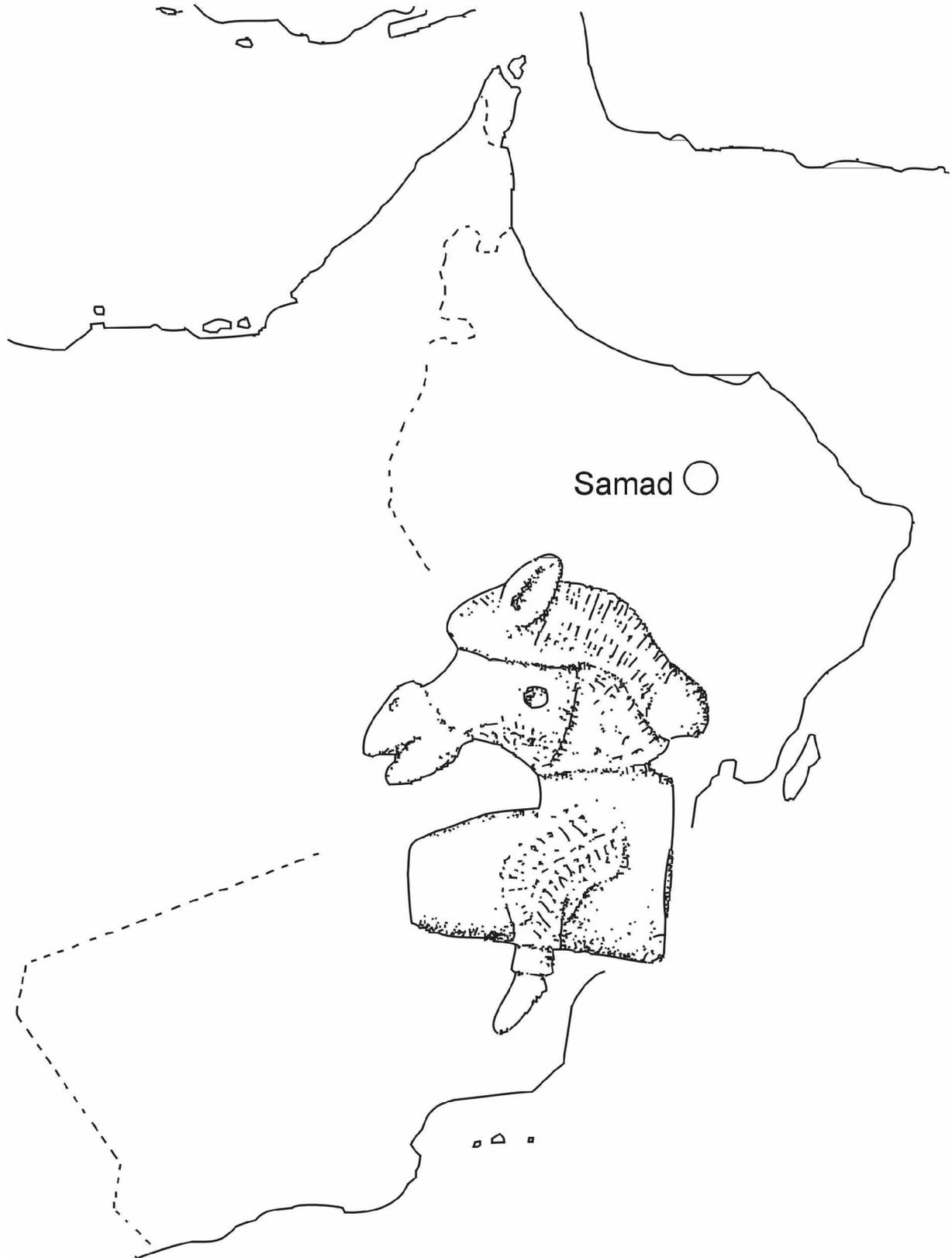


# Samad ash-Shan Preliminary Report 1988



**SAMAD ASH-SHAN**

**Excavation of the Pre-Islamic Cemeteries**

Preliminary Report 1988

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## **Contents**

Foreword	5
Introduction	6
Survey	8
Newly Discovered Sites in Samad	9
Cultural Resource Management	10
The Cemeteries	12
Main Types of Pre-Islamic Graves in Oman	17
Pottery	18
Stone Vessels	25
Metalwork	26
Other Finds and Chronology	30
Distribution of the Samad Culture	35
Late Iron Age Sites in Eastern Arabia	39
Burial Customs	40
Foreign Contacts	41
Catalogue of Selected Graves	42
Bibliography	55

Cover: mouthpiece of a drinking vessel, Sama'il

## Figures

- Fig. 1 Map of the Samad area, scale 1:20.000  
Fig. 2 Plan of the Samad Cemetery 21  
Fig. 3 Main types of Pre-Islamic graves, scale 1:100  
Fig. 4 &5 Selected Samad Period pottery scale 1:3 & 1:4  
Fig. 6 Selected script signs on pottery  
Fig. 7 Selected soft stone vessels, scale 1:3  
Fig. 8 Selected Samad Period metallic artefacts, scale 1:3  
Fig. 9 Selected Samad Period earring and beads, scale 1:1  
Fig. 10 Late Iron Age sites in Eastern Arabia  
Fig. 11 Sketch map of the early historic cemetery at Izki  
Samad grave 2138, scale 1:25 + finds  
Samad grave 101124, scale 1:25 + finds  
Samad grave 2202, scale 1:25 + finds  
Maysar grave 803, scale 1:50 + finds  
Samad grave 2144, scale 1:25 + finds

## Foreword

The following preliminary report is intended to outline the results of an excavation and survey project which from 1980 to 1988 successfully was carried out in Samad ash-Shan. The Late Iron Age burial customs of Eastern Arabia are emphasized. Following a pause of five years in 1987 with the kind permission of H.H. Sayyid Faisal Ibn Faisal al-Bu Said, Minister of National Heritage and Culture, and the active support of the Director of the Antiquities Department, Dr Ali Ahmed Bakhit al-Shanfari, the work was resumed in Samad. We are greatly obliged to them and the members of the Department of Antiquities for their active support. Three publications have presented results of the first field seasons at Samad<sup>1</sup>, and our purpose here is to complement these studies in greater detail than has been possible thus far.

We extend our gratitude to the Deutsche Forschungsgemeinschaft which bears the lion's share of the financing. Smaller contributions were made by the Deutsches Bergbau-Museum, Herrn Gerd Moeller of Bonn, the American Philosophical Society, and an anonymous source. Several individuals freely offered their time and talent for special studies. These include Prof Dr Manfred Kunter (physical anthropologist), Prof Dr Wolfgang Taute and Dr Jürgen Freundlich of the radiocarbon laboratory of the Universität Köln, Prof Dr Dieter Eckstein, Ordinariat für Holzbiologie, Universität Hamburg, Mrs Emily Glover of London (malacologist), Dr Karen H jgaard (dental anthropologist), Prof Dr H.-P. Uerpmann (archaeozoologist) Universität Tübingen, Dr Rainer Hutterer of the Museum Alexander Koenig (small mammal zoologist), Heinrich Schnitzler (restorer and graphic artist) Universität Bonn, and last but not least Martin Bemmann MA, whose support has been substantial in many ways. Major Bill Foxton offered us the hospitality of the SAF Aqua Club. Zenith Data Systems, Lufthansa and Bayer Leverkusen provided firm support to the project. Other colleagues provided advice which better enabled us to plan and coordinate the project. These include Prof Dr Harald Hauptmann, Universität Heidelberg, Prof C.C. Lamberg-Karlovsky, Peabody Museum, Harvard University, Merilyn Phillips Hodgson, American Foundation for the Study of Man, Prof Maurizio Tosi, University of Naples, Prof Dr Klaus Schippmann, Universität Göttingen, Dr Karen Frifelt, Prehistoric Museum Moesgaard, Dr Serge Cleuziou, Université Paris I, Dr Remy Boucharlat and Dr Pierre Lombard, Maison de l'Orient Lyon, and Dr Burkhard Vogt recently of the Deutsches Archäologisches Institut.

The catalogue part of the report is highly detailed because of the newness of this archaeological material. The colours of the pottery are indicated with the textual and numerical designations of the Munsell Color Chart in the catalogue entries.

All of the graves mentioned are in Samad, if not otherwise designated.

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<sup>1</sup> G. Weisgerber 1981, 1982; B. Vogt 1984.

## Introduction

Investigations in and around the Samad and al-Maysar (pronounced May-sar) oases, some 140 km south of the capital of the Sultanate, are not new. Some of the settlement sites including Maysar 1 and 25, near the village of Maysar, had been visited in the early 1970's by an expedition from Harvard University as a part of their survey activity of much of Oman.<sup>2</sup> Samad/Maysar also was surveyed by the British survey team of Beatrice de Cardi and Brian Doe which favoured the Sharqiyah at this same time.<sup>3</sup> They do not mention the particular cemeteries which became the emphasis of our work although they surveyed others in the immediate area.

Initially in 1979-81 the archaeological work of the German Mission centred on the excavation of the metal-producing Maysar-1 (last phase c. 2000 BC). In 1981 intensive surveys of the immediate area also were conducted. For the first time settlements and cemeteries of the Late Iron Age came to light. Some 1200 Late Iron Age mounds were mapped in Samad ash-Shan in the cemetery later designated Samad 10. This work then was discontinued for lack of time. A few graves exposed through erosion were cleared, and a hitherto unknown kind of pottery, the earliest accompanied by iron implements, came to light. The excavations were minimally expanded in order to obtain a dating instrument (i.e. the pottery) which would aid in ordering the finds from the mining and smelting complexes which were the main objective of the expedition. Owing to the gradual but incessant gnawing away of the cemetery through the present building boom, and its resulting enormous urban expansion the Ministry of National Heritage and Culture supported two seasons of excavation, placing workers at our disposal. As a result Burkhard Vogt salvaged and recorded 60 graves. Without exception the burials were subterranean stone cists with contracted skeletons. Some lay exposed and had been robbed, sometimes more than once. Only further excavations and an intensive evaluation of the finds would yield reliable information for the chronology. Exemplary, however, were an Achaemenid bronze bowl, Hellenistic/Seleucid period oil bottle and pilgrim flasks, as well as a sword similar to Parthian ones.

Little was known of the Arabian Iron Age material culture except for isolated objects. The literature pertaining to the Iron Age and particularly the Late Iron Age stood in the shadow of the rapidly expanding literature on the history and archaeology of Magan of the late 3rd and 2nd millennia. Although historical accounts such as those of Tabari<sup>4</sup> and Baladhuri<sup>5</sup>, and classical sources (see below), impelled excavations in the 1950's in Sohar on the Batina coast and Sumhuram (ancient Khor Rory) on the Dhofar coast, the results thereof are only partly published, and do little to illuminate the history and archaeology of the area.<sup>6</sup> Nor do these two excavations cover more than a fraction of the entire estimated 1000+ year timespan of the Samad Culture. A major research priority is to fix this period chronologically and to follow its

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<sup>2</sup> J.H. Humphries 1974; A. Hastings/J.H. Humphries/R.H. Meadow 1975. For the site designations see G. We

<sup>3</sup> D.B. Doe 1977, 35-57.

<sup>4</sup> At-Tabari/M.J. de Goeje 1879-1901, i, 1686; J.C. Wilkinson 1973, 40.

<sup>5</sup> Al-Baladhuri/M.J. de Goeje 1866, 76; J.C. Wilkinson 1973, 40.

<sup>6</sup> F.P. Albright 1982; R. Cleveland 1959.

development. At least a glimpse of what to expect of the grave architecture and pottery was documented by the work of K. Frifelt<sup>7</sup>, B. de Cardi<sup>8</sup>, S. Cleuziou<sup>9</sup>, and I. Salman.<sup>10</sup>

Chronological anchoring points were few indeed. For the millennium straddling the turning point of time we could say little more than that the historical sources clearly indicated the eastern Arabian coast, or Mazun as known by the Achaemenids and Sasanians, as being under Iranian hegemony.<sup>11</sup> But this historical situation had hardly revealed itself in the archaeological materials. The prehistory and early history of the area needed study, and could only be explained in the context of the happenings in the entire region. Modern political boundaries reveal little of the struggles which took place prior to the arrival of Islam in what has become the Sultanate - of the wandering of tribes in and out of Oman, and their incursions even into Iran. In the last few years other colleagues have taken up the study of the Late Iron Age in the Gulf region, particularly in the United Arab Emirates.<sup>12</sup>

Particularly in and around Samad it has been possible to construct a rough pottery chronology especially for the absolute chronology of the retardataire bronze-using Lizq and iron-using Samad Periods.<sup>13</sup> In the Lizq fortress, 12 km south of the Samad oasis a partial clearing of the ruins brought to light a single culture site dating to the earlier part of the Iron Age.<sup>14</sup> The Lizq cultural assemblage, particularly the pottery, is comparable with that of Dibba<sup>15</sup>, Rumeilah<sup>16</sup>, and Hili<sup>17</sup> in the Emirates which were excavated by a French team. The Samad Culture,

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<sup>7</sup> 1975.

<sup>8</sup> 1976.

<sup>9</sup> 1979, 30-45.

<sup>10</sup> 1974.

<sup>11</sup> D.T. Potts 1986, 81-95.

<sup>12</sup> Cf. R. Boucharlat/J.-F. Salles 1984.

<sup>13</sup> The terminology used here for the different periods is as follows rests in part on typological-areactual definitions of periods:

Hafit	3000-2700 BC
Umm an-Nar	2700-2000
Wadi Suq	2000-1600
al-Wasit	1600-1400
Nizwa	1200-1000
Lizq	1000-500
Samad	500BC-600 AD
Islam	>622AD

<sup>14</sup> G. Weisgerber 1981; *ibid.* n.d.; S. Kroll n.d.

<sup>15</sup> Karen Frifelt of the Prehistoric Museum in Moesgard kindly allowed us to examine the mostly Early Iron Age survey material from Dibba.

<sup>16</sup> R. Boucharlat/P. Lombard 1984.

<sup>17</sup> Saeed ur-Rahman 1979, 8-18; S. Cleuziou 1979, 30-45.

named eponymously after the place of its original discovery, is known largely from Samad and Maysar, although several other sites have yielded finds which fix this culture spatially and temporally (see below).

For the history and archaeology of central Oman during the Late Iron Age, i.e. prior to the coming of the Prophet, a positive step forward was taken by J.D. Wilkinson in his study of Oman's traditional irrigation system, the falaj.<sup>18</sup> By means of a bold hypothesis he argues the introduction of the falaj from Persia to develop and better exploit the land in the first half of the first millennium BC, a period of considerable prosperity necessary for the very building of the aflaj. Accordingly, first they spread on the western side of the Jebel Akhdar and then through new building techniques to the more rugged eastern side. His description of Late Iron Age relations between the sedentary Iranian-influenced Omanis (majus), migrating Azd tribesmen, and Persian invaders as, "...a 'Persian' system with an 'Arab' overlay... at a time when the one gave way to the other" rests on Arab authors, the national epic of Malik bin Fahm Azd, geographic observations, and a keen historical analysis. These form the basic fabric for a local history of the area. Nonetheless, Wilkinson's hypothesis neither can be confirmed nor denied despite several seasons of intensive archaeological work which the Deutsches Bergbau-Museum has conducted in the Sharqiyah Province. Our continued use of the term Samad Culture reflects the indigenous identity of the artefactual assemblage, despite the presence of affinities, local imitations of foreign goods and foreign imports.

For all of the reasons just articulated - those of chronology, ethnic identity, and history - and owing to the opportunity to cull a maximum amount of information with a minimum investment of time and other resources, we chose to continue the work in Samad and not elsewhere in the Oman peninsula.

## Survey

The surveys of 1987 and 1988 in and around Samad revealed a large number of prehistoric to subrecent sites, which complemented the excavations. During the course of the surveying we continued and modified the system of numbering for the sites in order systematically to designate the newly found sites.

The procedure is as follows: The sites are serially numbered, and the first two digits (10, 11, 20, 21 etc.) designate the place which is excavated. A third, fourth, and in several cases a fifth digit designate the individual grave (e.g. 2602, 101040). This system enables an easy means of notation because through the first two digits it is always clear which cemetery in Maysar/Samad is being referred to.

Developments in the understanding of the sizes and shapes of places ancient and modern, refinements in the rendering of local place names, and the discovery of new sites have necessitated an updating of the references to sites here over previous publications.<sup>19</sup> The changing of sites previously designated Maysar back to Samad reflects a firmer understanding of the local geography with the help of local informants.

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<sup>18</sup> J.D. Wilkinson 1973, 40-51; *ibid.* 1977.

<sup>19</sup> G. Weisgerber 1981, 176-180.

### **Newly Discovered Sites Based on the Surveys Conducted 1987 in Samad ash-Shan<sup>20</sup>**

**Site 1:** Hill settlement west of the northernmost part of the Samad oasis, some 400 m west of the Khubib fortress (site 4). Pottery sherds collected here are of the Lizq and Samad Periods.

**Site 2:** Abandoned villages of the modern period south of site 1, and to the west of the oasis.

**Site 3:** Watch towers with connecting fortification walls. Located between sites 1 and 2.

**Site 4:** Khubib fortress in the Wadi Samad, north of the Wadi Dhaadha. Well preserved, should be restored.

**Site 5:** Main fort in the northern part of the Samad oasis, c.300m northwest of the Khubib fortress.

**Site 6:** Recently abandoned settlement ruins in the westernmost part of the Samad oasis at the foot of the Jebel Saoq.

**Site 7:** Late Iron Age possible hill fort and settlement just west of the Samad oasis.

**Site 9:** Bronze Age cairns south of Samad near the Mudaiby road at the mouth of the wadi Hars, at the top of the hills.

**Site 10:** Formerly known as Maysar-9. Several large groups of graves, mostly of the Samad Period. The village is known locally as al-Mamorah, also referred to as Maysar jedeed.

**Site 19:** In the triangle formed between the Wadi Samad, the Mudaiby road, and the hill to the north of the al-Mamorah houses; south of the Islamic cemetery here lie at least three Lizq/Samad graves.

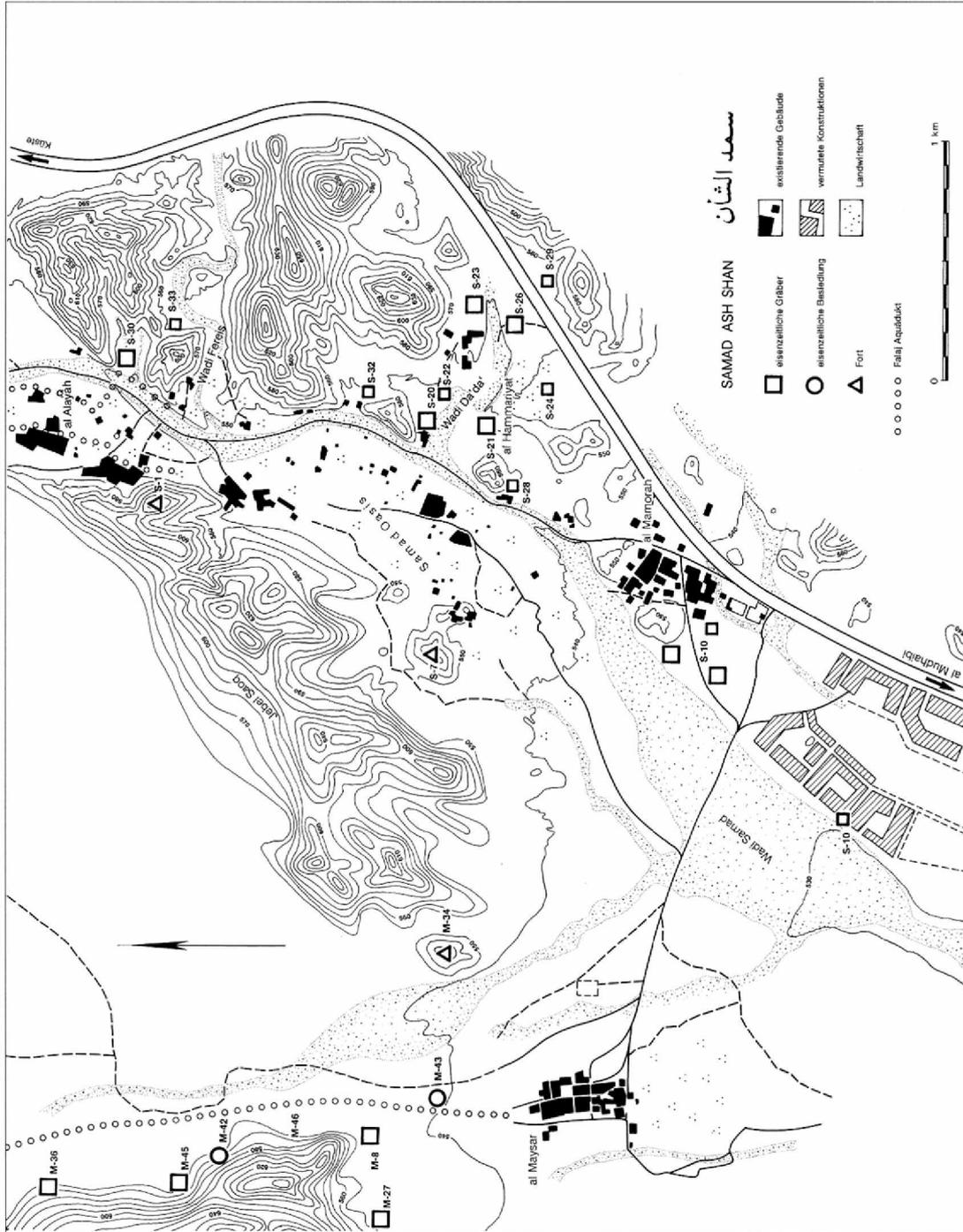
**Site 20:** Wadi Suq and Samad graves on the northern embankment of the Wadi Dhada in front of the house of Mohammed Hamud. The 17 graves excavated by us are numbered 2004 - 2020.

**Site 21:** Cemetery of the Wadi Suq and Samad Periods on the wadi embankment opposite site 20. Cemetery 21 borders a large Islamic necropolis. The early burials hitherto excavated are numbered 2100 to 2188.

**Site 22:** Lizq Period cemetery covering the rocky hill east of site 20, and northeast of site 21. The valley to its immediate north also belongs to this site. To the east the valley walls contain at least four Hafit graves (site 27). Four graves were salvaged here (2200-2203) in 1987.

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<sup>20</sup> Given the emphasis of the present report on the Late Iron Age, not all of the sites logged here appear on the map Fig. 1. This map is based on plan 804 contracted by the Ministry of Housing, Muscat. Contour lines are based on photogrammetric evaluation conducted by the Department of Photogrammetry of the German Mining Museum Bochum on the basis of aerial photos produced in 1981 by B.K.S. Surveys Ltd, Muscat. Scale of the photos approx. 1:10000; sites plotted by terrestrial surveying.



**Site 23:** Here to the east of site 22, Lizq and Samad graves are numerous. Toward the east the Lizq graves dominate. Covered by recent house construction and gardening. The graves excavated in 1988 are designated 2301-2310.

**Site 24:** Samad and Lizq graves southwest of and in a large garden lying on the south side of the wadi Dhaadha. This site borders on the new motorway which was finished in 1988. Test trenches revealed no anthropogenic remains.

**Site 26:** The eastern extension of this same cemetery, east of the garden, and on the south bank of the wadi Dhaadha; disturbed by road construction. The graves excavated in 1982 are designated 2600-2604. The 12 Late Iron Age graves investigated in 1988 are designated 2606-2608, 2610-2617.

**Site 27:** Four Hafit graves in the hills east of the valley site 22.

**Site 28:** Samad graves exposed by erosion in the small wadi southwest of the Jebel Buselah. The surrounding terraces are covered by Islamic graves which are encroaching on the early burials. The caves in the Jebel Buselah also belong to this date. Grave 2800 excavated.

**Site 29:** Cairns of the Hafit period lie atop the mountain to the southeast of the large garden of Saef Muhammad Suleiman al-Wardi.

**Site 30:** Mendessa valley to the east of the wadi Samad at its northern extension. Here between the Jebel al-Khubib and the Jebel al-Bilush erosion has exposed several Samad Period graves. Within the Islamic necropolis here structures made of very large boulders which are not datable also occur especially on the north valley slope. In 1987 four graves were investigated (3001-3004); in the following year 21 others also of the Samad Period received attention (3005, 3008-3023, 3026-3030).

**Site 31:** Prehistoric graves in the Wadi al-Freis on the western slope opposite the wadi Samad oasis between sites 30 and 4.

## **Cultural Resource Management**

Several factors condition which sites are selected for excavation. Justification for the choice of a grave or settlement for investigation rests on the desire to combine the positive aspects of rescue dictated operations with the requirements of specific research strategies. These evolved and changed during the course of the field work as our knowledge of the sites and periods developed. Everywhere in the vicinity of the Samad oasis prehistoric and historic monuments are vanishing, usually by serving as a source of building material - the stones are sold by materials contractors to construction firms. The quarrying, or better put, robbing of stones from archaeological monuments, wild building, and general urban expansion are on the increase with no end in sight. Thus, of the site Maysar 3 where in 1981 128 graves were tallied<sup>21</sup>, in 1987 only 60 survived. Where the graves, darkened by the ever-present desert patina, once had been sadly are now only light-coloured patches of bare ground. Where the 1981-82 excavation around Samad took place the new village of al-Mamorah had expanded and houses and gardens have displaced part of the cemetery. An extension for the building stop is increasingly difficult to enforce. Furthermore, a large building project sponsored by

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<sup>21</sup> G. Weisgerber 1981, 176.

the the Ministry of Housing soon shall begin, resulting in the destruction of the numerous Samad graves documented to the south of the al-Mamorah settlement.

On the property of Mohammad bin Salim bin Ali al-Wahahy in March 1988 we were successful in imposing a 10 day building halt in order to salvage 10 graves which were in the midst of succumbing to gardening (Samad 23). At the end of the same season some 200 m south of the cemetery Samad 21 an area comprising some several hundred square metres which contained about a hundred mounds, evidently grave remains, was graded. Before the grading could be halted the damage was complete. Only acutely endangered surfaces are selected by us for excavation.

The main Iron Age settlements lay at least partly in the present day oases, and are therefore inaccessible and badly disturbed.

In cooperation with the Department of Antiquities four areas were placed provisionally under protection: the Iron Age fortress and associated burials in Lizq, the Cemetery 21 in Samad, and the Early Iron Age graves of Bilad al-Maadin.

## The Cemeteries

A detailed account the excavation and its results is not intended, rather some of the highlights of the seasons up to 1988 are overviewed. While the emphasis of the excavation is the Late Iron Age, during the course of the excavation it proved impossible and not even desirable a priori to determine which of the graves belong to the Samad Culture and which predate it. This was particularly true of the cemetery at Samad 21 which is to be recovered completely. Based solely on the small finds (and not the architecture) the preliminary datings for all the graves investigated since 1980 can be summarized in the following table:

	Percent	examples
Wadi Suq	16	39
Lizq	7	18
Samad	49	120
undated	<u>28</u>	<u>69</u>
	100%	246 graves

The graves in terms of the present state of research designated as "undated" usually contain few or no identifying finds. Nearly all are subterranean stone cists such as best known from the Wadi Suq and Samad Periods.

Except for the cemetery 30, where almost no bones are preserved probably resulting to the highly acid soil (pH 3-4), preservation of the osteal remains is good. A fair number of the Samad graves are nearly intact<sup>22</sup>, and despite having been robbed, others are still rich in finds.<sup>23</sup> Compared to European prehistoric and early historic cemeteries, which locally range

<sup>22</sup> Graves M802; Samad 10679, 2159, 2172, 2183, 2185, 2306, 2607, 2613, 2615, 3010, 3011, 3017b, 3018, 3020, 3023.

<sup>23</sup> Especially Graves 2020 and 3004.



between virtually untouched to completely exploited, the Samad cemeteries are relatively well preserved.<sup>24</sup> Our impression is that the cemeteries in Samad yield more finds than those in other parts of eastern Arabia which we have visited. To judge from skeletons disturbed but with joints still intact, some of the grave robbing took place within a few years of the burial. Perhaps the cemeteries could not always be watched. Naturally the burials of the earlier periods are those least likely to survive. E.g. in Samad 21 one or two Umm an-Nar sherds have turned up, but no graves. While more than twice as many male as female skeletons from the Samad Period have survived, paradoxically womens' burials are better preserved: Poorer, they were less attractive to the robbers. Precious (cf. Fig. 8) and ferrous metal, perhaps as raw materials, could more easily be obtained by robbing than by mining and smelting. Graves which contained neither finds nor osteal materials may have been emptied more than once.

The main cemeteries which have been investigated are briefly described below.

### **Cemetery Maysar 8**

Discovered during the early 1980's, this small burial ground lies 600 m W of the Samad Period hill fort Maysar 34, as well as settlements 42 and 43.<sup>25</sup> The graves are strewn across an outwash plain eroded from the overlooking bluff to the north. Interments date from the Bronze Age into the Late Iron Age. In 1988 three graves were investigated here (801-803).

### **Cemetery Maysar 27<sup>26</sup>**

Located at the NE foot of a mountain some 850 m W of the ancient and modern path of the falaj and the Samad Period settlements just mentioned, this small cemetery contained some 20 graves of which two were investigated in 1980 (17 and 20). The graves represented were of the standing pillbox type, and not cist graves. Owing to their poor preservation the original grave form cannot be reconstructed. The few finds consisted of incised softstone vessels, bronze arrowheads and hand-made black on red painted pottery of the earlier part of the Iron Age. From the immediate area of the excavation numerous round beads of several materials and spindle whirls occurred.

### **Cemetery Maysar 36<sup>27</sup>**

The northernmost of the cemetery and settlement sites to the north of the modern village of Maysar, Maysar 36 is located low on a eastern mountain slope. An estimated 70 graves lie here, most seem to have been freestanding and not subterranean. All are robbed and destroyed. Survey finds include objects diagnostic of the Lizq Period.<sup>28</sup> Excavation and survey were conducted in 1980.

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<sup>24</sup> E.g. the Frankish cemetery in Fremersdorf contained some 3% intact graves (oral information, Frank Siegmund). Usually the observation and reporting of find conditions particularly of old excavations is such that reliable estimates of grave robbing cannot be made.

<sup>25</sup> A. Tillmann and S. Kroll 1981, 223; G. Weisgerber 1981, 233-238.

<sup>26</sup> A. Tillmann and S. Kroll 1981, 225-226.

<sup>27</sup> A. Tillmann/S. Kroll 1981, 224-225.

<sup>28</sup> A. Tillmann/S. Kroll 1981, 224 fig. 60.

### **Cemetery Maysar 45<sup>29</sup>**

Lying in the gravel eroded from the E slope of the mountain some 150 m N of the Samad Period settlement Maysar 42, this small cemetery is comprised of cist graves sunk into the surface. No doubt it was the burial place for the adjacent contemporary settlement. The area was surveyed in 1980.

### **Cemetery Samad 10<sup>30</sup>**

Previously designated Maysar 9, this sprawling burial ground stretches along the SE bank of the Wadi Samad particularly between the modern village al-Mamorah and further SW to the junction where the dirt track leading off to the Maysar oasis crosses the edge of the wadi. It is composed of virtually hundreds of low mounds. Maysar lies on the other side of the wadi nearly 2 km away. The main concentration of graves extends irregularly over some 660 m; 700 m further south a few more graves cluster together. A third concentration lies about 150-200 m SE of the edge of the wadi. The vast majority of the graves are subterranean cists, and belong to the Samad Period. Between 1980 and 1982 Burkhard Vogt excavated 57 graves here, mostly of the Late Iron Age. In 1988 we were able to excavated five more.

### **Cemetery Samad 20**

In 1987 excavations began on the northern side of the wadi Dhaadha on a parcel of land directly in front of the house of Mohammed Hamud. Before our work began the area had been cleared twice with a grader. The upper parts of the graves are destroyed, and their floors lay relatively close to the surface. 50 m<sup>2</sup> were cleared preparatory to the excavation. Seventeen graves of the Wadi Suq and Samad Periods occurred not only on this place, but also behind the house and presumably beneath the houses of the neighbours as well. To the E lay an Islamic cemetery. In all 17 graves, mostly of the Samad Period were excavated.

### **Cemetery Samad 21 (Fig. 2)**

In 1987 opposite the cemetery just mentioned work also began on another of the same period on the NE edge of a Muslim necropolis. Manfred Kunter has calculated that as many as 40,000 Islamic burials are estimated here. The first "heathen" graves to be investigated lay on the fringe of the Islamic cemetery. In order to avoid the risk of disturbing the latter only some 15 graves on the very edge of the wadi were excavated. Surveying revealed a concentration of Bronze Age and Iron Age graves approximately 380 m to the SE. Some 900 m<sup>2</sup> of this particular cemetery to date have been cleared and excavated to date enabling the study of 65 graves. As presently known, about 60% of this cemetery has been excavated. The cemeteries 20 and 21 served no doubt the oasis dwellers.

While a rough division into Wadi Suq, Lizq, and Samad Periods is certain, the determining of the reuse of graves as well as a fine chronology for the cemetery remain to be worked out. With regard to the layout of the cemetery, Wadi Suq graves scatter throughout the entire cemetery and Samad Period graves preferentially are located at the foot of the hill and in the plain to the east. Lizq Period graves cluster at mid altitude. Higher up the slope to the west Wadi Suq graves are anticipated.

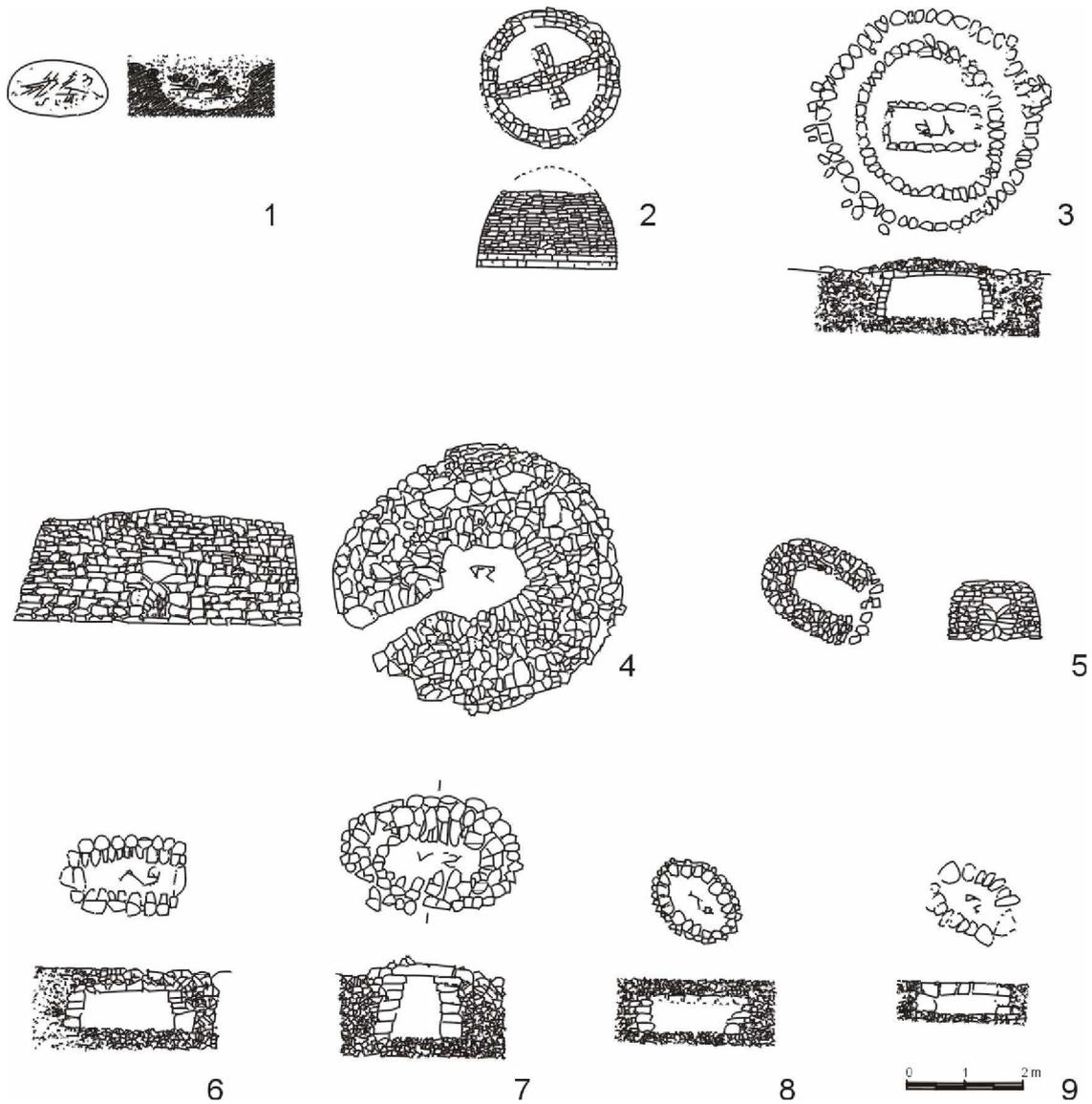
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<sup>29</sup> A. Tillmann 1981, 238-239.

<sup>30</sup> B. Vogt 1981, 239-243. Old Maysar 9a = new Samad 10; old Maysar 9b-Süd = Samad 20 and 21; old Maysar 9b-Nord = Samad 24.

### Cemetery Samad 30

Surveys which took place in the early 1980's indicated the graves of early and recent periods in this valley, east of the Samad oasis. Thus far the vast majority are of the Samad Period. But Umm an-Nar fine ware and prehistoric smelting remains also occur on the northern slope.



Main kinds of pre-Islamic graves in Oman Fig. 3

## Main kinds of Pre-Islamic Graves in Oman

It has been said axiomatically that the prehistory of Oman can be told on the basis of the grave architecture.<sup>31</sup> For Oman several types of graves are known which to varying degrees can be assigned to different periods. The simplest and earliest graves known in Oman are the numerous pit burials (1) and variants excavated by an Italian team in the cemeteries at the coastal site of Ras al-Hamra.<sup>32</sup> Calibrated radiocarbon determinations place the graves from the 4th to 2nd millennia BC.<sup>33</sup>

Architectural development is clear during the Hafit Period, and so-called Hafit, cairn and beehive tombs (2) dominate, terms which all refer to essentially the same kind of building structure. Beehive graves sometimes are distinguished from the larger body of Hafit graves on the basis of a "cleaner" masonry (Wadi Jizzi), and a more developed onion-like construction.<sup>34</sup> In plan Hafit graves are circular or nearly circular, and some may reach a maximum exterior diameter between 4 and 8 m.<sup>35</sup> The usually simple burial chamber ranges usually between 1 and 2.5 m in diameter. The preserved heights of the graves reaches 2 to 2.5 m. Several of these graves typically are perched on hill crests together as a group. Wholly characteristic of the Omani beehive tombs are the onion-like layered and corbelled superstructure of broken dry stone and large wadi stones. One to four individuals per grave occur.<sup>36</sup>

In the succeeding Umm an-Nar Period a new more elaborate kind of free standing tomb manifests itself typically with a smoothly dressed outer stone skin and a pebble or quarried stone filling. Circular in plan, the interior is usually divided by partition walls to accommodate the dead and their burial goods. Whether or not these tombs were igloo-shaped, or were truncated cannot be determined on the basis of the extant examples. Subtypes can be determined. Diameters vary between 5 and 12 m. As opposed to the graves of the preceding period, these lie directly in the vicinity of settlements.

In terms of funerary architecture the succeeding Wadi Suq Period poses a break with the Umm an-Nar tradition. For Oman small elongated subterranean stone cists sunk into the surface with room for a single individual dominate. Smaller child burials also occur. Large elongated communal graves predominate in the Emirates.<sup>37</sup> The roof stones lay usually just under the surface. In several cases<sup>38</sup> the grave chambers are encircled by a stone ring which may have served as a retaining wall for a small tumulus. The relation of the length to width of the subterranean chamber itself usually is 1:2. The chamber is built of round wadi stones. On the whole the cists of this period occur on the sides of hills or in the direct vicinity of wadis.

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<sup>31</sup> G. Weisgerber 1981, 181-183 fig. 6.

<sup>32</sup> M. Tosi 1982, 223-230, fig. 25; B. Vogt 1985.

<sup>33</sup> P. Biagi/W. Torke/M. Tosi/H.-P. Uerpmann 1984, 43-61.

<sup>34</sup> B. Vogt 1985, 92.

<sup>35</sup> B. Vogt 1985, 79.

<sup>36</sup> K. Frifelt 1975, 386.

<sup>37</sup> B. Vogt/U. Franke-Vogt 1987; P. Donaldson 1984.

<sup>38</sup> Gr. 2146, 2149, 2160, 2168, 2174, 2179.

In the succeeding Lizq Period freestanding, jerry-built, so-called pillbox graves seem to dominate, although cist graves frequently are reused, and this kind of grave possibly may have continued to be built. The diameter of the circular to oval plan is usually 2 to 3 m measured on the exterior, and heights between 1.5 and 2 m are known. Pillbox graves occur on flats or on the sides of hills.

The Samad Period witnesses a continuation of the tradition of small subterranean burial cists which contain one or more skeletons. Graves of this period range from 2 to 5 m in length, with the width far more constant. The roof stones may lie just beneath the present surface, or up to half a metre deep. From the chamber floor to the uppermost course of stones the distance may encompass 1 to 1.5 m. Different kinds of graves occur in the Samad Period, the main commitment of our work. They include children's graves, so-called bar graves, simple cists with distal access, as well as those in plan with rings formed of cantilever stones encircling the burial chamber. Other grave types may have existed at this time in Oman. The patina of a bronze wine service from Sumail<sup>39</sup> owes its existence to its survival in a dry atmosphere - not as expected in a Samad grave, but rather in a crypt. This kind of burial is not known in Oman, but examples exist in ed-Dur.<sup>40</sup>

### **Pottery** (Fig. 4, 5 and 6)

On the basis of regularly reoccurring techniques, fabric, vessel forms, and decoration the pottery excavated from the cemeteries in Samad allows a differentiation into Early and Late Iron Age wares. Local Lizq Period wares are fixed chronologically by the stylistically and typologically homogeneous material excavated from the Early Iron Age Lizq fortress. Pottery of this kind also occurs in quantity in Rumeilah<sup>41</sup> and other sites in the UAE. In Samad Lizq/-Rumeilah pottery is a hand-made, hard, clinky, lightly gritted ware.<sup>42</sup> It is easily distinguishable from the wheel-thrown and painted fine ware of the preceding periods. Dark slips are common, the palette of fabric-colours ranges from light red, reddish brown, reddish yellow, to yellowish light brown. Inside the vessel wall the fabric is not darkened by a reducing firing. The fine funerary ware consists mostly of bowls and cups with a penchant for a slightly constricted rim. Skeuomorphic metallizing thin-walled bowls as well as those occasionally with pouring spouts occur. At least three-quarters of the funerary pottery (more than the settlement pottery from Lizq) is painted, often with a reddish brown paint on a slipped ground. Standard is a painted rim and diagonal hatched zone or on more elaborate vessels a painted guilloche on the rim exterior. Typical painted interior decoration includes simple centrally radiating motifs, spare rectangles suspended from the rim, and hatched leaves. Grave 803 in Maysar contains this ware in concentration.

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<sup>39</sup> P. Yule/G. Weisgerber n.d.1.

<sup>40</sup> Unpub. C. Phillips kindly showed us the results of his excavations there.

<sup>41</sup> Cf. P. Lombard 1985, 172-188.

<sup>42</sup> The fabric of this ware is much harder in Lizq, Samad, and inner Oman than in the north of the Oman Peninsula and UAE.

### Samad pottery forms

- 1 Vat, DA 9359b, Gr. 2104, surface pinkish (7.5YR 7/4)
- 2 Stretched pitcher, slim, DA 8198, grave in al-Bustan, fabric grey (7.5YR 5/10), surface light brown (7.5YR 6/4) - dark brown (7.5YR 4/2), slip weak red (2.5YR 5/2)
- 3 Bellied vase, DA 9345, Gr. 3002, surface weak red (2.5YR 4/2) - light red (2.5YR 6/6)
- 4 Squat pitcher, DA 9343, Gr. 2161, reddish brown - light red (2.5YR 4/4-6/6)
- 5 Bottle, DA 9334, Gr. 2006, surface reddish yellow (5YR 7/6)

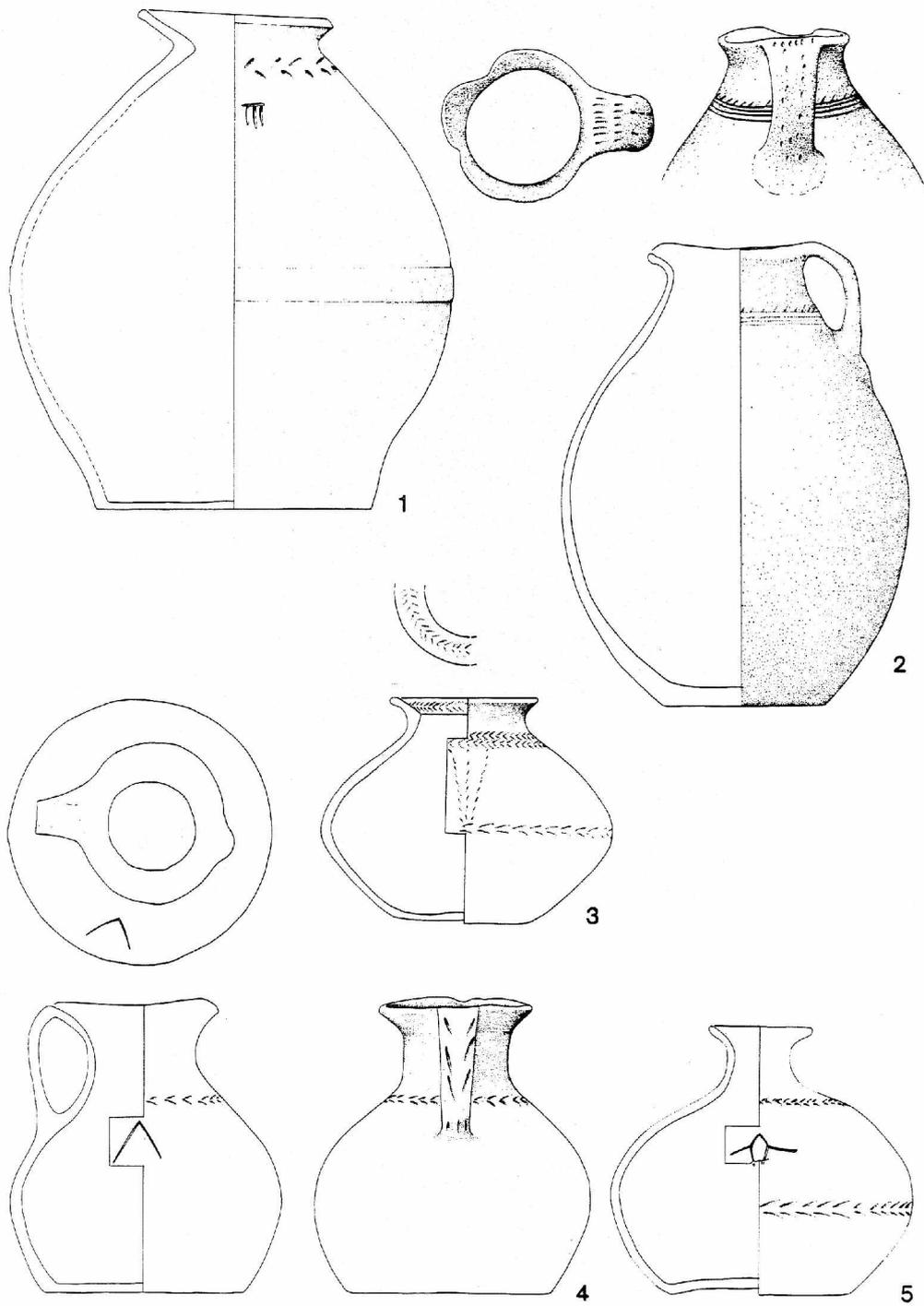


Fig. 4. Main forms. No. 3 scale 1:3. otherwise 1:4.

### Samad pottery forms

- 6 Balsamarium, DA 9576, Gr. 2127, surface very dark grey (7.5R 3/0)
- 7 Glazed perfume bottle, DA 9754, Gr. 3004, glaze yellow (2.5YR 8/8)
- 8 Small bottle, DA 10467, Gr. 3010, surface dark brown (7.5YR 4/4)
- 9 Miniature bottle, DA 9742, Gr. 3004, surface light red (2.5YR 6/6)
- 10 Bowl, DA 9740, Gr. 3004, surface greyish brown, light greyish brown, grey (10YR 5/2, 6/2, 5/1)
- 11 Spouted bowl, DA 9346, Gr. 2115, surface light red (2.5YR 6/6)
- 12 Pilgrim flask, DA 10556, Maysar Gr. 802, surface reddish yellow (7.5YR 7/6)
- 13 Bellied vase, DA 10638, Gr. 3018, paint dusky red (2.5YR 3/2) fabric light red (2.5YR 6/6)

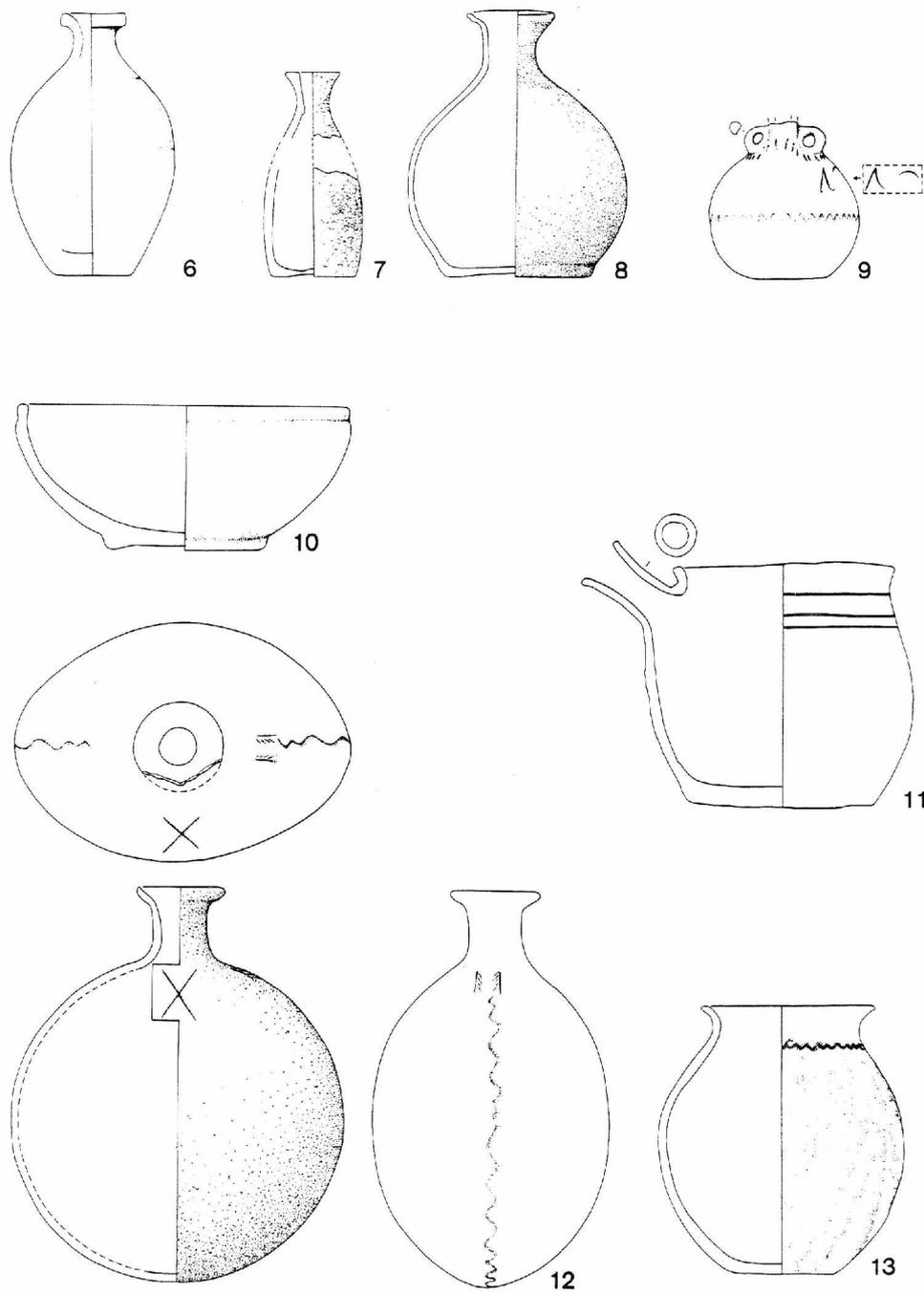


Fig. 5. Main forms. M. 1:3 except no. 12 (M. 1:4).

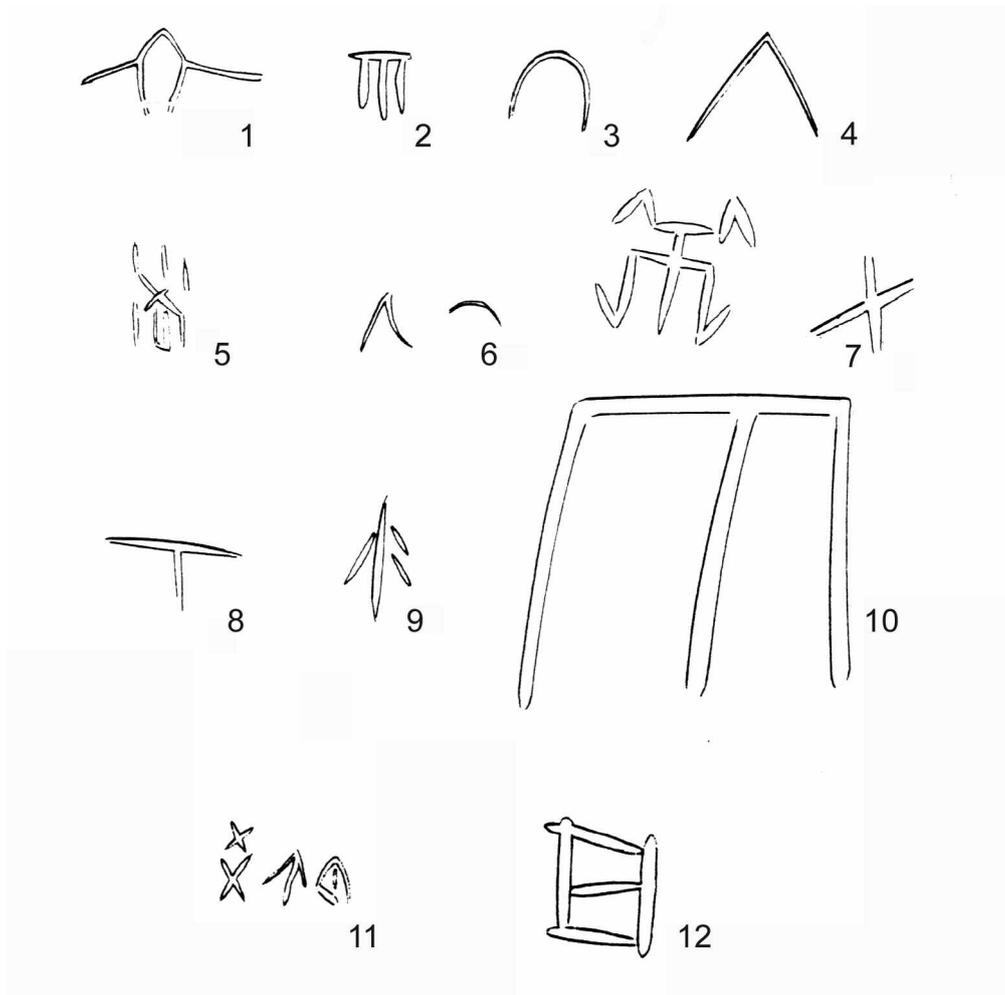


Fig. 6. Script signs on pottery

1 DA 9334, Gr. 2006  
 2 DA 9359B, Gr. 2104  
 3 DA 9455, Gr. 2107  
 4 DA 9343, Gr. 2161  
 5 DA 9901, Gr. 3001  
 6 DA 9742, Gr. 3004

7 DA 7323, Khadra bin Dhaffa Gr.1  
 8 DA 10369, Gr. 2172  
 9 DA 10370, Gr. 2172  
 10 DA 10503, Gr. 2185  
 11 DA 5090, Gr. 101104  
 12 DA 5087, Gr. 101102

Samad is eponymously the type site for this period. Most of the known vessel shapes are known from here. The similarity between pottery of the graves and of the settlements<sup>43</sup> is clear in the fabric, technique of manufacture, and decoration which supports the dating. Several forms from the graves (e.g. balsamaria) are absent in the settlement pottery. Further pottery of the Samad Culture came to light in the excavations at al-Akhdar and Khadra bin Dhaffa<sup>44</sup> and in the Wadi Bawshar all of which were carried out under the auspices of the

<sup>43</sup> A. Tillmann 1981, 234-238.

<sup>44</sup> G. Weisgerber n.d.

Department of Antiquities. The finds from Sohar excavated in 1960 by an American expedition, are potentially of value for the definition of this period, but owing to the destruction of the excavation records<sup>45</sup> the Iron Age pottery can be treated only as unstratified survey material. From time to time stray finds turn up which are turned over to the Department (e.g. Rustaq) and which provide valuable information on the distribution and ceramic variability of the Samad Culture.

Except for the same usually hand-made technique Samad funerary ware differs entirely from that of the preceding period.<sup>46</sup> Nonetheless, several vessels exist in Late Iron Age graves which seem transitional in their shapes from the Early Iron Age (e.g. Fig. 5,11). Standard Samad shapes include large open-mouthed storage vessels, elongated bottles, squat bottles, small bottles, balsamaria, glazed "perfume bottles", pitchers, elongated pitchers, bellied vases, pilgrim bottles, and various minor forms. Most numerous are bottles and small bottles. Bowls are rare. In essence four kinds of fabric occur in the Samad Period respectively in the storage vessels, the balsamaria, glazed and the remaining vessels. The clay of most Samad vessels is lightly gritted with mineral (serpentine) of a medium grain size. Its hardness corresponds to Mohs 2-4. Large storage vessels have a coarser temper. Quite different is the fabric of the dark, little tempered, soft-fired, often wheel-thrown balsamaria. The hand-made vessels sometimes are surprisingly asymmetrical. Except for the balsamaria on about half of the vessel surfaces a usually thin slip has been applied with a brush.

Characteristic Samad Period decoration is lightly impressed into the clay while still in a leather-like condition. Common motifs include herringbone or double wavy lines around the neck and/or belly. Script signs also occur singly, and more rarely in pairs (Fig. 6).<sup>47</sup> In the case of storage vessels where the upper and lower halves join, a slightly raised band frequently girths the belly. Pitcher handles generally bear dash ornament and more rarely punched ornament. On larger vessels three or four vertically oriented zones of vertical dashes may occur. Probably owing to unique preservation conditions a single bellied vessel retained its painted decoration on the side not in contact with the soil. This may serve to warn us that some other Samad Period vessels also may have been painted whose decoration simply has not survived.

Storage vessels of this period occur in Samad as well as in Khadra bin Dhaffa, Sumail, and Rustaq. Balsamaria have come to light in controlled excavations in Samad, Saruj, and as a chance find in the Wadi Bunzar. Survey activity yielded a pitcher in SH11, not far from Sohar. A stray bellied pot from Muteh near Izki, presumably from a grave, came to light a few years ago.<sup>48</sup> Some of the pottery in the Wadi Bawshar cemetery has clear Samad characteristics, and occurs together with iron weapons. Most of it is earlier, however.<sup>49</sup>

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<sup>45</sup> Oral information, Merilyn Phillips Hodgson.

<sup>46</sup> In the catalogue where the potter's technique is not specified (i.e. wheel-thrown) the vessel is handmade.

<sup>47</sup> W. Müller 1981, 243-245.

<sup>48</sup> Personal communication P. Costa.

<sup>49</sup> Personal communication C. Phillips.

## Stone vessels (Fig. 7)

Vessels of soft stone ("chlorite, serpentine, steatite") show various shades mostly of light grey to grey stone. The stone has a dry feel as opposed to the graphite slipperiness of some of the stone vessels from Sohar and Sumhuram.

Late Iron Age stone vessels are easily distinguished from those of the Lizq Period from Samad, Lizq, Rumeilah, Hili, Ghalilah and Selme.<sup>50</sup> Diagnostically Lizq are low bowls with outwardly slanting or straight walls, horizontally incised lines.<sup>51</sup> Equally as common are round-footed bowls with inwardly tipped walls. These generally show a band of incised decoration composed of 4 verticals against which diagonal parallel lines are stacked in bilateral symmetry.

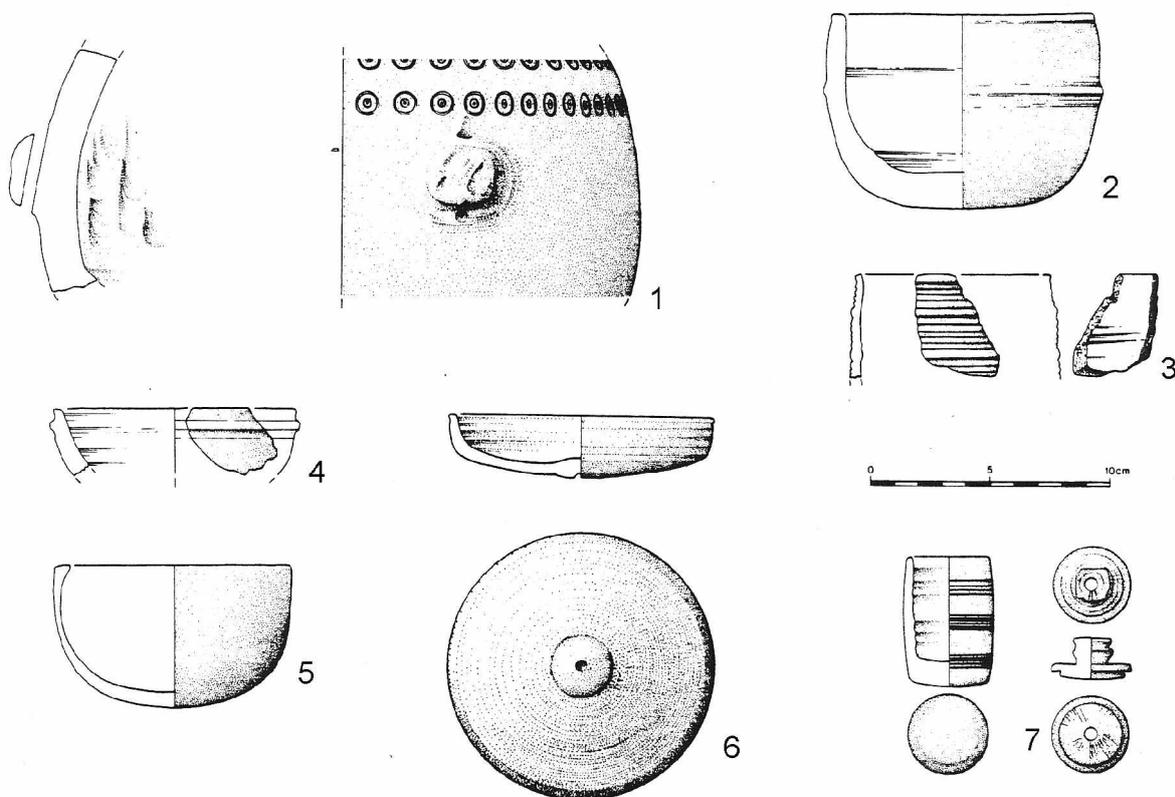


Fig. 7. Soft stone vessels, different scales.

- |                                 |                                     |
|---------------------------------|-------------------------------------|
| 1 DA 9760, strayfind Samad 21   | 2 DA 10623, grave Sumail            |
| 3 no DA no., strayfind Samad 30 | 4 DA 10700, surface find Maysar 801 |
| 5 DA 9340, Gr. 2151             | 6 DA 9750, Gr. 3004                 |
| 7 DA 9755, Gr. 3004             |                                     |

<sup>50</sup> P. Lombard 1982; Ibid. 1985, 189-204; P. Yule/G. Weisgerber n.d. 2.

<sup>51</sup> S. ur-Rahman 1979, 11 middle & above; 18 fig. 7; P. Donaldson 1984, 303 fig. 23; G. Weisgerber 1981, 215 fig. 49; A. Tillmann/S. Kroll 1981, 224 fig. 60.

Between each group the field is filled with zig-zag cuts. A third common type is a low spouted bowl with multiple vertically incised lines bordered above and below by a horizontal line. Cross hatching is common below the spout. These same spouted bowls occur in stone and in metal in the Selme hoard.

Stone vessels of the Samad Period are generally, but not always lathe-turned, as indicated by tool marks on the interior and exterior walls. They also differ entirely in shape and decoration from those of the Lizq Period. It is still too early to speak of standard shapes - no two are alike, and they are far fewer. To judge from the finds at Samad circular drill ornament already had passed out of style prior to the Lizq Period, and with a single exception is unknown in the Late Iron Age.<sup>52</sup> A stone vessel with a profiled ring around the belly link an important Samad burial in Sumail<sup>53</sup> to a parallel found on the surface at ed-Dur (1st and 2nd cent. AD).<sup>54</sup> Shapes such as flat saucers with an omphalos and those with sharp ridges imitate contemporary metallic vessels. The history of the lathe for stone vessels, metal and wood certainly goes back further than the Ptolemaic dating suggested by Woodbury some years ago.<sup>55</sup> In fact the words δινωτα λέχεα<sup>56</sup> in reference to a bed, as well as lathe-turned Achaemenid wooden furniture demonstrate a greater antiquity for this technology than commonly believed.<sup>57</sup>

## METALWORK (Fig. 8)

### Arrowheads

Bronze arrowheads are well documented in the Lizq Period in Hili 2<sup>58</sup>, Maysar<sup>59</sup>, Qusais<sup>60</sup>, Qarn Bint Saud<sup>61</sup>, and Samad. Seen en face the long variety is broad at the front, tapers toward the shank, and in section is lozenge-shaped. More common are smaller leaf-shaped arrowheads with a centre rib such as from grave M803. Both types are smaller than those of the succeeding period.

It has been pointed out that Samad Period iron leaf-shaped arrowheads resemble those excavated from the Seleucid fortress on Failaka (3rd-1st cent. BC),

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<sup>52</sup> P. Yule/G. Weisgerber n.d. 1.

<sup>53</sup> Ibid.

<sup>54</sup> J.-F. Salles 1984 270 fig. 197.

<sup>55</sup> 1963, 132ff.

<sup>56</sup> Homer II, III 391 (E. Hübner 1899, 371).

<sup>57</sup> D.B. Thompson 1956, 289; H. Kyrieleis 1969, 15.

<sup>58</sup> S. ur-Rahman 1979, 18 fig. 7; P. Lombard 1985, 206-208.

<sup>59</sup> A. Tillmann 1981, 224, fig. 60.

<sup>60</sup> P. Lombard 1984, 230 fig. 3.

<sup>61</sup> Ibid.

### Metalwork

1 Iron sword	DA 5978, Gr. 101125
2 Long iron dagger	DA 5997, Gr. 101132
3 Iron needle	DA 9493, Gr. 2112
4 Bronze ladle	M855 (Archaeol. Mus. Qurm), Rustaq
5 Iron dagger	DA 5185, Gr. 101106
6 Bronze foreparts of a horse	DA 9523, Gr. 2020
7 Iron dagger	DA 5967, Gr. 101125
8 Iron axe	DA 9481, Gr. 2110

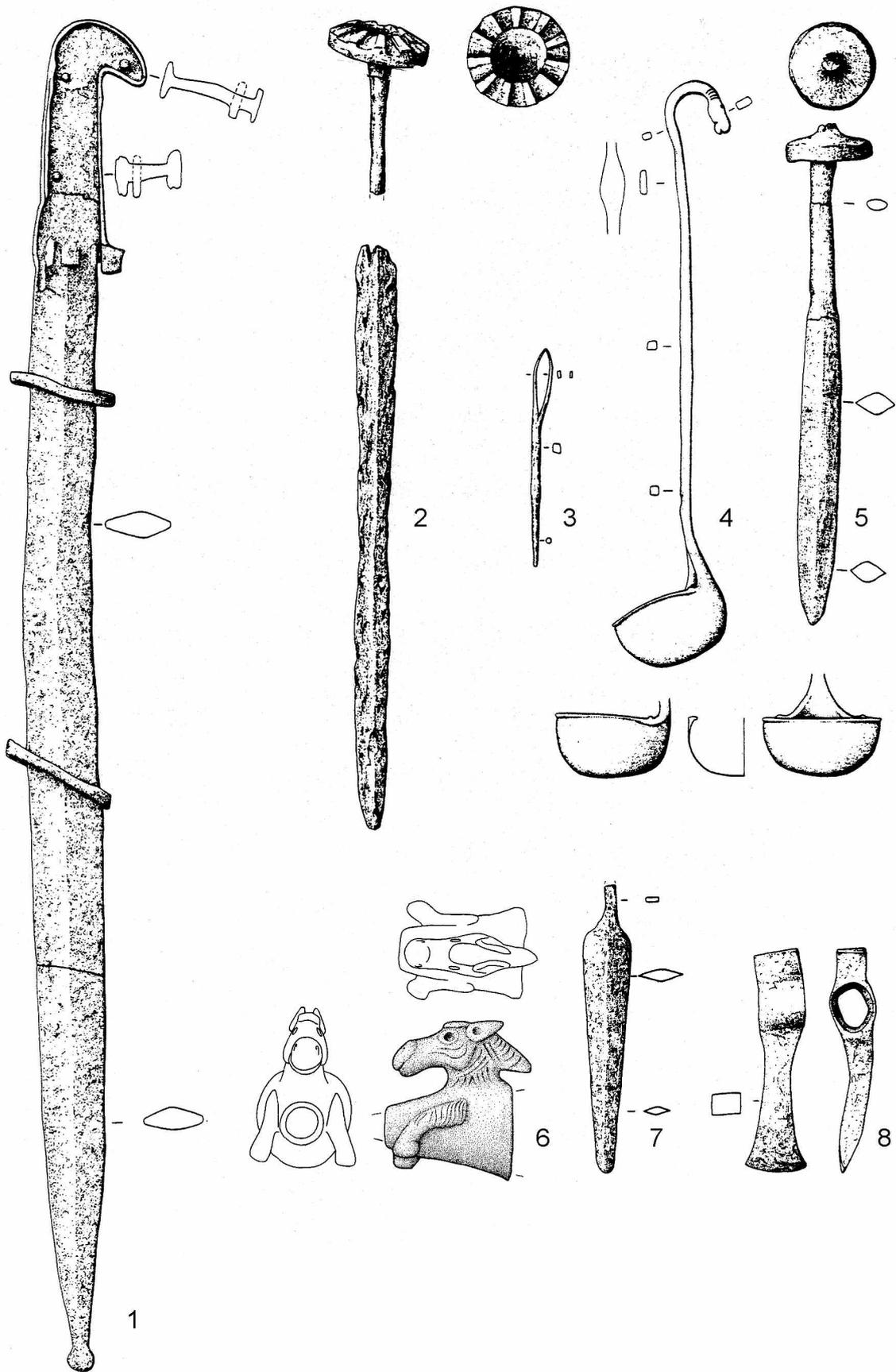


Fig. 8. Selected metallic artefacts of the Samad Period. 1:3 except no. 6 (2:3)

from graves in Mezruah (Qatar), from the Garrison Headquarters in Achaemenid Persepolis, and from Area C in Mleiha in Sharjah (3rd-2nd cent. BC).<sup>62</sup> In contrast, trilobate points such as those from Persepolis have occurred in the UAE in Qarn Bint Saud<sup>63</sup>, but not in central Oman. At Samad the great variety of arrowheads is interesting which the Samad males carried in their quivers. Most are of iron with an occasional bronze intruder from the Lizq Period. Generally they range between 7 and 9 cm with a weight of some 10 gm. Some graves<sup>64</sup>, however, contain larger arrowheads up to 8-10 cm in length and weighing up to 19 gm.<sup>65</sup>

### **Daggers, Long Daggers, Swords, Knives, and Axes**

The Selme hoard, al-Qusais, Rumeilah, and Hafit cairn 20 provide the main examples of daggers from the Lizq Period.<sup>66</sup> All are rim-flanged and in plan show a convexly formed butt. A few are of the well-known lappet ring type. Parallels for rim-flanged daggers occur in Early Iron Age Iranian, Levantine, and Mesopotamian contexts.<sup>67</sup> Except for the daggers, arrowheads and shaft-hole axes of the Selme hoard, the Samad cemeteries contain perhaps the largest excavated collection of Iron Age weapons in the entire Near East.

As for the metal iron itself, no certain occurrences are documented at Samad in the Lizq Period. Karen Frifelt reports its occurrence only in the richest graves of these graves.<sup>68</sup> Iron did not have nearly the same impact as in Iran or other Near Eastern countries.

In the Late Iron Age the find situation is far more amenable to study, and at Samad iron daggers are common in male graves. They are of two main kinds: simple tanged daggers and those with a full grip and a pommel. Owing to the usual fragmentary condition and heavy corrosion the original shape seldom can be determined with absolute certainty. Compared to that of neighbouring regions the iron smithed in Oman possibly was not of the best quality as reflected by its poorer preservation. A splendid dagger from Samad grave 2138, to judge from the inset on the underside of the pommel had a large-diameter hexagonal grip of perishable material. To judge from 11 intact examples simpler tanged daggers are common.<sup>69</sup> Traces of wood on both kinds of hilt are well documented. Wealthier persons possessed long daggers

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<sup>62</sup> G. Weisgerber 1982, 82; B. Vogt 1984, 276; more recently R. Boucharlat 1986, 71 fig. 33,5-10 (site c); 72 fig. 34,6 (site F); pl. 14 (pit P 204).

<sup>63</sup> P. Lombard 1984, 230 fig. 3,12-13.

<sup>64</sup> E.g. Gr. 104.

<sup>65</sup> Cf. Gr. 2110, 3.

<sup>66</sup> The examples from Trucial Oman have been assembled by P. Lombard 1985 209-210, and more recently by G. Weisgerber 1988 28 fig. 162.8; P. Yule/G. Weisgerber n.d. 2.

<sup>67</sup> R. Dyson 1964, 32-45; L. Woolley/M. Mallowan/T.C. Mitchell 1976, 250, 254, pl. 98, U.17385A.

<sup>68</sup> Oral communication.

<sup>69</sup> Gr. 101119, 10679, 101124, 2006, 2100, 2135, 2138, 2138, 2159, 2603, 3023.

with blades reaching some 30 cm in length.<sup>70</sup> Both tanged and pommel grips occur. At least one example has a heavy hilt-guard of iron.<sup>71</sup>

Both heavy and light iron swords generally survive in the graves in a fragmentary condition, corroded together with their scabbards which hinders a description of their original condition. Single-edge as well as double-edge swords occur, and the latter seem more common<sup>72</sup>. These swords find Iranian parallels in the Kopis and Machiera mentioned in Greek texts.<sup>73</sup> A scabbarded sword suspended by a strap and two fittings was meant to be carried over the shoulder as seen in a depiction of a Maciya on the facade of the grave of Darius II at Persepolis.<sup>74</sup> A sword from a Samad grave (Fig. 8,1) with fittings in order to be worn this way shows a so-called bird-head finial. It finds a parallel in shape and size from the "Tomb of the Sailor" in Mleiha.<sup>75</sup> This grave also contained millifiori glass which cannot date much earlier than the 1st century BC.<sup>76</sup> The rim-flanged construction is universal in the Near East of the Iron Age.<sup>77</sup>

Large, bronze, shaft-hole axes are well known in the Early Iron Age from the Selme hoard, Hili, Qarn Bint Saud, and Rumeilah level II.<sup>78</sup> From the succeeding period a rare, small, iron axe from grave 2110 (Fig. 8,8) is the sole extant example. Whether or not this is a weapon can be debated. It bears a surprising resemblance to present-day Shihuh axes from Musamdam.

Knives are usually quite small, of iron, and show a short tang which was mounted in wood or some other organic material. The 5 known examples vary considerably from each other in shape defined by their domestic function. As opposed to the Lizq Period (M 803, 15)<sup>79</sup>, one kind of blade is surprisingly absent in the Late Iron Age - the razor - Omanis of this period were perhaps unshaven.

### **Other Finds and Chronology**

While a great number of drinking scenes occur in the classical antique and Ancient Near East pictorial representations the archaeological evidence for the enjoyment of alcoholic beverages

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<sup>70</sup> Gr. 104, 101132, 2110, 2137, 2140, 2613, 2615, 2140, 3009, 3020.

<sup>71</sup> Gr. 3020.

<sup>72</sup> Swords: Gr. 101106, 101125, 2020, 2110, 2152, Maysar 802, Sumail, Bowshar.

<sup>73</sup> S. Bittner 1985, 171-174.

<sup>74</sup> G. Walser 1966, pl. 1.

<sup>75</sup> T. Madhloom 1974, 151, pl. 16A.

<sup>76</sup> See text below. Ibid. pl. 16B. The dating of the excavator ("4th-3rd cent. BC") must be lowered.

<sup>77</sup> Cf. E. Schmidt 1957, pl. 5.

<sup>78</sup> P. Lombard 1985, 212-213, fig. 109 no. 385; more recently G. Weisgerber 1988, 287-288, fig. 160.

<sup>79</sup> Cf. Ghalilah 2: P. Donaldson 1984, 257, 307 fig. 27,11 and ,12.

### Beads and an earring of the Samad Period

1 Silver	DA 10366	Gr. 2172
2 Silver	DA 10633	Gr. 3012
3 White fritte	DA 10554	Gr. M 801
4 Soft stone	DA 10421	Gr. 2607
5 Shell	DA 10421	Gr. 2607
6 Calcite	DA 10421	Gr. 2607
7 Gold	DA 10421	Gr. 2607
8 Dehydr. agate	DA 10421	Gr. 2607
9 Chalcedony	DA 10402	Gr. 2304
10 White etched carnelian	DA 10642	Gr. 3018
11-12, 15 Carnelian	DA 10642	Gr. 3018
13 Weathered shell	DA 10421	Gr. 2607
14 Quartz	DA 10421	Gr. 2607
16 Glass	DA 10403	Gr. 2304 (unrestored)

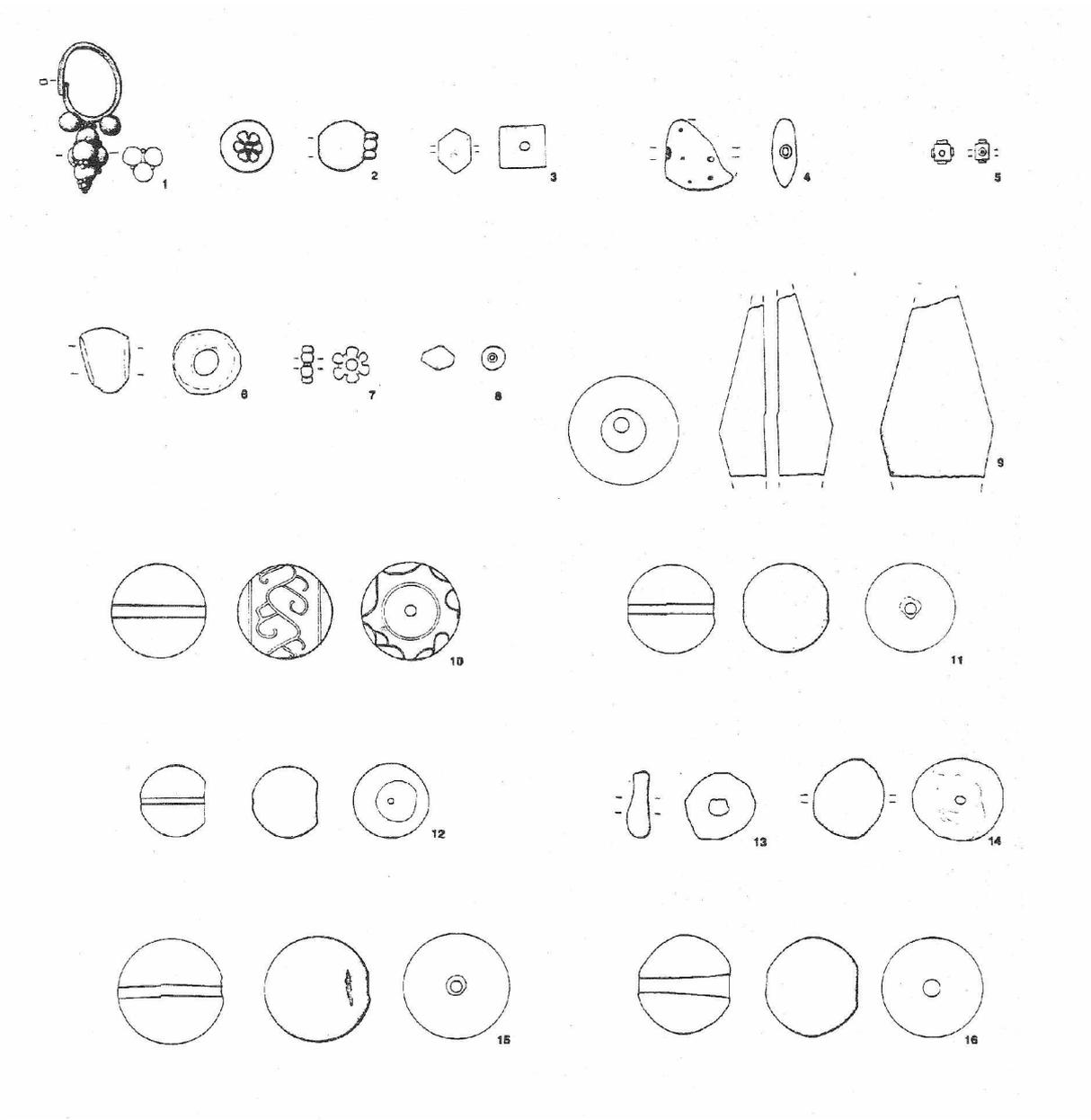


Fig. 9. Selected beads and a pendant of the Samad Period, scale 1:1.

is rare.<sup>80</sup> Unexpected in this part of the Orient, objects from drinking services raise the question "import or foreign influenced?". A hollow bronze finial in the form of the foreparts of a horse (Fig. 8,6) was the mouthpiece of a drinking horn which came to light in 1987 in a Samad grave. The identification is sustained by similar mouthpieces from Iran and its neighbours, not to mention ancient depictions of the drinking from horns.<sup>81</sup> Since this find was made, other such mouthpieces have come to light in Mleiha area F ("Hellenistic Period")<sup>82</sup>, as a stray near Dhahran (Saudi Arabia)<sup>83</sup>, in ed-Dur (Umm al-Qawain)<sup>84</sup>, and most recently from a rich burial in Sumail (Oman).<sup>85</sup> Related in their milieu are ladles for which the best known parallels derive from the Achaemenid, Greek and Roman world.<sup>86</sup> Ladles are known from Rustaq (Fig. 8,4), a Samad burial in Sumail<sup>87</sup>, from a handle fragment from Samad 30, and another which appeared as a surface find at ed-Dur in an area otherwise dated to the 1st and 2nd century BC.<sup>88</sup> Standard appear to be a drinking horn, ladle, strainer, and often shallow bowls. Small "ears" on the spoon part are no doubt intended to enable the hanging of the ladle on the rim of a larger vessel which must also have belonged to the service. Whether the ladles, which have a small capacity, were for the actual drinking or in order to add spices to the beverage is not known.

Two tweezers from the Lizq Period tomb Maysar 803 (nos. 16 and 56 in the catalogue and plates) are of the same shape as another contemporary example from Qarn Bint Saud.<sup>89</sup> The double edged razor from M 803 is of the same type as one from Ghalilah site 2<sup>90</sup> which the excavator dates in the first quarter of the first millennium BC.

The potential importance of jewellery and especially beads (Fig. 9) for the chronology is still undetermined and these objects are still in the earliest stages of study. A granulated silver

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<sup>80</sup> R. Ghirshman 1962; P.R.S. Moorey 1980; P. Lombard 1985, 108-111, pl. 42-43 + bibliography.

<sup>81</sup> E. Minns 1922, pl. 12 from the Grave of the 7 Brothers in Kuban; M. Grant 1982, 65, 5th century Sasanian depiction; New York 1987, 188, fig. 70. There can be no doubt that the small end of the horn was the one drunk from. Cf. also A.S. Melikian-Chirvani 1982.

<sup>82</sup> R. Boucharlat 1986, 60, 72 fig. 34,2.

<sup>83</sup> D. Potts lecture in Göttingen 16.04.1987.

<sup>84</sup> Oral information C. Phillips.

<sup>85</sup> Yule/Weisgerber n.d. 1.

<sup>86</sup> Cf. Tell el Farah, tomb 650, 6th-5th cent. BC=A. Kempinski/M. Avi Yonah 1978, pl. 50; D. Whitcomb 1985, 165 fig. 61s (from the Sasanian fort, late Parthian/early Islamic context; W. Hornbostel 1980, no. 4, pp. 4-6 (Achaemenid); Hildesheim 1988, no. 260, p. 358 (5th cent. BC); J. Marshall 1951, pl. 175, 184.

<sup>87</sup> P. Yule/G. Weisgerber n.d.1.

<sup>88</sup> Oral communication C. Phillips.

<sup>89</sup> S. Cleuziou 1978, 13, 43 fig. 11.

<sup>90</sup> P. Donaldson 1984, 257, 307 fig. 27,12. Cf. also fig. 11 on the same page, a double edged razor with at least one flat edge. Dating: p. 239.

earring from the burial of two ladies (Fig. 9,1) finds distant echoes in the West which provide a hint as to the dating of this tradition in jewellery in Oman.<sup>91</sup> Granulated gold beads from Samad Period graves (Fig. 9,7) unfortunately are as an artefactual category not closely datable. Such beads have been excavated in Kassite graves in Babylon<sup>92</sup>, in Rumeilah<sup>93</sup> and in contexts of the Late Iron Age Kamid el-Loz as well.<sup>94</sup> Millifiori and marble glass beads of various shapes occur in Samad graves and postdate the first century BC. Several large, planoconvex, lathe-turned beads in soft stone often found together with iron pins also are common, and have parallels ("spindle whirls") in the Near East.<sup>95</sup> Characteristic Samad Period beads are of glass, soft or hard stones, are on the whole larger than those of previous periods, and are spherical or barrel-shaped (Fig. 9,6, 8, 13, 14). Parallels occur in Post-Achaemenid Pasargadae.<sup>96</sup> Agate beads from Samad approximately in the shape of an elongated heart also occur in Arsacid jewellery.<sup>97</sup> This same dating holds for a copper armlet from Gr. 3018 (DA 10639) which is open in the middle in order to accept a large semi-precious stone. Unusual are white etched carnelian beads such as that in Fig. 9,10, which is one of 36 large carnelian beads from this same grave.

Mollusc shells were commonly placed in graves of the various pre-Islamic periods. Frequently encountered in the Samad Period but by no means exclusively at this time is *trachycardium rubicundum*.<sup>98</sup> This mollusc is at home all along the Omani coast.

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<sup>91</sup> I. Kovrig 1963, pl. 4, gr. 57,24 & ,25; pl. 5, gr. 70,1 & ,2; pl. 7,32 & ,33; pl. 19, gr. 233,15 & ,16; pl. 66,10 & ,11; Z. Cilinska 1975, esp. p. 92 "ältere Horizont" (568-650 AD). We thank Volker Babucke for these references.

<sup>92</sup> O. Reuther 1968, pl. 55 below: Gruft 32.

<sup>93</sup> Granulated beads: R. Boucharlat/P. Lombard 1985, 62, pl. 73,10.

<sup>94</sup> R. Poppa 1978, pl. 4,5-6; 9,2-6; 12,10-16; 14,10-13.

<sup>95</sup> D. Stronach 1978, 239 fig. 104,1.

<sup>96</sup> D. Stronach 1978, 234 fig. 102,11.

<sup>97</sup> B. Musche 1988, pl. 51,10.

<sup>98</sup> Mrs Emily Glover is studying the molluscal material.

The chronological evidence cited above is buttressed by radiocarbon determinations:

Context	Per.	Lab. no.	<sup>14</sup> C	Cal. dating
Gr 2113/1+2	Samad	KN 3851	1090±100 BP	780-1020 AD
Gr 2107	Samad	KN 3868	1230±95 BP	670-938 AD
Gr 2113/4	Samad	KN 3852	1330±100 BP	614-797 AD
Gr 101125	Samad	BLN 2746	1500±50 BP	437-637 AD
Gr 2138	Samad	KN 3839	1660±100 BP	255-533 AD
Gr 2137	Samad	KN 3838	1790±120 BP	70-389 AD
Gr 101128	Samad	HD 8526-8711	2410±80 BP	762-398 BC
Gr 101130	Lizq	BLN 2747	2730±50 BP	970-828 BC
Lizq fort	Lizq	KN 3499	2770±160 BP	1210-800 BC

(calibration: Stuiver and Becker 1986, half-life: 5568 years)

The Samad Culture previously was assigned to "the last three/four centuries BC"<sup>99</sup>, or alternatively as occupying the lacuna from the end of the Lizq Period (500 BC) to the coming of the Prophet. Considering the sum of the evidence the former dating is too narrow, and begs the question of the transition from the end of the Lizq to the beginning of the Samad period, not to mention the developments leading up to the advent of Islam. While no firm anchor point exists at present for the later part of the Samad Period at least two such graves and their contents have been radiocarbon assayed to cal. 762-398 BC. The aforementioned sword from Samad (Fig. 8,1) with "bird-head" terminal can be placed in the Sasanian period which nicely jibes with the <sup>14</sup>C determination of bones from this same grave to 437-637 AD.

### Distribution of the Samad Culture (Fig. 10)

In the first publications of the early 1980's which dealt with Late Iron Age Oman it was believed that the Samad Culture was a purely local phenomenon because in Trucial Oman during this period other grave types occurred.<sup>100</sup> Study since then has enhanced our understanding of its distribution. Now some 30 sites which are mostly cemeteries and less often settlements have been logged. The main concentration of sites lies in central Oman from Bahla to the capital. Owing in part to the amount of building in the latter area, the most sites are known here. In the UAE the sites of Bithnah and al-Khatt<sup>101</sup> have yielded Samad ware. To the south this is also true of am-Darraah and Batin. Further south on the island of Masirah materials of the Samad culture occur at several points.<sup>102</sup> The town of Sohar on the Batina coast to the northeast lies within the distributional area of the Samad culture, but for the moment has yet to produce artefacts diagnostic of the association, which is thus hypothetical. Moreover, different non-Samad Late Iron Age wares may dominate in Sohar as attested by a study of some of the finds from here which are now on deposit at the American Foundation for the Study of Man headquarters in Falls Church, Virginia.<sup>103</sup> Nonetheless, it would be

<sup>99</sup> B. Vogt 1984, 278.

<sup>100</sup> B. Vogt 1984, 278.

<sup>101</sup> J.H. Humphries 1974, 52; B. de Cardi 1985, 182-185.

<sup>102</sup> Unpublished surveys and excavations conducted together with Dr Ali Shanfari.

surprising if Sohar, positioned as it is on the edge of central Oman, would have a completely different culture. From the surveys carried out in the early 1980's in Dhofar no pertinent sites or finds came to light. Particularly in Khor Rory, which is mentioned in the Periplus of the Erythraean Sea as Μοσχα λιμην<sup>104</sup>, the lack of finds of the Samad Culture comes as no great surprise since his site was a Yemeni outpost.

It is not yet possible to distinguish subregions of the Samad Culture on the basis the style or type of artefacts with few exceptions. Larger pottery vessels and some of the most impressive finds derive from Rustaq and Sumail, which were centres in Oman in the Late Iron Age. Our first impression, however, is of a regional homogeneity in the material culture over a large expanse of territory.

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<sup>103</sup> Cf. M. Lebeau 1983, p. 473: "JT11"; p. 493: "GJ9".

<sup>104</sup> W.H. Schoff 1912, 32; W. Phillips 1966, 189; J. Pirenne 1975, 81-96; A.F.L. Beeston 1976, 39-42; F.P. Albright 1982, 6-8.

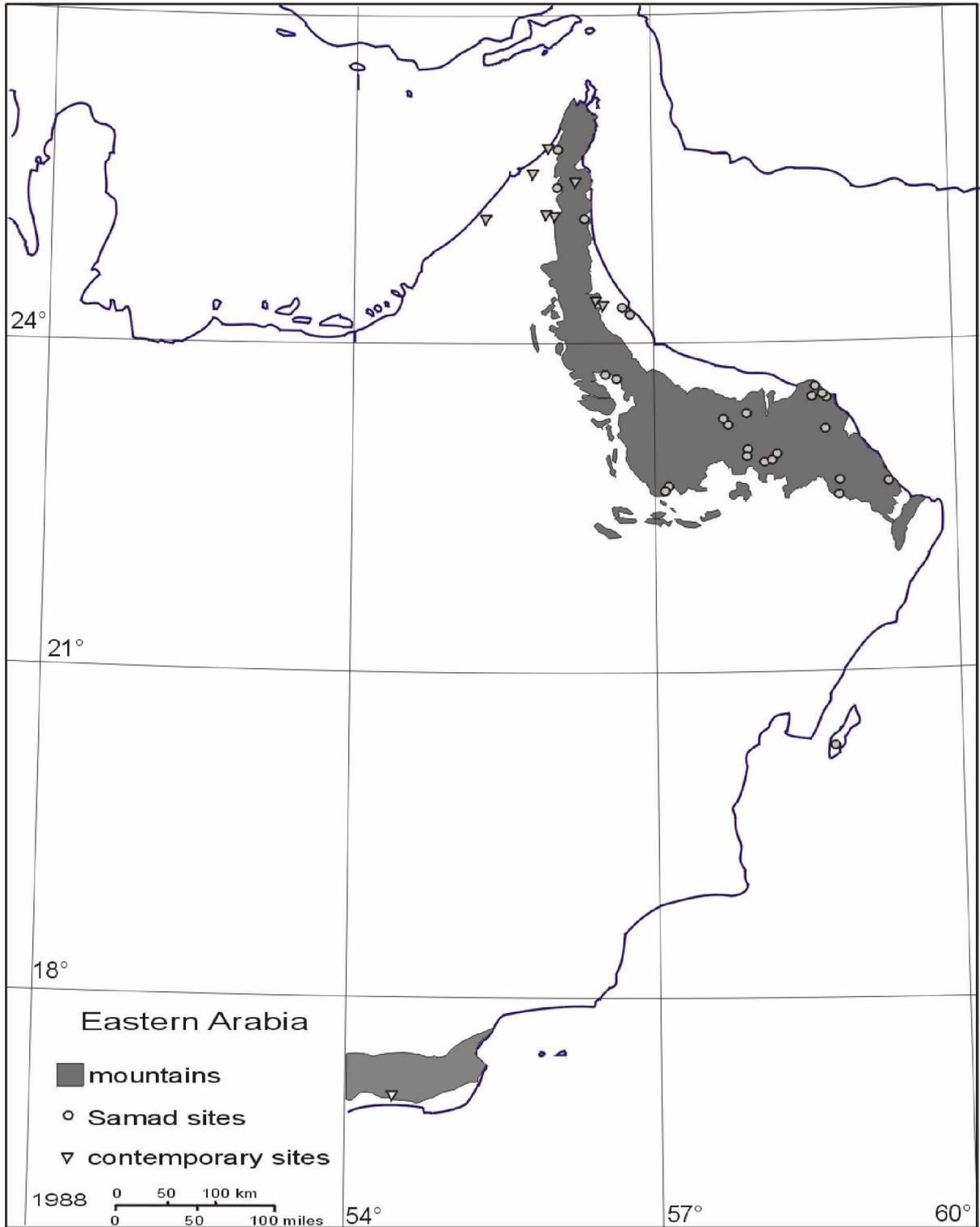


Fig. 10

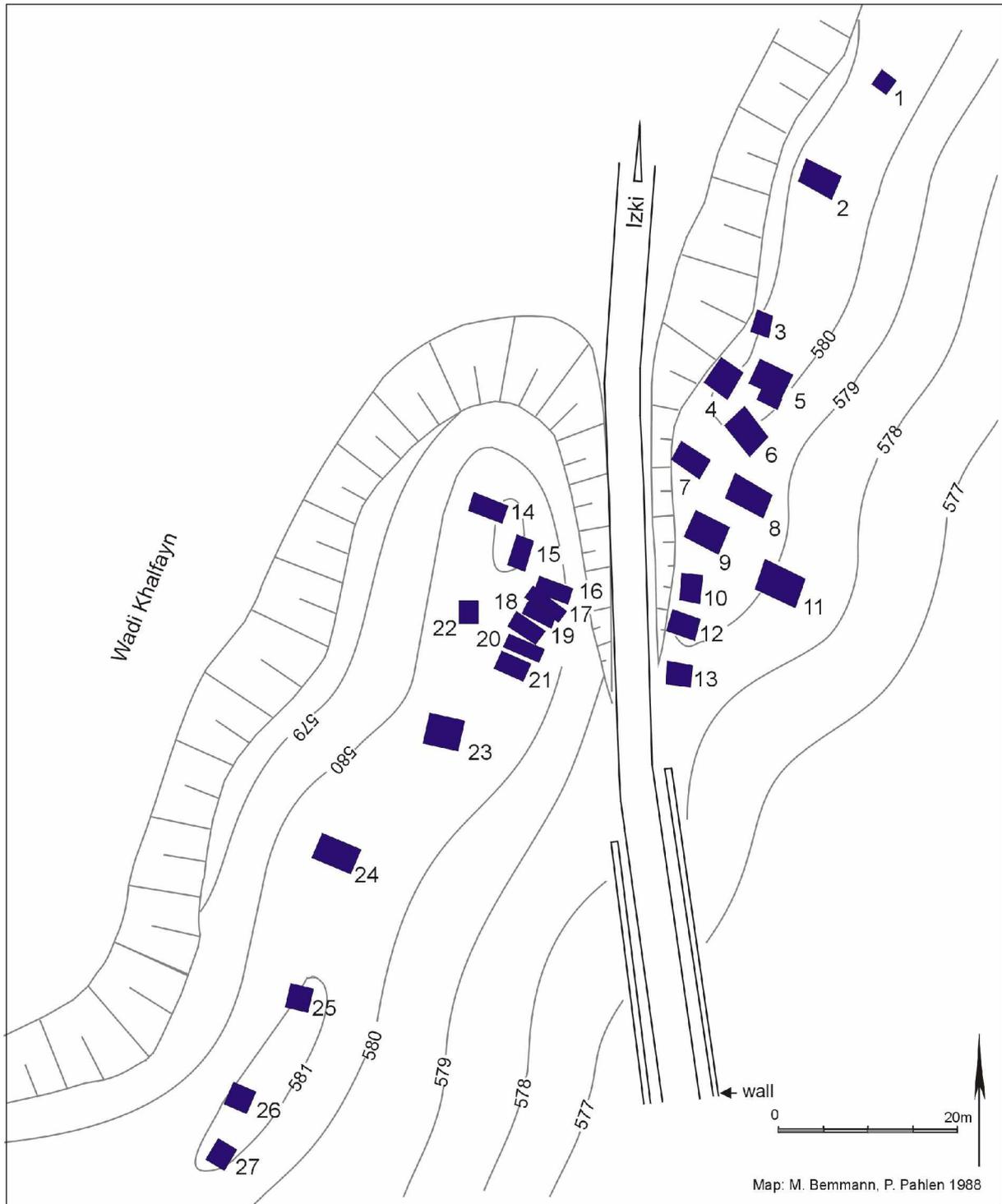


Fig. 11.

LATE IRON AGE SITES IN OMAN AND THE UAE

Name	Geog. Coordinates	Criterium	Bibliog.
1 Abbaya *	22°48'N; 58°00'E	A	Doe 1983
2 al-Akhdar*	22°51'N; 58°10'E	A C S	Weisgerber n.d.
3 Arja+	24°27'N; 56°34'E	S	P. Costa/T. Wilkinson 1987
4 Assima +	25°24'N; 56°08'E	A	B. Vogt unpub., de Cardi unpub.
5 Bandar Jussa*	23°33'N; 58°39'E	A C	Yule unpub.
6 Batin*	22°46'N; 58°40'E	A C S	Weisgerber 1981
7 BB 4?*	22°58'N; 57°18'E	C	Hastings/Humphries /Meadow 1975
8 BB 15*	22°45'N; 57°14'E	C	Humphries 1974
9 Bithnah (Fujierah)*	25°11'N; 56°12'E	A	B. Vogt unpub.
10 Bustan*	23°34'N; 58°37'E	A C	Yule unpub.
11 am-Darraah *	22°42'N; 58°43'E	C	de Cardi 1977
12 ed-Dur (Umm al-Qaiwain)+	25°33'N; 55°32'E	A C	Salles
13 Izki*	22°56'N; 57°46'E	A	Yule unpub.
14 Jazirat al-Ghanam +	26°22'N; 56°18'E	C	de Cardi 1972
15 Julfar +	25°48'N; 55°57'E	S	de Cardi/Doe 1971; Vogt unpub.
16 Jumierah +	25°10'N; 55°11'E		Boucharlat 1984
17 Khadra bin Daffa*	22°48'N; 58°00'E	A C S	Weisgerber n.d.
18 al-Khatt (Ras al-Khaimah)*	25°36'N; 56°01'E	C	de Cardi 1971, 1977
19 Khor Rori +	17°02'N; 54°27'E	A C S	Albright 1982
20 al-Maqniyat near Ibri*	23°22'N; 56°56'E	C	DA 9970
21 al-Masirah*	20°25'N; 58°50'E	A C S	Shanfari/Weisgerber i.D.
22 al-Maysar 8, 25, 27, 34, 43*	22°48'N; 58°08'E	A C S	Weisgerber 1981; Yule unpub.
23 Mezruah (Qatar) +	25°27'N; 51°23'E	S	de Cardi 1978
24 Mleiha (Sharjah) +	25°07'N; 55°45'E	A C S	Madhloom 1974; Boucharlat u.a. 1986
25 Murwab (Qatar) +	23°50'N; 50°59'E	C	Hardy-Guilbert 1984
26 Muti (Muteh) near Izki *	23°00'N; 57°47'E	C	Yule unpub.
27 Nud Ziba (Ras al-Khaimah)*	c.25°36'N; c.56°01'E	C	de Cardi 1984
28 Qalhat *	22°24'N; 59°22'E	A C	Bemmann unpub.
29 Raki 1 *	23°39'N; 56°36'E	C	Weisgerber unpub.
30 Ras Uwainat Ali (Qatar) +	25°30'N; 50°46'E	C	de Cardi 1978
31 Rustaq*	23°23'N; 57°26'E	S	Yule unpub.
32 Rustaq al-Alaia, Marba*	23°24'N; 57°26'E	C S	Yule unpub.
33 SH 11 (Sohar)*	24°21'N; 56°40'E	C	Humphries 1978
34 Samad ash-Shan *	22°48'N; 58°09'E	A C S	Weisgerber 1981
35 Sumail*	23°18'N; 58°59'E	C S	Yule/Weisgerber n.d. 1
36 Saruj*	23°37'N; 58°27'E	C	Weisgerber unpub.
37 Shariah*	22°48'N; 58°09'E	A	Yule unpub.
38 Shimal*	26°52'N; 56°01'E	C	de Cardi 1976, 1977

39 Sohar	+	24°22'N; 56°45'E	C S	Cleveland unpub.; Kervran 1984; Yule/Weisgerber n.d. 1
40 Wadi Bunzar *		3 km E of Lizq	C	Weisgerber unpub.
41 Wadi Bawshar, Gr. II *		23°23'N; 58°23'E	C S	Weisgerber unpub.
42 Zahra +		24°27'N; 56°35'E	C S	Costa/Wilkinson 1987

\* = Samad Culture

+ = contemporary sites

A = architecture

C = ceramic

S = small finds

### Burial Customs

In the Samad Period the burials of men differ in the kinds of grave goods found, not to mention the position of the body, from those of women. For both groups sex-linked attributes are well-defined and reoccur consistently in un plundered graves. Well preserved skeletons provide a basis for the study of burial customs. Typical of the burials of men is a contracted skeleton lying on its right side with the head pointing toward the east and the eyes looking toward the north. Different degrees of contraction occur. The hands frequently are held in front of the face. Deviations from the norm elude, at present, explanation. Common grave goods include daggers, finger rings, arrowheads, molluscs, the remains of meat offerings (usually young sheep and/or goat), pottery, and stone vessels. A balsamarium frequently lies before or behind the head. Numerous arrowheads survive, often as bundles from a long since decayed quiver. Not infrequently small fragments of wood are preserved in the cramps which provide tantalizing but inadequate evidence for the objects which these small cramps held together. Given their close proximity to the arrowheads at least some belonged to quivers, or bring to mind the Iranian *goryt* which seems to have been fashioned partly of wood.<sup>105</sup> Neither the arrow shafts nor bows have been found. The customary armament also includes a dagger, usually found at the waist. A large piece of meat is provided perhaps for one or more persons. Wealthy burials have yielded swords, horse bits, glazed pottery, glass vessels, and metallic drinking services, including a ladle and the remains of a drinking horn. In at least one rich grave strong evidence exists for the wearing of sandals.<sup>106</sup> Some of the population could afford silk garments.<sup>107</sup> Men evidently required many more objects and those of better quality for the afterlife than did women. Members of both sexes wore stone, glass, and precious metal beads on or near the shoulder area.

Womens' graves may contain only a balsamarium, other pottery vessels, simple jewelry, finger rings, molluscs, the remains of a young goat and/or sheep, date residues, and metallic cramps. Weapons virtually never occur. Contracted skeletons rest on the left side with the head pointing toward the south, but in some cases the northeast is preferred. The glance may be directed in one of several different directions. Where the hands are preserved they are posed in front of the eyes.

<sup>105</sup> S. Bittner 1985, 208-212.

<sup>106</sup> Gr. 2137; cf. A. Salonen 1969.

<sup>107</sup> Remains on an iron dagger, DA 9646, Gr. 2138.

10 multiple burials have occurred containing male, female as well as mixed interments. The burials often took place within a few years of each other, as attested by the semi-intactness of the disturbed skeletons.

## Foreign Contacts

Historical relations between Oman of the Samad Period and outside world are difficult to establish and articulate. One isolated case, however, is recorded of a king from is/ş/z-ki/qi-e (present-day Izki ?) in Magan by the name of Padi who undertook a trip to visit Ashurbanipal (668-627 BC).<sup>108</sup> Izki is by local tradition the oldest town in Oman.<sup>109</sup> In 1988 the opportunity arose to sketch-map a number of graves which resemble those of the Samad Period (Fig. 11). They are well preserved above the ground and probably are partially subterranean. They are not oriented toward Mekka, and certainly are not Islamic. It is tempting to consider these graves - the largest known in central Oman - as belonging to Late Iron Age rulers. In this context the recent now almost complete destruction of the Pre-Islamic cemetery in Rustaq is regrettable for in this old capital important finds are expected.

Disappointingly few are the indications for the origins of the Samad population and its relations with the historically well-known Azd tribes which departing from Yemen reach Oman and proceed to raid and settle the Persian coast.<sup>110</sup> Comparisons with contemporary artefacts from Yemen are of no help.<sup>111</sup> Through historical inference from succeeding periods there can be no doubt that Oman was in constant contact with the outside world. An indication of the internationalism of the Late Iron Age is that during J.H. Humphries' surveys in the early 1970's he had little difficulty in identifying Late Iron Age pottery on the basis of his knowledge of that of southeastern Iran.

For the pottery well-dated foreign parallels are few. But a glazed perfume bottle from Samad grave 101124 finds close parallels from Failaka<sup>112</sup>, Sumhuram (Khor Rory 1st cent. BC)<sup>113</sup>, Dura Europos as well as Kurha in Eastern Iran.<sup>114</sup> Particularly in connection with specific vessel shapes ceramic glazing is an indication of Hellenistic/Parthian/Seleucid/Sasanian culture. Carinated bowls such as that in bronze also from this grave occur early in Ziwiye<sup>115</sup>, and continue at Persepolis<sup>116</sup>, Tepe Suruvan, Tepe Yahya II, Deve Hüyük<sup>117</sup>, Pasargadae,

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<sup>108</sup> R. Zadok, 1981, 42-84; D. Potts 1985; *ibid.* 1986, 82-83.

<sup>109</sup> J.C. Wilkinson 1977, 130; Nahda 181.

<sup>110</sup> J.C. Wilkinson, 1973, 40-71; *ibid.*, 1977, 126-128.

<sup>111</sup> E.g. arrowheads: G. Van Beek 1969, 300 fig. 124b; 328 fig. 129c.

<sup>112</sup> L. Hannestad 1983, 26 cat. no. 291 (BI ware), pl. 28.

<sup>113</sup> F.P. Albright 1982.

<sup>114</sup> E. Haerinck 1983, 120 pl. 7,5.

<sup>115</sup> C. Young, 1965, 58, fig. 3.6 also here and in B. Vogt 1984, 273-4 for bibliography.

<sup>116</sup> E. Schmidt 1957, pl. 72,1. See also the tribute bearers on the north steps of the apadana.

Kamid el-Loz<sup>118</sup>, and a variety of Mediterranean sites<sup>119</sup> which may date as late as the second century BC. Pottery bowls with a constricted rim occur in Samad and at distant sites in Iran<sup>120</sup>, Eastern Arabia (Ain Jawan)<sup>121</sup>, and at ed-Dur<sup>122</sup>. At Samad pilgrim flasks of varying size and shape find Seleuco/Parthian parallels.<sup>123</sup> A double wavy line graces the shoulder of a bottle from cairns in the Soghun valley of southeastern Iran. These graves are linked in terms of the pottery to Yahya Periods I-III (700 BC - 225 AD).<sup>124</sup> Furthermore, the drinking horns point rather to Iranian than Arabian or Classical customs.

Samad pit graves differ significantly in their form and construction from those in the surrounding areas of Dhofar, the UAE, other areas of the Arabian Gulf, and Iran from the first millennium BC. Aside from their belonging to a great tradition of cist graves in Western Asia they cannot be linked in other than a superficial way to the funerary monuments of surrounding areas. In disparate parts of central Oman, given the similarity in the architecture and in the different categories of grave goods, they reflect a general homogeneity, which at least indirectly reflects the beliefs of the population.

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<sup>117</sup> P.R.S. Moorey 1981, fig. 6,104.

<sup>118</sup> R. Poppa 1978, pl. 5, gr. 3, gr. 4; pl. 7, gr 6, gr. 7; pl 9 gr. 21.

<sup>119</sup> M. Pfrommer 1987, 42-74 with regard to development and distribution of the  $\chi\omicron\nu\delta\upsilon$ , particularly in Egypt.

<sup>120</sup> Persepolis: E. Schmidt 1957, pl. 72,3.

<sup>121</sup> D. Potts et al. 1978, pl. 9,26; pl.10,54; pl. 13,140; R.L. Bowen 1950.

<sup>122</sup> J.-F. Salles 1984, 266 fig. 12, 137-140.

<sup>123</sup> L. Hannestad 1983, pl. 31-33.

<sup>124</sup> C.C. Lamberg-Karlovsky/W. Fitz 1987, 754 fig. 3g; 763 fig. 8e.

## CATALOGUE OF SELECTED GRAVES

### SAMAD GRAVE 2138

UTM coordinates of the long axis (a-b):

a. 618387.4; 2521958.3

b. 618385.4; 2521956.4

azimuth of the long axis: 51/251 gon (=NE-SW orientation)

L. of the floor: 1.85 m                      Br. of the floor: 0.65 m

depth of the floor b.s.: 1.40 m          Floor level: 549.05 m

Samad Culture                                  reuse provable: yes

<sup>14</sup>C: 1660± 10 BP cal.: 255-533 AD to 1σ (KN 3839)

Prior to the excavation of the surface this grave was not visible. The uppermost courses of the chamber first appeared in the course of horizontal excavations of trench I. In the northeast corner of the cist the wall was badly damaged, and only two courses of stones were preserved. The deceased were probably placed in the grave from here. Only in the SW end were the capstones in situ. Wadi stones served almost exclusively as the building material for the walls. Up to eight courses formed the chamber wall. In plan the chamber was in the form of an elongated oval. The side walls were corbelled so that in the upper part they were only 0.35 m apart from each other. The floor of the grave lay deeper than the lowermost course of stones (0.20 m+).

The interior evidenced three burials which were designated 1 - 3. According to their stratigraphic positions in the grave they are not contemporary, but rather were interred in the sequence 1, 3, and 2. The two reuses of the grave and other possible disturbances in the approximately 20 cm thick find level hindered certain attributions of all of the grave goods to specific burials. 20 cm beneath the head of burial 1, the earliest interment, lay a bundle of arrowheads (1) in a horizontal position. At the same spot there were the bones of an infantile sheep or goat (2), and a balsamarium (3) which was lying on its side. 10 cm to the south was a cramp (4). At the same height as the hip, and with its pommel pointing in the direction of the feet lay a dagger (5). A ring was placed on the 1st finger of the right hand of the deceased.

The second oldest burial (no. 3 according to our lifting sequence). At the waist lay a dagger (7) the point of which pointed to the NW. The position of a partly scattered bundle of arrowheads (8) which stood askew at the same height face was perhaps disturbed by a later burial.

At chest height directly in front of the last burial (no. 2) belongs a horizontally positioned bundle of arrowheads (9), which lay with the points to the SW. In front of the hips lay a dagger blade (10) with the point to the SW. At the SE side of the chamber opposite the face next to each other there stood a balsamarium (11) and a storage vessel (12). The latter nudged the bundle of arrowheads of the burial no. 3 and forced them apart before they had a chance to corrode together. Moreover, some skull fragments from this burial adhered to the vessel proving the later intrusion. The balsamarium no. 11 also stood in situ and cannot be convincingly attributed to burial 1.

Since the skeletal remains still were partly anatomically intact when the grave was reused no great interval had elapsed (less than 30 years?) for all three.

To the disturbed and non-attributable finds belong storage vessels (13-15), a copper cramp (16), sheep bones (17), and the astragal of a sheep (18).

### **Skeletal remains (M. Kunter)**

Sequence of the burials 1, 3, 2

Skel. 1 & 3 disturbed and strewn

Skel. 2 essentially anatomically intact

**SKEL. 1:**

Age: 40-50 years (dental wear, cranial sutures)

Sex: male (narrow pelvic angle; relation of the body to the manubrium sterni to the body is smaller than 1:2)

Position: flexed and lying on its right side, head toward the NE, gaze to the NW

**SKEL. 3:**

Age: 40-50 years (dental wear)

Sex: male (narrow incisura ishiadica major)

Position: lying on left side, head to the NE, gaze to the SE

**SKEL. 2:**

Age: 10 years (length of the diaphyses, open epiphyses, condition of the dentition)

Sex: not absolutely determinable. To judge from the size of the canine teeth perhaps male

Position: flexed and lying on its left side, head toward the NE, gaze toward the SE

### **GRAVE GOODS**

#### **Burial 1**

- 1** Iron arrowheads most in a bundle. **1.1** L. 7.5 cm, 15 gm; **1.2** L. 9 cm (pres.), 18.5 gm; **1.3** L. 7.9 cm (pres.), 9 gm; **1.4** L. 6.4 cm (pres.), 10.5 gm; **1.5** L. 6.2 cm (pres.), 9.5 gm; **1.6** L. 8.5 cm (pres.), 13 gm; **1.7** L. 8 cm (pres.), 13 gm; **1.8** L. 7 cm (pres.), 18 gm; **1.9** L. 8.6 cm (pres.), 20 gm; **1.10** L. 9.6 cm, 11 gm; **1.12** L. 4.1 cm (pres.), 3.2 gm; **1.13** L. 3.5 & 3.8 cm (pres.), 5.9 gm; **1.14** L. 6.9 cm (pres.), 16 gm; **1.15** L. 9.7 cm (pres.), 20 gm; **1.16** L. 8.9 cm (pres.), 18 gm; **1.17** L. 2.6 cm (pres.), 1.8 cm., all 549.20 m, all DA 9642; **1.18** D. 549.20 m, L. 9.7 cm, 15 gm, DA 9636; **1.19** D. 549.20 m, L. 9 cm, 11 gm, DA 9637
- 2** Skeleton of an infantile or juvenile sheep or goat. 549.20 m, DA 9634
- 3** Balsamarium. light mineral temper, smooth surface, fabric brown (10YR 5/3), surface pinkish to reddish grey (5YR 7/4-5/2), 14.1 x 9.6 cm, 549.25 m, DA 9638
- 4** Copper cramp. 2.9 (pres.) x 1.5 x 1.2 cm, 1 gm, 549.16 m, DA 9641
- 5** Iron dagger with pommel. 29 x 4.5 x 4.5 cm (pommel), 135 gm, hexagonal inlet on the interior of the pommel, 549.11 m, DA 9646
- 6** 2 Copper finger rings. Dm. 2.5, wire Dm. 0.35 cm, 2.1 gm; 2.2 x 2.5 cm, wire Dm. 0.2 cm, 1 gm, 549.10 m, DA 9662

#### **Burial 3**

- 7** Iron dagger and a piece of copper wire which probably belonged to the scabbard. L. largest fragment 15.5 (pres.) x 2 (pres.) x 0.9 cm, 50 gm, 549.15 m, DA 9647
- 8** Arrowheads, mostly iron. **8.1** L. 8.8 cm (pres.), 11 gm; **8.2** L. 9 cm, 12 gm; **8.3** L. 7.3 cm, 10 gm; **8.4** L. 7.8 cm (pres.), 10 gm; **8.5** L. 8 cm (pres.), 10 gm; **8.6** 3 arrowheads corroded together: L. 9.3 cm, L. 8.5 cm, L. 8.4 cm, 32 gm; **8.7** L. 8.3 cm (pres.), 14 gm; **8.8** L. 7.5 cm, 10 gm; **8.9** L. 7.3 cm, 9 gm; **8.10** L. 6.2 cm (pres.), 3.7 gm; **8.11** L. 4.1 cm

(pres.), 4.6 gm; **8.12** L. 8.3 cm, 10 gm; **8.13** L. 6.9 cm (pres.), 11 gm; **8.14** L. 8.7 cm (pres.), 17 gm; **8.15** L. 7.5 cm, 12 gm; **8.16** L. 8.7 cm, 10 gm; **8.17** L. 6.7 cm (pres.), 10 gm; **8.18** L. 6.7 cm (pres.), 8 gm; **8.19** L. 8.5 cm, 10 gm; **8.20** L. 7.2 cm (pres.), 9 gm; **8.21** L. 8.2 cm, 12 gm; **8.22** L. 5.3 cm (pres.), 5 gm; **8.23** L. 6.4 cm (pres.), 8.4 gm; **8.24** L. 6.1 cm (pres.), 8 gm; **8.25** L. 3.8 cm (pres.), 3.3 gm; **8.26** L. 5.6 cm (pres.), 10 gm (copper or bronze); **8.27** L. 4.9 cm (pres.), 5 gm; **8.28** L. 3.6 cm (pres.), 3.2 gm; **8.29** L. 5.4 cm (pres.), 6.2 gm; **8.30** L. 5.5 cm, 7.3 gm; **8.31** L. 7.5 cm (pres.); **8.32** L. 6.3 cm (pres.), 8 gm. 549.24 m, All DA 9640

## Burial 2

- 9** Iron arrowheads. **9.1** L. 8.2 cm, 12 gm; **9.2** L. 8 cm (pres.), 13 gm; **9.3** L. 7.6 cm (pres.), 12 gm; **9.4** L. 8.6 cm (pres.), 13 gm; **9.5** L. 8.1 cm, 13 gm; **9.6** L. 8.2 cm, 13 gm; **9.7** L. 8.3 cm, 13 gm; **9.8** L. 8.4 cm, 15 gm; **9.9** L. 5.2 cm (pres.), 5.9 gm; **9.10** L. 6.5 cm (pres.), 6.5 gm; **9.11** L. 5.2 cm (pres.), 5.4 gm; **9.12** L. 4.2 cm (pres.), 5.9 gm; **9.13** L. 2.5 cm (pres.), 2.9 gm. 549.16 m, nicht in situ, All DA 9640
- 10** Iron dagger. 29 x 4.8 x 1.1 cm, 135 gm, 549.11 m, DA 9645
- 11** Balsamarium, clay with fine mineral temper, surface originally smooth, fabric dark grey (5YR 4/1), outside yellowish red to yellowish red to very dark grey (5YR 5/6-3/1), 549.21 m, DA 9639
- 12** Storage vessel. heavy mineral temper, thin grey (5YR 5/1) slip outside, inside pink (5YR 7/4), herringbone pattern impressed in a horizontal band below the neck, 29.2 x 25.3 cm, 549.33 m, DA 9333

## Attribution to a Specific Burial Uncertain

- 13** Storage vessel. 33.5 x 31.5 cm, heavy mineral temper, red, light red, pink slip (2.5YR 5/6-6/6-5YR 8/3), dash and herringbone ornament on the neck and belly, 549.58 m, DA 9650
- 14** Jar. 25 x 28 cm, lower half wheel-turned, upper half hand made, heavy and coarse mineral temper, fabric light grey to red (5YR 7/1), surface light grey, pink and reddish yellow slip (5YR 7/1-7/3-7/6), herringbone band on the neck and on a raised band on the belly as well as in four vertical stripes between the neck and belly, 550.03 m, DA 9648
- 15** Storage vessel with narrow neck. 37.5 x 29 cm, slight mineral temper, surface and fabric reddish yellow (5YR 7/6-6/6), herringbone pattern around the neck, 549.63 m, DA 9649
- 16** Copper cramp. 2.2 (pres.) x 2.1 cm, 1.6 gm, 549.38 m, DA 9635
- 17** Skeletal remains from a goat or sheep. 549.17 m, DA 9634
- 18** Astragal of a goat or sheep. 549.19 m, DA 9634

Excavator: MBe

## SAMAD GRAVE 101124

UTM coordinates of the centre of the long axis (a-b):

616644.22; 2520414

azimuth of the long axis: 176/376 gon (=NW-SE orientation)

L. of the floor: 1.25 m

Br. of the floor: 0.75 m

depth of the floor b.s.: 0.62 m

Floor level: 532.18 m

Samad Culture

reuse provable: no

This grave lies some 50 m SW of the grave 101040 (=old Maysar 30), which is a landmark. 101124 and another grave (101125) are the southernmost group in the Samad 10 cemetery. The first was identifiable on the surface as a low mound of stones. Capstones were no longer

preserved. Large and middle-sized wadi stones maximally preserved in four courses serve as the building material. The plan of the grave is oval. Two rings of stone surround the crown. Wadi stones from the outwardly tipped walls have caved into the chamber.

The grave had been disturbed and the funerary objects lay scattered without any visible order in the chamber. In the SE end on top of a collapsed stone a mollusc (3) lay on its back with the hinc toward the E, as well as a bronze bowl (2). Near the W wall a pitcher (4) a "perfume bottle" (6), and a dagger blade (5) were found in disarray. To the E of the blade a handle made of white dolomite first awakened thought of an association which later proved not to be the case. Nothing remained of the skeleton.

### Grave Goods

- 1 Fragmentary "alabaster" vessel. 8.5 (orig.) x 3.4 x 5.7 cm, 532.13 m, DA 5938
- 2 Bronze sheet metal bowl. Dm. 13.5-13.7, H. 6.1 cm, patched three times with grommeted sheet metal, 532.24 m, DA 5943
- 3 Bivalve shell. 13.6 x 13.5 x 5.5 cm, 532.51 m, DA 5936
- 4 Pitcher. 18.6 x 14.6 cm, organic tempered, porous, soft, 532.12 m, DA 5942
- 5 Iron dagger, tanged. 13.6 (pres.) x 1.6 x 0.5 cm, tip broken off, 532.15 m, DA 5940
- 6 Glazed perfume bottle. 9.4 x 7.4 cm, light green, sand tempered, porous, well levigated, soft fabric, 532.17 m, DA 5941
- 7 Pendant in soft stone. Dm. 6.7-6.9, th. 1.9 cm, perforation in the centre through both faces, two additional perforations also through the faces, use-wear where the holes enter the faces, 532.09 m, DA 5939
- 8 Grip of dolomite (A. Hauptmann). 8.4 x 3.6 x 1.5 cm, 48.7 gm, borings from both ends do not meet; they are joined by another boring which is positioned perpendicular to them, 532.13 m, DA 5940
- 9 8 drilled snail beads. 1.5 x 1.1 cm, 532.09 m, DA 5937
- 10 Lathe-turned bead, soft stone, Dm. 3, H. 1.4 cm, fill, DA 5959
- 11 Copper cramp. 2.7 x 1.2 x 1.1 cm, punched dots on one face, beneath the chamber floor, DA 5958
- 12 Iron pin. 13.4, Dm. 0.35 cm, beneath the chamber floor, DA 5960
- 13 Bivalve shell. 6.8 x 4 x 1.5 cm, sieved, DA 5961

Excavator: BV

### SAMAD GRAVE 2202

UTM coordinates of the long axis (a-b):

a. 618457.4; 2522199.0

b. 618456.6; 2522196.0

azimuth of the long axis: 22/222 gon (=NNO-SSW)

L. of the floor: 2.0 m

Br. of the floor: 0.82 m

D. of the floor b.s.: 0.72 m

Floor level: 549.20 m

Wadi Suq & Lizq Culture

reuse provable: yes

Prior to excavation on the NW side of the grave part of the uppermost course of masonry was visible where it had been disturbed and partly cleared owing to adjacent building. Most of the architecture was destroyed. The grave was dug into the bedrock. Up to 5 courses of wadi stones were preserved in the SE side which were set in a corbelled vault. On this side some of

the stones of the stone ring were still in situ. The grave floor originally was of roughly oval form.

The chamber was completely disturbed, and the skeleton as well as grave goods lay strewn in the debris with no particular concentrations.

**Skeletal remains:**

Age: 30-50 years

Sex: more likely male

Position: unknown

**Grave goods:**

- 1 Fragment of a painted bowl (Lizq). clay heavily gritted, inside and outside light red (2.5YR 6/8), dark reddish brown decoration (2.5YR 3/4), H. 6,8 (pres.), orig. Dm. 11, Th. 0.4-0.8 cm, DA 9718
- 2 Floor fragment of a vessel (Lizq ?). fine clay without recognizable temper, inside and outside grey to light red (2.5YR 6/0-6/6), H. 4, Dm. 7,4, Wandung 0.3 cm, DA 9718
- 3 Painted rim sherd (Lizq), soft fired, little organic temper, surface and fabric reddish yellow (5YR 6/8), dusky red decoration (2.5YR 3/2), H. 2.2, Br. 3.9, Th. 0.2 cm, DA 9718
- 4 Painted belly sherd (Lizq). middle hard fired, fabric and surface pink (7.5YR 8/4), light red slip (2.5YR 6/6), very dark grey decoration (2.5YR 3/0), H. 4.3, Br. 4.5, Th. 0.3 cm, DA 9716
- 5 Rim sherd with traces of painted decoration (Lizq). middle hard fired, fabric and surface light red (2.5YR 6/6), red decoration (2.5YR 4/6), H. 3.5, orig. Dm. 8, Th. 0.7 cm, DA 9716
- 6 Body sherd of a rough vessel. fine middle hard fired clay with very little organic temper, inside light red (2.5YR 6/8), H. 8.7, Dm. 13.8, Th. 0.6-1 cm, DA 9716
- 7 Body sherd (Lizq). middle hard fired clay, little organic temper, surface light red (2.5YR 6/6), H. 13.8 cm, debris., (not reproduced), DA 9716
- 8 Body sherd of a bellied vessel with perforated suspension lugs (Lizq). middle hard fired clay, little organic temper, exterior light red, H. 5, Dm. 15, Th. 0.4 cm, DA 9717
- 9 Neck of a vessel (Wadi Suq). fine light organic temper middle hard fired, wheel-thrown, inside and fabric light red (2.5YR 6/6), red slip (2.5YR 5/8), H. 4.2, Dm. 8, Th. 0.4 cm, DA 9719
- 10 Rim sherd (Lizq). soft fired with little organic temper, fabric and surface light red (2.5YR 6/6), H. 3.1, Dm. 8.6, Th. 0.3 cm, DA 9719
- 11 Small saucer with flat base. fine clay, light mineral and organic temper, surface slipped, surface reddish yellow (5YR 6/6), H. 2.7, Dm. 6.8, Th. 0.5 cm, DA 9715
- 12 Soft stone lid with tubular drill ornament and lid inset. H. 3,7, Dm. 6.1 cm., DA 9709
- 13 Fragments of a soft stone bowl with pouring lip. zig zag incisions on the outside, H. 3.7, Dm. 8.7, Th. 0.6-0.8 cm, DA 9708
- 14 Copper ring, open on one side. Dm. 2.3, St. 0.2 cm, DA 9713
- 15 Copper arrowhead with tang square in section, L. 4, Br. 1.6, D. 0.3 cm, 5.9 gr, DA 9711
- 16 Copper arrowhead with tang square in section. edges ground on the blade, L. 4, Br. 1.2, D. 0.2, cm, 3.8 gr, DA 9712
- 17 Biconical carnelian bead. L. 1, Dm. 0.6 cm, DA 9705
- 18 27½ small, flat, perforated shell beads. H. 0.1, Dm. 0.4 cm, 8 large beads also of shell, H. 0.3, Dm. 0.7 cm, DA 9714
- 19 Fragmentary decorative button of a marble-like stone. above a relieved rosette, on the edge drill holes probably from the setting, H. (orig.) 1.2, Dm. 3.3 cm, DA 9710

- 20 Mollusc (*Anadara antiquata*). H. 4.5, Br. 6.1, D. 1.8 cm, DA 9720  
 21 Mollusc (*Acanthocardia pseudolima*). H. 11, Br. 11.7, D. 4.7 cm, DA 9721  
 22 Fragment of a mollusc. H. 7.4 (pres.), Br. 4.3 (pres.) cm, (not drawn), DA 9721

Excavator: MBe

### MAYSAR GRAVE 803

UTM coordinates of the centre (MP 5)

a. 615232.4; 2522347.8

azimuth of the long axis: different axes

L. of the floor: see below                      Br. of the floor: see below

Depth of floor b.s.: see below              Floor level: see below

Lizq and Samad Culture                      reuse provable: yes

This grave is the easternmost in a row of nearly circular graves at the south foot of an E-W oriented ridge. For several years it proved a rich source of survey material for members of our team. Initially we considered this grave to be of Lizq Period origin, owing in part to the find situation. Further deliberation brought us to the presumption that 803 was a reused Hafit grave. The architecture and situation is best matched in this period. On the surface the positions of the large wall stones could be recognized. Several of the quarried stones were badly disturbed and even lay outside of the grave. This structure is circular in plan with a diameter of some 5.2 m. Therein three large, concentric stone rings including the interior wall of the central chamber were visible which were larger than the other stones. The stones were bedded in a loose clayey soil. The structure and its contents were cleared by quadrant, levels and find-spots. Level 1 describes the surface, level 2 the fill, and level 3 the nearly undisturbed floor. The majority of the finds derive from level 2. Some of the Lizq Period pottery sherds showed traces of secondary burning. Presumably this grave stood higher than at present, but to judge from the position of the secondary burials nos. 2 and 3 in the structure itself as early as the Samad Period it may have assumed its present day appearance. In any case the secondary burial 2 has nothing to do with the original structure. Around the outermost circle of stones lay irregularly strewn stones.

Badly disturbed osteal remains from 6 individuals were scattered in and on the ruin. Those of the central burial and the two secondary burials were the least disturbed. The remaining human bones were even less intact and thus are referred to as bone finds 4, 5 and 6.

#### **Skeletal remains:**

Suggestion:

- 1 adult male (secondary burial 1)
- 2 older children or adolescents (secondary burials 2 and 3)
- 2 small children (bone finds 4 and 5)
- 1 adult female (bone find 6)

Alternative suggestion:

- 1 adult male (central burial)
- 1 adult woman (secondary burial 1)
- 2 older children or adolescents (secondary burials 2 and 3)
- 2 small children (bone finds 4 and 5)
- bone find 6 (not necessarily a separate burial)

**Central burial, Lizq Culture.** The central chamber was nearly circular in plan with a diameter of 1.6 m. On the E side is an entrance the axis of which deviates 174 gon from north. The masonry is interrupted here for some 0.60 m. This gap is filled with 5 stones set on edge and rammed together. They are considerably smaller than the stones of the chamber wall. Out of line with the other stones of the wall and lying in front of the entrance is a larger stone which probably blocked the entrance to the interior chamber. The floor level was at 548.32 m, below the present surface. The contents of the graves lay strewn directly SW of the main chamber in quadrant IV. The finds were datable with few exceptions to the Lizq Culture. The few skeletal remains were nearly entirely destroyed and in part may have belonged to the secondary burial 1. They shed no information on the burial itself.

**Skeletal remains:**

Skull and long bones preserved

Age: 40-70 years

Sex: not determinable

**Grave goods** (level 2 if not otherwise stated)

- 1 Small pottery sherds (all Lizq). DA 10571, 10594, 10598
- 2 2 molluscs. **2.1** 3.7 x 5.1 cm, DA 10567; **2.2** 3.4 x 5.3 cm, DA 10720
- 3 Sherds of a bowl (Lizq). dark grey (5YR 4/1) to reddish brown (5YR 5/3) slipped, fine fabric with little sand temper, fabric reddish yellow (5YR 6/6), H. (pres.) 4.5, Rdm. 10.8, Th. 0.3-0.4 cm, level 3, DA 10600
- 4 Sherds of a bowl (Lizq). dark reddish brown (5YR 3/2) decoration, fine light red (2.5YR 6/6) clay mixed with a small amount of grog, H. (pres.) 4.5, Dm. 10, Th. 0.5 cm, DA 10598
- 5 Neck fragment (Lizq). rough ware tempered with grog and sand, red (2.5YR 5/6) surface, reddish yellow (5YR 6/6) fabric, H. (pres.) 4, Rdm. 11, Th. 0.4-0.5 cm, DA 10598
- 6 Fragment of a bowl rim (Lizq). reddish brown (5YR 5/3) slipped, clay lightly tempered with grog, fabric reddish brown (5YR 5/3), H. (pres.) 7.2, Dm. not determinable, Th. 0.5 cm, DA 10598
- 7 Small pottery sherds (Lizq). DA 10571 & 10594 (not reproduced)
- 8 9 Beads. **8.1** perforated snail shell, **8.2** middle hard stone, **8.3** shell, **8.4-7** shell, **8.8** red and white agate, **8.9** carnelian, level 3, DA 10573

**Secondary burial 1, Lizq Culture.** W of the main chamber a burial was made between the inner and outer stone rings. This cist was oriented 32/232 gon from the north. The floor was reached at a level of 548.70 m, that is 25 cm below the modern surface.

The burial lay in a clay lense. It was nearly completely disturbed. The shin bones were still in situ. In the angle between the femur and lower leg a small flat bone object decorated with perforations was found (9).

**Skeletal remains:**

Position: lying on the left side, contracted, head in the SW, glance to the W

**Grave goods** (all level 2):

- 9 Small bone plaque with drilled decoration. L. 5.9, Br. 3, Th. 0.3 cm, DA 10606
- 10 Small vessel sherds (Lizq). DA 10599 (not reproduced)
- 11 Mollusc. 4 x 3.4 x 1.5 cm, DA 10730

- 12** Snail shell. 2.1 x 2.1 x 2 cm, DA 10730  
**13** 13 beads. **13.1-3** of shell, **13.4** of polished soft stone, **13.5** of calcite, **13.6-7** of shell, **13.8-10** shell, **13.11** snail, **13.12-13** shell, DA 10570

Scattered finds presumably from this burial or the main chamber lay scattered particularly over quadrant IV, fewer in quadrant I, in findspot 3. Finds attributable to the two burials (from FS 1, Q IV, level 2).

- 14** 2 copper arrowheads. **14.1** 5.7 x 1.6 x 0.2 cm, 5.9 gm, DA 10572; **14.2** 4.3 x 1.2 x 0.2 cm, 3 gm, DA 10573  
**15** Copper double-edged razor. 6.3 (pres.) x 2.6 x 0.2 cm, 12 gm, DA 10722  
**16** Copper tweezer. 4.9 x 1.9 x 0.7 cm, 7.5 gm, DA 10723  
**17** Snail shell. 4.9 x 3.4 x 3.6 cm, DA 10577  
**18** Soft stone oval pendant with hatched motif, through one end of the face pierced, traces of yellow colouring in the grooves, traces of light blue on the surface, 2.4 x 1.8 x 0.8 cm, DA 10578  
**19** Small rim fragment of a soft stone vessel. horizontal lines incised parallel to the rim, beneath multiple vertical lines, H. (pres.) 4, Dm. not determinable, Th. 0.3 cm, DA 10579  
**20** 6 molluscs. **20.1** 6.7 x 7 x 2.8 cm; **20.2** 6.1 x 5.5 x 2 cm; **20.3** 5.7 x 4.1 x 1.4 cm; **20.4** 5.8 x 4.1 x 1.5 cm; **20.5** 3.9 x 4. x 1.9 cm; **20.6** 6.3 x 4 x 1.6 cm, all DA 10577  
**21** Sherds of a bowl (Lizq). dark grey (7.5YR 4/0) slip, small amount of grog tempering, reddish yellow (5YR 6/6), H. 8.5, Dm. 20, Th. 0.6 cm, DA 10582  
**22** Sherds of a bowl (Lizq). light sand temper, relatively hard fired, fabric strong brown (7.5YR 5/6), H. (pres.) 4, Dm. 7.5, Th. 0.5 cm, DA 10582  
**23** Sherds of a bowl (Lizq). reddish brown slip (2.5YR 5/4), fine light red clay (2.5YR 6/6), H. 3.6, Dm. 10, Th. 0.3 cm, DA 10582  
**24** Sherds of a bowl (Lizq ?). dark reddish brown (2.5YR 3/2) decoration on red (2.5YR 5/6) slip, clay sand tempered and reddish yellow (5YR 6/6), H. 3.5, Dm. 16, Th. 0.6 cm, DA 10582  
**25** Sherds of a bowl (Lizq) with oval and constricted rim. sand and grog tempered, traces of a light reddish brown slip (5YR 6/3), fabric reddish yellow (5YR 6/6), H. (pres.) 7, Rdm. 10 x 14, Th. 0.4-0.6 cm, DA 10583  
**26** Base fragment (Lizq). sand and grog temper, hard fired, dark dusky red (2.5YR 3/2) decoration, light red (2.5YR 6/6), H. 2.5, Dm. of foot 6, Th. 0.5-0.7 cm, DA 10583  
**27** Broken bowl (Lizq). tournette made, very little mineral temper, red (2.5YR 5/8) slipped, light red fabric (2.5YR 6/8), H. 4.7, Dm. 8.3, Th. 0.2-0.3 cm, DA 10583  
**28** Sherds of a bowl (Lizq). weak red (2.5YR 4/2) painted rim, light red (2.5YR 6/6) - reddish brown (2.5YR 5/4) sand tempered clay, H. (pres.) 5.2, Dm. 8.2, Th. 0.2-0.4 cm, DA 10595  
**29** Fragments of a bowl (Lizq). reddish yellow (5YR 6/6) - weak red (2.5YR 4/2) slip, slight sand temper, reddish yellow fabric (5YR 7/6), H. 5.5, Dm. 11.2, Th. 0.5-0.7 cm, DA 10595  
**30** Fragment of a vessel foot (Lizq). 7 arm radial motif inside, very dusky red (2.5YR 2.5/2) decoration, sand temper, reddish brown fabric (5YR 5/4), 4.2 x 0.6 cm, DA 10595  
**31** Bowl (Lizq). dusky red (2.5YR 3/2) decoration, slight mineral tempered red (2.5YR 5/8) - light reddish brown (5YR 6/4), H. (pres.) 4, Dm. 10, Th. 0.4 cm, DA 10595  
**32** Rim sherd of a soft stone vessel. incised lines parallel and perpendicular to the rim, H. (pres.) 4.3, Dm. 10.7, Th. 0.6 cm, DA 10604  
**33** Molluscs. **33.1** 4.8 x 4.1 x 1.2 (pres.) cm; **33.2** 3.8 x 4.6 x 1.2 cm; **33.3** 4 x 4.6 x 1.3 cm, DA 10605

- 34** 15 beads. **34.1-4** red lightly banded carnelian, **34.5-7** dark red agate, **34.8-9** black and white agate, **34.10** blue faience, **34.11-13** shell, **34.14** shell, **34.15** snail shell, DA 10580

**Secondary burial 2**, Samad Culture. E of the entrance to the central chamber lies a second burial wedged between the stones of the inner and outer stone circles. The orientation of the grave is 45/245 gon. The floor was reached at 548.37 m, 0.20 m below the present day surface. The length of the grave measured 1.3 m and the width 0.6 m.

Fragments of a skull and long bones lay in the NE edge of the grave, evidently from another burial outside the central chamber.

**Skeletal remains:**

Age: 20 - x years

Sex: not determinable, more likely male

**Grave goods** (all level 3):

- 35** Neck and shoulder of a vessel (Samad ?). profiled rim, impressed wavy line around the neck, clay and schamotte temper, surface very pale brown (10YR 8/4) - light brownish grey (10YR 6/2), interior and fabric light red (2.5YR 6/6), H. (pres.) 7, Rdm. 6, Th. 0.3-0.5 cm, other sherds from this vessel in FS 3, Q III, DA 10601
- 36** Bowl (Lizq). weak red (2.5YR 4/2) decoration, fine light tempered, light red (2.5YR 6/8) clay, H. (pres.) 7.5, Rdm. 11, Th. 0.4-0.5 cm, pieces thereof also in FS 3, Q III, DA 10601
- 37** Rim sherd (Lizq). light red (2.5YR 6/6) decoration, very lightly tempered light red (2.5YR 6/6) clay, H. 2.5, Rdm. 12, Th. 0.4-0.6 cm, DA 10601
- 38** Copper pin. intact, 4.5 x 0.15 cm, 0.4 gm, level 3, DA 10589
- 39** 2 frit beads. **39.1** greenish white, H. 0.4, Dm. 0.5 cm; **39.2** bead made of snail shell, H. 0.46, Dm. 0.85-0.93 cm, DA 10590
- 40** 2 Molluscs. **40.1** 3.8 x 4.7 cm; **40.2** 2.1 x 3 cm, DA 10591
- 41** Soft stone vessel. lathe-turned, turning grooves inside, outside, an upper and lower zone of horizontal lines, slightly concave foot, script sign inscribed on the foot, Dm. 6, H. 2.1 cm, DA 10592
- 42** Shouldered vessel (Samad). neck and handle missing, wheel-thrown, yellow (2.5Y 8/6) glazed, badly weathered, light sand temper, fabric yellowish light brown (2.5Y 7/4), H. 13.2 (pres.), Br. 11, Th. 0.6 cm, DA 10593 and the fragment of a handle of the same vessel: H. 2.1 x 2.1 x 1 cm, DA 10731
- 43** Rim sherd of a bowl (Lizq). fine red (2.5YR 5/6) clay, slightly tempered, H. (pres.) 2.7, Dm. 20, Th. 0.4 cm, DA 10731
- 44** Fragment of a snail shell. 2.1 x 3.2 x 1 cm (not reproduced), DA 10591

**Secondary burial 3**, (Lizq and perhaps Samad). A small burial was set secondarily between the inner and outer stone ring SE of the main chamber with an orientation of 136/336 gon. The floor of the grave lay at 547.74 m, 0.72 m below the present day surface. The length and width measured 1.28 and 0.7 m.

Leg bones were found in situ in the NW part of the grave, and phallanges in situ in the SE end of the grave.

**Skeletal remains:**

Age: 20 - x years

Sex: not determinable

Position: contracted, lying on the right side, head in the E, gaze to the NE

**Grave goods** (all from level 3):

- 45** Small vessel sherds (Lizq). DA 10602 (not reproduced)
- 46** Finger ring of mother of pearl. Dm. 2, Th. 0.25-0.4 cm, DA 10724
- 47** 4 conically drilled stone beads of soft stone with iron pins (Samad). **47.1** lathe-turned, H. 0.8, Dm. 2 cm; **47.2** lathe-turned, H. 2.1, Dm. 1.7 cm; **47.3** lathe-turned, H. 0.6, Dm. 2 cm; **47.4** lathe-turned ?, H. 1.1, Dm. 2.2 cm, DA 10725
- 48** 17 carnelian beads. **48.1-4**, DA 10726

Not attributable to a particular burial:

- 49** Rim sherds of a vessel (Lizq). rough ware tempered with small stones, light red (2.5YR 6/6), H. (pres.) 6, Rdm. 12, Th. 0.4-0.5 cm, surface find, DA 10561
- 50** Rim sherd of a bowl (Lizq). fine, barely tempered clay, surface light brown (7.5YR 6/4), fabric pinkish grey (7.5YR 6/2), H. (pres.) 3.5, Rdm. 12.1, Th. 0.5 cm, surface find, DA 10561
- 51** Fragmentary vessel foot (Lizq). fine barely tempered clay, exterior reddish yellow (5YR 6/6), interior and fabric pinkish grey (7.5YR 6/2), H. 1.5, Fdm. 4, Th. 0.6 cm, surface find, DA 10561
- 52** Fragmentary vessel foot (Samad or Lizq). coarse ware with sand temper, exterior light brown (7.5YR 6/4), interior light pinkish grey (2.5YR 6/2), H. (pres.) 2.9, Fdm. 10, Th. 0.6 cm, surface find, DA 10561
- 53** Fragmentary vessel foot (Lizq). dark reddish brown (2.5YR 2.5/4) decoration, grog tempered, light reddish brown (2.5YR 6/4), H. 2.6 cm, Dm. not determinable, surface find, DA 10561
- 54** Copper arrowhead. L. 4.5, Br. 1.5, Th. 0.3 cm, 4 gm, surface find, DA 10564
- 55** Small foot sherd of a soft stone vessel. H. (pres.) 2, Dm. (orig.) 5.8 cm, surface find, DA 10569
- 56** Half of a copper tweezer. L. (pres.) 3.6, W. 0.6, Th. 0.15 (pres.) cm, 1.5 gm, surface find, DA 10565
- 57** Copper bangle. 3.9 x 4.2 cm, Th. 0.7 x 0.2 cm, 6.5 gm, surface find, DA 10565
- 58** Carnelian bead. cylindrical, L. 1.86, Dm. 0.72, FS 3, Q II, L 2, DA 10575
- 59** Molluscs. **59.1** 2.7 x 2.3 x 0.3 cm, DA 10576; **59.2** 4 x 4.8 x 1.8 cm, DA 10591; **59.3** 5.4 x 4.1 x 1.5 cm, FS 3, Q II, L 2, DA 10574; **59.4** 4.32 x 3.84 x 1.4 cm, Q I, L 2, DA 10568
- 60** Fragment of a bowl (Lizq). reddish brown decoration, H. 5, Dm. 12.2, Th. 0.5 cm, FS 4, Q II, L 2, DA 10567
- 61** Fragment of a vessel foot. H. 4, Dm. not determinable, FS 4, Q II, L 2, DA 10567
- 62** Small bowl (Lizq). H. (pres.) 3, Rdm. (pres.) 6.5, Th. 0.25 cm, FS 4, Q II, L 2, DA 10567
- 63** Fragmentary spouted vessel (Lizq). light red (2.5YR 6/8) decoration, clay and grog temper, fabric and exterior reddish yellow (5YR 6/8), H. 6 (pres.), Br. 15 (without spout), Th. 0.4 cm, FS 4, Q II, L 2, DA 10596
- 64** Small pottery sherds (Samad). incized decoration, hard fired, coarse sand temper, fabric and exterior dark reddish brown (2.5YR 3/4), FS 4, Q II, L 2, DA 10595, 10596
- 65** Shallow bowl (Lizq). dark reddish brown (2.5YR 3/4) decoration, grog tempered, exterior and fabric light red (2.5YR 6/6), H. (pres.) 3, Dm. 10, Th. 0.5 cm, FS 4, Q II, L 2, DA 10596
- 66** Mollusc shell and fragment. **66.1** 4.1 x 3.8 x 1.3 cm; **66.2** 5 x 5 cm, FS 4, Q II, L 2, DA 10603
- 67** Mollusc. 3 x 4 cm, FS 5, Q IV, L 2, DA 10588

- 68 Rim sherd (Lizq). dark reddish brown (2.5YR 3/4) decoration, secondary burning, fine hardly tempered clay, weak red (2.5YR 5/2), H. (pres.) 2.5, Rdm. 8.1, Th. 0.3-0.4 cm, FS 5, Q IV, L 2, DA 10585
- 69 Rim sherd (Lizq). middle coarse sand tempered clay, reddish yellow (5YR 6/6), H. (pres.) 4, Rdm. 10, Th. 0.3 cm, FS 5, Q IV, L 2, DA 10585
- 70 Overhanging rim fragment (Lizq). middle coarse sand tempered clay, light reddish brown (5YR 6/4), H. (pres.) 3.6, Dm. not determinable, Th. 0.4 cm, FS 5, Q IV, L 2, DA 10585
- 71 Slightly constricted rim sherd (Lizq). fine, lightly tempered, reddish yellow fabric (5YR 6/6), H. (pres.) 4, Dm. 10.5, Th. 0.3-0.5 cm, FS 5, Q IV, L 2, DA 10585
- 72 Rim fragment (Lizq). dark grey (5YR 4/1) slipped, fine grog temper, light red (2.5YR 6/6), H. (pres.) 2.1, Rdm. 10, Th. 0.5-0.6 cm, FS 5, Q IV, L 2, DA 10585
- 73 Small body sherds (Lizq). FS 5, Q II, L 2, DA 10597 (not reproduced)
- 74 Foot sherd (Lizq). coarse grog and sand temper, reddish yellow (5YR 7/8), H. (pres.) 3, Fdm. 11.5, Th. 0.6-0.7 cm, DA 10585
- 75 4 beads. **75.1-2** carnelian, **75.3-4** shell, FS 5, Q IV, L 2, DA 10587
- 76 Copper beaker, H. 4.9, Dm. 7, rim 0.2 cm, surface, DA 2174
- 77 4 fragments of molluscs (not reproduced), surface, DA 10562

Excavator: PP

## SAMAD GRAVE 2144

UTM coordinates of the long axis (a-b):

a. 618381.9; 2521979.8

b. 618383.2; 2521978.6

azimuth of the long axis: 152/352 gon (=NW-SE)

L. of the floor: 0.8 m

Br. of the floor: 0.6 m

D. of floor b.s.: 0.45 m

Floor level: 549.61 m

Wadi Suq Culture

reuse provable: no

The grave came to light during the course of the horizontal clearance of the surface. The NE side of the chamber wall and the capstones were missing entirely. The chamber had the shape of an irregular oval. Considering the small size we no doubt are dealing with the grave of a child. Skeletal remains were not preserved.

The grave goods lay together in a group near the missing NE wall of the grave.

Broken vessels lay strewn near the NE side (2 - 4). In the E part of this concentration just below the pottery lay a small mollusc on its back with the hinge to the SW.

### Grave goods:

- 1 Mollusc, recently broken (Garidae, *Asaphis* vgl. *deflorata*). with adhering traces of black mascara (brochantite & tenorite), 549.68 (Ok) m, DA 9498
- 2 Fineware beaker with a dark grey to reddish brown decoration (Wadi Suq). diagonal parallel lines bordered above and below by simple horizontal lines, wheel-thrown, foot slightly convex, interior light red (2.5YR 6/6), red (2.5YR 5/6) slip, exterior and fabric grey (2.5YR 6/6), paint very dark grey to dusky red (2.5YR 3/0-3/2), nearly untempered, H. 10.7, Rdm. 11.2, Dm. of foot 5.6 cm, this beaker was broken into several fragments, 549.72 & .76 (Ok) m, DA 9495

- 3 Fineware conical beaker with outwardly tipping rim (Wadi Suq). wheel-thrown, inside reddish yellow slip (5YR 6/6), exterior reddish yellow (7.5YR 6/6), paint very dark grey (2.5YR 3/0), slight organic temper, where the foot was somewhat too thick the wall was trimmed with a knife, H. 10.9, Rdm. 10.7, Dm. of foot 4.5 cm, 549.72 (Ok) m, DA 9496
- 4 Small fineware conical beaker (Wadi Suq). very dark grey (2.5YR 3/0) bands parallel to the rim, wheel-thrown, string cut, inside red (2.5YR 5/6) slip, exterior and fabric light red (2.5YR 6/6), paint very dark grey (2.5YR 3/0), little organic temper, H. 5.8, Rdm. 7.1, Th. 0.2-0.4 cm, 549.73 (Ok) m, DA 9497

Excavator: MBe

## Bibliography

F.P. Albright, *The American Archaeological Expedition in Dhofar, Oman*. Publications of the American Foundation for the Study of Man 6 (Washington, D.C. 1982)

P. Biagi/W. Torke/M. Tosi/H.-P. Uerpmann, "Qurum: A Case Study of Coastal Archaeology in Northern Oman", *World Archaeology* 16, 1984 43-61.

al-Baladhuri, *Futuh al-buldan*, ed. M.J. de Goeje (Leiden 1866)

A.F.L. Beeston, "The Settlement at Khor Rori", *JOS* 2, 1976, 39-43

S. Bittner, *Tracht und Bewaffnung des persischen Heeres zur Zeit der Achaimeniden* (Munich 1985)

R. Boucharlat (ed.), *Archaeological Surveys and Excavations in the Sharjah Emirate, 1986, A Third Report* (Lyon 1986)

R. Boucharlat/P. Lombard, "Fouilles de Rumeilah (Oasis d'al Ain, E.A.U.) Résumé", R. Boucharlat/J.F. Salles 1984, 237-240

Ibid., "Datations absolues de Rumeilah et chronologie de l'age du fer dans la peninsule d'Oman" lecture 14.04.1988 Göttingen

Ibid., "The Oasis of al Ain in the Iron Age: Excavations at Rumeilah 1981-1983", *Archaeology in the UAE* 4, 1985, 44-73

R. Boucharlat/J.-F. Salles (eds.), *Arabie orientale, Mésopotamie et Iran méridionale de l'age du fer au début de la période islamique* (Réunion de travail, Lyon, 1982, Maison de l'Orient). Editions Recherche sur les civilisations, Mémoires 37 (Paris 1984)

R.L. Bowen, Jr., *The Early Arabian Necropolis of Ain Jawan*. BASOR Supplementary Studies no. 7-9 (New Haven 1950)

B. de Cardi, "Further Archaeological Survey in Ras al-Khaimah, U.A.E.", *Oriens Antiquus* 24, 1985, 163-223

Ibid. "Ras al-Khaimah: Further Archaeological Discoveries", *Antiquity* 50, 1976, 216-222

Ibid., "Survey in Ras al-Khaimah", Boucharlat/Salles 1984, 201-215

Ibid., *Qatar Archaeological Report* (Oxford 1978)

Zlata Cilinska, "Frauens Schmuck aus dem 7. - 8. Jahrhundert im Karpathenbecken", *Slovenska Archaologia* 23,1, 1975, 63-96

S. Cleuziou, *Archaeology in the United Arab Emirates (al Ain 1978)*

Ibid., "Preliminary Report on the Second and Third Excavation Campaigns at Hili 8", *Archaeol. in the U.A.E.* 2-3, 1978-79, 30-45

- R. Cleveland, "Preliminary Report on Archaeological Soundings at Sohar (Oman)", BASOR 153, 1959, 11-19
- P.M. Costa/T.J. Wilkinson, "The Hinterland of Sohar Archaeological Surveys and Excavations within the Region of an Omani Seafaring City, JOS 9, 1987, 9-144
- D.B. Doe, "Gazetteer of Sites in Oman, 1976", JOS 3,1, 1977, 35-57
- P. Donaldson, "Prehistoric Tombs of Ras al-Khaimah", Or. Ant. 23,3-4, 1984, 191-312
- R.H. Dyson, Jr., "Notes on Weapons and Chronology in Northern Iran around 1000 BC", M.J. Mellink (ed.), Dark Ages and Nomads c. 1000 B.C. (Istanbul 1964) 32-45
- K. Frifelt, "On Prehistoric Settlements and Chronology of the Oman Peninsula", East and West 25, 1975, 329-423
- R. Ghirshman, "Le rhyton en Iran", Artibus Asiae 25, 1962, 57-80
- M. Grant, Morgen des Mittelalters (Bergisch Gladbach 1982)
- E. Haerinck, La céramique en Iran pendant la période parthe (ca. 250 av. J.C. à ca. 225 après J.C. (Gent 1983)
- G. Hagenow, Aus dem Weingarten der Antike der Wein in Dichtung, Brauchtum Alltag (Mainz 1982)
- L. Hannestad, The Hellenistic Pottery Catalogue and Plates Jutland Archaeological Publications 16:2. Ikaros the Hellenistic Settlements vol. 2:2 (Aarhus 1983)
- A. Hastings/J.H. Humphries/R.H. Meadow, "Oman in the Third Millennium BCE", JOS 1, 1975, 9-55
- Hildesheim, Exhib. cat. Roemer- und Pelizaeus-Museum, Albanien Schätze aus dem Land der Skiptaren (Mainz 1988)
- W. Hornbostel et al., Aus Gräbern und Heiligtümern die Sammlung Walter Kropatscheck (Mainz 1980)
- E. Hübner, "Betten" RE III,1 (1899) 370-374
- J.H. Humphries, "Harvard Archaeological Survey in Oman: Some Later Prehistoric Sites in the Sultanate of Oman, Proc. Sem. Arab. Stud. 4, 1974, 49-77
- M. Kervran, "A la recherche de Suhar: Etat de la question", Boucharlat/Salles 1984, 285-293
- C.C. Kolb, "A Red Slipped 'Pseudo-Arretine' Ceramic from South Central Asia", EW 33, 1983, 57-103
- E.A. Knauf, "Zwei Krug-Monogramme aus Uman", n.d.

- I. Kovrig, Das awarenzeitliche Gräberfeld von Alattyan", *Archaeologia Hungarica* N.S. 40 (Budapest 1963)
- S. Kroll, Die Burganlage von Lizq n.d.
- H. Kyrieleis, Throne und Klinen Studien zur Formgeschichte altorientalischer und griechischer Sitz- und Liegemöbel vorhellenistischer Zeit. *Jb. Dt. Arch. Inst. Ergft.* 24 (Berlin 1969)
- C.C. Lamberg-Karlovsky/W. Fitz, Cairn Burials in the Soghun Valley, Southeastern Iran, *Orientalia Iosephi Tucci Memoriae Dicata. Serie Orientale Roma* 56,2, 1987, 747-770
- M. Lebeau, La céramique de l'age du fer II-III à Tell Abou Danné et ses rapports avec la céramique contemporaine en Syrie. *Editions Recherche sur les Civilizations Cahier* 12 (Paris 1983)
- P. Lombard, "Iron Age Stone Vessels from the Oman Peninsula. A Preliminary Note", *Proc. Sem. Arab. Stud.* 12, 1982, 39-48
- Ibid., l'Arabie orientale à l'age du fer, unpublished doctoral dissertation, Université de Paris I (Paris 1985)
- Ibid., "Quelques éléments sur la métallurgie de l'age du fer aus Emirats Arabes Unis", *R. Boucharlat/J.-F. Salles* 1984, 225-235
- T. Madhloom, "Excavations of the Iraqi Mission at Mleiha, Sharjah, UAE", *Sumer* 30, 1974, 149-158
- J. Marshall, *Taxila* (Cambridge 1951)
- A.S. Melikian-Chirvani, "Le rhyton selon les sources persanes essai sur la continuité culturelle iranienne de l'antiquité à l'Islam", *Studia Iranica* 11, 1982, 263-292
- E. Minns, *Iranians and Greeks in Southern Russia* (Oxford 1922)
- P.R.S. Moorey, *Cemeteries of the First Millennium BC at Deve Hüyük*, *BAR Intern. Series* 87 (Oxford 1981)
- Ibid., "Metal Wine-Sets in the Ancient Near East", *Iranica Antiqua* 15, 1980, 181-197 + plates
- Munsell Soil Color Charts* (Baltimore 1975)
- B. Musche, *Vorderasiatischer Schmuck zur Zeit der Arsakiden und Sasaniden. Hdbh. der Or.* vol. 1,5 (Cologne 1988)
- New York (exhib. cat.), *Treasures from the Holy Land* (New York 1987)
- M. Pfrommer, *Studien zu alexandrinischer und großgriechischer Toreutik frühhellenistischer Zeit. DAI Achäol. Forsch.* 16 (Berlin 1987)

- C.S. Phillips, Wadi al Qawr, Fashgha 1. The Excavation of a Prehistoric Burial Structure in Ras al Khaimah, U.A.E., 1986 (Edinburgh 1987)
- W. Phillips, Unknown Oman (London 1966)
- J. Pirenne, "The Incense Port of Moscha (Khor Rori) in Dhofar", JOS 1, 1975, 81-86
- R. Poppa, Kamid el-Loz 2. der eisenzeitliche Friedhof Befunde und Funde. Saarbrücker Beiträge zur Altertumsforschung vol. 18 (Bonn 1978)
- D.T. Potts, "From Qade to Mazun: Four Notes on Oman c. 700 BC to 700 AD", JOS 8, 1986, 81-95
- D.T. Potts/A.S. Mughannum/J. Frye/D. Sanders, "Comprehensive Archaeological Survey Program, Preliminary Report of the Second Phase of the Eastern Province Survey 1397/1977", *Atlat* 2, 1978, 7-27 + plates
- S. ur-Rahman, "Report on Hili 2 Settlement, Excavations 1976-1979", *Archaeol. in the U.A.E.* 2-3, 1978-79, 8-18
- O. Reuther, Die Innenstadt von Babylon (Merkes) Ausgrabungen Dt. Or. Gesellschaft in Babylon III (Osnabrück 1968)
- al-Salimi (Muhammad b. Abdullah b. Humayd), *Nahdat al-a yan bi hurriyat Uman* (Cairo n.d.)
- J.-F. Salles, "Céramiques de surface à ed-Dour, Emirats Arabes Unis", R. Boucharlat/J.F. Salles 1984, 241-270
- I. Salman, "Foreword", *Sumer* 30, 1974, 1-2
- A. Salonen, Die Fußbekleidung der alten Mesopotamier nach sumerisch-akkadischen Quellen. *Suomalaisen Tiedeakatemia* (Helsinki 1969)
- Ibid., Die Möbel des alten Mesopotamien. *AASF Ser. B vol. 127* (Helsinki 1963)
- E. Schmidt, *Persepolis II: The Contents of the Treasury*, Univ. of Chicago, Or. Inst. Publ. 69 (Chicago 1957)
- W.H. Schoff, *The Periplus of the Erythraean Sea* (New York 1912)
- L. Sherr Dubin, *The History of Beads* (New York 1987)
- D. Stronach, *Pasargadae, A Report on the Excavations Conducted by the British Inst. of Persian Studies from 1961 to 1963* (Oxford 1978)
- at-Tabari, *Ta'rikh al-rusul wa l-muluk*, ed. M.J. de Goeje, (Leiden 1879-1901)
- B.S. Thomas, "The Musandam Peninsula and its People the Shihuh", *Jour. Royal Centr. Asian Soc.* 16, 1929, 71-86

- D.B. Thompson, "The Persian Spoils in Athens", *The Aegean and the Near East Studies...* Hetty Goldman (Locust Valley 1956) 281-291
- A. Tillmann, "Der Friedhof Maysar-45", 238-239, G. Weisgerber 1981
- A. Tillmann/S. Kroll, "Die erste Hälfte des 1. Jahrtausends (Lizq-Kultur)", G. Weisgerber 1981, 223
- Ibid., "Der Friedhof Maysar-36", G. Weisgerber 1981, 224-225
- Ibid., "Das Gräberfeld Maysar-27", G. Weisgerber 1981, 225-226
- M. Tosi, "Summary Report on the Archaeological Activity", *EW* 32, 1982, 223-231
- G. Van Beek, *Hajar Bin Humeid Investigations at a Pre-Islamic Site in South Arabia* (Baltimore 1969)
- B. Vogt, *Zur Chronologie und Entwicklung der Gräber des späten 4. bis 2. Jtsd. v.Chr. auf der Omanischen Halbinsel: Zusammenfassung, Würdigung und Analyse publizierter wie auch unveröffentlichter Grabungsergebnisse* (Diss. Göttingen 1986)
- Ibid., "1st Mill. BC Graves and Burial Customs in the Samad Area (Oman)", R. Boucharlat/J.-F. Salles 1984, 271-285
- Ibid., "Der Friedhof Maysar-9", 239-243, G. Weisgerber 1981
- B. Vogt/U. Franke-Vogt, *Shimal 1985/1986 Excavations of the German Archaeological Mission in Ras al-Khaimah, U.A.E. A Preliminary Report. Berliner Beiträge zum Vorderen Orient* 8 (Berlin 1987).
- G. Walser, *Die Völkerschaften auf den Reliefs von Persepolis. Teheraner Forschungen* 2 (Berlin 1966)
- G. Weisgerber, "Aspects of Late Iron Age Archaeology in Oman: The Samad Civilization", *Proc. Sem. Arab. Stud.* 12, 1982, 81-93;
- Ibid. *Excavations at Khadra bin Dhaffa, Sultanate of Oman* n.d.
- Ibid. "Mehr als Kupfer in Oman", *Der Anschnitt* 33, 1981, 174-263
- Ibid., "Oman: A Bronze-Producing Centre During the 1st Half of the 1st Millennium BC", J. Curtis (ed.), *Bronzeworking Centres of Western Asia c. 1000 -539 BC* (London 1988) 285-295 + plates
- D. Whitcomb, *Before the Roses and Nightengales Excavations at Qasr Abu Nasr, Old Shiraz* (New York 1985)
- J.D. Wilkinson, "Arab-Persian Land Relationships in Late Sasanid Oman", *Proc. Sem. Arab. Stud.* 6, 1973, 40-51

Ibid., *Water und Tribal Settlement in South-East Arabia: A Study of the Aflaj in Oman* (Oxford 1977)

R. Woodbury, "The Origins of the Lathe", *Sci. Amer.* 208, 1963, 132ff.

Ibid., *Water and Tribal Settlement in South-East Arabia: A Study of the Aflaj of Oman* (Oxford 1977)

L. Woolley/M. Mallowan/T.C. Mitchell, *Ur Excavations VII* (London 1976)

T.C. Young, "A Comparative Ceramic Chronology for Western Iran 1500-500 BC", *Iran* 3, 1965, 53-85

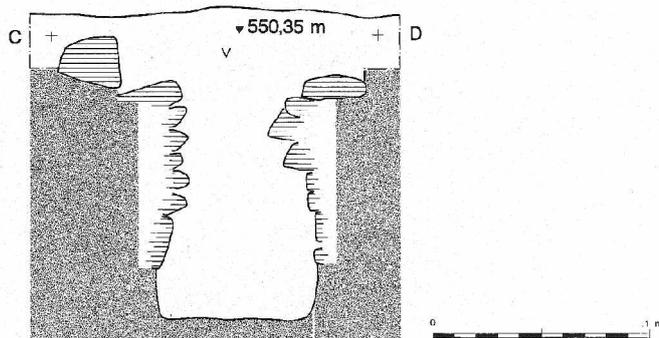
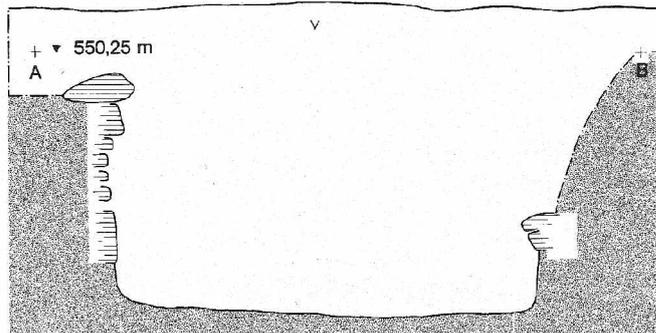
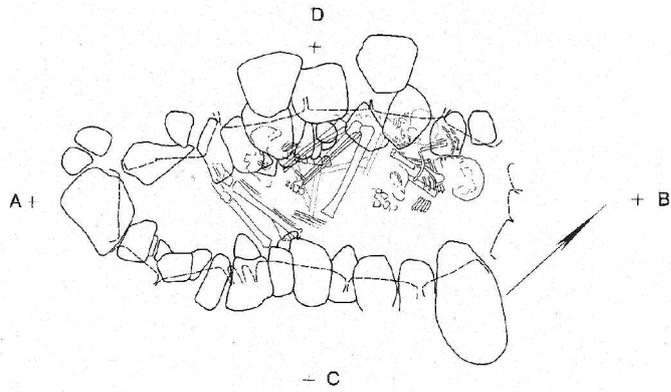
P. Yule, *Bestattungssitten im östlichen Arabien von der Späteisenzeit bis zum Islam n.d.* (in preparation)

P. Yule/G. Weisgerber, "The Burial of an Important Person in Sumail of the Samad Period", n.d. 1 (in preparation)

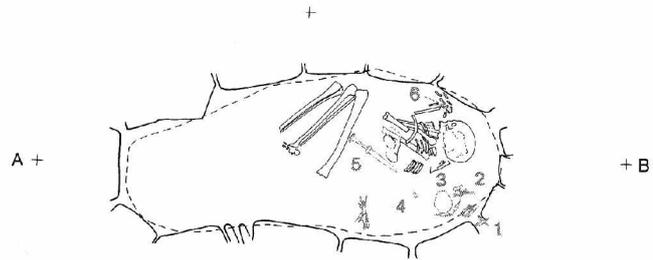
Ibid. *The Hoard from Ibri/Selme, Sultanate of Oman n.d.* 2 (in preparation)

R. Zadok, "Arabians in Mesopotamia during the Late-Assyrian, Chaldean, Achaemenian and Hellenistic Periods", *Zeit. Deut. Morgl. Ges.* 131, 1981, 42-84

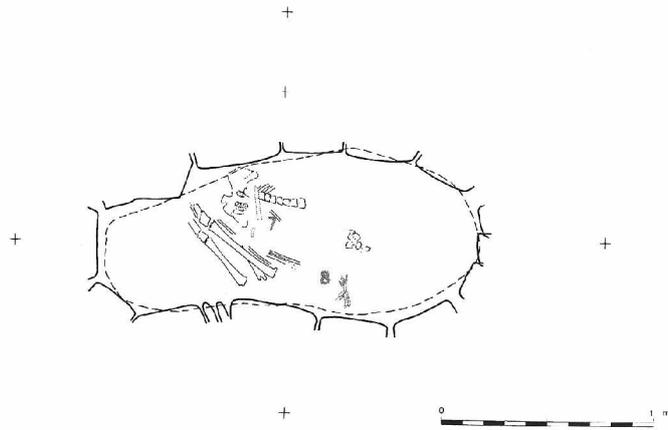
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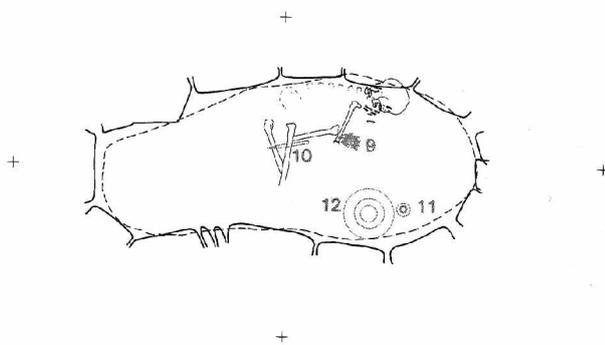
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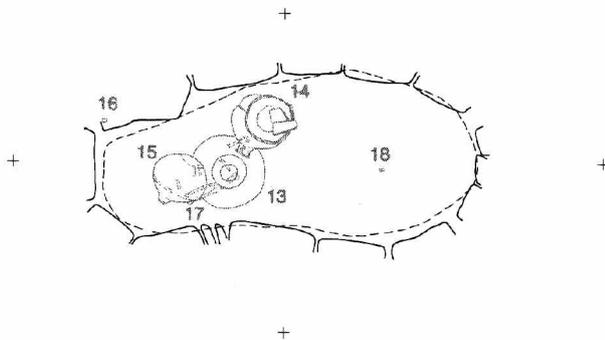
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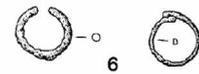
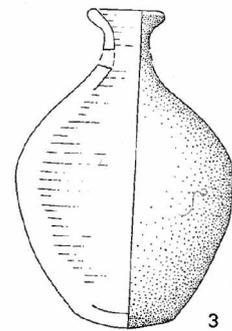
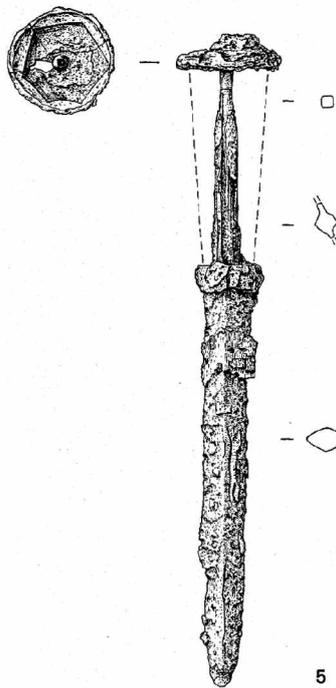
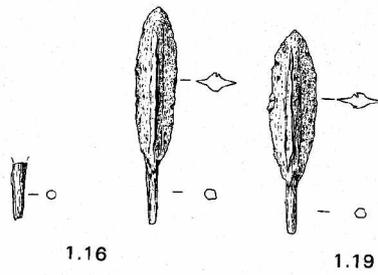
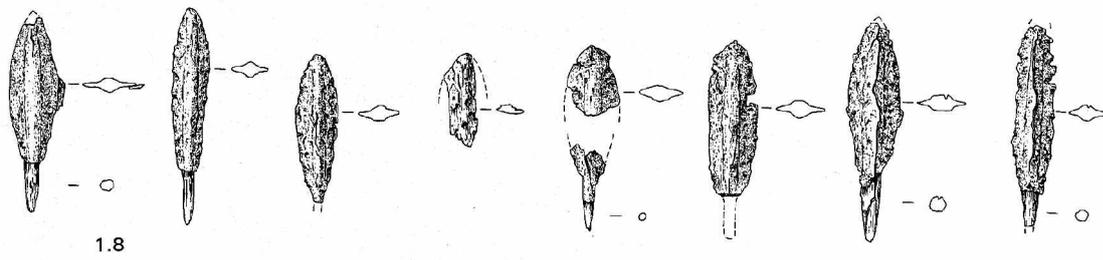
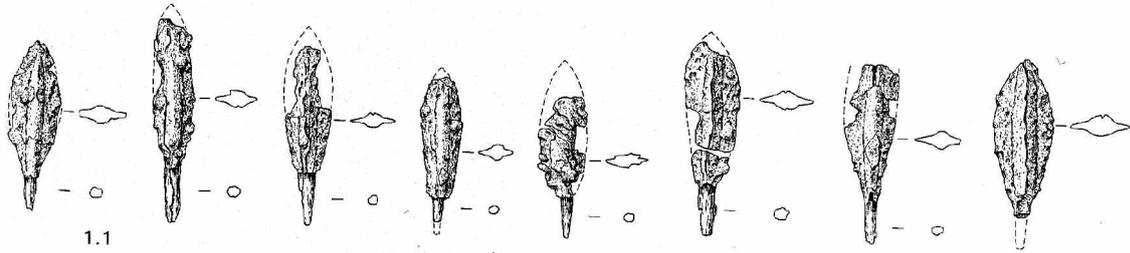
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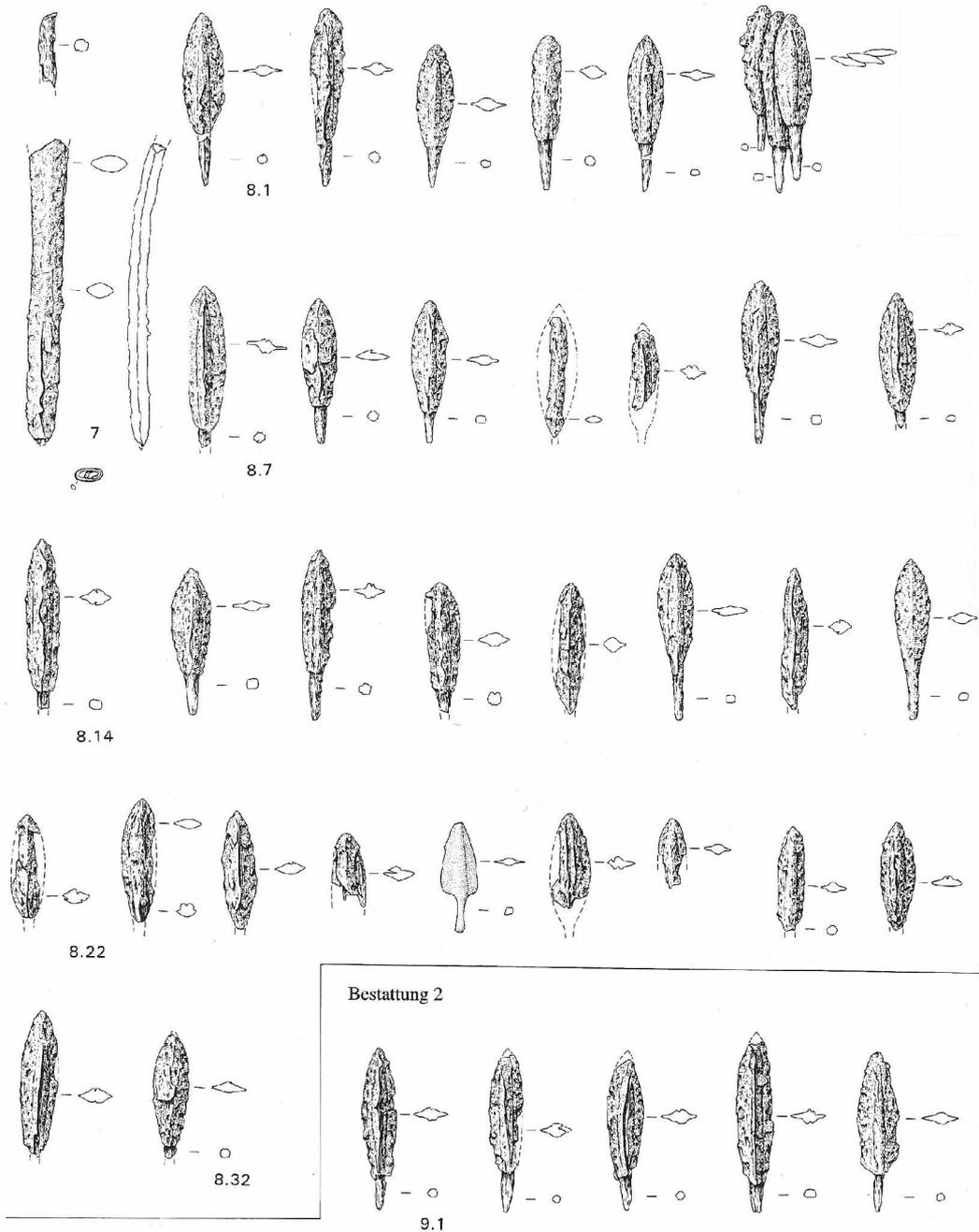


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Bestattung 1



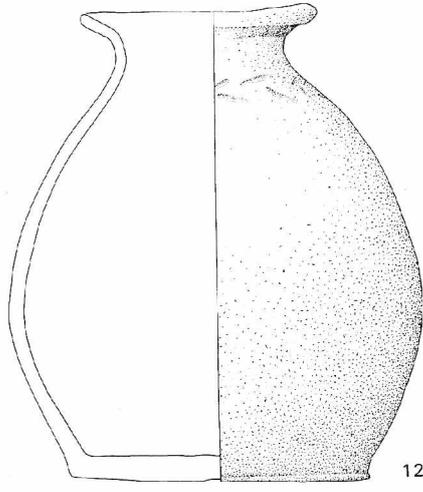
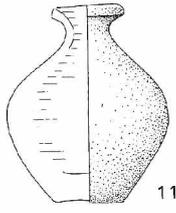
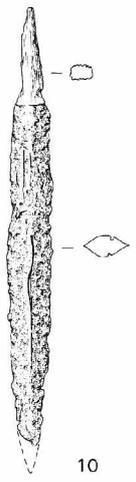
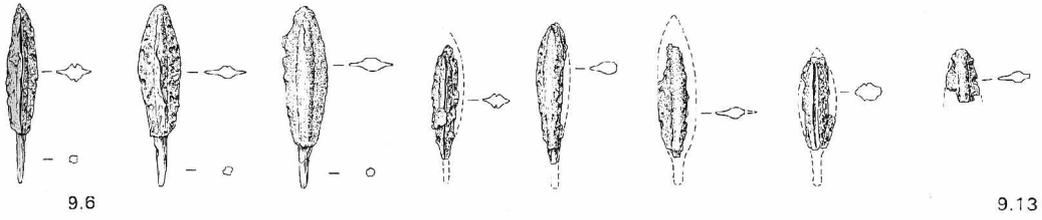
M. 1:3

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Bestattung 3



M. 1:3

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Bestattung 2



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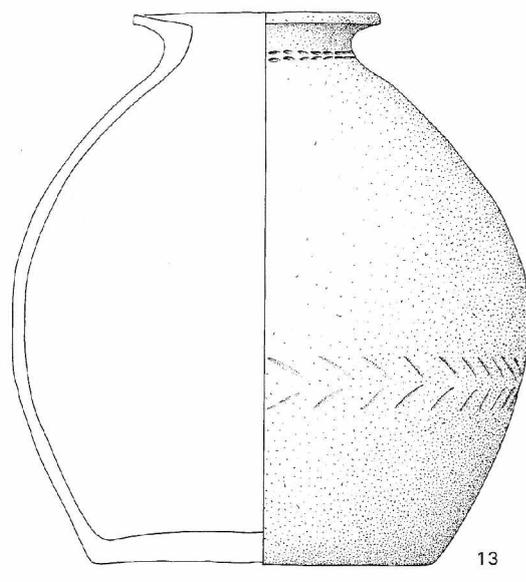
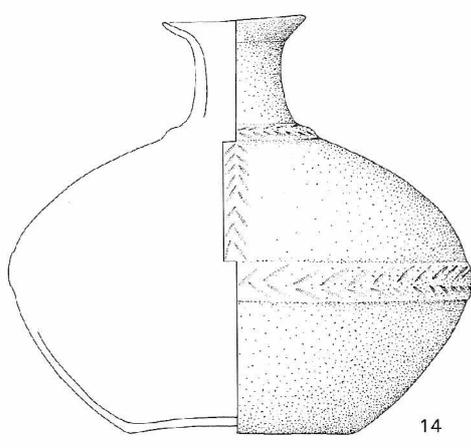


Abb. 12-14 M. 1:4 sonst M. 1:3

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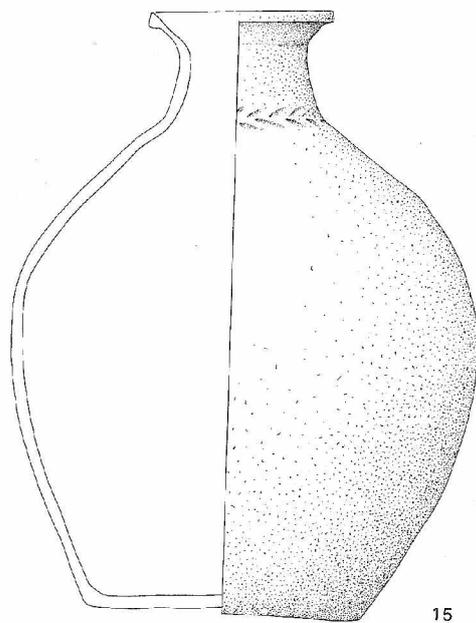
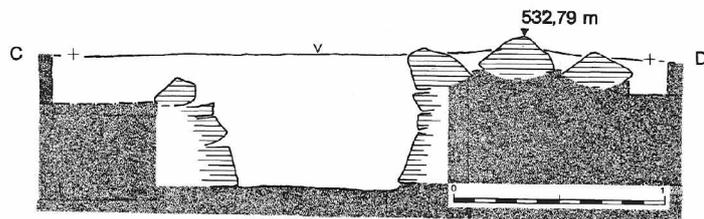
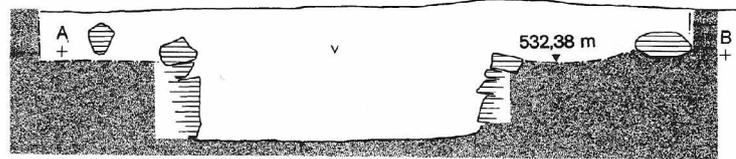
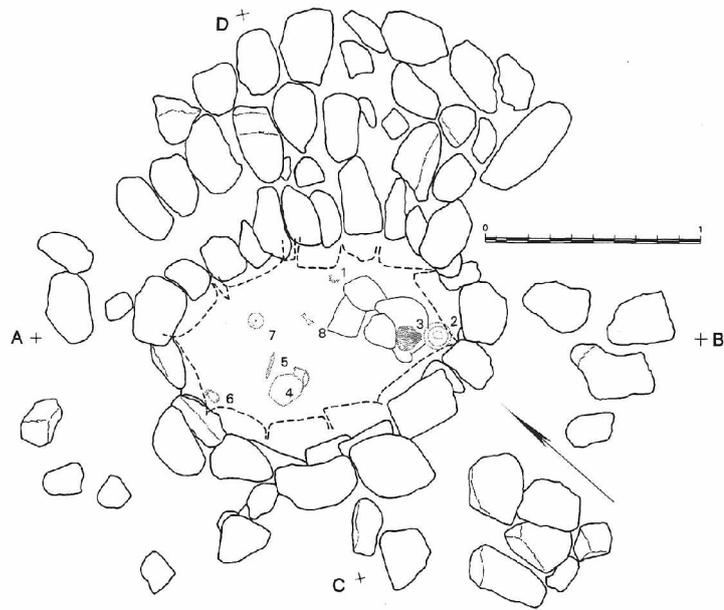


Abb. 15 M. 1:4 sonst M. 1:3

Grab S101124



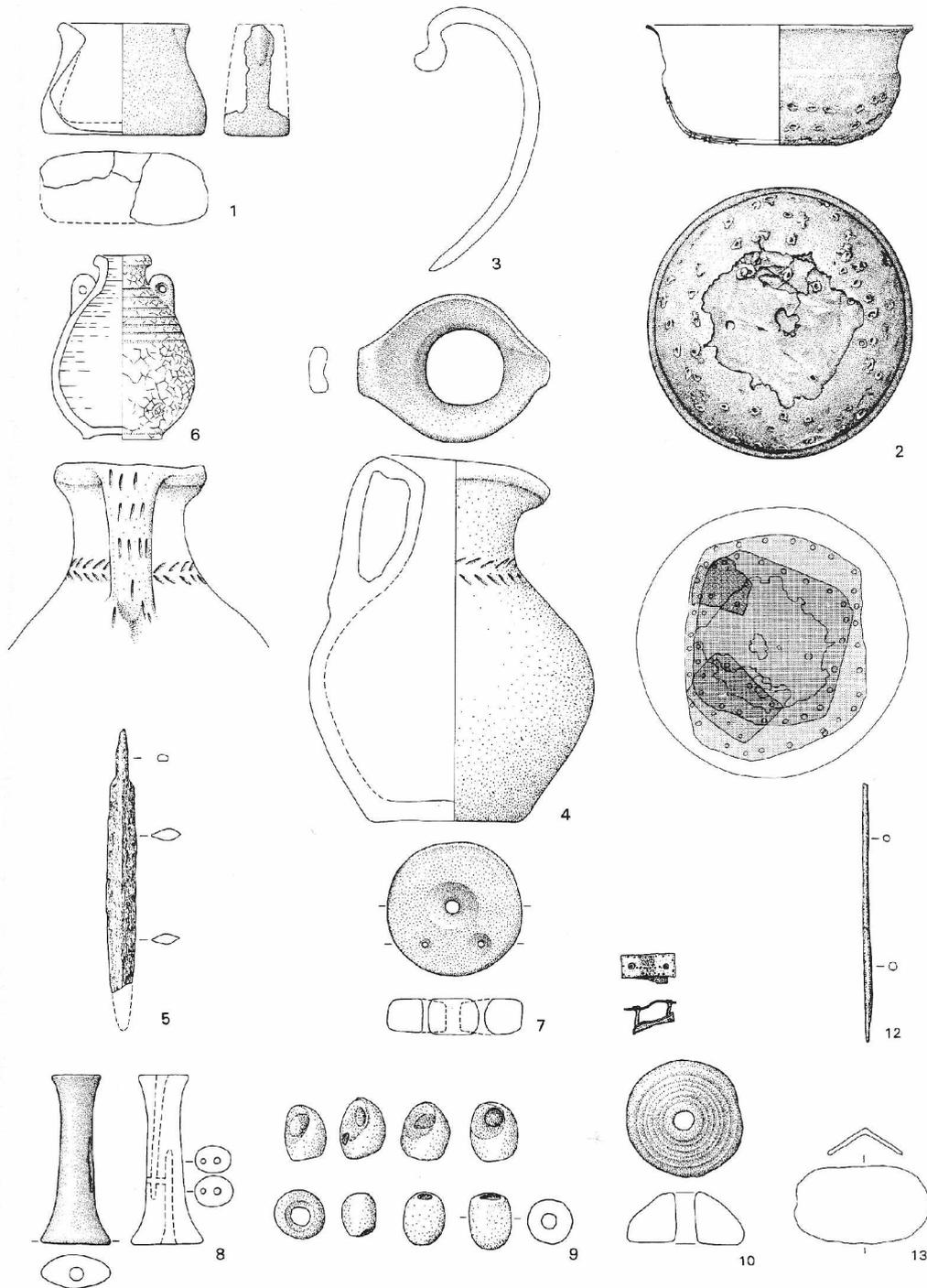
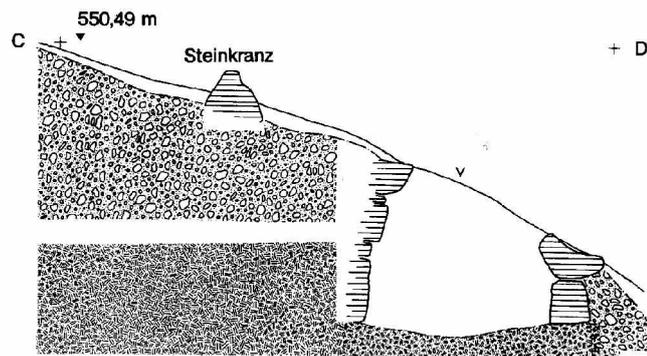
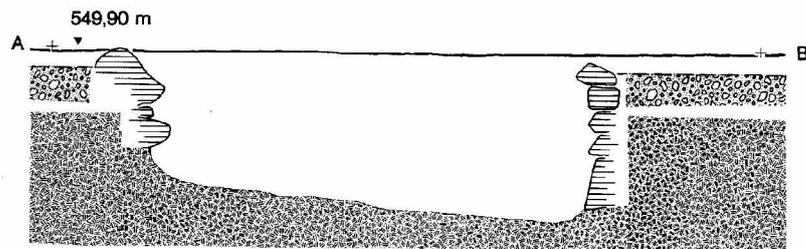
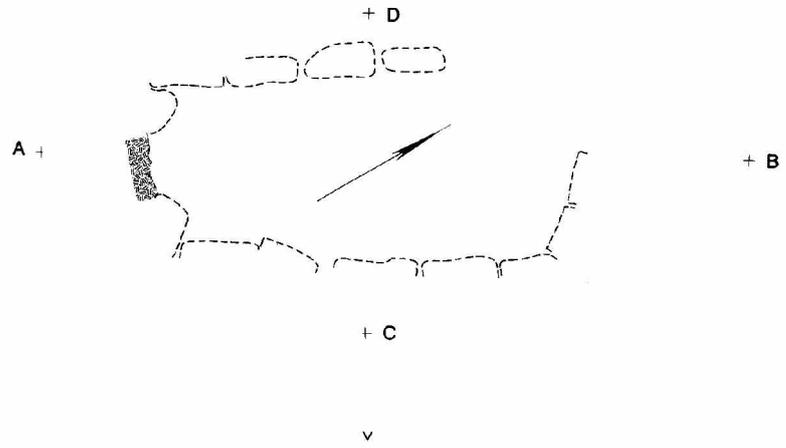


Abb. 9 M. 2:3 sonst M.1:3

Grab S2202



Grab S2202

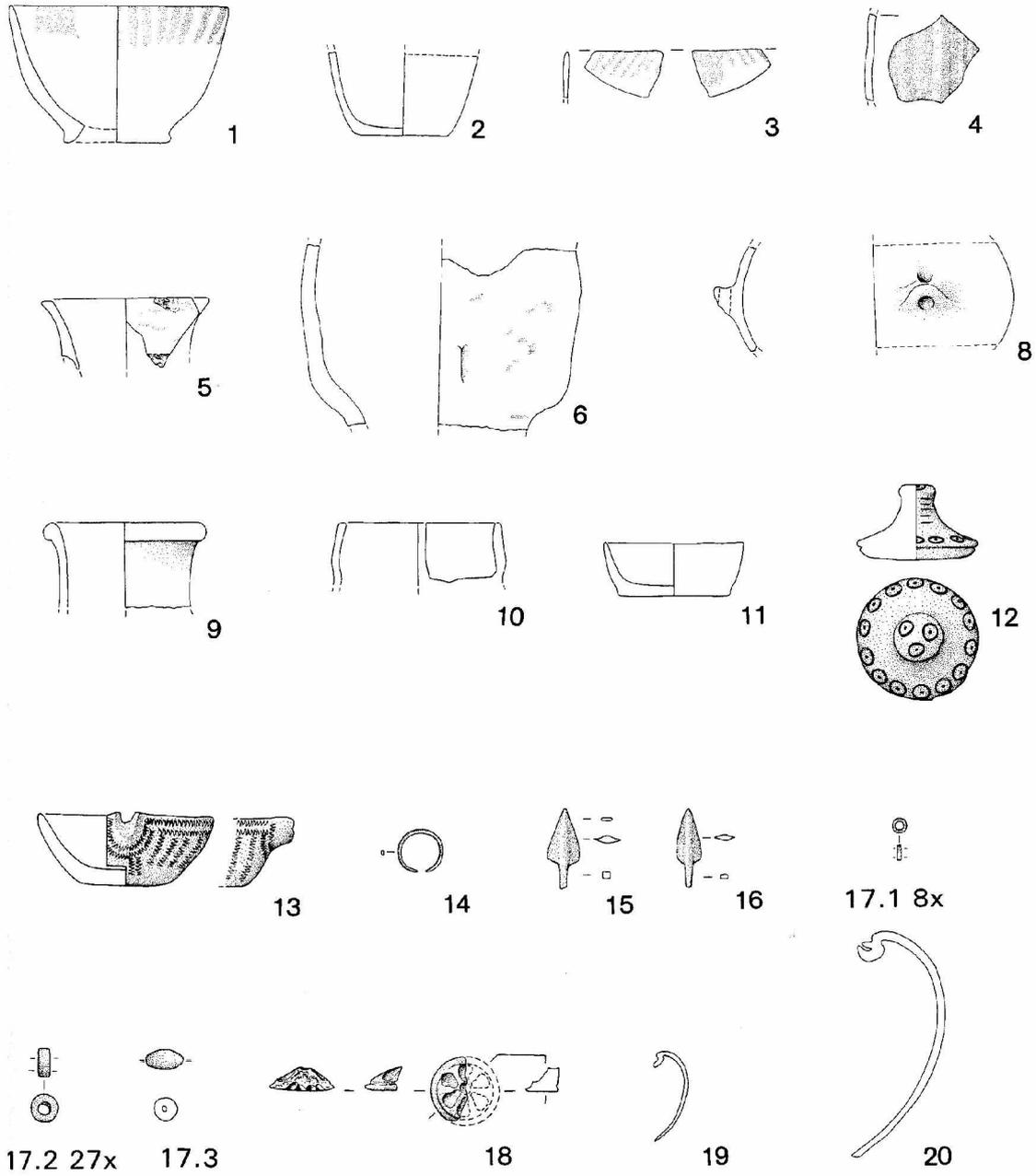
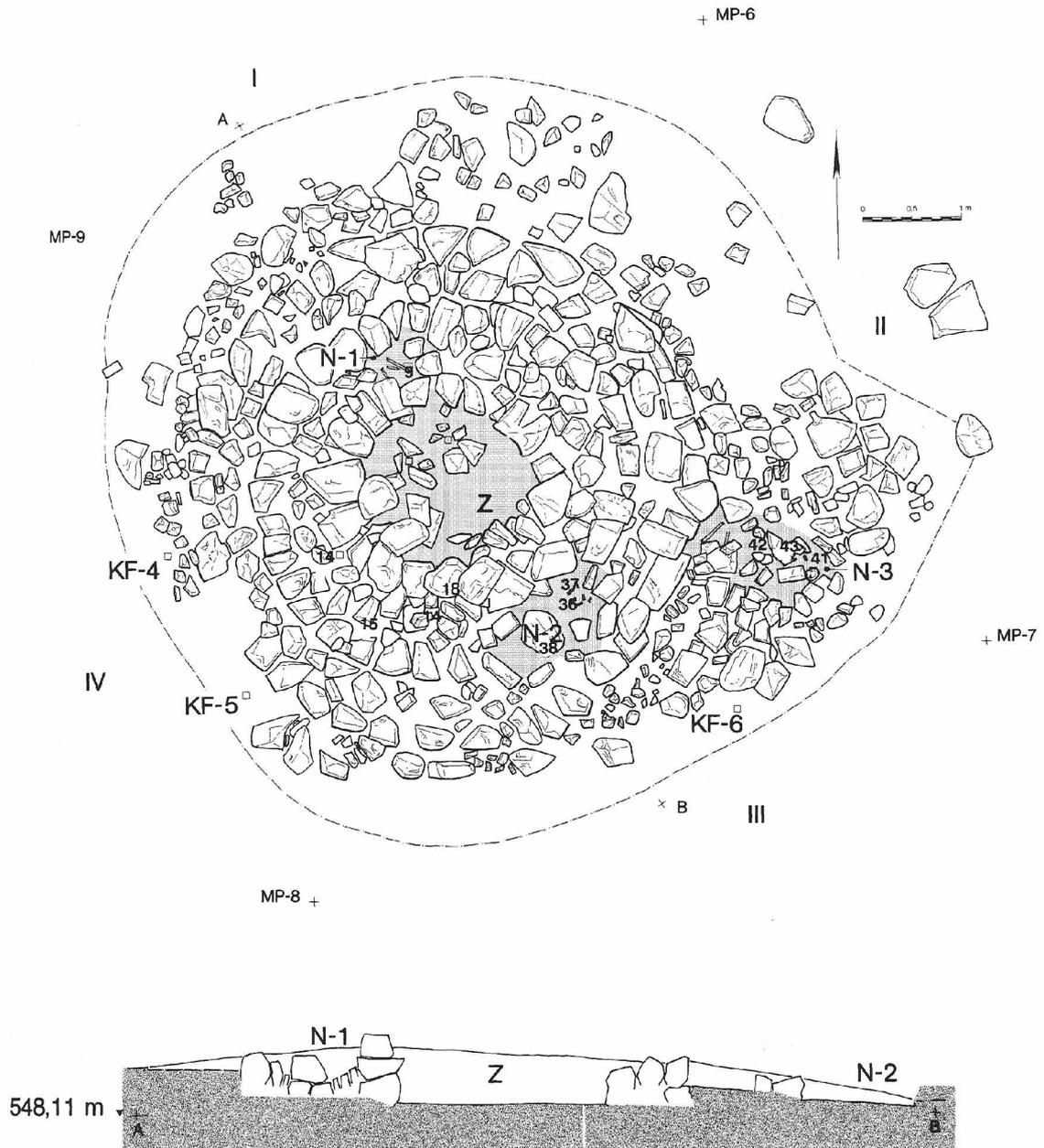


Abb. 17-18 M. 2:3 sonst M. 1:3

Grab M803



Grab M803

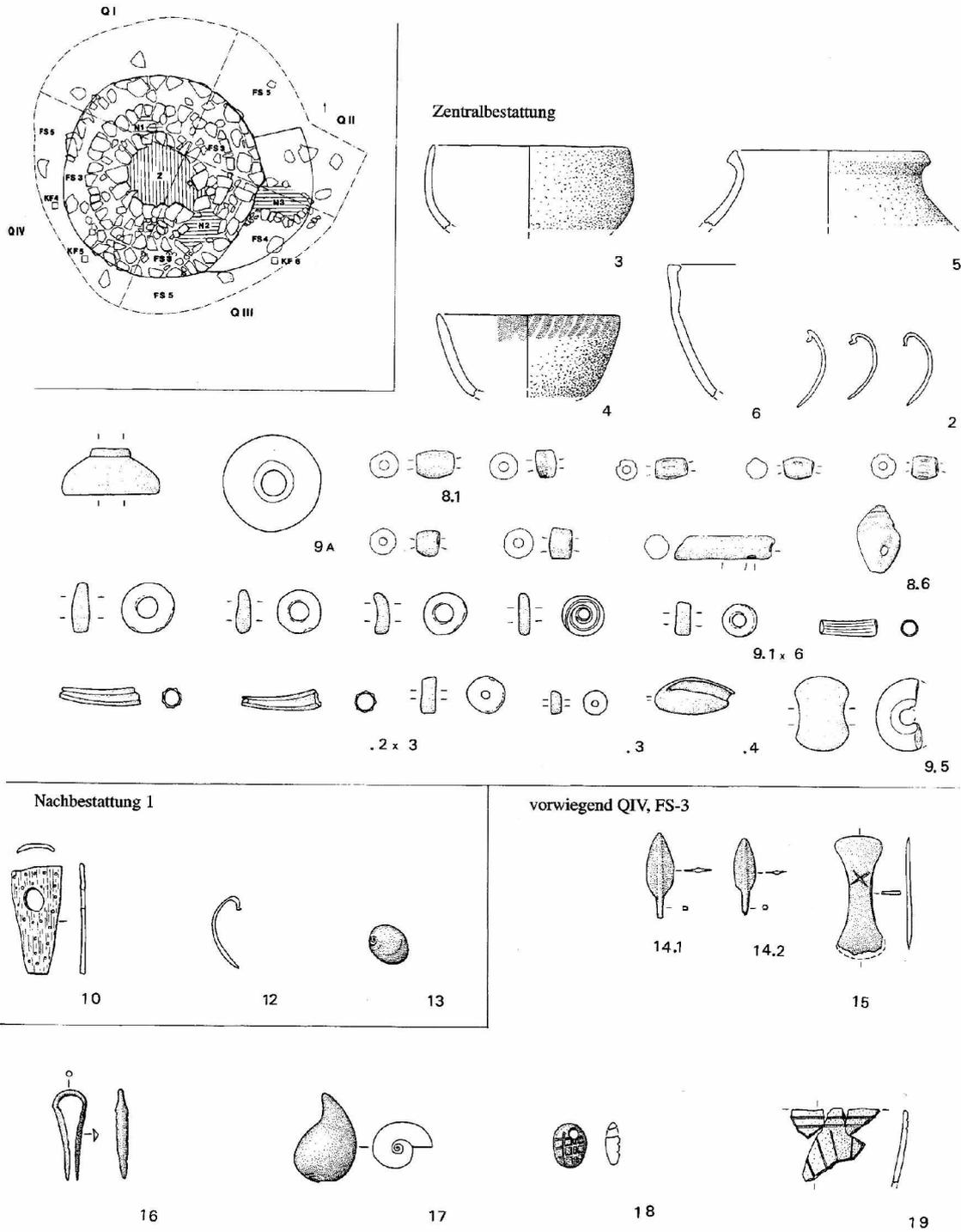
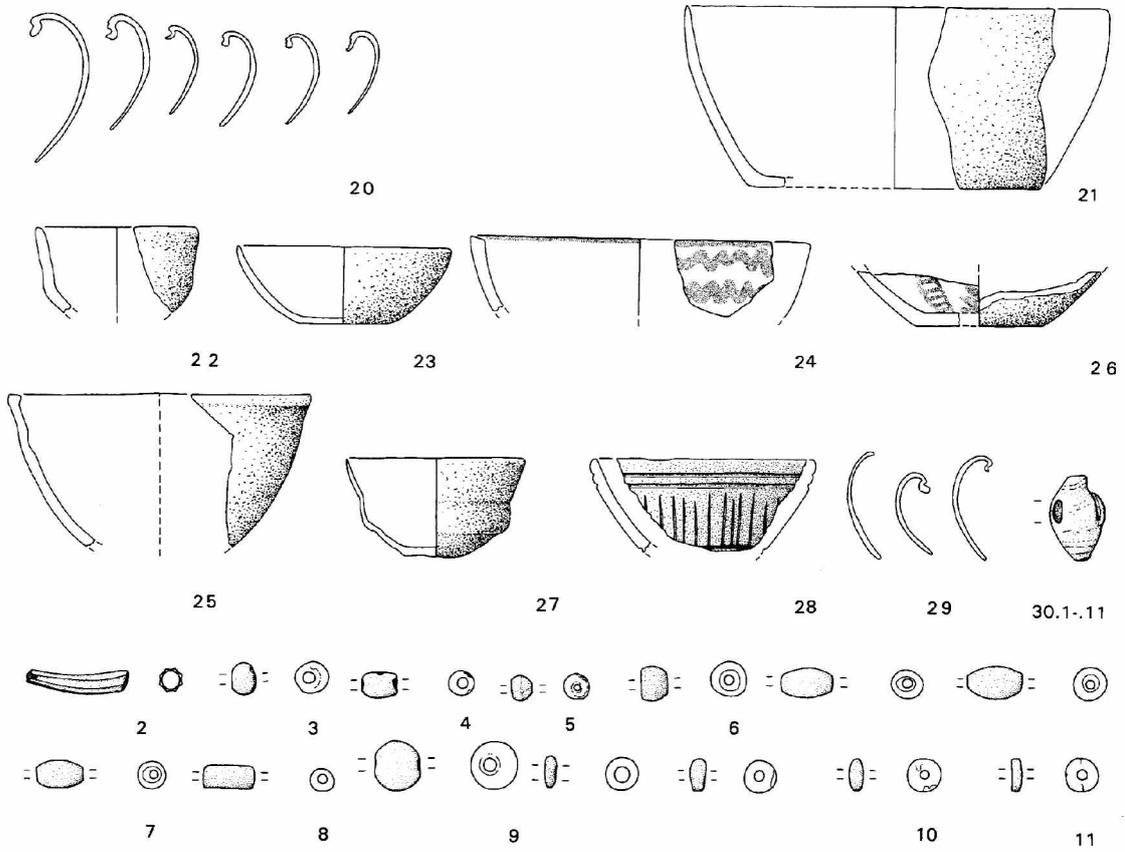


Abb. 8, 9, 9A, 18 M. 1:1 sonst 1:3

Grab M803



Nachbestattung 2

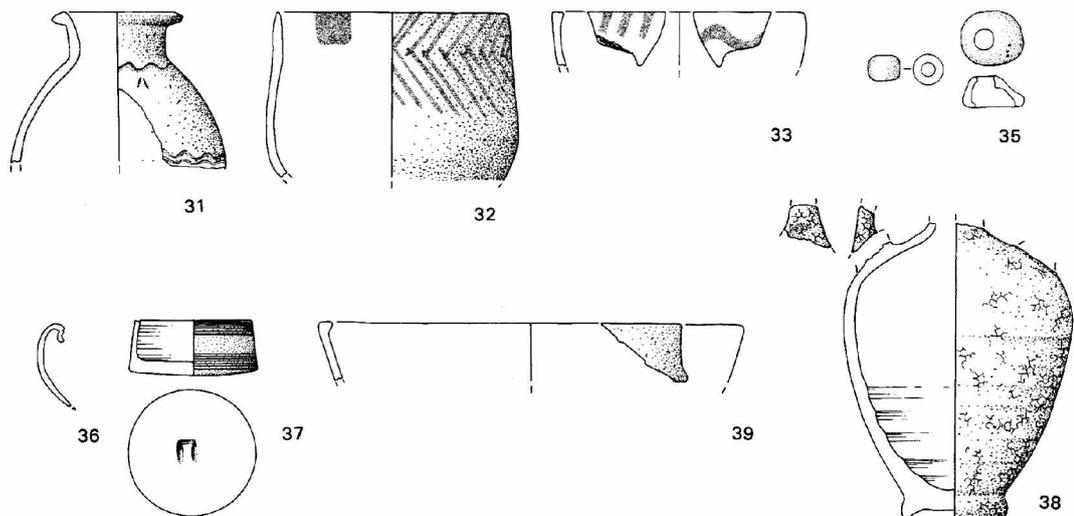
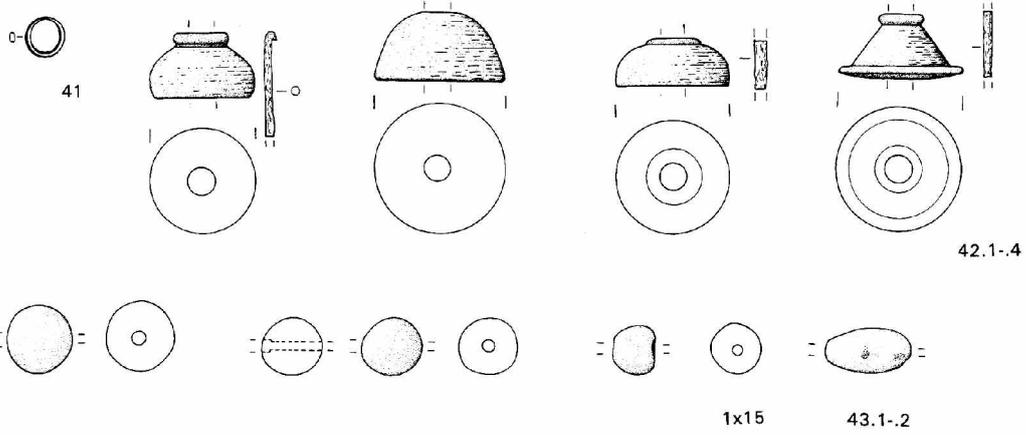


Abb. 30, 25 M. 1:1 sonst 1:3

Grab M803  
Nachbestattung 3



keiner Bestattung zuzuordnen

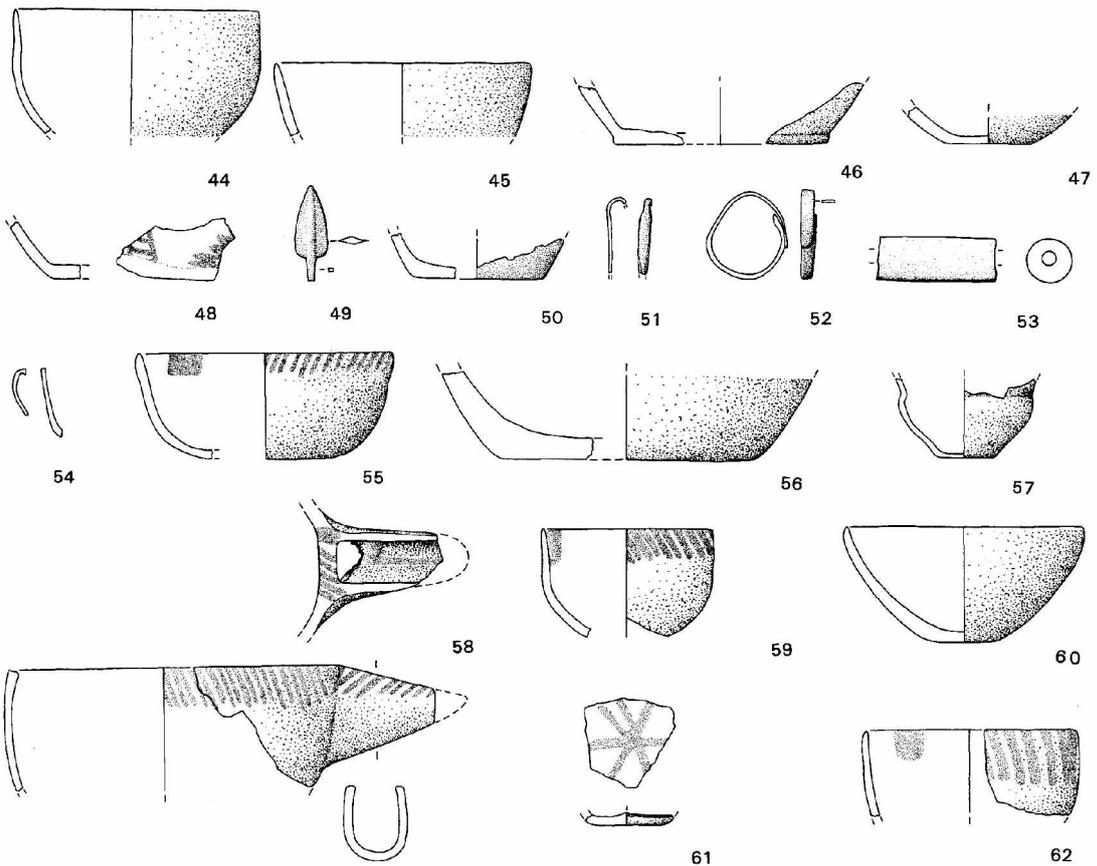


Abb. 42, 43 M. 1:1 sonst 1:3

Grab M803  
 keiner Bestattung  
 zuzuordnen

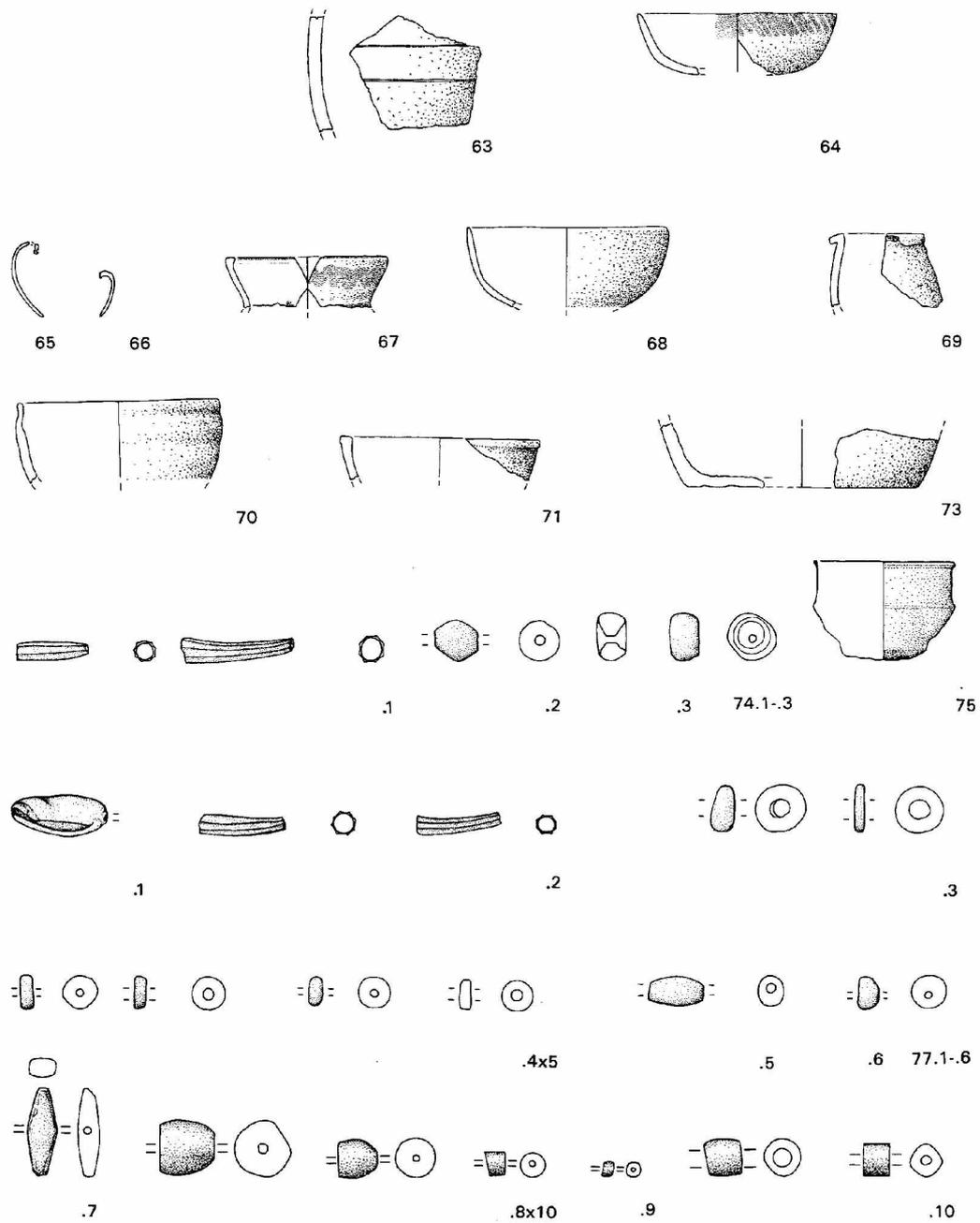
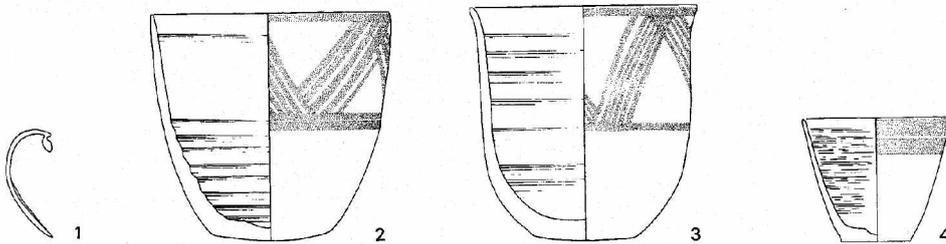
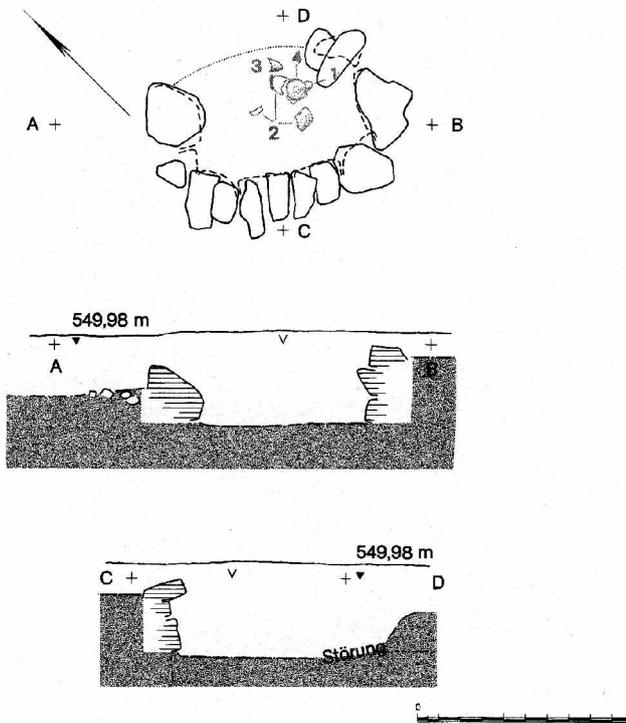


Abb. 74, 77 M. 1:1 sonst 1:3

Grab S2144



M. 1:3