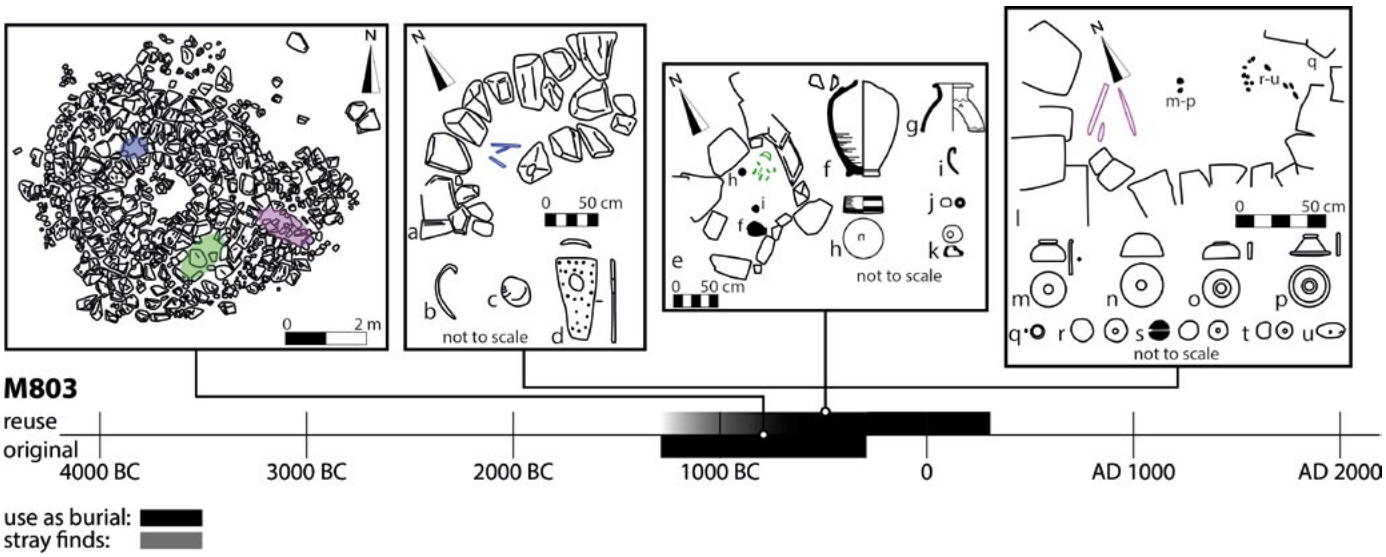


Fig. 40: Chronological timeframe of reused tomb at Maysar-8 (adapted from Yule 2001: Taf. 11–15).

1032 Gernez 2016: 64–65.
1033 Gernez 2016: 66.
1034 Gernez – Giraud 2015: 111; Gernez 2016: 66–67.
1035 Gernez – Giraud 2015: 111; Gernez 2016: 67–68.
1036 Gernez – Giraud 2015: 111.
1037 Weisgerber 1980: 97; Yule 2001: 224–228.

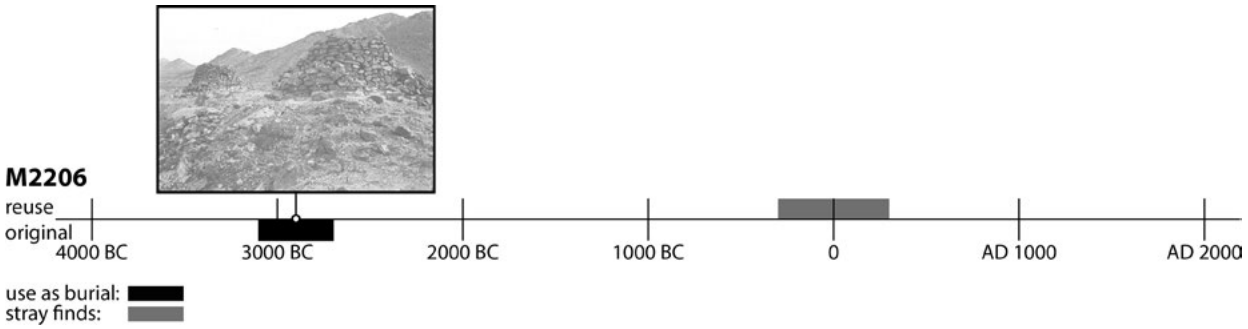


Fig. 41: Chronological timeframe of reused tomb at Maysar-22 (adapted from Weisgerber 1980: Abb. 55).

tery sherds (Fig. 43f–g), one copper needle, two beads (Fig. 43j–k), four shells (Fig. 43i) and one soft-stone vessel (Fig. 43h), but also three Iron Age pottery sherds.[1038] The latter possibly originates from the initial burials within the tomb. The human remains found within *Nachbestattung* 2 are attributed to a male individual above the age of 20. Another burial that is associated with the Samad period was found in a chamber that was built in between the inner and outer wall southeast of the main chamber (*Nachbestattung* 3, Fig. 43l, marked in purple). The skeleton was laid in a flexed position on its right side and was equipped with pottery, a mother of pearl ring (Fig. 43q), four conical spindle whorls made of soft-stone with an iron pin (Fig. 43m–p) and 16 beads (Fig. 43r–u).[1039] It is an individual above the age of 20.

4.1.33.2 Maysar-22

Four Hafit period tombs, Tomb M2201, M2204, M2205 and M2206, were excavated in the cemetery of Maysar-22.[1040] While no finds are reported for the first two tombs, within Tomb M2205 one pottery sherd, several beads and two copper alloy pins were found that could all date to the Hafit period. In **Tomb M2206** a Samad period body sherd was found, indicating reuse during that period (Fig. 41).

4.1.33.3 Maysar- 27

The Iron Age cemetery of Maysar-27 consists of approximately 20 tombs.[1041] Two of those, Tomb M2717 and M2720, were excavated by the German Mining Museum in 1981, and ten others in 1991. Most only yielded finds from the Iron Age and one tomb only from the Samad period. Four tombs (Tombs 2715, 2716N, 2717 and 2720) contained both finds from the Iron Age as well as from the Samad period, which indicates reuse. Two other tombs, M2710 and M2721, were not excavated but displayed Iron Age and Samad period finds on their surface. All tombs mentioned are above-ground, circular to oval stone structures in a severely disturbed state.

Tomb M2710 also yielded on its surface, besides Iron Age pottery sherds and a copper alloy arrowhead, one sherd of possible Samad period origin (Fig. 42a).[1042] The tomb has not been excavated and is therefore not part of the analyses in chapter 5. At ***Tomb M2715***, among the Iron Age pottery sherds and remains of two sheep or goats, a Samad period storage jar was found (Fig. 42b).[1043] To the circular Iron Age ***Tomb M2716***, a semi-circular chamber, ***Tomb M2716N***, was attached to in the north (Fig. 42, marked in red). Only this additional chamber was excavated by the German Mining Museum in 1991, while the main tomb remained untouched.[1044] Within the chamber, finds scattered throughout the fill include, besides Iron Age pottery most likely belonging to the initial burials in the main tomb and finds that cannot clearly be attributed to a specific period, three Samad period pottery sherds (Fig. 42c–e) and an iron wire (Fig. 42f).

Tomb M2717 is situated on a small rocky outcrop. To the original circular, above-ground tomb (chamber 1), two smaller chambers were added, one in the southwest (chamber 2) and one in the southeast (chamber 3).[1045] Human bones were found in all three chambers, albeit severely disturbed. Therefore, it can only be determined that those bones belong to adult individuals. Besides Iron Age finds, in chamber 1, 19 arrowhead fragments were found that can be dated to the Samad period (Fig. 42i). From the surface of this tomb, further Samad period pottery sherds were collected (Fig. 42g–h). The Iron Age ***Tomb M2720*** is an above-ground tomb set in the middle of a spacious stone circle.[1046] To the west of the main chamber, a burial was interred during the Samad period. It belongs to a male individual, 20 to 40 years of age. The burial was equipped with 29 iron and copper alloy arrowheads possibly originally contained in a quiver (Fig.

1038 Yule 2001: 227.
1039 Yule 2001: 227.
1040 Weisgerber 1980: 92; Yule 2001: 388.
1041 Yule 2001: 228–231.
1042 Yule 2001: 229.
1043 Yule 2001: 229.
1044 Yule 2001: 229–230.
1045 Yule 2001: 230.
1046 Yule 2001: 230–231.

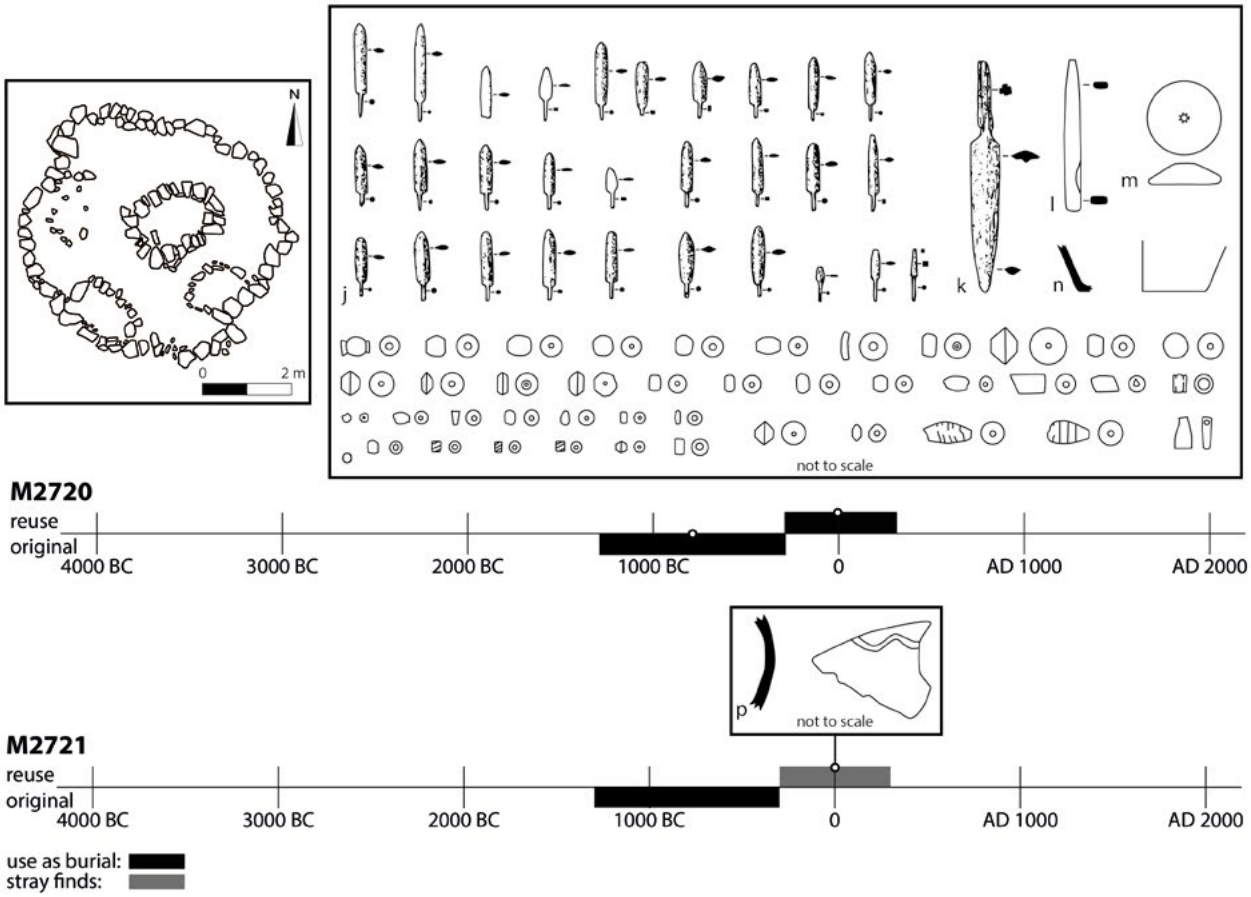


Fig. 42: Chronological timeframes of reused tombs at Maysar-27 (adapted from Yule 2001: Taf. 17 M2710.3, 18 M2715.2, 19, 20 M2716N.1–3, 21 M2716N.9, 17, 23 M2717.1, 4–5, 24, 25 M2720.2, 26, 27 M2720.3–7, 28 M2721.1)

42j), two fragments of a dagger (Fig. 42k), a whetstone (Fig. 42l), a spindle whorl made from a shell (Fig. 42m), a Samad period pottery jar (Fig. 42n) and 104 beads (Fig. 42o). Two other chambers were added to the southeast and southwest, which were both found empty. Further Samad period finds were made on the surface including iron wire and pottery. At ***Tomb M2721***, which was not excavated, Weisgerber found Iron Age and Samad period pottery sherds (Fig. 42p) during his survey in the 1980s.[1047]

4.1.33.4 Maysar-51

Maysar 51 represents a severely damaged Hafit period tomb.[1048] On its surface, an iron blade (Fig. 43e) was found together with other iron fragments (Fig. 43a–d), clearly indicating later activities at the tomb, most likely from the Samad period.

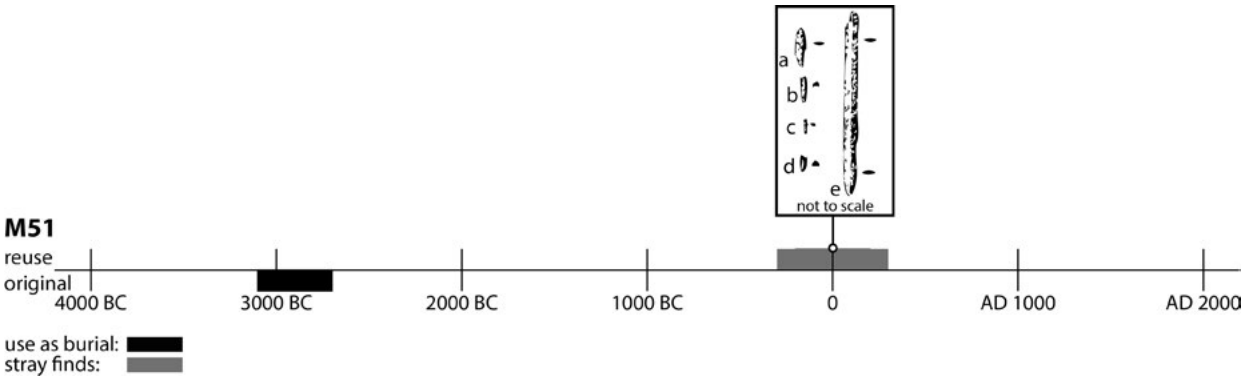


Fig. 43: Chronological timeframe of reused tomb at Maysar-51 (adapted from Yule 2001: Taf. 256 M51).

1047 Yule 2001: 231.

1048 Yule 2001: 391.

4.1.34 Samad

4.1.34.1 Samad-10

The cemetery of Samad-10 consists of more than 1200 above-ground stone structures in an area of approximately 1 × 1.5 km.[1049] The tombs belong to the Wadi Suq period, the Iron Age and the Samad period. In total, 112 were investigated by the German Mining Museum Bochum. Among those, nine tombs could be assigned to the Wadi Suq period based on their architectural design and/or their finds, five tombs to the Iron Age and 79 tombs to the Samad period.[1050] Seven tombs yielded too few finds and were not specific enough in their architectural layout to assign them to any period. Additionally, there are twelve tombs which show signs of reuse. These are two Wadi Suq period tombs with finds from the Samad period (Tombs S1074 and S101110), one Wadi Suq period tombs with finds from the Late Islamic period (Tomb S101115), two Iron Age tombs with finds from the Samad period (Tombs S10103 and S101040 (=Maysar-30)) and seven Samad period tombs that were, according to Yule, reused in the Samad period itself (Tombs S1073, S10608, S10666, S10681, S10683 and S101102). Generally, reuse within the same time period is very difficult to distinguish from continuous use, but here, a sterile layer of accumulation between the burials makes the reuse obvious, except for with Tombs S10683 and S101102, which are heavily disturbed.[1051] Therefore, only the remaining five tombs are considered in the analyses of this study. For another tomb, Tomb S10815, Yule[1052] mentioned reuse in the Samad period as well, but the publication lists only one skeleton to which all finds belong. Thus, this burial is not considered to be a reused burial.

Tomb S1073 is a nearly rectangular cist built of pebbles just below the surface.[1053] The tomb was constructed in the Samad period and yielded several finds from this period on the floor. Approximately 20 cm above floor level, there was another layer with scattered human bones that were too badly preserved to determine age or sex, associated with biconical carnelian and agate beads, give evidence to the reuse of the tomb during the Samad period. ***Tomb S1074*** is a heavily deteriorated above-ground Wadi Suq period tomb, whose circular wall is only preserved at its lowest course.[1054] Within the oval

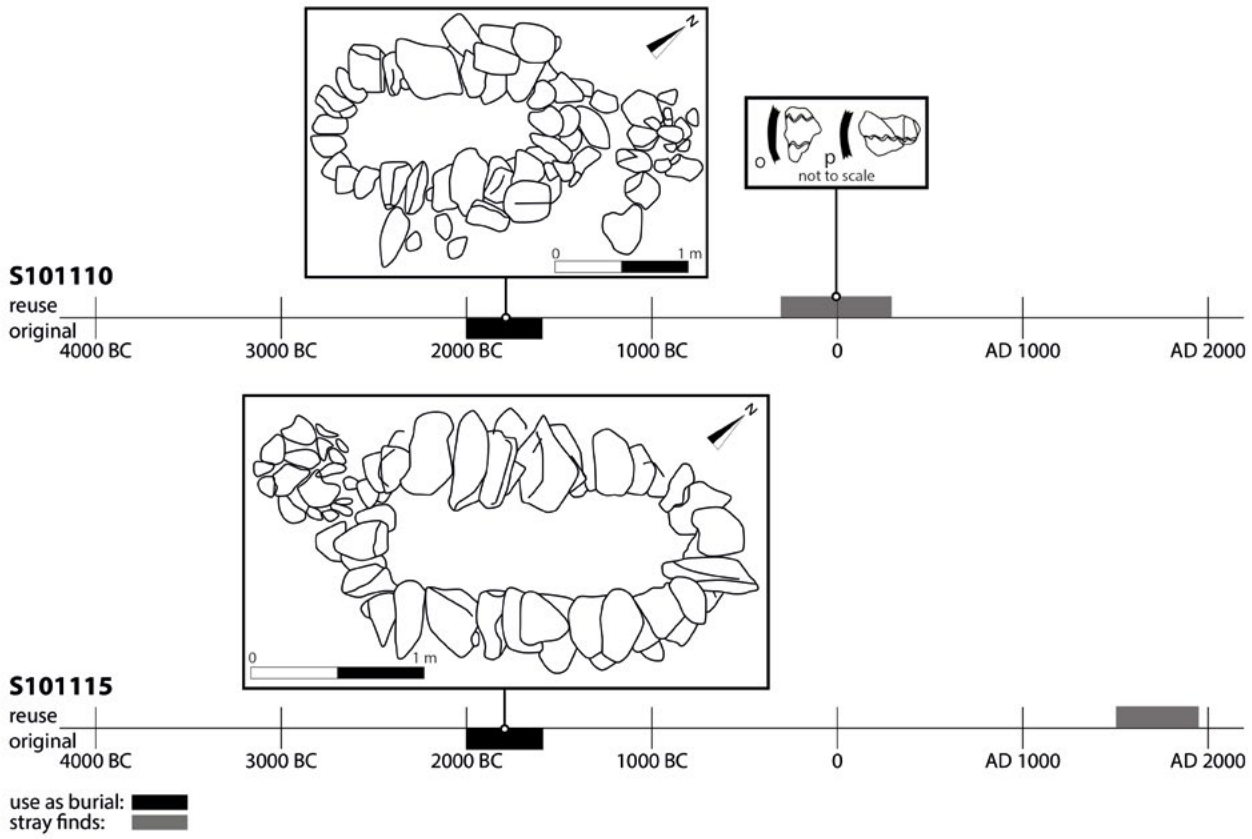


Fig. 44: Chronological timeframes of reused tombs at Samad-10 (adapted from Yule 2001: Taf. 38, 40, 41 M1074, 44.1, 59, 60.1–4, 69. 70.2, 86, 87.2, 179.7, 191.1–2, 195, 601).

1049 Yule 2001: 231–232.
1050 Yule 2001: 231–287.
1051 Yule 2001: 249–250.
1052 Yule 2001: 261.
1053 Yule 2001: 235.
1054 Yule 2001: 235.

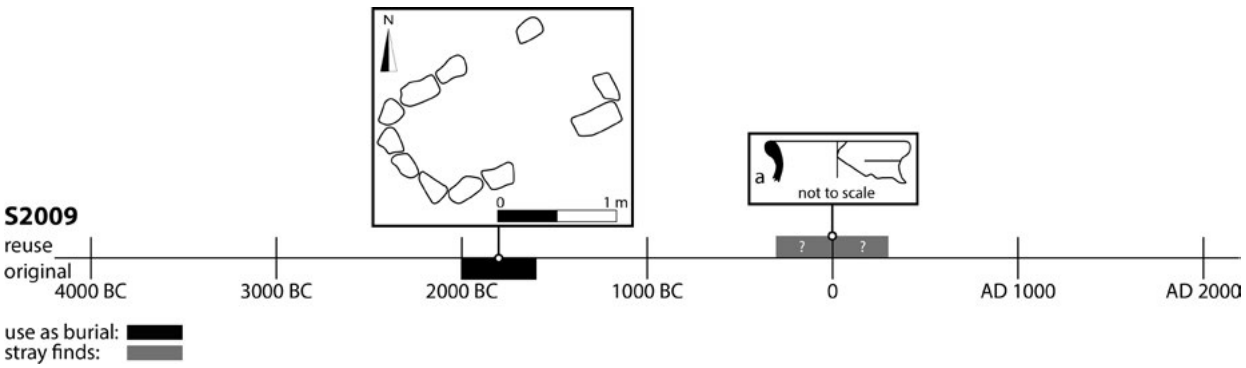


Fig. 45: Chronological timeframe of reused tomb at Samad-20 (adapted from Yule 2001: Taf. 235).

burial chamber, scattered human remains were found all over the floor, as were beads (Fig. 44a), some of which are made of glass, and a bell (Fig. 44b). All finds date to the Samad period. The badly preserved, but most likely circular to oval, above-ground ***Tomb S10103*** yielded small amounts of human bones, some Iron Age pottery sherds and a small number of not clearly datable finds like spindle whorls and seashells.[1055] In addition, a possible Samad period rim of a jar was found (Fig. 44c). A radiocarbon date from this tomb dates to around AD 96–350, thus in the later Samad period. Therefore, this tomb can be seen as an Iron Age construction that was reused in the Samad period. ***Tomb S10608*** is a subterranean, rectangular tomb of the Samad period.[1056] On its floor, the skeleton of a male individual associated with a goat skeleton, pottery jars, arrowheads, a dagger and other objects was found. Above 15–20 cm of sterile fill, the skeleton of a child was discovered together with 82 beads (Fig. 44d), most of them made of green glass and lying on its chest. Other grave goods of this burial are two earrings (Fig. 44e), two fragments of arm rings (Fig. 44f) and a seashell (Fig. 44g). The burial of the child is interpreted by the excavator as reuse of the tomb during the Samad period. A similar reuse of a Samad period tomb during the Samad period was observed at ***Tomb S10666***.[1057] Within the subterranean tomb chamber, disturbed remains of two individuals were found on the floor. The excavator assumes that first, a male individual of 25–35 years was buried in a flexed position on his left side together with five arrowheads. Then, an unspecified amount of time thereafter, a female individual of 20–40 years was also buried in a flexed position on her right side together with four shell beads (Fig. 44h). In addition, Samad period pottery, shells and animal bones of a sheep or goat were found within the tomb but could not be associated clearly with one of the two skeletons.

Tomb ***S10681*** is another Samad period underground tomb that was reused in the Samad period.[1058] The initial burial was found close to the floor of the tomb, while the skeleton from its reuse comes from the upper part of the fill (Fig. 44, marked in red). It belongs to a 30–40 year old woman placed in a flexed position on her left side. Finds that are clearly associated with this burial are a seashell with traces of pigment (Fig. 44i), another seashell (Fig. 44j), a triangular copper alloy fragment (Fig. 44k), a copper alloy needle (Fig. 44l) and a polished, partly drilled stone (Fig. 44m). Within the Iron Age ***Tomb S101040*** (= Maysar-30), in a large, circular, above-ground tomb with a diameter of 11 m, two areas with human remains were found.[1059] The central chamber of the tomb yielded only very fragmented human bones and a few finds, among them an Iron Age pottery sherd. The second inhumation was placed within a pit in the walls of the tomb and belongs to an adult individual lying in a flexed position on its right side with the head to the south (Fig. 44, marked in red). The only finds associated with this burial are three undiagnostic pottery sherds. More Iron Age pottery and other objects were found within the fill of the walls. Additionally, there are fragments of two possible Samad period pottery vessels (Fig. 44n). The latter make it plausible that the second inhumation can also be dated to the Samad period. ***Tomb S101110*** was built during the Wadi Suq period as an individual subterranean cist with a circular surrounding wall.[1060] Within its fill, a soft-stone bowl dating to the Wadi Suq period as well as two pottery fragments from the Samad period (Fig. 44o–p) were found. Human bones were sparse and highly fragmented. ***Tomb S101115*** was, just as Tomb S101110, constructed during the Wadi Suq period as a rectangular chamber and yielded only human remains of an individual of 20–60 years of age.[1061] On the surface, however, were large amounts of Late Islamic glazed pottery sherds.

1055 Yule 2001: 235–236.
1056 Yule 2001: 241.
1057 Yule 2001: 244.
1058 Yule 2001: 248–249.
1059 Weisgerber 1981: 206; Yule 2001: 272.
1060 Yule 2001: 276.
1061 Yule 2001: 277–278.

4.1.34.2 Samad-20

The cemetery of Samad-20 was already bulldozed before archaeological investigations began here in 1987.[1062] In total, 17 tombs of the Wadi Suq and Samad period were investigated. Among these, only seven tombs show indications of use during the Samad period, one tomb being used in the Wadi Suq as well as in the Samad period (Tomb S2009) and one tomb being reused during the Samad period (Tomb S2006). The preservation of eight tombs was so poor that no information about their date could be obtained. As already mentioned above, reuse within the same time period is very difficult to distinguish from continuous use. Therefore, Tomb S2006, where finds were scattered throughout the fill,[1063] will not be considered as reused in the following analyses.

Tomb S2009, a subterranean individual cist without a superstructure, is a severely damaged tomb, which yielded only a few finds, indicating that its construction took place during the Wadi Suq period.[1064] Some pottery sherds found within the fill might point to Samad period reuse, although their attribution is not certain (Fig. 45a). They could equally as likely originate from the initial use in the Wadi Suq period.

4.1.34.3 Samad-21 North

In total, 22 tombs from the cemetery of Samad-21 North were investigated.[1065] Among those, six tombs belong to the Samad period, four tombs to the Wadi Suq period and for another four tombs no date can be given. In addition, four Samad period tombs show indications of reuse in the Samad period (Tombs S2110,[1066] S2112,[1067] S2113[1068] and S2135B), three Wadi Suq tombs show reuse in the Samad period (Tombs S2107, S2109 and S2114) and one Iron Age tomb was reused in the medieval period (Tomb S2116). Again, due to the difficulties of differentiating between reuse and continuous use during the same time period, none of the Samad period tombs from Samad-21 North that show possible hints of reuse in the Samad period will be considered here, as no clear separation between the events is possible. Tomb S2112, for example, could also represent a double inhumation.

Tomb S2107 is, according to Righetti,[1069] an individual subterranean Wadi Suq period cist without a superstructure. It measures 1.85 m in length and 0.7 m in width.[1070] Within the fill, a Wadi Suq period soft-stone lid was discovered. Reuse in the Samad period is evident by the remains of a 15 to 20-year-old individual in a flexed position on its right side with the head oriented towards the south, albeit not all bones were found in anatomical order (Fig. 46, marked in red). Grave goods that can be associated with this skeleton are copper alloy clamps (Fig. 46a), iron arrowheads (Fig. 46b), a fragment of an iron dagger (Fig. 46c), some other iron fragments (Fig. 46d), three metal rings (Fig. 46e), stone beads (Fig. 46f) and a Samad period pottery jar (Fig. 46g). A radiocarbon date of 1σ cal. AD 734±94 was obtained from the tomb. This falls considerably after the end of the Samad period. Yule[1071] generally points out that some of the dates from Samad al-Shan are unreliable, without further explanation. The Wadi Suq period ***Tomb S2109***, an individual subterranean cist without a superstructure, was largely emptied, but featured, besides a few Wadi Suq period finds including pottery sherds and a soft-stone lid, a small pottery sherd from the Samad period.[1072] ***Tomb S2114***, another individual subterranean Wadi Suq period cist without a superstructure, was severely disturbed and yielded only some pottery sherds.[1073] These date to the Wadi Suq as well as to the Samad period. The cist has a length of 1.70 and a width of 0.5 m. ***Tomb S2116*** is a heavily disturbed Iron Age tomb, whose original shape could not be determined.[1074] Besides some Iron Age finds, including a soft-stone bowl fragment, a concentration of further unspecified medieval pottery sherds was encountered. ***Tomb S2135*** is comprised of two tombs, S2135A and S2135B, whereby Tomb S2135B seems to be the original construction to which S2135A was added later. Tomb S2135B is an individual subterranean cist without a superstructure. The cist measures 1.35 × 0.61 m. Righetti[1075] dates the construction of this tomb to the Late Bronze Age, as a soft-stone compartment vessel with typical decorations for this period was found within its fill. Within this tomb, two skeletons were attested.[1076] The older interment belongs to a 30–40-year-old female individual lying on the right side in a flexed position (Fig. 46, marked in red), and the younger one to a 20–40-year-old male individual, also lying on the right side in a flexed position (Fig. 46, marked in green). Grave goods associated with the first inhumation are a copper alloy finger-ring (Fig. 46h). The other objects found in the grave were attributed by the excavator to the second inhumation, not always because of their find location but because they were regarded as "male grave goods".[1077] Thus, it is equally possible that at least some of them must be at-

1062 Yule 2001.
1063 Yule 2001: 287.
1064 Yule 2001: 289.
1065 Yule 2001: 291–292.
1066 Yule 2001: 295.
1067 Yule 2001: 295–296.
1068 Yule 2001: 296.
1069 Righetti 2015a: 524.
1070 Yule 2001: 294.
1071 Yule 2014: 65; see also Kennet 2007: 100–102.
1072 Yule 2001: 294–295.
1073 Yule 2001: 296.
1074 Yule 2001: 297.
1075 Righetti 2015a: 548–550.
1076 Yule 2001: 299.
1077 Yule 2001: 299.

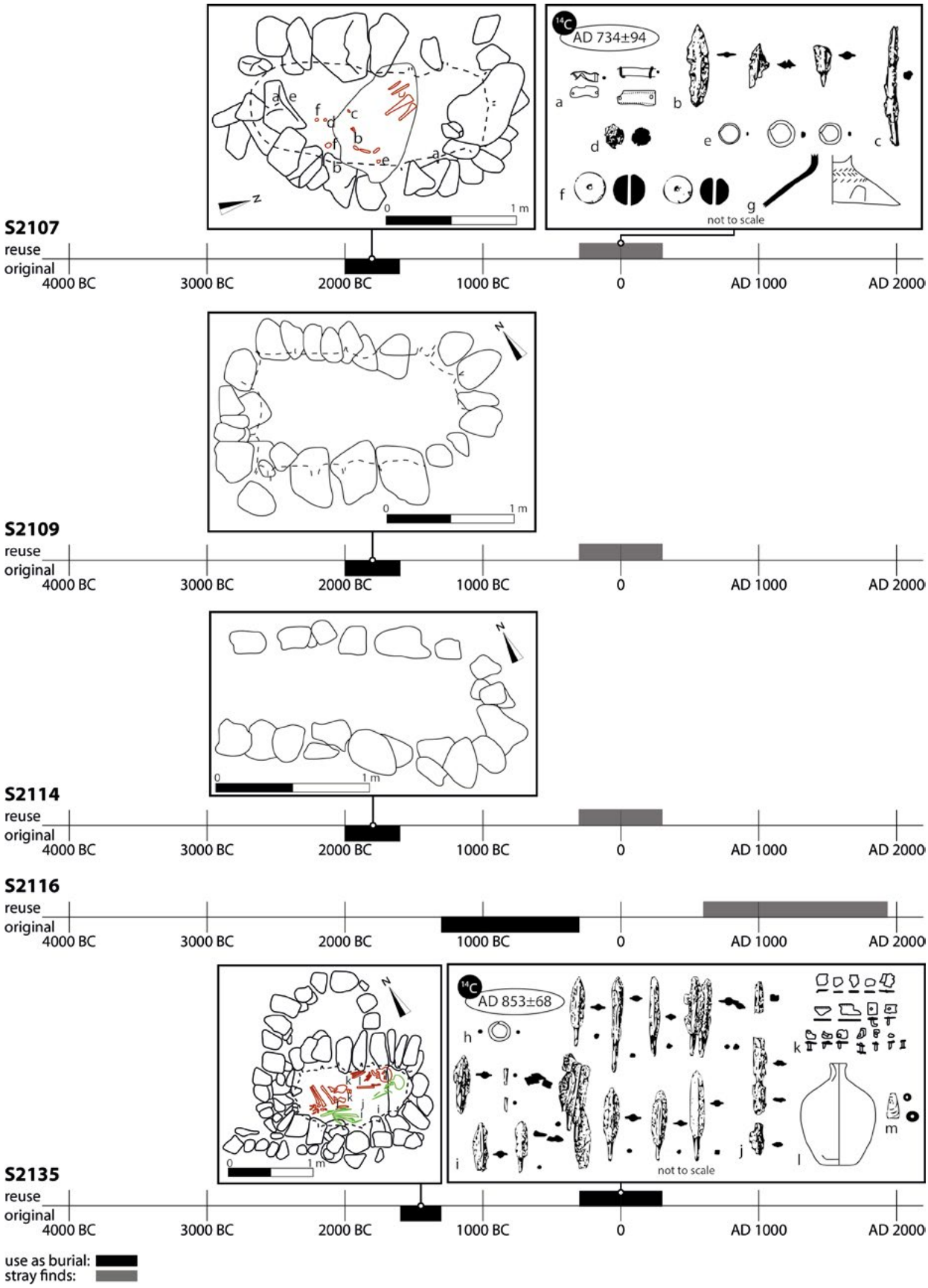


Fig. 46: Chronological timeframes of reused tombs at Samad-21 North (adapted from Yule 2001: Taf. 249, 250.1–10, 12, 252, 260 S2114, 263, 264).

tributed to the first inhumation. They include at least 15 mainly iron arrowheads (Fig. 46i), fragments of an iron dagger (Fig. 46j), copper alloy rivets (Fig. 46k), a Samad period pottery balsamarium (Fig. 46l) and a bone object often referred to as hilt or pulley (Fig. 46m).[1078]

Yule[1079] assumes that the tomb represents a Samad period structure that was reused in the Samad period. No explanation for the Late Bronze Age soft-stone vessels found within its fill is given. Therefore, Righetti's chronological assessment is more likely. A radiocarbon date from this tomb dates to 1σ cal. AD 853±68. As it is the case with the radiocarbon date from tomb S2107, this is much later than the end of the Samad period. At some time after the initial construction, ten stones were arranged in an arch to the northwest of the original cist, forming Tomb S2135A.[1080] As no finds were made within this tomb, no precise date can be given for its construction. It could be either Late Bronze Age or Samad period.

4.1.34.4 Samad-21 South

Cemetery Samad-21 South is located 200 m to the south of cemetery Samad-21 North.[1081] It extends over an area of approximately 60 × 90 m. Between 1987 and 1989, 91 tombs were investigated here. The majority of 55 of the excavated tombs belong to the Wadi Suq period. Ten tombs date to the Samad period and for one tomb the date is unknown. In addition, there are nine Wadi Suq tombs that were reused in the Iron Age (Tombs S2126, S2168, S2180, S2184, S2186, S21101, S21105, S21113 and S21114) – three of them, Tombs S2168, S2184 and S21114, were continuously used, as Late Bronze Age finds might be present. As well, there are seven Wadi Suq tombs that were reused in the Samad period (Tombs S2123, S2131, S2136, S2145, S2154, S2156 and S2199), seven Samad period tombs that were according to Yule reused in the Samad period (Tombs S2125,[1082] S2127,[1083] S2137,[1084] S2138,[1085] S2152,[1086] S2159,[1087] and S2172[1088]) and one burial, where the date of the construction is not known but reuse in the Samad period is clear (Tomb S2161). As reuse within the same time period is very difficult to distinguish from continuous use, the alleged Samad period reuses of Samad period tombs will not be considered in the following analyses. For Tomb S2138, for example, the excavators assume that the reuse occurred within a time frame of only 30 years,[1089] speaking much in favour of continuous use.

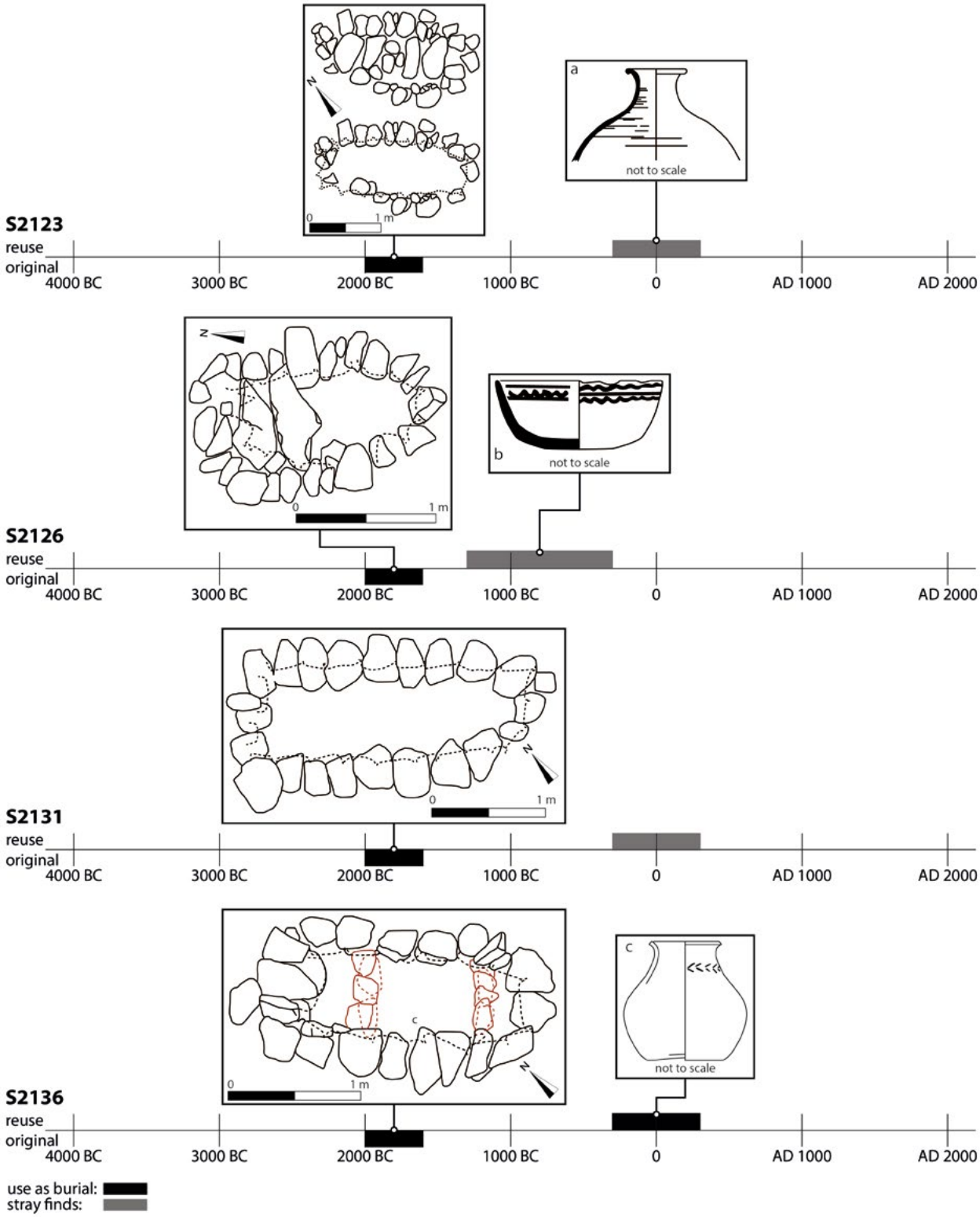
The individual subterranean ***Tomb S2123***, a cist without a superstructure, has initially been dated by Yule[1090] as being constructed during the Iron Age. Righetti,[1091] however, points out that the globular soft-stone vessel with a fitting lid found *in situ* in the tomb is clearly a Wadi Suq period object, as is the painted pottery beaker.[1092] Therefore, she places the construction of the tomb in the Wadi Suq period, a date that is followed here. Additionally, Samad period pottery sherds (Fig. 47a) were found, suggesting reuse.[1093] ***Tomb S2126***, another individual subterranean cist without a superstructure, yielded only a few grave goods.[1094] These include, besides Wadi Suq period pottery, seashells and an Iron Age pottery bowl (Fig. 47b). The rather well preserved second millennium ***Tomb S2131*** consists of an individual subterranean stone-built cist, without a superstructure.[1095] The tomb yielded only a few finds including Wadi Suq and Samad period pottery sherds. Within the Wadi Suq period ***Tomb S2136***, a subterranean rectangular cist without a superstructure, a burial of a child lying on its left side with its head to the southeast was interred during the Samad period together with a pottery jar (Fig. 47c).[1096] For this tomb, two cross walls were inserted in the original construction (S3136N, Fig. 47, marked in red). The pit for the Samad period inhumation cuts through the original bottom of the tomb. It seems that most of the Wadi Suq period grave goods were removed as only a socketed spearhead and some pottery fragments dating to this period were found. ***Tomb S2145***, a stone-built subterranean cist, is a largely destroyed tomb that might have been built during the Wadi Suq period.[1097] It measures 2.1 × 0.76 m. Only four pottery sherds and some fragmented animal bones were found. Three of the pottery sherds belong to the Samad period. The date of the latter could not be determined. Interestingly, Righetti[1098] does not consider it in her catalogue of Wadi Suq period tombs, thus it must be assumed that she, differently to Yule, dates it to the Samad period. The architectural layout of the Wadi Suq period ***Tomb S2154***, a subterranean, stone-built cist without a superstructure, was altered for a Samad period burial of an at least 20 year old individual (Fig. 47, marked in red).[1099] With the individual, cop-

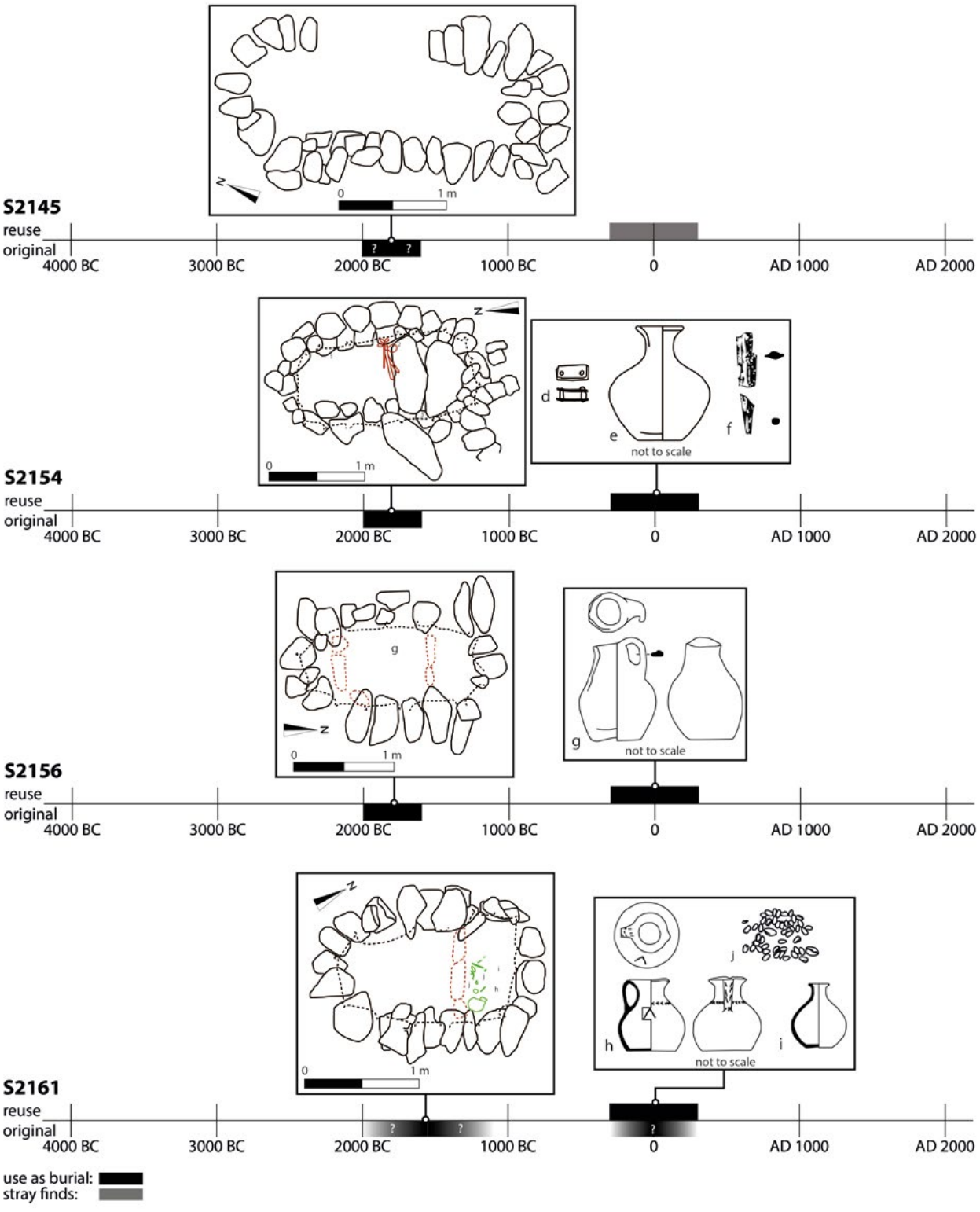
1078 For a discussion of the function of these objects see Barker 2004.
1079 Yule 2001: 299.
1080 Yule 2014: 298.
1081 Yule 2001: 299–300.
1082 Yule 2001: 301.
1083 Yule 2001: 302.
1084 Yule 2001: 304–306.
1085 Yule 2001: 306–307.
1086 Yule 2001: 311.
1087 Yule 2001: 313–314.
1088 Yule 2001: 317–318.
1089 Yule 2001: 306.
1090 Yule 2001: 300–301.
1091 Righetti 2015a: 556–558.
1092 Yule dates this beaker to the Iron Age (Yule 2001: 300).
1093 Yule 2001: 300–301.
1094 Yule 2001: 301–302.
1095 Yule 2001: 303.
1096 Yule 2001: 304.
1097 Yule 2001: 309.
1098 Righetti 2015a.
1099 Yule 2001: 311–312.

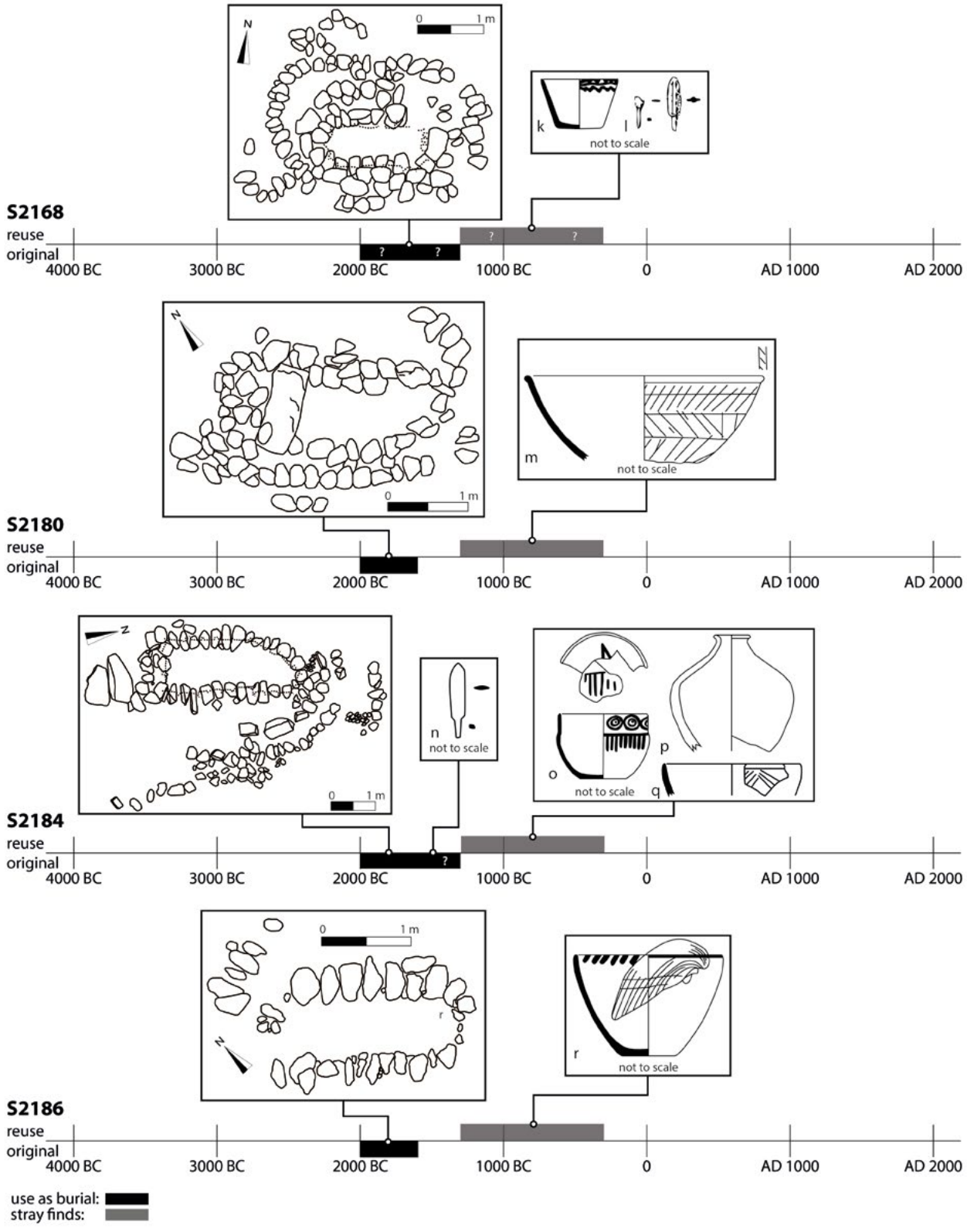
per alloy clamps (Fig. 47d), iron arrowheads (Fig. 47e), a Samad period balsamarium (Fig. 47f) as well as other pottery sherds were found. A similar phenomenon was observed at ***Tomb S2156***.[1100] Here, the architecture of the Wadi Suq period structure, a subterranean cist with a stone ring on the surface, was also altered to incorporate a Samad period burial. Two smaller walls were placed in the original chamber (Fig. 47, marked in red). The resulting space was so small that it seems to be intended for a child, although no child bones were found. The floor of this new burial chamber was 15 cm higher than that of the original one. None of the original Wadi Suq period material was encountered, as it was likely emptied before its reuse. This might be the reason why this tomb is omitted from Righetti's[1101] catalogue of Wadi Suq period tombs at Samad al-Shan. The only grave good attested was a small Samad period pottery jar (Fig. 47g) placed in the middle of the new burial chamber. It remains unclear to which of the two periods the human remains of an adult (most likely male, above the age of 20) belong that are mentioned in the excavation reports.[1102]

The date of the construction of ***Tomb S2161*** is unknown, but it has clearly been altered in the Samad period to incorporate the burial of a 3 to 4 year old child.[1103] A cross wall was inserted to form Tomb S2161N (Fig. 47, marked in red). The skeleton of the child was placed at a right angle to the original orientation of the tomb in a flexed position on its right side with the head to the southeast (Fig. 47, marked in green). The grave goods for this child consist of 48 cowrie shells (Fig. 47j), mainly distributed around the pelvis, and two Samad period pottery jars (Fig. 47h–i). From its architecture, the tomb should either date to the Wadi Suq or the Samad period. The Wadi Suq period ***Tomb S2168*** is a subterranean stone-built cist marked by a stone circle on the surface. The tomb yielded, according to Yule,[1104] finds from the Wadi Suq period as well as from the Iron Age, the latter being a pottery beaker (Fig. 47k). Righetti,[1105] on the other hand, dates the beaker to the Wadi Suq period. The two copper alloy arrowheads (Fig. 47l) found within the tomb are dated by Righetti to the Late Bronze Age but could equally be of an Iron Age date. Thus, continuous use of the tomb from the Wadi Suq period to the Iron Age cannot be ruled out. ***Tomb S2180***, a subterranean Wadi Suq period stone cist, measures 2 m in length and 0.8 m in width.[1106] The finds were scattered throughout its fill. It contained, besides Wadi Suq period soft-stone vessels and pottery sherds, a sherd of an Iron Age soft-stone vessel (Fig. 47m). ***Tomb S2184*** is another subterranean Wadi Suq period cist situated at the highest point of the Samad S21 south cemetery.[1107] With a length of 3.45 m and a width of 1.05 m, it is larger than most other Wadi Suq period tombs in the cemetery. The finds were scattered throughout the fill. Most material belongs to the Wadi Suq period. Two copper alloy arrowheads (Fig. 47n) were attributed by Righetti[1108] to the Late Bronze Age. A pottery cup decorated with horizontal lines (Fig. 47o) and a small jar (Fig. 47p) date to the Iron Age as well as possibly a sherd of a soft-stone vessel (Fig. 47q). The Wadi Suq period ***Tomb S2186***, yet another subterranean cist marked by a stone ring on the surface, was heavily plundered.[1109] It measures 1.8 × 0.75 m. On its floor, an Iron Age cup decorated with dark brown bands was found with a seashell inside (Fig. 47r). Of the original inventory, only a copper alloy bowl remained. ***Tomb S2199***, a subterranean cist, featured only a few Wadi Suq finds from the fill of the tomb.[1110] Additionally, the skeleton of a male adult, 20–30 years of age, was discovered (Fig. 47, marked in red). It was in a flexed position with the head to the southeast and the hands in front of the face. A small ring was found on one finger of its right hand (Fig. 47x), and a small bead made of shell before its head (Fig. 47w). Near the left shoulder 30 arrowheads (Fig. 47s) were deposited, among those two made of copper alloy (Fig. 47u). Three others were lying close to this group; another group of arrowheads were found near the feet of the individual. Here, also found, were animal bones of sheep or goat. A complete iron dagger with a length of 25 cm was found near the hip of the individual (Fig. 47t), and a complete Samad period pottery jar (Fig. 47v) near the feet. All finds clearly place the burial in the Samad period. As the copper alloy arrowheads were found in the larger group of iron ones, they can be dated to the Samad period rather than to the Late Bronze Age, contrary to what is suggested by Righetti.[1111] At ***Tomb S21101***, in the subterranean stone-built Wadi Suq period cist, among the few finds was an Iron Age pottery cup with reddish-brown decoration (Fig. 47y).[1112] Human bones were discovered in the northern and southern parts of the tomb belonging to a male individual above the age of 20, but it is unclear whether this skeleton belongs to the tomb's original use or to reuse. This tomb is, however, not mentioned in Righetti's[1113] catalogue of Wadi Suq period tombs at Samad al-Shan. The tomb was possibly surrounded by a stone ring on the surface. ***Tomb S21105*** is an individual subterranean cist

1100 Yule 2001: 312.
1101 Righetti 2015a.
1102 Yule 2001: 312.
1103 Yule 2001: 314–315.
1104 Yule 2001: 316–317.
1105 Righetti 2015a: 656.
1106 Yule 2001: 321.
1107 Yule 2001: 322–323.
1108 Righetti 2015a: 705.
1109 Yule 2001: 324.
1110 Yule 2001: 327–328; Righetti 2015a: 738–740.
1111 Righetti 2015a: 740.
1112 Yule 2001: 328–329.
1113 Righetti 2015a.


S2123
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
N
0
1 m
a
not to scale
S2126
b
not to scale
S2131
S2136
c
use as burial:
stray finds:


S2145
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
N
0
1 m
S2154
d
e
f
not to scale
S2156
g
not to scale
S2161
h
i
j
not to scale
use as burial:
stray finds:


S2168
reuse
original
4000 BC
3000 BC
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1000 BC
0
AD 1000
AD 2000
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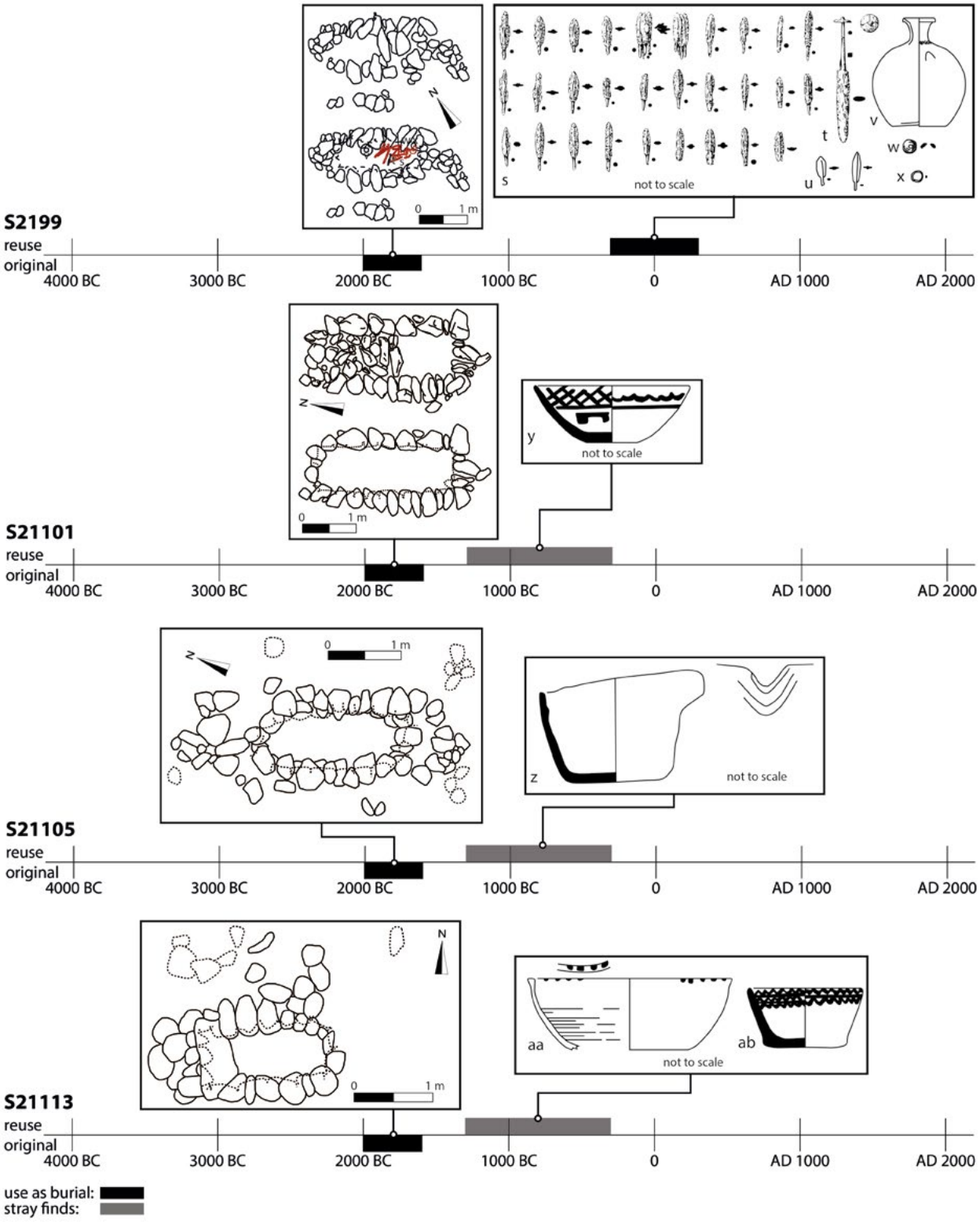
k
l
not to scale
S2180
m
not to scale
S2184
n
not to scale
o
p
q
S2186
r
use as burial:
stray finds:


S2199
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
N
0
1 m
s
not to scale
t
u
v
w
x
S21101
y
not to scale
S21105
z
not to scale
S21113
aa
ab
not to scale
use as burial:
stray finds:

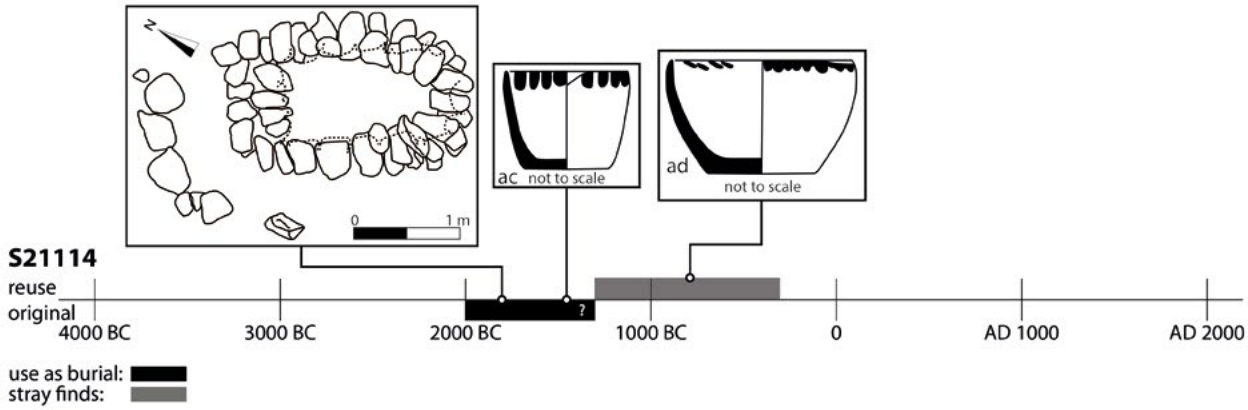


Fig. 47: Chronological timeframes of reused tombs at Samad-21 South (adapted from Yule 2001: Taf. 268, 269, 271, 271.2, 280, 305, 307, 314–315, 322, 323.2, 5, 336, 336.2, 341.2, 5, 342.13, 17, 345, 345.1–2, 355–357, 359, 359.1, 365, 365.2, 371, 371.2–3, 372, 372.2–3 604)

with a surrounding wall as a superstructure, dating to the Wadi Suq period.[1114] The fill included some fragments of human bone, a Wadi Suq period soft-stone vessel and some Iron Age pottery sherds including one from a cup with a spout (Fig. 47z). The content of ***Tomb S21113***, another subterranean stone-built Wadi Suq period cist, was disturbed.[1115] Within its fill, finds from the Wadi Suq period as well as the Iron Age were mixed. The latter consists of two pottery bowls, one with lines on the rim (Fig. 47aa), and the other with a wavy line decoration (Fig. 47ab). ***Tomb S21114*** is yet another Wadi Suq period tomb at cemetery Samad-21 South that also yielded finds from the Iron Age.[1116] The layout of the tomb is a D-shaped subterranean cist with a surrounding wall on the surface. Finds include a Wadi Suq period soft-stone vessel, a Wadi Suq period pottery beaker, a pottery bowl (Fig. 47ac) that is dated by Righetti[1117] to the Late Bronze Age but by Yule[1118] to the Iron Age, and another Iron Age pottery bowl with a wavy line decoration (Fig. 47ad). Thus, continuous use from the Wadi Suq period to the Iron Age cannot be excluded.

4.1.34.5 Samad-22

The cemetery of Samad-22 was discovered in 1982.[1119] Four tombs were investigated here. One of these has only indications for a date in the Wadi Suq period, while the other three are all built in the Wadi Suq period, but also yield Iron Age finds (Tombs S2200 and S2203), and in the case of Tomb S2202, Late Bronze as well as Iron Age finds. Here, continuous use is therefore possible.

Tomb S2200 is a subterranean stone-built cist, partly dug into the bedrock. It was marked on the surface by a stone ring.[1120] This Wadi Suq period tomb contained, besides Wadi Suq period finds, some Iron Age pottery sherds (Fig. 48a). Human remains were fragmented and mixed within the fill, making it impossible to associate them with any of the two periods. They belong to at least three individuals aged three, ten and above 35 years.

Tomb S2202 presents a similar situation.[1121] Scattered through the fill of this individual subterranean Wadi Suq period cist were Wadi Suq period pottery sherds and soft-stone vessel fragments, two Late Bronze Age arrowheads (Fig. 48b),[1122] several Iron Age pottery sherds (Fig. 48c), an Iron Age soft-stone vessel (Fig. 48d) and an Iron Age decorated shell button (Fig. 48e) together with several beads and sea shells of no certain chronological association. Thus, it is unclear whether this represents reuse or rather a continuously used tomb. A radiocarbon date from the tomb dates to cal. 1σ AD 184–430. This date is, as all other radiocarbon dates from Samad from Yule's publication, much younger than the associated finds and should therefore be treated with caution. The Wadi Suq period ***Tomb S2203***, another subterranean stone-built cist, was nearly empty when excavated, but an Iron Age soft-stone vessel (Fig. 48f) found in the debris gives evidence for reuse.[1123]

4.1.34.6 Samad-23

The cemetery of Samad-23 lies to the east of the modern oasis of Samad.[1124] In 1988, ten tombs were investigated in a rescue excavation. Today, the cemetery has vanished

1114 Yule 2001: 330–331.
1115 Yule 2001: 333.
1116 Yule 2001: 333–334.
1117 Righetti 2015a: 776.
1118 Yule 2001: 333, Taf. 372.2.
1119 Yule 2001: 334.
1120 Yule 2001: 336–337.
1121 Yule 2001: 337–338.
1122 Righetti 2015a: 816.
1123 Yule 2001: 338.
1124 Yule 2001: 339.

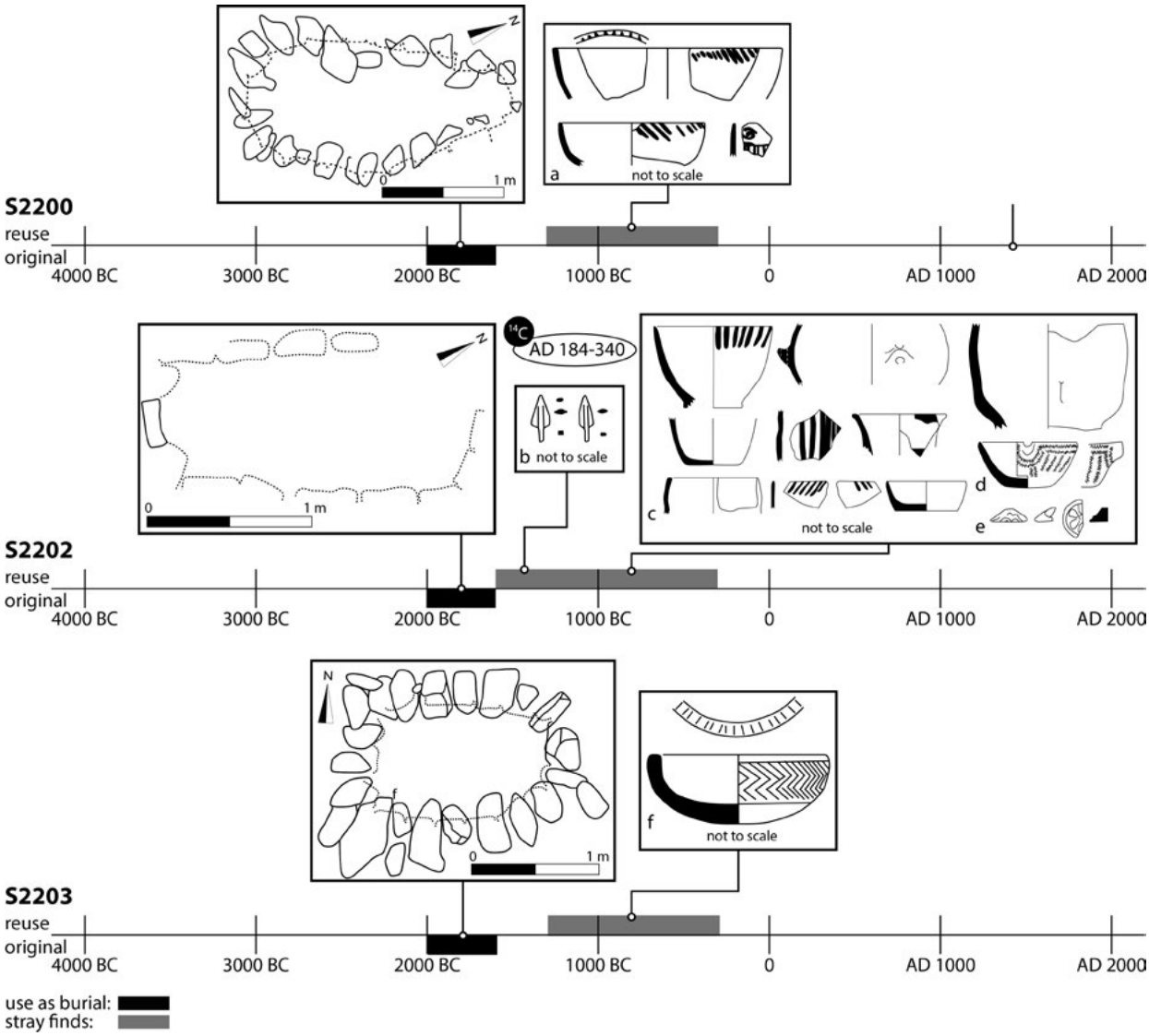


Fig. 48: Chronological timeframes of reused tombs at Samad-22 (adapted from Yule 2001: Taf. 381, 382.3–5, 384, 385.1–8, 10–11, 13, 15-16, 18, 386 S2203, 386.1).

below modern houses and farmland. From the excavated tombs, seven date to the Samad period, two to the Iron Age and one tomb (Tomb S2308) might be of Iron Age origin and was reused during the Samad period.

Tomb S2308 is an underground cist, which yielded only a few human remains and other objects (Fig. 49). These include Samad period pottery sherds and also likely Iron Age pottery sherds, although an attribution to the latter is not clear.[1125] Thus, it could either be a reused Iron Age tomb or a Samad period tomb without reuse.

4.1.34.7 Samad-30

The cemetery of Samad-30 is located to the east of the Samad oasis.[1126] Twenty-eight tombs were excavated here in the 1980s. Twenty-six of the tombs belong to the Samad period and two tombs are of an unknown date. No signs of reuse were visible, but it must be mentioned that within Tomb S3017A, Iron Age pottery sherds were found.[1127] The architecture of this tomb belongs, however, clearly to the Samad period. According to Yule, the sherds ended up in the tomb due to taphonomic processes. Additionally, an etched carnelian bead with a white-on-red rank/scroll motif was found at ***Tomb S3018***, together with thirty-five plain carnelian beads, likely belonging to a necklace (Fig. 50a).[1128] Due to the layout of the tomb and other finds such as typical Samad period pottery, Yule dates the tomb to this period. De Waele and Haerinck,[1129] however, do not want to exclude reuse of the tomb in the Sasanian or early Islamic period because of the specific type of carnelian bead found.

1125 Yule 2001: 341.
1126 Yule 2001: 348.
1127 Yule 2001: 356.
1128 Yule 2001: 357–358.
1129 De Waele – Haerinck 2006: 38.

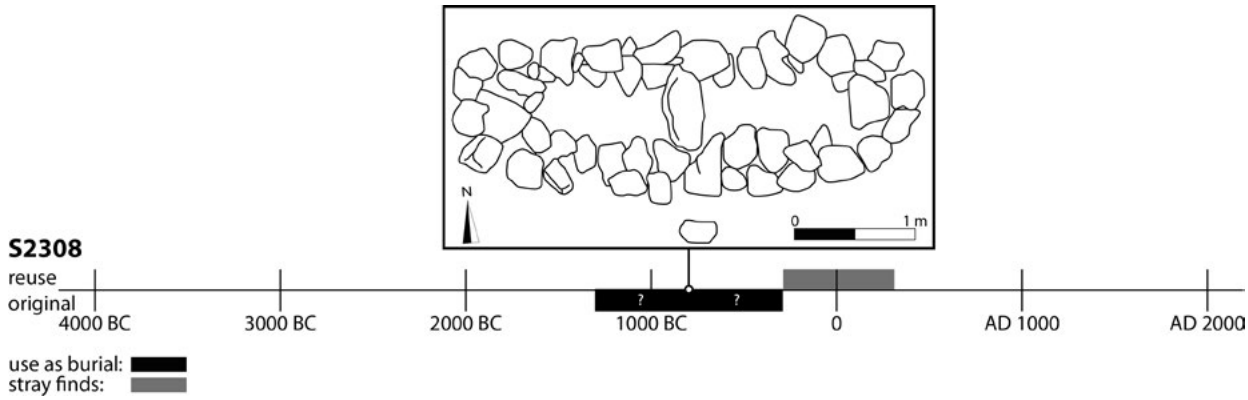


Fig. 49: Chronological timeframe of reused tomb at Samad-23 (adapted from Yule 2001: Taf. 396).

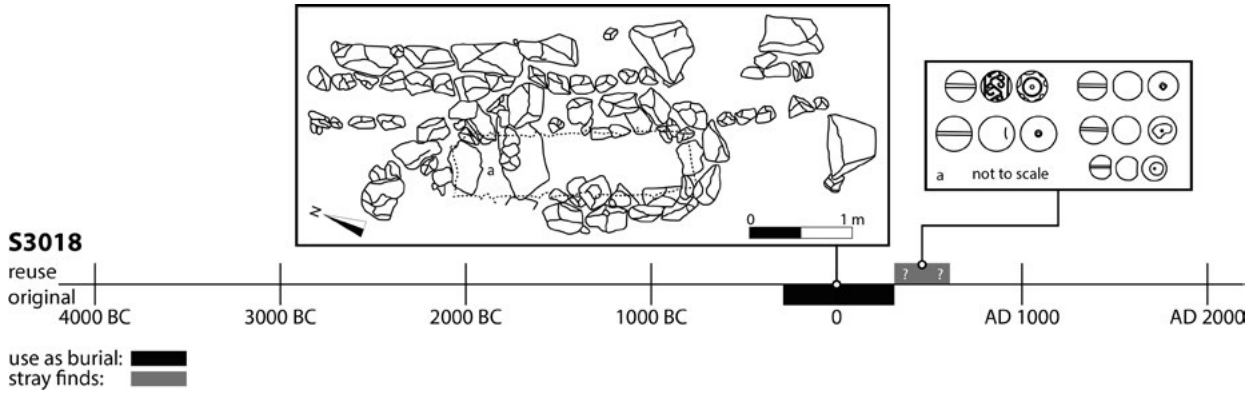


Fig. 50: Chronological timeframe of reused tomb at Samad-30 (adapted from Yule 2001: Taf. 449, 450.2).

4.1.35 Khudra

Khudra (Al-Akhdar) is a second millennium grave field about 5 km to the north-east of Samad al-Shan. Eight graves were excavated here by the Ministry of Heritage and Culture of the Sultanate of Oman (now the Ministry of Heritage and Tourism) in 1974.[1130] In 1981, Weisgerber re-examined these and some other tombs, leading to a total of 28 second millennium tombs that were excavated, of which an undefined number were reused in the Samad period. The tombs are subterranean, stone lined cists that yielded several typical second millennium period finds including large amounts of pottery and soft-stone vessels as well as a few metal objects including incised arrowheads.[1131] The latter, however, according to Velde,[1132] date to the end of the Late Bronze Age or the Iron Age I. Among the other metal objects are socketed spearheads, most likely of a Wadi Suq period date, and triangular shaped daggers with rivet holes at the end for a handle, which are a Late Bronze Age type.[1133] Sometimes the tombs incorporate third millennium sugar lumps in their construction.[1134] At least one of the tombs seems to have been reused in the Iron Age, as pottery sherds indicate.[1135]

4.1.36 Al-Rawdah

The cemetery of Al-Rawdah consists of tombs of different periods. It was investigated in February 1989 by Weisgerber, who conducted excavations at two of the tombs.[1136] Both tombs, Tombs Mu1 and Mu2, were built in the Iron Age and reused in the Samad period.

Tomb Mu1 is dated according to its architecture to the Iron Age.[1137] It included a badly disturbed skeleton of a 30–40 year old male individual with Samad period grave goods, among them different types of beads (Fig. 51a), a pendant (Fig. 51b), ten copper alloy rings (Fig. 51c), a stone vessel (Fig. 51d) and an iron pin. ***Tomb Mu2*** is also dated according to its architectural layout to the Iron Age and yielded finds from the Samad period. A skeleton of an adult individual together with two ar-

1130 De Cardi – Collier – Doe 1976: 156; Vogt 1985: 209; Yule 2001: 364.
1131 Weisgerber 1991: 324, Abb. 2.3, 5–6, 4.4–6.
1132 Velde 2003: 112.
1133 Righetti 2015a: 466–468.
1134 Weisgerber 1991: 324.
1135 Lombard 1985: 142, tab. 10.
1136 Yule 2001: 396–397.
1137 Yule 2001: 396.

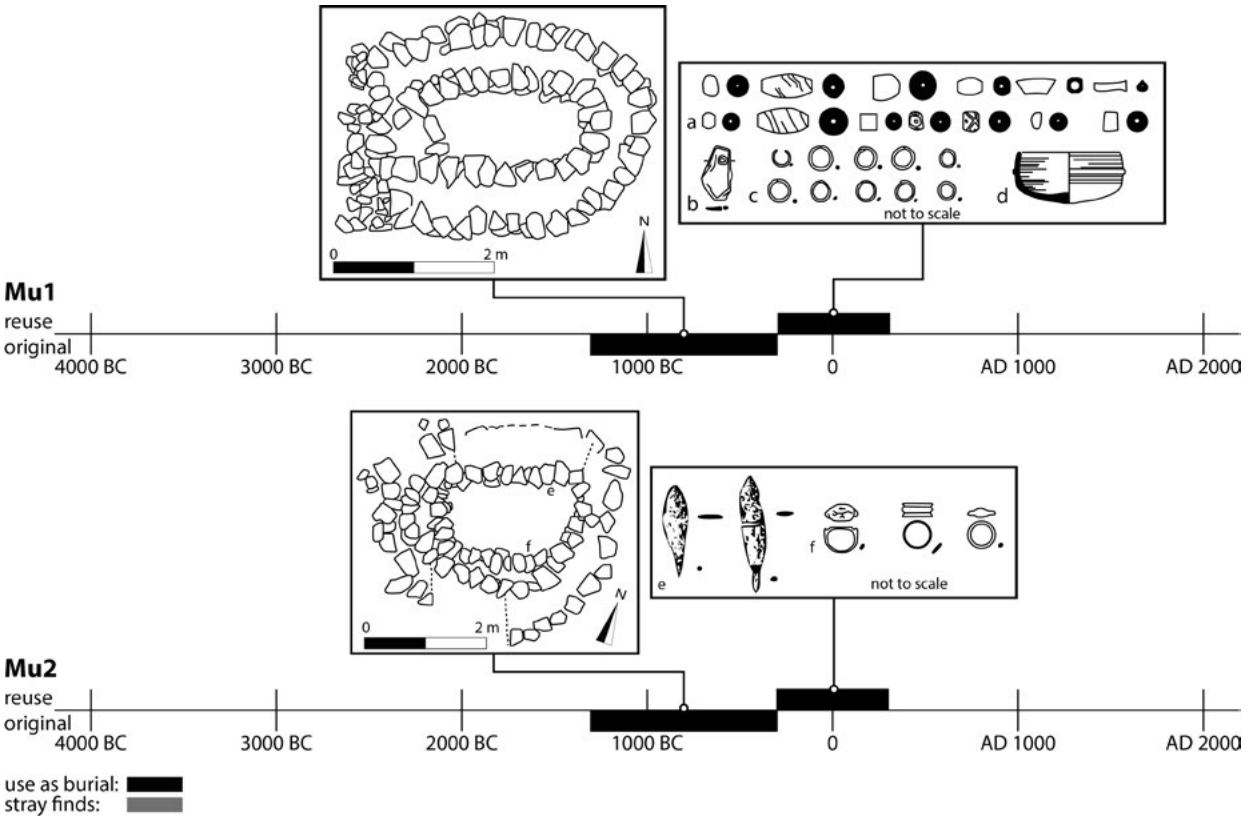


Fig. 51: Chronological timeframes of reused tombs at Al-Rawdah (adapted from Yule 2001: Taf. 531–532).

rowheads (Fig. 51e), three rings (Fig. 51f) and bones of sheep or goat was attested.[1138]

4.1.37 Tawi Silaim

Four tombs were excavated by the British Archaeological Expedition to Oman between 1977 and 1978 at Tawi Silaim.[1139] One of these, Cairn 4, dates to the Hafit period and was reused in the Iron Age, while the others are of an early third millennium BC date. The excavators suggest that they might represent transitional types between the Umm an-Nar and the Hafit period. Two of them, Cairn 2 and Cairn 3, show indications of reuse at a later, not precisely datable period.

Cairn 2 is a Hafit period tomb with an external diameter of 3.8 m and a wall thickness between 0.6 and 0.8 m.[1140] The tomb had two phases of use. After the initial use in the third millennium BC, a pit with a diameter of approximately 1 m was dug into the already decaying tomb, in which an individual in crouched position was buried (Fig. 52, marked in red). It belongs to a 20–25 year old male.[1141] The pit cuts through the earlier chamber floor to a depth of 50 cm. The individual, placed on its right side, was tightly flexed with the head to the west and the skull propped up against the side of the pit (Fig. 52a). There was no grave furniture directly associated that would allow a chronological assessment, and the skeleton was in poor condition. It was laid straight onto the natural gravel. ***Cairn 3***, another Hafit period tomb, features a similar pit to Cairn 2, albeit no finds were made within the pit (Fig. 52, marked in red).[1142] The pit is *c.* 90 × 50 cm wide and dug into the centre of the chamber. Floor slabs were lacking in this area. De Cardi[1143] interprets this as a later attempt to rob the tomb (but see chapter 6.1.1). The tomb has an external diameter of 3.6 m and a wall thickness of 0.8 m. The Hafit period ***Cairn 4*** differs from the other excavated tombs at Tawi Silaim insofar as it has an elliptical burial chamber.[1144] An Iron Age perforated cup was found within its fill (Fig. 52b). The excavators see this as the remains of a secondary burial which was completely destroyed when the structure was subsequently disturbed. According to them, this would account for the presence of perforated sherds deep in the backfill of the chamber.

1138 Yule 2001: 397.
1139 De Cardi – Doe – Roskams 1977; de Cardi – Bell – Starling 1979.
1140 De Cardi – Bell – Starling 1979: 63–66.
1141 De Cardi – Bell – Starling 1979: 92.
1142 De Cardi – Bell – Starling 1979: 66.
1143 De Cardi – Bell – Starling 1979: 66.
1144 De Cardi – Bell – Starling 1979: 68–70.

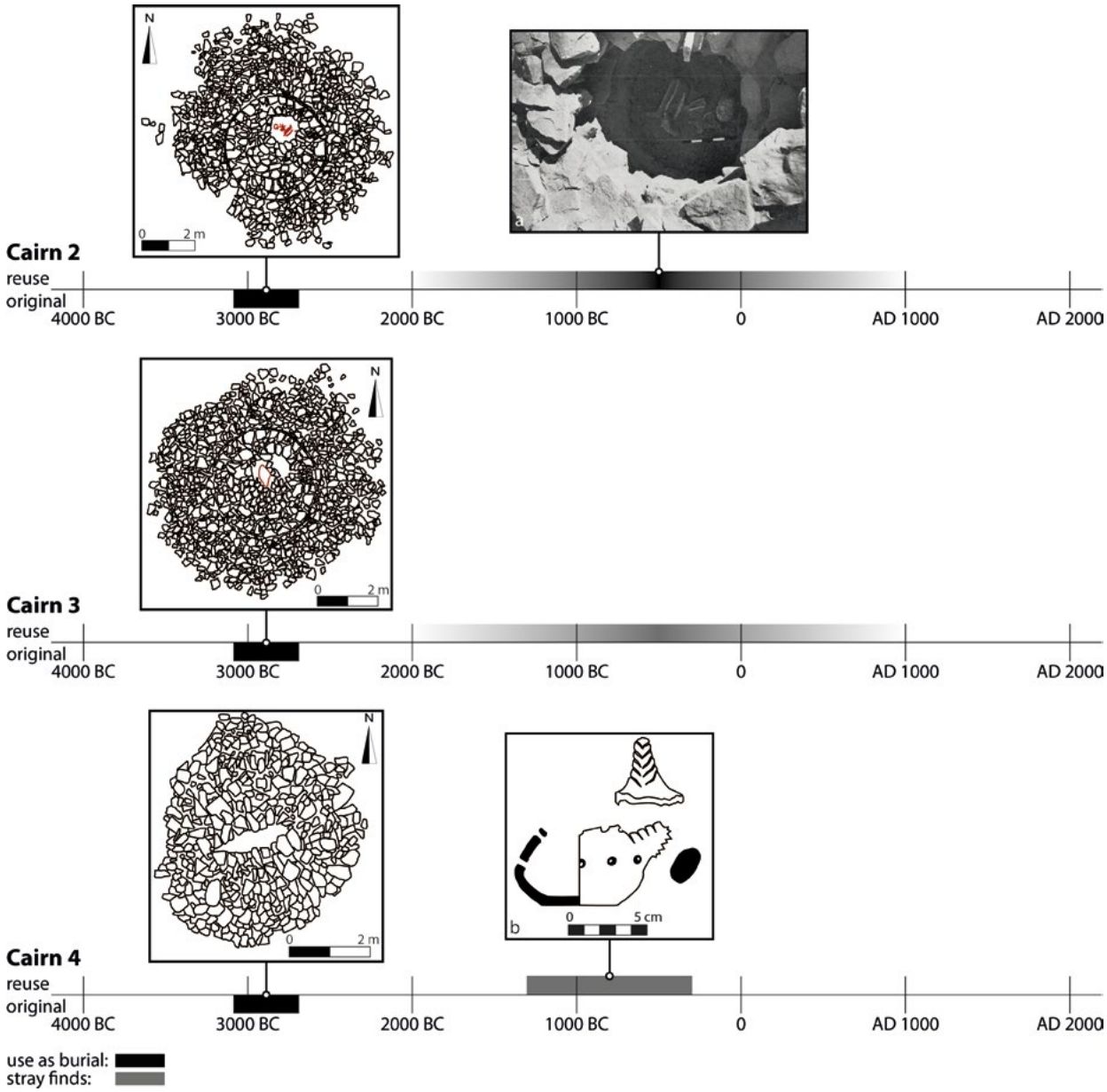


Fig. 52: Chronological timeframes of reused tombs at Tawi Silaim (adapted from de Cardi – Bell – Starling 1979: fig. 3–5, 7.11, 31a).

4.1.38 Shir/Jaylah

In total, 59 tombs were recorded on the top of the Shir plateau.[1145] They were discovered from the air in 1977 and further investigated in 1995 by Yule and Weisgerber. According to their architecture, the tombs belong to the Hafit or Umm an-Nar period or maybe to some transitional phase in between. Three of the tombs were excavated. During the investigations, however, no material from the third millennium BC was found at any of the three tombs, and two of them, Tombs Shi1 and Shi2, yielded Iron Age pottery sherds, indicating reuse of the tombs (Fig. 53).[1146]

Tomb Shi1 is the best-preserved tomb at Shir with a height of 5.47 m.[1147] The tomb has a round diameter of 6.07 m at its base. The excavators describe Tomb Shi1 as completely plundered and only in the crevices between the floor stones were found remains of a bone and molluscs, including three cowries (but see chapter 6.1.1). Outside the entrance, an Iron Age pottery sherd was encountered. ***Tomb Shi2*** has a diameter of 7.35 m at its bottom and is preserved to a height of 7.50 m.[1148] With

1145 Yule – Weisgerber 1996: 137–140; Yule – Weisgerber 1998; Yule 2001: 382–383.

1146 Yule – Weisgerber 1996: 140; Yule – Weisgerber 1998: 191; Siebert 2006: 51.

1147 Yule – Weisgerber 1998: 211–215.

1148 Yule – Weisgerber 1998: 215–216.

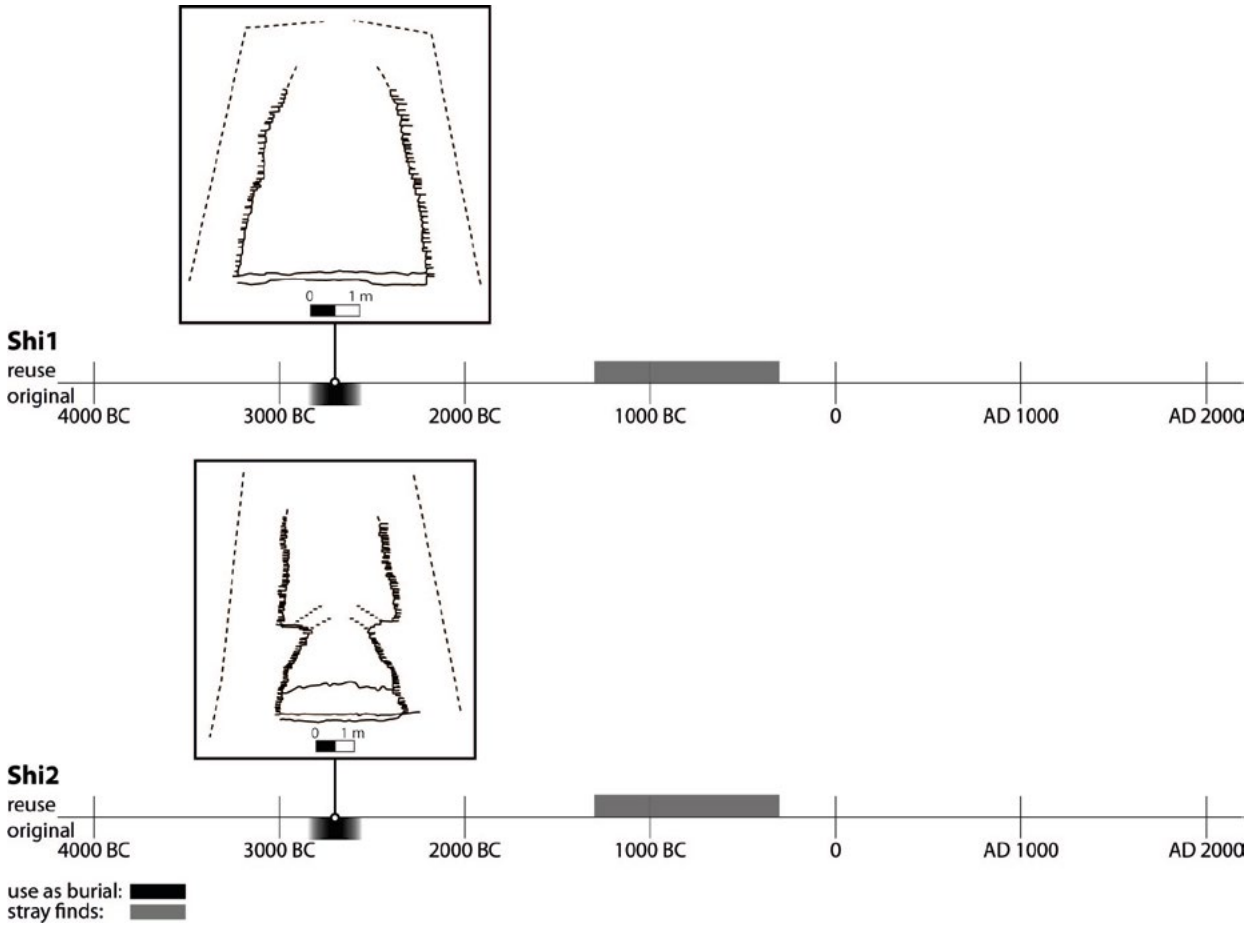


Fig. 53: Chronological timeframes of reused tombs at Shir (adapted from Yule – Weisgerber 1998: fig. 34, 37).

the exception of the upper and lower collapsed vaults, the tomb is intact. The interior of the tomb was filled with a 0.70 m high layer of debris. Two undecorated Iron Age pottery sherds were the only finds which came to light.

4.2 Evidence from intensively surveyed tombs

Within this chapter, selected evidence of reuse is presented from tombs that were part of intensive surveys with artefact collection. Finds from later periods encountered at a tomb that due to its layout can be attributed to a previous period are seen as indicators for reuse.

4.2.1 Khatt

In 1992 a survey was conducted in Khatt, United Arab Emirates, under the direction of de Cardi, recording archaeological remains from the fourth millennium BC to the present day.[1149] Within the survey, 23 tombs were identified that date to the Hafit period, four tombs that date to the Umm an-Nar period, 24 tombs that date to the Wadi Suq period and eleven tombs of an unknown date. In addition, three Umm an-Nar period tombs (Kh117a–c) were discovered that yielded Wadi Suq period material.[1150] Without excavation, it is, however, difficult to distinguish between continuous use and reuse.

Kh117a is an oval tomb that was bulldozed, leaving only the northern segments of its ring wall intact (Fig. 54).[1151] ***Kh117b*** and ***Kh117c*** are both small tombs with an external ring wall giving them a typical Umm an-Nar period layout. Fragments of pottery (Fig. 54a–d) and soft-stone vessels (Fig. 54e) dating to the early Wadi Suq period were found on their surfaces. Therefore, de Cardi concludes that "unless we are dealing with secondary burials in the Umm an-Nar tombs at Khatt it would appear that ceramic styles changed more rapidly than the traditional funerary architecture".[1152] Thus, for her, these are not reused Umm an-Nar period tombs, but Wadi Suq period tombs in an Umm an-Nar style. As no plans of these tombs were published, this claim cannot be verified.

1149 De Cardi – Kennet – Stocks 1994.

1150 De Cardi – Kennet – Stocks 1994: 46.
1151 De Cardi – Kennet – Stocks 1994: 47.
1152 De Cardi – Kennet – Stocks 1994: 48.

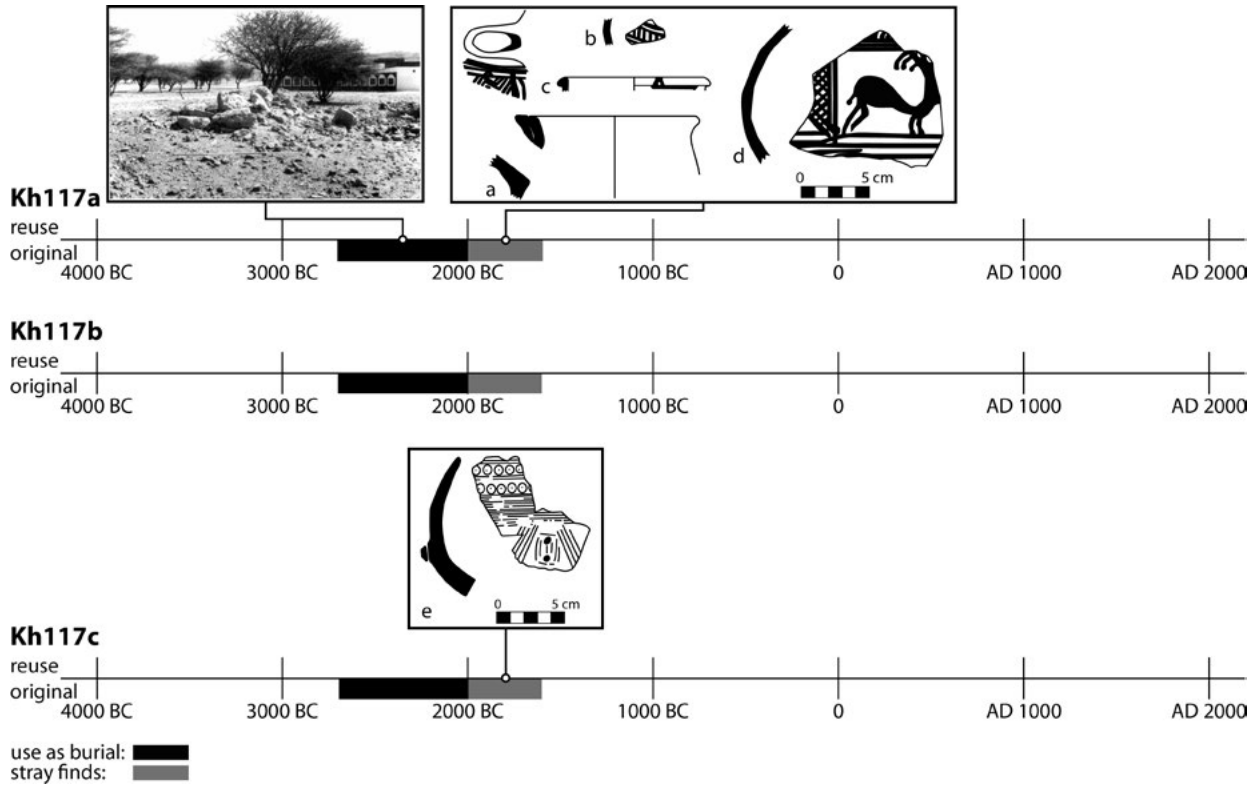


Fig. 54: Chronological timeframes of reused tomb at Khatt (adapted from de Cardi – Kennet – Stocks 1994: fig. 6.4–5, 11, 13, 32, pl. VIIa).

4.2.2 Wadi al-Fa'y B

About 20 cairns are spread out on a small plain along the southern ridges of Wadi al-Fa'y near the village of Ghob.[1153] Most of the cairns are typical Hafit period tombs with diameters between 5 and 6 m. Additionally, some oval shaped tombs dating to the first millennium BC were recorded. Nevertheless, all the pottery collected during the survey can be attributed to the Islamic period. Therefore, the researchers point out that the cairns were reused as a burial place in the Islamic period.

4.2.3 Al-Banah

In winter 1974/1975, the British Archaeological Expedition discovered a ruined Umm an-Nar period tomb near Al-Banah.[1154] Little remained of this tomb except the lowest courses of white, shaped, convex faced stones. Surface material was made up of Iron Age pottery sherds indicating reuse.[1155]

4.2.4 Wadi Andam

In two field seasons between 2004 and 2006, Al-Jahwari conducted a survey in the region of Wadi Andam for

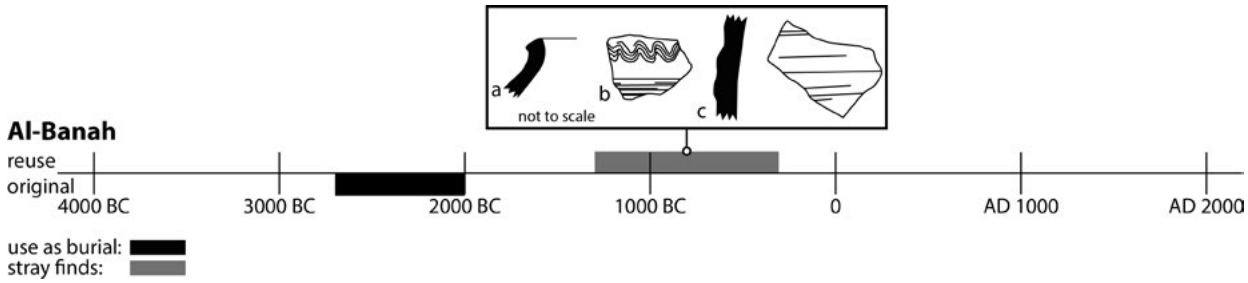


Fig. 55: Chronological timeframe of reused tomb at Al-Banah (adapted from de Cardi – Collier – Doe 1976a: fig. 25.277–279).

1153 Corboud – Hapka – Im Obersteg 1988: 21–22.

1154 De Cardi – Collier – Doe 1976: 171.

1155 De Cardi – Collier – Doe 1976: 145; Lombard 1985: tab. 10.

his PhD thesis.[1156] Seven sub-regions were selected for more intensive studies including the documentation of structural remains and surface finds. These are: Fulayj (CS.1), Wadi Andam itself (CS.2), Khurais (CS.3), Qaryatain (CS.4), Al-Khashbah (CS.5), Barzaman (CS.7) and Al-Rawdah (CS.9).[1157] The main aim of this thesis was to examine, quantify and re-think the settlement history of the northern Oman Peninsula from the Hafit period to modern times. Within the survey, several indications for later reuse of tombs were made, especially on Hafit period cairns.

In the area of Al-Qaryatain (CS.4), Iron Age and Samad period finds were associated with Hafit period cairns. At the site of ***CS.4.3*** 35, Iron Age (Fig. 56a) and 66 Samad period pottery sherds as well as one piece of a soft-stone vessel (Fig. 56b) and a sea shell (Fig. 56c) were associated with two disturbed cairns.[1158] According to Al-Jahwari, the finds demonstrate reuse in the Iron Age and Samad period. Among the five Hafit period cairns at the site of ***CS.4.13***, ***Tomb 8*** and ***Tomb 9*** yielded 38 Iron Age pottery sherds (Fig. 56e).[1159] Additionally, several beads (Fig. 56f) were discovered at Tomb 8, and one bead as well as a complete shell (Fig. 56g) at Tomb 9.[1160] Within ***Tomb 1***, a spindle-whorl made of grey stone (Fig. 56d) dating to the Iron Age was found.[1161]

Several sites in the wider vicinity of the modern village of Al-Khashbah (CS.5) also featured Iron Age material in association with Hafit period cairns. The site ***CS.5.10*** is comprised of 39 cairns southeast of the village. At ***Tomb 1***, 13 Samad period pottery sherds were discovered.[1162] ***Tomb 2*** yielded 23 Iron Age pottery sherds (Fig. 56h), 42 Late Islamic pottery sherds, one bead (Fig. 56i) that according to Al-Jahwari is of an Iron Age date, and an iron and copper earring (Fig. 56j).[1163] The latter might be of a Samad period date due its material. At ***Tomb 5***, 28 Samad period pottery sherds and two late Islamic ones were found, at ***Tomb 9*** twelve Late Islamic pottery sherds and at ***Tomb 13*** 13 Samad period pottery sherds and four of the late Islamic period were found.[1164] ***Tomb 27*** yielded six Late Islamic pottery sherds and a stone bead.[1165] The largest number of Early Iron Age sherds originate from site ***CS.5.13*** where eleven Hafit period cairns are located. ***Tombs 1, 2*** and ***3*** featured a total of 105 Iron Age pottery sherds, while additionally several beads and shells were found that were dated by Al-Jahwari to the Iron Age.[1166] ***Tomb 4*** seashells and one bead as well as several fragments of an Iron Age soft-stone vessel were attested.[1167]

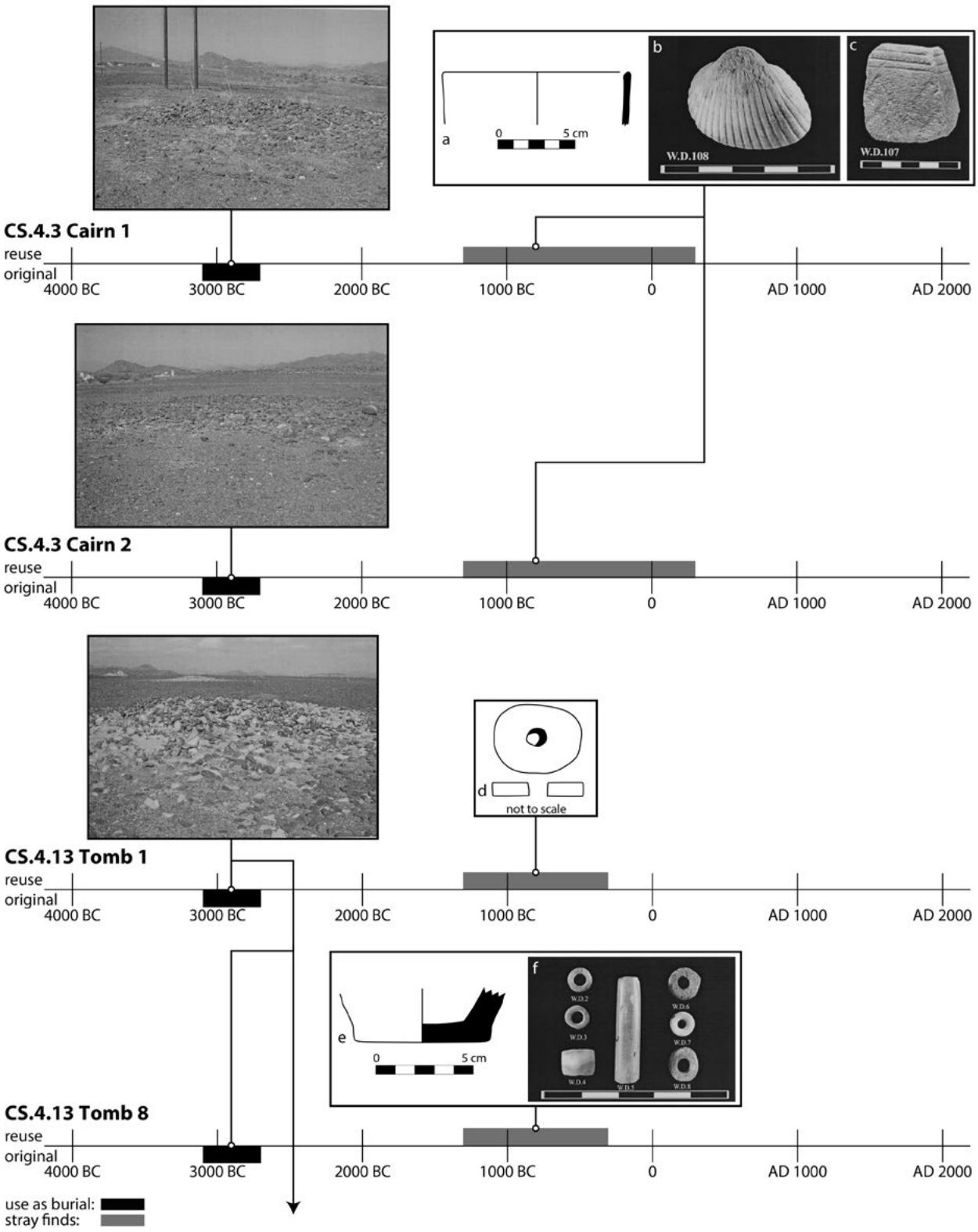
4.2.5 Al-Mudhaybi Regional Survey

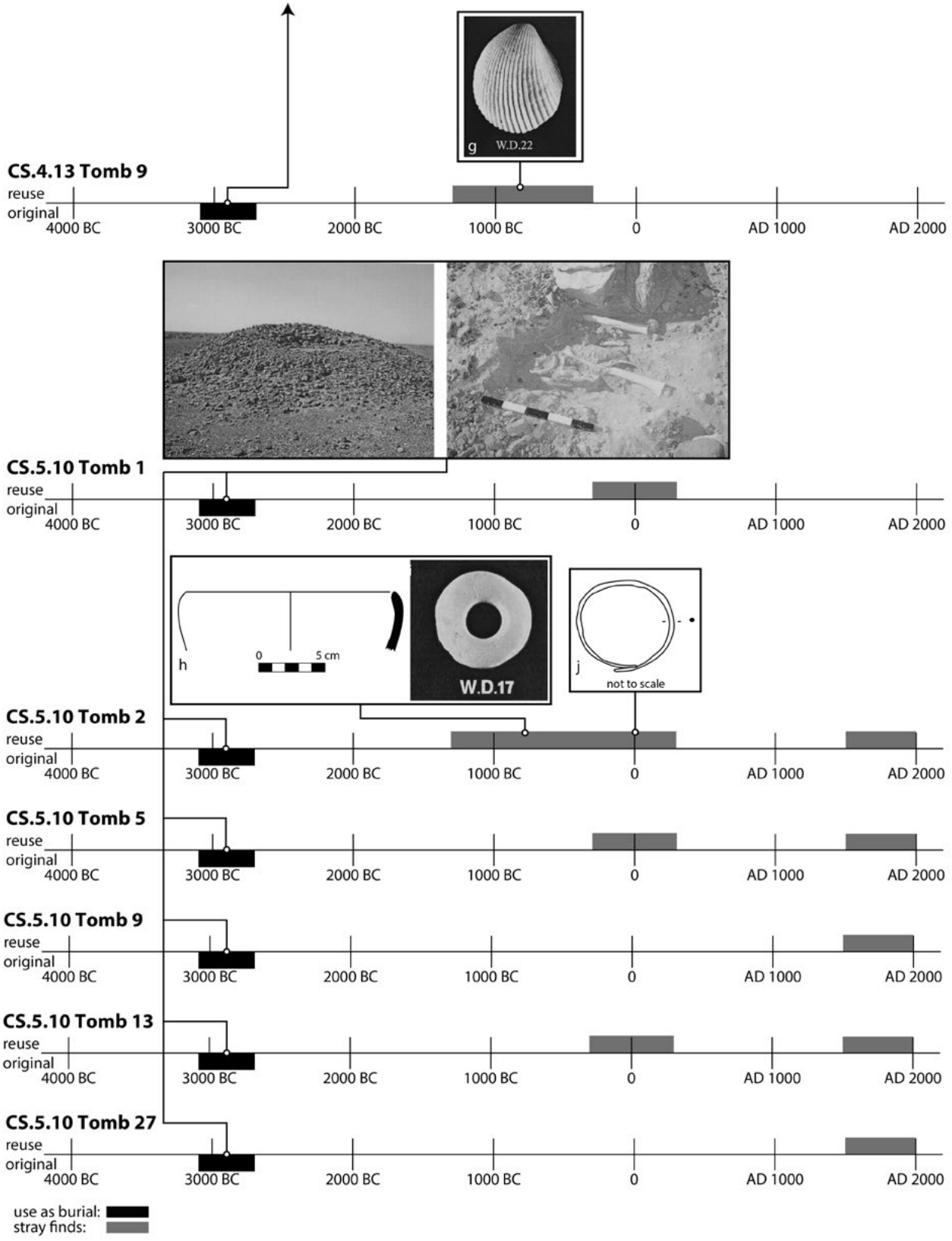
During the Al-Mudhaybi Regional Survey conducted by the author,[1168] 255 tombs were identified among the total of 3665 documented tombs that show signs of probable reuse. Most of the tombs are flattened remains of tumuli, which are likely of a Hafit period date, but due to their bad state of preservation and lacking excavation, this cannot be confirmed. Tumuli on the Oman Peninsula can also date to other periods from the Neolithic to the Samad/PIR.[1169]

These difficulties in dating the construction of the tombs result in uncertainties when identifying reuse. This is also true for the six reused tombs that were most likely constructed during the Umm an-Nar period and the ten tombs that are supposedly of a Wadi Suq period origin.

Generally, the most common indicator for reuse are Late Islamic/modern pottery sherds (Fig. 57b) found on the surface of 123 of these tombs, which might have been unintentionally deposited here. Middle and Early Islamic finds are much rarer and only occurred at two tombs (TURQ pottery sherds) and five tombs (sgraffiato pottery sherds, Fig. 57c). Samad period finds that were identified at four tombs include iron arrowheads (Fig. 57d), iron pins, a soft-stone spindle whorl and copper alloy rivets. Iron Age material is the second most common indicator for reuse after the Late Islamic/modern material in the region. These are typical Iron Age II pottery sherds with plum colour painted decoration (Fig. 57a, f), carinated pottery bowls, bridge spouted vessels, soft-stone vessels (Fig. 57e) and copper alloy arrowheads (Fig. 57g). Very often these finds are associated with large quantities of beads and seashells, some of the latter filled with green or black substances, likely cosmetics. Iron Age finds were discovered at 117 tombs during the survey. Eight possible Hafit period tombs yielded Wadi Suq period finds such as soft-stone vessel fragments and pottery sherds (Fig. 57h). Additionally, there are five supposedly Hafit period tombs that yielded fine mineral tempered pottery with black decoration that could be of an Umm an-Nar period date.

1156 Al-Jahwari 2008.
1157 Al-Jahwari 2008: map 9.
1158 Al-Jahwari 2008: 174, pl. 93–94, 458.
1159 Al-Jahwari 2008: 174, pl. 95, 463.
1160 Al-Jahwari 2008: 175, pl. 84, 96–97.
1161 Al-Jahwari 2008: 175, pl. 98.
1162 Al-Jahwari 2008: 474.
1163 Al-Jahwari 2008: 175, pl. 107, 474.
1164 Al-Jahwari 2008: 474.
1165 Al-Jahwari 2008: 474.
1166 Al-Jahwari 2008: 175, pl. 106, 110–111, 475.
1167 Al-Jahwari 2008: 175, pl. 106, 112, 476.
1168 Döpper – Schmidt 2020.
1169 Williams – Gregoricka 2020.


a
0
5 cm
b
W.D.108
c
W.D.107
CS.4.3 Cairn 1
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
CS.4.3 Cairn 2
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
d
not to scale
CS.4.13 Tomb 1
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
e
0
5 cm
f
W.D.2
W.D.3
W.D.4
W.D.5
W.D.6
W.D.7
W.D.8
CS.4.13 Tomb 8
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
use as burial:
stray finds:


g W.D.22
CS.4.13 Tomb 9
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
CS.5.10 Tomb 1
h
0
5 cm
W.D.17
j
not to scale
CS.5.10 Tomb 2
CS.5.10 Tomb 5
CS.5.10 Tomb 9
CS.5.10 Tomb 13
CS.5.10 Tomb 27
use as burial:
stray finds:

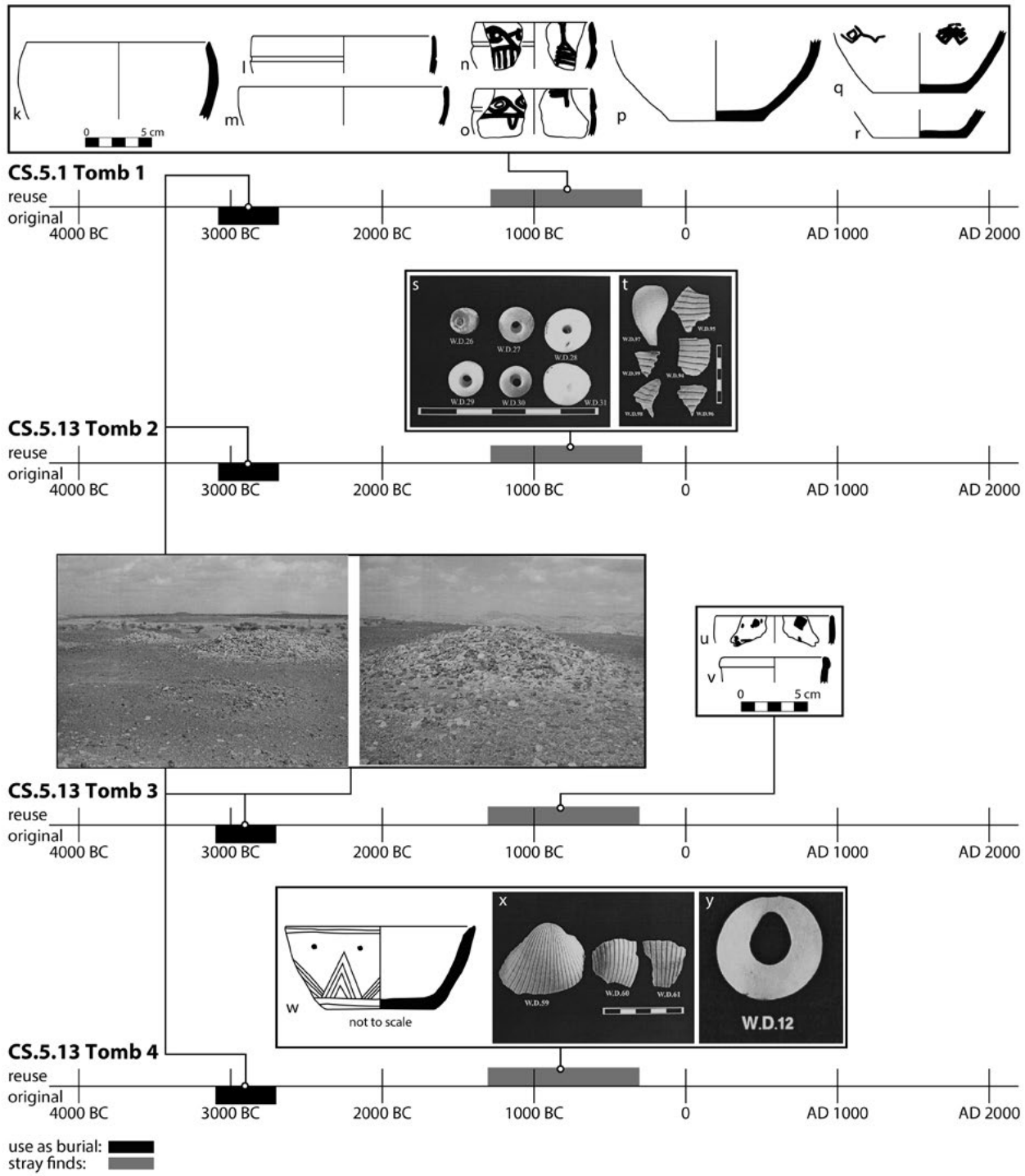


Fig. 56: Chronological timeframe of reused tombs in the Wadi Andam Survey (adapted from Al-Jahwari 2008: fig 57.W.D.112–115, 58.W.D.119, W.D.130, 130A–D, 131D, 133B, 134A, D, G, 135B, 136E–F, 138A, F, 139C, E, pl. 91–97, 106.W.D.12, 17, 108–111).

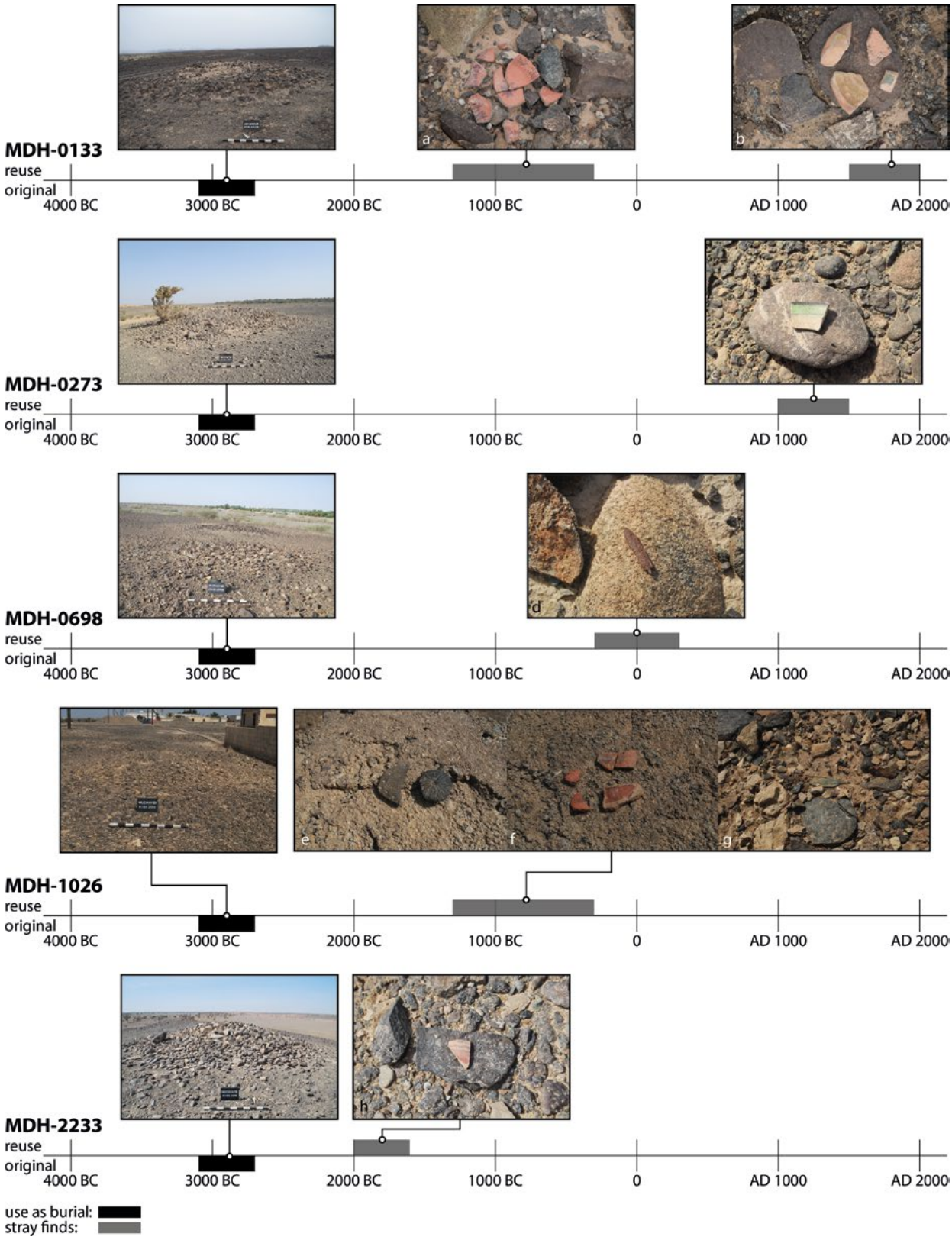


Fig. 57: Chronological timeframes of selected reused tombs from the Al-Mudhaybi Regional Survey.

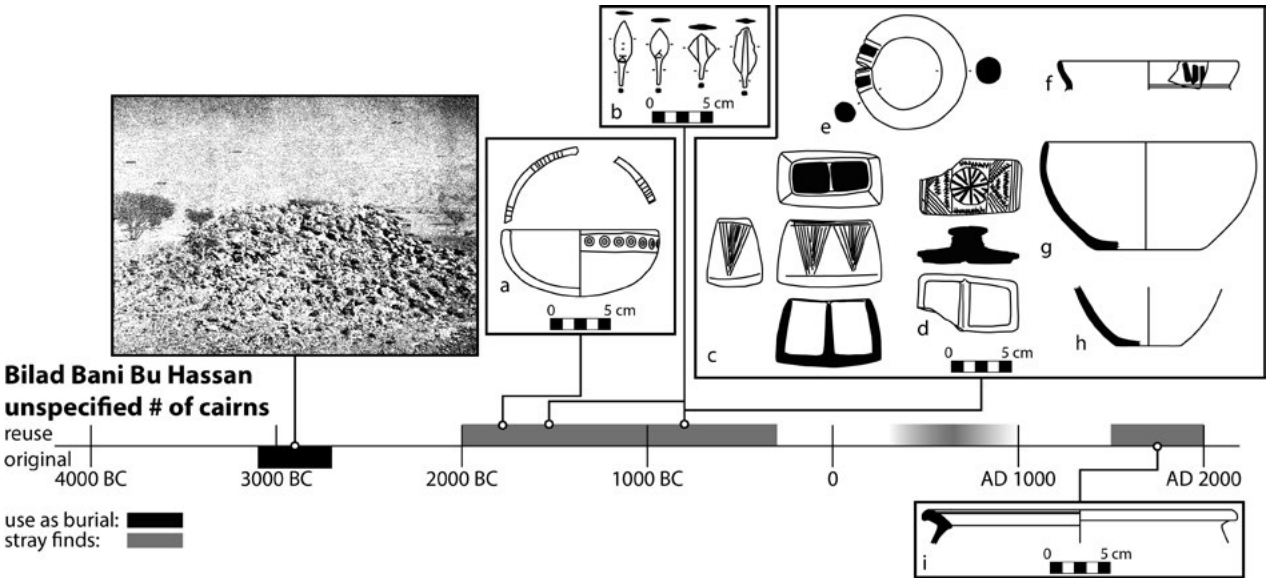


Fig. 58: Chronological timeframe of reused tombs in the Bilad Bani Bu Hasan (adapted from Edens 1988: fig. 40, 41.4–7, 42–43).

4.2.6 Bilad Bani Bu Hassan

During a survey in the area of Bilad Bani Bu Hassan in the winter of 1987/1988 a cairn field with an estimated 300 cairns was discovered.[1170] The surface finds included pottery sherds, of which three could be associated with the third millennium BC, most likely the Hafit period, four with the Iron Age and two of more recent periods.[1171] One of the two Iron Age pottery sherds belongs to a bowl with an out-turned curved neck and simple rim (Fig. 58f). It was found in the same cairn as an Early Dynastic pottery jar from Mesopotamia.[1172] The other two Iron Age vessels are deep bowls with a simple incurved rim and a flat base (Fig. 58g–h).[1173] Other sherds from a handmade vessel, whose form cannot be determined, might also belong to the Iron Age. One of the younger pottery sherds belongs to an imitation of an Indian Red Polished Ware jar, which dates to the late Sasanian or early Islamic period, the second one is a Islamic Bahla ware jar with out-rolled rim (Fig. 58i).[1174] Among the soft-stone vessels recorded during the survey were a soft-stone bowl (Fig. 58a) that is dated by Edens[1175] to the Umm an-Nar period, but seems rather to belong to the Wadi Suq, an Iron Age soft-stone compartment box (Fig. 58c) and corresponding lid, characterised by shallow incised linear and zigzag decoration (Fig. 58d).[1176] Interestingly, both objects were found in two separate cairns. The metal objects include a Hafit period rivet,[1177] four copper alloy arrowheads with leaf-shaped blades and lenticular cross-section (Fig. 58b), which might date to the Late Bronze[1178] or Iron Age,[1179] and a heavy bracelet with decorated ends (Fig. 58e), typical for the Iron Age.[1180] Furthermore, thin scraps of copper alloy were discovered in several tombs. For them, as well as for a base of the metal vessel, no dating is possible.[1181] Also difficult to assign a date to are large amounts of beads found in the survey.[1182] In conclusion, the survey at the Hafit cairns revealed finds from the third millennium BC up to the Islamic period, indicating a complex use-history of these tombs.

4.2.7 Ja'alan

Over three seasons of investigation between 2010 and 2012, Al-Jahwari recorded the mortuary landscape of the western Ja'alan.[1183] Judging from the surface finds, most of the tombs did not feature any objects and in no case were Hafit period finds made. All items discovered during the survey date to the Iron Age, indicating reuse in this and in later periods, and include pottery, shells and beads.[1184] Al-Jahwari suggested that in fact some of the supposedly Hafit period tombs might be of an Iron Age date.

1170 Edens 1988.
1171 Edens 1988: 45.
1172 Edens 1988: 46, fig. 41.4.
1173 Edens 1988: 46, fig. 41.5–6.
1174 Edens 1988: 46, fig. 41.7.
1175 Edens 1988: fig. 42.1.
1176 Edens 1988: fig. 42.2–3.
1177 Edens 1988: fig. 43.1.
1178 Edens 1988: fig. 43.3–4; Carter 1997: 43.
1179 Edens 1988: 47, fig. 43.3–6.
1180 Edens 1988: 47, fig. 43.7.
1181 Edens 1988: 47, fig. 43.2.
1182 Edens 1988: 47–50.
1183 Al-Jahwari 2013.
1184 Al-Jahwari 2013: 156, 159–160, 165 fig. 14, 166 fig. 15.

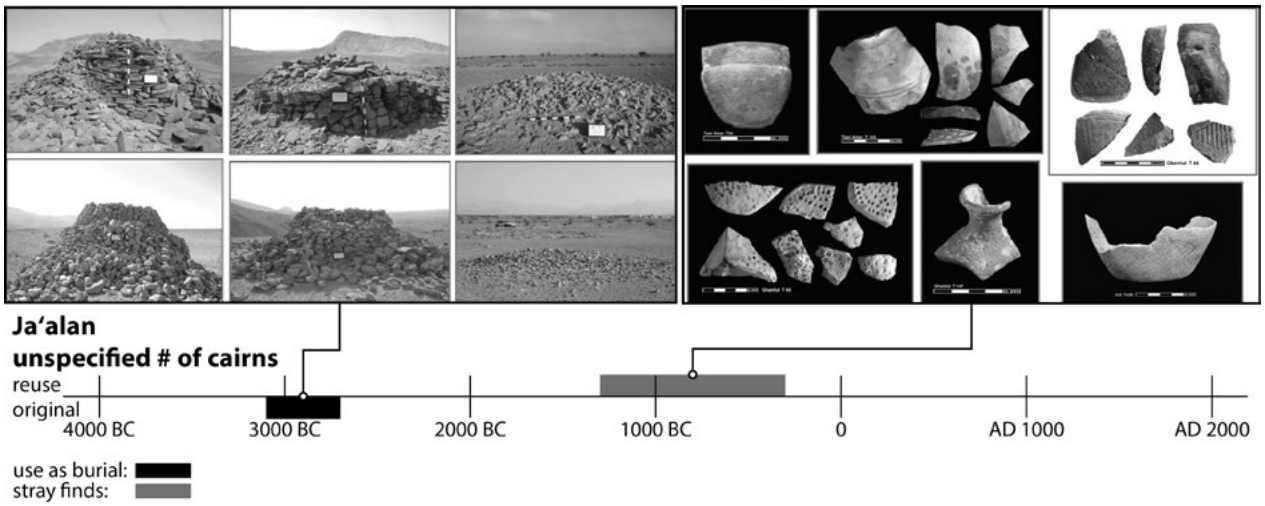


Fig. 59: Chronological timeframe of reused tombs in the Ja'alan (adapted from Al-Jahwari 2013: fig. 6–8, 14–15).

4.2.8 Wadi Tiwi

During the survey of the "Transformation Processes in Oasis Settlements of Oman" project at Tiwi, about 130 tombs of the Hafit period were identified as well as 950 Samad period tombs.[1185] Some of the Samad period tombs were built against the Hafit ones, using stones from the Hafit tombs in their construction.[1186]

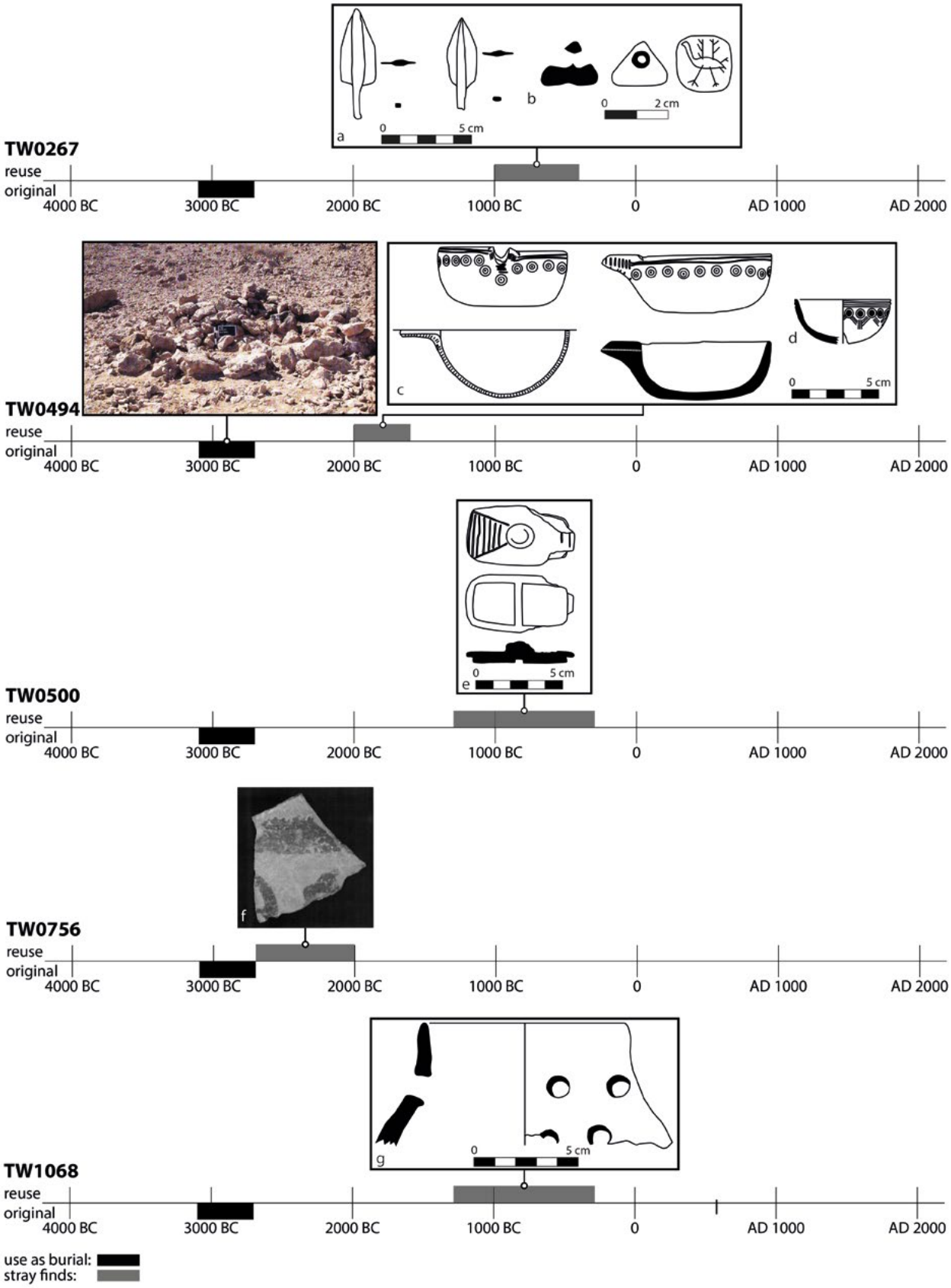
Secondary uses in the Umm an-Nar and Wadi Suq periods as well as in the Iron Age were identified within these tombs. Here Umm an-Nar period (e.g., ***Tomb TW0756***, Fig. 60f) and Iron Age (***Tomb 1068***, Fig. 60fg) pottery sherds as well as Wadi Suq period (e.g., ***Tomb TW0494***, Fig. 60c–d), Iron Age (e.g., Tomb ***TW0500***, Fig. 60e) and undiagnostic (e.g., ***Tomb TW1081***, ***Tomb TW1160***, Fig. 60h) soft-stone vessel fragments were found.[1187] As soft-stone vessels are known in Eastern Arabia only from the Umm an-Nar period onwards, even the undiagnostic soft-stone fragments are a clear sign of reuse. An example of a secondary burial with an Iron Age II date was recorded in the heavily deteriorated Hafit period ***Tomb TW0267***. The tombs were severely disturbed, but five ring walls with a diameter of 8 m could be identified. Inside the tomb, in a small chamber measuring 1 m in diameter, fragments of bone, two copper alloy arrowheads (Fig. 60a) and a stamp seal (Fig. 60b) were found. The seal depicts a stylised ostrich.

4.2.9 Dhank

4.2.9.1 Shokour

The Umm an-Nar period tombs at Shokour, located within a residential neighbourhood of Dhank, were intensively surveyed by the SoBo project.[1188] Surface collections at the Umm an-Nar period tombs and in the surrounding area provided, besides material from its original use, Iron Age pottery sherds, copper arrowheads, soft-stone vessel fragments, a carnelian pendant and other pieces of personal adornment together with Islamic pottery sherds (Fig. 61).

1185 Korn *et al.* 2004: 66–74; Schreiber – Häser 2004.
1186 Schreiber – Häser 2004: 324.
1187 Schreiber – Häser 2004: 321.
1188 Williams – Gregoricka 2013: 137.


a
0
5 cm
b
0
2 cm
TW0267
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
c
d
0
5 cm
TW0494
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
e
0
5 cm
TW0500
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
f
TW0756
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
g
0
5 cm
TW1068
reuse
original
4000 BC
3000 BC
2000 BC
1000 BC
0
AD 1000
AD 2000
use as burial:
stray finds:

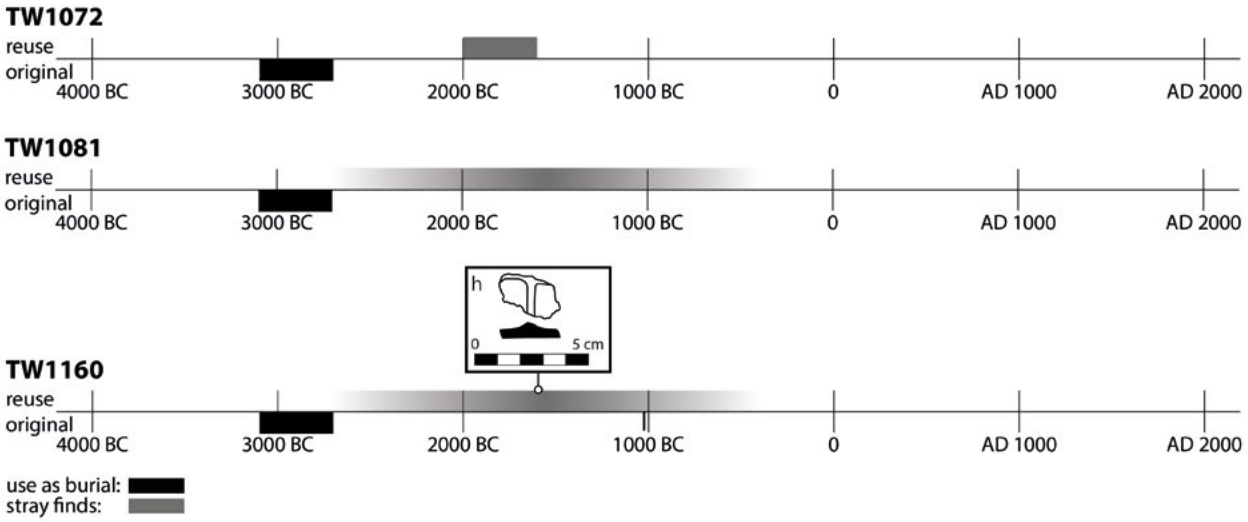


Fig. 60: Chronological timeframes of reused tombs at Wadi Tiwi (adapted from Korn *et al*. 2004: pl. 9, Schreiber – Häser 2004: fig. 3–7).

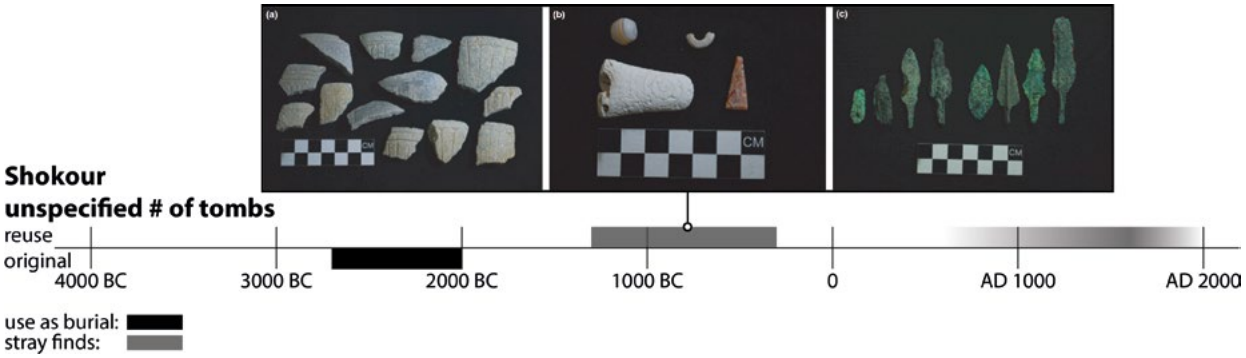


Fig. 61: Chronological timeframe of reused tomb at Shokour (adapted from Williams – Gregoricka 2013: (fig. 7)

5 Modalities of reused tombs in Eastern Arabia

Within this chapter, the nature of the reuse of tombs in Eastern Arabia with the data presented in the previous chapter will be studied considering firstly its different modalities. These are the types of tombs reused (chapter 5.1.1), the temporal perspective of their reuse (chapter 5.1.2), the spatial distribution of the tombs reused within Eastern Arabia (chapter 5.1.3) and, in the case of reuse as tombs, who was buried (chapter 5.1.4). This can be seen as a study of the use-life of the tombs, a concept developed by processual archaeologists. It focuses on changes of the morphological or functional characteristics of an artefact or building through its life in a *chaîne opératoire* manner.[1189] One of the main aims of this approach was to explain the formation of the archaeological record.[1190] In addition, the relationships between people and objects are examined mainly with the idea to account for changes in technology or artefact form.[1191] In fact, the physical state of the objects often corresponds to a particular use and thus provides valuable insights.[1192] The archaeological data will be analysed in this chapter in terms of physical changes that are visible within the tombs over time.

5.1 Modalities of reuse

The presentation of the archaeological evidence for reused tombs in Eastern Arabia in chapter 4 clearly demonstrates that the funeral landscape of the region was a complex mosaic of tombs reused in different time periods. For the following analyses, information from 969 excavated and published tombs were used. These include 144 tombs built in the Hafit period, 63 from the Umm an-Nar period, 244 from the Wadi Suq period, seven from the Late Bronze Age, 184 from the Iron Age and 293 tombs from the Samad period or PIR. In addition, 41 tombs are incorporated whose date of construction could not be determined. For 934 of the analysed tombs, information is available on whether reuse happened or not. Out of those, 145 show signs of reuse (Fig. 62). This demonstrates that reuse was common in Eastern Arabia, in this extent a rather unique phenomenon compared to other regions of Western Asia,[1193] especially when bearing in mind that the number of overlooked cases is presumably quite high, as reuse is often omitted from publications.

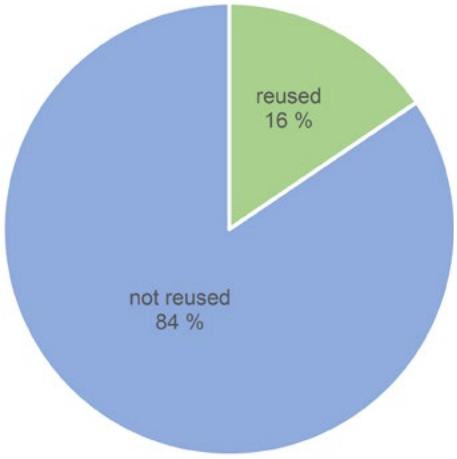


Fig. 62: Proportion of tombs reused among all excavated tombs studied.

The following analyses are, amongst other things, to test the hypothesis that tombs were, in the majority, not reused as "a simple solution for a cheap funeral without construction work" as sometimes assumed.[1194] If that was the case, one could expect that those tombs that were predominantly reused were similar to the constructions of their own funerary customs and poorer burials would be dominant in the instances of reuse.[1195] The quality and quantity of the evidence presented in chapter 4, however,

1189 Gosden – Marshall 1999: 169.
1190 Schiffer 1996.
1191 Joy 2009: 542.
1192 Kopytoff 1986: 67.
1193 For example, Döpper 2021c.
1194 Böhme 2012a: 91.
1195 Williams 1997: 24.

suggests that labour saving and other practical reasons for reuse did not prevail.

5.1.1 Types of tombs reused

In a first step, this analysis will look at what types of tombs were reused. Out of the 145 reused tombs, 35 date to the Hafit period, 25 to the Umm an-Nar period, 59 to the Wadi Suq period, three to the Late Bronze Age, 16 to the Iron Age and seven to the Samad or PIR. The remaining two are of an unknown date (Fig. 63). If these figures are put in relation to the total number of excavated and published tombs of each period, the proportion of reused tombs is comparable. 25.7 % of all Hafit period tombs, 34.9 % of all Umm an-Nar period tombs, 23.8 % of all Wadi Suq period tombs and 42.9 % of all Late Bronze Age tombs show indications of reuse, whereby the high number for the Late Bronze Age must be seen against how only seven tombs of this period were available for this analysis. Iron Age and Samad/PIR tombs were reused less frequently. Only 8.7 % of all Iron Age and 2.4 % of all Samad period tombs present evidence for reuse. Concerning these numbers, one must bear in mind that younger tombs had less time to be reused than older ones. Thus, even though we can see a preference of monuments of specific time periods in the data, this does not necessarily reflect a particular connection of the people who reused the tombs with the time period of the initial construction of the tomb. It is improbable that the people were able to attribute the tombs to a specific period such as the Umm an-Nar. Rather, all of them were conceptualised by the people reusing them as ancient places built before living memory.[1196]

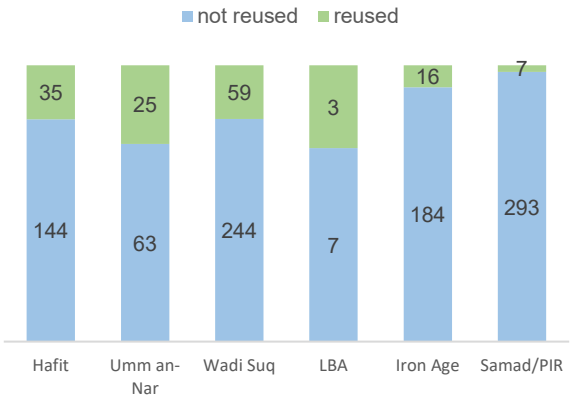


Fig. 63: Types of tombs reused.

The most obvious explanation for the difference between tombs from the third and second millennia BC, where about one quarter of them are reused, and the first millennia BC and AD, would be the visibility of the tombs. Third millennium tombs are above-ground stone constructions that can be seen from afar even in a collapsed state, in which most of the tombs were at the time of their reuse (chapters 3.1 and 3.2, Fig. 63 and Tab. 2). Tombs of the first millennia BC and AD are, on the contrary, largely below ground (chapters 3.4 and 3.5). For the second millennium BC, the picture is more complex as a variety of tomb types exist (chapter 3.3). From the reused tombs of the Wadi Suq period, only 16.9 % are above ground. Most of them are single, subterranean cists. Overall, 58.5 % of all reused tombs are above ground and 41.5 % below, demonstrating that visibility played a role, but cannot be the only, or maybe not even the primary, reason to choose a tomb for reuse.

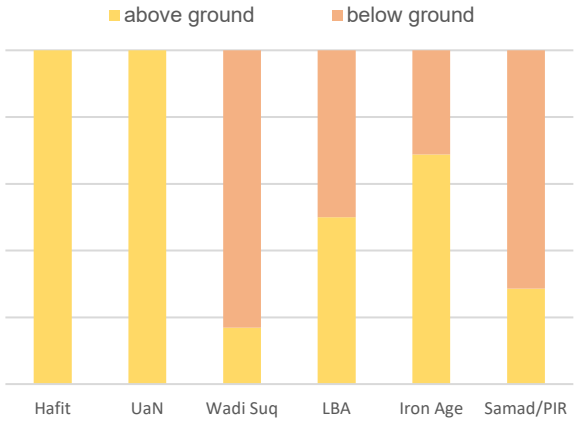


Fig. 64: Types of tombs reused (above/below ground).

Another factor that differentiates the tombs is whether they are individual or collective (Tab. 2 and Fig. 65). Hafit tombs were here grouped with individual tombs as they were meant for only a few inhumations (chapter 3.1). Thus, all Hafit period and Samad/PIR tombs are here classified as individual, white all Umm an-Nar period tombs are collective (chapter 3.2). In the Wadi Suq period, Late Bronze and Iron Ages, both collective and individual tombs exist. With 72.2 % of all reused tombs, individual

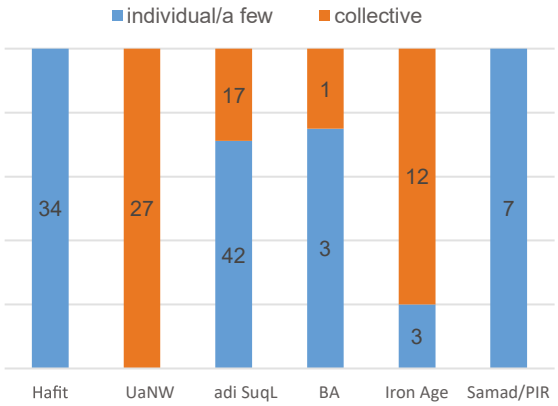


Fig. 65: Types of tombs reused (individual/a few/collective).

1196 Williams 1997: 14.

Tomb	Period	Collective/Individual	Above/Below Ground
Adam 1002	Wadi Suq	individual	below
Adam 1003	Wadi Suq	individual	below
Adam 1006	Wadi Suq	individual	below
Adam 1015	Wadi Suq	individual	below
Adam 1016	Wadi Suq	individual	below
Adam 1017	Wadi Suq	individual	below
Adam 1024	Wadi Suq	individual	below
Adam 2001	Wadi Suq	individual	above
Adam 2004	Hafit	a few individuals	above
Adam 2005	Wadi Suq	individual	below
Adam 2006	Wadi Suq	individual	below
Adam 996	Wadi Suq	individual	below
Ajman A	Umm an-Nar	collective	above
Al-Ayn 07	Hafit	a few individuals	above
Amlah 1	Umm an-Nar	collective	above
Asimah As100	Umm an-Nar	collective	above
Asimah As16	Umm an-Nar	collective	above
Asimah As21	Umm an-Nar	collective	above
Asimah As15	Umm an-Nar	collective	above
Bat 110	Umm an-Nar	collective	above
Bat 112	Umm an-Nar	collective	above
Bat 154	Umm an-Nar	collective	above
Bat 155	Umm an-Nar	collective	above
Bat 156	Umm an-Nar	collective	above
Bat 301	Umm an-Nar	collective	above
Bat 601	Hafit	a few individuals	above
Bat 603	Hafit	a few individuals	above
Jebel Buhais BHS1	Wadi Suq	collective	above
Jebel Buhais BHS2	Wadi Suq	individual	below
Jebel Buhais BHS3	Wadi Suq	individual	below
Jebel Buhais BHS8	Wadi Suq	collective	below
Jebel Buhais BHS12	Wadi Suq	collective	below
Jebel Buhais BHS19	Wadi Suq	individual	below
Jebel Buhais BHS20	Wadi Suq	individual	below
Jebel Buhais BHS37	Wadi Suq	collective	below
Jebel Buhais BHS61	Wadi Suq	collective	below
Jebel Buhais BHS66	Wadi Suq	collective	below
Jebel Buhais BHS71	Umm an-Nar	collective	above
Bidya-1	Wadi Suq	collective	below
Bisya	Umm an-Nar	collective	above
Bitnah 4	Late Bronze Age	collective	below
Dhayah Dh1	Wadi Suq	collective	above
Dhayah Dh3	Wadi Suq	collective	above
Ghalilah Gh2	Wadi Suq	collective	above
Jebel Hafit 1031	Hafit	a few individuals	above
Jebel Hafit 1033	Hafit	a few individuals	above

Tomb	Period	Collective/Individual	Above/Below Ground
Jebel Hafit 1034	Hafit	a few individuals	above
Jebel Hafit 1037	Hafit	a few individuals	above
Jebel Hafit 1043	Hafit	a few individuals	above
Jebel Hafit 1045	Hafit	a few individuals	above
Jebel Hafit 1049	Hafit	a few individuals	above
Jebel Hafit 1051	Hafit	a few individuals	above
Jebel Hafit 1053	Hafit	a few individuals	above
Jebel Hafit 1303	Hafit	a few individuals	above
Jebel Hafit 1310	Hafit	a few individuals	above
Jebel Hafit 1311	Hafit	a few individuals	above
Jebel Hafit 1312	Hafit	a few individuals	above
Jebel Hafit Cairn 2	Hafit	a few individuals	above
Jebel Hafit Cairn A (36)	Hafit	a few individuals	above
Hili 1059	Umm an-Nar	collective	above
Hili A North	Umm an-Nar	collective	above
Hili B	Umm an-Nar	collective	above
Hili H	Umm an-Nar	collective	above
Jebel Buhais BHS10	Iron Age	collective	above
Jebel Buhais BHS27	Iron Age	collective	above
Jebel Buhais BHS46	Iron Age	individual	below
Jebel Buhais BHS64	Hafit	a few individuals	above
Jebel Buhais BHS85	Iron Age	collective	above
Jebel Emalah I	Hafit	a few individuals	above
Jebel Emalah III	Hafit	a few individuals	above
Jebel Emalah IV	Hafit	a few individuals	above
Khubayb rescue excavation	Umm an-Nar	collective	above
Khubayb S007-167	Umm an-Nar	collective	above
Khubayb S007-169	Umm an-Nar	collective	above
Khutma S002-001	Umm an-Nar	collective	above
Maysar M2206	Hafit	a few individuals	above
Maysar M2710	Iron Age	individual (?)	below
Maysar M2715	Iron Age	individual (?)	below
Maysar M2716N	Iron Age	individual (?)	above
Maysar M2717	Iron Age	individual	above
Maysar M2720	Iron Age	individual	above
Maysar M51	Hafit	a few individuals	above
Maysar M803	Iron Age	individual (?)	above
Mazyad	Hafit	a few individuals	above
Mleiha 4	Samad/PIR	individual (?)	above
Mleiha 5	Samad/PIR	individual (?)	above
Qarn al-Harf QaH67	Wadi Suq	collective	below
Qarn Bint Saud 15	Hafit	a few individuals	above
Qarn Bint Saud 18	Hafit	a few individuals	above
Qarn Bint Saud 21	Hafit	a few individuals	above
Qarn Bint Saud 3	Late Bronze Age	collective	above
Qumayrah Qa 1-1	Umm an-Nar	collective	above

Tomb	Period	Collective/Individual	Above/Below Ground
Qusais A	Wadi Suq	collective	below
Rawdah Mu1	Iron Age	individual (?)	above
Rawdah Mu2	Iron Age	individual (?)	above
Salut 1 1	Hafit	a few individuals	above
Salut 3 1	Hafit	a few individuals	above
Samad S10103	Iron Age	individual (?)	above
Samad S101040	Iron Age	individual	above
Samad S10110	Wadi Suq	individual	below
Samad S10115	Wadi Suq	individual	below
Samad S10608	Samad/PIR	individual	below
Samad S10666	Samad/PIR	individual	below
Samad S10681	Samad/PIR	individual	below
Samad S1073	Samad/PIR	individual	below
Samad S1074	Wadi Suq	individual	above
Samad S2009	Wadi Suq	individual	below
Samad S2107	Wadi Suq	individual	below
Samad S2109	Wadi Suq	individual	below
Samad S21101	Wadi Suq	individual	below
Samad S21105	Wadi Suq	individual	below
Samad S21113	Wadi Suq	individual	below
Samad S21114	Wadi Suq	individual	below
Samad S2114	Wadi Suq	individual	below
Samad S2116	Iron Age	individual (?)	below
Samad S2123	Wadi Suq	individual	below
Samad S2126	Wadi Suq	individual	below
Samad S2131	Wadi Suq	individual	below
Samad S2135	Late Bronze Age	individual	below
Samad S2136	Wadi Suq	individual	below
Samad S2145	Wadi Suq	individual	below
Samad S2154	Wadi Suq	individual	below
Samad S2156	Wadi Suq	individual	below
Samad S2168	Wadi Suq	individual	below
Samad S2180	Wadi Suq	individual	below
Samad S2184	Wadi Suq	individual	below
Samad S2186	Wadi Suq	individual	below
Samad S2200	Wadi Suq	individual	below
Samad S2202	Wadi Suq	individual	below
Samad S2203	Wadi Suq	individual	below
Samad S2308	Iron Age	(?)	below
Samad S3018	Samad/PIR	individual	below
Selme	Umm an-Nar	collective	above
Sharm	Late Bronze Age	collective	above
Shimal Sh100	Wadi Suq	collective	above
Shimal Sh102	Wadi Suq	collective	above
Shimal Sh222	Umm an-Nar	collective	above
Shimal Sh502	Wadi Suq	collective	above

Tomb	Period	Collective/Individual	Above/Below Ground
Shimal Sh99	Wadi Suq	collective	above
Shir Sh1	Umm an-Nar	collective	above
Shir Sh2	Umm an-Nar	collective	above
Tawi Silaim 2	Hafit	a few individuals	above
Tawi Silaim 3	Hafit	a few individuals	above
Tawi Silaim 4	Hafit	a few individuals	above
Wa'ab 4	Wadi Suq	collective	below
Wadi Suq Grave 1125	Wadi Suq	individual	below
Wadi Suq Grave 1126	Wadi Suq	individual	below

Tab. 2: Types of tombs reused.

tombs clearly dominate in the Wadi Suq period as they do in the Late Bronze Age, while 80.0 % of all reused Iron Age tombs are collective. In total, there is, with 61.0 % versus 39.0 %, a slight preference for reusing individual tombs, but that is not significant enough to derive any pattern.

All in all, neither the visibility in terms of their above ground or below ground location nor their shape regarding their designation for individual or collective burials are decisive in whether a tomb was reused or not.

5.1.1.1 Case studies: Bat, Adam North and Samad-21 South

For Eastern Arabia, as well as for other regions in the world, it has been suggested that larger and more conspicuous graves were deliberately selected for later activities.[1197] While some very large and richly outfitted tombs such as the long subterranean collective tomb at Sharm were reused, smaller tombs with considerably fewer grave goods were targeted as well, sometimes in the same cemetery. Further, it has been suggested that different landscape settings rather than specific architectural details were crucial for making a monument a symbol of community and identity.[1198] In the following, three case studies of the cemeteries at Bat, Adam North and Samad-21 South will be presented. They were chosen as examples as at each site large numbers of tombs of different periods are attested, and several of them were excavated, providing the opportunity to compare the location within the landscape, and the size and inventories of the reused tombs with those of the same cemetery that do not show signs of reuse.

At Bat, 19 tombs were excavated by the Danish, German and American missions (Fig. 66 and chapter 4.1.27). They can be divided roughly into three groups. The first is situated in the north of the cemetery and encompasses the four Hafit period tombs: 601 (1137 in Frifelt's numbering), 602 (1138 in Frifelt's numbering), 603 and 604.[1199] Here, two of the tombs were reused or continuously used until the Umm an-Nar and possibly also the Wadi Suq period. On the mountain ridge to the north-east of these tombs, a double-tomb, Tomb 1139/40 in Frifelt's numbering, is located, most likely of an Iron Age date. No finds were made but the construction is, according to Frifelt,[1200] similar to Iron Age tombs in Wadi al-Jizzi. The second group is located in the centre of the cemetery and consists of six Umm an-Nar period tombs: 110, 112 (1143 in Frifelt's numbering), 132 (1142 in Frifelt's numbering), 154 (1144 in Frifelt's numbering), 155 and 156 as well as of the Hafit period Tomb 150. Reuse is attested here for the Wadi Suq period, the Iron Age, the Samad period as well as for the Sasanian and Islamic periods. Especially with the group of three Umm an-Nar period tombs 154, 155 and 156, reuse occurred at all tombs in all the mentioned periods except for the Sasanian. The third group is a bit more spread out and located to the south of the cemetery. It includes the Umm an-Nar period tombs 301, 305 and 401, the Wadi Suq period tomb at Tower 1156 as well as the two Iron Age tombs 402 and 403. No reuse was attested here, but it is interesting to note that the Iron Age tombs were built in close connection and with direct reference to the Umm an-Nar period tomb 401. Generally, the highest ratio of reused tombs can be encountered in the central group (five out of seven). In the northern group, only one out of four tombs were reused and in the southern one none. However, as these are all very small numbers it can only indicate a tendency for a preference of the centre of the necropolis, not a rule. The central group is on the lowest spot in the landscape and therefore the least visible from far afield. Nevertheless, this group includes three Umm an-Nar period tombs with white facing stones that must have been very impressive in the past and might have attracted reuse.

1197 Driehaus 1978: 19; Baitinger 1992: 335; Klevnäs 2011: 76–79; Böhme 2012a: 91.
1198 Williams 1997: 14.
1199 Tomb numbers are according to Weisgerber, and numbers in brackets are according to Frifelt.
1200 Frifelt 1973: 26–27.

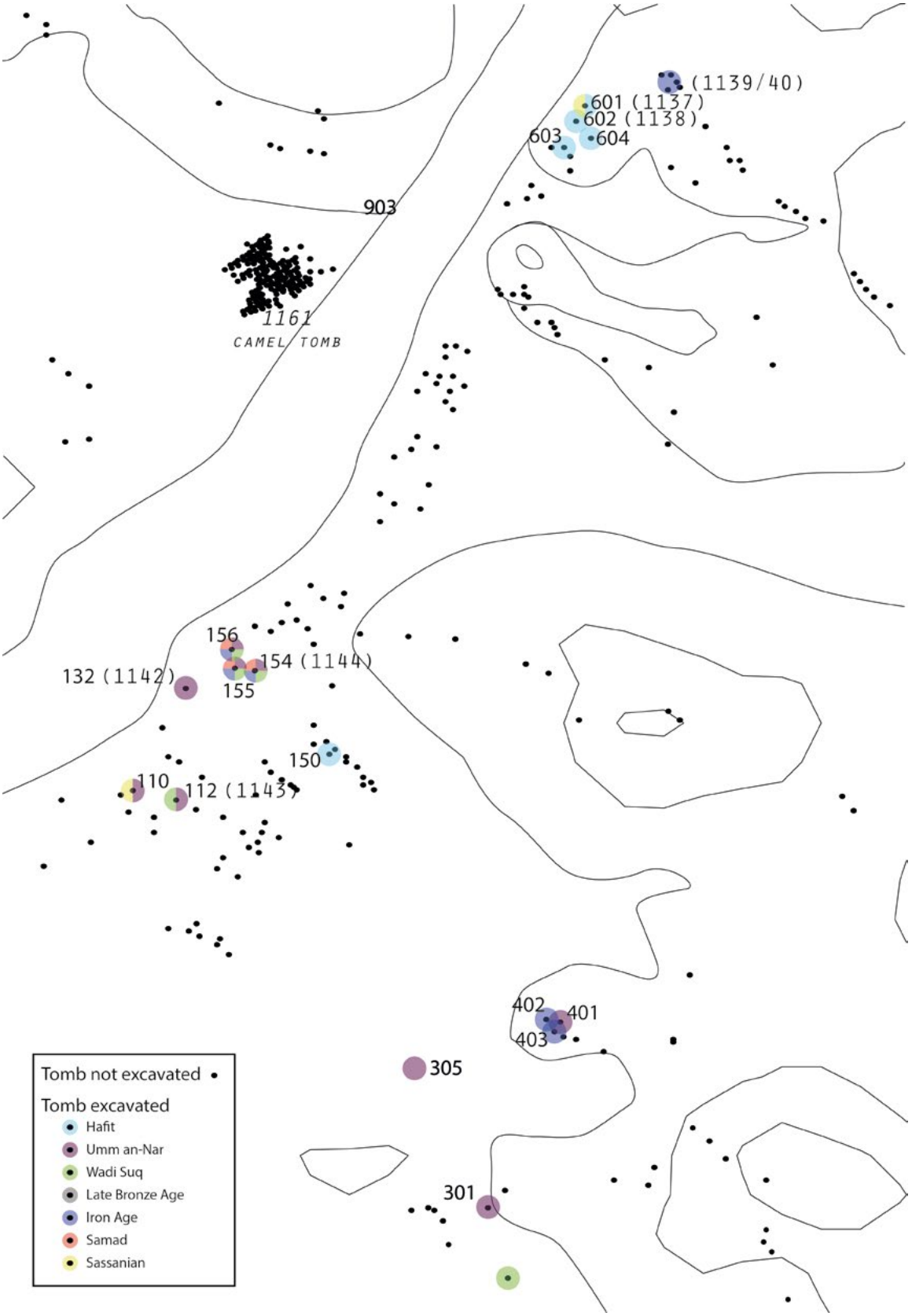


Fig. 66: Investigated tombs at the necropolis of Bat. Locations of Tombs 1139/40, 305 and 930 are only approximate. Background map by Frifelt 1989: fig. 10.7.

On the other hand, the Umm an-Nar period Tomb 301 in the southern group is also outfitted with white facing stones and in a very prominent location on the hillslope overlooking the plain. Here, however, no signs of reuse were encountered. Generally, there seems to be no significant difference in reusing the smaller Hafit period tombs (two out of six) or the larger Umm an-Nar period tombs (four out of eight). As Umm an-Nar period tombs are also as a rule outfitted with larger quantities of grave goods, this seems not to have played a role as well. Interestingly, besides the two Iron Age Tombs 402 and 403 as well as a cluster of Iron Age tombs around the camel tomb (1161 in Frifelt's numbering) and the Wadi Suq period tomb at Tower 1156, most tombs in the necropolis of Bat date to the third millennium BC. Thus, reuse occurred in a context where (nearly) no regular burials of this period were positioned at the same location. In conclusion, reuse at Bat cemetery affected Hafit as well as Umm an-Nar period tombs with or without white facing stones, indicating that the outer appearance of the tomb could not have been the prime factor for choosing a specific tomb for reuse. The visibility of the location was also not the deciding factor as most reused tombs are situated in the plain close to other reused and not-reused tombs. The prominent group of the Umm an-Nar period tombs 154, 155 and 156 was reused in multiple periods, but one must point out that these tombs are also among the most thoroughly investigated ones in the necropolis.

At Adam North, a total of 36 tombs were excavated (Fig. 67 and chapter 4.1.32.1).[1201] Most of them belong to the Wadi Suq period, but there are also three Umm an-Nar and one Iron Age tombs. Eight tombs show indications of reuse in the Samad period. All of them were constructed during the Wadi Suq period. The Wadi Suq period tombs at Adam North can be divided into three different types. Group one consists of simple stone-lined graves with of an oval subterranean chamber lined with stones.[1202] The chambers are on average 1 m wide, 1.5 to 2.0 m long and 0.6 to 1.0 m deep. Cist chambers with tumuli and ring walls exist in two variants. The first, group two, is very similar to the simple stone-lined graves with the only difference that a ring wall is located at a close distance to the chamber. [1203] They have only small tumuli with a maximum diameter of 3 m. The second type, group three, is larger and its chamber is only partially subterranean.[1204] The ring wall can reach diameters of up to 5 m. Large, oval or circular tombs with rectangular chambers and concentric walls represent the third type.[1205] The chamber is above-ground, about 1 m wide and 1.4 to 2.0 m long. Two or more concentric walls surround the chamber with a diameter of 6 to 6.5 m. Reuse in the Samad period clearly falls mostly in group three, the cist chambered tombs with a tumulus and ring wall. Only one tomb of the first group, the simple stone-lined graves, was reused.[1206] This is especially interesting when recalling that this type is the most common one in the excavated part of Adam North. Thus, larger and more visible tombs of the Wadi Suq period were chosen more frequently for reuse during the Samad period.

However, the likely more prominent and just as large Umm an-Nar period tombs do not show any signs of reuse, even though they are the direct neighbours to reused tombs. Thus, visibility and size does not seem to be the only criteria for choosing a tomb in the Samad period. Concerning the spatial distribution, the north-western part of the excavated area seems to have been targeted more in the Samad period than the rest. None of the Wadi Suq period tombs of the second type along the foot of the hill in the east (Tombs 1012–1014, 1023, 1036 and 1038–1039) show signs of reuse. Interestingly, no regular tombs of the Samad period were found at Adam North.

Ninety-one tombs in total were investigated at the cemetery of Samad-21 South (Fig. 68 and chapter 4.1.34.4).[1207] Most of the tombs are of a Wadi Suq period date, but Samad period tombs exist as well. The largest Wadi Suq period tombs that are surrounded by one or several ring walls on the surface are Tombs S2174, S2187, S2192, S21108 and S21110. The external diameter of those ring walls ranges between 4.5 and 8.8 m. Tombs S2192, S21108 and S21110 also occupy the highest point of the cemetery and therefore were the most visible. Reuse of Wadi Suq period tombs in the Iron Age as well as in the Samad period was predominantly recorded for the normal, small subterranean cist-tombs (Tombs S2126, S2131, S2136, S2145, S2154, S2156, S2168, S2180, S2184, S2186, S21101, S21105, S21113 and S21114), which are on average 2.5 m in length and 1.2 m in width. The Samad period tombs feature similar dimensions than the smaller Wadi Suq period tombs at the site. The distribution clearly shows that it was not the most visible and largest tombs were targeted for reuse, both in the Iron Age and the Samad period, but the normal ones. Those tombs with indications for later reuse were also not particularly richly outfitted – at least from what was visible at the point of excavation. Only Tomb S2184 had more grave goods than the average tomb, including eight pottery vessels, 52 beads and a seal.[1208] Thus, as far it can be told, it does not seem to be that more conspicuous graves were deliberately targeted at the cemetery of Samad-21

1201 Gernez – Giraud 2015.
1202 Gernez – Giraud 2015: 115.
1203 Gernez – Giraud 2015: 115.
1204 Gernez – Giraud 2015: 115.
1205 Gernez – Giraud 2015: 115–116.
1206 Gernez – Giraud 2015: 117.
1207 Yule 2001: 291–336.
1208 Yule 2001: 322–323.

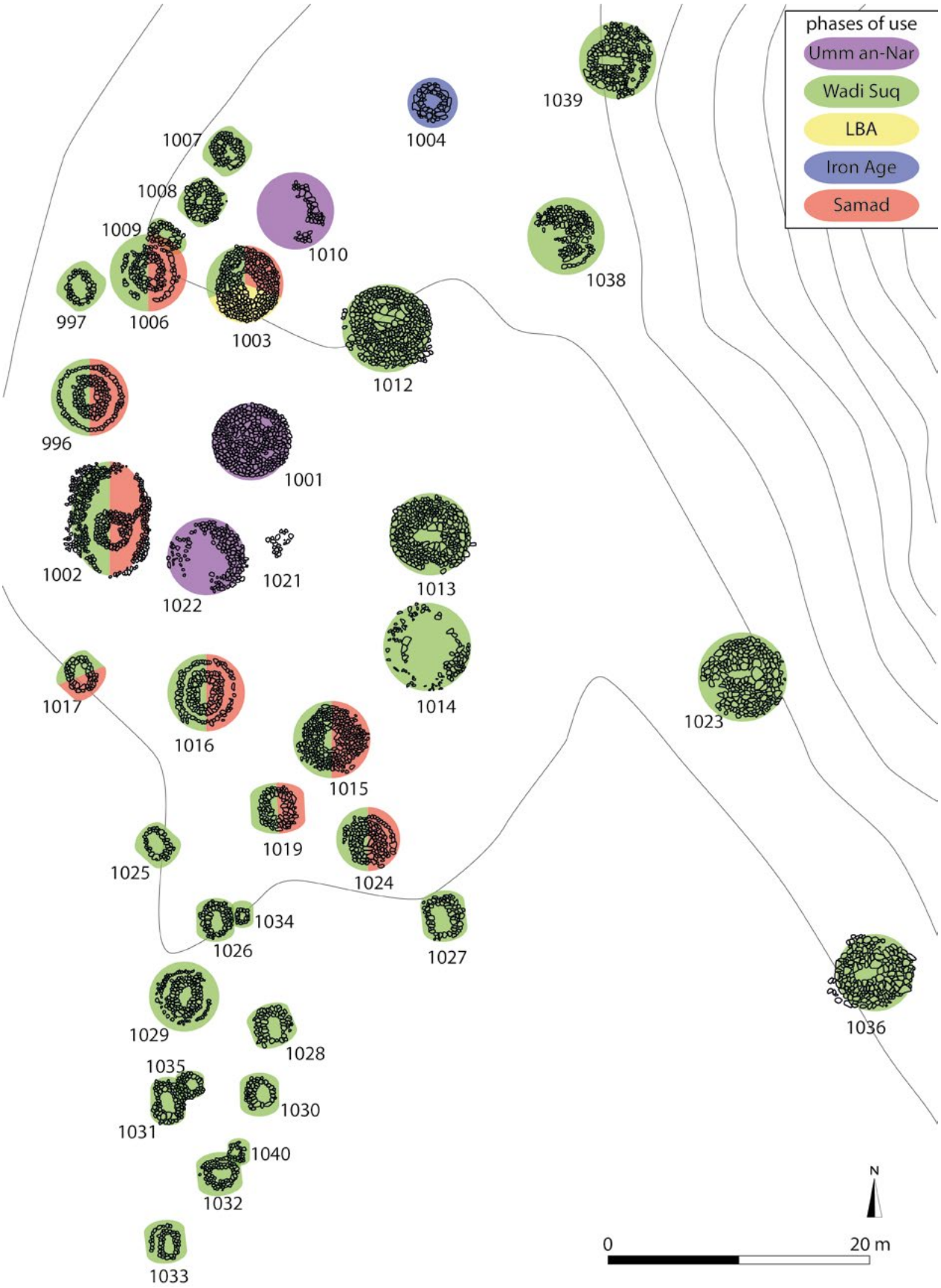


Fig. 67: Investigated tombs at Adam North. Background map by Gernez – Giraud 2015: 114 fig. 9a.

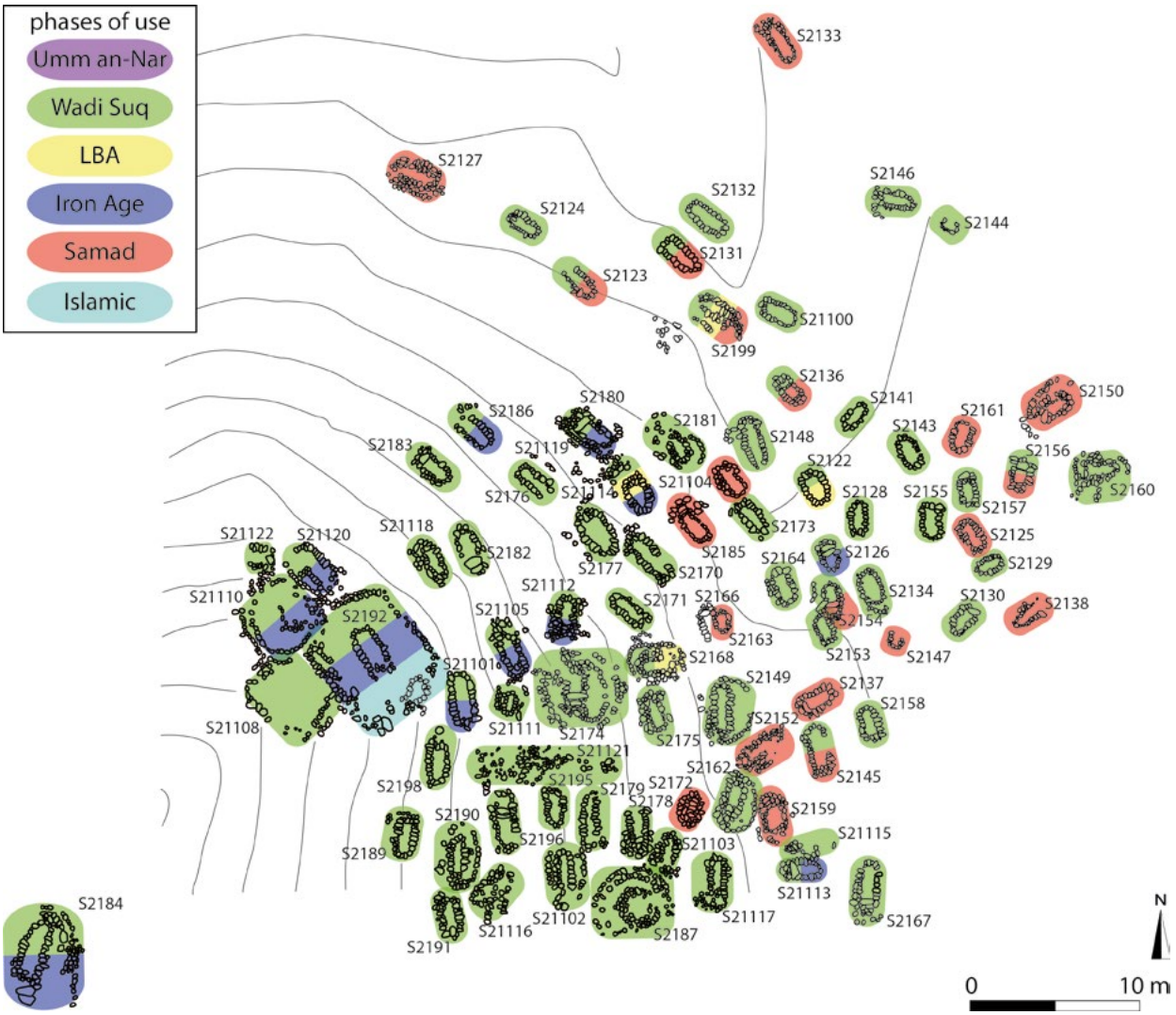


Fig. 68: Investigated tombs at Samad 21 South. Background map by Yule 2001: Taf. 603.

South. Only the spatial distribution of the reused tombs provides a pattern, albite nor a very distinct one (Fig. 68). All tombs that were reused in the Iron Age are found on the hill or half way up the slope, while all tombs reused in the Samad period are located on the lowest part of the excavations. Here, the regular Samad period tombs are also to be found. This demonstrates that, in the Samad period, tombs were reused in locations where new tombs were interred as well. As there is no tomb that was constructed in this cemetery during the Iron Age, nothing can be inferred about the location of regular Iron Age tombs at the site.

In conclusion, all three investigated cemeteries do not reveal any clear pattern within the reused tombs. Neither the most prominent locations, nor the most visible nor largest tombs are significantly more frequently targeted than others, although in Adam North there seems to be a preference for a specific type of Wadi Suq period tombs. What can be seen is a spatial distribution of the reused tombs. They are normally concentrated on a specific part of the cemetery and grouped together. In Bat, reused tombs group around the centre. In Adam North they group around the western part of the excavated area, and in Samad-21 South they group on the lower part of the slope during the Samad period and on the upper part of the slope during the Iron Age. All these cemeteries are relatively large and have a long lifespan. Thus, the events of reuse are not likely to specifically target the history of the people using the cemetery, for example to mark a discontinuity of descent lines or affinal relations like marriage ties (chapter 2.2.3).[1209]

5.1.2 Temporal perspectives of reuse

As a second step, it is investigated here when the tombs were reused. Of the 177 cases of reused tombs in Eastern Arabia that form the basis of this study, the majority occurred during the Iron Age and Samad period/PIR (Fig. 69). Together they account for 121 cases. Only 13 tombs

1209 Van Haperen 2017: 21.

were reused in the Wadi Suq period, ten in the Late Bronze Age, nine in the Sasanian, eight in the Islamic and five in the Umm an-Nar period. As these numbers could be influenced by the total amount of burials that were excavated for each period, those two sets of numbers were put in relation to each other. We see that only 5.1 % of all Wadi Suq period activities at tombs were reuse and only 7.4 % of all Umm an-Nar period activities were (Fig. 70).[1210] In contrast, 22.7 % of all Iron Age activities at tombs we know are reuses of older burial structures and 18.6 % of Samad/PIR activities are. Due to their low total number, the Late Bronze Age does not provide meaningful data. In conclusion, although the numbers differ slightly from the total number of reused tombs in each period (Fig. 69), the general trend is the same: reuse occurred more often in the Iron Age and Samad period/PIR than in all others. Thus, one can conclude, that reuse is customary to those two periods[1211] and can be seen as part of the regular burial practice. This leads to the question, why is the past seemingly more important in some periods, but not in others?

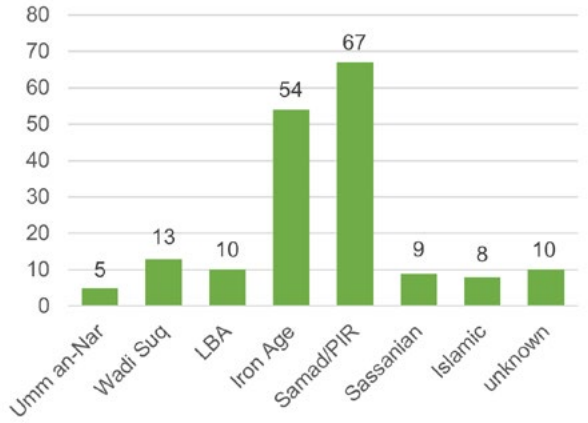


Fig. 69: Temporal distribution of reuse.

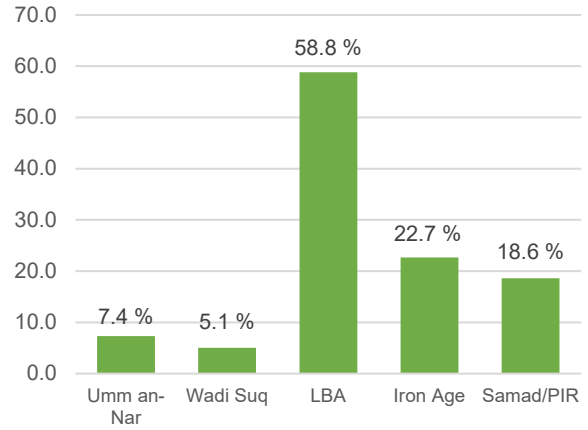


Fig. 70: Temporal distribution of reuse in relation to the total number of excavated tombs of each period.

1210 Sassanian period reuse was not considered as almost no regular Sassanian tombs have been excavated so far in Eastern Arabia. Islamic period reuse was also not included as the regular burial custom of this period is beyond the scope of this study.

1211 See Lombard 1985: 167 for the Iron Age.

5.1.3 Spatial perspectives of reuse

Within this chapter, the spatial distribution of reused tombs compared to those that were not reused will be investigated. At first glance, no differences are visible (Fig. 71). Reuse occurs in the whole area under investigation from the northern tip of Musandam to eastern Oman. The only exception might be the area around the modern city of Muscat, where no reuse could be identified at the sites of Al-Baruni, Amqat, Bawshar, Bustan and Yiti. However, as there were only 22 tombs excavated in total, this might also be related to the amount of archaeological research conducted in this region rather than expressing reality. Therefore, ideas that the lack of reuse in a region might reflect a higher level of continuity in traditions as suggested for other regions in the world[1212] does not apply here. Likewise, there is no concentration of reuse in areas that played a higher social, religious or economic significance in the respective time period as could for example be demonstrated for the reuse of megalithic tombs in Europe.[1213]

The spatial distribution further reveals that the number of tombs' reuse in a given cemetery varies considerably (Tab. 3). There are cemeteries where all tombs are reused, those where none are reused and almost everything in between. This variety is present all over the region. The general picture remains the same if only sites with ten or more excavated tombs are considered, speaking in favour of the validity of the data.

Breaking down the spatial distribution of reused tombs in Eastern Arabia by time period in which the reuse occurred, reuse is still spread all over the research area in those periods for which enough data is available (Fig. 72–Fig. 77). During the Umm an-Nar period, reuse is only evidenced at sites where tombs built during that period were present as well, while in all other periods reuse also occurs at sites without original construction of tombs in the same period. This is especially true for the Iron Age and Samad period/PIR. Sasanian burials have so far been only identified as reuses. The data from the Late Bronze Age is biased, as too little is known about its burial practice to securely date tombs into this period based on architecture alone. In conclusion, reuse of tombs is a frequent phenomenon that appears in all regions in Eastern Arabia without spatial clusters.

5.1.4 Who reused the tombs?

5.1.4.1 Reuse of tombs as burial places

For approaching the question of who reused the tombs, firstly those tombs will be considered where reuse hap-

1212 Williams 1997: 19.

1213 Vejby 2012: 209–218; Vejby 2015.

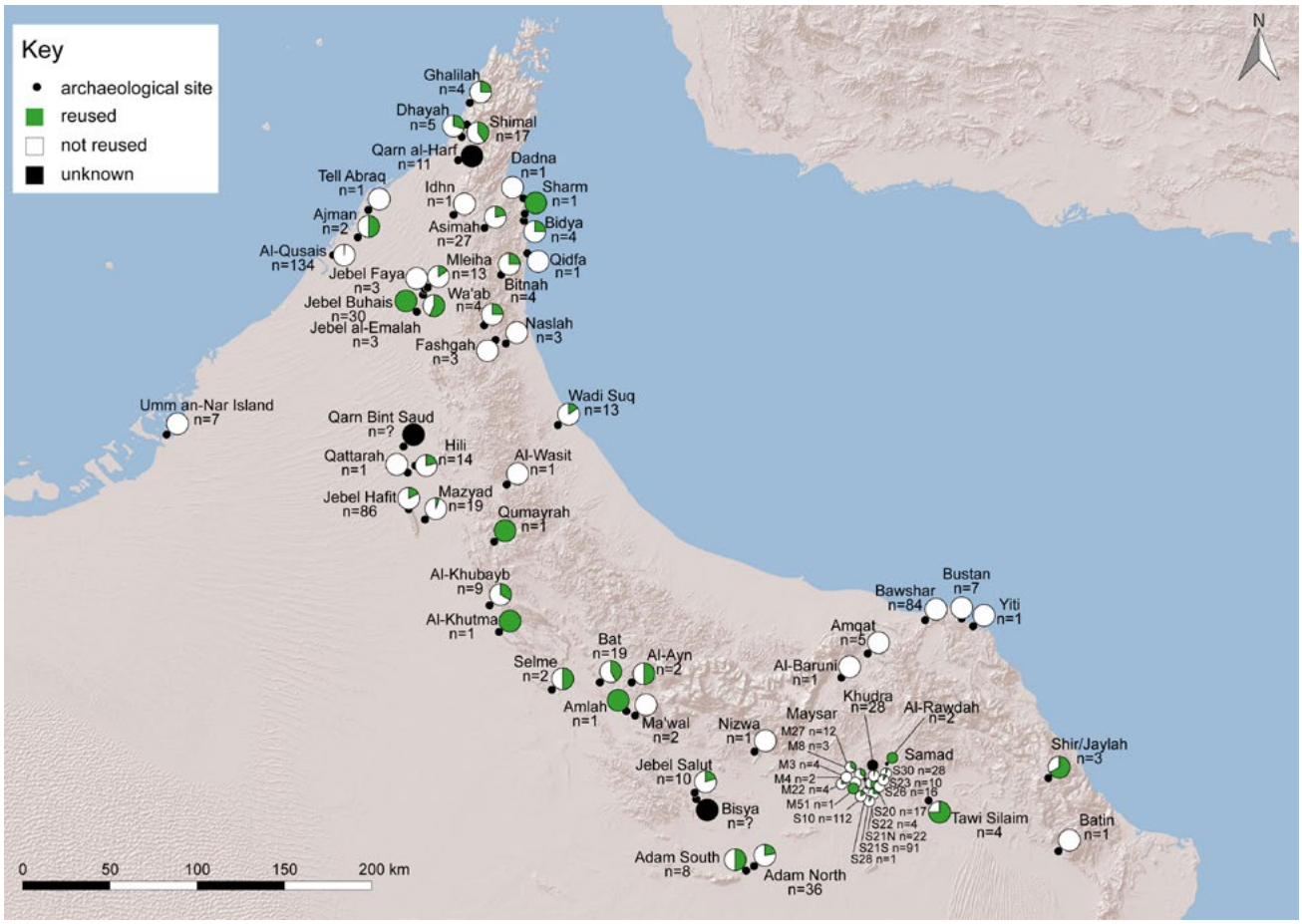


Fig. 71: Spatial distribution of reused tombs in Eastern Arabia.

Site	Tombs excavated	Tombs Reused		Tombs not reused	
Amqat	5	0	0 %	5	100 %
Bawshar	84	0	0 %	84	100 %
Bustan	7	0	0 %	7	100 %
Fashgah	3	0	0 %	3	100 %
Jebel Faya	3	0	0 %	3	100 %
Maysar-3	4	0	0 %	4	100 %
Naslah	3	0	0 %	3	100 %
Samad-26	16	0	0 %	16	100 %
Umm an-Nar Island	7	0	0 %	7	100 %
Al-Qusais	134	1	0.7 %	133	99.3 %
Samad-30	28	1	3.6 %	27	96.4 %
Mazyad	19	1	5.3 %	18	94.7 %
Samad-10	112	10	8.9 %	102	91.1 %
Samad-23	10	1	10.0 %	9	90.0 %
Samad-20	17	2	11.8 %	15	88.2 %
Mleiha	13	2	15.4 %	11	84.6 %

Site	Tombs excavated	Tombs Reused		Tombs not reused	
Wadi Suq	13	2	15.4 %	11	84.6 %
Samad-21 South	91	14	15.4 %	77	84.6 %
Jebel Hafit	86	15	17.4 %	71	82.6 %
Jebel Salut	10	2	20.0 %	8	80.0 %
Hili	14	3	21.4 %	11	78.6 %
Adam North	36	8	22.2 %	28	77.8 %
Asimah	27	6	22.2 %	21	77.8 %
Samad-21 North	22	5	22.7 %	17	77.3 %
Bidya	4	1	25.0 %	3	75.0 %
Bitnah	4	1	25.0 %	3	75.0 %
Ghalilah	4	1	25.0 %	3	75.0 %
Maysar-22	4	1	25.0 %	3	75.0 %
Wa'ab	4	1	25.0 %	3	75.0 %
Shimal	17	5	29.4 %	12	70.6 %
Al-Khubayb	9	3	33.3 %	6	66.7 %
Maysar-27	12	4	33.3 %	8	66.7 %
Maysar-8	3	1	33.3 %	2	66.7 %
Dhayah	5	2	40.0 %	3	60.0 %
Bat	19	8	42.1 %	11	57.9 %
Adam South	8	4	50.0 %	4	50.0 %
Samad-22	4	2	50.0 %	2	50,0 %
Jebel Buhais	30	17	56.7 %	13	43.3 %
Shir/Jaylah	3	2	66.7 %	1	33.3 %
Tawi Silaim	4	3	75.0 %	1	25.0 %
Jebel al-Emalah	3	3	100 %	0	0 %

Tab. 3: Percentage of reused tombs for each site. Sites with only one or two excavated tombs are not listed.

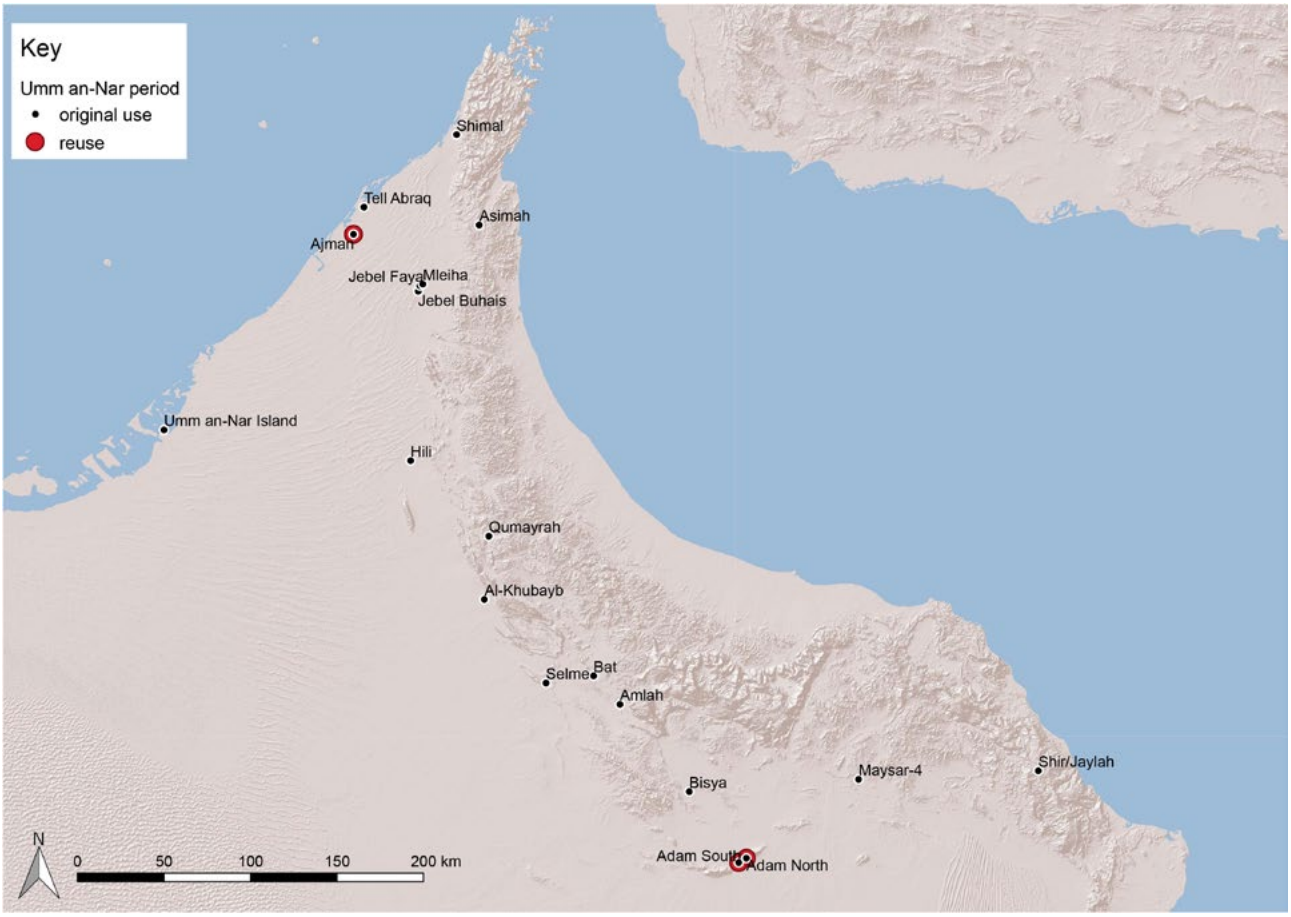


Fig. 72: Spatial distribution of reused tombs during the Umm an-Nar period.

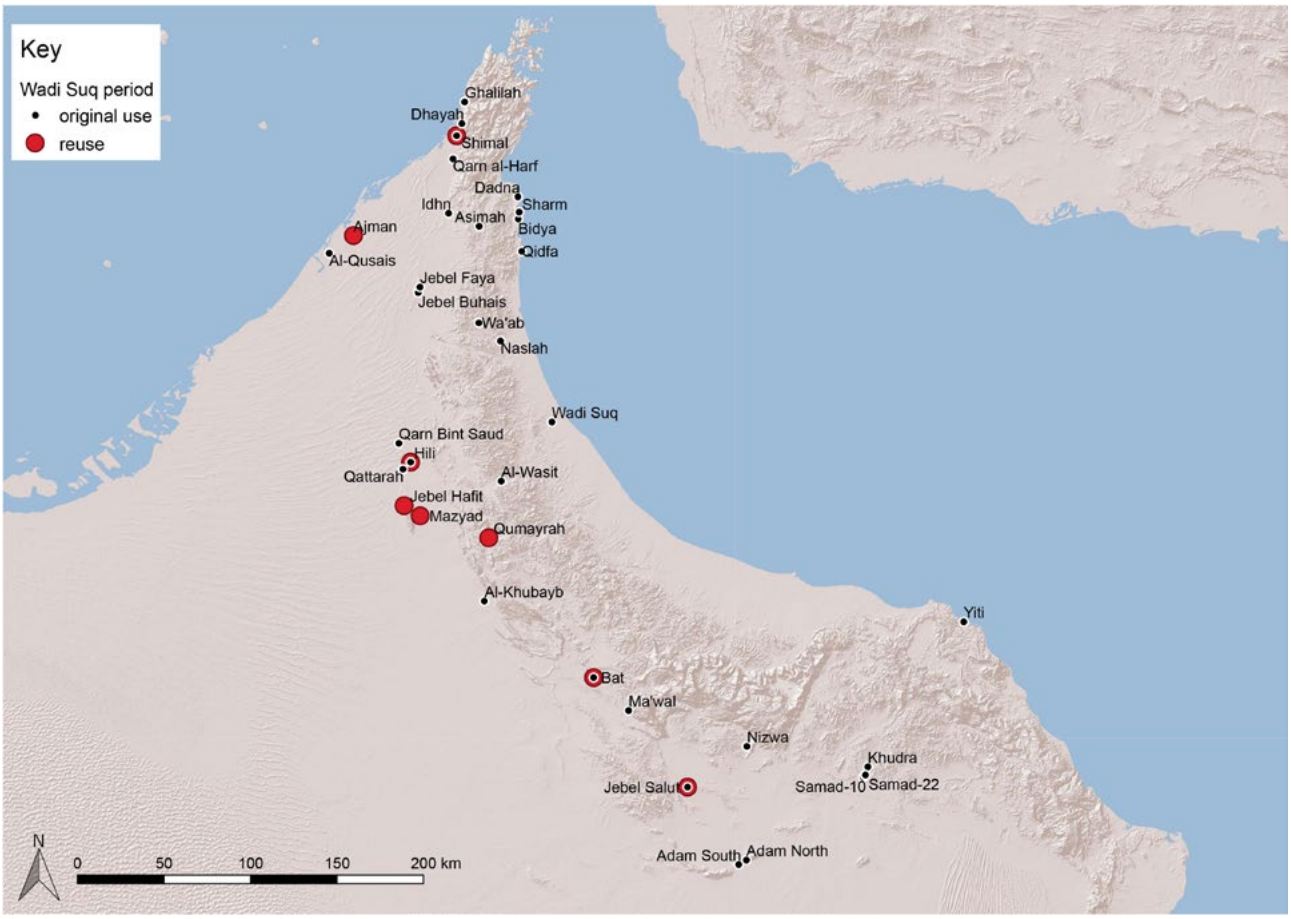


Fig. 73: Spatial distribution of reused tombs during the Wadi Suq period.

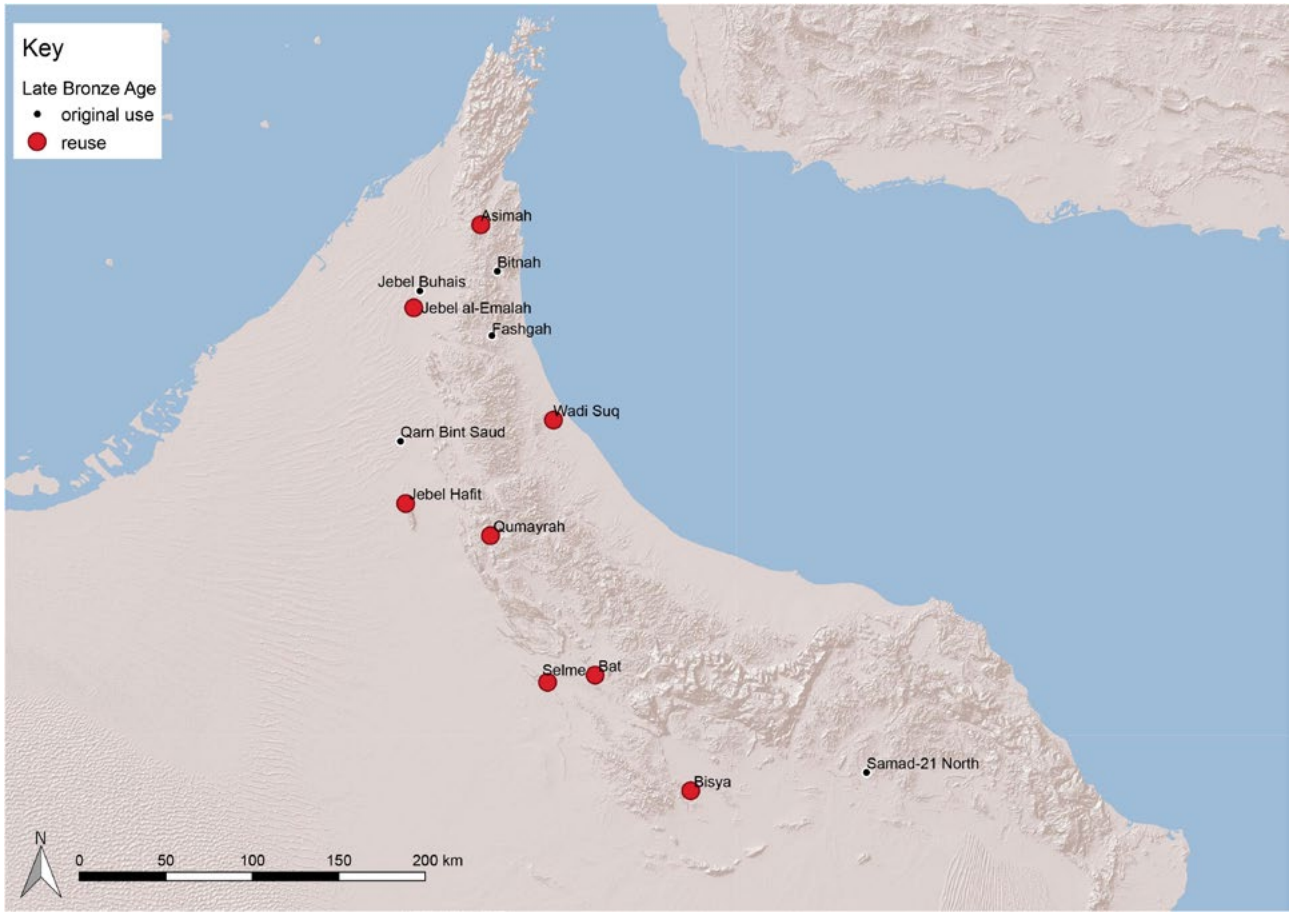


Fig. 74: Spatial distribution of reused tombs during the Late Bronze Age.

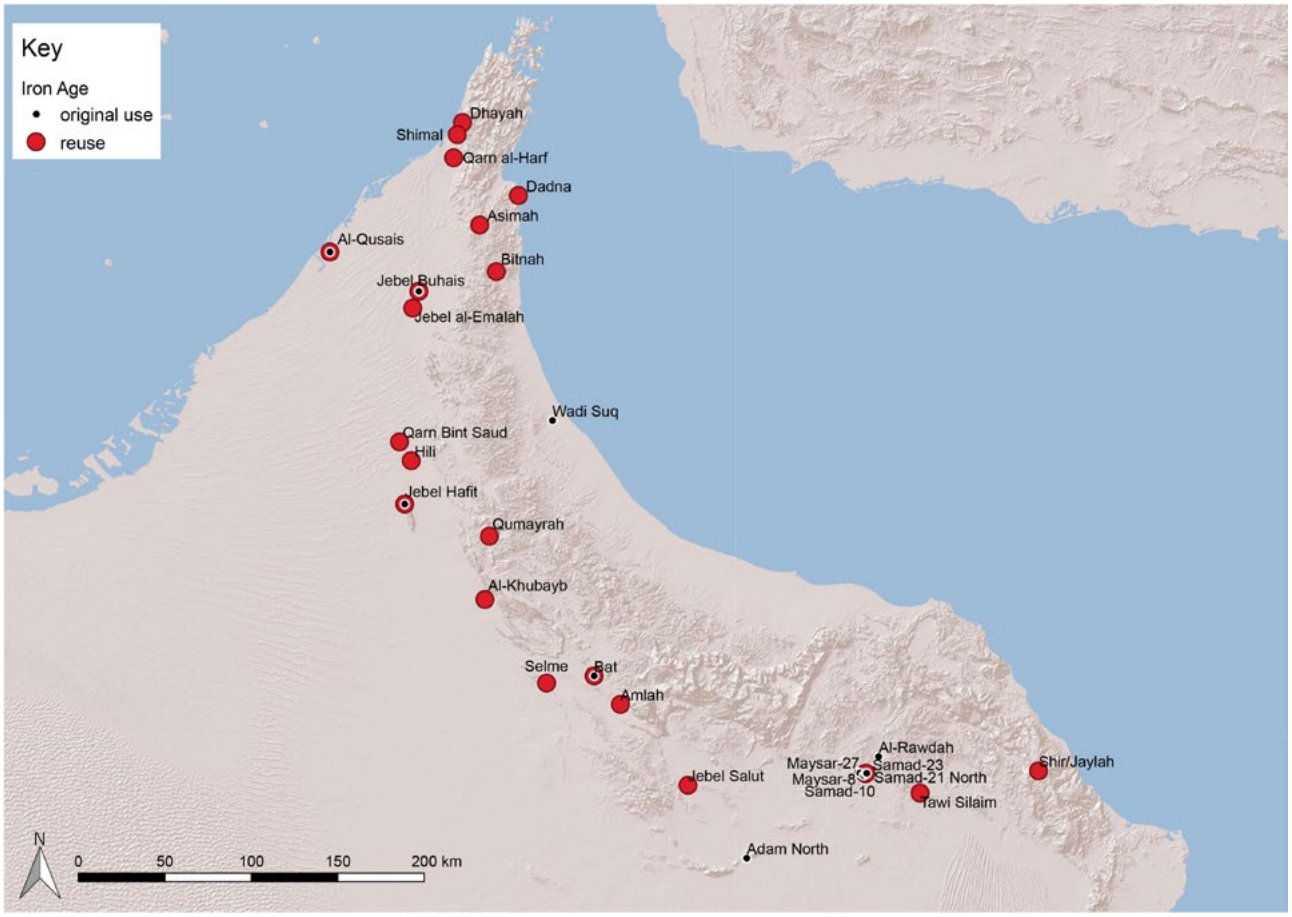


Fig. 75: Spatial distribution of reused tombs during the Iron Age.

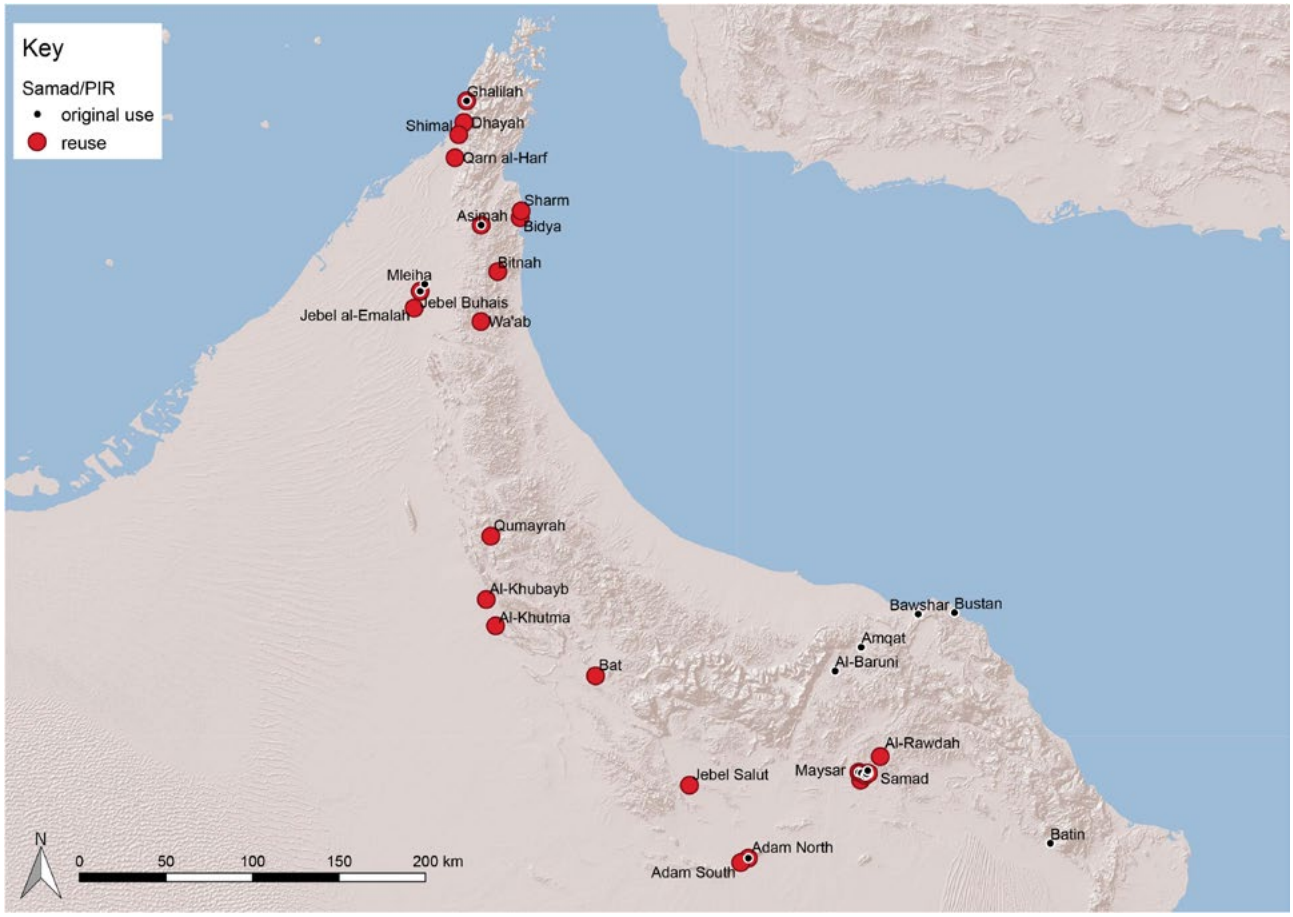


Fig. 76: Spatial distribution of reused tombs during the Samad/PIR.

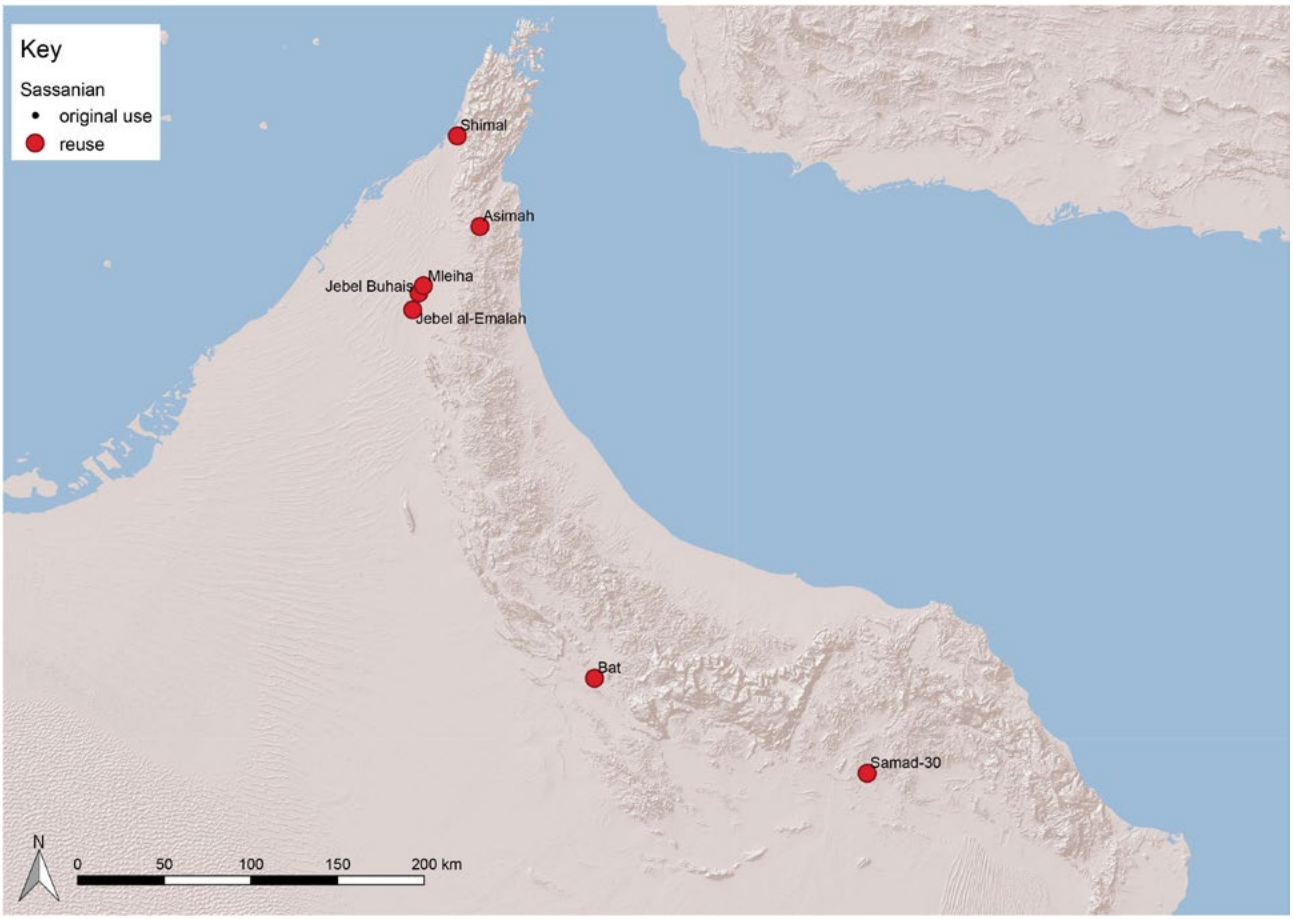


Fig. 77: Spatial distribution of reused tombs during the Sasanian period.

pened as a new burial inside the older structure as this provides some clues about the agents involved that are missing in other types of reuse. The reuse burials in older monuments will be compared with the regular burial practice of that period.

It is generally assumed that special treatment of the dead, such as being placed in an older grave structure, relates to special characteristics of the deceased including age, gender, sex, occupation, social status or membership of a religious community. The manner of death can also play a crucial role.[1214] Some suggest that people buried in older monuments were not allowed into regular cemeteries.[1215] However, one has to be careful not to regard burials in older structures per se as deviant burials as there might very well be more than one norm for burying people.[1216] When we look at those tombs in Eastern Arabia that were reused for burial evidenced either by the presence of human remains associated with later grave goods or architectural changes to incorporate a new burial (Tab. 4), the Samad period/PIR clearly dominates. Iron Age and Sasanian reuse burials occur less frequently. Only one reuse burial each is attested for the Wadi Suq period and the Late Bronze Age, and none for the Umm an-Nar and Islamic period. This might be biased because only those occasions where human bones could be clearly associated with a later reuse were considered burials giving preference to the latest inhumation. When the human remains of all periods present at the tomb were mixed, as for instance often encountered at Wadi Suq period collective tombs, they are excluded. However, those occasions as far as we can tell from the objects found in the tomb only result in higher numbers of Iron Age burials and do not explain why Umm an-Nar, Wadi Suq and Late Bronze Age burials do not occur as reuse burials.

Most burials in older tombs of any period are single inhumations. Nevertheless, at Jebel Buhais BHS66 human remains of eight individuals were encountered as reuse burials, five at Bidiya-1, three at Jebel Salut 3 Grave 1 and two each at Adam North Tomb 1015, Adam North Tomb 1016, Samad S2135 and possibly Ghalilah Gh2. At Bitnah Tomb 4 an unspecified number of individuals were buried reusing the tomb. Tomb A at Al-Qusais had two subsidiary graves with one individual each and Tomb M803 at Maysar had two individual reuse burials placed separately between the inner and outer row of the original tomb. In these cases, it is unclear whether all individuals were buried simultaneously or over a longer period of time. Compared to the regular burial customs of the periods concerned, the dominance of single burials in the reused tombs fits well with the normal funerary practice. During the Wadi Suq period and Late Bronze Age (chapter 3.3) as well as the Iron Age (chapter 3.4), single and collective burials co-occur, while in the Samad period and PIR (chapter 3.5) single inhumations are common. For the Sasanian (chapter 3.6) we lack data, but generally single inhumations also seem to be the norm here. The only reuse burial out of the norm is the deposit of an infant in a pottery urn at Ajman (chapter 4.1.10). No such burials are known from regular Wadi Suq period cemeteries.

Regarding the grave goods (Tab. 4), there is also no discrepancy between the regular burials and those in reused tombs. They all feature more or less the same amount of what is common and the same type of objects made of the same materials (chapter 3). The Wadi Suq period reuse burial is outfitted with pottery vessels, and the Late Bronze Age burial with a copper alloy arrowhead. Grave goods of the Iron Age reuse burials are pottery and soft-stone vessels, a soft-stone whetstone, seashells, shell buttons, decorated bone plates and copper alloy objects including daggers, swords, arrowheads, bracelets, rings, bowls and hooks. A special find is a silver headband from Al-Qusais Tomb A. Reuse burials from the PIR feature pottery vessels, beads often made of glass or frit, pendants, spindle whorls, iron daggers, swords, arrowheads and rivets, copper alloy and silver rings as well as silver and gold earrings. Samad reuse burials display a similar set of grave goods. These are pottery and stone vessels, ground stone tools, beads, pendants, shell rings, bone hilt/pulleys, spindle whorls, clay weights, iron spearheads, arrowheads and daggers as well as copper alloy bowls, rivets and needles. Sasanian reuse burials were mainly identified by radiocarbon dates as their grave goods are not always distinguishable from the Samad/PIR. They yielded iron spear/lanceheads, pikes, swords, arrowheads and bracelets, copper alloy arrowheads, pottery vessels, seashells, beads and in one case a spherical stamp seal.

Anthropological identification of the age and sex of the skeletons is rarely indicated in the literature, as is the orientation of the body within the tomb. If so, it generally fits well to what is known from original burials of the same period (chapter 3 and Tab. 4). The reuse burial from the Wadi Suq belongs to an infant, and the one from the Late Bronze Age to a child. The Iron Age reuse burials include individuals of both sexes and adults as well as children. One child was found associated with a female individual, likely its mother, the other by itself. In the few incidences where the position of the body was preserved and recorded, the skeletons were lying on their side in a flexed position, in two occasions with the head facing west. If information is available, the PIR skeletons were found outstretched on their back. The Samad period reuse burials include male and female individuals

1214 Neugebauer 1994: 117; Williams 1997: 17–18; Veit 2013: 12.
1215 Roymans 1995: 16.
1216 Aspöck 2015b.

Tomb	Date of Reuse	# Individuals	Position of the Body	Grave Goods	Changes to Architecture	^{14}C Date
Ajman	Wadi Suq	1 infant	–	large urn, pottery vessels	pit outside the ring wall	–
Wadi Suq Tomb 1126	Late Bronze Age	1 child	–	copper alloy arrowhead	–	–
Al-Qusais Tomb A	Iron Age	Grave II: 1 individual; Grave III: 1 individual	Grave II: flexed position, hands below skull; Grave III: flexed position	Grave II: 2 copper alloy daggers, 35 copper alloy arrowheads, silver headband; Grave III: copper alloy dagger, 7 copper alloy arrowheads	Grave II: subsidiary grave; Grave III: pit covered by farush slab	
Jebel al-Emalah Tomb III	Iron Age	–	–	copper alloy bracelet	rectangular subsidiary grave	–
Jebel Buhais BHS1	Iron Age	1 small child	–	unspecified	subsidiary grave	–
Jebel Buhais BHS12	Iron Age	–	–	–	subsidiary grave	–
Jebel Buhais BHS2	Iron Age	–	–	unspecified	subsidiary grave	–
Jebel Buhais BHS3	Iron Age	human bones	not in anatomical order	pottery sherds, pottery bowl, large pottery jar	–	–
Jebel Buhais BHS61	Iron Age	human bones	not in anatomical order	pottery sherds, two heavy copper alloy rings or anklets	–	–
Jebel Buhais BHS64	Iron Age	1 adult male	flexed, facing west	12 copper alloy arrowheads, 2 copper alloy rings, soft-stone whetstone	–	–
Jebel Buhais BHS66	Iron Age	1 adult female, 1 child, 1 female?, 5 individuals	adult female flexed on left side, accompanied by child burial	2 copper alloy anklets	–	–
Jebel Buhais BHS67	Iron Age	–	–	–	subsidiary graves	–
Jebel Buhais BHS71	Iron Age	–	–	–	subsidiary grave	–
Jebel Buhais BHS8	Iron Age	human bones	not in anatomical order	arrowheads, soft-stone vessels	–	–
Jebel Hafit Tomb 1049	Iron Age	1 adult	side, head towards east	2 copper alloy bowls, soft-stone bowl, copper alloy sword, copper alloy hook, polished shell button	breaking through corbelled roof/making shaft through upper ring wall	–
Maysar M803	Iron Age	1 adult	flexed, left side, head facing west	decorated bone plate, pottery sherds, seashell	placed between inner and outer row of stones	–
Asimah As11	PIR	human bones	–	animal bones	stone covered pit	
Asimah As21	PIR	human bones	–	shell objects, pottery sherd, iron dagger	subterranean pit, supporting wall added	–
Bidya-1	PIR	5	–	iron swords, iron arrowheads, metal pin, rivets, pottery vessels, beads, pendants, spindle whorl	–	–
Bitnah Tomb 4	PIR	"further skeletons"	one outstretched	Iron arrowheads, glass for frit beads, copper alloy rings, fragments of glass vessel, blade fragment (not clearly associated with skeletons)	pit for last inhumation	–
Ghalilah Gh2	PIR	[2]	[outstretched on back]	–	[removal of stone floor pavement]	–
Jebel Buhais Tomb BHS85	PIR	1 adult	–	socketed iron spearhead	–	–
Wa'ab 4	PIR	1 female	–	pottery jar, bead (?)	–	–
Asimah As8	PIR/Sasanian	human bones	–	(glazed) pottery sherds, glass beads, stone beads, copper alloy and silver ring, silver earring	superimposes older tumulus	–

Tomb	Date of Reuse	# Individuals	Position of the Body	Grave Goods	Changes to Architecture	^{14}C Date
Adam North Tomb 1002	Samad	1 subadult, 12–18 years	flexed, right side, head facing west	iron awl, iron rod, gold earring, stone mortar and pestle, shell, 2 copper alloy bowls, beads, copper alloy fragments	–	–
Adam North Tomb 1015	Samad	1 adult	flexed position, right side, head facing east	3 pottery sherds, hammer stone, 11 riveted copper alloy plates, iron spearhead, iron arrowhead, shell ring	–	–
Adam North Tomb 1016	Samad	2 adults	–	iron fragments, iron plate	burial just outside the original tomb	–
Adam North Tomb 1024	Samad	2 adults, one 25 years	flexed, right side, head facing west/north	18 iron arrowheads, clay weight, copper allow bowl, iron spearhead	–	–
Adam North Tomb 996	Samad	1 subadult, 7–12 years	flexed, right side, head facing north	unclear	–	–
Adam South Tomb 2001	Samad	human bones	–	iron arrowheads	–	–
Adam South Tomb 2004	Samad	human bones	–	iron arrowheads, coper alloy plates with rivets	–	–
Al-Khutma S002-001	Samad	1 subadult	flexed, facing south, hands near chest	18 beads made of soft-stone, jade, quartz and hematite	–	AD 255–410
Al-Khubayb Rescue Excavation	Samad	2+ individuals, 1 below 20 years	–	base of stone vessel, rim of glass vessel, seashell, copper alloy and iron plates with rivets, iron arrowheads	–	–
Al-Rawdah Mu1	Samad	1 male, 30–40 years	–	beads, pendant, 10 copper alloy rings, stone vessel, iron pin	–	–
Al-Rawdah Mu2	Samad	1 adult	–	2 arrowheads, 3 rings, bones of sheep/goat	–	–
Bat Tomb 155	Samad	1 female (?), 18–25 years	flexed	at least 5 iron arrowheads, rivet	pit, removal of stone floor pavement	–
Bat Tomb 156	Samad	1 male (?)	flexed	6 iron arrowheads, five metal rivets, iron blade (dagger?), stone beads	in collapsed parts of ring wall	–
Jebel Salut 3 Grave 1	Samad	1 adult female, 1 individual above 25 years, remains of one further individual	flexed	2 copper alloy plates with rivets, biconical carnelian bead, iron spearhead	–	–
Maysar M2716N	Samad	–	–	pottery sherds, iron wire	subsidiary grave	
Maysar M2717	Samad	adult human bones	not in anatomical order	pottery sherds, 19 iron arrowheads	subsidiary graves	–
Maysar M2720	Samad	1 male, 20–40 years	–	29 iron and copper alloy arrowheads, 2 fragments of a dagger, whetstone, shell spindle whorl, pottery, 104 beads	subsidiary grave	–
Maysar M803	Samad	*Nachbestattung* 2: 1 male, above 20 years; *Nachbestattung* 3: 1 individual above 20 years	flexed, right side	*Nachbestattung* 2: pottery sherds, copper alloy needle, 4 beads, 4 shells, soft-stone vessel; *Nachbestattung* 3: pottery, mother of pearl ring, 4 spindle whorls, 16 beads	placed between inner and outer row of stones	–
Samad S10103	Samad	human bones	–	pottery sherd, spindle whorl	–	AD 96–350
Samad S101040	Samad	1 adult	flexed, right side, head facing south	pottery sherds	pit in the wall of the tomb	–
Samad S10608	Samad	1 child	–	82 beads	–	–
Samad S10666	Samad	1 female, 20–40 years	flexed, right side	4 shell beads	–	–

Tomb	Date of Reuse	# Individuals	Position of the Body	Grave Goods	Changes to Architecture	^{14}C Date
Samad S10681	Samad	1 female, 30–40 years	flexed, left side	shell with pigments, seashell, copper alloy needle, polished, partly drilled stone, copper alloy fragments	–	–
Samad S1073	Samad	human bones	not in anatomical order	biconical carnelian bead, agate beads	–	–
Samad S2107	Samad	1 adult, 15–20 years	flexed, right side, head facing south	copper alloy clamps, iron arrowheads, iron dagger, 3 metal rings, stone bead, pottery jar	–	AD 734±94
Samad S2135	Samad	1 female, 30–40 years, 1 male, 20–40 years	flexed, right side	15 iron arrowheads, iron dagger, copper ally rivets, pottery balsamarium, bone hilt/pulley	–	AD 853±68
Samad S2136	Samad	1 child	left side, head facing southeast	pottery jar	two cross-walls added; pit for burial cuts through bottom of tomb	–
Samad S2154	Samad	1 adult, above 20 years	–	copper alloy clamps, iron arrowheads, pottery balsamarium, pottery sherds	two cross-walls added	–
Samad S2156	Samad	–	–	pottery jar	two cross-walls added	–
Samad S2161	Samad	1 child, 3–4 years	flexed position, right side, head facing southeast	48 kauri shells, 2 pottery jars	cross wall added	–
Samad S2199	Samad	1 male, 20–40 years	flexed, head facing southeast	ring, bead, 30 iron and copper alloy arrowheads, animal bones, iron dagger, pottery jar	–	–
Jebel Hafit Tomb 1303	Sasanian	1 adult, 20 years	flexed position, right side, head towards north	iron spearhead	breaking through ceiling	–
Jebel al-Emalah Tomb I	Sasanian	1 male, 34–39 years	outstretched, east-west oriented	70 cm long iron sword, copper alloy plates with rivets, copper alloy arrowheads	pit	423–727 AD 530–697 AD
Jebel al-Emalah Tomb III	Sasanian	1 male, 25–29 years	flexed	iron lance head, pike	–	492–667 AD 323–668 AD
Jebel Buhais BHS12	Sasanian	1 male	flexed, right side	iron arrowheads	camel burial in same level	[for camel: AD 640–680]
Mleiha Tomb 5	Sasanian	1 adult female	–	no grave goods	inserted through tunnel	AD 623–651
Shimal Sh100	Sasanian	–	–	5 pierced shell beads, cowry shell, biconical chalcedony bead, iron bracelet, spherical stamp, pottery	disturbance in eastern part of the wall; superstructure of tomb already destroyed	–
Mleiha Tomb 4	–	1	squatting, slightly upright position facing west	no grave goods	inserted through horizontal tunnel	
Tawi Silaim Cairn 2	–	1 male, 20-25 years	flexed, right side, head facing west	–	pit, 1 m diameter, cutting through original floor of the tomb	–
Tawi Silaim Cairn 3	–	–	–	–	pit, 0.9 m diameter, removal of stone slab floor	–

Tab. 4: Details of burials in reused tombs. The data for this table derives from chapter 4.1.

between 3 and 40 years of age. Where it could be determined, they were in a flexed position on their right or left side with the head facing various directions. Sasanian reuse burials were of male and female adult individuals between 20 and 39 years of age. Most of them were found in a flexed position on their right side, one outstretched.

The most common architectural changes during the Iron Age were subsidiary graves attached to an older construction; in some cases, inhumations were placed directly into the stone walls of the original tombs (Tab. 4). At Jebel Hafit Tomb 1049, the corbelled roof was broken through to place the reuse burial into the tomb (chapter 4.1.22). During the PIR and Samad period, most reuse burials occurred in simple, sometimes stone covered pits, where people occasionally removed parts of the original stone paved floor of the older tomb. Samad period reuse burials also occurred in subsidiary graves attached to the older one as well as within the stone wall of the original tomb. Occasionally, cross walls were added to the original cist tomb for the reuse burial. Sasanian reuse burials were inserted into the older tombs by breaking through ceilings or by tunnels.

In conclusion, nothing in the reuse burials of the Iron Age, Samad period and PIR gives any indication of special people being buried in those tombs. The data from the Wadi Suq period and Late Bronze Age is too limited to draw further conclusions.

5.1.4.2 Reuse with single objects

In many cases in Eastern Arabia, reuse was indicated by later objects that were encountered in older tombs without a clear indication for a burial (Tab. 5). These could be remains of funerals where for various reasons such as later disturbances and taphonomic processes the human remains were not preserved, but they might also never have belonged to later burials but entered the older tombs on other occasions and for other purposes. In the literature, they are often labelled as "stray finds" to emphasise the fact that they are younger than the initial burial of the tomb, a term that is also used in this study.

Most stray finds are pottery and soft-stone vessels as well as metal objects. In the five Hafit period tombs that were reused in the Umm an-Nar period, pottery and a copper alloy knife, a copper alloy plate with a handle as well as beads and seashells were found. In the case of Tomb 601 at Bat, the excavator believes that this is not reuse as it is understood in this study but continuous use from the Hafit into the Umm an-Nar period,[1217] which cannot be excluded for the other four tombs as well. While pottery is very common in Umm an-Nar period tombs, metal objects are rare, making their frequency in the reuse burials noteworthy. The Wadi Suq period objects that were encountered in 13 Hafit and Umm an-Nar period tombs are mainly soft-stone vessels, and to a lesser extent pottery and copper alloy weapons and tools such as swords, razor blades and spearheads. Additionally, there are two tombs with stamp or cylinder seals. All these items are commonly found as grave goods in Wadi Suq period tombs. While in the eight Umm an-Nar period tombs, these objects could originate from continuous use, the gap of occupation in the remaining five Hafit period tombs makes this impossible. Late Bronze Age single objects are always copper alloy arrowheads as this is one of the few items of the material culture of that period that is chronologically significant, although not undisputed (chapter 3.3). Contrasting with Wadi Suq period stray finds, where soft-stone vessels formed the largest group, in the Iron Age pottery clearly dominates, although soft-stone vessels and copper alloy arrowheads are also frequent. Other finds include seashells, decorated shell buttons and other shell objects, beads, pendants, copper alloy bracelets, pins, hooks and earrings. A special case is Selme. Here, a complete metal hoard consisting, amongst other things, of copper alloy shaft-hole axes, spearheads, bracelets, daggers and vessels was interred into an Umm an-Nar period tomb (chapter 4.1.26). For all PIR objects found in older tombs, it is possible that they are parts of undetected burials due to later disturbances or the fact that they were found in mixed, collective tombs. Iron weapons form the bulk of these objects including iron knives/daggers, arrowheads, and spear/lanceheads, but there are also pottery vessels, iron pins and beads. The same range of objects is attested within the Samad period, with the only difference that here pottery dominates instead of iron weapons. Among the latter are arrowheads and knives/daggers. Other finds include beads, copper alloy plates with rivets, rings and pins as well as spindle whorls, glass and stone vessels. The clearest Sasanian reuse is a hoard outside Tomb 110 in Bat. It consists of a metal needle, a copper-alloy vessel and a blue glazed ceramic bowl. Additionally, Sasanian beads were found in two older tombs. Islamic finds are mainly pottery sherds, which is often not specified so that it is not clear to which phase within the Islamic period it belongs. If so, it is predominantly Late Islamic. Some of the excavators explain the Islamic pottery sherds with the presence of Islamic villages close by as chance finds.[1218] This explanation, however, works less well for other objects such as Late Islamic metal beads and pendants (chapter 4.1.27) and Middle Islamic beads and coins (chapter 4.1.27 and 4.1.3).

1217 Böhme 2009.

1218 Vogt – Franke-Vogt 1987: 33.

Tomb	Closed vessel (jar/bottle)	Open vessel (bowl)	Unspecified pottery/sherd	(Soft-)stone vessel	Glass vessel	Copper alloy knife/dagger	Copper alloy sword	Copper alloy razor blade	Copper alloy vessel	Copper alloy arrowhead	Copper alloy spearhead	Copper alloy shaft-hole axe	Copper alloy pin/needle	Copper alloy hook	Copper alloy ring	Copper alloy earring	Copper alloy bracelet	(Plates with) copper alloy rivet	Copper alloy plate with handle	Iron knife/dagger	Iron sword	Iron arrowhead
Bat Tomb 601	■																					
Bat Tomb 603						■													■			
Jebel al-Emalah Tomb IV	■																					
Jebel Hafit Tomb 1034	■																					
Jebel Hafit Tomb 1312			■																			
Bat Tomb 112		■		■																		
Bat Tomb 154								■														
Bat Tomb 155				■																		
Bat Tomb 156				■																		
Hili Tomb 1059				■																		
Hili Tomb A North				■																		
Hili Tomb B	■	■		■																		
Jebel Hafit Cairn 2											■											
Jebel Hafit Tomb 1033			■																			
Jebel Salut 1 Grave 1				■																		
Mazyad																						
Qumayrah QA1				■																		
Shimal Sh222											■											
Bat Tomb 154							■															
Bat Tomb 156										■												
Jebel Hafit Cairn A (36)										■								■				
Jebel Hafit Tomb 1051										■												
Samad S2202										■												
Jebel al-Emalah Tomb IV						■				■												
Al-Khubayb S007-167	■																					
Al-Khubayb S007-169			■																			
Amlah Site 1		■																				
Asimah As15			■																			
Asimah As16		■	■																			
Bat Tomb 154				■						■												
Bat Tomb 155				■																		
Bat Tomb 156		■	■	■						■												
Dhayah Dh3	■	■																				
Hili Tomb H				■																		
Jebel al-Emalah Tomb III										■							■					
Jebel Hafit Tomb 1037																						
Jebel Hafit Tomb 1043	■																					
Jebel Hafit Tomb 1311													■		■							
Jebel Hafit Tomb 1312													■		■							

Iron spear/lancehead	Iron pin/awl/rod	(Plates with) iron rivet	Iron earring	Iron bracelet	Silver headband	Silver ring	Silver/gold earring	Unspecified metal object	Shell	Shell with pigment	Shell/bone object	(Decorated) shell button	Button	Bead	Pendant	Ground stone tool	Whetstone	Spindle whorl	Cylinder/stamp seal	Coin	Period
																					Umm an-Nar
																					Umm an-Nar
																					Umm an-Nar
																					Umm an-Nar
									■					■							Umm an-Nar
																					Wadi Suq
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Tomb	Closed vessel (jar/bottle)	Open vessel (bowl)	Unspecified pottery/sherd	(Soft-)stone vessel	Glass vessel	Copper alloy knife/dagger	Copper alloy sword	Copper alloy razor blade	Copper alloy vessel	Copper alloy arrowhead	Copper alloy spearhead	Copper alloy shaft-hole axe	Copper alloy pin/needle	Copper alloy hook	Copper alloy ring	Copper alloy earring	Copper alloy bracelet	(Plates with) copper alloy rivet	Copper alloy plate with handle	Iron knife/dagger	Iron sword	Iron arrowhead
Jebel Salut 1 Grave 1		■																				
Qarn al-Harf QaH67			■							■			■	■								
Qarn Bint Saud Cairn 18				■																		
Qarn Bint Saud Cairn 21	■																					
Qumayrah QA1										■												
Samad S21101		■																				
Samad S21105		■	■																			
Samad S21113		■																				
Samad S21114		■																				
Samad S2126		■																				
Samad S2180				■																		
Samad S2184	■	■		■																		
Samad S2186		■																				
Samad S2200		■																				
Samad S2202	■	■	■	■																		
Samad S2203				■																		
Selme	■			■		■			■		■	■					■					
Shimal Sh99																						
Shir/Jaylah Sh1			■																			
Shir/Jaylah Sh2			■																			
Tawi Silaim Cairn 4	■																					
Dhayah Dh1																						
Jebel Buhais BHS10																				■		
Jebel Buhais BHS27																				■		
Jebel Buhais BHS46																				■		
Jebel Buhais BHS85																						
Qarn al-Harf QaH67																						
Sharm	■	■																				
Shimal Sh102																				■		
Shimal Sh502	■																					■
Adam North 1006																						
Adam North 1017																						
Adam South 2005																						■
Adam South 2006			■																			
Bat Tomb 154																						■
Maysar M2206			■																			
Maysar M2715	■																					
Maysar M51																				■		
Qumayrah QA1																						

Iron spear/lancehead	Iron pin/awl/rod	(Plates with) iron rivet	Iron earring	Iron bracelet	Silver headband	Silver ring	Silver/gold earring	Unspecified metal object	Shell	Shell with pigment	Shell/bone object	(Decorated) shell button	Button	Bead	Pendant	Ground stone tool	Whetstone	Spindle whorl	Cylinder/stamp seal	Coin	Period
																					Iron Age
																					Iron Age
																					Iron Age
																					Iron Age
																					Iron Age
																					Iron Age
																					Iron Age
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		■																			Samad

Tomb	Closed vessel (jar/bottle)	Open vessel (bowl)	Unspecified pottery/sherd	(Soft-)stone vessel	Glass vessel	Copper alloy knife/dagger	Copper alloy sword	Copper alloy razor blade	Copper alloy vessel	Copper alloy arrowhead	Copper alloy spearhead	Copper alloy shaft-hole axe	Copper alloy pin/needle	Copper alloy hook	Copper alloy ring	Copper alloy earring	Copper alloy bracelet	(Plates with) copper alloy rivet	Copper alloy plate with handle	Iron knife/dagger	Iron sword	Iron arrowhead
Samad S101110			■																			
Samad S2009	■		■																			
Samad S2109			■																			
Samad S2114			■																			
Samad S2123	■		■																			
Samad S2131			■																			
Samad S2145			■																			
Samad S2308			■						■													
Bat Tomb 110		■							■				■									
Samad S3018																						
Bat Tomb 301			■																			
Shimal Sh100																						
Asimah As15			■																			
Bat Tomb 156																						
Samad S101115			■																			
Asimah As11			■																			
Samad S2116			■																			
Shimal Sh102			■																			
Wadi Suq 1125			■																			
Shimal Sh222			■																			

Tab. 5: Later objects in older tombs that could not be associated with a burial (stray finds). The data for this table derives from chapter 4.1.

Iron spear/lancehead	Iron pin/awl/rod	(Plates with) iron rivet	Iron earring	Iron bracelet	Silver headband	Silver ring	Silver/gold earring	Unspecified metal object	Shell	Shell with pigment	Shell/bone object	(Decorated) shell button	Button	Bead	Pendant	Ground stone tool	Whetstone	Spindle whorl	Cylinder/stamp seal	Coin	Period
																					Samad
																					Samad
																					Samad
																					Samad
																					Samad
																					Samad
																					Samad
																					Samad
																					Sassanian
														■							Sassanian/ Early Islamic
														■							Middle Islamic
																				■	Middle Islamic
																					Late Islamic
														■	■						Late Islamic
																					Late Islamic
																					Islamic
																					Islamic
																					Islamic
																					Islamic
																					“later periods”

6 Why are tombs reused in Eastern Arabia?

This chapter combines the archaeological record of reused tombs in Eastern Arabia (chapters 4 and 5) with the theoretical concepts presented in chapter 2 in order to approach a conclusive interpretation differentiating between destructive (chapter 6.1) and additive reuse (chapter 6.2). To this end, the instances of reuse of tombs in Eastern Arabia will be set against the different frameworks of interpretations. This is followed by a more general discussion considering the historical background in which reuse took place, starting from the general observations on the modalities of reuse in Eastern Arabia made in chapter 5. There is also a third type of reuse of tombs, i.e., the reuse of its building material. As it differs considerably from the other two types of reuse, it will be dealt with here only as a side note (chapter 6.3). Finally, the reuse of tombs in Eastern Arabia will be presented from a diachronic perspective, placing it firmly against the background of the socio-cultural developments in the region (chapter 6.4). It must be pointed out that such culturally specific meanings are difficult to study in archaeology as we cannot ask the ancient inhabitants of Eastern Arabia how they perceived the world around them.[1219] Therefore, the motivations of the reuse of tombs must remain hypothetical.

6.1 Destructive reuse in Eastern Arabia

6.1.1 Grave robbery in Eastern Arabia

Reviewing the literature, grave robbery seems to be very prominent in Eastern Arabia as is claimed to have occurred at various sites.[1220] In most cases, the evidence is not specified but the disarrangement and absence of grave goods seem to be the basis for this assumption. In all cases it is viewed as disturbance and as an obstacle to further artefact-oriented research.[1221] Sometimes secondary entrances to the tombs, identified as "robbery shafts", were encountered, for instance at Bat[1222] and in Wadi Suq.[1223] Elsewhere, such as Adam[1224] and Shir/Jaylah,[1225] none or only parts of the grave goods were attested and at yet other sites there is considerable damage to the tomb's architecture such as at Jebel Salut[1226] and Dhayah Tombs Dh1 and Dh9.[1227] In the following, it will be critically analysed whether economically motivated grave robbery is a plausible explanation for destructive reuse in Eastern Arabia.

If personal enrichment was the main reason behind the reopening of tombs in Eastern Arabia, one should expect that it specifically targeted tombs that potentially yielded rich loot (chapter 2.2.1). This was, as discussed in chapter 5.1.1.1, not the case. Considering the individual situations that are labelled as pre-modern grave robbery in Eastern Arabia in the literature, further complications emerge. The Hafit Tombs 601, 602 and 603 at the necropolis of Bat are believed to have been robbed, most likely in antiquity.[1228] Considering the usually rather sparse grave goods of Hafit period tombs, consisting mainly of pottery and personal adornment and only occasionally of metal objects (chapter 3.1), one can wonder if there is anything worth stealing in Hafit period tombs at all. Regarding the tombs at Bat, one has to further consider two Umm an-Nar period copper alloy objects that were found in Tomb 603[1229] and a few grave goods in the other two including beads and a pottery jar (chapter 4.1.27).[1230] This reflects more or less the usual amount of grave goods found in Hafit tombs, plus Umm an-Nar period objects. Thus, nothing indicates that a considerable quantity of objects is missing, making the idea of robbery unlikely. In Tomb 602 at Bat, the presence of

1219 Van Haperen 2010: 22.
1220 Frifelt 1975a: 373, 378; Vogt 1985: 77–78; Corboud *et al.* 1996: 13–14; Yule – Weisgerber 1996: 139; Yule 2001: 381; Jasim 2006: 33–40; Overlaet – Haerinck 2014; Gernez 2016.
1221 See also Van Haperen 2013: 89.
1222 Böhme 2009.
1223 Frifelt 1975a: 373.
1224 Gernez 2016.
1225 Yule – Weisgerber 1996: 139.
1226 Condoluci – Degli Esposti 2015: 15.
1227 Kästner – Sahm – Velde 1988: 7–8; Kästner 1990: 342.
1228 Frifelt 1975a: 385; Frifelt 1975b: 69, 75 fig. 22; Böhme 2009.
1229 Böhme 2009.
1230 Frifelt 1975a: 385.

a single pottery sherd is taken as an argument for grave robbery.[1231] While the damage to the vessel might have been the result of illicit entry to the tomb, it is doubtful that the grave robbers would have taken all other sherds with them when they were done with their business. Personal enrichment seems hardly reasonable.

Another example is the Umm an-Nar period tombs at Shir/Jaylah (chapter 4.1.38). They are thought to have been completely robbed as no grave goods with their original use were encountered.[1232] As most grave goods of the Umm an-Nar period are pottery jars (chapter 3.2), the economic profit of this action is again questionable. Unlike metal objects, which were very rare in Umm an-Nar period graves, pottery cannot be re-smelted and it is also likely that in the long period of these collective tombs several pottery jars were damaged. Thus, the alleged grave robbers must have taken shattered jars as well as all human remains. The Umm an-Nar Tomb Sh222 in Shimal is also believed to have been plundered because of the low number of finds, especially metal finds, as "gold was the main aim of looters".[1233] Only one gold bead, two silver beads, a spearhead and some fragments of copper needles and rings were found. Compared to other Umm an-Nar period tomb inventories (chapter 3.2), this is, however, a rather large number of metal objects as metal was generally sparse in Umm an-Nar period tombs. Thus, again, this is no convincing argument for looting.

The Wadi Suq period Tomb 2001 at Adam South, an above-ground stone tumulus with a central chamber, likely for a single inhumation, was, according to the excavator, completely robbed so that nothing of the original inventory remained.[1234] Finds from the tomb consisted of Samad period material that was scattered throughout the tomb, so that at least a second robbery event is postulated after the reuse. A similar situation is present at the allegedly plundered Hafit (?) period Tomb 2004[1235] and the Wadi Suq period Tomb 2005[1236] in the same cemetery. In both cases, grave goods from reuse in the Samad period were in disorder and the human bones fragmented. The Wadi Suq period stone cist Tomb 2006 is also thought to have been robbed, but here reuse is not clearly identifiable and the northern part of the tomb was "spared" from the robbery leaving the skull and a Wadi Suq period beaker in its original position.[1237] The other grave goods including various beads and a coarse ware pottery sherd of an unknown date (possibly indicating later reuse) were scattered throughout the tomb. Additionally, some of the stones of its wall were removed. Other (possible) Wadi Suq period tombs at Adam South that are considered to be plundered by the excavator are Tombs 2003 and 2007. In the case of Tomb 2003, except for some fragments of human bones, the stone cist was found completely emptied and even parts of the wall were removed.[1238] The stones from the wall were piled up next to the tomb. The only object discovered in the stone-cist Tomb 2007 is a shell fragment.[1239] As Wadi Suq period tombs are known for their metal grave goods (chapter 3.3), one could say that their content is worth robbing. Samad period tombs including those that reuse older tombs like here in Adam are also known for their metal grave goods, most of all iron arrowheads. Thus, they clearly contained grave goods worth stealing, however, only if there has not been a too large of a time span in between so that corrosion did not have large effects on the objects yet. However, even if the metal objects were of economic interest and human remains from the Wadi Suq period could be intermingled with the ones for the Samad period reuse burials and therefore were not visible in the archaeological record or just did not survive, there is still the question of why the grave robbers should steal the other grave goods such as pottery jars. There are several other instances where the lack of grave goods is simply explained by the excavators as grave robbery, even though all non-valuable objects are missing as well. For example, in the Wadi Suq period tombs Wa'ab 1–3 only a single fragment of a soft-stone vessel was found within one of them.[1240] Nearly all of the Mleiha graves has only scattered remnants of grave goods, while interestingly, skeletal material was generally lacking.[1241] Furthermore, several above-ground Iron Age chamber graves in Wadi Suq are also thought to have been broken into.[1242] Usually, the secondary entrance is located at the eastern end, sometimes on the roof. Iron Age graves clearly possess grave goods worth taking (chapter 3.4), but many of them were not completely emptied and metal objects or beads were left behind, leaving vast room for explanations other than grave robbery.

The Umm an-Nar period Tomb Amlah 5a is said to have been severely affected by grave robbers. They entered via the ceiling and even took out the largest parts of the stone-paved floor.[1243] Taking parts of the floor of Umm an-Nar period graves is also encountered at several other sites in Eastern Arabia. Tomb 156 at Bat (chapter 4.1.27) had in its eastern chamber only single stone slabs of the original stone paved floor preserved. In the western chamber, one row of stones was lined along the

1231 Frifelt 1975a: 385.
1232 Yule – Weisgerber 1996: 139.
1233 Kästner – Sahm – Velde 1988: 3.
1234 Gernez 2016: 64–65.
1235 Gernez 2016: 66.
1236 Gernez 2016: 66–67.
1237 Gernez 2016: 67–68.
1238 Gernez 2016: 65.
1239 Gernez 2016: 68–69.
1240 Fritz 2010: 102; Phillips 1997: 210.
1241 Potts 1990: 268; Overlaet – Haerinck 2014: 209.
1242 Frifelt 1975a: 373.
1243 Vogt 1985: 78; de Cardi – Collier – Doe 1976: 115.

external wall in the northern half, while in the southern half, the floor was more or less complete.[1244] The reason behind this practice is not clear, but at Tomb 155 at Bat (chapter 4.1.27), the Samad period burial was placed in a pit that was created by removing some stones from the floor. The same can be observed at Ghalilah Gh2 (chapter 4.1.1), Dhayah Tombs Dh1 and Dh9 (chapter 4.1.2) and Qumayrah Tomb QA-1 (chapter 4.1.24). At Tawi Silaim Cairn 2, the pit for the reuse burial was cutting through the original floor of the tomb and the pit in Cairn 3 at the same site removed the floor stone slabs (chapter 4.1.37).[1245] According to Madsen[1246] the removal of stones is also the explanation why Tomb 1034 at Jebel Hafit (chapter 4.1.22) lacks a stone floor pavement. Thus, the removal of stone slabs from the floors of Umm an-Nar period tombs can be associated with secondary burials. Interestingly, all tombs where the removed of parts of the floor were observed yielded later finds, although fully articulated burials are only known from the two tombs at Bat, Ghalilah and Tawi Silaim.

There are also clearly no countermeasures against grave robbery in Eastern Arabia. Tombs were in nearly all periods built visible, oftentimes above ground and clearly marked. While the coverage with stone slabs for subterranean tombs or the closure of entrances of aboveground ones exist, there seems to be no particular effort to prevent people from entering the tomb after the original burial. This all demonstrates that grave robbery was of no concern to the people burying their deceased. Possible exceptions to this are Tomb S2172 at Samad al-Shan and Tomb Dh1 at Dhayah. At the former, a stone structure (S2169) was placed on top of the tomb. Yule[1247] speculates that this was intended to look like an already plundered tomb, preventing the actual tomb from robbery. At Tomb Dh1, the entrance was recessed, which leads Kästner[1248] to believe that it was originally protected by an additional wall, making it less visible to grave robbers. Both explanations are not very convincing.

Summarising the occasions of grave robbery in Eastern Arabia listed in the literature, there is little evidence that intentional and illegal removal of valuable objects from the tombs for economic benefits was responsible for the disturbance of graves and the removal of grave goods in this region. Tombs where no valuable objects are to be expected such as those from the Hafit period were targeted with the same intensity as tombs from periods that equipped their deceased with grave goods of a higher economic value. Furthermore, non-valuable objects as pottery sherds and even human remains were taken in most cases as well. Thus, later destructive activities are encountered in Eastern Arabia at cemeteries where grave goods were generally rare as even undisturbed tombs featured nearly no grave goods or at sparsely outfitted tombs in cemeteries where much richer tombs were present as well. In conclusion, other explanations for destructive activities at tombs in Eastern Arabia must be sought.

6.1.2 Fear of revenants in Eastern Arabia

Fear of revenants, which is presented as explanation for destructive reuse activities in other regions of the world, does not play a significant role in the archaeology of Eastern Arabia, neither in the scholarly discussions nor in the archaeological material. Actions against revenants out of fear of the dead are believed to result in destruction of weapons so that the dead can no longer attack the living or in the manipulation of the dead body by removing parts of it, especially the head (chapter 2.2.2). Nothing of this is evident in the material record of Eastern Arabia. Thus, fearing the supernatural powers of dead persons does not seem to underly later activities at the tombs in this region.

6.1.3 Change of status and the destruction of grave goods in Eastern Arabia

In Eastern Arabia, purposeful smashing of grave goods has not been observed, and destructive activities towards the tombs other than the removal of the stone-paved floor of some Umm an-Nar period tombs as described above, which most likely is connected to later burials, are not attested. There is no evidence that more prominent tombs of (possible) elites were specifically targeted (chapter 5.1.1) and therefore that the reopening of the grave was aimed at destroying or taking over the power and status of the individual within those tombs. Further, there is no evidence for any form of violence taken against the skeletons for setting up a theatrical death to make the deceased individual memorable.[1249]

In this context, it is, however, interesting to note that the excavators in Shir/Jaylah present another reason besides grave robbery for lacking Umm an-Nar period grave goods: iconoclasm.[1250] While this term usually refers to the destruction of images for religious or political reasons, it is here adapted for tombs. Yet the tomb structures themselves were not affected – in fact, they are among the best-preserved third millennium BC tombs – but only the interior items of the tombs were taken. Thus, the term iconoclasm might not be the best choice, but the idea that the grave goods were taken to interfere with

1244 Döpper 2021b: Abb. 97.
1245 De Cardi – Bell – Starling 1979: 66, 92.
1246 Madsen 2017: 59.
1247 Yule 2001: 318.
1248 Kästner 1990: 341–342.
1249 Williams 2003b.
1250 Yule – Weisgerber 1996: 139.

power relations in society is worth considering. On the other hand, there is no evidence from settlements that older objects were cherished in the community; thus, if the objects were taken, it seems that they were not meant to be kept at home.

6.1.4 Secondary burials in Eastern Arabia

Secondary burials are known from Eastern Arabia only for the Umm an-Nar period (chapter 3.2). Here, human remains and their grave goods were relocated after their initial burial in one of the large stone-built tombs into a pit nearby. This happened clearly after a longer period of time, when the bodies were largely decayed and only the human bones remained. This could explain empty Umm an-Nar period tombs, but none of the other periods. Contradictory to this, Umm an-Nar period tombs are more rarely found empty compared to tombs of other periods. It is, however, distinctively possible that tombs were emptied to free and clean them for a later reuse burial, e.g., a Hafit period tomb for a Samad period burial. Thus, additive practices (chapter 6.2.2) could be held accountable for the absence of grave goods from older periods.

6.1.5 Summary: destructive reuse of tombs in Eastern Arabia

In summary, clear cases of grave robbery motivated by economic gain in pre-modern times cannot be found in Eastern Arabia. Neither were only valuable objects targeted, nor only rich tombs. There is also no convincing evidence for countermeasures against such practices. Tombs are mostly above ground and in all cases clearly visible in the landscape. Many of the other explanations for destructive activities at tombs such as fear of revenants or actions to diminish the power of the buried also lack evidence in Eastern Arabia. Whether single objects were taken for their spiritual value cannot be assessed with any certainty, but there seems to be no pattern to which objects were taken and which were left behind. By all likelihood, the destructive activities to either grave goods or the tombs' architecture happened within the realm of placing later burials within the tomb. Emptying of tombs can be a first step in this procedure in some cases, and in others, during the process, older grave goods and human remains might have been damaged and scattered. Secondary entrances and the removal of stone slabs from the tombs floors also fit into this scenario. Why not in all these occasions, later burials were clearly identified, remains open. Most likely, later activities did not necessarily include a burial but could also be offerings and the like (chapter 6.2.2). In this regard, one must point out that instances of destructive reuse are much rarer in Eastern Arabia compared to additive reuse.

6.2 Additive reuse in Eastern Arabia

In this chapter, the theories underlying additional reuse of tombs presented in chapter 2.3 will be applied to the archaeological record of Eastern Arabia. This follows the division in deposition of single objects (chapter 6.2.1) and reuse as burial (chapter 6.2.2). It is likely that much of what is listed in the following as single objects could have been part of a burial where the skeleton is not preserved, but that is no longer to be determined. Therefore, only secure reuse burial contexts are treated as such.

6.2.1 Deposition of single objects in Eastern Arabia

Concerning the single younger objects found in older tombs, one can distinguish between intentional depositions and accidental loss. Due to the high replacement costs, it is unlikely that complete and thus usable objects and those made of valuable materials such as metal were accidentally lost. Broken objects of less valuable material such as pottery sherds are on the contrary not easy to identify as either intentional or accidental deposits. Those objects that are intentionally deposited at the tombs can then be separated into ritual and non-ritual ones according to the criteria listed in chapter 2.3.1. Being deposited in a tomb, all the single objects discussed here fulfil the criterion of a special location (Tab. 6). Following Levy[1251] this also limits the access through ritual sanctions, another criterium for ritual deposits, although this can only be valid as long as the same cultural norms apply to society. Another characteristic, the high proportion of weapons and ornaments, is also present at most depositions of single objects, albeit ornaments less so than weapons. Among the weapons found as younger objects in older tombs are copper alloy and iron knives and daggers, swords, spear-, pike- or lanceheads as well as large quantities of arrowheads. Other metal objects include copper alloy and iron pins, needles and wires, razor blades, vessels, plates with rivets and a plate with a handle. All weapons and other metal objects seem to have been in good condition and complete when deposited, thereby fulfilling another criterion for ritual deposits (Tab. 6). If not belonging to unidentified burials, they can be convincingly interpreted as gifts to some supernatural power located within the tomb, for example dead ancestors. Metal objects are clearly gifts worth giving to such beings. Regardless of whether those offerings were made to appease the dead/supernatural beings or to gain favour from them, they are a way to establish relationships with the past. By incorporating the old tombs into the ritual practice at present, they generate and main-

1251 Levy 1982: 21.

tain the cultural memory of the community involved in these rituals. However, one must consider that all these metal objects are also part of regular grave inventories in the time period concerned. The mixed context of the layers within the tombs makes it plausible that they are part of later burials within the tombs that are not recognisable in the archaeological record, a scenario that is highly likely. For none of the metal or other objects can it be said if they were used or new when they were deposited as no use wear analyses were conducted. In any case, most of them do not differ from the material culture generally present at that time. Exceptions to this are the spearheads from Tomb As15 in Asimah[1252] and DH1 in Dhayah[1253] as they are miniaturised. As pointed out in chapter 2.3.1, miniatures are seen as objects specially made for ritual deposition. They are not part of regular grave inventories in Eastern Arabia. Generally, miniatures are rare in the material culture of this region. This made the finds in the Iron Age II cult complex of Mudhmar East even more spectacular. In Room 3019 of the cultic structure, together with thirteen normal-sized arrowheads, a copper alloy ring and a copper alloy snake as well as four miniature weapons were found.[1254] These include a spear, a quiver and two bows, all in high-quality manufacture. In Room 3036, besides several other metal weapons, two other miniaturised copper alloy quivers, each containing six arrows, were discovered.[1255] They are interpreted as votive offerings to a warrior deity.[1256] Clearly ceremonial objects such as cult paraphernalia are absent from tombs in Eastern Arabia. Comparing the later metal objects found in tombs to those from hoards is difficult as only very few are known, namely the one from Ibri/Selme and the one from Mudhmar East with its miniature weapons discussed before. Additionally, in Room 3036, in three separate layers a total of nine axes, seven daggers, eight groups of arrowheads, five bows and two complete quivers were exposed.[1257] Thus, the clearly ritual hoards of Mudhmar East from a cultic building are completely made up of weapons, which also make up the highest proportion of single later metal objects from the tombs investigated, giving credit to their interpretation as ritual. The hoard from Selme contains of a shaft-hole axe, a spearhead, 101 bangles, 32 daggers and fragments thereof, more than 370 vessels and fragments of copper, 15 soft-stone vessels, lids and fragments, as well as four pottery vessels. Yule[1258] assumes due to its material worth and chronological span from the second to the first millennium BC that it was a grave robber's hoard and thus non-ritual. Taking Levy's criteria for distinguishing between a ritual and a non-ritual hoard (chapter 2.3.1), the Selme hoard, however, fulfils most of those of the ritual hoard, i.e., specialised placement location (tomb), restricted range of items often with a high proportion of weapons and the fact that the objects are in good condition and complete when they were deposited. Thus, it is rather to be considered as ritual hoard. Another hoard was identified in a pit next to Tomb 110 at the cemetery of Bat (chapter 4.1.27). It consists of a blue glazed Sasanian pottery bowl, a copper alloy vessel and a metal needle. Location and composition again argue for a ritual deposition.

Personal ornaments found in older tombs in Eastern Arabia mainly encompass several beads, including etched carnelian, gold, copper and glass beads, pendants, earrings and headbands as well as decorated shell and alabaster buttons (Tab. 6). Not personal ornaments as such but generally fitting the category of elaborate personal items are a cylinder seal and a gulf seal. As metal objects, all those objects were complete when deposited and of such value that they are suitable as offerings to deities. But again, they are also part of regular tomb inventories so that reuse of the tombs as burial is possible, even though this was not recognised in the archaeological investigations.

Most single younger objects found in older tombs are, however, not luxury goods, but pottery vessels and fragments thereof as demonstrated in chapter 5.1.4.2. Complete or reconstructable vessels were rare. Mainly, we deal with pottery sherds, which however could have belonged to complete vessels when deposited at the tomb. Complete pottery remains were possibly containers for food and thus remains of commemorative feasts.[1259] This would be one of the strongest activities to establish a relationship with the past and generating and maintaining the cultural memory of the community (chapter 2.1.3.1.2). From the reconstructable shapes of the later pottery vessels found in the tombs, we deal with bowls from Dhayah Dh3, Sharm, Asimah Tombs As16 and As100, Bat Tombs 110, 112, 155 and 156, Amlah Site 1, Jebel Salut 1 Grave 1, Samad 21 South Tombs S2126, S2168, S2184, S2186, S21101, S21105, S2113 and S2114 as well as Samad 22 Tombs S2200 and 2202, beakers from Hili Tomb B, small jars from Qarn bint Saud Tomb 21, Hili Tomb B and Bat Tomb 601 as well as large jars from Asimah As100, Hili Tomb B and Maysar Tomb M2715. Thus, open as well as closed forms are present, both suitable for food offerings, the closed forms also for offering liquids. Additionally, large quantities of later pottery fragments were found. These might have

1252 Vogt 1994: 46–48.
1253 Kästner 1991: 243 fig. 7.
1254 Gernez – Jean – Benoist 2017: 110.
1255 Gernez – Jean – Benoist 2017: 109.
1256 Gernez – Jean – Benoist 2017: 111.
1257 Gernez – Giraud 2017: 88.
1258 Yule 2001: 381.
1259 Levy 1982: 22; de Groot 1988: 99; Bradley 1990: 28; Drenth 2012: 163.

accidentally entered the tomb, are the remains of once completely deposited objects, could be representations of the complete object symbolically killed in order to accompany the dead person to the afterlife, or to free them of the impurity of death or other ritual activities (chapter 2.2.3). A way to decide between these options is the arrangement in which they were found as a formal arrangement is seen as an indicator for ritual deposits. Unfortunately, the disturbed character of the tombs makes this hardly possible for most sites. The Hafit period tombs at the Al-Khubayb necropolis (chapter 4.1.25.2), however, reveal an interesting pattern. At least ten Early Bronze Age tumuli featured Iron Age II pottery vessels placed on top,[1260] clearly demonstrating a ritual deposition. This recalls a situation at Tomb 1043 of Jebel Hafit (chapter 4.1.22). Here, remains of a single Iron Age pottery vessel were found out of context. Furthermore, at the Umm an-Nar period Tomb 155 at Bat, a complete incised pottery cup was found that could have been placed on top of the ruins of the tomb at the time when a Samad period inhumation was placed here as a reuse burial (chapter 4.1.27).

The second largest group of younger objects from older tombs are soft-stone vessels. Their small sizes make them, unlike the pottery vessels, unsuitable as food containers. Their elaborate decoration, however, clearly indicates their value, placing them in line with the ornaments discussed above (Tab. 6). Comparable to the placement of Iron Age pottery vessels at the Al-Khubayb necropolis, soft-stone vessels were intentionally deposited at Tomb 2717 at Maysar and other tombs in the cemetery Maysar-36,[1261] again demonstrating that they were used as single objects in ritual depositions besides being part of the regular grave inventories.

The rareness of non-ritual deposits within older tombs goes along with the general rareness of such hoards in Eastern Arabia. Among the few known ones are a ninth century hoard found 1 km west of Sinaw, containing more than 900 coins in a green-glazed jar buried in a shallow pit,[1262] an 11th century silver coin hoard found by a farmer while enlarging his palm garden in the Wadi Milaha, a tributary of the Wadi al-Qawr in the United Arab Emirate,[1263] a pot containing several hundred coins dating to the 17th or 18th century found by another farmer in Mirbah, Fujairah[1264] and a smaller hoard containing only 18 silver coins from the Sasanian period found in the outskirts of Fujairah city[1265]. It is interesting to note that all these non-ritual hoards contain coins and date back at most 1300 years, making them a comparably young phenomenon in the history of Eastern Arabia. If the single silver coin dating to the 11th century AD from Shimal Tomb Sh100 can be interpreted as ritual or non-ritual deposition remains a matter of discussion. A single coin could very well be an offering.

As demonstrated in Tab. 6, for most objects it is likely that they belong to non-recognised reuse burials, which would also be some sort of ritual deposit. Generally, it is clear that most of them did not accidentally end up in the tombs. Possible exceptions are pottery sherds found scattered over the ruins of tombs such as at Asimah Tombs As11, As15, As16, Bat Tomb 301, Samad Tomb

Reuse	Objects	special location	possible to retrieve	good condition and whole	formal arrangement	animal bones	possible food containers	usual grave inventory	non-accidental deposition	ritual deposit	Period
Adam North 1006	iron fragments	■		■				■	■	■	Samad
Adam North 1017	iron fragments	■		■				■	■	■	Samad
Adam South 2005	iron arrowhead, carnelian bead	■		■				■	■	■	Samad
Adam South 2006	beads, pottery	■						■	■	■	Samad
Al-Khubayb S007-167	bridge-spouted pottery vessel	■	■	■	■	■	■	■	■	■	Iron Age
Al-Khubayb S007-169	pottery base	■	■		■		■	■	■	■	Iron Age
Amlah Site 1	pottery bowls	■					■	■	■	■	Iron Age

1260 Williams – Gregoricka 2020: 106.

1261 Weisgerber 1981: 225.
1262 Lowick 1983.
1263 Lowick 1986.
1264 Hellyer 1995.
1265 Hellyer 1995.

Reuse	Objects	special location	possible to retrieve	good condition and whole	formal arrangement	animal bones	possible food containers	usual grave inventory	non-accidental deposition	ritual deposit	Period
Asimah As11	pottery sherds	■	■								Islamic
Asimah As15	pottery sherds	■	■				■	■		?	Iron Age
Asimah As15	pottery sherds	■	■				■				Late Islamic
Asimah As16	pottery sherds	■	■				■	■		?	Iron Age
Bat Tomb 110	glazed pottery bowl, copper ally vessel, metal needle	■			■		■	?	■	■	Sasanian
Bat Tomb 112	soft-stone vessel, pottery vessel	■	▒				■	■	■	■	Wadi Suq
Bat Tomb 154	copper alloy razor blade	■	▒	■				■	■	■	Wadi Suq
Bat Tomb 154	copper alloy sword	■	▒	■				■	■	■	Late Bronze Age
Bat Tomb 154	soft-stone vessels, copper alloy arrowheads, decorated shell buttons, beads, pendants	■	▒	▒				■	■	■	Iron Age
Bat Tomb 154	iron arrowheads	■	▒	■				■	■	■	Samad
Bat Tomb 155	soft-stone vessels	■	▒	■				■	■	■	Iron Age
Bat Tomb 155	soft-stone vessels	■	▒	■				■	■	■	Wadi Suq
Bat Tomb 156	pottery and soft-stone vessels, copper alloy arrowheads, animal bones	■	▒	■		■	■	■	■	■	Iron Age
Bat Tomb 156	bead, pendant	■	▒	■					■	■	Late Islamic
Bat Tomb 156	copper alloy arrowhead	■	▒	■				■	■	■	LBA
Bat Tomb 156	soft-stone vessels	■	▒	■				■	■	■	Wadi Suq
Bat Tomb 301	pottery sherds, glass bead	■	▒	▒					?	?	Middle Islamic
Bat Tomb 601	pottery jar, serpentine bead	■	▒	▒			■	■	■	■	Umm an-Nar
Bat Tomb 603	copper alloy dagger, copper alloy plate with handle	■	▒					■	■	■	Umm an-Nar
Dhayah Dh1	etched carnelian beads	■		■				■	■	■	PIR
Dhayah Dh3	pottery bowl and flask	■	▒	■	■		■	■	■	■	Iron Age
Hili Tomb 1059	soft-stone vessels	■	▒	■				■	■	■	Wadi Suq
Hili Tomb A North	soft-stone vessels	■	▒	■				■	■	■	Wadi Suq
Hili Tomb B	pottery and soft-stone vessels	■	▒	▒			■	■	■	■	Wadi Suq
Hili Tomb H	soft-stone vessels	■	▒					■	■	■	Iron Age
Jebel al-Emalah Tomb III	copper alloy arrowheads and bracelets	■	▒	■				■	■	■	Iron Age
Jebel al-Emalah Tomb IV	copper alloy knives and arrowheads	■	▒	■				■	■	■	LBA/Iron Age
Jebel al-Emalah Tomb IV	three pottery jars	■	▒	?			■	■	■	■	Umm an-Nar
Jebel Buhais BHS10	iron knife	■	▒	■				■	■	■	PIR
Jebel Buhais BHS27	iron knife	■	▒	■				■	■	■	PIR
Jebel Buhais BHS37	pottery bowl	■		■			■	■	■	■	Iron Age
Jebel Buhais BHS46	iron dagger	■		■				■	■	■	PIR
Jebel Hafit Cairn 2	copper spearhead	■	▒	■				■	■	■	Wadi Suq

Reuse	Objects	special location	possible to retrieve	good condition and whole	formal arrangement	animal bones	possible food containers	usual grave inventory	non-accidental deposition	ritual deposit	Period
Jebel Hafit Cairn A (36)	copper alloy arrowhead and plates with rivets	■		■				■	■	■	LBA
Jebel Hafit Tomb 1033	soft-stone vessel	■		■				■	■	■	Wadi Suq
Jebel Hafit Tomb 1034	pottery jar	■					■	■	■	■	Umm an-Nar
Jebel Hafit Tomb 1037	green glass bead	■		■				■	■	■	Iron Age
Jebel Hafit Tomb 1043	pottery sherd	■					■	■	■	■	Iron Age
Jebel Hafit Tomb 1051	copper alloy arrowhead	■		■				■	■	■	LBA
Jebel Hafit Tomb 1311	glass bead, coppáer alloy nail and rod	■		■	■			■	■	■	Iron Age
Jebel Hafit Tomb 1312	three pottery sherds, four copper alloy rings, soft-stone vessels, copper alloy rivet, seashell with pigment	■					■	■	■	■	Iron Age
Jebel Hafit Tomb 1312	soft-stone beaker, jack-knife clam, four carnelian and one agate bead	■		■	■			■	■	■	Umm an-Nar
Jebel Salut 1 Grave 1	pottery sherds	■					■	■	■	■	Iron Age
Jebel Salut 1 Grave 1	soft-stone vessel	■						■	■	■	Wadi Suq
Maysar M51	iron blade	■		■				■	■	■	Samad
Maysar M2206	pottery sherd	■					■	■	■	■	Samad
Maysar M2715	storage jar	■		■		■	■	■	■	■	Samad
Mazyad	Gulf seal	■		■				■	■	■	Wadi Suq
Qarn al-Harf QaH67	pottery sherds, copper alloy arrowheads, fishhooks, needle	■					■	■	■	■	Iron Age
Qarn al-Harf QaH67	iron earring and scraps	■						■	■	■	PIR
Qarn Bint Saud Cairn 18	soft-stone vessel	■		■				■	■	■	Iron Age
Qarn Bint Saud Cairn 21	lugged pottery jar	■		■			■	■	■	■	Iron Age
Qumayrah QA1	copper alloy arrowhead	■		■				■	■	■	Iron Age
Qumayrah QA1	plates with iron rivets	■		■				■	■	■	Samad
Qumayrah QA1	soft-stone vessels	■		■				■	■	■	Wadi Suq
Samad S101110	pottery sherds	■					■	■	■	■	Samad
Samad S101115	pottery sherds	■	■				■				Late Islamic
Samad S2009	pottery sherds	■					■	■	■	■	Samad
Samad S2109	pottery sherd	■					■	■	■	■	Samad
Samad S21101	pottery bowl	■		■			■	■	■	■	Iron Age
Samad S21105	pottery cup and sherds	■		■			■	■	■	■	Iron Age
Samad S21113	two pottery bowls	■		■			■	■	■	■	Iron Age

Reuse	Objects	special location	possible to retrieve	good condition and whole	formal arrangement	animal bones	possible food containers	usual grave inventory	non-accidental deposition	ritual deposit	Period
Samad S21114	pottery bowls	■		■			■	■	■	■	Iron Age
Samad S2114	pottery sherds	■					■	■	■	■	Samad
Samad S2116	pottery sherds	■	■				■				Islamic
Samad S2123	pottery sherds	■					■	■	■	■	Samad
Samad S2126	pottery bowl	■		■			■	■	■	■	Iron Age
Samad S2131	pottery sherds	■					■	■	■	■	Samad
Samad S2145	pottery sherds	■				■	■	■	■	■	Samad
Samad S2180	soft-stone vessel	■						■	■	■	Iron Age
Samad S2184	pottery cup and jar, soft-stone vessel	■		▒			■	■	■	■	Iron Age
Samad S2186	pottery cup with seashell	■		■	■		■	■	■	■	Iron Age
Samad S2200	pottery sherds	■					■	■	■	■	Iron Age
Samad S2202	pottery and soft-stone vessels, decorated shell button	■		▒			■	■	■	■	Iron Age
Samad S2202	copper alloy arrowheads	■		■				■	■	■	LBA
Samad S2203	soft-stone vessel	■		■				■	■	■	Iron Age
Samad S2308	pottery sherds	■					■	■	■	■	Samad
Samad S3018	carnelian beads	■		■				■	■	■	Sasanian/Early Islamic
Selme	copper alloy shaft-hole axe, spearhead, bangles, daggers, vessels, soft-stone vessels, pottery vessels	■		■	■				■	?	Iron Age
Sharm	pottery vessels	■		■			■	■	■	■	PIR
Shimal Sh100	silver coin	■		■					?	?	Middle Islamic
Shimal Sh102	iron pin and dagger	■		■				■	■	■	PIR
Shimal Sh102	pottery sherds	■					■				Islamic
Shimal Sh222	copper alloy spearhead	■	▒	■				■	■	■	Wadi Suq
Shimal Sh222	pottery	■	▒				■				"later periods"
Shimal Sh502	pottery flasks, iron arrowheads, carnelian beads	■	▒	■			■	■	■	■	PIR
Shimal Sh99	metal objects	■	■					■	■	■	Iron Age
Shir/Jaylah Sh1	pottery sherds	■					■	■			Iron Age
Shir/Jaylah Sh2	pottery sherds	■					■	■			Iron Age
Tawi Silaim Cairn 4	perforated pottery cup	■	▒				■	■	■	■	Iron Age
Wadi Suq 1125	pottery sherds	■					■				Islamic

Tab. 6: Stray finds from tombs against criteria for ritual/non-ritual deposits. Black indicates when a criterium is fulfilled, grey if it is partially fulfilled.

S101115, Shimal Tombs Sh100, Sh102 and Sh222, Shir/Jaylah Tombs Sh1 and Sh2 and Wadi Suq Tomb 1125 and of course the hoards from Selme and Bat Tomb 110. Objects that are clearly not associated with secondary burials are the pottery vessels placed on top of the burials at the Al-Khubayb cemetery (chapter 4.1.25.2), the Late Islamic pieces of jewellery from Tomb 156 at Bat (chapter 4.1.27) and the Middle Islamic silver coin from Shimal (chapter 4.1.3).

6.2.2 Reuse of tombs as burial places in Eastern Arabia

Undisputable evidence of the reuse of a tomb as a burial place is only given when human remains can be associated with a later phase or when clear structural changes were made to the tomb intended for incorporating another burial. As demonstrated in chapter 5.1.4.1, such a situation was identified at 64 tombs mainly during the Iron Age, Samad/PIR and Sasanian periods (Tab. 4). It has also been shown that no patterning regarding sex or age is observable. Thus, there is no indication that the special treatment of the dead by placing them into an older grave is related to these characteristics. Furthermore, the amount and types of grave goods, the orientation of the body and the type of burial (singe/collective) does not differ from the regular burial custom of the respective periods. This speaks against interpretations of those buried in older tombs being social outcasts or high ranking individuals of any sort.[1266] As reuse is defined in this study (chapter 4) as activities at the burial sites from different cultural periods, the questions of whether the people belonged to the same social group as the deceased[1267] and if they had positive or negative relations with the individual[1268] are obsolete. All this makes the question of why certain people were buried in older tombs and others not even more difficult.

One idea is that burials were placed in ruins explicitly to create links back to ancient beings or to perceived ancestral features to fabricate for their communities an "inherent legitimacy" justifying their own presence in the landscape as well as rights over land or other material and human resources.[1269] Directly linked to this is the idea that especially elite groups use this means to legitimise political strategies.[1270] How does this fit with the evidence from Eastern Arabia? The burial of an infant in a large pottery vessel during the Wadi Suq period just outside the Umm an-Nar period Tomb A at Ajman (chapter 4.1.10) is clearly a unique case from several points of view. First, this is to my knowledge the only burial in a pottery vessel of any period in Eastern Arabia. Second, this is the only case where human remains can be associated with clear reuse (not continuous use) in the Wadi Suq period. The infant burial was equipped with two Wadi Suq period beakers.[1271] The only reuse burial from the Late Bronze Age also belongs to a child. At Tomb 1126 in the cemetery of Wadi Suq (chapter 4.1.17), it was buried in an upper layer of a Wadi Suq period tomb outfitted with a copper alloy arrowhead. Both events stand out for their uniqueness making reuse burials a rare phenomenon in this period. The fact that both burials are of very young individuals makes it unlikely that they were staged to legitimate rights over land, resources and political power.

In the Iron Age, small subsidiary grave chambers were added to several older tombs. This requires investment into labour and material but is absolutely within the range of what is common for the construction of Iron Age individual tombs (chapter 3.4). Tombs with those subsidiary chambers are Jebel Buhais Tombs BHS1, BHS2, BHS12, BHS67 and BHS71 (chapter 4.1.14), Jebel al-Emalah Tomb III (chapter 4.1.15) and Al-Qusais Tomb A (chapter 4.1.11). The subsidiary chambers are generally small, fitted to incorporate one individual in a flexed position and built of stone. Not in all of them human remains were attested, and not all were outfitted with grave goods. In Tomb BHS1, a small child was buried,[1272] one adult individual each in the subsidiary graves of Al-Qusias Tomb A.[1273] Grave goods include copper alloy bracelets, daggers, arrowheads and in the case of Al-Qusais Tomb A a silver headband. In the Maysar-8 cemetery, a burial chamber was laid out in between the inner and outer wall southeast of the main chamber of the already partially ruined Tomb M803 (chapter 4.1.33.1). A skeleton in a flexed position equipped with pottery and other objects was placed within.[1274] In all cases it is hard to imagine that this was a statement of elite groups to legitimise their power or – considering the rather inconspicuous position just outside the tomb's walls – that it was meant to propagate rights to land or other resources. However, adding oneself to an older structure is making clear links with the past and thus creating a cultural memory for the community.

There are also Iron Age reuse burials that did not alter the original structure of the tomb and were encountered in distinct upper layers within the fill of these tombs. These are Jebel Buhais Tombs BHS3, BHS8, BHS61 and BHS64 (chapter 4.1.14) and Jebel Hafit Tomb 1049 (chapter 4.1.22). Both, at Tomb BHS64 and Tomb 1049, the skeleton of an adult individual was found near the

1266 Whitley 2002: 122.
1267 Zintl 2019: 47.
1268 Van Haperen 2017: 18.
1269 Williams 1998b: 103; Chadwick 2013: 295.
1270 Williams 1998b: 103.
1271 Al-Tikriti 1989b: 92.
1272 Jasim 2006: 22.
1273 Taha 1981: 69; Lombard 1985: 169; Taha 2009: 75.
1274 Yule 2001: 227.

entrance, just outside the main chamber of the tomb. In case of the latter, the tomb was carefully closed after the burial was placed within it.[1275] Grave goods include pottery and soft-stone vessels, copper alloy arrowheads, swords, hooks, rings, bracelets and bowls as well as a whetstone and polished shell buttons. Again, this inconspicuous way of burying that does not put much effort into the actual building of the tomb does not seem to be suitable for highlighting any elites, but clearly refers to the older structure. It is interesting to see that both, at the Jebel Hafit and the Jebel Buhais tombs, regular burials from the Iron Age were attested alongside reuse burials (Fig. 75).

The PIR and Samad period burials in older tombs appear mostly as pits dug into the, at that point, already ruined structures. This is the case at Tombs Asimah As21 and As11 (chapter 4.1.8), Bitnah Tomb 4 (chapter 4.1.12), Bat Tomb 155 (chapter 4.1.27) and possibly also at Ghalilah Gh2 (chapter 4.1.1), where it is reported that the reuse burial of two individuals resulted in the removal of some parts of the stone paved floor. Likely belonging to this category are also the Tawi Silaim Cairns 2 and 3, where a pit for a later inhumation was observed (chapter 4.1.37). However, no date for the reuse could be established as grave goods were absent. Placed in upper layers of the fill without a clearly visible pit were the individuals from the tombs Bidya-1 (chapter 4.1.7), Jebel Buhais Tomb BHS85 (chapter 4.1.14), Wa'ab 4 (chapter 4.1.16), Al-Khutma Tomb S002-001(chapter 4.1.25.1), the rescue excavation at Al-Khubayb (chapter 4.1.25.2), Jebel Salut 3 Grave 1 (chapter 4.1.31), Adam North Tombs 996, 1002, 1015, 1016 and 1024 at Adam North and Adam South Tombs 2001 and 2004 (chapter 4.1.32), Maysar M2720 (chapter 4.1.33.3), Samad Tombs S1073, S10103, S10608, S10666 S10681, S2107, S2135, S2136 and S2199 (chapters 4.1.34.1, 4.1.34.3 and 4.1.34.4) and Al-Rawdah Tombs Mu1 and Mu2 (chapter 4.1.36). At Bat Tomb 156, the Samad period burial was placed on top of the collapsed part of the outer ring wall of the Umm an-Nar period tomb (chapter 4.1.27), and at Maysar Tomb M803 and Samad Tomb S101040 separate reuse burials were places into the outer ring wall of the tomb during the Samad period belonging to two adults above the age of 20 (chapters 4.1.33.1 and 3.1.34.1). Some more effort is visible at Maysar Tombs M2716N, M2717 and M2720 (chapter 4.1.33.3). Here, smaller chambers were added in the Samad period to the Iron Age tombs. Furthermore, the chamber of the Wadi Suq period Tombs S2154, S2156 and S2161 at the Samad-21 South cemetery (chapter 4.1.34.4) were altered for the inhumation of an at least 20 year old individual of the Samad period, an adult individual and a three to four years old child. These architectural constructions make these situations more comparable with the cases of Iron Age reuse presented above, especially when chambers were added to the exterior of the tombs. In most cases, we deal with a single (sub)adult inhumation of both sexes; only at Bidya-1 five individuals were attested and two at Ghalilah Tomb Gh2, Al-Khubayb, Jebel Salut 3 Grave 1, Samad Tomb S2135 as well as Adam Tombs 1016 and 1024. Grave goods are made up of pottery, glass and stone vessels, iron daggers, swords, spear- and arrowheads, copper alloy plates with rives, beads, pendants, spindle whorls and seashells. As in the periods discussed before, the reuse burials of the Samad/PIR do not provide indications of being for an elite as they are made with little construction effort and concerning grave goods completely in line with what is common for this time. These reuse burials occur both at cemeteries with tombs from the same period and at those without (Fig. 76).

Sasanian reuse of tombs as a burial place occurs either in pits or tunnels or in the upper layers of the fill of the tombs and thus again in a rather opportunistic fashion. At Jebel al-Emalah Tomb I, a pit was dug into its centre in the Sasanian period where a male individual aged 34 to 39 was buried together with a sword and other grave goods (chapter 4.1.15). At Tomb III, a burial of a 25 to 29 year old male individual was placed into the entryway of the tomb in the late Sasanian period.[1276] The same situation is present at Jebel Hafit Tomb 1303. An adult individual around 20 years of age was put into the ruined tomb by breaking through the ceiling (chapter 4.1.22). It was in a flexed position and outfitted with an iron spearhead. The uppermost layers of the U-shaped, subterranean Wadi Suq period Tomb BHS12 at Jebel Buhais revealed a fully articulated skeleton of an adult male together with that of a camel (chapter 4.1.14). In the upper part of the fill of PIR Tomb 5 at Mleiha, Sasanian skeletal remains of a female individual were found (chapter 4.1.13). Just west of the entrance of the above-ground Wadi Suq period Tomb Sh1000 at Shimal, a secondary burial was placed in the tomb, when this was already in a ruinous state (chapter 4.1.3). Grave goods include, amongst other things, a spherical stamp seal made of dark green stone dating to the third to fifth century AD and Partho-Sasanian pottery.[1277] Another later addition made by tunnelling into the original fill of the tomb is attested at Mleiha Tomb 5 (chapter 4.1.13). Real investment into the construction is only evident at Tomb As8 at Asimah (chapter 4.1.8). On top of the third millennium tumulus As8B, a cairn grave labelled As8A was placed in the Sasanian period. Here human bones were associated with one glazed body sherd of a Parthian-Sasanian bowl and other grave goods.

1275 Frifelt 1971: 380.

1276 Potts 1997a: 130.

1277 Vogt – Franke-Vogt 1987: 46–47.

All Sasanian reuse burials were at sites without original burials from the same period. It must be pointed out, however, that Sasanian original burials are generally unknown from the region (chapter 3.6).

In conclusion, for all periods with reuse burials, there are no indications that they are associated with elites as it is often suggested for other regions of the world. As elites are generally not visible in the burial record of Eastern Arabia at any given period, the deposition of individuals in older tombs can perhaps rather be interpreted as an intentional action to counteract the emergence of social hierarchies by promoting a sense of equality and belonging by linking the death of an individual to a cultural memory of the past,[1278] making the world and the social structures they live in to appear timeless, universal and inevitable.[1279]

6.3 Side note: spolia in Eastern Arabia

The third type of reuse of tombs, i.e., the reuse of its building material, differs considerably from the other two types of reuse as the focal point of the reuse is not the tomb but the new place where the building materials are brought to. Materials or artefacts incorporated into a setting culturally or chronologically different from that of their creation are referred to as spolia.[1280] The term spolia derives from a Latin word meaning spoils or anything stripped from someone or something.[1281] First of all, the reuse of building material is an universal response to limitations of technology or resources: it is always easier to obtain second-hand material than to manufacture it.[1282] There is, however, also evidence for non-pragmatic reuse, which is much harder to explain.[1283] Elements of older buildings can be witnesses of their own history, of the antiquity and of the institution to which the new building, where the older elements are incorporated, belonged to and with it to its grandeur.[1284] Monuments embody cycles of past events when they are created with elements of older buildings.[1285] Acquiring spolia from external locations can demonstrate power by identifying with or overthrowing the other.[1286] In these circumstances, spoilations entail a forcible transfer of ownership.[1287] Therefore, Stocker differentiates between casual reuse (practical reuse in Eaton's terms), where the only concern of the builder was to obtain the material cheaply and conveniently, functional reuse, where pieces were reuse in their original purpose, and iconic reuse (meaningful reuse in Eaton's terms), where the material was prized in particular for their antiquity and consequently proudly displayed in the new context.[1288] Casual reuse is very hard to be identified in the archaeological record, as it often concerns rubble, but happens most often.[1289] Iconic reuse is less common, but most interesting.[1290] Placing antique spolia into new structures, they can promote an impression of longevity of individuals and institutions[1291] as well as being an expression of continuity between old and new[1292] and by this give historical legitimation to contemporary ideas and claims.[1293] It provides the opportunity to incorporate the past into new systems of religious meaning and social structures[1294] or to demonstrate that the past was overcome by the new political or religious order.[1295] However, this can be defeated by an audience that sees only the prior stages of significance of the reused building material.[1296]

In Eastern Arabia, building stones from tombs were regularly found reused in other constructions of various time periods. This applies especially to the white facing stones of Umm an-Nar period tombs, as they are clearly distinguishable due to their specific shape.[1297] Those facing stones were incorporated in tombs and other ancient buildings but also in modern constructions in local villages,[1298] wells, Islamic graves and the *mihrab* prayer niche of open-air mosques.[1299] It can be assumed that the material itself was prized for its inherent qualities regardless of the intention of its reuse.[1300] Umm an-Nar period facing stones were already reused in the Umm an-Nar period itself, for example at the Hili 8 tower.[1301] At the cemetery of Bat, Umm an-Nar period tombs were partly dismantled and their material was recycled for the construction of other tombs within the same period.[1302] According to Böhme,[1303] within the ensemble of the three Umm an-Nar period Tombs 154, 155 and 156 (chapter 4.1.27), white facing stones and other regular stones of the latter two were taken for the construction of Tomb

1278 Torres-Rouff – Pestle – Daverman 2012: 200.
1279 Pader 1982: 14–15; Arnold 2001: 215.
1280 Kinney 2011: 233.
1281 Kinney 2011: 233.
1282 Kinney 2011: 233.
1283 Kinney 2011: 234.
1284 Jacobsen 1996: 162.
1285 Jones 2007: 22.
1286 Jacobsen 1996: 162.
1287 Kinney 2011: 4.
1288 Stocker 1990; Eaton 2000: 11.
1289 Stocker 1990: 84.
1290 Stocker 1990: 93.
1291 Eaton 2000: 134.
1292 Burström 1996: 28.
1293 Burström 1996: 25.
1294 Burström 1996: 25.
1295 Esch 1969: 44–45.
1296 Kinney 2011: 8.
1297 Frifelt 1975a: 374; Giraud 2010: 79; Böhme 2012a.
1298 Frifelt 1975a: 386.
1299 De Cardi – Collier – Doe 1976: 165, pl. 21; Böhme 2012a: 91.
1300 Greenhalgh 2011: 76.
1301 Méry 2010: 37.
1302 Frifelt 1975a: 386; Böhme 2012a: 88.
1303 Böhme 2012a: 90.

154. He concludes that stone removal for construction of tombs was a normal behaviour in the third millennium BC and that the working process of their construction was more important than the structural integrity of the individual tomb.[1304] Tomb 155 at Bat featured three white façade stones in its stone-paved floor.[1305] It is not clear if those stones originate from the façade of Tomb 155 itself and were left over from its construction or come from Tomb 154, the only other tomb in the vicinity with such a façade of white stones. An example for the reuse of the facing stones of an Umm an-Nar period tomb in the construction of a later one is found at Adam South (chapter 4.1.32.2). Here, the Wadi Suq period Tomb 2006 incorporates covering stones, which are dressed in the same way and have the same dimensions as the stones of the Umm an-Nar period Tomb 2000.[1306] The Wadi Suq period Tomb 2007 at the same cemetery includes similarly dressed stones.[1307] Therefore, it is highly likely that those stones were taken from the Umm an-Nar period Tomb 2000, where in fact many stones are missing.[1308] The Wadi Suq period tomb of Qattarah in the United Arab Emirates also features several Umm an-Nar period "sugar lumps" incorporated in the inner facing of the walls (chapter 4.1.21).[1309] More Umm an-Nar period facing stones can be found reused in the Wadi Suq period tombs of Dhayah Tomb Dh1[1310] and Khudra.[1311] Stones of Umm an-Nar period tombs were also of interest in the Iron Age and the Samad period. In some Iron Age graves near Bat, Umm an-Nar stones were incorporated, although the closest Umm an-Nar period tomb is located at a distance of 1.5 km.[1312] In the Samad period, larger Umm an-Nar period tomb stones were reused as covering slabs and walling for subterranean cists as for example at Hijayramat or Samad.[1313] Vogt[1314] assumes that the heap of façade stones found at the foot of the external stone wall of the Umm an-Nar period tomb Amlah 5a is a result of stone robbery. Yet not only white facing stones were reused. For Tomb Sh402 the excavators assume that "not only the stones of this tomb but also the inventory was robbed from those people who erected SH401".[1315]

It is hard to say whether this reuse was practiced with a historic consciousness and respect to their former use,[1316] i.e., iconic reuse according to Stocker, or rather for practical reasons, i.e., casual reuse. The stone reused in Eastern Arabia bears no images or inscriptions as it is common for iconic reuse of building materials in other parts of the world. It is also of note that graves that are accessible by car and close to roads suffered much more from stone robbery than others.[1317] Stone was a too-valuable resource to be wasted, even in a stone-rich region such as Eastern Arabia. Nevertheless, the white Umm an-Nar period facing stones were integrated in such ways in the new construction that they remained clearly visible as alien to the other stones used. Therefore, one can assume that it was intentional to demonstrate the foreignness of these materials in the new construction.[1318] Thus, it is possible that these stones were appreciated as relicts of the past and not only for their inherent material properties.[1319]

6.4 Discussion: reuse of tombs in Eastern Arabia in a diachronic perspective

Remembering always shows deliberate efforts.[1320] Such an effort is present in an intentional reuse of tombs as a form of a commemorative ritual. As such, it can reveal much information about beliefs and social structures of the communities practicing reuse.[1321] In order to gain these insights as archaeologists, a detailed contextual analysis is of crucial importance. Therefore, the reuse of tombs in Eastern Arabia must be set against the historical background and cultural context in which it happened and focus on the identity of the participants who took part in these events.

6.4.1 Umm an-Nar period

As demonstrated in chapters 4 and 5, reuse of tombs is extremely rare in the Umm an-Nar period and documented only at Jebel al-Emalah Tomb IV (chapter 4.1.15), Jebel Hafit Tombs 1034 and 1312 (chapter 4.1.22) and Bat Tombs 601 and 603 (chapter 4.1.27). In none of these cases is a reuse burial evident. Only single objects, i.e., pottery sherds, beads and metal items were found and often continuous use cannot be excluded. Generally, the Umm an-Nar burial custom generally follows a strictly standardised pattern in terms of architecture, which might have prevented reusing older tombs. In such contexts, reuse thus departs from the cultural norm might

1304 Böhme 2012a: 90; Furholt 2012: 125.
1305 Döpper 2021b: 10, Abb. 12–13.
1306 Gernez 2016: 67.
1307 Gernez 2016: 67.
1308 Gernez 2016: 59.
1309 Cleuziou 1981: 284; Vogt 1985: 193–194.
1310 Kästner 1991.
1311 Weisgerber 1991: 324.
1312 Böhme 2012a: 91.
1313 De Cardi – Collier – Doe 1976: 156, pl. 16; Böhme 2009; Böhme 2012a: 91.
1314 Vogt 1985: 77.
1315 Kästner – Sahm – Velde 1988: 12.
1316 Böhme 2012a: 91–92.
1317 Frifelt 1975a: 383.
1318 Meier 2007: 5.
1319 Greenhalgh 2011: 79.
1320 Assmann 2011: 51.
1321 Williams 1998b: 90.

not have been deemed appropriate. Adding burials to the communal tombs is already an act of cultural memory.[1322] Likely, because of this strong connection to the direct ancestors that was manifested in the regular burial customs, there was no need to actually incorporate older tombs into it to make this link.

The focus of the social cohesion of the group is also evident in other parts of the material culture. The Umm an-Nar period is generally one of high cultural homogeneity all over the region, which is amongst other things visible in the shapes and decoration of pottery and soft-stone vessels, the construction of monumental structures called towers, but also in the funerary customs (chapter 3.2). All members of the community, regardless of age, gender and status, were buried together in monumental collective tombs that required the involvement of larger parts of the community in their construction and maintenance. The wealth accumulated through the trade with copper along the Arab-Persian Gulf and the Gulf of Oman did not seem to have developed a hierarchic society. No elites or restricted access to resources by specific members of the community are visible, neither in burial practice nor in everyday life. There are no palaces or elite residences, no temples or formalised cultic structures or any other markers of central authority. The lack of hierarchies is often explained by social cohesion being the major factor in structuring the society.[1323] This does not imply that there were no differences in wealth or power within the Umm an-Nar communities and there were clearly different groups such as farmers and craftsmen, but that power was viewed with suspicion and coercive means to execute such power was opposed.[1324] Agriculture, copper production as well as the creation of monumental tombs and towers needed substantial work investment, led to a destabilisation of the concept of equal access to resources among community members and favoured the emergence of elites. To counteract these tendencies, kinship was strongly affirmed.[1325] In such a worldview the direct kin members would have been cherished more than distant ancestors as this is where the communities are bound together against tensions of social hierarchies.

In this economically flourishing time, kinship and equality were promoted to thwart tendencies for a more hierarchical social organisation that came along with the increasing wealth obtained through the copper trade as well as growing agriculture and sedentism. Living in prosperity and in a social setting that puts all efforts into emphasising the importance of social cohesion, it seems that – despite all the changes that came along with the increasing contact with neighbouring regions and a new lifestyle – there was simply no need to link with distant ancestors in this time of stability to an extent of stagnancy, explaining why reuse of tombs is nearly not attested at all in this period. Cultural memory was deliberately grounded by the community members in continuity and not related to a splendid past associated with older monuments. People were content with their own present and immediate past, so that the distant past seems to have been simply of no concern to them.

6.4.2 Wadi Suq period

Bearing in mind the suggested dichotomy between a more conservative and persistent north, where settled agricultural life concentrated in a "Wadi Suq enclave", and the south, where the break between Umm an-Nar and Wadi Suq period is sharper and agriculture seems largely to have been abandoned (chapter 3.3), it is at first glance not surprising to see that in the north, reuse of tombs is still a rare phenomenon as it was in the Umm an-Nar period. It occurs only at Shimal Tomb Sh222 (chapter 4.1.3), Ajman Tomb A (chapter 4.1.10), Hili Tombs 1059, A North and B (chapter 4.1.20), Jebel Hafit Cairn 2 and Tomb 1033 (chapter 4.1.22) as well as Mazyad (chapter 4.1.23 and Fig. 73). Additionally, there is also some restricted evidence for continuous use from the Umm an-Nar to the Wadi Suq period in the northern region, for example at Asimah (chapter 4.1.8) and Ajman (chapter 4.1.10). This could be explained by how, comparable with the Umm an-Nar period, kinship affiliations were stronger and more important than those with distant ancestors and that they were affirmed through collective burials. The interpretation, however, ignores two important facts. First, nearly half of all Wadi Suq period tombs in the north are single inhumations occurring alongside collective ones. The coexistence of different types of burials demonstrates that the strict burial rules that applied for the Umm an-Nar period, which incorporated any group member irrespective of his or her status into a group of equals after death, was no longer a social requirement, indicating significant social changes between both periods. [1326] Second, the monumental towers that can be seen as symbols of the former social order[1327] were often abandoned or resettled in a different way, again demonstrating that some parts of the material culture also remained in place, but the underlying social organisation did not. Furthermore, in the south, which seems to have faced more significant and more rapid changes than the north, reuse is also rare. Evidence comes only from three sites. These are Qumayrah QA1 (chap-

1322 Magee 2014: 122.
1323 Magee 2014: 120.
1324 Cleuziou 2003: 140–141; Cleuziou – Tosi 2007: 239.
1325 Cleuziou 2002: 227; Cleuziou – Tosi 2007: 132; Magee 2014: 120, 122, Munoz 2015: 262.
1326 Cleuziou – Tosi 2007: 274.
1327 Cleuziou – Tosi 2007: 275.

ter 4.1.24), Bat Tombs 112, 154, 155 and 156 (chapter 4.1.27) and Jebel Salut 1 Grave 1 (chapter 4.1.31). This can be taken as an indicator that differences between the north and the south during the Wadi Suq period are less than previously assumed.[1328]

If the changes coming with the beginning of the Wadi Suq period were as advocated by Cleuziou,[1329] a conscious choice of the people against tendencies for a hierarchical system that increased towards the end of the Umm an-Nar period, it seems logical that there was no desire to associate oneself with the increasingly unstable social order one has just left behind, no wish to promote a cultural memory highlighting an overcome past. The newly introduced varied burial practices including single inhumations in simple underground pits went along with turning away from excessively promoting kinship and group affiliation to counteract social tensions. There might simply have no longer been a demand to respond to tendencies of increasing social hierarchies. At the same time, the community must have been strong enough not to long for a more distant, glorious past.[1330] There was no need to for an escapist nostalgia of people whose past was bigger than their present[1331] and thus also no necessity to reuse tombs, indicating that the Wadi Suq period was not as disintegrated as some assume. This does not fit with the general image of the Wadi Suq period as one of decline, but there is more and more evidence that, on the contrary, the Wadi Suq was a shift to a more substantial way of life better fitting the marginal landscape of Eastern Arabia. Thus, as in the Umm an-Nar period, people seem to have been satisfied with their present, being consequently less attracted to a distant past to shape the cultural memory of the present.

6.4.3 Late Bronze Age

Very little is known of the Late Bronze Age communities in Eastern Arabia and the identification of their material culture remains challenging (chapter 3.3). Reuse of tombs is mainly attested by the presence of copper alloy arrowheads, although this has to be taken with some doubts as it has recently been suggested that copper alloy arrowheads might already have appeared during the Wadi Suq period.[1332] Tombs with Late Bronze Age reuse are Tomb As100 at Asimah (chapter 4.1.8), Tomb IV at Jebel al-Emalah (chapter 4.1.15), Tomb 1126 in the Wadi Suq (chapter 4.1.17), Carin A and Tomb 1051 at Jebel Hafit (chapter 4.1.22), Tombs 154 and 156 at Bat (chapter 4.1.27) and Tomb S2202 in Samad (chapter 4.1.34.5). More frequent than reuse, is, however, continuous use from the Wadi Suq to the Late Bronze Age and often also into the Iron Age. This is mostly attested in the large collective tombs of the north but also occurs in the Samad cemeteries in the south. It points towards an interest in associating oneself with a more distant past. However, as already only very few original burials of this period are known, not to mention the social organisation of that period as a whole, it is, as yet, unproductive to speculate on the reasons for the reuse of tombs during the Late Bronze Age in Eastern Arabia.

6.4.4 Iron Age

The Iron Age is the first heyday of the reuse of tombs in Eastern Arabia. Evidence is known from 51 tombs at 22 different sites (Fig. 75). Further, it is also the peak of continuous use from the Wadi Suq period onwards. Most of the tombs reused in the Iron Age were constructed during the Early Bronze Age. Such tombs can be found in Asimah (chapter 4.1.8), Jebel Buhais (chapter 4.1.14), Jebel al-Emalah (chapter 4.1.15), Qarn bint Saud (chapter 4.1.19), Hili (chapter 4.1.20), Jebel Hafit (chapter 4.1.22), Qumayrah (chapter 4.1.24), Al-Khubayb (chapter 4.1.25.2), Bat (chapter 4.1.27), Amlah (chapter 4.1.29), Jebel Salut (chapter 4.1.31) and Tawi Silaim (chapter 4.1.37). Wadi Suq period tombs, both collective such as at Dhayah (chapter 4.1.2), Shimal (chapter 4.1.3), Qarn al-Harf (chapter 4.1.4), Al-Qusais (chapter 4.1.11) and Jebel Buhais (chapter 4.1.14), as well as individual tombs, like in Jebel Buhais (chapter 4.1.14) and Samad (chapters 4.1.34.4 and 4.1.34.5) were employed less often but still commonly. This is not surprising, considering that Wadi Suq period collective tombs were the focus of continuous use from the Wadi Suq period to the Iron Age. This shows that for the people in the Iron Age it seems to have made little difference what type of tomb they chose for reuse. All available structures were suitable.

The "obsession with the past" [1333] of the people in Iron Age Eastern Arabia expressed in the frequent reuse and continuous use of tombs could be a means to deal with the fundamental changes in society that occurred, especially visible in the emergence of elites (chapter 3.4). Both *falaj* irrigation and the movement of goods by newly domesticated camel enlarged the potential for controlling and restricting access,[1334] so that developments also influenced the distribution and deployment of power within

1328 Döpper 2021a.
1329 Cleuziou 1996: 162.
1330 Al-Jahwari (2008: 346) assumes that in the Wadi Suq period single inhumation burials were placed on the land of the Umm an-Nar ancestors. However, Wadi Suq burials often occur in locations without Umm an-Nar presence (Fig. 72 and Fig. 73), which argues against such connection.
1331 Alcock 2001: 323.
1332 De Vreeze – Düring – Olijdam 2020: 141; Yule – Vogt 2020.
1333 Alcock 2001: 323.
1334 Magee 2014: 237.

society as a whole.[1335] For the first time in the archaeological record of Eastern Arabia, elite buildings and formal religious structures appear, marking the emergence of a hierarchical society. This put social cohesion under pressure much stronger than during the Umm an-Nar period, which was counteracted not only by feasts where goods, especially food and drinks were shared,[1336] but also during burial rites. Reuse might have offered a foundation in cultural memory as a way for the community to respond to a fast-moving period of novel and unpredictable social change.[1337] Through reuse and continuous use of burials for nearly a millennium, the deceased are associated with a distant past, evoking cultural memory of a unified community that helped to shape a new identity for the living and to legitimise the power of the new elites. This fits well with the pottery vessels found placed on top of third millennium BC cairns, which can be interpreted as offerings to those residing in these tombs. Another form to boost this new collective identity is visible in the first formal cultic structures with standardised paraphernalia.[1338]

Hoaen and Loney[1339] propose that economic investment, which requires repeated maintenance and enhancement activities, as it attested with the newly developed *falaj* irrigation system in Eastern Arabia during the Iron Age, is likely to be driven through social devices including collective myth-making. To them, cultural memory can be a powerful tool in the motivation of groups of people to invest in their land.[1340] By the widespread use of irrigation, people physically reshaped their landscape in the Iron Age of Eastern Arabia, creating a contrast to the multitude of monuments surviving from the past. During this time, claims to agricultural land became more and more important. Renfrew[1341] was one of the first to suggest that monuments were constructed as communities established their claims to agricultural land. Later writers extended this argument that territorial claims were in fact legitimised by the physical presence of the ancestors,[1342] which can be acted out by the reuse of ancient tombs. Others[1343] emphasise that rapid population growth, as one can also assume for the Iron Age in Eastern Arabia given the significant increase in settlements, can promote an emphasis on ritual renewal through the conservation of tangible material connections to the past such as tombs. Interestingly, there is a similar reuse of Bronze Age tombs during the Iron Age of Yemen.[1344]

Efforts for tomb construction during the Iron Age was less than that of the collective tombs in the previous periods. This is interesting compared the large labour investments that went into the construction and maintenance of irrigation systems, columned halls, cultic structures and forts of the living. However, reuse and continuous use of tombs were more common practices than the construction of new ones. The introduction of *falaj* irrigation and the domestication of the camel lead to an economic boost that also resulted in the emergence of elites and social hierarchies. This puts social organisation under pressure, so people tried hard through communal rituals including feasting and other formalised ritual practices to provide stability and security in these fast-changing times. Especially through focussing on the past by frequently reusing and continuously using tombs, people created a cultural memory that allowed them to promote their new identity and keep them grounded in social reality. It raised the awareness of the paramount importance of the group and ensured that the common good predominated over individual agendas and desires.[1345] It further helped the increasingly settled people to connect with, and propagate their right to, the lands. In the Iron Age, people seem to have experienced less satisfaction with the present, where the association with the group and immediate past was no longer enough to hush the increasing social tensions coming alongside increasing social hierarchies. This favoured an attraction for a more distant and more glorious past, making it more powerful in the cultural memory, legitimisation of social orders and the formation of group identity in the Iron Age Eastern Arabia.

6.4.5 Late pre-Islamic (PIR) and Samad periods

After the end of the Iron Age, most tombs that were employed for almost a millennium fell out of use. In the following PIR and Samad periods, though we can see different developments in the northern (PIR) and southern (Samad) part of Eastern Arabia, especially in the types of tombs – simple pit graves and monumental stone or mud-brick above-ground rectangular tombs in the north and the very homogeneous funerary tradition of simple, stone-lined underground cist graves with single interments in the south – both periods are times when reuse of tombs was widely practiced. PIR reuses are attested in 16 cases at eleven sites. Most tombs reused during the PIR originates from the Wadi Suq period, all of them being collective tombs. These are in Ghalilah (chapter 4.1.1), Dhayah (chapter 4.1.2), Shimal (chapter 4.1.3), Qarn al-Harf (chapter 4.1.4), Sharm (chapter 4.1.6), Bidya (chapter 4.1.7) and Wa'ab (chapter 4.1.16). Only

1335 Magee 2014: 235; Charbonnier 2017: 66–67.
1336 Benoist 2010: 139; Magee 2014: 237.
1337 Crown – Wills 2003: 529.
1338 Magee 2014: 237, 240.
1339 Hoaen – Loney 2013: 124.
1340 Hoaen – Loney 2013: 125.
1341 Renfrew 1976: 206–208.
1342 Chapman 1981: 72–74; Bradley 1984: 15–20.
1343 Crown – Wills 2003: 529.
1344 Crassard *et al.* 2010; McCorriston *et al.* 2011.
1345 Assmann 2011: 121.

at Asimah (chapter 4.1.8) and Jebel al-Emalah (chapter 4.1.15) Hafit period tombs were reused during PIR and at Bitnah (chapter 4.1.12) and Jebel Buhais (chapter 4.1.14) Iron Age tombs. Samad reuses were identified in 51 cases at 15 different sites. Here, besides Wadi Suq period tombs, reuse is also often present at Hafit period tombs as well as Iron Age ones. The Hafit period tombs reuse during the Samad period are at Al-Khutma (chapter 4.1.25.1), Al-Khubayb (chapter 4.1.25.2), Jebel Salut (chapter 4.1.31), Adam (chapter 4.1.32.1) and Maysar (chapter 4.1.33.2), the Iron Age tombs at Maysar (chapters 4.1.33.1 and 4.1.33.3), Samad (chapters 4.1.34.1 and 4.1.34.6) and Al-Rawdah (chapter 4.1.36). All Wadi Suq period tombs reused during the Samad period are individual tombs, the common type of tombs of this period in the south. They are attested at Adam (chapters 4.1.32.1 and 4.1.32.2) and Samad (chapters 4.1.34.1, 4.1.34.2, 4.1.34.3 and 4.1.34.4). In addition, Umm an-Nar period tombs were reused at Qumayrah (chapter 4.1.24) and Bat (chapter 4.1.27). Thus, there seems to be a slightly different selection of tombs that were reused between the PIR and Samad. In this regard it is interesting to note that reuse of Samad period tombs also seems to have occurred during the same period. In some cases, in the cemeteries of Samad al-Shan, the skeletal material indicates that it was only some months up to a few years after the burial that the skeleton was moved.[1346] This fits with Samad people not only reusing tombs for burials but also other Bronze Age structures. At the Umm an-Nar period tower Maysar-25, a Samad period pottery jar was discovered that Yule[1347] interprets as the remains of an otherwise completely destroyed tomb. Samad and PIR being a time of significant changes – whether migration played a role or not – could have fostered recalling the past by reusing ancient tombs.

After a recession in the Iron Age III, the PIR and Samad periods are again a time of settlement intensification and a flourishing trade from the Mediterranean to the Indian Ocean (chapter 3.5). However, this did not occur uniformly across Eastern Arabia, and at several sites, especially inland, more ephemeral structures appear, which some scholars do not uncontestably link to the arrival of new (nomadic) populations from Western Arabia.[1348] Beyond dispute is that it was a time of visible social hierarchies, where social rank and wealth was marked in the burial by different amounts and types of grave goods.[1349] Elites are also evident in the architecture, such as the fortified palace at Mleiha and forts from other sites as well as temples. Thus, it is – unlike the whole Bronze Age in Eastern Arabia – a period where social differences are openly displayed and kinship solidarity became less important, albeit not completely forgotten.[1350] In such communities, critical resources were no longer available to everyone, something that might have led to the emergence of formal burial sites with individual tombs.[1351] Further, analogously to the Iron Age, the *falaj* agriculture again required significant labour investment, which can be associated with generating a cultural memory that motivated people to invest in their lands.[1352] Being settled agriculturalists, rights to land are of great importance and can be established by reusing old monuments.[1353] The main difference in the Iron Age in Eastern Arabia is that continuous use of tombs is of no importance during the PIR/Samad period. This can be explained by the general practice of individual burials in these periods (chapter 3.5).

The predominantly agricultural lifestyle, though not practiced in all regions, required significant investment into the irrigation system and, together with the interregional trade, provided superfluity of wealth. The developing social hierarchies and resulting social tensions needed measurements that both promoted social cohesion and group identity as well as legitimised the role of the elites. This was achieved through creating cultural memory by reusing old tombs at a large scale. As in the Iron Age, people seem to have, with the social circumstances of their present, despite economic wealth, generated a desire to associate oneself with a distant, better past.

6.4.6 Sasanian

Little is known about the Sasanian period in Oman and even less about their burial practices (chapter 3.6). Therefore, it is assumed that the Sasanian period followed a significant decline at the end of the PIR/Samad period in association with a drop in economic activities, especially interregional trade and population size.[1354] Agricultural use of the land ceased and most people followed a mobile lifestyle.[1355] Sites with Sasanian reuse of tombs are Shimal (chapter 4.1.3), Sharm (chapter 4.1.6), Mleiha (chapter 4.1.13), Jebel al-Emalah (chapter 4.1.15), Bat (chapter 4.1.27) and Samad-30 (chapter 4.1.34.7). The type of tombs that were reused is quite widespread ranging from Hafit period cairns to Samad period subterranean stone-lined cists.

Lacking information about regular burial customs, it is hard to judge the significance of these reuses. They might be attempts to make sense of the past during a

1346 Yule 1994: 522.
1347 Yule 2001: 388–389, Taf. 256a.
1348 Cleuziou – Tosi 2007: 298; Mouton 2008: 278–282.
1349 Cleuziou – Tosi 2007: 299; Yule 2018.
1350 Cleuziou – Tosi 2007: 299.
1351 Chapman 1981: 73–74; Bradley 1984: 15–16.
1352 Hoaen – Loney 2013: 125.
1353 Chapman 1981: 72–74; Bradley 1984: 15–20.
1354 Kennet 2007: 106.
1355 Al-Jahwari *et al.* 2018: 738.

period of widespread social change that required transformation of worldviews and social identities.[1356] During and after the Roman period in Britain, monument reuse might have been places within the context of identity (re)construction,[1357] a process that might also have happened during the Sasanian period in Eastern Arabia. Reusing old tombs through votive depositions or burials can be seen as performative acts binding people and places in narratives of collective memories and though this allow local elites to create a genealogical descent from real or fictive ancestors, to legitimise claims to status and land and generally support the creation and articulation of cultural memory as an important mechanism in effecting authority.[1358] During the Sasanian period, monumental architecture ceased to be created and thus the phenomenon of additive reuse might be an escapist nostalgia of people whose past was bigger than their present.[1359] It might also play a role that the new demographic pattern with lower overall population size, dispersed communities and – although this remains to be tested – lower life spans truncated the grandparent-child-grandchild pattern as Kilmurray[1360] argues for the European Neolithic. Thus, other mnemotic devices were needed to transmit information across generations, possibly including the reuse of old tombs. Gosden and Lock[1361] point to a similar phenomenon in southern Oxfordshire during the Late Bronze Age to the Romano-British period that could also provide an explanation for the reuse of tombs in the Sasanian period in Eastern Arabia. Their idea is that when histories in different time periods contrast, i.e., a long continuity in one period and short genealogies in the other, the latter is complemented by a strong interest the mythological past. Spencer[1362] suggest that a strong interest in the distant past could also be an attempt to minimise and overcome an unpleasant phase of the immediate past by creating and alternative one and by appealing to the more distant history of a region. In the Sasanian period people were practising cult traditions at the prehistoric tombs dotted around the landscape to appeal to their more distant history. Likely, by doing this, they cast back some of the monuments into a glorious, mythical past.[1363] However, as our understanding of the Sasanian period, especially of their burial customs, this explanations of the attested occasions of reuse during this period must remain in the realm of speculation.

1356 Jarrett 2013: 200–201.
1357 Jarrett 2013: 200–201.
1358 Jarrett 2013: 200–201.
1359 Alcock 2001: 323.
1360 Kilmurray 2009: 42.
1361 Gosden – Lock 1998: 8–11.
1362 Spencer 1995: 289.
1363 Spencer 1995: 289.

7 Summary: the how, the who and the why

In this study, 969 excavated and published tombs from Eastern Arabia dating from the Hafit to the Sasanian period were investigated for reuse. Reuse differs from continuous use as it is characterised by an interruption in use. This means that there is a considerable gap in time between the initial use of the tomb and reuse activities. It can involve very different types of activities, which can be divided into additive and destructive forms. Additive reuse, which is more prominent in Eastern Arabia, includes objects and/or burials added to the original content of the tomb, while in destructive reuse, parts of the inventory of the tomb are removed and the structural integrity of the tomb is damaged. Both can occur at the same tomb simultaneously or consecutively. From an archaeological perspective, identifying such later activities is complicated, because one and the same action can result in very different archaeological records and very differently motivated actions can lead to the same visible changes.

In order to approach some of the motives behind the reuse of ancient tombs, three processes are of special importance: interpretation, confrontation and legitimation.[1364] All are interlinked with intentional references to the past that explicitly communicate meaning and thus with cultural memory. Its function is to make sense of the present, to give orientation in new situations and to help shape a cultural identity. Of course, archaeologists cannot get inside the minds of people in the past and thus will never know what people consciously thought,[1365] but analysing patterns in the archaeological record against culturally-specific contexts allows for some conclusions.

Out of the 969 tombs analysed, 145 show signs of reuse, demonstrating that it was common practice in the region and a quite unique phenomenon compared to other regions of Western Asia, especially when considering that the number of overlooked cases is approximately quite high, as reuse is often not mentioned in publications. Within reused tombs, a preference for tombs from the Bronze Age is visible as the proportion of reused tombs to overall excavated tombs lie here between 24 and 34 %, compared to the Iron Age and Samad period where it is less than ten percent. Visibility, however, was not the primary reason for choosing a tomb for reuse as 58.5 % of all reused tombs are above ground and 41.5 % below, the latter clearly minimising their visibility. The same is true for the attractiveness of individual or collective tombs. There is only a slight, but not significant preference for reusing individual tombs. Case studies from the cemeteries of Bat, Adam North and Samad-21 South did not reveal any pattern within size or location of reused tombs. Neither the most prominent or highest locations or the most visible or largest tombs were more frequently target for reuse than others. Spatially, reuse occurs in the whole of Eastern Arabia without any concentrations of areas that might have played a higher social, cultic or economic role in the respective time period. In terms of temporal distribution, we can clearly see that reuse occurred more often in the Iron Age and Samad period/PIR than in all others. If a tomb is reused as a burial, it was mainly for a single inhumation. The grave goods that outfitted reuse burials do not differ from what is common for regular burials of that period and as far as the anthropological identifications that were conducted, this is also true for the orientation and position of the body. Nothing of the reuse burials indicates that they were meant for special people. Most later single objects, mainly pottery, soft-stone vessels and metal objects, found in tombs might have been grave goods of reuse burials that were not recognised by the excavators or not preserved. Only some of them are clearly ritual deposits without associated burials such as Iron Age pottery vessels placed on top of Early Bronze Age tombs, and spatially delimited hoards. Very few objects can be considered to be accidentally lost.

Destructive reuse is rare in the material record of Eastern Arabia, although grave robbery features as the most prominent explanation for later activities in the literature. With a closer look, there is almost no evidence that intentional and illegal removal of valuable objects from the tombs for economic benefits played a significant role in pre-modern Eastern Arabia. There are simply no valuable objects to be expected from most periods

1364 Bradley 2002: 147.
1365 Williams 2006: 20.

and in most cases of alleged grave robbery, non-valuable objects such as pottery sherds and even human remains were taken as well. Other explanations for later destructive activities that are found for other regions of the world such as fear of revenants, change of status and the destruction of grave goods appear even less likely from the archaeological record of Eastern Arabia. Secondary burials at another place did occur, especially during the Umm an-Nar period, but just from this period, tombs are rarely found empty. It seems that most objects were taken to prepare the tomb for an additive reuse. Additive reuse was mainly practiced during the Iron Age and Samad period/PIR. During the Umm an-Nar period, an economically flourishing time, tendencies for the development of social hierarchies coming along with increasing wealth obtained through agriculture and trade, were fiercely counteracted by strongly promoting equality and social cohesion not the least with collective burials. In this context, there seems to have been simply no need to propagate a cultural memory that cherishes a distant past to legitimise the social order of the present. In the following Wadi Suq period people returned to a less conspicuous but likely more sustainable way of life without elaborate social hierarchies. Now, there was no need for a strong promotion of social cohesion, but obviously also no need to long for a past that was bigger than the present, indicating that the Wadi Suq period was more affluent than currently assumed. Too little is known about the Late Bronze Age, but with the Iron Age the heyday of reuse in Eastern Arabia began. The Iron Age witnessed an economic boost going along with the introduction of *falaj* irrigated agriculture and overland trade with the newly domesticated camel that also resulted in the emergence of elites. As in the Umm an-Nar period, this put the social order under pressure, which was attempted to be eased – though not completely hushed as in the Umm an-Nar period – by various communal rituals including feasting and other formalised ritual practices, especially reuse and continuous use of tombs. This shaped the cultural memory that allowed them to promote their new identity and to propagate their belonging and rights to the land. Reuse continued as a prominent phenomenon during the PIR/Samad period, a time that was also affected through visible social hierarchies and economic wealth. Whether newcomers from other regions were a substantial part of the society or not, the social hierarchies and resulting tensions made counter measurements necessary that both promoted social cohesion and group identity as well as legitimised the role of the elites. This was achieved through creating cultural memory by reusing old tombs. For the Sasanian period, again, too little is known to judge the role of reuse for their societies.

In summary, the material record of Eastern Arabia demonstrates that the reuse of tombs was a common phenomenon, especially coming into place when elites emerged, tallying along social tensions. It seems to have been an affective measurement to generate a cultural memory that provided a narrative of social cohesion while simultaneously legitimising elites, presenting the present situation as unavoidable and placing them in direct line with a (glorious) past. Those actions seemed not necessary in times where social hierarchies were low or at least equality was strongly advocated, but clearly shows that "history mattered to many in prehistory".[1366]

1366 Gosden – Lock 1998.

References

Abar, A. in preparation
Beyond the Ecstasy of Copper. Living and Doing in the Umm an-Nar Period Village of Al-Maysar, Oman, Bochum, Deutsches Bergbau-Museum.

Abboud, S. J. 1997
More Discoveries in Sharjah, *Tribulus* 7/1, 27–28.

Adler, H. 1970
Zur Ausplünderung langobardischer Gräberfelder in Österreich, *Mitteilungen der Anthropologischen Gesellschaft in Wien* 100, 138–147.

Al-Jahwari, N. S. 2008
Settlement Patterns, Development and Cultural Change in Northern Oman Peninsula: A Multi-Tiered Approach to the Analysis of Long-Term Settlement Trends [PhD thesis, Durham University].

Al-Jahwari, N. S. 2013
The Early Bronze Age Funerary Archaeological Landscape of Western Ja'alan: Results of Three Seasons of Investigation, *Arabian Archaeology and Epigraphy* 24, 151–173.

Al-Jahwari, N. S. – Douglas, K. – Al-Belushi, M. – Williams, K. D. 2018
Umm an-Nar Settlement at Dahwa (DH1), Oman: Preliminary Results of the Archaeological Investigations 2014—2016, in: S. Döpper (ed.), *Beyond Tombs and Towers. Domestic Architecture of the Umm an-Nar Period in Eastern Arabia. Arabia Orientalis* 4, Wiesbaden, Harrassowitz, 29–49.

Al-Jahwari, N. S. – Douglas, K. – Hesein, M. A. 2020
Al-Ghoryeen: An Early Bronze Age Settlement in Central Oman Peninsula, *Arabian Archaeology Epigraphy* 31, 281–300.

Al-Jahwari, N. S. – Kennet, D. 2010
Umm an-Nar Settlement in the Wādī Andam (Sultanate of Oman), *Proceedings of the Seminar for Arabian Studies* 40, 161–172.

Al-Jahwari, N. S. – Kennet, D. – Priestman, S. M. N. – Sauer, E. 2018
Fulayj: A Late Sasanian Fort on the Arabian Coast, *Antiquity. A Quarterly Review of Archaeology* 92/363, 724–741.

Al-Tikriti, W. Y. 1981
Reconsideration of the Late Fourth and Third Millenium B.C. in the Arabian Gulf with Special Reference to the United Arab Emirates [unpublished PhD thesis, Cambridge University].

Al-Tikriti, W. Y. 1989a
The Excavations at Bidya, Fujairah: the 3rd and 2nd Millennia BC Culture, *Archaeology of the United Arab Emirates* 5, 101–114.

Al-Tikriti, W. Y. 1989b
Umm an-Nar Culture in the Northern Emirates: Third Millennium BC Tombs at Ajman, *Archaeology of the United Arab Emirates* 5, 89-100.

Al-Tikriti, W. Y. 2002
The South-East Arabian Origin of the Falaj System, *Proceedings of the Seminar for Arabian Studies* 32, 117–138.

Al-Tikriti, W. Y. 2010
Heading North: An Ancient Caravan Route and the Impact of the *falaj* System on the Iron Age Culture, in: A. Avanzini (eds), *Eastern Arabia in the First Millennium BC. International Conference, Pisa, 12th–13th May 2008*, *Arabia Antica* 6, Rome, Bretschneider, 227–247.

Alcock, S. E. 2001
The Reconfiguration of Memory in the Eastern Roman Empire, in: S. E. Alcock – T. N. D'Altroy – K. D. Morrison – C. M. Sinopoli (eds), *Empires: Approaches from Archaeology and History*, Cambridge, Cambridge University Press, 323–350.

Alcock, S. E. 2002
Archaeologies of the Greek Past. Landscape, Monuments, and Memories, Cambridge, Cambridge University Press.

Andrzejowski, J. 1998
Nadkole 2: A Cemetery of the Przeworsk Culture in Eastern Poland, *Monumenta Archaeologica Barbarica* 5, Krakow, Eydawnictwo i drubkarnia "secesja".

Appadurai, A. 1986
The Social Life of Things. Commodities in Cultural Perspective, Cambridge, Cambridge University Press.

Arnold, B. 2001
The Limits of Agency in the Analysis of Elite Iron Age Celtic Burials, *Journal of Social Archaeology* 1/2, 210–224.

Aspöck, E. 2003
Graböffnungen im Frühmittelalter und das Beispiel der langobardenzeitlichen Gräber von Brunn am Gebirge, Flur Wolfholz, Niederösterreich, *Archaeologia Austriaca* 87, 225–265.

Aspöck, E. 2011
Past ‚Disturbances' of Graves as a Source: Taphonomy and Interpretation of Reopened Early Medieval Inhumation Graves at Brunn am Gebirge (Austria) and Winnal III (England), *Oxford Journal of Archaeology* 30/3, 229–324.

Aspöck, E. 2015a
Cross-Cultural Interactions and Archaeological Context. A Reopened Early Bronze Age Grave in Weiden am See, Austria, in: L. Gardeła – K. Kajkowshi (eds), *Limbs, Bones, and Reopened Graves in Past Societies. International Interdisciplinary Meeting 'Motifs through the Ages'*, Bytów, Muzeum Zachodniokaszubskie w Bytowie, 21–45.

Aspöck, E. 2015b
Funerary and Post-Depositional Body Treatments at the Middle Anglo-Saxon Cemetery Winnall II: Norm, Variety and Forms of Deviance?, in: Z. L. Devlin – E.-J. Graham (eds), *Death Embodied. Archaeological Approaches to the Treatment of the Corpse*, Oxford, Oxbow Books, 86–108.

Assmann, A. 1999
Erinnerungsräume. Formen und Wandlungen des kulturellen Gedächtnisses, München, C. H. Beck.

Assmann, A. 2006
Memory, Individual and Collective, in: R. E. Goodin – C. Tilly (eds), *The Oxford Handbook of Contextual Political Analysis*, 211–224.

Assmann, J. 2011
Cultural Memory and Early Civilization. Writing, Remembrance, and Political Imagination, Cambridge, Cambridge University Press.

Avanzini, A. – Phillips, C. 2010
An Outline of Recent Discoveries at Salut in the Sultanate of Oman, in: A. Avanzini (ed.), *Eastern Arabia in the First Millennium BC*, Rome, L'Erma di Bretschneider, 93–108.

Azzarà, V. M. 2009
Domestic Architecture at the Early Bronze Age Sites HD-6 and RJ-2 (Ja'alān, Sultanate of Oman), *Proceedings of the Seminar for Arabian Studies* 39, 1–16.

Azzarà, V. M. 2018
Exploring Cultural, Social and Economic Complexification: Settlement Life through the Umm an-Nar Period at Ras al-Jinz RJ-2, in: S. Döpper (ed.), *Beyond Tombs and Towers. Domestic Architecture of the Umm an-Nar Period in Eastern Arabia. Arabia Orientalis* 4, Wiesbaden, Harrassowitz, 97–120.

Baitinger, H. 1992
Zur Beraubung hallstattzeitlicher Gräber in Süddeutschland. Dittigheim Grab 607, *Fundberichte aus Baden-Württemberg* 17/1, 327–345.

Barber, P. 2010
Vampires, Burial, and Death: Folklore and Reality, New Haven, Yale University Press.

Barker, D. 2002
Wadi Suq and Iron Age Period Ceramics from Sharm, Fujairah (U.A.E.), *Arabian Archaeology and Epigraphy* 12/1, 1–94.

Barker, D. 2004
Miniature Shell and Bone 'Hilts' or 'Pulleys' from Sharm, *Arabian Archaeology and Epigraphy* 14, 115–119.

Barrett, J. C. 1994
Fragments from Antiquity. An Archaeology of Scial Life in Britain, 2900–1200 BC, *Social Archaeology*, Oxford/Cambridge, Blackwell.

Bartelheim, M. – Heyd, V. 2001
Cult after Burial: Patterns of Post-Funeral Treatment in the Bronze and Iron Ages of Central Europe, in: P. F. Biehl – F. Bertemes – H. Meller (eds), *The Archaeology of Cult and Religion* 13, Budapest, Archaeolingua, 261–276.

Baumeister, M. 2004
Metallrecycling in der Frühgeschichte. Untersuchungen zur technischen, wirtschaftlichen und gesellschaftlichen Rolle sekundärer Materialverwertung im 1. Jahrtausend n. Chr., *Würzburger Arbeiten zur Prähistorischen Archäologie* 3, Radhen (Westf.), Marie Leidorf.

Begemann, F. – Hauptmann, A. – Schmitt-Strecker, S. – Weisgerber, G. 2010
Lead Isotope and Chemical Signature of Copper from Oman and its Occurrence in Mesopotamia and Sites on the Arabian Gulf Coast, *Arabian Archaeology and Epigraphy* 21, 135–169.

Behm-Blancke, G. 1973
Gesellschaft und Kunst der Germanen. Die Thüringer und ihre Welt, Dresden, VEB Verlag der Kunst.

Beiner, G. 2008
In Anticipation of a Post-Memory Boom Syndrome, *Cultural Analysis* 7, 107–110.

Benoist, A. 2002
Quelques réflexions à propos de l'utilisation des céramiques dans la péninsule d'Oman au cours de l'âge du fer (1350–300 av. J.C.), *Paléorient* 27/1, 45–67.

Benoist, A. 2010
Authority and Religion in South-East Arabia during the Iron Age, in: A. Avanzini (ed.), *Eastern Arabia in the First Millennium BC*, Rome, L'Erma di Bretschneider, 109–141.

Benoist, A. – Ali Hassan, S. 2010
An Inventory of the Objects in a Collective Burial at Dadna (Emirate of Fujairah), in: L. Weeks (eds), *Death and Burial in Arabian and Beyond. Multidisciplinary Perspectives*, *Society for Arabian Studies Monographs* 10, Oxford, Archaeopress, 85–99.

Benoist, A. – Mouton, M. – Schiettecatte, J. 2003
The Artefacts from the Fort at Mleiha: Distribution, Origins, Trade and Dating, *Proceedings of the Seminar for Arabian Studies* 33, 59–76.

Benton, J. N. 1994
Excavations at Jebel Al Emalah, *Tribulus* 4/1, 12–13.

Benton, J. N. 1996
Excavations at Al Sufouh: A Third Millenium Site in the Emirate of Dubai, *Abiel* 1, Turnhout, Brepols.

Benton, J. N. – Potts, D. T. 1994
Jabal al-Emalah 1993/4. Report Compiled for the Department of Culture and Information, Government of Sharjah, United Arab Emirates [unpublished, circulated report].

Berliner, D. 2005
The Abuses of Memory: Reflections on the Memory Boom in Anthropology, *Anthropological Quarterly* 78/1, 197–211.

Bernbeck, R. 2003
Die Vorstellung der Welt als Wille: Zur Identifikation von intentionellem Handeln in archäologischen Kontexten, in: M. Heinz – M. K. H. Eggert – U. Veit (Hrsg.), *Zwischen Erklären und Verstehen? Beiträge zu den erkenntnistheoretischen Grundlagen archäologischer Interpretation*, Münster/New York/München/Berlin, Waxmann, 201–237.

Bertemes, F. 1989
Das frühbronzezeitliche Gräberfeld von Gemeinlebarn. Kulturhistorische und paläometallurgische Studien, *Saarbrücker Beiträge zur Altertumskunde*, Bonn, Rudolf Habelt.

Bertemes, F. 1990
De l'origine de perturbationssecondaires dans les tombes de l'Age du Bronze Ancien, *Bulletin de la Société Préhistorique Luxembourgeoise* 11, 101–128.

Bibby, T. G. 1965
Arabiens Arkæologi, *Kuml. Årbog for Jysk Arkaeologisk Selskab* 1964, 86–111.

Bill, J. – Daly, A. 2012
The Plundering of the Ship Graves from Oseberg and Gokstad: An Example of Power Politics?, *Antiquity. A Quarterly Review of Archaeology* 86/333, 808–824.

Blackman, M. J. – Méry, S. – Wright, R. P. 1989
Production and Exchange of Ceramics on the Oman Peninsula from the Perspective of Hili, *Journal of Field Archaeology* 16/1, 61–77.

Blake, E. 2003
The Familiar Honeycomb: Byzantine Era Reuse of Sicily's Prehistoric Rock-Cut Tombs, in: R. M. Van Dyke – S. E. Alcock (eds), *Archaeologies of Memory*, Oxford, Blackwell, 203–220.

Blau, S. 1999
The People at Sharm: An Analysis of the Archaeological Human Skeletal Remains, *Arabian Archaeology and Epigraphy* 10, 190–204.

Blau, S. 2001
Fragmentary Endings: A Discussion of 3rd Millennium BC Burial Practices in the Oman Peninsula, *Antiquity. A Quarterly Review of Archaeology* 75, 557–570.

Blin, O. 2007
Al-Ayn: A Small Settlement and Palm Tree Garden in Eastern Oman, in: S. Cleuziou – M. Tosi (eds), *In the Shadow of the Ancestors. The Prehistoric Foundations of the Early Arabian Civilization in Oman*, Muscat, Ministry of Heritage and Culture Sultanate of Oman, 248–250.

Blin, O. 2012
Prospections et fouilles au pied du djebel Salim Khamis (Ja'alan, Sultanat d'Oman): occupations et habitats du IIIe millénaire av. J. V., in: J. Giraud – G. Gernez (éd.), *Aux marge de l'archéologie. Hommage à Serge Cleuziou, Travoux de la Maison René-Ginouvès* 16, Paris, de Boccard, 483–490.

Bofinger, J. – Przernyslaw, S. 2008
Reihenweise ausgeraubt: Beobachtungen zum Grabraub im frühen Mittelalter, in: F. Brunecker (ed.), *Raubgräber – Schaztgräber*, Biberach, Museum Biberach, 48–59.

Böhme, M. 2009
Restaurierung [unpublished, circulated report].

Böhme, M. 2011
The Bat-Type. A Hafit Period Tomb Construction in Oman, *Arabian Archaeology and Epigraphy* 22/23–31.

Böhme, M. 2012a
The Recurring Monument. Records on Hafit- and Umm an-Nar Period Tomb Architecture in the Oman Peninsula, in: M. Furholt – M. Hinz – D. Mischka (eds), *"As Time Goes By?" Monumentality, Landscape and the Temporal Perspective. Proceedings of the International Workshop "Socio-Environmental Dynamics over the Last 12,000 Years: The Creation of Landscapes II (14th–18th March 2011)" in Kiel* 2, *Universitätsforschungen zur prähistorischen Archäologie* 206, Bonn, Rudolf Habelt, 85–93.

Böhme, M. 2012b
The restoration of Tomb 154 in Bat, in: D. T. Potts – P. Hellyer (eds), *Fifty Years of Emirates Archaeology. Proceedings of the Second International Conference on the Archaeology of the United Arab Emirates*, Abu Dhabi, 112–119.

Böhme, M. – Ali Al-Sabri, B. 2011
Umm an-Nar Burial 401 at Bat, Oman: Architecture and Finds, *Arabian Archaeology and Epigraphy* 22, 113–154.

Böhme, M. – Heckes, J. – Weisgerber, G. 2008
BAT Research & Restoration Project/Sultanate of Oman. Ein Tätigkeitsbericht für 2006 bis 2008 [unpublished, circulated report].

Bollmer, G. D. 2011
Virtuality in Systems of Memory: Toward an Ontology of Collective Memory, Ritual and the Technological, *Memory Studies* 4/4, 450–464.

Borić, D. 2010
Happy Forgetting? Remembering and Dismembering Dead Bodies at Vlasac, in: D. Borić (ed.), *Archaeology and Memory*, Oxford, Oxbow Books.

Boucharlat, R. 2003
Water Draining Galleries in the Iron Age Oman Peninsula and the «Iranian Qanât», in: D. Potts – H. Naboodah – P. Hellyer (eds), *Archaeology of the United Arab Emirates. Proceedings of the 1st Conference on the Archaeology of the United Arab Emirates, Abu Dhabi, April 2001*, London, Trident Press, 162–172.

Boucharlat, R. – Lombard, P. 1985
The Oasis of Al-Ain in the Iron Age: Excavations at Rumeilah 1981–1983, Survey at Hili 14, *Archaeology in the United Arab Emirates* 4, 44–73.

Boucharlat, R. – Lombard, P. 2001
Le bâtiment G de Rumeilah: remarques sur les salles à poteaux de l'Age du Fer en péninsule d'Oman, *Iranica Antiqua* 36, 213–238.

Boucharlat, R. – Mouton, M. 1998
Les pratiques funeraires dans le peninsule d'Oman. Repartition et mode de construction des tombes de Mleiha (E.A.U.), in: C. S. Phillips – D. T. Potts – S. Searight (eds), *Arabia and her Neighbours. Essays on Prehistorical and Historical Developments Essays Presented in Honour of Beatrice de Cardi*, Turhnhout, Brepols, 15–32.

Bourdieu, P. 1977
Outline of a Theory of Practice, *Cambridge Studies in Anthropology* 16, Cambridge, Cambridge University Press.

Bradley, R. 1984
The Social Foundations of Prehistoric Britain, Harlow, Longman.

Bradley, R. 1987
Time regained – The Creation of Continuity, *Journal of the British Archaeological Association* 140, 1–17.

Bradley, R. 1990
The Passage of Arms: An Archaeological Analysis of Prehistoric Hoards and Votive Deposits, Cambridge, Cambridge University Press.

Bradley, R. 1998
The Significance of Monuments: On the Shaping of Human Experience in Neolithic and Bronze Age Europe, London/New York, Routledge.

Bradley, R. 2002
The Past in Prehistoric Societies, London, Routledge.

Brather, S. 2008
Bestattungsrituale zur Merowingerzeit: Frühmittelalterliche Reihengräber und der Umgang mit dem Tod, in: C. Kümmel – B. Schweizer – U. Veit (eds), *Körperinszenierung, Objektsammlung, Monumentalisierung: Totenritual und Grabkult in frühen Gesellschaften: archäologische Quellen in kulturwissenschaftlicher Perspektive*, *Tübinger Archäologische Taschenbücher* 6, Münster, Waxmann, 151–177.

Britannica 2019
Encyclopædia Britannica. https://www.britannica.com/science/memory-psychology (accessed 28th October 2019).

Brockmeier, J. 2002
Remembering and Forgetting: Narrative as Cultural Memory, *Culture and Psychology* 8/1, 15–43.

Brunswig, R. H. 1989
Cultural History, Environment and Economy as Seen from an Umm an-Nar Settlement. Evidence from Test Excavations at Bat, Oman, 1977/78, *The Journal of Oman Studies* 10, 9–50.

Burström, M. 1996
Other Generations' Interpretation and Use of the Past: The Case of the Picture Stone on Gotland, *Current Swedish Archaeology* 4, 21–40.

Button, S. 2007
Mortuary Studies, Memory, and the Mycenean Polity, in: N. Yoffee (ed.), *Negotiating the Past in the Past: Identity, Memory, and Landscape in Archaeological Research*, Tuscon, University of Arizona Press, 76–103.

Caciola, N. 1996
Wraiths, Revenants and Ritual in Medieval Culture, *Past & Present* 152, 3–45.

Cancik, H. – Mohr, H. 1990
Erinnerung/Gedächtnis, in: H. Cancik – B. Gladigow – M. Laubscher (eds), *Handbuch religionswissenschaftlicher Grundbegriffe. Band II: Apokalyptik – Geschichte*, Stuttgart/Berlin/Köln, W. Kohlhammer, 299–323.

Carsten, J. 1995
The Politics of Forgetting: Migration, Kinship and Memory on the Periphery of the Southeast Asian State, *The Journal of the Royal Anthropological Institute* 1/2, 317–335.

Carsten, J. – Hugh-Jones, S. 1995
About the House: Levi-Strauss and Beyond, Cambridge, Cambridge University Press.

Carter, R. A. 1997
Defining the Late Bronze Age in Southeast Arabia: ceramic evolution and settlement during the second millennium BC [unpublished PhD thesis, University College London Institute of Archaeology].

Carter, R. A. 2003
Restructuring Bronze Age Trade: Bahrain, Southeast Arabia and the Copper Question, in: H. Crawford (eds), *Proceedings of a Seminar Held on Monday 24th July 2000 to Mark the Exhibition 'Traces of Paradise' at the Brunei Gallery, SOAS, London*, *BAR International Series* 1189, Oxford, Archaeopress, 31–42.

Casey, E. 2004
Public Memory in Place and Time, in: K. R. Phillips (ed.), *Framing Public Memory*, Tuscaloosa, AL, University of Alabama Press.

Chadwick, A. M. 2013
'Memories Can't Wait' – Creating Histories, Materialising Memories and Making Myths in Iron Age and Romano-British Landscapes, in: A. M. Chadwick – C. D. Gibson (eds), *Memory, Myth and Long-term Landscape Inhabitation*, *Celtic Studies Publications* 17, Oxford, Oxbow Books, 291–314.

Chadwick, A. M. – Gibson, C. D. 2013
"Do You Remember the First Time?" A Preamble through Memory, Myth and Place, in: A. M. Chadwick – C. D. Gibson (eds), *Mermoy, Myth and Long-Term Landscape Inhabitation*, *Celtic Studies Publications* 17, Oxford, Oxbow Books, 1–31.

Chaffey, G. – Barclay, A. 2013
The MTV Generation: Remixing the Past in Prehistory – or Forgetting to Change Old Habits, in: A. M. Chadwick – C. D. Gibson (eds), *Memory, Myth and Long-Term Landscape Inhabitation*, *Celtic Studies Publications* 17, Oxford, Oxbow Books, 208–225.

Chapman, R. 1981
The Emergence of Formal Disposal Areas and the 'Problem' of Megalithic Tombs in Prehistoric Europe, in: R. Chapman – I. Kinnes – K. Randsborg (eds), *The Archaeology of Death*, Cambridge, Cambridge University Press, 71–81.

Charbonnier, J. 2015
Groundwater Management in Southeast Arabia from the Bronze Age to the Iron Age: A Critical Reassessment., *Water History* 7/1, 39–71.

Charbonnier, J. 2017
The Genesis of Oases in Southeast Arabia: Rethinking Current Theories and Models, in: E. Lavie – A. Marshall (eds), *Oases and Globalization*, Cham, Springer International Publishing, 53–72.

Chesson, M. S. 2001a
Embodied Memories of Place and People: Death and Society in an Early Urban Community, *Archaeological Papers of the American Anthropological Association* 10/Supplement 1. Special Issue: Social Memory, Identity, and Death: Anthropological Perspectives on Mortuary Rituals, 100–113.

Chesson, M. S. 2001b
Social Memory, Identity, and Death: An Introduction, in: M. S. Chesson (ed.), *Social Memory, Identity, and Death: Anthropological Perspectives on Mortuary Rituals Archaeological Papers of the American Anthropological Association* 10/Supplement 1. Special Issue: Social Memory, Identity, and Death: Anthropological Perspectives on Mortuary Rituals, 1–10.

Chopovsky, B. – Dušek, M. – Polla, B. 1960
Pohrebiská zo staršej doby bronzovej na slovensku I. Gräberfelder aus der älteren Bronzezeit in der Slowakei I, *Archaeologica Slovaca Fontes* 3, Bratislava, Verlag der slowakischen Akademie der Wissenschaften.

Cleuziou, S. 1977
Mission archéologique francaise. 1ère campagne décembre 1976–1977, *Archéologie aux Emirates Arabes Unis/Archaeology in the United Arab Emirates* 1, 8–53.

Cleuziou, S. 1981
Oman Peninsula in the Early Second Millennium B. C., in: H. Härtel (ed.), *South Asian Archaeology 1979*, Berlin, Dietrich Reimer Verlag, 279–293.

Cleuziou, S. 1989
Excavations at Hili 8: A Preliminary Report on the 4th to 7th Campaigns, *Archaeology in the United Arab Emirates* 5, 61–87.

Cleuziou, S. 1996
The Emergence of Oases and Towns in Eastern and Southern Arabia, in: G. Afganes'ev – S. Cleuziou – J. 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 Mantime Trade in the Indian Ocean*, Forli, 159–165.

Cleuziou, S. 1998
The Foundation of Early Bronze Age Oases in the Oman Peninsula, in: M. Pearce – M. Tosi (eds), *Papers from the EAA Third Annual Meeting at Ravenna 1997. Volume I: Pre- and Protohistory:*, Oxford, Archaeopress, 59–70.

Cleuziou, S. 2002
The Early Bronze Age of the Oman Peninsula. From Chronology to the Dialectics of Tribe and State Formation, in: S. Cleuziou – M. Tosi – J. Zarins (eds), *Essays on the Late Prehistory of the Arabian Peninsula*, *Serie Orientale Roma* 93, Roma, Institute italiano per l'Africa e l'Oriente, 191–236.

Cleuziou, S. 2003
Early Bronze Age Trade in the Gulf and the Arabian Sea: The Society Behind the Boats, in: D. T. 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 Press, 133–150.

Cleuziou, S. 2004
Un système d'irrigation par gravité depuis les nappes souterraines dans la péninsule d'Oman au troisième millénaire avant notre ère, in: J.-P. Carbonnel – M. Dalby (éd.), *Colloque OH2, Origine et Histoire de l'Hydrologie, Dijon 2001*, Université de Bourgogne.

Cleuziou, S. 2006
La société de Magan à l'Âge du Bronze : Entre tribu et état, in: P. Charvat – B. Lafont – J. Mynarova – L. Pécha. (éd.), *L'État, le pouvoir, les prestations et leurs formes en Mésopotamie ancienne. Actes du Colloque assyriologique franco-tchèque Paris, 7-8 novembre 2002*, Univerzita Karlova v Praze. Filozoficka fakulta, 43-66.

Cleuziou, S. 2007
Evolution toward Complexity in a Coastal Desert Environment. The Early Bronze Age in the Ja'alan, Sultanate of Oman, in: T. A. Kohler – S. E. van der Leeuw (eds), *Model-Based Archaeology of Socionatural Systems*, Santa Fe, School of American Reserach Press, 213–231.

Cleuziou, S. 2009
Extracting Wealth from a Land of Starvation by Creating Social Complexity: A Dialogue between Archaeology and Climate?, *Comptes Rendus Geoscience* 341, 726–738.

Cleuziou, S. – Berthoud, T. 1980
Farming Communities of the Oman Peninsula and the Copper of Makkan, *The Journal of Oman Studies* 6/2, 239–246.

Cleuziou, S. – Costantini, L. 1980
Premiers éléments sur l'agriculture protohistorique de l'Arabie orientale, *Paléorient* 6/245–251.

Cleuziou, S. – Méry, S. – Vogt, B. 2011
Protohistoire de l'oasis d'al-Aïn, travaux de la mission archéologique française à Abou Dhabi (Emirates arabes unis). Les sépultures de l'âge du Bronze, *British Archaeological Reports (International Series)* 2227, Oxford, Archaeopress.

Cleuziou, S. – Tosi, M. 2000
Ra's al-Jinz and the Prehistoric Coastal Cultures of the Ja'alan, *The Journal of Oman Studies* 11, 19–73.

Cleuziou, S. – Tosi, M. 2007
In the Shadow of the Ancestors. The Prehistoric Foundations of the Early Arabian Civilization in Oman, Muscat, Ministry of Heritage & Culture, Sultanate of Oman.

Codreanu-Windauer, S. 1997
Pliening im Frühmittelalter. Bajuwarisches Gräberfeld, Siedlungsbefund und Kirche, *Materialhefte zur Bayrischen Vorgeschichte. Reihe A: Fundinventare und Ausgrabungsbefunde* 74, Kallmünz, Michael Lassleben.

Condoluci, C. – Degli Esposti, M. 2015
High Places in Oman. The IMTO Excavations of Bronze and Iron Remains on Jabal Salut, *Quaderni di Arabia Antica* 3, Roma, L'Erma di Bretschneider.

Confino, A. 1997
Collective Memory and Cultural History: Problems of Method, *The American Historical Review* 102/5, 1386–1403.

Connerton, P. 1989
How Societies Remember, Cambridge, Cambridge University Press.

Corboud, P. – Castella, A.-C. – Hapka, R. – im Obersteg, P. 1996
Les tombes protohistoriques de Bithnah, Fujairah, Emarats Arabes Unis, *Terra Archaeologica* 1, Mainz, Phillipp von Zabern.

Corboud, P. – Hapka, R. – Im Obersteg, P. 1988
Archaeological Survey of Fujairah, 1 (1987). Preliminary Report First Campaign of the Archaological Survey of Fujairah (United Arab Emirates), Bern, Swiss-Liechtenstein Foundation for Archaeological Research Abroad.

Córdoba, J. M. 2003
Villages of Shepherds in the Iron Age, in D. T. Potts – H. Al-Naboodah – P. Hellyer (eds), *Proceedings of the First International Conference on the Archaeology of the UAE*, London, Trident Press, 173–180.

Cosgrove, D. 1993
The Palladian Landscape. Geographical Change and its Cultural Representation in Sexteenth-Century Italy, University Park, Pennsylvania, The Pennsylvania State University Press.

Costa, P. M. 1983
Notes on Traditional Hydraulics and Agriculture in Oman, *World Archaeology* 14/3, 273–295.

Costa, P. M. 1991
The Animal Powered Irrigation Well of Oman (*zajara*), *Quaderni di Studi Arabi* 9, 245–252.

Costa, P. M. – Costa, G. G. – Yule, P. – Kunter, M. – Phillips, C. – Al Shanfari, A. 1999
Archaeological Research in the Area of Muscat, in: P. Yule (eds), *Studies in the Archaology of the Sultanate of Oman*, Rahden, Marie Leidorf, 1–90.

Costa, P. M. – Wilkinson, T. J. 1987
Excavations at ʻArja, *The Journal of Oman Studies* 9, 133–144.

Costantini, L. – Audisio, P. 2000
Plant and Insect Remains from the Bronze Age Site of Ra's al-Jinz (RJ-2), Sultanate of Oman, *Paléorient* 26/1, 143–156.

Crassard, R. – Guy, H. – Schiettecatte, J. – Hitgen, H. 2010
Reuse of Tombs or Cultural Continuity? The Case of Tower-Tombs in Shabwa Governorate (Yemen), in: L. Weeks (ed.), *Deach and Burial in Arabia and Beyond. Multidisciplinary Perspectives*, *Society for Arabian Studies Monographs* 10, Oxford, Archaeopress, 173–177.

Crown, P. L. – Wills, W. H. 2003
Modifying Pottery and Kivas at Chaco: Pentimento, Restoration, or Renewal?, *American Antiquity* 68/3, 511–532.

Crumley, C. L. 1999
Sacred Landscapes: Constructed and Conceptualized, in: W. Ashmore – B. A. Knapp (eds), *Archaeologies of Landscapes: Contemporary Perspectives*, Oxford, Blackwell, 269-276.

Czarnecka, K. 2003
Zum Totenritual der Bevolkerung der Przeworsk-Kultur, in: C. Lieber (Hrsg.), *Die Vandalen: Die Konige, die Eliten, die Krieger, die Handwerker*, Nordstemmen, Trigena, 273–294.

D'Errico, F. 1998
Palaeolithic Origins of Artificial Memory Systems: An Evolutionary Perspective, in: A. C. Renfrew – C. Scarre (eds), *Cognition and Material Culture: the Archaeology of Symbolic Storage*, Cambridge, McDonald Institute for Archaeological Research, 19–50.

Dannhorn, T. 1994
Beobachtungen zu den antiken Beraubungsmethoden im frühmittelalterlichen Reihengräberfeld von Viecht, "Unterfeld", Gde Eching, Lkr. Landshut, in: K. Schmotz (Hrsg.), *Vorträge des 12. Niederbayerischen Archäologentages*, Buch am Erlbach, Marie Leidorf, 295–306.

Dark, K. R. 1993
Roman-Period Activity at Prehistoric Ritual Monuments in Britain and in the Armorican Peninsula, in: E. Scott (ed.), *Theoretical Roman Archaeology: First Conference Proceedings*, *Worldwide Archaeology Series* 4, Avebury/Ashgate, Aldershot, 133–146.

de Cardi, B. 1972
A Sasanian Outpost in Northern Oman, *Antiquity. A Quarterly Review of Archaeology* 46, 305–310.

de Cardi, B. 1988
The Grave-Goods from Shimal Tomb 6 in Ras al-Khaimah, U.A.E., in: D. T. Potts (ed.), *Araby the Blest. Studies in Arabian Archaeology*, Copenhagen, Museum Tusculanum Press, 45-71.

de Cardi, B. 1996
A Late Pre-Islamic Burial at al-Khatt, U.A.E., *Arabian Archaeology and Epigraphy*/7, 82–87.

de Cardi, B. – Bell, R. D. – Starling, N. J. 1979
Excavations at Ṭāwī Silaim and Ṭāwī Saʾīd in the Sharqīya, 1978, *The Journal of Oman Studies* 5, 61-94.

de Cardi, B. – Collier, S. – Doe, D. B. 1976
Excavation and Survey in Oman, 1974–5, *The Journal of Oman Studies* 2, 101–187.

de Cardi, B. – Doe, B. – Roskams, S. P. 1977
Excavation and Survey in the Sharqiyah, Oman, 1976, *The Journal of Oman Studies* 3, 17-33.

de Cardi, B. – Doe, D. B. 1971
Archaeological Survey in the Northern Trucial States, *East and West* 21/3–4, 225–289.

de Cardi, B. – Kennet, D. – Stocks, R. L. 1994
Five Thousand Years of Settlement at Khatt, UAE, *Proceesings of the Seminar for Arabian Studies* 24, 35–95.

de Groot, D. J. 1988
Hunebed D9 at Annen (*Gemeente* Anlo, Province of Drenthe, the Netherlands), *Palaeohistoria. Acta et communicationes Instituti bio-archaeologici Universitatis Groninganae* 30, 73–108.

de Vreeze, M. 2016
Pottery Ancestories: Comparing Ceramic Evolution in the Eastern Mediterranean and South-East Arabia during the Middle Bronze Age (ca. 2000–1550 BC) with the Use of Phylogenetic Methods [unpublished PhD thesis, Durham University Department of Archaeology].

de Vreeze, M. – Düring, B. – Olijdam, E. 2020
New Light on the Late Wadi Suq Period from the Ṣuhār Hinterlands, *Proceedings of the Seminar for Arabian Studies* 50, 141–155.

de Waele, A. – Haerinck, E. 2006
Etched (Carnelian) Beads from Northeast and Southeast Arabia, *Arabian Archaeology and Epigraphy* 17/1, 31–40.

DeMarrais, E. – Castillo, L. J. – Earle, T. 1996
Ideology, Materialization, and Power Strategies, *Current Anthropology* 37/1, 15–31.

Desruelles, S. – Fouache, E. – Eddargach, W. – Cammas, C. – Wattez, J. – Beuzen-Waller, T. – Martin, C. – Tengberg, M. – Cable, C. – Thornton, C. P. – Murray, A. 2016
Evidence for Early Irrigation at Bat (Wadi Sharsah, Northwestern Oman) before the Advent of Farming Villages, *Quaternary Science Reviews* 150, 42–54.

Dietrich, O. 2014
Learning from 'Scrap' about Late Bronze Age Hoarding Practices. A Biographical Approach to Individual Acts of Dedication in Large Metal Hoards, *European Journal of Archaeology* 17/3, 468–486.

Donald, M. 1991
Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition, Cambridge, MA., Harvard University Press.

Donaldson, P. 1984
Prehistoric Tombs of Ras al-Khaimah, *Oriens Antiquus. Rivista del Centro per le antichità e la storia dell'arte del Vicino Oriente* 23, 191–312.

Donaldson, P. 1985
Prehistoric Tombs of Ras al-Khaimah, *Oriens Antiquus. Rivista del Centro per le antichità e la storia dell'arte del Vicino Oriente* 24, 85–142.

Döpper, S. 2014
On the Reuse of Early Bronze Age Tombs – the German Excavations at Bāt and Al-Ayn, Sultanate of Oman, in: P. Bieliński – M. Gawlikowski – R. Koliński – D. Ławecka – A. Sołtysiak – Z. Wygnańska (eds), *Proceedings of the 8th International Congress on the Archaeology of the Ancient Near East. 30 April – 4 May 2012, University of Warsaw*, Wiesbaden, Harrassowitz, 57–69.

Döpper, S. 2015
The Reuse of Tombs in the Necropolis of Bāt, Sultanate of Oman, *Proceedings of the Seminar for Arabian Studies* 48/45, 83–92.

Döpper, S. 2017
Rescue Excavation of a 3rd Millennium BC Tomb at Al-Khubayb, Sultanate of Oman, *Arabian Archaeology and Epigraphy* 28, 190–208.

Döpper, S. (ed.) 2018
Beyond Tombs and Towers. Domestic Architecture of the Umm an-Nar Period in Eastern Arabia, *Arabia Orientalis* 4, Wiesbaden, Harrassowitz.

Döpper, S. 2020
Der Wadi Suq-zeitliche Siedlungsplatz von Tawi Said im Zentraloman: Bericht über den Survey 2018, *Mitteilungen der Deutschen Orient-Gesellschaft* 152, 5–27.

Döpper, S. 2021a
The Middle and Late Bronze Age in Central Oman: New Insights from Tawi Said, Al-Mudhairib and the Wilayat al-Mudhaybi, *Arabian Archaeology and Epigraphy*.

Döpper, S. 2021b
Die Nekropolen von Bat und Al-Ayn und das Gebäude II in Bat, *Arabia Orientalis* 2, Oxford, Archaeopress.

Döpper, S. 2021c
Robbery, Veneration and Destruction – On the Reuse of Early Bronze Age Tombs in Syria, *Ancient Near Eastern Studies* 58, 173–203.

Döpper, S. – Schmidt, C. 2011
Die Grabtürme der Nekropolen von Bāt und Al-Ayn im Sultanat Oman. Bericht über die Vorkampagne 2010, *Mitteilungen der Deutschen Orient-Gesellschaft zu Berlin* 143, 293–321.

Döpper, S. – Schmidt, C. 2013
Bericht über die Ausgrabungen 2011 und 2012 in Bāt und Al-Ayn, Sultanat Oman, *Mitteilungen der Deutschen Orient-Gesellschaft zu Berlin* 145, 23–52.

Döpper, S. – Schmidt, C. 2019
A Hafit Period Copper Workshop at Al Khashbah, Sultanate of Oman, *The Journal of Oman Studies* 20, 1–24.

Döpper, S. – Schmidt, C. 2020
Nothing but Tombs and Towers? Results of the Al-Mudhaybi Regional Survey 2019, *Proceedings of the Seminar for Arabian Studies*.

Drenth, E. 2012
A Note on the Re-use of *hunebedden* in the Netherlands during the Late Neolithic, in: M. Furholt – M. Hinz – D. Mischka (eds), *"As Time Goes By?" Monumentality, Landscape and the Temporal Perspective. Proceedings of the International Workshop "Socio-Environmental Dynamics over the Last 12,000 Years: The Creation of Landscapes II (14th–18th March 2011)" in Kiel*, Bonn, Dr. Rudolf Habelt, 159–168.

Driehaus, J. 1978
Der Grabraub in Mitteleuropa während der älteren Eisenzeit, in: H. Jankuhn – H. Nehlsen – H. Roth (Hrsg.), *Zum Grabfrevel in vor- und frühgeschichtlicher Zeit: Untersuchungen zu Grabraub und "haugbrot" in Mittel- und Nordeuropa: Bericht über ein Kolloquium der Kommission für die Altertumskunde Mittel- und Nordeuropas vom 14. bis 16. Februar 1977*, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, Göttingen, Vandenhoeck & Ruprecht, 18–47.

Droberjar, E. – Peška, J. 1994
Waffengräber der römischen Kaiserzeit in Mähren und die Bewaffnung aus dem Königsgrab bei Mušov, in: C. von Carnap-Bornheim (Hrsg.), *Beiträge zu römischer und barbarischer Bewaffnung in den ersten vier nachchristlichen Jahrhunderten. Akten des 2. Internationalen Kolloquium in Marburg a. d. Lahn, 20. bis 24. Februar 1994*, *Veroffentlichung des Vorgeschichtlichen Seminars Marburg, Sonderband* 8, Lublin, Marburg, 271–301.

Duerr, J. 2013
Die verkehrte Jenseitswelt (*mundus inversus*): Eine Deutzung zerbrochener, verbogener oder vertauschter Grabbeigaben, in: N. Müller-Scheeßel (Hrsg.), *'Irreguläre' Bestatungen in der Urgeschichte: Norm, Ritual, Strafe...? Akten der Internationel Tagung in Frankfurt a. M. vom 3. Bis 5. Februar 2012*, *Kolloquien zur Vor- und Frühgeschichte* 19, Bonn, Rudolf Habelt, 49–64.

Düring, B. S. 2005
Building Continuity in the Central Anatolian Neolithic: Exploring the Meaning of Buildings at Aşıklı Höyük and Çatalhöyük, *Journal of Mediterranean Archaeology* 18/1, 3–29.

Düring, B. S. 2007
The Articulation of Houses at Neolithic Çatalhöyük, Turkey, in: R. Beck (eds), *The Durable House, House Society Models in Archaeology*, Carbondale IL, Center for Archaeological Investigations, 130–153.

Düring, B. S. – Botan, S. A. 2018
The Early Bronze Age Settlements of the Sohar Hinterlands: Scratching the Surface, in: S. Döpper (ed.), *Beyond Tombs and Towers. Domestic Architecture of the Umm an-Nar Period in Eastern Arabia. Arabia Orientalis* 4, Wiesbaden, Harrassowitz, 17–27.

Düring, B. S. – Olijdam, E. 2015
Revisiting the Ṣuḥār Hinterlands: The Wādī al-Jīzī Archaeological Project, *Proceedings of the Seminar for Arabian Studies* 45, 93–106.

Eaton, T. 2000
Plundering the Past. Roman Stonework in Medieval Britain, Stroud, Tempus.

Eckardt, H. 2004
Remembering and Forgetting in the Roman Provinces, in: B. Croxford – H. Eckardt – J. Meade – J. Weekes (eds), *TRAC 2003. Proceedings of the Eleventh Annual Theoretical Roman Archaeology Conference, Leicester 2003*, Oxford, Oxbow Books, 36–50.

Eckardt, H. – Williams, H. 2003
Objects without a Past? The Use of Roman Objects in Early Anglo-Saxon Graves, in: H. Williams (eds), *Archaeologies of Remembrance. Death and Memory in Past Societies*, New York, Kluwer Academic/Plenum, 141–170.

Edens, C. 1988
Brief Survey Around Bilad Bani Bu Hassan, in: S. Cleuziou – J. Reade – M. Tosi (eds), *The Joint Hadd Project Summary Report on the Third Season. October 1987 – February 1988*, 44–55.

Edens, C. 1992
Dynamics of Trade in the Ancient Mesopotamian "World System", *American Anthropologist* 94/1, 118–139.

Ekengren, F. 2009
Ritualization – Hybridization – Fragmentation: The Mutability of Roman Vessels in Germania Magna AD 1–400, Lund University Department of Archaeology and Ancient History, Lund.

ElMahi, A. T. – Al Jahwari, N. S. 2005
Graves at Mahleya in Wādī ʿAndām (Sultanate of Oman): A View of a Late Iron Age and Samad period Death Culture, *Proceedings of the Seminar for Arabian Studies* 35, 57–69.

Erll, A. 2005
Kollektives Gedächtnis und Erinnerungskulturen. Eine Einführung, Stuttgart, J. B. Metzler.

Esch, A. 1969
Spolien. Zur Wiederverwendung antiker Baustücke und Skulpturen im mittelalterlichen Italien, *Archiv für Kulturgeschichte* 51/1, 1–64.

Ethelberg, P. 2000
Skovgårde: Ein Bestattungsplatz mit reichen Frauengräbern des 3. Jhs. N. Chr. Auf Seeland, *Nordiske Fortidsminder Serie B* 19, København, Det Konigelige Nordiske Oldskriftselskab.

Fabian, J. 1999
Remembering the Other: Knowledge and Recognition in the Exploration of Central Africa, *Critical Inquiry* 26/1, 49–69.

Fentress, J. – Wickham, C. 1992
Social Memory, *New Perspectives on the Past*, Oxford, Blackwell.

Ferrari, G. 2002
The Ancient Temple on the Acropolis at Athens, *American Journal of Archaeology* 106/1, 11–35.

Fisher, K. D. 2006
Messages in Stone: Constructing Sociopolitical Inequality in Late Bronze Age Cyprus, in: E. C. Robertson – J. D. Seibert – D. C. Fernande – M. U. Zenter (eds), *Space and Spatial Analysis in Archaeology*, Calgary, University of Clagary Press/University of New Mexico Press, 123–132.

Forty, A. 1999
Introduction, in: A. Forty – S. Küchler (eds), *The Art of Forgetting*, Oxford, Berg, 1–18.

Fowler, C. 2003
Rates of (Ex)change. Decay and Growth, Memory and the Transformation of the Dead in Early Neolithic Southern Britain, in: H. Williams (ed.), *Archaeologies of Remembrance. Death and Memory in Past Societies*, New York, Kluwer Academic/Plenum, 45–63.

Frifelt, K. 1968
Arkaeologiske undersøgelser pa Oman halvøen (Archaeological Investigations in the Oman Peninsula), *Kuml. Årbog for Jysk Arkaeologisk Selskab* 18, 159–175.

Frifelt, K. 1971
Jamdat Nasr Graves in Oman, *Kuml. Årbog for Jysk Arkaeologisk Selskab* 1970, 355–383.

Frifelt, K. 1973
Danish Archaeological Expedition to Oman 1972/73. Full Report of Oman Campaign 1972/73 [unpublished, circulated report].

Frifelt, K. 1974
Full Report of Oman Campaign 1972/73. Danish Archaeological Expedition to Oman 1972/73. Report of Work [unpublished, circulated report].

Frifelt, K. 1975a
On Prehistoric Settlement and Chronology of the Oman Peninsula, *East and West* 25/1–2, 359–424.

Frifelt, K. 1975b
A Possible Link Between the Jemdet Nasr and the Umm an-Nar graves of Oman, *The Journal of Oman Studies* 1, 57-80.

Frifelt, K. 1976
Evidence of a Third Millennium BC Town in Oman, *The Journal of Oman Studies* 2, 57-67.

Frifelt, K. 1979
The Umm an-Nar and Jemdet Nasr of Oman and their Relations Abroad, *South Asian Archaeology* 1975, 43–57.

Frifelt, K. 1985
Further Evidence of the Third Millennium BC Town at Bat in Oman, *The Journal of Oman Studies* 7/1, 89–104.

Frifelt, K. 1989
Third Millennium Irrigation and Oasis Culture in Oman, in: J. M. Kenoyer (ed.), *Old Problems and New Perspectives in the Archaeology of South Asia*, Madison, 105–113.

Frifelt, K. 1995
The Island of Umm an-Nar. Vol 2: The Third Millennium Settlement, Aarhus, Aarhus University Press.

Frifelt, K. 2002
Bat, a Center in Third Millennium Oman, in: S. Cleuziou – M. Tosi – J. Zarins (eds), *Essays on the Late Prehistory of the Arabian Peninsula*, *Serie Orientale Roma* XCIII, Roma, 101–110.

Fritz, C. 2010
Collective Burials and Status Differentiation in Iron Age II Southeastern Arabia, in: L. Weeks (ed.), *Death and Burial in Arabia and Beyond. Multidisciplinary perspectives*, *Society for Arabian Studies Monographs* 10. *BAR International Series* 2107, Oxford, Archaeopress, 101–107.

Frohlich, B. – Amgalantugs, T. – Littleton, J. – Ganbat, G. – Hunt, D. – Nittler, E. – Karstens, S. – Frohlich, T. – Batchatar, E. 2010
An Overview of Theories and Hypotheses Pertaining to Mongolian Bronze Age Khirigsuurs in the Hovsgol aimag, Mongolia. The Institute of Archaeology, Mongolian Academy of Sciences, Ulaanbaatar, Mongolia Honeychurch, *Studia Archaeologicae Instituti Archaeologici Academiae Scientiarum Mongolocae* 29/6.

Furholt, M. 2012
Monument and Durable Landscapes in the Neolithic of Southern Scandinavia and Northern Central Europe, in: M. Furholt – M. Hinz – D. Mischka (eds), *"As Time Goes By?" Monumentality, Landscape and the Temporal Perspective. Proceedings of the International Workshop "Socio-Environmental Dynamics over the Last 12,000 Years: The Creation of Landscapes II (14th–18th March 2011)" in Kiel*, Bonn, Rudolf Habelt, 115–132.

García Sanjuán, L. 2010
Transformations, Invocations, Echoes, Resistance: The Assimilation of the Past in Southern Iberia Monumental Landscapes (V to I Millennia BC), in: K. T. Lillios (eds), *Comparative Archaeologies. The US Southwest and the Iberian Peninsula*, Oxford, Oxbow Books, 81–102.

Garfinkel, Y. 1994
Ritual Burial of Cultic Objects: The Earliest Evidence, *Cambridge Archaeological Journal* 4/2, 159–188.

Garwood, P. 2007
Before the Hills in Order Stood: Chronology, Time and History in the Interpretation of Early Bronze Age Round Barrows, in: J. Last (ed.), *Beyond the Grave: New Perspectives on Barrows*, Oxford, Oxbow Books, 30–57.

Gatto, E. – Basset, G. – Méry, S. – McSweeney, K. 2003
Étude paléodémographique et utilisation du feu à Hili N, une sépulture collective en fosse de la fin de l'âge du Bronze ancien aux Émirats arabes unis, *Bulletins et Mémoires de la Société d'Anthropologie de Paris* 15/1–2, 25–47.

Geary, P. 1994
Phantoms of Remembrance: Memory and Oblivion at the End of the First Millennium, Princeton, N.J., Princeton University Press.

Gedi, N. – Elam, Y. 1996
Collective Memory – What is it?, *History and Memory: Studies in Representation of the Past* 8/1, 30–50.

Gernez, G. 2016
La nécropole d'Adam Sud: rapport préliminaire, *Revue d'archéologie de l'Orient ancien. Hors séries* 2: *Actualités des recherches archéologieques en Arabie*, 53–72.

Gernez, G. – Giraud, J. 2015
Protohistoric Graveyards in Adam (Oman). Preliminary Report on the 2013 and 2014 Seasons of the French Archaeological Mission to Adam, *Proceedings of the Seminar for Arabian Studies* 45, 107–122.

Gernez, G. – Giraud, J. 2017
Taming the Great Desert. Adam in the Prehistory of Oman, *The Archaeological Heritage of Oman*, Muscat, Ministry of Heritage and Culture Sultanate of Oman.

Gernez, G. – Jean, M. – Benoist, A. 2017
The Discovery of a New Iron Age Ritual Complex in Central Oman: Recent Excavations near Ādam, *Proceedings of the Seminar for Arabian Studies* 47, 101–116.

Giardino, C. 2017
Magan – The Land of Copper. Prehistoric Metallurgy of Oman. The Archaeological Heritage of Oman 3, Muscat, Ministry of Heritage and Culture Sultanate of Oman.

Gibson, C. D. 2013
Out of Time but not out of Place. Tempo, Rhythm and Dynamics of Inhabitation in Southern England, in: A. M. Chadwick – C. D. Gibson (eds), *Memory, Myth and Long-term Landscape Inhabitation*, *Celtic Studies Publications* 17, Oxford, Oxbow Books, 99–123.

Giddens, A. 1984
The Constitution of Society: Outline of the Theory of Structuration Cambridge, Polity Press.

Gilchrist, R. 2013
The Materiality of Medieval Heirlooms: From Biographical to Sacred Objects, in: H. P. Hahn – H. Weis (eds), *Mobility, Meaning and Transformations of Things: Shifting Contexts of Material Culture through Time and Space*, Oxford, Oxbow Books, 170–182.

Giraud, J. 2009
The Evolution of Settlement Patterns in the Eastern Oman from the Neolithic to the Early Bronze Age (6000–2000 BC), *Compte Rendutes Geoscience* 341, 739–749.

Giraud, J. 2010
Early Bronze Age Graves and Graveyards in the Eastern Ja'alan (Sultanate of Oman): An Assessment of the Social Rules Working in the Evolution of a Funerary Landscape, in: L. Weeks (ed.), *Death and Burial in Arabia and Beyond. Multidisciplinary Perspectives*, *Society for Arabian Studies Monographs* 10, Oxford, Archaeopress, 71–84.

Giraud, J. 2012
Les espaces du passé. L'exemple du Ja'alan à la période Hafit, in: J. Giraud – G. Gernez (éd.), *Aux marges de l'archéologie. Hommage à Serge Cleuziou*, Paris, De Boccard, 133–151.

Giraud, J. – Cleuziou, S. 2009
Funerary Landscape as Part of the Social Landscape and its Perceptions: 3000 Early Bronze Age Burials in the Eastern Ja'lān (Sultanate of Oman), *Proceedings of the Seminar for Arabian Studies* 39, 163–180.

Goody, J. 1962
Death, Property and the Ancestors. A Study of the Mortuary Customs of the Lodagaa of West Africa, Stanford, California, Stanford University Press.

Goonatilake, S. 1991
The Evolution of Information: Lineages in Gene, Culture, and Artefact, London, Pinter Publishers.

Gosden, C. – Lock, G. 1998
Prehistoric Histories, *World Archaeology* 30/1, *The Past in the Past: The Reuse of Ancient Monuments*, 2–12.

Gosden, C. – Marshall, Y. 1999
The Cultural Biography of Objects, *World Archaeology* 31/2, 169–178.

Graham, M. 1998
Redifining Romaization: Material Culture and the Question of Social Continuity in Roman Britain, in: C. Forcey – J. Hawthorne – R. Witcher (eds), *TRAC 97, Proceedings of the Seventh Annual Theoretical Roman Archaeology Conferece*, Oxford, Oxbow Books, 1–10.

Graves, M. – Rechniewski, E. 2010
From Collective Memory to Transcultural Remembrance, *PORTAL Journal of Multidisciplinary International Studies* 7/1, 1–15.

Greenhalgh, M. 2011
Spolia. A Definition in Ruins, in: R. Brilliant – D. Kinney (eds), *Reuse Value. Spolia and Appropriation in Art and Architectrue from Constantine to Sherrie Levine*, Farnham, Ashgate, 75–95.

Gregory, C. A. 1980
Gifts to Men and Gifts to Gods: Gift Exchange and Capital Accumulation in Contemporary Papua, *Man* 15, 628–652.

Grünewald, C. 1988
Das alamannische Gräberfeld von Unterthürheim, Bayerisch-Schwaben, *Materialhefte zur Bayrischen Vorgeschichte. Reihe A: Fundinventare und Ausgrabungsbefunde* 59, Kallmünz, Michael Lassleben.

Guggenheim, M. 2009
Building Memory: Architecture, Networks and Users, *Memory Studies* 2/1, 39–53.

Haerinck, E. 1991
The Rectangular Umm an-Nar Period Grave at Moweihat (Emirate of Ajman; United Arab Emirates), *Gentse Bijdragen voor Kunstgeschiedenis en Oudheidkunde* 29, 1–30.

Halbwachs, M. 1952
Les cadres sociaux de la mémoire, *Bibliothèque de philosophie contemporaine*, Paris, Presses Universitaires de France.

Halbwachs, M. 1967
Das kollektive Gedächtnis, Stuttgart, Ferdinand Enke Verlag.

Halbwachs, M. 1992
On collective memory, *The Hertiage of Sociology*, Chicago, Chicago Universtiy Press.

Hallam, E. – Hockey, J. 2001
Death, Memory and Material Culture, *Materializing Culture*, Oxford/New York, Berg.

Hamilakis, Y. 1998
Eating the Dead: Mortuary Feasting and the Politics of Memories in the Aegean Bronze Age Societies, in: K. Branigan (ed.), *Cemetery and Society in the Aegean Bronze Age*, Sheffield, Sheffield Academic Press, 115–132.

Hamilakis, Y. 2010
Re-collecting the Fragments: Archaeology as Mnemonic Practice, in: K. T. Lillios – V. Tsamis (eds), *Material Mnemonics: Everyday Memory in Prehistoric Europe*, Oxford, Oxbow, 188–199.

Hänsel, B. – Kalicz, N. 1986
Das bronzezeitliche Gräberfeld von Mezöcsát, Kom. Borsod, Nordostungarn, *Bericht der Römisch-Germanischen Kommission* 67, 5–88.

Hansen, S. 2016
A Short History of Fragments in Hoards of the Bronze Age, in: H. Baitinger (Hrsg.), *Materielle Kulture und Identität im spannungsfeld zwischen Mediterraner Welt und Mittleeuropa. Akten der Internationalen Tagung am Römisch-Germanischen Zentralmuseum Mainz, 22.–24. Oktober 2014. Abschlusstagung des DFG-Projekts »Metallfunde als Zeugnis für die Interaktion zwischen Griechen und Indigenen auf Sizilien zwischen dem 8. und 5. Jahrhundert v. Chr.«*, *RGZM-Tagungen* 27, Mainz, Verlag des Römisch-Germanischen Zentralmuseums, 185–208.

Härke, H. 1990
"Warrior Graves"? The Background of the Anglo-Saxon Weapon Burial Rite, *Past & Present* 126/1, 22–43.

Härke, H. 2000
The Circulation of Weapons in Anglo-Saxon Society, in: F. Theuws – J. L. Nelson (eds), *Rituals of Power from Late Antiquity to the Early Middle Ages*, Leiden, Brill, 377–399.

Harman, M. – Molleson, T. I. – Price, J. L. 1981
Burials, Bodies and Beheadings in Romano-British and Anglo-Saxon Cemeteries, *Bulletin of the British Museum of Natural History* 35, 145–188.

Harmann, B. 2002
The Social Life of Pre-Sunrise Things: Indigenous Mesoamerican Archaeology, *Current Anthropology* 43, 351–382.

Harmanşah, Ö. 2012
Monuments and Memory: Architecture and Visual Culture in Ancient Anatolian History, in: G. McMahon – S. Steadman (eds), *The Oxford Handbook of Ancient Anatolia: (10,000-323 BCE)*, Oxford, Oxford University Press, 11–21.

Hastings, A. – Humphries, J. H. – Meadow, R. H. 1976
Oman in the Third Millennium BCE, *The Journal of Oman Studies* 1, 9–55.

Hellyer, P. 1995
Safavid and Sassanian Coins in Fujairah, *Tribulus* 5/1, 225.

Hewer, C. J. – Roberts, R. 2012
History, Culture and Cognition: Towards a Dynamic Model of Social Memory, *Culture & Psychology* 18/2, 167–183.

Hilal, A. 2005
Excavations at Qarn al-Harf 67, Ra's al-Khaimah, 2001, in: P. Hellyer – M. C. Ziolkowski (eds), *Emirate Heritage Volume One. Proceedings of the 1st Annual Symposium on Recent Palaeontological and Archaeological Discoveries in the Emirates. Al Ain, 2003*, Al Ain, Zayed Center for Heritage and History, 36–46.

Hill, J. D. 1995
Ritual and Rubbish in the Iron Age of Wessex. A Study on the Formation of a Specific Archaeological Record. BAR British Series 242, Oxford, Tempus Reparatum.

Hingley, R. 1996
Ancestors and Identity in the Later Prehistory of Atlantic Scotland: The Reuse and Reinvention of Neolithic Monuments and Material Culture, *World Archaeology* 28/2, Sacred Geography, 231–243.

Hoaen, A. W. – Loney, H. L. 2013
Landesque Capital and the Development of the British Uplands in Later Prehistory: Investigating the Accretion of Cairns, Cairnfields, Memories and Myths in Ancient Agricultural Landscapes, in: A. M. Chadwick – C. D. Gibson (eds), *Memory, Myth and Long-term Landscape Inhabitation*, *Celtic Studies Publications* 17, Oxford, Oxbow Books, 124-145.

Hobsbawm, E. 1983
Introduction: Inventing Traditions, in: E. Hobsbawm – T. Ranger (eds), *The Invention of Tradition*, *Past and Present Publications*, Cambridge, Cambridge University Press.

Hodder, I. 1980
Social Structure and Cemeteries: A Critical Appraisal, in: P. Rahtz – T. Dickinson – L. Watts (eds), *Anglo-Saxon Cemeteries 1979. The Fourth Anglo-Saxon Symposium at Oxford*, *BAR British Series* 82, Oxford, BAR, 161–169.

Hodder, I. 1982
Symbols in Action. Ethnoarchaeological Studies of Material Culture, *New Studies in Archaeology*, Cambridge, Cambridge University Press.

Hodder, I. 1986
Reading the Past, Cambridge, Cambridge University Press.
Hodder, I. 1988
Material Culture Texts and Social Change: A Theoretical Discussion and some Archaeological Examples, *Proceedings of the Prehistoric Society* 54, 67–75.
Hodder, I. 2000
Developing a Reflexive Method in Archaeology, in: I. Hodder (ed.), *Towards Reflexive Method in Archaeology: The Example at Çatalhoyük*, *McDonald Institute Monograph: BIAA Monograph* 28, Ankara, British Institute of Archaeology at Ankara, 3–15.
Hodder, I. – Cessford, C. 2004
Daily Practice and Social Memory at Çatalhöyük, *American Antiquity* 69/1, 17–40.
Holtorf, C. 2001
Archaeology and Cultural/National Memory, in: N. J. Smelser – P. B. Baltes (eds), *International Encyclopedia of Social & Behavioral Sciences*, 611–614.
Holtorf, C. J. 1997
Megaliths, Monumentality and Memory, *Archaeological Review from Cambridge* 14/2, 45–66.
Hughes, E. A. 2014
Structured Deposition and the Interpretation of Ritual in the Near Eastern Neolithic: A New Methodology [unpublished PhD thesis, University of Liverpool, Liverpool]
Hunter, J. R. 1977
Scandinavian Glass Vessels of the First Millennium AD: A Typological and Physical Examination [unpublished PhD thesis, Durham University Department of Archaeology].
Hutton, R. 2011
Romano-British Reuse of Prehistoric Ritual Sites, *Britannia* 42, 1–22.
Jacobsen, W. 1996
Spolien in der karolingischen Architektur, in: J. Poeschke (Hrsg.), *Antike Spolien in der Architektur des Mittelalters und der Renaissance*, München, Hirmer, 155–168.
Jarrett, K. 2013
Telling Tales? Myth, Memory, and Crickley Hill, in: A. M. Chadwick – C. D. Gibson (eds), *Memory, Myth and Long-term Landscape Inhabitation*, *Celtic Studies Publications* 17, Oxford, Oxbow Books, 189–207.
Jasim, S. A. 2006
The Archaeological Sites of Jabal al-Buhais, in: H.-P. Uerpmann – M. Uerpmann – S. A. Jasim (eds), *Funeral Monuments and Human Remains from Jebel al-Buhais*, *The Archaeology of Jebel al-Buhais, Sharjah, United Arab Emirates* 1, Sharjah, Department of Culture and Information, Government of Sharjah, United Arab Emirates, 13–63.
Jasim, S. A. 2012
The Necropolis of Jebel Buhais. Prehistoric Discoveries in the Emirate of Sharjah, United Arab Emirates, Sharjah, Department of Culture and Information, Government of Sharjah, UAE.
Johnson, N. C. 2003
Ireland, the Great War and the Geography of Remembrance, *Cambridge Studies in Historical Geography* 35, Cambridge, Cambridge University Press.
Jones, A. M. 2001
Drawn from Memory: The Archaeology of Aesthetics and the Aesthetics of Archaeology in Earlier Bronze Age Britain and the Present, *World Archaeology* 33/2, *Archaeology and Aesthetics*, 334–356.
Jones, A. M. 2003
Technologies of Remembrance. Memory, materiality and identity in Early Bronze Age Scotland, in: H. Williams (ed.), *Archaeologies of Remembrance. Death and Memory in Past Societies*, New York, Kluwer Academic/Plenum, 65–88.
Jones, A. M. 2007
Memory and Material Culture. Topics in Contemporary Archaeology, Cambridge, Cambridge University Press.
Jones, A. M. 2013
Memory, Myth, Place and Landscape Inhabitation: A Perspective from the South-West Peninsula, in: A. M. Chadwick – C. D. Gibson (eds), *Memory, Myth and Long-term Landscape Inhabitation*, *Celtic Studies Publications* 17, Oxford, Oxbow Books, 55–75.
Jorgensen, D. G. – Al-Tikriti W. Y. 2002
A Hydrologic and Archeologic Study of Climate Change in Al Ain, United Arab Emirates, *Global and Planetary Change* 35/1–2, 37–49.
Joy, J. 2009
Reinvigorating Object Biography: Reproducing the Drama of Object Lives, *World Archaeology* 41/4, 540–556.
Joyce, R. A. 2000
Girling the Girl and Boying the Boy: The Production of Adulthood in Ancient Mesoamerica, *World Archaeology* 31/3 Human Lifecycles, 473–483.
Joyce, R. A. 2003
Concrete Memories: Fragments of the Past in the Classic Maya Present (500-1000 AD), in: R. M. Van Dyke – S. E. Alcock (eds), *Archaeologies of Memory*, Oxford, Blackwell, 104–125.
Joyce, R. A. 2008
Practice in and as Deposition, in: B. J. Mills – W. H. Walker (eds), *Memory Work: Archaeologies of Material Practices*, Santa Fe, School of Advanced Research Press, 25–39.
Joyce, R. A. – Gillespie, S. D. 2000
Beyond Kinship: Social and Material Reproduction in House Societies, Philadelphia, University of Pennsylvania Press.
Kansteiner, W. 2002
Finding Meaning in Memory: A Methodological Critique of Collective Memory Studies, *History and Theory* 41, 179–197.
Kars, M. 2013
The Early-Medieval Burial Evidence and Concepts of Possession: Questioning Individual Identities, in: B. Ludowici (ed.), *Individual and Individuality? Approaches towards an Archaeology of Personhood in the First Millennium AD*, *Neue Studien zur Sachsenforschung* 4, Hannover, Niedersächsisches Landesmuseum Hannover, 95–106.
Kästner, J.-M. 1990
Vorbericht über zwei untersuchte Kollektivgräber in Dhayah (Ra's al-Khaimah, U.A.E.), in: F. M. Andraschko – W.-R. Teegen (Hrsg.), *Gedenkschrift für Jürgen Driehaus*, Mainz, von Zabern, 339–346.

Kästner, J.-M. 1991
Some Preliminary Remarks Concerning Two Recently Excavated Tombs in Dhayah/Ras al-Khaimah, in: K. Schippmann – A. Herling – J.-F. Salles (Hrsg.), *Golf-Archäologie. Mesopotamian, Iran, Kuwait, Bahrain, Vereinigte Arabische Emirate und Oman*, *Internationale Archäologie* 6, Buch am Erlbach, Marie Leidorf, 233–244.

Kästner, J.-M. – Sahm, N. – Velde, C. 1988
Excavations of the German Archaeological Mission to Ras al-Khaimah. Report of the 4th Season 1988, Göttingen, Seminar für Vorderasiatische Archäologie.

Kennet, D. 1997
Kush: A Sasanian and Islamic-Period Archaeological Tell in Ras al-Khaimah (U.A.E.), *Arabian Archaeology and Epigraphy* 8, 284–302.

Kennet, D. 1998
Evidence for 4th/5th-century Sasanian occupation at Khatt, Ras al-Khaimah, in: C. S. Phillips – D. T. Potts – S. Searight (eds), *Arabia and her Neighbours. Essays on Prehistorical and Histroical Developments Presented in Honour of Beatrice de Cardi*, *Abiel* 2, Turnhout, Brepols, 105–116.

Kennet, D. 2007
The Decline of Eastern Arabia in the Sasanian Period, *Arabian Archaeology and Epigraphy* 18, 86–122.

Kennet, D. 2018
Qarn al-Harf. https://www.dur.ac.uk/archaeology/research/projects/all/?mode=project&id=659 (accessed 28th April 2018)

Kennet, D. – Deadman, W. – Al-Jahwari, N. S. 2016
The Rustaq-Batinah Archaeolgical Survey, *Proceedings of the Seminar for Arabian Studies* 46, 155–168.

Kerr, A. D. R. 2016
A House Complex in Bronze Age Arabia: A Study of 'Umm an-Nar' and 'Wadi Suq' Domestic Architecture at the Settlement Slope, Bat (Oman) [unpublished MA thesis, Durham University, Department of Archaeology]

Kervran, M. 2004
Archaeological Research at Ṣuḥār 1980–1986, *The Journal of Oman Studies* 13, 263–381.

Kielt Costello, S. 2002
Tools of Memory: Investigation of the Context of Information Storage in the Halaf Period [unpublished PhD thesis, Binghamton University/State University of New York Anthropology].

Kilmurray, L. 2009
The Re-Generation of the Neolithic. Social Memory, Monuments and Generations, in: I. Barbiera – A. M. Choyke – J. A. Rasson (eds), *Materialising Memory. Archaeological Material Culture and the Semantics of the Past* 1977, Oxford, Archaeopress, 41–51.

Kinney, D. 2006
The Concept of *Spolia*, in: C. Rudolph (ed.), *A Companion to Medieval Art: Romanesque and Gothic in Northern Europe*, Malden, MA, Blackwell, 233–252.

Kinney, D. 2011
Introduction, in: R. Brilliant – D. Kinney (eds), *Reuse Value. Spolia and Appropriation in Art and Architecture from Constantine to Sherrie Levine*, Farnham, Ashgate, 1–11.

Klein, K. L. 2000
On the Emergence of Memory in Historical Discourse, *Representations* 69/Special Issue: *Grounds for Remembering*, 127–150.

Klevnäs, A. M. 2011
Whodunnit? Grave-Robbery in Early Medieval Northern and Western Europe [unpublished PhD thesis, University of Cambridge Department of Archaeology].

Klevnäs, A. M. 2015a
Give and Take: Grave Goods and Grave Robbery in the Early Middle Ages, in: A. M. Klevnäs – C. Hedenstierna-Jonson (eds), *Own and Be Owned. Archaeological Approaches to the Concept of Possession*, *Stockholm Studies in Archaeology* 62, Stockholm, Publit, 157–188.

Klevnäs, A. M. 2015b
Overkill. Reopening Graves to Maim the Dead in Anglo-Saxon England, in: L. Gardeła – K. Kajkowshi (eds), *Limbs, Bones, and Reopened Graves in Past Societies. International Interdisciplinary Meeting 'Motifs through the Ages'*, Bytów, Muzeum Zachodniokaszubskie w Bytowie, 177–213.

Kluge, J. 2018
The Domestic Architecture of Umm an-Nar Island, in: S. Döpper (ed.), *Beyond Tombs and Towers. Domestic Architecture of the Umm an-Nar Period in Eastern Arabia. Arabia Orientalis* 4, Wiesbaden, Harrassowitz, 7–15.

Knapp, B. A. 2009
Monumental Architecture, Identity and Memory, in: E. Blake – B. A. Knapp (eds), *Proceedings of the Symposium: Bronze Age Architectural Traditions in the East Mediterranean: Diffusion and Diversity (Gasteig, Munich, 7–8 May 2008)*, Weilheim, Verein zur Förderung der Aufarbeitung der Hellenischen Geschichte e.V., 47–59.

Knapp, B. A. – Ashmore, W. 1999
Archaeological Landscapes: Constructed, Conceptalized, Ideational, in: W. Ashmore – B. A. Knapp (eds), *Archaeologies of Landscapes: Contemporary Perspectives*, Oxford, Blackwell, 1-30.

Knaut, M. 1993
Die alamannischen Gräberfelder von Neresheim und Kösingen, Ostalbkreis, *Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg* 48, Stuttgart, Konrad Theiss.

Koch, U. 1973
Grabräuber als Zeugen frühen Christentums, *Archäologische Nachrichten aus Baden* 11, 22–26.

Kontopodis, M. 2009
Editorial: Time. Matter. Multiplicity, *Memory Studies* 2/1, 5–10.

Kopytoff, I. 1986
The Cultural Biography of Things: Commoditization as Process, in: A. Appadurai (eds), *The Social Life of Things:Commodities in Cultural Perspective*, Cambridge, Cambridge University Press, 64–91.

Korn, L. – Haeser, J. – Schreiber, J. – Gangler, A. – Nagieb, M. – Siebert, S. – Buerkert, A. 2004
Tiwi, Ash Shab and Wadi Tiwi: The Development of an Oasis on the North-Eastern Coast of Oman, *The Journal of Oman Studies* 13, 57–90.

Küchler, S. 1987
Malangan: Art and Memory in a Melanesian Society, *Man New Series* 22/2, 238–255.

Kuijt, I. 2001
Place. Death, and the Transmission of Social Memory in Early Agricultural Communities of the Near Eastern Pre-Pottery Neolithic, in: M. S. Chesson (eds), *Social Memory, Identity, and Death: Anthropological Perspectives on Mortuary Rituals*, *Archaeological Papers of the American Anthropological Association* 10, Arlington, VA, American Anthropological Association, 80–99.

Kümmel, C. 2008
Recht der Toten, rituelle Konsumtion oder Objektsammlung? Zur Konzeption von Grabbeigaben und ihrer Rückwirkung auf die Interpretation von Grabstörungen, in: C. Kümmel – B. Schweizer – U. Veith (Hrsg.), *Körperinszenierungen – Objeksammlung – Monumentalisierung. Totenritual und Grabkult in frühen Gesellschaften*, Münster/New York/München/Berlin, 473–494.

Kümmel, C. 2009
Ur- und frühgeschichtlicher Grabraub. Archäologische Interpretation und kulturanthropologische Erklärung, *Tübinger Schriften zur ur- und frühgeschichtlichen Archäologie* 9, Münster, Waxmann.

Kutterer, A. – Jasim, S. A. – Yousif, E. 2015
Buried far from Home: Sasanian Graves at Jebel al-Emeilah (Sharjah, UAE), *Arabian Archaeology and Epigraphy* 26, 43–54.

Kutterer, A. – Overlaet, B. – Miller, C. E. – Kutterer, J. –
Jasim, S. A. – Haerinck, E. 2014
Late Pre-Islamic Burials at Mleiha, Emirate of Sharjah (UAE), *Arabian Archaeology and Epigraphy* 25, 175–185.

Kyriakidis, E. 2007
Finding Ritual, Calibrating the Evidence, in: E. Kyriakidis (eds), *The Archaeology of Ritual*, Los Angeles, Cotsen Institute of Archaeology, 9–23.

Ladenbauer-Orel, H. 1960
Linz-Zizlau. Das baierische Gräberfeld an der Taubermündung, Wien/München, Anton Schroll.

Laland, K. N. – Rendell, L. 2013
Cultural Memory, *Current Biology* 23/17, 736–740.

Laser, R. – Leinenweber, R. 1991
Die römischen Importfunde der Altmark, in: D. Kaufmann (Hrsg.), *Jahresschrift für mitteldeutsche Vorgeschichte* 74, Berlin, Deutscher Verlag der Wissenschaften, 191–282.

Laurenza, S. – Bianchi, M. – Di Michele, A. 2020
Graves, Distribution and Social Memory: Towards a New Definition of Funerary Landscape in Oman, in: C. Coppini – F. Simi (eds), *Interactions and New Directions in Near Eastern Archaeology. Proceedings of the 5th "Broadening Horizons" Conference (Udine 5–8 June 2017)* 3, *West & East. Rivista della Scuola di Specializzazione in Beni Archeologici. Monografie*, Trieste, EUT Edizioni Università di Trieste, 343–357.

Le Goff, J. 1992
Geschichte und Gedächtnis, *Historische Studien*, Frankfurt am Main/New York, Campus Verlag/Editions de la Maison des Science de l'Homme Paris.

Lecomte, O. – Boucharlat, R. – Culas, J. M. 1989
The European Archaeological Expedition to ed-Dur, Umm al-Quaiwayn (U.A.E.). An Interim Report on the 1987 adn 1988 Seasons. Les fouilles françaises, *Mesopotamia. Rivista di archeologia* 24, 29–56.

Lecomte, O. E. 1993
Ed-Dur, les occupations des 3e et 4e s. ap. J.-C.: Contexte des trouvailles et matériel diagnostique., in: U. Finkbeiner (Hrsg.), *Materialien zur Archäologie der Seleukiden- und Partherzeit im südlichen Babylonien und im Golfgebiet*, Tübingen, Wasmuth, 195–217.

Lefebvre, H. 1991
The Production of Space, Oxford, Blackwell.

Levy, J. E. 1982
Social and Religious Organization in Bronze Age Denmark: An Analysis of Ritual Hoard Finds, *British Archaeological Reports (International Series)* 124, Oxford, British Archaeological Reports.

Lillios, K. T. 1999
Objects of Memory: The Ethnography and Archaeology of Heirlooms, *Journal of Archaeological Method and Theory* 6/3, 235–262.

Littleton, J. H. – Frohlich, B. 2012
Postmortem Violence? Identifying and Interpreting Postmortem Disturbance in Mongolia, *Landscapes of Violence* 2/2.

Lombard, P. 1985
L'Arabie orientale a l'âge du fer [unpublished PhD thesis, Université de Paris 1 Panthéon Sorbonne Archéologie orientale].

Lombard, P. 1989
Âges du fer sans fer: Le cas de la peninsule d'Oman au 1er millénaire avant J.-C., in: T. Fahd (eds), *L'Arabie préislamique et son environnement historique et culturel. Actes du colloque de Strasbourg 24–27 juin 1987*, *Travaux du centre de recherche sur le Proche-Orient et la Grèce antiques* 10, Leiden, Brill, 25–37.

Lowenthal, D. 1985
The Past is a Foreign Country, Cambridge, Cambridge University Press.

Lowick, N. 1983
The Sināw Hoard of Early Islamic Silver Coins, *The Journal of Oman Studies* 6/2, 199–230.

Lowick, N. 1986
An Eleventh Century Coin Hoard from Ra's al-Khaimah and the Question of Sohar's Decline, *Proceedings of the Seminar for Arabian Studies* 16, 89–100.

Lucas, G. 2005
The Archaeology of Time, *Themes in Archaeology*, London/New York, Routledge.

Lund Hansen, U. 1987
Römischer Import im Norden: Warenaustausch zwischen dem Römischen Reich und dem freien Germanien während der Kaiserzeit unter besonderer Berücksichtigung Nordeuropas, *Nordiske Fortidsminder B* 10, København, Det Nongelige Nordiske Oldskriftselskab.

Lund Hansen, U. 2000
Die Glasbecher, in: P. Ethelberg (ed.), *Skovgårde: Ein Bestattungsplatz mit reichen Frauengräbern des 3. Jhs.*

n. Chr. auf Seeland, *Nordiske Fortidsminder Serie B* 19, København, Det Konigelige Nordiske Oldskriftselskab, 320–347.

Madsen, B. 2017
The Early Bronze Age Tombs of Jebel Hafit. Danish Archaeological Investigations in Abu Dhabi 1961–1971, *Jutland Archaeological Society Publication* 39, Aarhus, Aarhus University Press.

Magee, P. 1998
New Evidence of the Initial Appearance of Iron in Southeastern Arabia, *Arabian Archaeology and Epigraphy* 9, 112–117.

Magee, P. 2003
Columned Halls, Power and Legitimisation in the South-East Arabian Iron Age, in: D. T. 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.*, Abu Dhabi, Trident Press, 181–191.

Magee, P. 2014
The Archaeology of Prehistoric Arabia. Adaptation and Social Formation from the Neolithic to the Iron Age, *Cambridge World Archaeology*, Cambridge, Cambridge University Press.

Manning, S. W. 1998
Changing Pasts and Socio-Political Cognition in Late Bronze Age Cyprus, *World Archaeology* 30/1, *The Past in the Past: The Reuse of Ancient Monuments*, 39–58.

McCorriston, J. – Steimer-Herbet, T. – Harrower, M. – Williams, K. D. – Saliège, J.-F. – Bin 'Aqil, A. 2011
Gazetteer of Small-Scale Monuments in Prehistoric Hadramawt, Yemen: A Radiocarbon Chronology from the RASA-AHSD Project Research 1996–2008, *Arabian Archaeology and Epigraphy* 22, 1–22.

McSweeney, K. – Méry, S. – Macchiarelli, R. 2008
Rewriting the End of the Early Bronze Age in the United Arab Emirates trough the Anthropological and Artefactual Evaluation of two Collective Umm an-Nar Graves at Hili (Eastern Region of Abu Dhabi), *Arabian Archaeology and Epigraphy* 18, 1–14.

Meier, H.-R. 2007
Die Anfänge des neuzeitlichen Spolienbegriffs bei Raffael und Vasari und der Konstantinsbogen als Paradigma der Deutungsmuster für den Spoliengebrauch, *Das Münster* 1/7, 2–8.

Méry, S. 1991
Wadi Suq Fine Wares from Shimal and Hili Sites (United Arab Emirates). A Technological and Provenience Analysis, in: K. Schippmann – A. Herling – J.-F. Salles (Hrsg.), *Golf-Archäologie: Mesopotamien, Iran, Kuwait, Bahrain, Vereinigte Arabische Emirate und Oman*, Buch am Erlbach, Marie Leidorf, 245–255.

Méry, S. 2000
Les céramiques d'Oman et l'Asie moyenne. Une archéologie des échanges à l'Âge du Bronze, Paris, CNRS Éditions.

Méry, S. 2010
Results, Limits and Potential: Burial Practices and Early Bronze Age Societies in the Oman Peninsula, in: L. Weeks (es.), *Death and Burial in Arabia and Beyond: Multidisciplinary Perspective. BAR International Series* 2107, London, BAR Publishing, 33–34.

Méry, S. 2013
The First Oases in Eastern Arabia: Society and Craft Technology, in the 3rd Millennium BC at Hili, United Arab Emirates, *Revue d'ethnoécologie* 4, 2–17.

Méry, S. – McSweeney, K. – Basset, G. – Rouquet, J. – Al-Tikiriti, W. Y. 2008
New Evidence of Funerary Practises at the End of the Early Bronze Age at Hili, United Arab Emirates, in: E. Olijdam – R. H. Spoor – W. Deitch-Van der Meulen (eds), *Intercultural Relations between South and Southwest Asia. Commemoration Volume E.C.L. During Casperts*, *BAR International Series* 1826, London, Oxford Press, 200–208.

Méry, S. – McSweeney, K. – Van der Leeuw, S. E. – Al-Tikiriti, W. Y. 2004
New Approaches to a Collective Grave from the Umm An-Nar Period at Hili (UAE), *Paléorient* 30/1, 163–178.

Méry, S. – Rouquet, J. – McSweeney, K. – Basset, G. – Saliège, J. – Tikriti, W. Y. 2001
Re-Excavation of the Early Bronze Age Collective Hili N Pit-Grave (Emirate of Abu Dhabi, UAE): Results of the First Two Campaigns of the Emirati-French Project, *Proceedings of the Seminar for Arabian Studies* 31, 161–178.

Méry, S. – Schneider, G. 1996
Mesopotamian Pottery Wares in Eastern Arabia from the 5th to the 2nd Millennium BC: A Contribution of Archaeometry to the Economic History, *Proceedings of the Seminar for Arabian Studies* 26, 79–96.

Meskell, L. 2004
Object Worlds in Ancient Egypt: Material Biographies Past and Present, London, Berg.

Meyer, J.-W. 1991
Gräber des 3. Jahrtausends v. Chr. im syrischen Euphrattal. 3. Ausgrabungen in Šamseddin und Djerniye, *Schriften zur vorderasiatischen Archäologie* 3, Saarbrücken, Saarbrücker Druckerei und Verlag.

Michel-Rolph, T. 1996
Silencing the Past: Power and the Production of History, Boston, Beacon Press.

Mille, B. J. – Walker, W. H. 2008a
Introduction: Memory, Materiality, and Depositional Practice, in: B. J. Mills – W. H. Walker (eds), *Memory Work: Archaeologies of Material Practices*, Santa Fe, School of Advanced Research Press, 3–23.

Mills, B. J. – Walker, W. H. 2008b
Memory Work: Archaeologies of Material Practices, Santa Fe, School for Advanced Research Press.

Mills, B. J. 2008
Remembering While Forgetting: Depositional Practices and Social Memory at Chaco, in: B. J. Mills – W. H. Walker (eds), *Memory Work: Archaeologies of Material Practices*, Santa Fe, School of Advances Research Press, 81–108.

Mithen, S. 1996
The Prehistory of the Mind. A Search for the Origins of Art, Religion and Science, London, Thames and Hudson.

Mizoguchi, K. 1993
Time in the Reproduction of Mortuary Practices, *World Archaeology* 25/2 *Conceptions of Time and Ancient Society*, 223–235.

Moore, J. D. 2010
Making a *huaca*: Memory and Praxis in Prehistpanic far Northern Peru, *Journal of Social Archaeology* 10/3, 398–422.

Morris, I. 1991
The Archaeology of Ancestors: The Saxe/Goldstein Hypothesis Revisited, *Cambridge Archaeological Journal* 1, 147–169.

Mouton, M. 2008
La Péninsule d'Oman de la fin de l'Age du Fer au début de la période sassanide (250 av. – 350 pl. JC), *Society for Arabian Studies Monographs* 6, Oxford, Archaeopress.

Mouton, M. – Schiettecatte, J. 2014
In the Desert Margins: The Settlement Process in Ancient South and East Arabia, Roma, L'Erma di Bretschneider.

Müller, H. F. 1976
Das alamannische Gräberfeld von Hemmingen (Kreis Ludwigsburg), *Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg* 7, Stuttgart, Müller & Gräff.

Müller, S. 2015
Das awarische Gräberfeld in Zwölfaxing, Burstyn-Kaserne, *Archäologische Forschungen in Niederösterreich*, St. Pölten, Selbstverlag des NÖ Instituts für Landeskunde.

Munoz, O. 2015
La « fabrique des ancêtres ». Complexification sociale et sépultures collectives dans la péninsule d'Oman à l'âge du Bronze ancien, in: G. Delaplace – F. Valentin (éd.), *Le funéraire. Mémoire, protocoles, monuments*, *Colloques de la MAE, René-Ginouvès* 11, Paris, De Boccard, 255–265.

Munoz, O. – Cleuziou, S. 2008
La tombe 1 de Ra's al-Jinz RJ-1: une approche de la complexité des pratiques funéraires dans la péninsule d'Oman à l'Âge du Bronze ancien, in: J. M. Córdoba – M. Molist – M. C. Pérez – I. Rubio – S. Martínez (eds), *Proceedings of the 5th International Congress on the Archaeology of the Ancient Near East, Madrid, April 3–8 2006*, Madrid, Ediciones Univ. Autónoma de Madrid, 627–644.

Munoz, O. – Ghazal, R. O. – Guy, H. 2012
Use of Ossuary Pits During the Umm an Nar Period: New Insights on the Complexity of Burial Practices from the Site of Ra's al-Jinz (RJ-1), Oman, in: J. Giraud – G. Gernez (éd.), *Aux marges de l'archéologie. Hommage à Serge Cleuziou*, Paris, De Boccard, 451–467.

Murphy, E. M. 2008
Deviant Burial in the Archaeological Record, *Studies in Funerary Archaeology*, Oxford, Oxbow Books.

Nebelsick, L. D. 1997
Auf Biegen und Brechen. Ekstatische Elemente bronzezeitlicher Materialopfer – Ein Deutungsversuch, in: A. Hänsel – B. Hänsel (Hrsg.), *Gaben and die Götter. Schätze der Bronzezeit Europas. Ausstellung der Freien Universität Berlin in Verbindung mit dem Museum für Vor- und Frühgeschichte, Staatliche Museen zu Berlin – Preußischer Kulturbesitz*, *Bestandskatalog* 4, Berlin, Seminar für Ur- und Frühgeschichte der Freien Universität/Museum für Vor- und Frühgeschichte, 35–41.

Nette 2008a
Report of the Excavation of Tomb 301 in Spring-Champagne 2008 [unpublished, circupated report].

Nette 2008b
Summary of the Excavation of the Secondary Burial in Tomb 156 [unpublished, circulated report].

Neugebauer, J.-W. 1991
Die Nekropole F von Gemeinlebarn, Niederösterreich. Untersuchungen zu den Bestattungssitten und zum Grabraub in der ausgehenden Frühbronzezeit in Niederösterreich südlich der Donau zwischen Enns und Wienerwald, *Römisch-Germanische Forschungen* 49, Mainz, Philipp von Zabern.

Neugebauer, J.-W. 1994
Zum Grabraub in der Frühbronzezeit Niederösterreichs, in: K. Schmotz (Hrsg.), *Vorträge des 12. Niederbayerischen Archäologentages*, Buch am Erlbach, Marie Leidorf, 109–147.

Noble, G. 2006
Neolithic Scotland: Timber, Stone, Earth and Fire, ProQuest Ebook Central, Edinburgh University Press.

Nora, P. 1984
Les lieux de mémoire I: La République, Paris, Gallmard.

Nora, P. 1989
Between Memory and History: Les Lieux de Mémoire, *Representations* 26/Special Issue: *Memory and Counter-Memory*, 7–24.

Noterman, A. A. 2015
Early Medieval Grave Robbery. The French Case, in: L. Gardeła – K. Kajkowshi (eds), *Limbs, Bones, and Reopened Graves in Past Societies, International Interdisciplinary Meetings 'Motifs through the Ages'*, Bytów, Muzeum Zachodniokaszubskie w Bytowie, 149–174.

Novák, M. 2008
Individuum oder Kollektiv? Zur kulturgeschichtlichen Stellung der Königsgruft von Qatna, in: C. Kümmel – B. Schweizer – U. Veith (Hrsg.), *Körperinszenierungen - Objeksammlung - Monumentalisierung. Totenritual und Grabkult in frühen Gesellschaften*, Münster, 207–232.

Olick, J. K. – Robbins, J. 1998
Social Memory Studies: From "Collective Memory" to the Historical Sociology of Mnemonic Practices, *Annual Review of Sociology* 24, 105–140.

Orchard, J. – Orcahrd, J. 2002
The Work of the Al Hajar Project in Oman, *The Journal of Oman Studies* 12. 227–234.

Orchard, J. – Orchard, J. 2007
The Third Millennium BC Oasis Settlements of Oman and the First Evidence of their Irrigation by Aflaj from Bahla, in: Ministry of Heritage and Culture Sultanate of Oman (ed.), *Archaeology of the Arabian Peninsula through the Ages*, Muscat, Ministry of Heritage and Culture, 143–173.

Osborne, R. 2004
Hoards, Votives, Offerings: The Archaeology of the Dedicated Object, *World Archaeology* 36/1, 1–10.

Overlaet, B. 2015
Belgian Excavations at Mleiha, Sharjah (UAE) 2009–2013, *Kaowarsom* 6, 1–17.

Overlaet, B. – Haerinck, E. 2014
Monumental Tombs along the Arabian Caravan Routes, *Akkadica Supplementum* 12, 205–214.

Pader, E.-J. 1982
Symbolism, Social Relations and the Interpretation of Mortuary Remains, *British Archaeological Reports (International Series)* 130, Oxford, BAR Publishing.

Paez, D. – Basabe, N. – Gonzalez, J. L. 1997
Social Processes and Collective Memory: A Cross-Cultural Approach to Remembering Political Events, in: J. W. Pennebaker – D. Paez – B. Rimé (eds), *Collective Memory of Political Events: Social Psychological Perspectives*, Mahwah, New Jersey, Lawrence Erlbaum Associates, 147–174.

Parker Pearson, M. 1982
Mortuary Practises, Society and Ideology: An Ethnoarchaeological Study, in: I. Hodder (ed.), *Symbolic and Structural Archaeology*, Cambridge, 99–113.

Parker Pearson, M. 1993
The Powerful Dead: Archaeological Relationships between the Living and the Dead, *Cambridge Archaeological Journal* 3/2, 203–229.

Pauketat, T. 2000
The Tragedy of Commoners, in: M.-A. Dobred – J. E. Robb (eds), *Agency in Archaeology*, London, Routledge, 113–129.

Pauli, L. 1981
Rezension zu: H. Jankuhn/H. Nehlsen/H. Roth (Hrsg.), Zum Grabfrevel in vor- und frühgeschicht-licher Zeit. Untersuchungen zu Grabraub und "haugbrot" in Mittel- und Nordeuropa. Bericht über ein Kolloquium der Kommission für Altertumskunde Mittel- und Nordeuropas vom 14. bis 16. Februar 1977, *Germania. Anzeiger der Römisch-Germanischen Kommission des Deutschen Archäologischen Instituts* 59, 467–474.

Peltenburg, E. J. – Campbell, S. – Carter, S. – Stephen, F. M. K. – Tipping, R. 1997
Jerablus-Tahtani, Syria, 1996. Preliminary Report, *Levant. Journal of the British School of Archaeology in Jerusalem and the British Institute at Amman for Archaeology and History* 29/1, 1–18.

Peltenburg, E. J. 1989
The Beginning of Religion in Cyprus, in: E. J. Peltenburg (ed.), *Early Society in Cyprus*, Edinburgh, Edinburgh University Press, 108–126.

Perkins, D. R. J. 1991
The Jutish Cemetery at Sarre Revisited: A Rescue Evaluation, *Archaeologia Cantiana* 109, 139–166.

Peška, J. 2002
Das Grab, in: J. Peška – J. Tejral (eds), *Das germanische Koningsgrab von Mušov in Mahren* 1, *Romisch-Germanisches Zentralmuseum. Forschungsinstitut fur Vor- und Frühgeschichte. Monographien* 55, Mainz, Rudolf Habelt, 3–71.

Petrie, C. 2000
Late Pre-Islamic Ceramics from the Tomb at Sharm, Fujairah, U.A.E., *Arabian Archaeology and Epigraphy* 11/1, 80–86.

Pfälzner, P. – Niehr, H. – Pernicka, E. – Wissing, A. (eds) 2012
(Re-) Constructing Funerary Rituals in the Ancient Near East. Proceedings of the First International Symposium of the Tübingen Post-Graduate School "Symbols of the Dead" in May 2009, *Qatna Studien Supplementa* 1, Wiesbaden, Harrassowitz.

Phillips, C. S. 1997
The Pattern of Settlement in the Wadi al-Qawr, *Proceedings of the Seminar for Arabian Studies* 27, 205–218.

Phillips, C. S. 2010
Iron Age Chronology in South East Arabia and New Data from Salut, Sultanate of Oman, in: A. Avanzini (eds), *Eastern Arabia in the First Milllennium BC. International Conference, Pisa 12th –13th May 2008*, Roma, L'Erma di Bretschneider, 71–80.

Potts, D. T. 1986
Eastern Arabia and the Oman Peninsula during the Late 4th and Early 3rd Millennia BC, in: U. Finkbeiner (eds), *Gamdat Nasr: Period or Regional Style?*, Wiesbaden, Ludwig Reichert, 121–170.

Potts, D. T. 1990
The Arabian Gulf in Antiquity. From Prehistory to the Fall of the Achaemenid Empire, Oxford, Claredon Press.

Potts, D. T. 1993
The Late Prehistoric, Protohistoric, and Early Historic Periods in Eastern Arabia (ca. 5000–1200 BC), *Jorunal of World Prehistory* 7/2, 163–212.

Potts, D. T. 1997a
Late Sassanian Arment from Southern Arabia, *Electrum* 1, 127–136.

Potts, D. T. 1997b
Rewriting the Late Prehistory of South-Eastern Arabia: A Reply to Jocelyn Orchard, *Iraq: Publication of the British School of Archaeology in Iraq* 59, 63–71.

Potts, D. T. 1998
Some Issues in the Study of the pre-Islamic Weaponry of Southeastern Arabia, *Arabian Archaeology and Epigraphy* 9/2, 182–208.

Potts, D. T. 2000
Ancient Magan: The Secrets of Tell Abraq, London, Trident Press.

Potts, D. T. 2012
The Hafit-Umm an-Nar Transition: Evidence from Falaj al-Qaba'il and Jabal al-Emalah, in: J. Giraud – G. Gernez (éd.), *Aux marges de l'archéologie. Hommage à Serge Cleuziou*, Paris, De Boccard, 371–377.

Potts, D. T. – Cribb, J. 1995
Sasanian and Arab-Sasanian Coins from Eastern Arabia, *Iranica Antiqua* 15, 123–137.

Prent, M. 2003
Glories of the Past in the Past: Ritual Activities at Palatial Ruins in Early Iron Age Crete, in: R. M. Van Dyke – S. E. Alcock (eds), *Archaeology of Memory*, Oxford, Blackwell, 81–103.

Primas, M. 1977
Untersuchungen zu den Bestattungssitten der ausgehenden Kupfer- und frühen Bronzezeit, *Berichte der Römisch-Germanischen Kommission* 58, 1–160.

Raddatz, K. 1978
Zum Grabraub in der Frühen Bronzezeit und in der Römischen Kaiserzeit, in: H. Jankuhn – H. Nehlsen – H. Roth (Hrsg.), *Zum Grabfrevel in vor- und frühgeschichtlicher Zeit: Untersuchungen zu Grabraub und "haugbrot" in Mittel- und Nordeuropa: Bericht über ein Kolloquium der Kommission für die Altertumskunde Mittel- und Nordeuropas vom 14. bis 16. Februar 1977*, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, Göttingen, Vandenhoeck & Ruprecht, 48–52.

Randsborg, K. 1998
Plundered Bronze Age Graves. Archaeological and Social Implications, *Acta archaeologica Academiae scientiarum Hungaricae* 69, 113–138.

Reade, J. 2000
Sacred Places in Ancient Oman, *The Journal of Oman Studies* 11, 133–138.

Reade, J. 2008
The Indus-Mesopotamian Relationship Reconsidered, in: E. Olijdam – R. H. Spoor (eds), *Intercultural Relations between South and Southwest Asia: Studies in Commemoration of E. C. L. During Caspers (1934–1996)*, Oxford, Archaeopress, 12–18.

Renfrew, C. 1976
Megaliths, Territories and Population, in: S. De Laet (eds), *Acculturation and Continuity in Atlantic Europe*, Burges, De Tempel, 198–220.

Reynolds, A. 1997
The Definition and Ideology of Anglo-Saxon Execution Sites and Cemeteries, in: G. De Boe – F. Verhaege (eds), *Death and Burial in Medieval Europe. Papers of the 'Medieval Europe Brugge 1997' Conference* 2, *I.A.P. Rapporten* 2, Zellik, Instituut voor het Archeologisch Patrimonium. Institue for the Archaeological Heritage, 33–41.

Reynolds, A. 2009
Anglo-Saxon Deviant Burial Customs, *Medieval History and Archaeology*, Oxford, Oxford University Press.

Richards, C. – Thomas, J. 1984
Ritual Activity and Structured Deposition in Later Neolithic Wessex, in R. Bradley and J. Gardiner (eds), in: R. Bradley – J. Gardiner (eds), *Neolithic Studies. A Review of Some Current Research*, *BAR British Series* 133, Oxford, BAR, 189–218.

Righetti, S. 2012
Analyse des pratiques funéraires à l'âge du Bronze moyen et récent dans la péninsule omanaise : une fenêtre sur la société, in: J. Giraud – G. Gernez (éd.), *Aux marges de l'archéologie. Hommage à Serge Cleuziou*, Paris, De Boccard, 379–385.

Righetti, S. 2015a
Les cultures du Wadi Suq et de Shimal dans la péninsule omanaise aux deuxième millénaire avant notre ère. Évolution des sociétés du Bronze moyen et du Bronze récent III: Catalogue des tombes [unpublished PhD thesis, Université Paris 1, Panthéon Sorbonne Art et Archéologie].

Righetti, S. 2015b
Les cultures du Wadi Suq et de Shimal dans la péninsule omanaise aux deuxième millénaire avant notre ère. Évolution des sociétés du Bronze moyen et du Bronze récent [unpublished PhD thesis, Université Paris 1, Panthéon Sorbonne Art et Archéologie]

Rittershofer, K.-F. 1987
Grabraub in der Bronzezeit, *Berichte der Römisch-Germanischen Kommission* 68, 5–23.

Roddick, A. P. – Hastorf, C. A. 2010
Tradition Brought to the Surface: Continuity, Innovation and Change in the Late Formative Period, Taraco Peninsula, Bolivia, *Cambridge Archaeological Journal* 20/2, 157–178.

Roth, H. 1978
Archäologische Beobachtungen zum Grabfrevel im Meroweingerreich, in: H. Jankuhn – H. Nehlsen – H. Roth (Hrsg.), *Zum Grabfrevel in vor- und frühgeschichtlicher Zeit: Untersuchungen zu Grabraub und 'haugbrot' in Mittel- und Nordeuropa: Bericht über ein Kolloquium der Kommission für die Altertumskunde Mittel- und Nordeuropas vom 14. bis 16. Februar 1977*, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, Göttingen, Vandenhoeck & Ruprecht, 53–84.

Roymans, N. 1995
The Cultural Biography of Urnfields and the Long-Term History of a Mythical Landscape, *Archaeological Dialogues* 1995/1, 2–38.

Rozoy, J.-G. 1987
Les Celtes en Champagne. Les Ardennes au second Âge du Fer: le Mont Troté, les Rouliers, *Mémoires de la Société Archéologique Champenoise* 4, Charleville-Mezieres.

Rubertone, P. E. 2008
Engaging Monuments, Memories, and Archaeology, in: P. E. Rubertone (ed.), *Archaeologies of Placemaking. Monuments, Memories, and Engagementin Native North America*, Walnut Creek, California, Left Coast Press, 13–33.

Rutkowski, Ł. 2017
Archaeological Investigations of the Early Bronze Age Burial site QA1 at Wadi al-Fajj in Northern Oman: Results of the 2016 Season, *Polish Archaeology in the Mediterranean* 26, 521–439.

Rutkowski, Ł. 2020
Some thoughts on the Burial Space Inside QA 1-1, an Umm an-Nar Tomb in Wādī al-Fajj (Oman): A Case of Incomplete Paving of the Tomb's Floor, *Proceedings of the Seminar for Arabian Studies* 50, 307–320.

Sági, K. 1964
Das langobardische Gräberfeld von Vörs, *Acta archaeologica Academiae scientiarum Hungaricae* 16, 359–408.

Savage, S. 1995
Descent, Power, and Competition in Predynastic Egypt: Mortuary Evidence from Cemetry N7000 at Naga-Ed-Der [unpublished PhD thesis, Arizona State University].

Savage, S. 1997
Descent Group Competition and Economic Strategies in Predynastic Egypt, *Journal of Anthropological Archaeology* 16/3, 226–268.

Schiffer, M. B. 1996
Formation Processes of the Archaeological Record, Salt Lake City, University of Utah Press.

Schiffer, M. B. 1999
The Material Life of Human Beings. Artifacts, Behavior, and Communication, London/New York, Routledge.

Schmidt, C. 2018a
Pastoral Nomadism in Third Millennium BC Eastern Arabia: A View from Al-Zebah in Central Oman, *Paléorient* 44/1, 105–118.

Schmidt, C. 2018b
The Umm an-Nar Settlement of Al-Zebah, *Beyond Tombs and Towers. Domestic Architecture of the Umm an-Nar Period in Eastern Arabia. Arabia Orientalis* 4, Wiesbaden, Harrassowitz, 71–86.

Schmidt, C. 2020
Die Bestattungsgruben in Bat. Arabia Orientalis 1, Oxford, Archaeopress.

Schmidt, C. – Döpper, S. 2014
German Expedition to Bāt and Al-Ayn, Sultanate of Oman: The 2010 to 2013 Seasons, *The Journal of Oman Studies* 18, 187–230.

Schmidt, C. – Döpper, S. 2019
The Hafit Period at Al-Khashbah, Sultanate of Oman: Results of Four Years of Excavations and Material Studies, *Proceedings of the Seminar for Arabian Studies* 49, 265–274.

Schmidt, C. – Döpper, S. 2020
Die Anfänge der Kupferproduktion in Oman und ihre Verbindung zu den archaischen Texten aus Uruk, in: J. Baldwin – J. Matuszak (Hrsg.), *mu-zu an-za$_3$-še$_3$ kur-ur$_2$-še$_3$ ḫe$_2$-ĝal$_2$. Altorientalische Studien zu Ehren von Konrad Volk, dubsar* 17, Münster, Zaphon, 433–443.

Schneider, J. 1983
Deersheim. Ein völkerwanderungszeitliches Gräberfeld im Nordharzvorland, *Jahresschrift für mitteldeutsche Vorgeschichte* 66, 75–358.

Schön, M. D. 2003
Sachsen – Nachbarn der frühe Franken: Überlegungen zu Bestattungssitten im 4./5. Jh., in: E. Taayke – J. H. Looijenga – O. H. Harsema – H. R. Reinders (eds), *Essays on the Early Franks*, *Groningen Archaeological Studies* 1, Groningen, Barkhuis, 35–61.

Schreiber, J. 2010
The Iron Age I-Period in South-Eastern Arabia. A View from Central Oman, in: A. Avanzini (ed.), *Eastern Arabia in the First Millennium BC*, Roma, "L'erma" di Bretschneider, 81–90.

Schreiber, J. – Häser, J. 2004
Archaeological Survey at Ṭīwī and its Hinterland (Central Oman), *Proceedings of the Seminar for Arabian Studies* 34, 319–329.

Schwartz, G. M. 2007
Status, Ideology, and Memory in Third-Millennium Syria: "Royal" Tombs at Umm el-Marra, in: N. Laneri (eds), *Performing Death: Social Analyses of Funerary Traditions in the Ancient NearEast and the Mediterranean*, *The University of Chicago Oriental Institute Seminars* 3, Chicago, Oriental Institute of the University of Chicago, 39–68.

Schwartz, G. M. 2013
Memory and its Demolition: Ancestors, Animals and Sacrifice at Umm el-Marra, Syria, *Cambridge Archaeological Journal* 23, 495–522.

Shanks, M. – Tilley, C. 1987
Social Theory and Archaeology, Oxford, Polity Press.

Sharjah 2016
http://www.discovermleiha.ae/EN/history/archaeological-sites (accessed 19th October 2016).

Siebert, S. 2006
Analysis of Arid Agricultural Systems Using Quantitative Image Analysis, Modeling and Geographical Information Systems [unpublished PhD thesis, Universität Kassel Agrarwissenschaften]

Simpson, S. J. 2003
Sasanian Beads: The Evidence of Art, Texts and Archaeology, in: I. C. Glover – H. Hughes Brock – J. Henderson (eds), *Ornaments from the Past: Bead Studies after Beck*, London, Bead Study Trust, 59–78.

Sopp, M. 1999
Die Wiederaufnahme älterer Bestattungsplätze in den nachfolgende vor- und frühgeschichtlichen Perioden in Norddeutschland, *Antiquitas 3. Abhandlungen zur Vor- und Frühgeschichte, zur Klassichen und Provinzial-Römischen Archäologie und zur Geschichte des Altertums* 39, Bonn, Rudolf Habelt.

Spatzier, A. 2007
Untersuchungen zu Chronologie, Grabstörung und Struktur des frühbronzezeitlichen Gräberfelds Franzhausen I, Niederösterreich, *Praehistorische Zeitschrift* 82/2, 215–347.

Spencer, N. 1995
Heroic Time: Monuments and the Past in Messenia, Southwest Greece, *Oxford Journal of Archaeology* 14/3, 277–292.

Steuer, H. 1982
Frühgeschichtliche Sozialstrukturen in Mitteleuropa. Eine Analyse der Auswertungsmethoden des archäologischen Quellenmaterials, *Abhandlungen der Akademie der Wissenschaften Göttingen*, Göttingen, Vandenhoeck & Ruprecht.

Steuer, H. 2004
Adelsgräber, Hofgrablegen und Grabraub um 700 im östlichen Merowingerreich – Widerspiegelung eines gesellschaftlichen Umbruchs, in: U. Nuber (Hrsg.), *Der Südwesten im 8. Jahrhundert aus historischer und archäologischer Sicht*, Ostfildern, Thorbecke, 193–217.

Stilborg, O. 1997
Shards of Iron Age Communicatin. A Ceramological Study of Internal Structrue and External Contacts in the Gudme-Lundeborg Area, Funen during the Late Roman Iron Age, *Monographs on Ceramics*, Lund, Lunds Universitet Sverige.

Stocker, D. 1990
Rubbish Recycled: A Study of the Re-use of Stone in Linconshire, in: D. Parsons (ed.), *Stone: Quarrying and Building in England, AD 43–155*, Phillimore, Chichester, 83–101.

Stoll, H. 1939
Die Alamannengräber von Hailfingen in Württemberg, *Germanische Denkmäler der Völkerwanderungszeit* 4, Berlin, De Gruyter.

Stork, I. 1997
Als Persönlichkeit ins Jenseits. Bestattungsitte und Grabraub als Kontrast, in: A. L. Baden-Württemberg (eds), *Die Alamannen. Begleitband zu Ausstellung "Die Alammannen"*, Stuttgart, Theiss, 418–432.

Swerida, J. 2018
Bat and the Umm an-Nar Settlement Tradition, in: S. Döpper (ed.), *Beyond Tombs and Towers. Domestic Architecture of the Umm an-Nar Period in Eastern Arabia. Arabia Orientalis* 4, Wiesbaden, Harrassowitz, 51–69.

Taha, M. Y. 1981
The Iron Age in the United Arab Emirates with Special Reference to Mesopotamia [unpublished PhD thesis, Cambridge University, St. John's College].

Taha, M. Y. 1983
The Archaeology of the Arabian Gulf During the First Millennium B.C., *Al-Rafidan* 3–4, 75–87.

Taha, M. Y. 2009
The Discovery of the Iron Age in the United Arab Emirates, Abu Dhabi, Ministry of Culture, Youth and Community Development.

Tempelmann-Mązyńska, M. 1998
Totenfurcht und Totenglauben bei den Germanen im 4. bis 7. Jahrhundert n. Chr. aufgrund der sog. Sonderbestattungen und des Grabraubs, *Zeitschrift der Savigny-Stiftung für Rechtsgeschichte. Germanistische Abteilung* 106/1, 274–283.

Thäte, E. S. 2007
Monuments and Minds: Monument Re-use in Scandinavia in the Second Half of the First Millennium AD Acta archaeologica Lundensia Series 40, Lund, Institutionen för arkeologi och antikens historia, Lunds universitet.

Theuws, F. 1999
Changing Settlement Patterns, Burial Grounds and the Symbolic Construction of Ancestors and Communities in the Late Merovingian Southern Netherlands, in: C. Fabech – J. Ringtved (eds), *Settlement and Landscape. Proceedings of a Conference in Arhus, May 4–7 1998*, Moesgard, 337–350.

Thomas, J. 1991
Rethinking the Neolithic, *New Studies in Archaeology*, Cambridge, Cambridge University Press.

Thomas, J. 1996
Time, Culture and Identity: An Interpretative Archaeology, Routledge/ProQuest Ebook Central.

Thomas, J. 2000
The Identity of Place in Neolithic Britain: Examples from South-West Scotland, in: A. Ritchie (ed.), *Neolithic Orkney in its European Context*, Oxford, Oxbow, 79–87.

Thomas, J. 2007
Place and Memory: Excavations at the Pict's Knowe, Holywood and Holm Farm, Dumfries and Galloway, 1994–8, Oxford, Oxbow Books.

Thornton, C. P. 2016
Excavations at Kasr al-Khafaji (Tower 1146), in: C. P. Thornton – C. M. Cable – G. L. Possel (eds), *The Bronze Age Towers at Bat, Sultanate of Oman. Research by the Bat Archaeological Project 2007–12, Museum Monograph* 143, Philadelphia, University of Pennsylvania Press, 25–47.

Thrane, H. 1978
Beispiele für Grabraub aus der Bronzezeit Dänemarks, in: H. Jankuhn – H. Nehlsen – H. Roth (Hrsg.), *Zum Grabfrevel in vor- und frühgeschichtlicher Zeit: Untersuchungen zu Grabraub und "haugbrot" in Mittel- und Nordeuropa: Bericht über ein Kolloquium der Kommission für die Altertumskunde Mittel- und Nordeuropas vom 14. bis 16. Februar 1977*, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, Göttingen, Vandenhoeck & Ruprecht, 9–17.

Tilley, C. 1984
Ideology and the Legitimation of Power in the Middle Neolithic of Southern Sweden, in: D. Miller – C. Tilley (eds), *Ideology, Power and Prehistory*, Cambridge, Cambridge University Press, 111–146.

Tilley, C. 1994
A Phenomenology of Landscape, Providence, Berg.

Tilley, C. 1996
An Ethnography of the Neolithic. Early Prehistoric Societies in Southern Scandinavia, Cambridge, Cambridge University Press.

Tilley, C. 1999
Metaphor and Material Culture, *Social Archaeology*, Oxford, Blackwell.

Torres-Rouff, C. – Pestle, W. J. – Daverman, B. M. 2012
Commemorating Bodies and Lives at Kish's 'A Cemetery': (Re)presenting Social Memory, *Journal of Social Archaeology* 12/2, 193–219.

Truc, G. 2011
Memory of Places and Places of Memory: For a Halbwachsian Socio-Ethnography of Collective Memory, *International Social Science Journal* 62/203–204, 147–159.

Tsukimoto, A. 1985
Untersuchungen zur Totenpflege (kispum) im alten Mesopotamien, *Alter Orient und Altes Testament. Veröffentlichungen zur Kultur und Geschichte des Alten Orients und des Alten Testaments* 216, Kevelaer/Neukirchen-Vluyn, Butzon und Bercker.

Uerpmann, H.-P. – Uerpmann, M. 1999
The Camel Burial of Al-Buhais 12 (Sharjah, U.A.E.), in: C. Becker – H. Mannhardt – J. Peters – J. Schibler (Hrsg.), *Historia Animalium ex Ossibus – Festschrift für Angela Von den Driesch*, Rahden, Marie Leidorf, 455–462.

van Dyke, R. M. 2009
Chaco Reloaded: Discursive Social Memory on the Post-Chacoan Landscape, *Journal of Social Archaeology* 9/2, 220–248.

van Dyke, R. M. 2011
Imagined Past Imagined. Mermoy and Ideology in Archaeology, in: R. Bernbeck – R. H. McGuire (eds), *Ideologies in Archaeology*, Ruscon, University of Arizona Press, 233–253.

van Dyke, R. M. – Alcock, S. E. 2003
Archaeologies of Memory: An Introduction, in: R. M. Van Dyke – S. E. Alcock (eds), *Archaeologies of Memory*, Oxford, Blackwell, 1–13.

van Haperen, M. C. 2010
Rest in Pieces: An Interpretive Model of Early Medieval 'Grave Robbery', *Medieval and Modern Matters* 1, 1–36.

van Haperen, M. C. 2013
The Distributed Dead: Personhood from the Perspective of Reopened Graves, in: B. Ludowici (ed.), *Individual and Individuality? Approaches towards an Archaeology of Personhood in the First Millenium AD*, *Neue Studien zur Sachsenforschung* 4, Stuttgart, Konrad Theiss, 89–93.

van Haperen, M. C. 2015
Merovingian Reopened Graves. A Scenario-Based Approach to Interpretation, in: L. Gardeła – K. Kajkowshi (eds), *Limbs, Bones, and Reopened Graves in Past Societies, International Interdisciplinary Meetings 'Motifs through the Ages'*, Bytów, Muzeum Zachodniokaszubskie w Bytowie, 123–147.

van Haperen, M. C. 2017
In Touch with the Dead: Early Medieval Grave Reopenings in the Low Countries [unpublished PhD thesis, Leiden University Faculty of Archaeology]

Veit, U. 2013
'Sonderbestattungen': Vorüberlegungen zu einem integrieten Ansatz ihrer Erforschung, in: N. Müller-Scheeßel (Hrsg.), *'Irreguläre' Bestatungen in der Urgeschichte: Norm, Ritual, Strafe...? Akten der Internationel Tagung in Frankfurt a. M. vom 3. bis 5. Februar 2012*, *Kolloquien zur Vor- und Frühgeschichte* 19, Bonn, Rudolf Habelt, 11–24.

Vejby, M. D. F. 2012
Reinterpreting the Iron Age and Roman Reuse of Megalithic Tombs in Atlantic Europe [unpublished PhD thesis, University of Reading Department of Archaeology].

Vejby, M. D. F. 2015
Enduring Past. Megalithic Tombs of Brittany and the Roman Occupation in Western France, in: M. Díaz-Guardamino – L. García Sanjuán – D. Wheatley (eds), *The Lives of Prehistoric Monuments in Iron Age, Roman, and Medieval Europe*, Oxford, Oxford University Press, 163–182.

Velde, C. 2003
Wadi Suq and Late Bronze Age in the Oman Peninsula, in: D. T. Potts – H. Al-Naboodah – P. Hellyer (eds), *Archaeology of the United Arab Emirates: Proceedings of the First International Conference on the Archaeology of the UAE*, London, Trident Press, 102–113.

Vieira, A. 2013
Castelo Velho and Prazo (Vila Nova de Roz Côa, Portugal): The Oral Tradition, in: A. M. Chadwick – C. D. Gibson (eds), *Memory, Myth and Long-term Landscape Inhabitation*, *Celtic Studies Publications* 17, Oxford, Oxbow Books, 258–275.

Vogt, B. 1985
Zur Chronologie und Entwicklung der Gräber des späten 4. – 2. Jahrtausends vor Christus auf der Halbinsel Oman: Zusammenfassung, Analyse und Würdigung publizierter wie auch unveröffentlichter Grabungsergebnisse [unpublished PhD thesis, Georg-August-Universität zu Göttingen].

Vogt, B. 1994
Asimah - An Account of Two Month Rescue Excavation in the Mountains of Ras al-Khaimah, United Arab Emirates, Dubai, Shell Markets Middle East.

Vogt, B. 1998
State, Problems and Perspectives of Second Millennium B.C. funerary Studies in the Emirate of Ras al-Khaimah (U.A.E.), in: C. Phillips – D. T. Potts – S. Searight (eds), *Arabia and its Neighbours: Essays on Prehistorical and Historical Developments Presented in Honour of Beatrice de Cardi*, *Abiel* 2, Turnhout, Brepols, 273–290.

Vogt, B. – Franke-Vogt, U. 1987
Shimal 1985/1986. Excavations fo the German Archaeological Mission in Ras Al-Khaimah, U.A.E.. A Preliminary Report, *Berliner Beiträge zum Vorderen Orient* 8, Berlin, Dietrich Reimer.

Vogt, B. – Häser, J. – Kästner, J.-M. – Schutkowski, H. – Velde, C. 1989
Preliminary Remarks on Two Recently Excavated Tombs in Shimal, Ras al-Khaimah (United Arab Emirates), in: K. Frifelt – P. Sørensen (eds), *South Asian Archaeology 1985. Papers from the Eighth International Conference of South Asian Archaeologist in Western Europe, held at Moesgaard Museum, Denmark, 1–5 July 1985*, *Scandinavian Institute of Asian Studies Occasional Papers* 4, London, Curzon Press, 62–73.

Watkins, T. 2012
Household, Community and Social Landscape: Maintaining Social Memory in the Early Neolthic of Southwest Asia, in: M. Furholt – M. Hinz – D. Mischka (eds), *"As Time Goes By?" Monumentality, Landscape and the Temporal Perspective. Proceedings of the International Workshop "Socio-Environmental Dynamics over the Last 12,000 Years: The Creation of Landscapes II (14th–18th March 2011)" in Kiel*, Bonn, Rudolf Habelt, 23–44.

Weeks, L. 2000
Metal Artefacts from the Sharm Tomb (1), *Arabian Archaeology and Epigraphy* 11, 180–198.

Weeks, L. 2004
Early Metallurgy of the Persian Gulf: Tehcnology, Trade, and the Bronze Age World, Boston, Bill.

Wegewitz, W. 1972
Das langobardische Brandgraberfeld von Putensen, Kreis Harburg, *Die Urnenfriedhofe in Niedersachsen* 10, Hildesheim, August Lax.

Weisgerber, G. 1980
"...und Kupfer in Oman" – Das Oman-Projekt des Deutschen Berbau-Museums, *Der Anschnitt. Mitteilungsblatt der Vereinigung der Freunde von Kunst und Kultur im Bergbau* 32/2–3, 62–110.

Weisgerber, G. 1981
Mehr als Kupfer in Oman – Ergebnisse der Expedition 1981, *Der Anschnitt. Mitteilungsblatt der Vereinigung der Freunde von Kunst und Kultur im Bergbau* 33/5–6, 174–263.

Weisgerber, G. 1987
Archaeological Evidence of Copper Exploitation at 'Arja, *The Journal of Oman Studies* 9, 145–172.

Weisgerber, G. 1991
Archäologisches Fundgut des 2. Jahrtausends v. Chr. in Oman. Möglichkeiten zur chronologischen Gliederung?, in: K. Schippmann – A. Herling – J.-F. Salles (Hrsg.), *Golf-Archäologie: Mesopotamien, Iran, Kuwait, Bahrain, Vereinigte Arabische Emirate und Oman*, *Internationale Archäologie* 6, Göttingen, Universität Göttingen, 321–330.

Weisgerber, G. 2010a
BAT WHM Annex 1. Sensational Archaeological Finds form Survey, Restoration, Geophysics and Excavation Work [unpublished, circulated report Deutsches Bergbaumuseum Bochum].

Weisgerber, G. 2010b
BAT WHM Annex 2. Sasanian Finds from Bat, Tomb 110 C [unpublished, circulated report Deutsches Bergbaumuseum Bochum].
Weisgerber, G. – Böhme, M. – Heckes, J. 2007
BAT World Heritage Monument. Frühjahr 2007 Bericht [unpublished, circulated report Deutsches Bergbaumuseum Bochum].
Weisgerber, G. – Böhme, M. – Heckes, J. 2008
BAT World Heritage Monument Frühjahr 2008 Bericht [unpublished, circulated report Deutsches Bergbaumuseum Bochum].
Weisgerber, G. – Heckes, J. – Niederhagemann, S. – Böhme, M. 2005
Dokumentations-, Restaurierungs- und Forschungsprojekt in Bat (Oman) seit 2004 [unpublished, circulated report Deutsches Bergbaumuseum Bochum].
Weisgerber, G. – Yule, P. 1989
The First Metal Hoard in Oman, in: K. Frifelt – P. Sørensen (eds), *South Asian Archaeology 1985*, London, Curzon Press, 60–61.
Weiss-Krejci, E. 2015
The Plot Against the Past. Reuse and Modification of Ancient Mortuary Monuments as Persuasive Efforts of Appropriation, in: M. Díaz-Guardamino – L. García Sanjuán – D. Wheatley (eds), *The Lives of Prehistoric Monuments in Iron Age, Roman, and Medieval Europe*, Oxford, Oxford University Press, 307–324.
Whitley, J. 2002
Too Many Ancestors, *Antiquity. A Quarterly Review of Archaeology* 76/291, 119–126.
Wilkinson, J. C. 1977
Water and Tribal Settlement in South-East Arabia. A Study of the Aflāj of Oman, Oxford, Claredon Press.
Wilkinson, T. J. 1983
The Origins of the Aflaj of Oman, *The Journal of Oman Studies* 6, 177–194.
Willcox, G. – Tengberg, M. 1995
Preliminary Report on the Archaeobotanical Investigations at Tell Abraq with Special Attention to the Chaff Impressions in Mud Brick, *Arabian Archaeology and Epigraphy* 6, 129–138.
Williams, H. 1997
Ancient Landscapes and the Dead: The Reuse of Prehistoric and Roman Monuments as Early Anglo-Saxon Burial Sites, *Medieval Archaeology. Journal of the Society for Medieval Archaeology* 41, 1–32.
Williams, H. 1998a
The Ancient Monument in Romano-British Ritual Practices, in: C. Forcey – J. Hawthorne – R. Witcher (eds), *TRAC 97: Proceedings of the Seventh Annual Theoretical Roman Archaeology Conference*, Oxford, Oxbow Books, 71–86.
Williams, H. 1998b
Monuments and the Past in Early Anglo-Saxon England, *World Archaeology* 30/1 *The Past in the Past: The Reuse of Ancient Monuments* 90–108.
Williams, H. 2003a
The Archaeology of Death, Memory and Mateiral Culture, in: H. Williams (ed.), *Archaeology of Remembrance. Death and Memory in Past Societies*, New York, Kluwer Academic/Plenum, 1–24.
Williams, H. 2006
Death and Memory in Early Medieval Britain, *Cambridge Studies in Archaeology*, Cambridge, Cambridge University Press.
Williams, K. D. – Gregoricka, L. A. 2013
The Social, Spatial, and Bioarchaeological Histories of Ancient Oman Project: The Mortuary Landscape of Dhank, *Arabian Archaeology and Epigraphy* 24, 134–150.
Williams, K. D. – Gregoricka, L. A. 2016
Excavation of the Wadi Suq Tombs at Tower 1156, in: C. Thornton – C. Cable – G. L. Possehl (eds), *The Bronze Age Towers at Bat, Sultanate of Oman: Research by the Bat Archaeological Project, 2007–12*, *Museum Monographs (University of Pennsylvania. University Museum)*, Philadelphia, University of Pennsylvania Museum of Archaeology and Anthropology 303–308.
Williams, K. D. – Gregoricka, L. A. 2019
The Hafit/Umm an-Nar Transition of the Third Millennium BC. Evidence from Architecture and Mortuary Ritual at Al Khubayb Necropolis, in: K. D. Williams – L. A. Gregoricka (eds), *Mortuary and Bioarchaeological Perspectives on Bronze Age Arabia*, Florida Scholarship Online, 76–107.
Williams, K. D. – Gregoricka, L. A. 2020
New Evidence of Prehistoric Tomb Diversity in Dank, Oman, *The Journal of Oman Studies* 21, 102–127.
Williams, M. 2003b
Tales from the Dead. Remembering the Bod Bodies in the Iron Age of North-Western Europe, in: H. Williams (eds), *Archaeologies of Remembrace. Death and Memory in Past Societies*, New York, Kluwer Academic/Plenum, 89–112.
Winter, J. 2001
The Memory Boom in Contemporary Historical Studies, *Raritan* 21/1, 52–66.
Yoffee, N. 2007
Peering into the Palimpset. An Introduction to the Volume, in: N. Yoffee (ed.), *Negotiating the Past in the Past: Identity, Memory, and Landscape in Archaeological Research*, Tuscon, University of Arizona Press, 1–9.
Yule, P. 1994
Grabarchitektur der Eisenzeit im Sultanat Oman, *Baghdader Mitteilungen* 25, 519–577.
Yule, P. 2001
Die Gräberfelder in Samad al Shān (Sultanat Oman). Materialien zu einer Kulturgeschichte, *Orient-Archäologie* 4, Rahden/Westf., Marie Leidorf.
Yule, P. 2014
Cross-roads. Early and Late Iron Age South-Eastern Arabia, *Abhandlungen der Deutschen Orient-Gesellschaft* 30, Wiesbaden, Harrasssowitz.
Yule, P. 2016
Valorising the Samad Late Iron Age, *Arabian Archaeology and Epigraphy* 27, 31–71.
Yule, P. 2018
Toward an Identity of the Samad Period Population (Sultanate of Oman), *Zeitschrift für Orient-Archäologie* 11, 438–486.

Yule, P. – Vogt, B. 2020
Do South-Eastern Arabia's Earliest Extant Copper-Alloy Arrowheads date to the Wadi Suq Period?, *Journal of Global Archaeology*, 1–49.

Yule, P. – Weisgerber, G. 1996
Die 14. Deutsche Archäologische Oman-Expedition 1995, *Mitteilungen der Deutschen Orient-Gesellschaft* 128, 135–155.

Yule, P. – Weisgerber, G. 1998
Prehistoric Tower Tombs at Shir/Jaylah, Sultanate of Oman, *Beiträge zur Allgemeinen und Vergleichenden Archäologie* 18, 183–241.

Yule, P. – Weisgerber, G. 2001
The Metal Hoard from ʾIbrī/Selme, Sultanate of Oman, *Prähistorische Bronzefunde. Abteilung 20* 7, Stuttgart, Steiner.

Zelizer, B. 1995
Reading the Past against the Grain: The Shape of Memory Studies, *Critical Studies in Mass Communication* 12, 214–239.

Zerubavel, E. 2003
Time Maps. Collective Memory and the Social Shape of the Past., Chicago/London, University of Chicago Press.

Zimmermann, T. 2010
Verbogen, zerschlagen, zerhackt – Spuren ekstatischer Inszenierungen in frühbronzezeitlichen Gräbern Anatoliens, *Colloquium Anatolicum* 9, 367–380.

Zintl, S. 2017
Grabraub? Graböffnungen und ihre Erklärung, in: S. Brather (Hrsg.), *Recht und Kultur im frühmittelalterlichen Alemannien. Rechtsgeschichte, Archäologie und Geschichte des 7. und 8. Jahrhunderts*, *Ergänzungsbände zum Reallexikon der Germanischen Altertumskunde* 102, Berlin/Boston, De Gruyter, 239–255.

Zintl, S. 2019
Frühmittelalterliche Grabräuber? Wiedergeöffnete Gräber der Merowingerzeit, *Regensburger Studien* 24, Regensburg, Stadtarchiv Regensburg.

Ziolkowski, M. C. 2001
The Soft Stone Vessels from Sharm, Fujairah, United Arab Emirates, *Arabian Archaeology and Epigraphy* 12/1, 10–86.

People in the past were always confronted with surviving remains from previous periods, and reacted to and engaged with them in varying ways. One activity through which this becomes visible is the reuse of tombs. If this reuse is an intentional reference to the past, it explicitly communicates meaning and thus cultural memory. In Eastern Arabia, however, this phenomenon received little attention in archaeological research, often having been discounted by the excavators as a disturbance to the first use of a tomb.

This book will investigate reuse of tombs from the beginning of the Early Bronze Age until the end of the Sasanian period in order to understand the underlying purposes and social context of this practice. In Eastern Arabia, where the adding of new burials to the original content of the tomb is common, such reuse might have functioned to make sense of the present, to give orientation in new situations and to help shape a cultural identity. Reuse occurred more often in the Iron Age and Samad/PIR periods than in all other periods investigated, combined. These are also times of visible social hierarchies. The resulting tensions made counter-measures that both promoted social cohesion and group identity and legitimised the role of the elites necessary. This might have been achieved through creating cultural memory by reusing old tombs.

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