ẒAFĀR, CAPITAL OF ḤIMYAR,
IBB PROVINCE, YEMEN
Given the newness of the highly competitive field of Yemenite archaeology, it was decided to go ahead with the basic documentation and bring out our findings at the soonest possible opportunity. At the time of writing the present study was the first publication with an emphasis on a Himyarite cemetery and intensive mapping. Aside from further excavation reports, a volume devoted to the inscriptions from the site museum, and another on its reliefs are in preparation. Some of this information remains new for only a relatively short time, and thus it...
seems advisable to make it available to colleagues and students as soon as possible.

Previously, the writer had studied a population, which wandered at least partly at the end of the 1st millennium BCE from the Yemen to the central part of Sultanate of Oman. Comparisons between the two parts of Arabia ideally would illuminate the identity of south and south-eastern Arabian populations in the early historic age. Zafar appeared an interesting topic of research in Arabia because it would be possible to study an urban culture there, having worked largely on a non-urban early medieval Arabian one in Samad al-Shan. In addition, despite detailed studies, such as for isolated inscriptions and history, the archaeology of Himyar is a largely unrecognised research lacuna. The present work reflects no particular school of archaeology (post-processual American anthropology/archaeology etc.). Such intellectual ambitions would be difficult to realize within the framework of a preliminary report – first the building blocks and later the superstructure. The limitations in the report are a function of my ability or lack of such to motivate individual team members to exchange with each other and for this exchange to find expression in their own reports.

Introduction

A rich cultural history studded with innumerable archaeological monuments, the products of an urban culture, characterize Old South Arabia. Although its material culture is the equal of those in more accessible and better known areas, the Yemen belongs to the least studied ones in the ancient Near or Middle East. 25 years of research on Old South Arabia contrast with 150 years of mainstream research in the field of Near Eastern archaeology centred on Mesopotamia. As opposed to the traditionally defined subfields thereof, qualitatively greater changes occur in the archaeology of the new subfields because they have been ignored. If our discipline is to grow, then a serious commitment must be made outside its traditionally defined geographic and thematic areas, for example in the Yemen.

Most field projects devoted to Old South Arabia concentrate on early periods down to the mid 1st millennium BCE, and more particularly relate to Mārib, capital of the kingdom of Saba’. In practice, in the eyes of most, Saba’ has come to represent Old South Arabia per se. Alternatively, our intention is to investigate the little-known, late, or so-called Sabaeo-Himyar age and deconstruct this parhelion. Given the fact that Himyar’s kings vanished and succeeded their rivals, particularly Sabaeans ones, Zafar (14°13’ N; 44°24’ E) would seem the ideal place to study this period. Thus, the political history could be complemented by the kind of cultural evidence (burial customs, realia etc.), which archaeology can bring to bear. Anyone who reads this work will realize that the undersigned sees just such information as exactly what is needed for this subject.

From the late 3rd cent. onward, Himyar became the seat of power in South Arabia, in the 5th cent. the fist of which reached far into the centre of the peninsula. During the 6th to 7th centuries CE competing religious and political interest groups made the Arabian Peninsula a hotbed of war and migration. For their own power struggles, the Sasanian and Byzantine empires ensnared and manipulated Himyar and its neighbours. The struggle for universal empire and universal religion went hand in hand. In the mid 4th cent. an early monotheism (perhaps Henotheism [Mueller] or Hanafitism [Beeston]), Judaism, and subsequently Monophysite Christianity germinate in Arabia, more particularly in Zafar, reaching the royal family in the later 4th cent. With an eye to strategic military advantage, Orthodox Byzantium and Monophysite north-east Africa successfully fostered Christian proselytism in Arabia. Orthodox, Nestorian, and Monophysite sects were in constant turmoil with each other. To suppress the Monophysite »heresy«, the eastern church, in the first half of the 6th cent. excommunicated the Monophysites, who thereupon formally seceded from the parent church. The Sasanians would have supported the Jews, who had suffered at the hands of the Byzantines. One can validly question the nature and

1 M. Rodinson, Mohammed (1977) 2.
2 I. Shahid, The Martyrs of Najran New Documents (1971) 186; 1. Gajda, Die Vereinigung Sudarabiens unter dem Reich von Himyar, in: Katalog Wien 1998, 269; Jews and Judaizing monotheists may have been perhaps already in South Arabia following the destruction of the temple in Jerusalem in 70 CE, but they are invisible until they gained political influence in the mid 4th cent. CE. The dedication in inscriptions to the »lord of heaven« replaced those to earlier gods. For this problem see Reallexikon christliches Altertum 15 (1991) 303–351 s. v. Himyar (W. Muller).
depth of the rulers’ purported religious leanings at a time when a division of church and state was unthinkable. The dogmatic tenor of proselytisation and the competition for trade and political advantage around Arabia between Persia, Ethiopia, and Byzantium comprise an explosive mixture.

Until recently, epigraphic and historic analysis – far less that of archaeology – have dominated the ancient studies of Pre-Islamic Yemen. Our intention is to correct this imbalance with the help of a multi-disciplinary approach at Zafār: Mapping, excavation, art history, as well as the analysis of the bones of humans and non-humans form the building blocks of our investigation. These combine with the results of on-site epigraphy. Mapping began in the first campaign in 1998 (Pl. 1).

Aside from the mapping, in the second campaign we investigated a Ḣimyarite burial ground, which promised to shed light on Zafār’s history and religion: Textual sources reveal the development of religious life there, which from the 2nd to the 5th centuries CE evolves from polytheism to monotheism. Christianity and Judaism brought new models for the culture. Nothing is really known about a different purely local monotheism, which remains a hidden quantity in this question. Change in the burial customs could conceivably yield a qualitatively different kind of information regarding religiosity than that offered by the much biased historic narrative. Thus, as part of a long-term strategy to study the interesting Old South Arabian late period, desired was a Ḣimyarite cemetery less exposed to grave robbing than the large and conspicuous rock-cut tombs, numerous at Zafār.

The reorganizing of the site museum and registration of the finds comprises a third component of the project. Thereby we registered over 1000 valuable inscriptions and reliefs. Our expedition is an agent both for cultural resource management and research archaeology.

Table 1  Main events pertaining to Zafār

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>630–</td>
<td>Islam</td>
</tr>
<tr>
<td>570–630</td>
<td>Sasanian domination</td>
</tr>
<tr>
<td>525–570</td>
<td>Ethiopian domination, churches rebuilt in Zafār</td>
</tr>
<tr>
<td>525</td>
<td>Ḣimyarite–Ḥimyarite war</td>
</tr>
<tr>
<td>518</td>
<td>Jewish Yusuf Asʿar Yaʿar (arab. Dū-NUwwās) persecutes Christians (Ry 507, Ry 508)</td>
</tr>
<tr>
<td>late 5th cent.</td>
<td>Ḣimyarite political expansion into Central Arabia</td>
</tr>
<tr>
<td>462</td>
<td>Šurāḇbiʿil Yaʿfur fits out his palace, Hargab, and repairs Mārib dam (zm 0001)</td>
</tr>
<tr>
<td>early 5th cent.</td>
<td>Abikarib Asʿad proclaims his conversion to Judaizing monotheism (Ry 509)</td>
</tr>
<tr>
<td>378</td>
<td>Monotheist Malikkarib Yuhāʿimin II builds the castle Šawḥaṭān (GI389, RES 3383)</td>
</tr>
<tr>
<td>mid 4th cent.</td>
<td>Theophilus establishes a church in Zafār (following Philostorgios)</td>
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<tr>
<td>mid 4th cent.</td>
<td>Judaizing monotheism and Judaism widespread in South Arabian towns</td>
</tr>
<tr>
<td>285</td>
<td>Šāmmar Yuhāʾrīš uses title »king of Sabaʿ and Dū-Raydān, and Ḥadramawt and Jamanat«</td>
</tr>
<tr>
<td>232</td>
<td>Fortifications in Zafār South strengthened</td>
</tr>
<tr>
<td>230</td>
<td>Ethiopeans (Habashites) penetrate Zafār, extricated by Liʿazz Yuhānuf Yuḥaṣdiq and Sāʾirum Awṭar (Ja 631, CIH 314*954)</td>
</tr>
<tr>
<td>c. 140</td>
<td>Sabaʿ under protection of Ḥimyar beginning with Watarum Yuhanʿim</td>
</tr>
<tr>
<td>10–20 CE (?)</td>
<td>Ḥimyar conquers part of Sabaʿ and builds in Zafār</td>
</tr>
<tr>
<td>115 BCE</td>
<td>Conventional dating for the beginning of the Ḣimyarite era</td>
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</tbody>
</table>

3 Chronological basis: The year 640 Ḥimyar in CIH 621 dates to 525 CE and the massacre at Najrān dates to 518.
Mapping and Survey of Building Structures

Owing to its size and historical importance, this 110 ha city, lying at some 2800 m altitude, is a fascinating and rewarding object of study, however strenuous the working conditions there might be. At this stage of the work, not surprisingly, the mapping of antique and recent features lacks a depth of historical focus with regard to the stages of development of the city, which excavation could yield, but reveals considerable information about its appearance presumably in the imperial and late periods. That means from the 1st cent. CE – when Ḥimyarite kings adopt the title »ruler of Saba‘ and Ḫuṣn Raydān«. However, the few chronological references, which are available raise the likelihood of yet later building programmes, that is, from the later 3rd cent. CE. Why? While on the one hand, the few examples of high quality stone masonry may predate the 3rd cent. CE, on the other, politically, economically, and militarily, Ḫimyar comes to fruition in the latter part of this century. And one expects major building programmes in this wealthy 250 year period – a time, politically and architecturally speaking, when the other Old South Arabian kingdoms had eclipsed4. The majority of the sculpture fragments from Ḫuṣn Raydān (see below) date to this time confirming its wealth.

Whereas prior to our survey no contexts in Ḫuṣn Raydān were considered intact5, even without excavation first survey results reveal a number of structures at the site, which require or even demand dating and interpretation. Surveyors mapped the topography with the help of an infrared tachymeter. Coordinates and heights initially taken from a large scale map, were combined with the data from handheld GPS receivers6. These served to orient the map. Since the historically most important part of the site appeared to be the Ḫuṣn Raydān, work commenced here in 1998. In Ḫuṣn Raydān South architectural features too large to be readily robbed shed light on the nature and dimensions of Ḫuṣn Raydān’s fortification system. Notable among these are the entrance to Ḫuṣn Raydān South, fragments of casemate walls of the city defences, two towers, a settlement extra muros, and tombs of nobles as well. But unfortunately, the antique character of the large area where the present-day village is located remains completely unknown. Moreover, there are no indications for the locations of the Kawkabān palace and that of Ḫuṣn Raydān alluded to by the historian al-Hamdānī in his »al-Ikl il«. The mapping of the northern part of the ancient city (locally known as »al-Gusr« [=al-qasr]) followed in 2002. In 2000 in two test trenches in Ḫuṣn Raydān we recovered numerous small finds potentially useful for dating. But these amounted, in fact, to little more than surface debris without clear stratification.

In conjunction with the mapping, to date some 277 different architectural features (20 different feature-categories) have been registered and are locateable by means of their coordinates. Most common are the present-day houses in Ḫuṣn Raydān (88), which are built to a large degree from antique spolia. Numerous walls and fragments thereof (42) have come to light. These are distinct from »heavy walls« (32) – probably official structures, such as the defence system (for example, the city wall z183). Common are »cave entrances« (46), which vary in character and appearance. »Cave/tombs« (12) are difficult to distinguish from »cave entrances«, owing to differing states of preservation and complicated alterations presumably by human agency. Irregularly laid »stone rectangles« usually over 5 m in length are particularly notable on the south-western face of Ḫuṣn Raydān. There they consist of roughly hewn stone, and are taken to be the remains of medieval dwellings, since they are dissimilar to better known Pre-Islamic remains. Others, however, of large roughly hewn stone (for instance, features z144, z184, and z247) may be mountain sanctuaries or isolated official buildings of Ḫimyarite date. Other features include dams and their accompanying reservoirs (4), rock cut faces (4), »robbed walls« (2), »ways« (2), and »worked bedrocks« (1), that is foundation trenches. This classification is not an end in itself, but rather it forms the structure of an ongoing documentational system, and is a precursor to a planned virtual reconstruction of Ḫuṣn Raydān, the first of its kind for an Old South Arabia capital.

4 Paradoxically for all its wealth, at this time Ḫimyar did not strike its own coins.
Masonry Chronology

Himyarite activity first appears to scholars in an inscription dated to the 1st cent. CE from Hadramawt and from mention in classical sources, such as by the elder Pliny in his «Natural History» at about the same time. At present, no means are available to date the finds and architectural structures from Himyar to its historic origin and one assumes that what is visible postdate it. As noted above, most Arabia experts consider early masonry to be of higher quality than that of the late period. The quality and manner in which building stone is hewn and its finish provide some hint of chronology. A few rare walls distinguish themselves by virtue of a high standard of stone masonry. Until outside parallels for them can be dated, these may be attributed to the early period, which ranges from the beginnings of the Himyar capital until perhaps the 1st cent. CE. But precise dates are known neither for the type nor quality of the best masonry from Zafār, possibly apart from those of the neighbouring Gabal al-'Awd. At this stage of research a less likely alternative is that such walls are simply better workmanship of the imperial period. Research on the masonry chronology is still in its earliest stages.

A single, but important portion of the city wall (Pls. 2, 1) and its masonry style seems dated by a text (Pls. 2, 2 a. b), which is preserved in three large fragments. According to the museum custodian, one came to light near the wall in Zafār South c. 1990. The mending of the city wall, mentioned in the text, is dated to 347 Himyar/232 CE.7 If one accepts the likely assumption that this inscription was built into the wall or gate there, then one gains an anchor point for the masonry chronology of both. Inscriptions are more common at prominent parts of the walls, such as near gates. The preserved city wall here (z183) is hardly a meter thick, thin in comparison to other Old South Arabian city walls, up to 3 m in thickness. It is smooth and not niched. Presumably this last line of defence was considered unimportant, given the powerful army.

Gates of Zafār

Owing to the fact that less than 2% of the city wall is visible on the surface, its graphic reconstruction and that of its gates as well is a challenging but risky undertaking, albeit one which enlivens our understanding of later Old South Arabian city architecture. Building remains and contemporary texts shed more light on the gates than on the city wall. We can surmise the positions of some of Zafār’s alleged nine pre-Islamic city gates which al-Hamdānī mentioned in «al-Iklīb». The main gate, with its presumably antique cobblestones, to judge from its size and position appears to be the present-day access to Zafār village (Zafār South). In the 1880s the Austrian Eduard Glaser describes the «east gate». This is a «… regular thoroughfare flanked with well-preserved walls». Glaser’s «thoroughfare» may have lain in the low eastern side of the ruin in al-Ǧahw, or is perhaps the entrance to the present-day village in Zafār South. Both had a protected road, and both have been plundered beyond recognition. Indications point to Zafār’s major entrance complex being located just to the south: A further gate there probably faced to the north-east near the city wall z183, some 100 m to the south-west toward Kitāb, to the south-south-east toward Bayt al-‘Aīwal, and to the north-north-east into the Wādi Zafār. The negative growth in an adjacent cultivated field (the light discolourations in the vegetation visible in Pl. 2, 3) where the city wall originally was built reveals the presence of part of the southern city gate complex just below the surface. Subsurface remains of walls and other structures reflected in these negative growth patterns cannot be simply reconstructed without the information provided by excavation. One assumes a complicated building history for the gate complex, fragments of which need not all be contemporary with each other.

The intact walls and the positions of urban centres suggest that monumental gate remains can be sought between al-Gusr and the Ḫūṣn Raydān in the saddle between these two volcanic mountains. Hidden in the massive rubble here are walls, which face north-east/south-west, the standard at Zafār and most other Old South Arabian sites. The rubble on

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both the east and west slopes are particularly heavy. But these ruins more probably include the Šawbaṭṭān castle located on the northern wall of Zafār (actually of Ḥusn Raydān), as the Ḥimyar monotheist (not necessarily Christian) ruler and builder Malikkarib Yuhā’min II informs us in an inscription from 493 CE10.

No other traces of the main city gates are extant to date, but they must have existed at convenient points. Otherwise the inhabitants frequently would have to go to the extreme north and south ends of the city for daily coming and going. Despite the lack of traces of roads or ways emanating to/from the east and west sides, gates must have existed here. The same argument holds for Raydān North: Such a large fortified city certainly had an ingress to the north, and not solely that of the other fortresses to the south. None of the city gates can be identified by means of the names, which presumably reflect places or wadis in the directions which they faced. Aside from present-day roads, which lead to Zafār South, other ancient roads cannot yet be identified, which would help to localize city gates. The palace Hargab11 of Šuraḥbī’il Ya’fur (440–458 CE) may have been combined with such a gate at mid-slope to the west of Ḥusn Raydān, where the rubble are particularly heavy, bespeaking the presence of a monumental building. Here (e: 435541; n: 1571533) his monumental building inscription lay on the surface until it was brought into the site museum.

Subterranean Cistern z096

Turning now to Zafār/al-Ḡāyw (Pl. 2, 5) a cluster of antique buildings command our attention, first an antique subterranean conoid chamber some 4.5 m in height (Pls 2, 4; 3, 1. 2). The bottle-shaped silo including a stair and banister is cut into the hard bedrock12. Today the uppermost tip is housed by a simple stone building. Its shape seems most readily explicable as a granary. Its present owner is said to have rediscovered and excavated the silo some 25 years ago. It contains 40 m³ (40 000 Liter = 400 hl) in volume. For those familiar with the Heidelberg castle, the granary is about the same size as the »kleines Faß«. In all likelihood, such an ambitious building undertaking probably was not constructed by an individual but rather by the central authority.

Royal Tomb z066

A subterranean gallery in Zafār/al-Ḡāyw consists of a main gallery surrounded by chambers, which are sub circular in plan (Pl. 3, 3). The long axis deviates north-north-east/south-south-west from magnetic north. The lower sides of the main gallery form a bench flanked by chest-high walls and by piers cut out of the bedrock. A step leads into the northernmost central chamber. On the east side the chambers communicate with each other and from chest height upwards also with the central hall by means of an arcade, which separates them. The chambers on the north and east sides are approximately as deep as is the main gallery. During the rainy summer monsoon, water seeps into z066. At centre bottom of each chamber a cylindrical depression measuring some 20 x 20 cm is cut, evidently for drainage. Now-worn steps at the south end provide access into the gallery. In its present state, this part of the structure is enclosed by a stone barrel-vault some 35 years old. Despite the presence of three reused Ḥimyar reliefs, which decorate the exterior, the latter edifice is of no great antiquity. It now belongs to Ḥamūd al-Tam al-Zafār. Aside from the addition of the vaulted stone building to the gallery, there is no evidence for different building phases of the structure. The antique complex is remarkable owing to its large size, elaborateness, and unique shape. Although it bears no inscribed name of a king of Ḥimyar or other personnage, two goat representations cut in relief (Pl. 4, 1) on the two northernmost piers indicate that its owner was a polytheist who worshipped deities with goat-like attributes similar to those of other Old South Arabian polytheistic ones. The identification for z066 as a royal tomb is inferred by its size, elaborate construction, and location with other structures in what is taken to be the main palace area. Other potential royal tombs in al-Ḡāyw are choked with debris and are filled with

12 We wore out several steel chisels used only to cut a few surveying marks into the rock.
water. There is no more plausible explanation for this structure than that suggested.

*Bath* Structure z071

Also located in al-Ǧahw is the oldest of the two mosques in Zafār (z070). Local inhabitants speculate that the present-day superstructure is some 160 years old. At the bottom of a flight of stairs cut into the bedrock on its south side, a chamber with a bent axis opens to the north (Pl. 4, 3). Since the floorplan does not resemble that of a tomb, we must seek some other explanation for the structure. The chamber below the present-day mosque contains clean water some 1.6 m in depth in the rainy season. The floor of the mosque is 2 m thick and connects with the underground chamber by means of a 30 cm wide vertical shaft. Chambers such as z071 are, as far as I know, unknown in mosques. A Christian baptism or a Jewish mikveh (ritual bath) come alternatively to mind.

The question arises whether z071 can be linked to polytheistic, local monotheist, Jewish, or Christian cult activities (or successively all four). Baptism derives from a large sphere of antique washings and rites of passage in the orient with roots reaching far into the past. In any case, the chamber does not resemble the rare known early Christian baptistries or Jewish mikva'ot. In the 4th cent. in Zafār the Byzantine king Constantius sent a delegation led by a certain Theophilus to Zafār who is said to have presented the Himyarite king with 200 Cappadocian horses and financed the building of a church. Subsequently this was devastated or changed, and in the 6th cent. was followed by one or more. A church (South Arabian: *qalīya*, Greek: ἐκκλησία), such as described in the early written sources, would have been far larger than the little cube mosque, z070.

The chamber walls are smooth, the floor level. This kind of carving may be relatively early (possibly predating the 2nd cent. CE), since this chamber is located in the area of heavy presumed early Himyarite building activity, including a storage silo (z096), a large tomb (z066), heavy walls, and numerous foundation trenches (z069). Marshalling these arguments, the writer takes al-Ǧahw and the Ḥuṣn Raydān to be part of the famous Raydān palace.

Reorganisation of the Zafār Site Museum

A final category of finds are sculpture and inscriptions. In 1975 the Ministry of Culture and Tourism built a museum at Zafār in order to house and exhibit numerous artefacts collected by Abdullah al-ʾAnābī. But this museum was only partially installed. Instead, it served principally as a repository for the sculptures. On arrival in 1998, we were alarmed to note that the floor of the museum magazine was littered in places with stone reliefs and inscriptions to a depth of over 1 m (Pl. 4, 2). These form the lion’s share of the museum collection. The existing shelves in the magazine were poorly assembled, and collapsed some years ago shortly following their erection.

With the abiding support of our Yemeni colleagues, team members registered the different kinds of stone reliefs. Such comprise inscriptions, figural, phyllomorphic, ornamental, and facade-like architectural groups. Given the large number and thematic variety of the reliefs, it was necessary to sort them on the floor throughout the entire museum (Pl. 5, 1), prior to their reshelving (Pl. 4, 4). A staff member thus preliminarily photographed and registered 1000 of the most important artefacts. First photos of the finds were recorded on CD and presented to our Yemeni colleagues, and to interested specialists.

The sculpture includes inscriptions and figural motives of local and in Greco-Roman style, which has a greater influence in the area than previously assumed. The female figure shown in Pl. 5, 2 a has been exhibited in the site museum for some years. During the cataloguing of the fragments in 2000, it proved the counterpart of an ensemble and its vis
à vis originally positioned on its right came to light (Pl. 5, 2 b). The former is polished by countless hands that touched the representation of what the locals consider a »bride fleeing her wedding«. In fact, represented is a peplophore standing aslant beneath a torso around which a snake is coiled. Between the snake and the peplophore the artist imposed a now damaged bead and reel row.

One wonders to what degree itinerant foreign artists worked in the Yemen, the extent of local copies of Mediterranean art, and how common imported works were. The presence of a dedicatory inscription written in Greek (Pl. 5, 4) and dated palaeographically approximately to the 2nd cent. CE by Christian Marek, awakens more tangible expectations of a Greek/Roman presence in the area18. It brings to mind the invasion of the Roman general Aelius Gallus in 25/4 BCE of Mārib, and raises the question as to the nature and extent of Greek and Roman presence in the area. This is strengthened by a hellenistic representation of a figure with a devine radiate crown (the deity Helios, Mithra, Šams or simply Rahmān?; Pl. 5, 6), probably of local workmanship. Much of the sculpture indicates a developed sense of style. It is hoped that the numerous sculpted artefacts can support a chronology of îmyarite style and iconography. Even more significant is the observation that îmyar has closer cultural contacts with the Mediterranean world than commonly understood.

These tantalizing finds fuel expectations for defining the succeeding cultural/historic stages. An excellent point of departure as a datable archaeological unit would be the investigation of the Šawḥatān palace, built by one of îmyar’s most important kings, the monotheist Malikkarib Yuḥāmin II.

Cemetery zc001

Prior to excavation, holes and depressions pocked the north slope of the Ġabal al-‘Aṣabī (Pl. 5, 3) – clearly the remains of disturbed tombs. Robbers opened the ancient tomb entrances and left behind tunnels. The area selected for excavation lays in the midst of the main concentration of graves in an abandoned terrace field a few metres above the level of the Wādi Ṣafār. But for a single exception (grave zg011) the contexts were disturbed. In addition to the later disturbances, the overlapping of the burials (zg016–018) worsened the preservation. The grading of the dirt road cut into the slope exacerbating the erosion, affecting even the deeper graves. Having measured the surface of the excavation surface, we freed the visible shafts from earth and stone debris and so began excavation of the tombs at the west end of the excavation surface (Pl. 5, 3, 5). A feature by feature excavation on 14 September gave way to excavation in horizontal spits. Deep tombs, such as zg018, 004 and 007, lay 3 m below the surface.

The builders of the chamber tombs cut into the topsoil, mixed clay, metamorphic and volcanic rock on the slope of the Ġabal al-‘Aṣabī. In plan, rectangular graves and chamber tombs with narrow entrances are typical. Such did not lie on a single level, but rather were scattered in the slope at different heights. Problems of a static nature resulted for builders, robbers, and archaeologists alike. Collapsed and overlapping tombs are evident in the plan of the cemetery (Pl. 6, 1, 2).

Grave zg011 was undisturbed and three other contexts were intact enough that the position of the skeletons was clear. They lay extended with the head toward the south. The accompanying finds, a seal stone, a small gold bell, and an iron knife are objects of a personal nature. Further iron weapons did not occur and presumably were not favoured. Iron splinters, traces which otherwise might reveal the presence of weapons, were non-existent. Old iron could not be recycled profitably and thus one might expect weapons, or splinters from them in the graves, unless the graves stood open for a considerable period. Pottery sherds were also extremely rare. 19 tombs and their fragments were documented. The human osteal material was identified in situ; human and animal bones were separated. Animal bones were identified in Germany.

The few pottery sherds deriving from excavation were fragmentary to such an extent that they offer little information as to the form, technique and decoration of the pottery.

Chronology

Stratigraphy and tomb-orientation in zc001 help little to create a relative chronology. An absolute

18 Marek translated it 23.10.1998. His study is in preparation.
chronology for the tombs derives primarily from the small finds, which they contained and in one case from carbon dating.

The few artefacts allowed a rough dating for some of the tombs and but less so for the cemetery on the whole. In particular two finds can be dated by means of outside parallels: an early Sasanian seal stone engraved in white and dark black banded agate with six fake Old South Arabian script signs (tomb zg007, Pl. 7, 1) and a knife (tomb zg013, Pl. 7, 2 above). The former is engraved with a eagle-like bird *gryllos* consisting of human faces. The bird’s left wing is formed by the profile face of an old man, its right wing is that of a young man, and its breast feathers show a frontal human face. That on the left has more sharply articulated features than its counterpart. The bird of prey grasps snake- or plant-like forms. Next to the head of the bird is a motive, which seems to be a seated sphinx. Near the bird’s left leg is an indefinable animal. Notwithstanding the Old South Arabian characters, the style and iconography early in the Sasanian group is nearly in late imperial style. Symbol combinations and *grylloi* enjoyed considerable popularity during the Roman imperial period. Roman seals also depict combinations of old and young faces. In any case, although nearly still Roman in style, the banded agate and the annular shape date it to the Sasanian style group perhaps in the 3rd cent. CE. Two samples of different human skeletons from tomb zg007 were submitted for carbon/AMS dating and yielded the following results (siehe Tabelle unten).

Laboratory results indicate that the reason for the discrepancy between the two assays lies not in a contamination of the samples, but rather in the time between the two interments. The seal appears an heirloom and entered the tomb perhaps a century after its manufacture. There is no way to determine which of the two adults owned the seal because the context was disturbed. One of these was probably the original owner of the tomb. The other two individuals in the tomb were children who would not have a seal. These determinations lower the date of the tomb use to the mid 5th and 6th centuries.

The iron knife from tomb zg013 also yields a reference for dating. A parallel exists for the shape of the blade evidently from a grave in the Wadi ‘Araf, which may date to the 2nd cent. CE.

Tombs zg001, 002, and 008 contained small fragments of pottery, which furnish little information. Other rare pot sherds derive largely from large storage vessels. A bell-shaped pendant made of gold from tomb zg001 finds parallels from different ages, and is dated by the other finds in the cemetery (Pl. 7, 2).

Both tombs and graves are represented in the cemetery (Pl. 6, 1): chamber tombs and narrow earth graves. The chamber tombs seem to have belonged to richer owners and these contained the most finds. The tombs (nos zg001, zg002, zg004, zg006, zg007, zg010, zg013) lie slightly deeper than do the narrow graves (zg005, zg008, zg011.

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21 I am most grateful to John Boardman and Antje Krug for sharing information on this dating to me.
22 CIAS I 2 Louvain (1977) 601 and title page is/was in the collection of J. Pirenne and had only a dealer’s provenance, »Zafar«. Pirenne dated this seal implausibly to the »6th century BC«.
zg014–zg017, zg019), which suggest that less effort was given to the graves (floor level: 2762.70 m versus 2763.71 m above mean sea level). There is no evidence for a development in the burial customs in this small excavated section of the burial site. The diagnostic finds and radiocarbon suggest a dating around the 2nd, 4th and 5th cent. CE for the cemetery, a time of polytheism in the general population. At the time of writing only these and the royal tomb z066 in al-Ghaw at the foot of the Ḫuṣn Raydān can be dated with any degree of certainty. Archaeological evidence for the burial of Jewish and Christian inhabitants has not yet come to light.

Stratigraphy provided a single relative dating in the cemetery. Tomb zg004 lay deeper than zg007, which itself was deep below the slope. The entrances lay mostly at the north end, but some such zg004 opened to the north-west. This conceivably could reflect chronology. Zg004 contained several fragmentary skeletons, which might reflect its sustained reuse and greater age. The asmuth of the tombs in zc001 do not correlate with the orientation of the large rock-cut tombs (zg066, zg211 etc.), the orientation of which was dictated by other, presumably practical factors.

The only excavated and published cemetery contemporary with zc001 was salvaged in 1999 by GOAM and staff members of the DAI. The excavators suggest a dating in the 2nd–5th centuries CE for the graves on the strength of the small finds. Sha’a`ūb may well predate zc001. The two cemeteries share few similarities. The main difference is that most of the burials at Sa`ūb are in stone-slab coffins, which are heterogeneously oriented.

Identity of the Interred

Having been robbed, the tombs revealed limited information about their owners and builders. Most importantly, pottery is missing. Jewellery found therein does not awaken the thought of the poorest dwellers in the city. But the diminutive tombs sunk into the soil differ essentially from those cut into bedrock. Social classes mentioned in the Old South Arabian texts relating to the inhabitants of Na`rūn from the time of Christian domination cannot be identified. These include «slaves», «freemen», «landmen», and «manual workers».

P. Yule

Catalogue of Tombs and Graves in Cemetery zc001

Tomb zg001 (Pl. 8)
Asmuth of the long axis: 188/388 gon (S–N)
Length of the chamber floor: 1.90 m
Breadth of the chamber floor: 2.20 m
Level of the chamber floor: 2763.60 m
Secondary burial: not determinable

Description of the Context
The presumed tomb entrance was visible during the first inspection of the site as a hole in the horizontal part of the slope.

The form of the entrance was unclear. The red tuff into which the tomb was sunk lost its cohesiveness and with the removal of the debris, parts of the roof caved in. The tomb was filled with dark brown earth and stones with a diameter of up to 50 cm. In addition, we encountered the surrounding rock of the chamber. A stratigraphy inside the tomb was not recognisable. The shape of the chamber could not be reconstructed with certainty since a large part of the original surface had caved in. The preserved red antique chamber wall seems to have been roughly rectangular in plan. At different heights the debris contained human skeletal remains, none of which were in anatomical order. An inclined shaft coming from tomb zg003 led through the eastern entrance wall of tomb zg001 into zg006 (see zg006).

Skeletal Remains: At least Four Individuals
Age: 1) 30–60; 2) 17–25; 3) 4–6; 4) 0–1 year
Sex: 1) male?; 2) female?; 3) and 4) not determinable
Position: not recognisable

Finds
1 Bead, green glass, in the debris of the chamber near the floor, lz 9
2 Pendant in the shape of a bell, gold, lz 19
3 Pottery sherd, belly fragment, lz 36
The tomb also contained the osteal remains of small and large ruminants. M. Lange

Tomb zg002 (Pl. 9)
Asmuth of the long axis: 200/400 gon (S–N)
Length of the entrance and chamber floor: 2.52 m

Description of the Context

During the removal of the surface a semicircular clayey deposit was recognisable in the surrounding red tuff. To the north-west a further filled area came to light, which initially was interpreted as the entrance to tomb zg002. During the subsequent excavation it turned out in fact to be the entrance of tomb zg003. In order to determine the eastern border of the tomb, excavation expanded in this direction. Disturbances were apparent on the eastern side of the tomb (tombs zg016, 017, 018).

The debris in zg002 contained large broken stones and clayey layers with basaltic stone and reddish tuff. A clear stratigraphy was not recognisable. The tomb was poorly preserved, and the roof of the chamber as well as the southern border of the entrance shaft were not determinable. Zg002 appears to be a chamber tomb with vertical entrance shaft presumably at the north end as with the other tombs in the cemetery. The shaft is reconstructable as c. 1.05 m wide and 0.50 cm long. It was sunk to a depth of 2765.11 m and the floor lay a further 1.75 m below this. The eastern chamber wall was formed by a straight wall. The south and western chamber walls joined in an arch above them. The upper portions of the chamber wall were missing.

Sherds of two ceramic vessels (lz 34) came to light. The debris contained human and non-human osteal remains. The human bones consist of at least two individuals.

Skeletal Remains: At least Two Individuals
Age: 1) adult; 2) 12–17 years
Sex: 1) and 2) not determinable
Position: not determinable

Finds
1 Cylinder, copper alloy, in jaw of the individual, lz 24
2 Pottery sherd, x2, rim, belly sherd, lz 34
The animal bones derive from small ruminants. Jaws and teeth occur disproportionately often.

C. Witzel

Tomb zg003
Asmuth of the long axis: 183/383 gon (S/N)
Length of the chamber floor: 1.40 m
Breadth of the chamber floor: 1.40 m
Level of the chamber floor: not determinable
Secondary burial: not determinable

Description of the Context
In the slope a horizontal shaft was visible. We excavated to the bedrock and discovered the remains of a grave or tomb. It was poorly preserved and the surrounding rock very unstable. Several times the excavation trenches caved in.

The tomb was dug into the dark red tuff. It was filled with gravel and earth from the slope. The probable tomb chamber was rectangular in shape and showed an unclear entrance to the north. In the western wall 1 m below the recent surface a trench (robber trench?) led to tomb zg001 and further downward to tomb zg006. This contributed to the general instability of the immediate area, which led to subsidences of the excavated walls.

Human and animal bones but no finds came to light in the debris.

Skeletal Remains: Two Individuals the Chronological Order of Which is Unknown
Age: 1) >20 years; 2) >20 years
Sex: 1) male; 2) not determinable
Position: not determinable

M. Hofmann

Tomb zg004
Asmuth of the long axis: 161/361 (SE–NW)
Length of the chamber: 2.3 m
Breadth of the chamber: 1.5 m
Level of the floor: 2762.30 m (chamber), 2661.97 m (entrance way)
Secondary burial: determinable

Description of the Context
In the slope a recently dug horizontal shaft was recognisable. The surrounding area was cleared and in plan soil discolourations were sought. In the south and in the lower portions the context was well preserved. Owing to the erosion and the building of tomb zg012 the northern part of the tomb was poorly preserved. As found, the roof had collapsed.

The tomb had a chamber rectangular in plan with an entrance way directed to the north-north-west. Tomb zg012 cut into the west wall. The tomb was filled with earth, stones, and blocks of tuff, which collapsed from the roof. Immediately before the chamber entrance lay a bundle of bones (individual 1). The remains of at least two individuals lay in secondary position in the south-east corner on the floor (individuals 3 and 4).

No finds came to light. Skeletal remains: at least five individuals from two concentrations of human bones as well as those from the debris.

Individual 1
Age: >60 years
Sex: female
Position: not determinable

Individual 2
Age: 20–80 years
Sex: male
Position: not determinable

Individual 3
Age: 20–80 years
Sex: male
Position: not determinable

Individual 4
Age: 20–80 years
Sex: not determinable
Position: not determinable

Individual 5
Age: 14–18 years
Sex: not determinable
Position: not determinable

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M. Hofmann

**Grave zg005**

Asmuth of the long axis: 190/390 gon (S–N)
Length of the chamber: 1.00 m
Breadth of the chamber: 0.80 m
Level of the chamber: 2764.93 m
Secondary burial: not determinable

**Description of the Context**

The shaft is located to the north-east of tomb zg018. During the course of the removal of surface soil to the east of grave zg016, beneath the stones of a recent terrace wall, in the red tuff the south end of a debris filled area came to light. This context seems to be an outline of a narrow tomb chamber. The investigation was terminated owing to the instability of the surrounding soil, so that the entire form remains unknown.

C. Witzel

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**Tomb zg006**

Asmuth of the long axis: 177/377 gon (SSE–NNW)
Length of the chamber floor: 2.30 m
Breadth of the chamber floor: 1.90 m
Level of the chamber floor: 2761.66 m
Secondary burial: not determinable

**Description of the Context**

During the course of the excavation of zg001 a labourer broke through the floor into the roof of zg006. As in the case of zg001 large fragments of the chamber vault collapsed. Only in the south-west corner the roof is intact. A shaft from tomb zg001, from zg003, or from both cut into this tomb.

What remains suggests a rectangularly formed chamber. As a result of the erosion of the slope, is the majority of the rectangular entrance also lost. Chamber and entrance contained dark brown earth, and contained broken stones with a diameter of up to 0.30 m. A stratigraphy was in the debris not recognisable. At different heights in the debris osteal material came to light. No other finds were made.

M. Hofmann

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**Tomb zg007**

Asmuth of the long axis: 194/394 gon (S–N)
Length of the chamber floor: 2.00 m
Breadth of the chamber floor: 2.58 m
Level of the chamber floor: c. 2760.00 m
Secondary burial: not determinable

**14C: see p. ###**

**Description of the Context**

While excavating tomb zg004 we cut into the chamber of zg007. With the exception of the roof, which was disturbed by the building of zg004, the preservation of zg007 is good. The walls of the chamber were no longer solid, and during excavation 4–7 cm spalted off of them.

The rectangular form was, however, clearly recognisable. A c. 2 m long entrance way led into the chamber from the north slope. From the floor to the roof it measured 1 m. The chamber and entrance contained alternating layers of earth, tuff, and basalt gravel. These looser, more recent layers contrast with the lowest 10 cm, which consisted of a dense brown earthen sediment.

In the lowest debris level the foot sherds of two large clay vessels (lz 27) came to light, which contained ash (lz 46). Aside from these, a seal stone appeared (lz 49), in addition to human osteal remains which were not in situ. The lowest level of debris may be of antique origin, in contrast to the looser overburden.

M. Lange

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**Skeletal Remains: Remains of at least Four Individuals**

Individual 1
Age: 20–40 years
Sex: male?
Position: not determinable

Individual 2
Age: adult
Sex: female?
Position: not determinable

Individual 3
Age: 1–3 years
Sex: not determinable
Position: not determinable

Individual 4
Age: 7–10 years
Sex: not determinable
Position: not determinable
Finds
1. Pottery sherd, on floor, lz 27
2. Seal stone, annular, black agate with white bands, 10 cm above the floor, lz 49

M. Hofmann

Grave zg008
(Pl. 14, 2)
Asmuth of the long axis: 22/223 gon (SSW–NNE)
Length of the chamber: >1.64 m
Breadth of the chamber: 0.68 m
Level of the chamber: 2763.86 m
Secondary burial: not determinable

Description of the Context
While removing surface soil below a collapsed recent terrace wall in the red tuff, a trench filled with debris became noticeable. First only the south-east corner was recognisable. At the same level a fragmented skull came to light in the debris west of this corner. Beneath the level of the skull the shape of the chamber became evident. It is highly likely that the context is a narrow tomb chamber. The north end is badly eroded. 26 cm beneath the northernmost end of the shaft an inclined north-east – south-west oriented floor was evident. The remaining parts of the chamber contained loose soil. This debris extended south into the native soil. Owing to the lack of stability of the surrounding soil, the excavation was terminated.

In addition to human and non-human osteal remains, a small ceramic belly sherd (lz 38) occurred. The animal bones belonged to a large animal.

Skeletal Remains
Age: 30–50 years
Sex: male
Position: cranium without mandible, eyes directed to the north

Find
Pottery sherd, in the debris of the entrance shaft, lz 38

C. Witzel

Possible tomb zg009
(Pl. 15, 1)
Asmuth of the long axis: 55/255 gon (NE–SW)
Length of the chamber floor: c. 1.40 m
Breadth of the chamber floor: not determinable
Level of the chamber floor: not determinable
Secondary burial: not determinable

Description of the Context
The form of this poorly preserved context is hardly recognisable as a tomb. The eastern part is eroded away and the southern part was not excavated, owing to the instability of the surrounding soil. From the chamber 1.30 m was traceable and excavated. The floor was not observed. To a height of c. 0.50 m the north wall is clearly in evidence, its upper reaches are eroded away. The interpretation of this context is not certain, and possibly it represents the remains of the entrance ways of either tomb zg002 or zg017. Neither finds nor human bones came to light.

M. Hofmann

Tomb zg010
(Pl. 15, 2)
Asmuth of the long axis: not determinable (c. S–N)
Length of the chamber floor: >1.40 m
Breadth of the chamber floor: 1.70 m
Level of the chamber floor: 2764.90 m
Secondary burial: not determinable

Description of the Context
This chamber collapsed during the excavation of zg001, which lay directly below it. Part of the floor, the north-east and south-west walls were preserved. The roof was destroyed as a result of the erosion or a robber’s trench dug into it.

Position just above zg001 and slight to its north-east, exact shape of the chamber is unclear. To judge from the neighbouring zg001, it may have been a squarish chamber with an entrance to the north. The latter was not in evidence and presumably was eroded away.

Neither anthropogenic finds nor osteal remains occurred.

P. Yule

Grave zg011
(Pl. 16, 1)
Asmuth of the long axis: 177/377 gon (SSE–NNW)
Length of the chamber floor: 1.80 m
Breadth of the chamber floor: 0.74 m
Level of the chamber floor: 2762.74 m
Secondary burial: not determinable

Description of the Context
During the course of the planing of the step trench the context became visible in profile. The south and west parts of the tomb were badly eroded and filled with the stone and soil from the slope. On the level of the interment the tomb outline was readily recognisable and well preserved. The tomb is imbedded in the dark red tuff. Debris consisted of brown slightly humous soil with a strong proportion of the neighbouring surface soil, as well as smaller stones with a diameter of 1 to 8 cm. West of the skeleton lay some larger stones, which were in part the debris from the adjacent zg013. Directly beneath the skeleton lay a 8–10 cm thick layer of loose dark red tuff mixed with iron pellets, usual to the area. Beneath this we encountered a layer of brown earth with fine tuff fragments. Grave zg011 cut into zg013, thus postdating the latter.
The burial chamber was rectangular with rounded corners. A height from 0.95 m was observable only in its south-west corner. The rest of the chamber was eroded. The original entrance was not recognisable.

The sole surviving grave good was a single bivalve (lz 44), which lay 1 cm south-east of the skull on the burial platform.

Skeletal Remains
Age: 35–50 years
Sex: male
Position: extended in dorsal position, hands both on the left half of the pelvis, left arm above the right, right arm angled slightly more than the left, eyes directed to the east, perhaps not in its original burial posture. Legs slightly contracted with the knees to the west.

Find
Bivalve, lz 44
M. Hofmann

Tomb zg012
Asmuth of the long axis: 166/366 gon (SSE–NNW)
Length of the chamber floor: 2.20 m
Breadth of the chamber floor: 0.96 m
Level of the chamber floor: 2762.27 m
Secondary burial: determinable

Description of the Context
zg012 came to light during the clearing off of the uppermost surface of the cemetery. Three of the walls, the floor and the roof were nearly completely extant. But in the north front surface, parts of the roof were missing. The entrance to the chamber lay to the north on the slope side. The tomb was filled with the reddish white local soil in which consistently broken stones of this same material. The face of the skeleton was badly fragmented, as opposed to the rest of the skull. Only the left side of the mandible was provided. The entire remains at chest height were not preserved. The pelvis, femurs, tibiae, and fibulae were fragmented, but still lay in situ. The left foot was missing and two bones of the right foot were preserved. At the south end of the tomb slightly above the level of the floor, further osteal human remains occurred. Skull sherds and parts of humerus were in evidence. These belonged to a second individual. In the fill of the tomb two lower vertebræ occurred which could not be attributed to either individual.

The ground plan is rectangular and the north and south sides are short.

Skeletal remains: order of the burials, first 2 then 1
Age: 1) 40–60 years; 2) 20–40 years
Sex: 1) female; 2) not determinable

Position: 1) extended, skull lay to the south on the left side, glance to the west; 2) scattered, not determinable

Find
A cylinder of copper/bronze (lz 24) adhered to the roof of the mouth.
M. Lange

Grave zg014
Asmuth of the long axis: 186/386 gon (SSE/NNW)
Length of the chamber floor: >1.63 m

Tomb zg013
Asmuth of the long axis: 191/391 gon (S–N)
Length of the chamber floor: 2.00 m
Breadth of the chamber floor: 2.05 m
Level of the chamber floor: 2761.60 m
Secondary burial: not determinable

Description of the Context
This tomb was discovered while deepening the step-trench. The chamber is well-preserved, and the antique surface of the tomb readily recognisable. As discovered, the roof of the chamber was readily preserved. The floor of the chamber and of the entrance were preserved. They were filled with a red and white tuff soil. These were mixed with tuff and basalt stones of varying size. Unfortunately the upper part of the entrance way, including the presumed roof, was lost owing to erosion.

The level of the entrance lay 30 cm below that of the chamber. The former is 30 cm wider than the entrance itself to the chamber. The middle of the northern chamber wall was accessed. In its plan the chamber is square, and the entrance way is rectangular.

In the south-west of the chamber on the floor an iron knife (lz 28) came to light presumably in secondary position. A grip was clearly in evidence in the form of decomposed wood. It could not be salvaged intact. A sherd of blue glass (lz 30) occurred in the entrance way of the debris. Also in the debris human and animal bones were found. None of the bones were in their original position. The skeletal remains are fragmentary, not necessarily representative, and consist of at least one individual.

Skeletal Remains
Age: adult
Sex: probably male
Position: not determinable

Finds
1 Knife, iron, floor, lz 28
2 Glass sherd, floor, lz 30
M. Lange

Grave zg014
Breadth of the chamber floor: 0.58 m  
Level of the chamber floor: 2762.17 m  
Secondary burial: not determinable

**Description of the Context**  
While levelling the step trench, this context came to light. Its south wall is completely preserved, but the east and west walls are only preserved at the south end. On the slope side the walls reach about half of their original height; the rest having been destroyed by the soil erosion. The floor was preserved in its entirety, as opposed to the lack of a roof. But a slight inward curve at the top of the south wall gave indication of the height of the roof at 0.70 m.  

The plan shows a narrow rectangular chamber. The debris consisted of dark brown earth and small basaltic gravel from the immediate area.  

Neither finds nor human skeletal remains were in evidence.  

M. Lange

**Grave zg015**  
(Pl. 18, 2)  
Asmuth of the long axis: c. 190/390 gon (SSE–NNW)  
Length of the chamber floor: >1.60 m  
Breadth of the chamber floor: 0.75 m  
Level of the chamber floor: 2763.05 m  
Secondary burial: not determinable

**Description of the Context**  
This grave came to light while planing the first step of the step trench. While the south wall was completely preserved, the eastern and western ones were preserved to a lesser height as a result of the slope erosion to the north. The entire floor of the chamber is preserved. No entrance way was in evidence. A roof was not preserved, probably as a result of the slope erosion. The grave was poorly preserved.  

The grave is in plan rectangular, and the northern and southern ends were narrow. Dark brown earth and basaltic gravel debris filled the chamber, which leaked in from the slope above. Neither finds nor osteal remains were in evidence.  

M. Lange

**Tomb zg017**  
(Pl. 19, 2)  
Asmuth of the long axis: not determinable  
Length of the chamber floor: not completely excavated  
Breadth of the chamber floor: not completely excavated  
Level of the chamber floor: 2765.00 m reconstructed  
Secondary burial not determinable

**Description of the Context**  
During the removal of earth east of tomb zg002, two large broken stones lay on an earthen floor. A floor terminated to the south in which direction it slanted downward. Further to the south at the same height, recognisable from a vertical eastern wall and a corresponding western one were the remains of what once was a tomb floor. The remaining parts of the floor collapsed into tomb zg018, which lies below it. To the south, the tomb is bordered by a vertically excavated and filled robbers trench.  

Tomb zg017 is badly disturbed as a result of the building of adjacent tombs and by the activities of tomb robbing. The extant building remains belong to a chamber entrance in the north. Only its eastern wall of the entrance is preserved. The entrance must have been at least 90 cm wide. At the end of the entrance area a disturbance is manifest. But the eastern wall is also partly preserved. It shows a shallow corner 17 cm from the entrance, which continues in a straight line to the border of the excavation to the south. At the northern end the distance between the east...
and west chamber walls amounts to 66 cm. To the south it measures 48 cm.

Neither anthropogenic finds nor osteal remains came to light.

C. Witzel

Tomb zg018  
Asmuth of the long axis: not determinable  
Length of the chamber floor: not completely excavated  
Breadth of the chamber floor: not completely excavated  
Level of the chamber floor: 2763.67 m  
Secondary burial not determinable

Description of the Context

Directly below the destroyed floor of tomb zg017 a rock and earth-filled loamy area came to light. This extended to the south-east part of tomb zg002, c. 20 cm above the floor level of the latter. To the north-east, the end of a horizontal tunnel became evident (see below). In light of the height of the adjacent excavation walls, time did not allow the completion of this investigation.

Zg018 represents the remains of a burial chamber and the remains of its entrance way to the north-east. At the floor level, the latter was 0.70 m wide and c. 0.80 m high. The roof was arched. Only the chamber walls to the east and north were clearly visible. The chamber floor was cut into the ochre-coloured tuff. To the west, cut by tomb zg002, no chamber wall was preserved. The collapsed material does not support the presumption that a wall existed here, or whether this was thin and collapsed ancienly together with the roof. To the south, zg018 is cut by the robber shaft, which led to zg017, positioned above it. In this complex of overlapping tombs and robber shafts the attribution of the different contexts is not always clear: The entrance shaft of tomb zg005 may well have been part of the chamber of zg018.

Neither anthropogenic finds nor osteal remains were in evidence.

C. Witzel

Grave zg019  
Asmuth of the long axis: 170/370 gon (SSE–NNW)  
Length of the chamber floor: >1.70 m  
Breadth of the chamber floor: 0.60 m  
Level of the chamber floor: 2762.90 m  
Secondary burial not determinable

Description of the Context

Zg019 is poorly preserved. It came to light while investigating Grave zg011. Zg011 cut into the northern part of this context. An erosion gully destroyed its southern end at a time when this part of the tomb was exposed. East

Table 2 Summary Description of the Tombs in zc001

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<th>Tomb Number</th>
<th>Tomb</th>
<th>Narrow Form</th>
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<td>x</td>
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<td>x</td>
<td></td>
<td>1.80 x 0.74 x 0.96</td>
<td>SSE–NNW</td>
</tr>
<tr>
<td>zg012</td>
<td>x</td>
<td></td>
<td>2.20 x 0.96 x 1.60</td>
<td>SSE–NNW</td>
</tr>
<tr>
<td>zg013</td>
<td>x</td>
<td></td>
<td>2.00 x 2.05 x 1.30</td>
<td>S–N</td>
</tr>
<tr>
<td>zg014</td>
<td>x</td>
<td></td>
<td>&gt;1.63 x 0.58 x 0.90</td>
<td>SSE–NNW</td>
</tr>
<tr>
<td>zg015</td>
<td>x</td>
<td></td>
<td>&gt;1.60 x 0.75 x ?</td>
<td>SSE–NNW</td>
</tr>
<tr>
<td>zg016</td>
<td>x</td>
<td></td>
<td>&gt;2.10 x 0.63 x ?</td>
<td>S–N</td>
</tr>
<tr>
<td>zg017</td>
<td>x</td>
<td></td>
<td>? x ? x ?</td>
<td>not determinated</td>
</tr>
<tr>
<td>zg018</td>
<td>x</td>
<td></td>
<td>? x ? x ?</td>
<td>not determinated</td>
</tr>
<tr>
<td>zg019</td>
<td>x</td>
<td></td>
<td>&gt;1.70 x 0.60 x ?</td>
<td>SSE–NNW</td>
</tr>
</tbody>
</table>
and west walls were fragmentarily preserved. Neither their height nor that of the roof were reconstructable, as is the case with the length of the floor.

The grave seems to have been a narrow rectangle in plan with the long walls to the east and west. Its northern half was filled with an orange-coloured tuff. In the southern part this consisted of dark brown earth and basaltic gravel from the immediate eroded slope area.

Anthropogenic finds did not come to light. In the northern part approximately 0.20 m above the chamber floor tibiae and fibulae of a man were in evidence. Further bones came to light in the chamber debris.

**Skeletal Remains**

Age: 20–40 years  
Sex: male?  
Position: legs extended in dorsal position

**FINDS FROM THE SURFACE OF CEMETERY ZC001**

1. Pottery sherd, x2, lz 32  
2. Pottery sherd, above tomb zg004, lz 42

**THE HUMAN SKELETAL REMAINS**

**Introduction**

During the course of the campaign in 2000 our team investigated 19 tombs/graves either partially or completely. As explained above, resources did not allow a full investigation of the cemetery. Human and animal bones came to light in the debris inside the tombs and their entrances. The scattering of the osteal remains results from the activity of tomb robbers, the heavy erosion, and the subsequent agricultural use of the slope. Only in a single case (grave zg011) did an undisturbed burial occur. Three further tombs contained incomplete skeletons with the remains consisting of bones in partial anatomical articulation (zg012, 016, and 019). One tomb contained two accumulations of bones of which at least the first only consists of a single individual (zg004), which appears to have been reburied. Human and animal bones were mixed. The second accumulation of human bones represents at least three individuals. Two further tombs contained presumably intentionally isolated crania (zg008 and zg019). In the burial chamber of tomb zg001 near the entrance large parts of a cranial vault came to light, which did not fit with the postcranial elements in the remaining debris. Also here an intentional deposition of bones comes to mind. Finally, seven tombs contained no bones at all (zg005, 009, 014, 015, 017, and 018).

The upper layers of soil in the cemetery contained primarily animal bones. The few human bones, which occurred here do not appear in the evaluation since they cannot be attributed with certainty to the primary use of the cemetery.

The deeper red soil was of volcanic origin and contrasts with the clear alternating layers of compacted volcanic ash. An upper layer of soil is clayey.

Generally, the human bones were poorly preserved. Most of the cranial and long bones, as well as the cancellous parts were fragmentary. The soil contributed to the poor condition of the osteal remains. Mineral accretions adhered to the bones in such a manner that they could not be removed by washing with water. Thus, only a rough mechanical cleaning was possible.

The author salvaged the skeletons and their remains. Characteristics of sex and age were diagnosed during such operations, which otherwise might have been lost. For the same reason the author measured complete but fragmented long bones in situ, in order to enable a reconstruction of the stature of the individuals. Human and animal bones, which occurred in the debris, were salvaged and later separated at the site museum. He separated the human bones according to kind and to the respective side of the body. Morphological criteria for age and sex were recorded. The morphodiagnostic criteria used are those of Ferembach et al.28. The stature of the individuals were reconstructed by means of the formulas of Trotter and Gleser29.

Inasmuch as fragmentary and incomplete material only in exceptional cases allow a secure identification to a particular individual, all of the human bones found in a tomb were examined for indications that more than one individual might exist. Such include, for example, the occurrence of paired elements or clear differences in the age of bones or

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groups of bones. In this way for each tomb a minimal number of individuals (MNI) could be determined. In the case of disarticulated skeletons, the exact number of individuals may in fact have been higher. Theoretically more individuals may have been buried than indicated by the individual bones found. By means of morphological comparison of corresponding bones of the right and left sides of the body and of fragments, which fit together, the number of individuals per tomb was reduced. For the analysis, bones, which clearly were not associatable, however, do not contradict the hypothesis that they derive from the same individual. This assumption seems adequate if one keeps in mind the size and kind of tombs, which we studied.

Results

A. Demographic Distribution

In all the remains of 27 individuals (MNI) came to light. These include 19 adults (10 male, 3 female, 6 sex not determinable) as well as 8 immature individuals. The adults include individuals who died before reaching 40 years as well as those older than 60. The immature individuals fall into the following categories:

- Juvenis (13 to 19 years): 3 individuals
- Infans II (7 to 12 years): 2 individuals
- Infans I (0 to 6 years): 3 individuals

The existence of all of the mortality classes including both sexes indicates that this cemetery represents the average population of a settlement. Also within the different tombs no special concentrations are recognisable. In the larger chamber tombs the bones of adult males, females as well as those of children appeared together. This may be taken as indication of a family burial.

B. Reconstruction of Stature

Only three individuals were sufficiently preserved that measurements of the long bones could be taken (see table 3).

C. Measurements of Skulls and the Skull Typology

For preservation reasons few skulls yielded dimensions. Thus these are not necessarily representative and do not support an evaluation. However, typologically they in fact do belong to the gracile Mediterranean group. Although all of the skulls were fragmented, and a reconstruction owing to the deformation resulting from the pressure of the overburden rarely was possible, a tendency toward long relatively small skulls with gracile contours was evident.

D. Non-metric Traits

Owing to the poor preservation only rarely was it possible to identify epigenetic characteristics. But evident was a relatively high frequency of ossicles at bregma and lambda in the skull sutures.

Table 3  Skeletons from Zafar zc001, which were measured

<table>
<thead>
<tr>
<th>Bones</th>
<th>Side</th>
<th>zg004 (individual 1)</th>
<th>zg011</th>
<th>zg012 (individual 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humerus</td>
<td>left</td>
<td>32.0 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>right</td>
<td>32.5 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Femur</td>
<td>left</td>
<td>45.5 cm</td>
<td>41.5 cm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>right</td>
<td>45.8 cm</td>
<td>41.0 cm</td>
<td></td>
</tr>
<tr>
<td>Tibia</td>
<td>left</td>
<td>34.0 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>right</td>
<td>34.2 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>calculated</td>
<td>160.7 cm</td>
<td>170.4 cm</td>
<td>155.4 cm</td>
</tr>
<tr>
<td></td>
<td>stature</td>
<td>+/- 4.1 cm</td>
<td>+/- 3.1 cm</td>
<td>+/- 3.7 cm</td>
</tr>
</tbody>
</table>
**E. Condition of the Teeth**

In cases whereby loose teeth occurred in a tomb, these were assumed to belong to the individual buried in the tomb unless other characteristics contradicted this (see introduction). The evaluation identified 10 individuals. The small size of this corpus limits possibilities for interpretation.

Tooth abrasion increases with increasing age of the individual. Only individuals whose age at death was greater than 40 years evidenced dental wear (stage 4).

Only four of the 10 individuals evidenced caries. Caries influences the ante mortem loss of teeth. In cases of advanced caries the pulpa of the tooth becomes exposed and bacterial can penetrate the roots thereby causing ante mortem tooth loss. Diets rich in carbohydrates contribute to this process. In the series under study 11 cases of ante mortem tooth loss were observed and three of the seven cases of caries (42.9 %) the pulpa chamber was exposed. From these data result a corrected caries frequency of 11.6 %. The skeletons under study in cemetery zg001 evidence no essential increase in caries when one connects the presumed tooth loss as a result of caries. As a result of the small sample, the nutrition of the population cannot be determined.

Six of the 10 individuals suffered from plaque accretions, usually of a minor nature.

**F. Degenerative Manifestations**

With exception of the 60+ year old woman from tomb zg004, no individual suffered from degenerative symptoms. Young adults showed little or only incipient joint wear. The results correspond to those that one would expect as a function of age. The individuals studied showed no characteristic indications of physical bodily stress, which would have precipitated degenerative sicknesses in early years.

**G. Miscellaneous other Pathological Findings**

Neither bone fractures nor other afflictions were diagnosed, but for a single exception. An individual from zg001 suffered from a fracture of the sagittal suture, which could have arisen from a blow or a fall on the head.

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**Catalogue and Evaluation of Skeletal Remains**

**Tomb zg001**
Find numbers: 1, 4, 9, 19
Minimum number of individuals: 4
Remarks: burial not in situ

**Individual 1**

a. Bones Found
   - Fragmentary cranial vault; mostly parts of the frontal, parietal, and occipital bone (fragments, which partly joined with each other, other parts, which are underrepresented or lacking)
   - Teeth: 36, 41 and 42 (isolated without jaw, could also belong to individual 2)
   - Ossified thyroid cartilage
   - Fragments of a right scapula and a few fragments of long bones

b. Estimation of Age
   - The ectocranial sections of the coronary suture are clearly visible, whereas the corresponding endocranial sections of the coronal suture are closed
   - Endo- and ectocranial sections of the sagittal suture are closed (except section S1 here Ossicles)
   - Ossified thyroid cartilage
   - Estimate: 30 to 60 years old
   - Contradiction here owing to the minimum of abrasion (1st and 2nd degree) of the teeth

c. Estimation of Sex
   - Eye orbits rounded
   - Marked slope of forehead
   - Frontal and parietal tuber little marked
   - Estimate: tendency male

d. Remarks
   - Ossicle at bregma
   - The nasal bone is long, prominent, and robust
   - A large, deeply imbedded Pacchionic granulation on both sides of the sagittal suture
   - In the area of the suture S2 a light impression ectocranially, and a Y-shaped break on the right parietal bone as well as an old downward radiating fracture line on the left parietal, endocranially, the lamina interna is slightly raised and part of it is missing. This corresponds to

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what one would expect from an injury resulting from a blow or fall. No indication of healing.

**Individual 2**

a. Bones Found
   - Vertebrae and thorax fragments; C4 or 5, C7, T2, T3, T7, L2. Further vertbral fragments as well as rib and manubrium fragments
   - Long bone fragments; left femur, tibia left as well as other small fragments also of other long bones
   - Pelvic fragments: right ischium, right pubical bone as well as non specific fragments
   - A few hand bones
b. Estimation of Age
   - Covering plates of the vertabral bodies not joined; missing
   - Pubic symphasis: stage 1
   - Epiphyseal line on the left femoral head still visible
   Estimate: 17 to 22 years
c. Estimation of Sex
   - Very gracile constitution
   Estimate: tendency female

**Individual 3**

a. Bones Found
   - Germ of an upper permanent molar
   - Thoracic fragments; sternal right clavicle, ribs
   - Few non-identifiable fragments
b. Estimation of Age
   - Crown of a permanent premolar, completely formed, no sign of root formation
   Estimate: 4 to 6 years
   The other bones correspond to this stage of development.
c. Estimation of Sex
   - Not determinable

**Individual 4**

a. Bones Found
   - Germ of a first deciduous molar
b. Estimation of Age
   - Crown of a deciduous molar completely formed, no sign of root formation
   Estimate: 0 to 1 year
c. Estimation of Sex
   - Not determinable

**Tomb zg002**

Find numbers: 2, 10 and 12
Minimum number of individuals: 2
Remarks: burial not in situ

<table>
<thead>
<tr>
<th>Tomb zg003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find numbers: 7</td>
</tr>
<tr>
<td>Minimum number of individuals: 2</td>
</tr>
<tr>
<td>Remarks: burial not in situ</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Individual 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Bones Found</td>
</tr>
<tr>
<td>- Right talus</td>
</tr>
<tr>
<td>- Fragment left radius</td>
</tr>
<tr>
<td>- Distal fragment of the metacarpus V</td>
</tr>
<tr>
<td>- Fragment of occipital bone</td>
</tr>
<tr>
<td>(– Humerus fragment and 2 skull fragments not clearly human)</td>
</tr>
<tr>
<td>b. Estimation of Age</td>
</tr>
<tr>
<td>- Characteristics of maturity</td>
</tr>
<tr>
<td>Estimate: adult, older than 20 years</td>
</tr>
<tr>
<td>c. Estimation of Sex</td>
</tr>
<tr>
<td>- No diagnostic characteristics</td>
</tr>
<tr>
<td>Estimate: not determinable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Individual 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Bones Found</td>
</tr>
<tr>
<td>- Lesser trochanter</td>
</tr>
<tr>
<td>- Part of the corpus sterni</td>
</tr>
<tr>
<td>- Pelvic fragments</td>
</tr>
<tr>
<td>(– Rib fragments not clearly human)</td>
</tr>
<tr>
<td>b. Estimation of Age</td>
</tr>
<tr>
<td>- Characteristics of maturity</td>
</tr>
<tr>
<td>- Lesser trochanter isolated, epiphysis open</td>
</tr>
<tr>
<td>- Sternebrae not fused</td>
</tr>
<tr>
<td>Estimate: 12 to 17 years</td>
</tr>
<tr>
<td>c. Estimation of Sex</td>
</tr>
<tr>
<td>- No diagnostic characteristics</td>
</tr>
<tr>
<td>Estimate: not determinable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tomb zg003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find numbers: 7</td>
</tr>
<tr>
<td>Minimum number of individuals: 2</td>
</tr>
<tr>
<td>Remarks: burial not in situ</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Individual 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Bones Found</td>
</tr>
<tr>
<td>- Right calcaneus (morphodiagnostically individual 1)</td>
</tr>
<tr>
<td>- Fragment of a left ilium (morphodiagnostically individual 1)</td>
</tr>
<tr>
<td>- 4 Fragments of a left fibula (fragments join with each other, nearly complete; morphologically individual 1)</td>
</tr>
<tr>
<td>- Fragment of a further left fibula (morphodiagnostically individual 2)</td>
</tr>
<tr>
<td>- Fragment of a left os temporal bone (individual attribution not possible)</td>
</tr>
<tr>
<td>- Fragment of an os parietal bone (side not determinable; individual attribution not possible)</td>
</tr>
<tr>
<td>(– Unspecified long bone fragments, not clearly human, individual attribution not possible)</td>
</tr>
</tbody>
</table>
b. Estimation of Age
- All bones found correspond to the maturity of an adult
  Estimate: Individual 1 older than 20 years
  Individual 2 older than 20 years

c. Estimation of Sex
- Pelvic bone: pre-auricular sulcus, arc composé
- Calcaneus right and fragmented left fibula, large and robust
  Estimate: Individual 1 possibly male
- Remaining bones with indifferent characteristics
  Estimate: Individual 2 not determinable

**Tomb zg004**
Find numbers: 13, 29, and 31
Minimum number of individuals: 5
Remarks: burial not in situ, human remains from 2 concentrations of bones and from the debris of the chamber

**Individual 1**

a. Bones Found
- Nearly complete fragmented cranium
- Complete fragmented mandible
- Left and right tibia complete
- Fragments of further long bones (left humerus), (right humerus from the debris), right ulna, left and right femur, right fibula)
- Right clavicle complete
- Left and right scapulae fragmented, incomplete
- Atlas, axis C4, C5, T1, T2, T3 complete and vertebrae fragments from all of the remaining areas
- Rib fragments
- Pelvic fragments (large fragments right side)
- 2 fragments of the left pelvis
- 31 hand bones (all areas both sides)
- Talus and calcaneus left as well as 11 further foot bones (all areas both sides except the distal phalanges)

b. Estimation of Age
- Pubic symphysis on both sides stage IV
- Closure of the cranial sutures stage IV
  Estimate: 60+ years
Other evidence (several ante mortem tooth loss with resorption of the alveolar bone, partly severe tooth abrasion as well as advanced degenerative manifestations on nearly all determinable joints) support this result

c. Estimation of Sex
- Determinable pelvic characteristics characteristically female (exception: ischiadic tubur: robust)
- Supraorbital ridges particularly female
- Mastoid process female
- Supraorbital rim, frontal and parietal prominences and gonial angle indifferent
- Supramastoid ridge, zygomatic, general appearance of the mandible and mentum more male
  Estimate: female
d. Remarks
- Middle to advanced arthritic alterations in all parts of the spine (atlas and axis slightly altered)
- Light to middle arthritic alterations in the large joints (elbow without arthritic alterations, only the distal right humerus preserved)
- Squatting facets on the tibia on both sides
- All of the bones studied occurred in a concentration in the entrance area and were mixed with animal bones (exception: diaphysis left humerus occurred in the debris, good morphological correspondence with the right humerus)

**Further Individuals**

a. Bones Found
Second concentration of bones
- Fragment of the epiphysis of the right humerus and distal third of the diaphysis
- Fragmentary of left femur without column and proximal epiphysis (morphologically plausible correspondence with a fragmentary right femur distal from the debris)
- Fragment of left femur without the distal half
- Fragment right tibia without proximal epiphysis (morphologically plausible epiphysis and proximal quarter of the diaphysis)
- Fragmentary left tibia without proximal epiphysis and proximal quarter of diaphysis (morphologically plausible correspondence with the right tibia fragment without the proximal epiphysis)
- Fragment of the tibia diaphysis without the proximal half
- Fragment of the right fibula without the proximal half
- Fragment of the left fibula without the proximal half
- Fragment of the left metatarsus III without distal epiphysis
- Fragment of a long bone diaphysis non specific

Bones from the debris
- 4 fragments of a frontal bone (which join, left part missing)
- Cranial fragment
- Basilar portion of a sphenoid bone
- Teeth 14 and 16
- Fragment of a right radius diaphysis distal quarter
- Fragment of a right ulna proximal epiphysis and distal quarter diaphysis
- Fragment of a right ulna epiphysse and distal quarter diaphysis
- Fragment of a left radius epiphysse
- Fragment of a right femur distal epiphysis (morphologically plausible correspondence with a fragmentary left femur without collum and proximal epiphysis
- Fragment of a right femur diaphysis distal third (very gracile, developmental stage: juvenis)
- Fragment of a left tibia distal diaphysis and parts of distal diaphysis
- Fragment of a left fibula distal diaphysis and parts of distal diaphysis
- Further small bones not identifiable by side or otherwise
- Long bone diaphysis fragments
- Fragment of unspecified vertabral arches
- Fragments of right ribs
- Fragment of ilium/ischium left
- Fragment of another ischium left
- Fragment of pubic bone, side not identifiable
- Fragment of metatarsus II left and metatarsus IV right without distal epiphysis

Because of the distal parts of a left tibia of an adult and the occurrence of bones of a juvenile the bones listed represent at least 4 individuals (+ 1 individual from the bone concentration in the entrance area)

b. Estimation of Age
Individual 2: adult older than 20 years
Individual 3: adult older than 20 years
Individual 4: adult older than 20 years
Individual 5: juvenis 12 to 17 years

c. Estimation of Sex
- Fragment ilium/ischium left, greater sciatic notch and arc composé male
  Estimate: individual 2 male
- Fragment of another ischium left, robustness of ischial tuberosity more likely male
  Estimate: individual 3 more likely male
Otherwise no elements with diagnostic characteristics
Estimate: individual 4 not determinable
individual 5 not determinable

d. Remarks
The only human bones in a concentration of animal bones

Tomb zg005
Find numbers: 8
Minimum number of individuals: 0
Remarks: no human bones

Tomb zg006
Find numbers: 11
Minimum number of individuals: 1
Remarks: burial not in situ

a. Bones Found
Fragment of a distal or intermedial hand phalange, distal end

b. Estimation of Age
In their development the bones correspond to that of an adult
Estimate: adult > 20 years

Tomb zg007
Find numbers: 14 and 51
Minimum number of individuals: 4
Remarks: burial not in situ, ca. 10 cm above the level of the burial chamber a concentration of bones occurred, further bones came to light in the debris

a. Bones Found
Concentration of bones 10 cm above the floor of the tomb
- Fragment of a cranial vault
- Fragment of a base of a skull
- Fragmentary left and right femurs, proximal parts (right with femoral head)
- Fragmentary left and right tibia
- Proximal right radius
- Fragmentary diaphysis of the right humerus
- Fragmentary right scapula
- Fragmentary left pelvis
- 3 fragmentary vertabrae (lower thoracic and upper lumbar areas)
- Fragment of a right proximal metacarpus II
The preceding parts correspond to adult development.
- Cranial vault fragment
- Crown from tooth 26
- Distal fragments of a left and right femur
The preceding parts correspond to infants I.

Bones from the debris of the burial chamber and entry area
- Mandible fragment (mentum with teeth 23 and 24)
- 2 stray mandibular molars left (not more closely identifiable)
- Fragment of a distal femur diaphysis (not identifiable as to the side)
- Fragmentary left scapula
- Fragments of a right pelvic half (which join with each other)
- Fragmentary vertabrae (upper and lower thoracic and upper lumbar vertabrae)
- A further left femoral head (much smaller)
The preceding parts correspond to adult development.
- Bilateral femur fragments
- Bilateral tibia fragments
- Bilateral ischium, each slightly fragmented
- Right ilium fragment
- 8 metatarsel fragments
- Proximal hand phalange fragments
The preceding parts correspond to the development infans II.
For the bones from the bone concentration and from the debris indications exist that a single individual is represented:
– Except for a smaller left femoral head (thus a further individual, no. 2) there are no double elements
– Articular facets of vertebral arches from the transition between the thoracic and lumbar areas of the spinal column fit together nicely
– Vertical diameter of the femoral heads fits bilaterally
– Good diagnostic correspondence of the proximal parts of the femurs
In addition two further individuals are identifiable.

b. Estimation of Age
Individual 1
– Dense spongiosa structure
– No and/or incipient degenerative manifestations
Estimate: 20 to 40 years

Individual 2
– From degree of maturity
Estimate: older than 20 years

Individual 3
– The maturity of the femur fragments
– The maturity of the tooth germ 26
Estimate: 1 to 3 years

Individual 4
– The maturity of the pelvis and general developmental grounds
Estimate: 7 to 10 years

c. Estimation of Sex
Individual 1
– General robustness
Estimate: tendency male

Individual 2
– Small femoral head
Estimate: tendency female

Individual 3
– No recognisable characteristics
Estimate: not determinable

Individual 4
– No recognisable characteristics
Estimate: not determinable

Tomb zg008
Find numbers: 15 and 20
Minimum number of individuals: 1
Remarks: burial not in situ, skull in the tomb entrance, post-cranial fragments in the debris, find no. 20 consists of animal bones

a. Bones Found
– Skull essentially complete, fragmented, mandible missing
– Incomplete post-cranial fragments, left proximal ulna, bilateral scapula fragments, fragments of the left side of the pelvis, and a lumbar vertebral arch

b. Estimation of Age
– The endo- and ectocranial sagittal suture mostly closed
– Small fragments of the coronal and lambda sutures preserved, ectocranial ones clearly visible and endocranial ones at least the lambda suture closed
– Little tooth abrasion
Estimate: 30 to 50 years

c. Estimation of Sex
– Supramastoid ridge developed
– Mastoid process small, but clearly set off
– Zygomatic process robust
– Proximal ulna robust
Estimate: more likely male

Tomb zg009
Find numbers: none
Minimum number of individuals: 0
Remarks: no human bones

Tomb zg010
Find numbers: none
Minimum number of individuals: 0
Remarks: no human bones

Tomb zg011
Find numbers: 11, 23, and 24
Minimum number of individuals: 1
Remarks: burial in situ

a. Bones Found
– Complete skull, fragmentary
– Complete mandible, fragmentary
– All long bones partially fragmented with a slight loss of substance
– Bilateral scapulae and clavicles fragmented with a loss of substance
– Ribs fragmentary with a major loss of substance
– C1 to T6 and L4 complete to slightly fragmented (remaining vertebrae badly fragmented with major loss of substance)
– Sacral fragment without the caudal part
– Pelvis bilaterally fragmented with a slight loss of substance (more on the right)
– Carpalia bilaterally complete through carpal and metacarpal bones
– Patellae bilaterally complete (but see remark)
– Tarsalia represented bilaterally mostly by tarsal and metatarsal bones (left talus and calcaneus missing)
b. Estimation of Age
- Spongiosa structure of the femur: stage II: suture closure: stage III
- Irregular pattern of abrasion from slight to middle
- Ante mortem tooth loss in the molar area
Estimate: 35 to 45 years

c. Estimation of Sex
- All diagnostic pelvic fragments male to pronouncedly male
- Zygomatic process and mentum pronouncedly male
- Glabella, supraorbital rim, frontal and parietal eminences, supramastoid ridge, and mandible characteristically male
- Mastoid process, external occipital protuberance and nuchal plane indifferent
- Genial angle female
Estimate: male

d. Remarks
- Ossicle at lambda
- Patella bipartia bilateral (small fragments of patellae missing, but lateroproximal edge with pseudoarthritic alteration)
- except for the osteophytes on the dens axis no further degenerative changes of the spinal column and major joints

Tomb zg012
Find numbers: 22 and 26
Minimum number of individuals: 2
Remarks: remains of a burial in situ in addition to a few bones of a further individual at the foot-end of the burial chamber

Individual 1
a. Bones Found
- Skull vault, maxilla and mandible fragments, major loss of substance
- Fragments of the lumbar vertebrae and of the sacrum
- Bilateral pelvic fragments
- Bilateral femurs, badly fragmented with minor loss of substance
- Bilateral tibiae, badly fragmented with major loss of substance
- Few carpal or tarsal bones, fragmented
b. Estimation of Age
- Pubic symphysis: stage IV
- Marked sloping tooth abrasion
- To the extent determinable, no ante mortem tooth loss and only slight degenerative manifestations
Estimate: 40 to 60 years

c. Estimation of Sex
- Ischial tuberosity, ventral arch, and ridge formation on the pubic bone are markedly female
- Mastoid process and supramastoid ridge female
Estimate: female

d. Remarks
- Minimal arthritic alterations on the pelvic joints (other large joints and the spinal column not determinable)
- The bones preserved lay essentially in their correct anatomical position

Individual 2
a. Bones Found
- Fragments of frontal, temporal, and maxilla
- 2 fragments of a right humerus
- Small fragments of bilateral fibulae

b. Age diagnose
- The bones and teeth correspond in their degree of development an adult
- Abrasion of the extant teeth minimal
Estimate: 20 to 40 years

c. Estimation of Sex
- Insufficient diagnostic characteristics
Estimate: not determinable

d. Remarks
- The bones of individual 2 lay at the end of the tomb occupied by the feet. The postcranial bones may include some of those of individual 1, while the cranial ones certainly belong to a second individual.

Tomb zg013
Find numbers: 17 (above spit 1) and 21 (below spit 1)
Minimum number of individuals: 1
Remarks: burial not in situ

a. Bones Found
- 4 fragments of a right pelvic bone (2 certain joins, the other 2 probable)
- 11 fragments of a left pelvis (6 certainly join and the others probable)
- See »remarks«

b. Estimation of Age
- All of the extant bones correspond in their development to an adult
Estimate: adult >20 years

c. Estimation of Sex
- Left pelvis: small preauricular sulcus, ischial tuberosity robust, arc composé
Estimate: more likely male

d. Remarks
The area anterior-superior iliac spine and anterior parts of the acetabulums manifest morphodiagnostic correspondences between right and left
Estimate: very probably one individual
**Tomb zg014**
Find numbers: 18 and 25
Minimum number of individuals: 0
Remarks: no human bones

**Tomb zg015**
Find numbers: none
Minimum number of individuals: 0
Remarks: no human bones

**Tomb zg016**
Find numbers: 5
Minimum number of individuals: 2
Remarks: remains of a burial in situ and bones of a second individual in the debris

**Individual 1**

a. Bones Found
   - Distal fragment of a right humerus
   - Proximal fragment of a epiphysis, diaphysis of a right radius and ulna, and a distal epiphysis of the right radius
   - Diaphysis fragments of the right radius and ulna
   - Few osa carpalia of both sides
   - Bilateral pelvic fragments
   - Bilateral fragments of femur diaphysis, left with proximal epiphyses
   - Bilateral tibia fragments without proximal epiphysis
   - Bilateral fragments of fibula diaphysis, the left one with distal epiphysis
   - Bilateral tarsal fragments without phalanges

b. Estimation of Age
   - General degree of development
   - Estimate: 1 to 2 years

c. Estimation of Sex
   - No diagnostic characteristics
   - Estimate: not determinable

d. Remarks
   - Both femurs manifest a hypotrochanteric groove

**Individual 2**

a. Bones Found
   - 1 lumbar vertebral arch
   - Fragment of a column and right femur diaphysis
   - Fragments of a right distal femur epiphysis
   - Fragments of bilateral tibia diaphysis

b. Estimation of Age
   - Frontal, bilateral, parietal, right temporal, fragmented occipital with a loss of substance (some joins)
   - Fragments of long bones (right distal humerus, right proximal ulna, right radius diaphysis, bilateral distal femur diaphysis, bilateral proximal tibial epiphysis, bilateral fibulae both without proximal epiphysis
   - Fragments of bilateral pelvis
   - Rib fragments
   - Fragments of bilateral metacarpals and phalanges
   - Fragments of left metatarsals
   - Fragments of a right calcaneus

b. Estimation of Age
   - All of the extant bones correspond in their development to an adult
   - No recognisable suture closure
   - No recognisable degenerative manifestations
   - Estimate: 20 to 40 years

c. Estimation of Sex
   - No preauricular sulcus
   - Generally robust
   - Estimate: tendency male

d. Remarks
   - None of the extant bones contradicts the assumption that the remains belong to 1 individual
In the zone bordering with tomb zg013 a second nearly complete cranium occurred (below, individual 2)

**Individual 2**

a. Bones Found
   - A cranium in all essentials, fragmented with losses at the base of the skull and face (no mandible)

b. Estimation of Age
   - Skull sutures completely unfused (with exception of S2: stage 2)
   - Tooth enamel only slightly worn
   - Estimate: 20 to 30 years

   **c. Estimation of Sex**
   - Mastoid process as well as frontal and parietal eminences markedly male
   - External occipital protuberance, zygomatic and supramastoidal ridge are male
   - Superciliary arches are female
   - Estimate: male

<table>
<thead>
<tr>
<th>Tomb/MNI*</th>
<th>Age at Death in Years</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>zg001,1</td>
<td>30–60</td>
<td>tendency ♂</td>
</tr>
<tr>
<td>zg001,2</td>
<td>17–22</td>
<td>tendency ♂</td>
</tr>
<tr>
<td>zg001,3</td>
<td>4–6</td>
<td>♂</td>
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<tr>
<td>zg001,4</td>
<td>0–1</td>
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<tr>
<td>zg002,1</td>
<td>&gt;20</td>
<td>♂</td>
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<td>zg002,2</td>
<td>12–17</td>
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<td>zg003,1</td>
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<td>more likely ♂</td>
</tr>
<tr>
<td>zg003,2</td>
<td>&gt;20</td>
<td>♂</td>
</tr>
<tr>
<td>zg004,1</td>
<td>&gt;60</td>
<td>♂</td>
</tr>
<tr>
<td>zg004,2</td>
<td>&gt;20</td>
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<tr>
<td>zg004,3</td>
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<td>more likely ♂</td>
</tr>
<tr>
<td>zg004,4</td>
<td>&gt;20</td>
<td>♂</td>
</tr>
<tr>
<td>zg004,5</td>
<td>&gt;20</td>
<td>♂</td>
</tr>
<tr>
<td>zg006</td>
<td>&gt;20</td>
<td>♂</td>
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<tr>
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<td>zg007,2</td>
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<td>tendency ♂</td>
</tr>
<tr>
<td>zg007,3</td>
<td>1–3</td>
<td>♂</td>
</tr>
<tr>
<td>zg007,4</td>
<td>7–10</td>
<td>♂</td>
</tr>
<tr>
<td>zg008</td>
<td>30–50</td>
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<tr>
<td>zg011</td>
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<td>zg013</td>
<td>&gt;20</td>
<td>more likely ♂</td>
</tr>
<tr>
<td>zg016,1</td>
<td>14–16</td>
<td>♂</td>
</tr>
<tr>
<td>zg016,2</td>
<td>1–2</td>
<td>♂</td>
</tr>
<tr>
<td>zg019,1</td>
<td>20–40</td>
<td>tendency ♂</td>
</tr>
<tr>
<td>zg019,2</td>
<td>20–30</td>
<td>♂</td>
</tr>
</tbody>
</table>

* Minimum number of individuals
NON-HUMAN OSTEAL REMAINS FROM CEMETERY zc001

Hans-Peter Uerpmann (Osteal Identifications)

The following osteal identifications derive from the cemetery and were excavated from the graves, and seldom are mere surface finds. Owing to the disturbances of the contexts, they cannot be narrowly dated, and one must assume most to be from Himyarite times. The domesticates by far outnumber wild animals, which are unimportant. One assumes that sheep and goats are the main non-human kind of bone in the tombs. They were placed there probably as grave equipment. But there is no evidence which allow a distinction between a funerary meal as opposed to grave provisions or offerings.

Table 5 Osteal Identifications from Cemetery zc001, Excavated in 2000

<table>
<thead>
<tr>
<th>Identified Fragments</th>
<th>Number</th>
<th>%</th>
<th>Weight (g)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>cattle, BOS</td>
<td>50</td>
<td>5.7</td>
<td>1275.5</td>
<td>26.2</td>
</tr>
<tr>
<td>sheep, OVIS</td>
<td>24</td>
<td>2.7</td>
<td>2640</td>
<td>5.4</td>
</tr>
<tr>
<td>goat, CAPRA</td>
<td>6</td>
<td>0.7</td>
<td>58</td>
<td>1.2</td>
</tr>
<tr>
<td>sheep or goat OVIS/CAPRA</td>
<td>753</td>
<td>85.9</td>
<td>2076.3</td>
<td>42.7</td>
</tr>
<tr>
<td>horse, CABALLUS</td>
<td>1</td>
<td>0.1</td>
<td>33</td>
<td>0.7</td>
</tr>
<tr>
<td>donkey, ASINUS</td>
<td>2</td>
<td>0.2</td>
<td>22.4</td>
<td>0.5</td>
</tr>
<tr>
<td>camel, DROMEDARIUS</td>
<td>12</td>
<td>1.4</td>
<td>1105</td>
<td>22.7</td>
</tr>
<tr>
<td>dog, CANIS</td>
<td>10</td>
<td>1.1</td>
<td>10</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>domesticates, total</strong></td>
<td><strong>858</strong></td>
<td><strong>97.8</strong></td>
<td><strong>4844.2</strong></td>
<td><strong>99.6</strong></td>
</tr>
<tr>
<td>unidentified equid</td>
<td>1</td>
<td>0.1</td>
<td>1.7</td>
<td>0</td>
</tr>
<tr>
<td>wolf or dog</td>
<td>3</td>
<td>0.3</td>
<td>3.3</td>
<td>0.1</td>
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<tr>
<td><strong>domestic or wild animals</strong></td>
<td><strong>4</strong></td>
<td><strong>0.5</strong></td>
<td><strong>5</strong></td>
<td><strong>0.1</strong></td>
</tr>
<tr>
<td>gazelle, Gazelle spec.</td>
<td>11</td>
<td>1.3</td>
<td>9.6</td>
<td>0.2</td>
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<tr>
<td>unidentified birds</td>
<td>4</td>
<td>0.5</td>
<td>5.3</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>wild animals total</strong></td>
<td><strong>15</strong></td>
<td><strong>1.7</strong></td>
<td><strong>14.9</strong></td>
<td><strong>0.3</strong></td>
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<tr>
<td><strong>identified animal remains total</strong></td>
<td><strong>877</strong></td>
<td><strong>100</strong></td>
<td><strong>4864.1</strong></td>
<td><strong>100</strong></td>
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<tr>
<td>identified bones</td>
<td>877</td>
<td>77.5</td>
<td>4864.1</td>
<td>89.1</td>
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<tr>
<td>unidentified bones</td>
<td>255</td>
<td>22.5</td>
<td>593</td>
<td>10.9</td>
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<td><strong>animal remains total</strong></td>
<td><strong>1132</strong></td>
<td><strong>100</strong></td>
<td><strong>5457.1</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td>human bones, (Homo sapiens)</td>
<td>14</td>
<td>1.6</td>
<td>26.5</td>
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</table>

Source of the bone samples:

<table>
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<th>Tomb/grave</th>
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<tbody>
<tr>
<td>Gr. zg01</td>
<td>l001</td>
</tr>
<tr>
<td>Gr. zg02</td>
<td>l037</td>
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<tr>
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<td>l008</td>
</tr>
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<td>Gr. zg08</td>
<td>l009</td>
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<tr>
<td>Gr. zg09</td>
<td>l010</td>
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<tr>
<td>Gr. zg10</td>
<td>l011</td>
</tr>
<tr>
<td>Gr. zg11</td>
<td>l012</td>
</tr>
<tr>
<td>Gr. zg12</td>
<td>l013</td>
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<tr>
<td>Gr. zg13</td>
<td>l014</td>
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<td>Gr. zg14</td>
<td>l015</td>
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<tr>
<td>Gr. zg15</td>
<td>l016</td>
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<tr>
<td>Gr. zg16</td>
<td>l017</td>
</tr>
<tr>
<td>Gr. zg17</td>
<td>l018</td>
</tr>
</tbody>
</table>

Cemetery zc001, surface la033
SECOND PRELIMINARY REPORT, SPRING 2002

Mapping and Site Topography

Introduction

In light of a lack of detailed information on the site and generally on the late Pre-Islamic period in the Yemen, like its predecessor, the present report on Zafar originated in a near archaeological vacuum. The site’s historical importance, large size, multidimensional complexity, as well as numerous historic literary references in the East and West, impelled the undersigned to take up work there in 1998 by means of a surface survey and an extensive photo documentation (see appended CD) combined with a geo-informational database (see site list below). By means of the latter, one can readily retrieve an image of a given context by means of context numbers when the city plan is published; just as easily, one can locate the context in the plan from any photo number. Ultimately, our efforts reveal Zafar’s great potential as an informational source and served to deconstruct its inevitable superficial denigration as a site utterly destroyed. In point of fact, prior to excavation such a description apply to nearly all ancient sites, and at face value need not, by any means, pose an insuperable problem.

The Antique Cityscape

Zafar’s Himyarite urban core has revealed itself to comprise some 110 hectares, about the size of that of Mārib, including a sizeable antique settlement on the south side extra muros (Fig. 21, 1). Mountains, ancianty fortified, form a chain, which from north to south are designated Raydān North (al-Gusr), Ḩuṣn Raydān, in addition to Raydān South (Zafar village). In 2002, surveyors mapped the topography of Raydān North. Authors and local inhabitants alike seldom distinguish these three areas of the city in a consequent way. Just east and west of the Ḩuṣn Raydān, two areas, known respectively as al-Suḥd and Maqārī, fall outside of the core area, as defined here. Presumably during the antique they consisted of houses and gardens, the latter of which were extensively terraced. Such in the plain al-Sillat are far more voluminous than in the Maqārī terraces.

Increasing topographical knowledge results in an expansion of our perception of the extent, development, and nature of the city – in a word, its makeup and importance.

The number of contexts registered jumped from 278 in 2000 to 351 in 2002. Although some 72 thereof admittedly are houses built in the last 50 years of antique spolia (reused architectural remains), most contexts are of late antique/early medieval date, to judge from the accomplished masonry. These contrast especially with coarsely built later medieval ruins e.g. just south-west of Raydān South. Antique roughly hewn stone walls blend in optically with the mountainous surroundings and are difficult to recognise even if one is standing directly near or on them. Despite centuries of weathering, erosion, pillaging, and vandalism of the remains, intensive study leads to the reconstruction of large fragments of this rupetrian capital. The fortification contexts consist of dry stone walls, natural stone outcroppings used in the defences, and nar-

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33 The undersigned thanks here the Zayed Centre for Coordination and Follow-up of Abu Zabi Emirate (in support of the exhibition) and the Kulturrhilfe of the Auswärtiges Amt of the Federal Republic of Germany (overall project support). GOAM supplemented this for the repair of the museum building. The team included Mechthild Kolb (photographic assistant), Petra Krebs and Jens Gutperle (archaeologists), Alexander Sima (epigrapher), Markus Roth and Pascal Garn (geoinformational engineers), Paul Yule (coordinator), ‘Isa b. ‘Ali b. ʿAlī al-Šebānī and Ḥilād al-ʿAnṣī (government representatives), Abūdā Gerahah (driver). In Germany Muḥammad Maraqten and Paul Yule wrote and translated numerous texts into Arabic for the exhibition and served as advisor. Thomas Breiter set the Arabic texts for the exhibition. This year again, the Yemen provided us with favourably priced flights which furthered our work. Marcus Heid scanned large plans and printed the exhibition posters. Irene Steuer-Siegmund served as draftsword. Participating institutions are the University of Heidelberg, the Institute for Spatial Information and Surveying Technology of the University of Applied Science in Mainz (particularly Wolfgang Böhler), and the General Organisation of Antiquities, Museums, and Manuscripts (GOAM), particularly Prof Yusuf Abdu al-Madīd al-ʿAbbās, its president. In Saʾīr the Deutsches Archäologisches Institut provided us with a welcome hospitality again this year. The fieldwork in Zafar took place from 02. 03. to 09. 04. 2002.

34 P. Yule, Mapping Himyarite Zafar op. cit. 313–325; P. Yule supra present volume.

35 Not including ancient scattered buildings, dams, cisterns, cemeteries, peak buildings, and terraces which thin out at the periphery.

36 The appended list of sites gives the condition as of September 2003.
row foundation «terraces» cut into the slope in order to accommodate walls now robbed. The orientation of the Ḥimyarite cityscape and its constituent buildings is conditioned by the narrow format of the available building surfaces on the three mountains, al-Gusr, Ḥuṣn Raydān, and Zafār; with several exceptions it coincides roughly with north-north-west for antique but also some present-day buildings. This general orientation gives some clues for the dating of particularly enigmatic (for example, very fragmentary) walls of possible Ḥimyarite origin. Important for the chronology of the structures, after the fall of Zafār as a political capital, there is no evidence for building activity.

One may remark in passing that on the debit side of the ledger at Zafār, clandestine digging continues, especially on the northern face of al-Gusr, untroubled by the efforts of local inspectors to hinder them. Robbers look for and occasionally presumably find Pre-Islamic graves and their finds.

**Palaces**

Substantial stone structures built presumably under royal patronage flank most notably the Ḥuṣn Raydān on all four sides. Heavy multiple fortifications are conspicuous on its steep east slope. Concentrations of tombs, monumental Ḥimyarite building remains and antique subterranean storage facilities in and around the south slope, give reason to consider the historic Raydān palace complex to have been located largely, but not exclusively in this area, today known as al-Ḡbāw. These ruins terminate immediately to the north-west of the south slope, which at this place is dominated by tombs and unidentified Ḥimyarite buildings. Further on, the western slope consists of deep rolling fields of stone rubble. On the small north slope/saddle connecting to al-Gusr, substantial walls of major buildings and fortifications are partly recognisable. Poor preservation resulting from squatter occupation and stone robbing atop the Ḥuṣn Raydān inhibits risking resources for investigation there. This year’s work took place following the peak of the dry season (December–January); the drop in the water table allowed access to large cisterns and tombs. Thus, the Ḥimyarite cistern z067 proved more than a simple subterranean chamber, as first thought on its discovery in 1998. Then, access could only be gained to the first of its chambers. It now turns out to be a cavernous cluster of large cisterns, 200 m east of the other identified cistern, z096. At the south foot of the Ḥuṣn Raydān, z067 and z096 would certainly be well positioned to catch run-off water.

With regard to the location of the palaces, several places come into question. In 1998 the concentration of stone rubble located in the saddle between Ḥuṣn Raydān and al-Gusr were taken possibly to reflect the remains of a large pre-Islamic gate. Whether, for example, the Kawkabān, Kallānum, or the late 4th cent. Sawḥāṭān palace of the king Malikkarib Yuḥa’min II, be located partly in this saddle and/or perhaps on al-Gusr itself, is a moot question. This is all the more so since in 2002 a building of 100 m+ length came to light (walls z337–z344, z356–z358) on top of al-Gusr, which presents itself as a candidate for one of these. Šuraḥbi’il Ya’fur’s monumental unfinished building inscription (dated 462 CE, siglum: zm1), which was found on the west slope of the Ḥuṣn Raydān in the densest stone rubble at Zafār, suggests a possible identification there for his palace, Hargab. But aside from this, the locations of all of the palaces in Zafār remain unknown, although certainly they are to be sought intramuros. In addition to the unexplored Ḥuṣn Raydān mountain, and the substantial ruins atop al-Gusr, another prime candidate lies in the cluster of houses on the north slope of the present-day Zafār village where there is adequate room for one or more palaces.

**City Fortifications**

To the highlights of the 2002 campaign belongs the identification of fragments of the antique-early medieval urban enceinte: east of the present-day village (contexts z330 and z331), on the eastern and south-
ern slopes of Ġabūbah al-Laqıyə (contexts z361–z367), and west of Maqārī (context z312, see site appendix below for these and other related features). In some places that which is preserved is smooth and without niches, but in others it is roughly built in irregularly formed casemates, best viewed on the south and east slopes of Ġabūbah al-Laqıyə. With few exceptions (walls z318 and z319 on Raydān North, which are particularly neatly masoned), the ashlar stone are roughly cut. Inner and outer walls can be discerned by numbering their fragments in the field and reconstructing them on paper. The heaviest discerned by numbering their fragments in the field stone are roughly cut. Inner and outer walls can be discerned by numbering their fragments in the field and reconstructing them on paper. The heaviest

In addition, at the eastern end of the alley where al-‘Uwār the large field terrace is encompassed on four sides by Ӯmyarite walls and on the north-north-west side by a dam and/or wall. But negative growth characteristics of the grain inside this area reveal heavy Ӯmyarite fortifications, which predate the outside walls.

Buildings for Worship

The functions of different Ӯmyarite buildings cannot be definitively identified on the surface without excavation. Although interested villagers attribute


41 A. Sima, lecture in Bamberg 29.06.2002, a likely translation of ‘ydr in the zm1 text of the king Ӯsabḥ’il Yaḵūr.

architectural sculpture with motifs of a devotional nature in the site museum to the Ġabal al-Âšâbî, only a single 8 m long wall fragment there (z348, orientation: north-north-west/south-south-east) now bears witness to the presence of a reported «temple» (Pl. 21, 3)\(^43\). On present knowledge, the occurrence of Maltese-like crosses on double capitals may reflect Christian iconography (Pl. 22, 2). Relief sculpture from a church (arab. gulais) mentioned by Costa from the «second layer» and «lower layer» on «Zafâr hill» are irritating, for the locals whom the author is in continual contact deny knowledge of an ancient church in the village\(^44\). Outlying hills crowned on four sides with bare, heavy walls, which come into question as hilltop sanctuaries (e.g. z247: Ġabal Ḥamârni and z347: Ġabal Aṣwar) for any of the early religions\(^45\). Numerous capitals, doubtless from Zafâr, which bear Roman and Byzantine motifs, date to the 5th and early 6th centuries of our time notation (Pl. 22, 1. 3. 4), bearing witness to both religious and secular architecture\(^46\).

If, as the Syriac Vita of Grigentius indicate, the Abessinean Negus Ella Aṣbeḥa (byz. Câlêb) built three churches in Zafâr around 525 CE\(^47\), almost certainly one was located in or near Raydân, and at least two places there come into question: first, the small site of the oldest mosque in Zafâr, z070/z071, and secondly, in the large area immediately to its east. First, one expects that the mosque would be erected on the site of a previous church or synagogue. Moreover, since the peculiar chamber below the mosque cannot be explained in terms of Islamic gogue. Moreover, since the peculiar chamber below erected on the site of a previous church or synagogue. Moreover, since the peculiar chamber below, «second layer» and «lower layer» on «Zafâr hill» are irritating, for the locals whom the author is in continual contact deny knowledge of an ancient church in the village\(^44\). Outlying hills crowned on four sides with bare, heavy walls, which come into question as hilltop sanctuaries (e.g. z247: Ġabal Ḥamârni and z347: Ġabal Aṣwar) for any of the early religions\(^45\). Numerous capitals, doubtless from Zafâr, which bear Roman and Byzantine motifs, date to the 5th and early 6th centuries of our time notation (Pl. 22, 1. 3. 4), bearing witness to both religious and secular architecture\(^46\).

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**Elaborate Antique Tombs**

Over time, the need for room for the dead appears to have expanded apace with that for the living, from the centre of the city outwards. 1000 m to the east of the present-day village, largely on the north slope of the adjacent Ġabal al-Âšâbî, part of the main cemetery area seems to contain relatively early remains, possibly of the 2nd–5th centuries CE. Large later tombs also in the immediate area are discussed below. Inside the city, large tombs are considered to have originated at a time when more open space was available there\(^49\). One of these (tomb z066, Pl. 4, 1) shows two goat reliefs associated with polytheism (an old established fertility symbol), from a time when the city's elite still worshipped polytheistic deities. The goats bring to mind involuntarily the pre-monothestic Sabaean deity Almahqah.

During the dry season this year, some of the tombs could be measured, which in the monsoon in August are filled to the roof with water. Three large and splendid rock-cut tombs in the al-ʿUwâr lowland dominate the foot of the eastern slope of Ġabal al-Âšâbî to the exclusion of all other tombs. Each has steps, which descend to a vertical entrance door. The tombs differ from each other in size and shape (Pls 23. 24), but have in common excellent workmanship with straight walls and regularly formed corners. Their rather precise cutting from the hard mafic bedrock represents indeed an effort of royal magnitude. Since the tombs lie outside the city gates, presumably they date to a time when their defense was taken for granted owing to the secure state hegemony.

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\(^{43}\) Cf. W. Radt, Forschungsreise in die arabische Republik Yemen, AA 1971, 268 fig. 23 «Tempel al-Âšâbî». A Christian bronze weight inscribed with a Latin cross which bears this same provenance dates to the 4th cent. CE (G. Brandle, Ein spätantikes Bronzegewicht im Yemen, AA 1998, 483 f.).

\(^{44}\) P. Costa, Antiquities from Zafar (Yemen), AION 33, 1973, 191 nos. 35 and 36. This provenance contradicts that of his provenance dates to the 4th cent. CE (G. Garbini, Antichità yemenite, AION 20, 1970, 545).

\(^{45}\) Oral communication Christian Robin.

\(^{46}\) Costa op. cit. 201 no. 97 pl. 23, 1, Ḥuṣn Raydân is the provenance given here.

\(^{47}\) El 11 fasc. 185/186 (2001) 379 f.s.v. Zafâr (W. Müller) 380 cites the Vita of Gregentius (ch. 63), who later became the bishop of Zafâr. Accordingly, Câlêb built three churches in Tephar including the large Holy Trinity. I am grateful to A. Sima and A. Berger for advising me as to the propagandistic even tendentious nature of this source.

\(^{48}\) A tomb seems an unlikely alternative explanation for the structure.

Impressive are the partition wall and an elaborate entrance step with landing of tomb z213 (Pl. 23, 1) cut from the living rock. With its two platforms 50 cm in height at the north and south sides of the chamber, tomb z212 (Pl. 23, 2) draws our attention. Perhaps they served as the final resting places of father and son or brother co-regents, if not a wife, all of whom are known to have existed in the later part of the Ḥimyarite Period56. The great co-regents Abikarib ʿAsʿad and his son Suraḥbīʿīl Yaʿfur (mid 5th cent. CE) come to mind. The smoothness of the stone cut walls (Pl. 24, 2) and near 90° angles resemble those of the chamber with steps z071 in Ṣafār al-Ḡīwān. Few other tombs at Ṣafār match this quality of stone-cutting, although many also have simple bench-like furniture. More elaborate still, tomb z211 (Pl. 24, 3) is under study. Even during the dry season its chamber is filled with water to a depth of 2 m.

Zafār Museum and its Reliefs

The 25 year old site museum at Zafār houses an important collection of Ḥimyarite, provincial Roman, and local Late Antique sculpture, which in 2000 our team documented in a provisional way52. Owing to the quality and quantity of this collection, its cataloguing – one of our main tasks – requires considerable effort above the pioneer work of P. M. Costa in the early 1970s53, at the founding of the museum. Many a piece, which he catalogued in the Wunderkammer of Abdullah b. Saleh al-ʿAnābī ultimately found its way into the museum collection. Over the years numerous further ones were acquired, making a catalogue a must. To wit, many of the published pieces yield information about the city, its inhabitants, and its buildings54. Unfortunately, many of Costa’s 170 photos are too small, not suitably clear for study, and thus have to be redone55. Some of the finest sculptures have been on an international travelling exhibition since 1998.

An astonishingly high percentage of the 1000 reliefs in the museum (about one third) depict humans and animals. In addition to these come 195 inscriptions, over twice as many of which seem written in late Sabean (mid 3rd to 6th centuries CE)56 than in middle Sabean (1st cent. BCE to mid 3rd cent. CE), and presumably these same proportions hold for the museum’s relief sculpture. Two fragments, possibly of a single inscription, are written in Axumite, another in Greek. Phyllomorphic motifs, the largest category of reliefs, account for 40% of the collection. Finally, with 82 examples, «architectural» motifs (i.e. stylised representations of niched facades) are less numerous. By means of a visual databank-study of the fragments, a relatively modest investment in time has revealed several fragments, which possibly join.

At first glance, the majority of the reliefs conceivably might be provisionally designated early Christian or Byzantine, but notable are also works of classical Roman inspiration, such as a Hercules (Pl. 25, 1), which may well belong to an earlier period of production, if they are not heirlooms acquired from outside during the city’s zenith in the 4th to early 6th centuries CE. Aside from works in Mediterranean classical style of considerable artistic quality, those clearly of local inspiration, and a few revealing Egyptian motifs also occur. Their great variety is by no means surprising in urban international Zafār, with its manifold contacts with the outside world. The large number of imported and local figural artefacts from the nearby satellite settlement on the Ġabal al-Awd also underline the importance of Mediterranean art forms to patrons in distant South Arabia57. Several works of local origin show a predilection for depictions of palaces, high-status persons, and narration. Be they scenes of the capital itself, they adumbrate what awaits the excavator. A case in point is a relief depiction of a leop-
ard statue poised on a base in a niche beside a column capital, which is decorated with a face couched in foliate ornament (Pl. 25, 2). At the top of the scene the rays of a sun are visible. This fragment brings to mind Šurahbi’i’l Ya’fur’s description (zm1) of his placing bronze statues of panthers, lions and ibexes in his palace Hargab58.

In the second half of the 4th cent. CE, temples decline. Invocations of the tribal South Arabian deities yield to those dedicated to the »lord of the heaven and the earth« or to »Rahmānān« (the merciful), significantly in 384 CE by the Ḥimyarite king Abikarib As’ād, co-regent with his father and brother. During the greater part of the period of production of the reliefs in the site museum, the country was ruled by kings who worshipped Rahmānān, or one (Yusuf As’ār Ya’ār) who is considered to profess the Jewish faith59. The first invocations of Rahmānān never mention Jewish attributes. From 380 to 530 CE the inscriptions are monotheist, but later include a number of Jewish formulations (e.g. »prior of his people, Israel«). This suggests the idea that Rahmānānism is a fiction and that the elite of Yemen in effect had already converted to Judaism60. To complicate matters, somewhat later, Rahmānān is invoked in both Christian and Jewish inscriptions (possibly by Henotheites, believing in one god without denying the worship of others)61. Moreover, also ab- 

tifs and syntactic arrangements. Moreover, also ab-

dent populations have no good chance of supplanting the existing one, late Ḥimyarite.

In the context of cataloguing of the museum artefacts, the question arises, which of the numerous stone sculptures reflect Jewish, and Christian cul-

58 Costa 1973 op. cit. 196 cat. no. 64 pl. 17, 1, explains the representation in a different way. Inscription: Sima op. cit.
63 Ibid.
64 This fertility image also signifies the Christian faith.
65 Robin op. cit. 31.
tural remains and culture. Stylistic dating of the available material does not offer the means to make precise distinctions between these three categories. Although the Christians doubtless reconstituted at least one of their churches destroyed in the persecution in the years following 525 CE, one can question whether the Christian building boom accounts for the high proportion of the late Himyarite reliefs in the collection of the site museum and/or, alternatively, if they derive from a long rule by early monotheists and Jews. The classification of the different stone artefacts as documents of their patrons and owners as Jewish, or Christian is open to discussion.

Our team renewed the museum installation, and the building was refurbished (Pl. 26, 1. 2). The photographic documentation of the artefacts is a larger undertaking still in progress. An Arabic-English sign at the entrance (Pl. 26, 4) and 14 bilingual posters were installed. The four exhibition rooms (Pl. 26, 3) are devoted to the history of Himyar and inscriptions (room 3); archaeological sites, tombs, and religion (room 4); as well as visual arts and other aspects (room 5). Zafār village received a tarmac road during 2002, and electricity in September 2003.

3 Excavated Stone Structure, z178

In 1998 citizens from Zafār recounted to the author that some 20 years previously at the southern foot of the Ḥūsn Raydān fortress in the eastern part of the sloping plain, al-Gahw, stone robbers (i.e. other local villagers) exposed heavy antique walls. In order to protect these from further depredations, the Zafār villagers buried them under a thick cover of stone debris. In 2000 a small portion of this wall was exposed at the spot indicated as a control for the mapping and in order to test the potential of this part of the site, which appeared to be part of the Raydān palace complex. In 2002 resources enabled minimal excavation and documentation of the structure (Pl. 27, 1. 2). Work remains to be done on the building’s northern and western flanks. In the uppermost debris a stone figurine came to light of local manufacture, which as depicted, is finely clad (Pl. 25, 3). Despite the limited nature of the test trench, it confirmed the nature and position of large buildings and shed light on the state of preservation in al-Gahw.

Description of Context z178

The context consists of a roughly north-north-west/south-south-east oriented ashlar wall66, which forms the eastern face of a squarish platform structure (Pl. 28). A 1.50 m wide alley to its east separates it from a neighbouring building (z285) to the south-east and another to the south (z284). The south side of z178 has partially been cleared. Structural remains lie just below the rock debris resting on the bedrock and without foundation trenches. The uppermost courses of stone had long since been robbed. The wall z178 steps slightly inward from course to course ascendingly. The joints of the stretchers occasionally lie over each other, but more often are staggered. The west face of the wall z178 is rough and obviously not meant to be exposed. The 0.80 m wide wall z178 consists of nine courses of ashlar preserved or visible with a maximum elevational difference of 3.60 m, and a length of 11.30 m.

The building stones on top of this platform are heterogeneous in their form, size, as well as finish, and are minimally hewn, thus contrasting with the neatly cut ashlar blocks of the wall z178. Two west-south-west/east-north-east oriented parallels walls, z275 and z276, stand on top of the platform, roughly perpendicular to wall z178. The 5–7 m long and 1 m wide z275 consists of irregularly hewn boulders shimmed below with smaller stones. Wall z276 also measures 1 m in width. Both walls are preserved to some 1.60 m above the surrounding surface. Wall z276 is located 3 m north and parallel to z275. 3.2 m of the length of this 0.80 m wide wall are recognisable.

Located in the north-east corner of the excavation, the canal z277 is formed by flat stones covering smaller ones. This drainage canal runs down slope to the south-east. Visible in the northern most balk at the northern border of the trench, z278 is a wall parallel to z276.

Z279 is a stone packing between z276 and z278.
Z280 is a stone packing between z275 and z276 in the middle of the context.

Directly adjacent to the wall z178 lies a packing (z281) of large stone blocks, which suggests the presence of a grave.

66 The site z178 is comprised of the loci z178, z275–z286.
Z282 is a stone packing between z275 and z276 toward the west.
Z283 is a stone packing immediately adjacent to z276 at the western edge of the trench.
Z284 runs in an east-north-east/west-south-west direction, parallel to the southern face of z178. It existed prior to z285, and postdates wall z178.
Z285 is a north/south-oriented wall opposite the wall z178. At its southern end it joins wall z284. To the north it rests on debris similar to that of z178. Thus, it is later than the adjacent z178, which is built on bedrock.
Z286 is a secondary wall, which blocks the north/south access between z178 and 285.
The platform z178 finds a parallel in Hāḍramī Pre-Islamic Sabwa bâtiment A, a large part of the palace67. Similar are the platform, the sandwich walls, and the strip-like wall footings atop the platform.
Context z178 had been stripped and contained few small finds, pottery, or architectural accessories (building sculpture, gargoyles etc.). Wood from a timber frame building that probably rested on top of the platform z178 was not preserved.
The dating of the initial building and suspected rebuilding(s) of platform z178 at this stage of research is unclear. General principles of construction, such as known from the palace at Şabwa, help little to pinpoint its dating. The latter was destroyed in the 3rd cent. CE, probably in 225 by the Sabaean king Śā'irum Awtar68. At Zafār at this stage of research, coinciding with the rise in political, financial and military fortunes, one assumes extensive building in the latter 3rd cent. CE. These buildings may have been continually refurbished and new ones added to them, thus confounding the dating.

Summary
Recent documentation of the Ḥimyarite capital, Zafār, reveals a late antique/early medieval centre, complementing data from textual sources. A tachymetric survey and virtual simulation provide means to reconstruct the ancient cityscape, especially its fortifications, prior to its demise in the 6th cent. CE. Some walls appear to have been in use for over 300 years spanning different Ḥimyarite phases. To judge from the extant surface remains, the main palatial area centred in and around Ḥuṣn Raydān. Building ruins suspected to have been used for worship lie both inside and immediately outside the city. Outside the walls in al-ʿUwār, presumed royal tombs appear to date to the 5th cent. CE.

Preliminary study dates most reliefs in the local museum after c. 400 CE. Rarely can the iconography of the different relevant religions in Zafār be distinguished individually. The museum building and exhibition were renewed, and a catalogue of the artefacts is in preparation.
The Ḥimyarite stone platform z178, excavated in al-Ḡaw, seems part of the Raydān palace complex.

P. Yule

Handlist of sites at Zafār ordered by their Context Number

The following list does not represent a classification senso stricto of the different kinds of contexts, but rather is a systematic attempt to complement the map. The coordinates given below derive from a closed mapping system referenced into the UTM network by means of hand-held GPS. Nuances in the descriptors reflect the certainties and uncertainties of the descriptions. This explains, for example, the difference between «tomb entrance», «cave/tomb entrance», «tomb/cave entrance». The definitions shall be made available in a later publication.

Two exceptions occur: Certain ones remain to be verified (signed #). Other were determined solely by means of a GPS (signed +), and were determined at a time when «selective availability» was not in effect. They usually lie outside the terrestrial mapping proper.

Line 1 gives the context number (for example, z007), descriptor, and UTM coordinates.

Line 2 gives the place name at Zafār, and main distinguishing features.

z001 wall 435577 1571602
H Raydān, NE corner, NE/SW-NW/SE, 10 x 1.4 m

z002 entrance 435575 1571600
H Raydān, N end, NE/SW, 1.4 m wide

67 J.-F. Breton, Le site et la ville de Shabwa, Syria 68, 1991, opposite 118 fig. 4 b. I thank H. Hitgen for this reference.
68 J. Seigne, Le château royal de Shabwa, architecture, techniques de construction et restitutions, Syria 1991, 156, based on textual information.
z003 heavy wall 435573 1571591
H Raydán, N side, NE/SW, 32 x 1.4 m

z004 way 435570 1571605
H Raydán, leads from z002 to NW, c. 2 m wide

z005 wall 435591 1571586
H Raydán, NW bastion, NW/SE, ±40 x 0.35 m

z006 heavy wall 435601 1571578
H Raydán, NW/SE, 30 m, 0.5 m wide

z007 heavy wall 435623 1571547
H Raydán, NW/SE, 15 m, S of z006 and lower, red stone, more finely dressed than z006, 1.1 m wide

z008 rock outcropping, bastion 435610 1571530
H Raydán, z007 switches up the hill, z008 lies to E, abuts it, NW/SE, 5 m, near z009

z009 wall 435630 1571520
H Raydán, z008+9 same system, jogs to E, continues to N, 0.8 m wide continues SE side and then to NW 25 m, dressed brown stone

z010 wall 435639 1571524
H Raydán, below z009, E corner and SE side, NNE/SSW, 8 m, 0.6 m wide, roughly dressed grey stone

z011 wall 435643 1571525
H Raydán, NE/SW, 5 m, connection with z010: 0.5 m wide

z012 rock cut face 435609 1571502
H Raydán, fortification, max 4 m high

z013 foundation or ramp 435632 1571507
H Raydán, along side of rock face z012, NE/SW, 2 m wide, SW side

z014 wall 435635 1571559
H Raydán, joins z009, NW/SE, 60 x 0.5–0.8 m, forms entrance to «king's chamber», dressed grey stone

z015 tunnel entrance 435641 1571544
H Raydán, NE/SW, «kings chambers», secondarily formed

z016 steps and entrance 435644 1571547
H Raydán, NE/SW, 4 m, inside z014 and z015

z017 wall 435612 1571546
H Raydán, NW/SE, 5 x 0.5 m, above z008 and z009 edge of summit

z018 terrace 435632 1571595
H Raydán, NW/SE, 70 x 4 m, E side, 12 m below wall z014

z019 wall 435565 1571544
H Raydán, NW/SE, 20 x 0.8 m, continuation on W side of z009? Rough grey blocks, +435571E; 1571529

z020 wall 435563 1571540
H Raydán, 4 m W of z019, inner and outer face of same system, grey rough dressed, patinated, like z019. 50 x 30 x 40 cm, 6–7 m

z021 house/room 435565 1571555
H Raydán, NW/SE, 10 x 11 m, greyish red stones W brick, 0.75 m wide, rough dressed, local sources: recent

z022 cistern 435556 1571561
H Raydán, immed N of NW corner of z021, N/S 3 m, E/W 3.5 m, red dressed blocks, concrete. 2nd cistern inside of z022

z023 stone basin 435573 1571563
H Raydán, 0.80–0.85 m wide, H 1.06 m, inside 0.8 m, original polish preserved, not in situ

z024 wall 435573 1571591
H Raydán, NE/SW, 2 x 0.8 m, beneath/earlier z003

z025 house/walls 435583 1571541
H Raydán, NE/SW, walls 0.6 m wide, at highest point on Husn on W side

z026 house 435589 1571535
H Raydán, NNE/SSW, 4.0 x wall 0.7 m, good masonry on SW side, toward S edge of cliff, irregular shape

z027 wall 435588 1571531
H Raydán, NW/SE, 10 x 0.7 m, edge of cliff, large and small red and grey stones, fortification, wall of z025 abuts it

z028 house 435598 1571537
H Raydán, NW/SE, 17 x 10 m, highest point on Husn, NE of house z026, 0.8 m wide, test excavation

z029 house 435573 1571543
H Raydán, NW/SE, 14 x 8 m, wall 0.75 m wide, W of z025

z030 courtyard 435584 1571555
H Raydán, NW/SE, 10 x 10 m, S of z032, NW of z028

z031 house 435571 1571564
H Raydán, NNW/SSE, 8 x 8 m, NW of z028, near NW edge, walls 0.85 m wide

z032 house/room 435586 1571567
H Raydán, N of open area, little collapsed stone, debris here, wall 1.1 m wide
<table>
<thead>
<tr>
<th>ID</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>z033</td>
<td>house/room</td>
<td>H Raydán, NE/SW, 3 x 4 m, NE edge, N of z028 by c. 25 m, wall width 0.75 m</td>
</tr>
<tr>
<td>z034</td>
<td>wall/room</td>
<td>H Raydán, NE/SW, 2 x 4 m, on NE edge S of z033, wall width 0.75 m</td>
</tr>
<tr>
<td>z035</td>
<td>wall</td>
<td>H Raydán, NE/SW, 3.0 x 0.5 m, W side at N corner, along top of rock outcropping, reddish grey stone</td>
</tr>
<tr>
<td>z036</td>
<td>wall</td>
<td>H Raydán, NNW/SSE bent, 10 m, stones 2 m long, along SW side, z020 below, c. 8 m distant</td>
</tr>
<tr>
<td>z037</td>
<td>wall</td>
<td>H Raydán, along SW side of уфн S of z036, rougher and smaller stones, near S corner</td>
</tr>
<tr>
<td>z038</td>
<td>rock cut face</td>
<td>H Raydán, possibly connected with z035 as part of uppermost defenses, on W side</td>
</tr>
<tr>
<td>z039</td>
<td>heavy wall</td>
<td>al-Gahw, al-, N/S, 10 m, in line with z065</td>
</tr>
<tr>
<td>z040</td>
<td>terrace</td>
<td>H Raydán, N/S, 2 m wide, slightly slanting to slope</td>
</tr>
<tr>
<td>z041</td>
<td>wall</td>
<td>H Raydán, NW/SE, 35 x 1 m, grey blocks, 4 courses finely dressed, roughly dressed blocks above, terrace just above z041</td>
</tr>
<tr>
<td>z042</td>
<td>wall</td>
<td>H Raydán, NW/SE, 50 x 0.6 m, rough stones, blocks fr z041, 10 m below hill crest 8 m up from foot of z041 to top of z042</td>
</tr>
<tr>
<td>z043</td>
<td>wall and terrace</td>
<td>H Raydán, NNW/SSE, 3 m, W side, 5 m higher than z042, 0.45 m wide</td>
</tr>
<tr>
<td>z044</td>
<td>wall</td>
<td>H Raydán, NW/SE, 25 x 0.5 m, not as finely masoned as z041, 10 m above z043, 2nd fr. 1 m distant, next to z044</td>
</tr>
<tr>
<td>z045</td>
<td>wall</td>
<td>H Raydán, NW/SE, 12 x 0.5 m, rests on z044 and continues N of it</td>
</tr>
<tr>
<td>z046</td>
<td>wall</td>
<td>H Raydán, 4 m above top of z045, grey blocks as z009, 30 m long, 50 (w) x 30 x 40 cm blocks as with wall z020, stepcut into bedrock</td>
</tr>
<tr>
<td>z047</td>
<td>house</td>
<td>Zafar, Bayt Saleh 'Abdullah Mhd al-'Anabi</td>
</tr>
<tr>
<td>z048</td>
<td>cave entrance</td>
<td>Zafar, opens to e, in Bayt Saleha l-Anabi's garden/courtyard</td>
</tr>
<tr>
<td>z049</td>
<td>house</td>
<td>Zafar, facing cave entrance to W reliefs (hand and bucra-nium), Bayt Saleh Musalleh al-Zafâri</td>
</tr>
<tr>
<td>z050</td>
<td>house</td>
<td>Zafar, Bayt Saleha l-Anabi, small stone with carved rosette and sharp pointed flower</td>
</tr>
<tr>
<td>z051</td>
<td>house</td>
<td>Zafar, Bayt Táher al-Zafâri, immediately N next to Bayt Saleha l-Anabi</td>
</tr>
<tr>
<td>z052</td>
<td>house</td>
<td>Zafar, Bayt Mhd Hussein's Sa'ad Saleh al-'An, E of z051, S of z053</td>
</tr>
<tr>
<td>z053</td>
<td>house</td>
<td>Zafar, Bayt Himyar Táher al-Zafâri, N of z051/052. 2 families, 2 houses, bull sculpt set into wall, inscribed stone</td>
</tr>
<tr>
<td>z054</td>
<td>house</td>
<td>Zafar, Bayt Musleh al-Zafâri, NE of z053</td>
</tr>
<tr>
<td>z055</td>
<td>house</td>
<td>Zafar, Bayt Ḥamūd 'Abdullah Ahmâd al-Zafâri, E of z054, inlaid reliefs</td>
</tr>
<tr>
<td>z056</td>
<td>cave entrance</td>
<td>Zafar, E of Ḥamūd 'Abdullah's house, almost directly beneath it on a slope, 3 chambers</td>
</tr>
<tr>
<td>z057</td>
<td>cisterns</td>
<td>Zafar, belongs to Mhd Saleha l-Anabi, E and N of Ḥamud 'Abdullah's house, 6 cisterns</td>
</tr>
<tr>
<td>z058</td>
<td>cave entrance</td>
<td>Zafar, near Bayt Mhd Saleha l-Anabi, two level cave, above one cistern</td>
</tr>
<tr>
<td>z059</td>
<td>cave entrance</td>
<td>Zafar, below z059, arched cut stone entrance, «king’s tomb», excavated, old no. 14, «Báb Suq al Layl»</td>
</tr>
<tr>
<td>z060</td>
<td>tomb entrance</td>
<td>Zafar, E of z060, entrance to E, E edge of village</td>
</tr>
</tbody>
</table>
z062 cave entrance 435694 1571444
Zafr, on a narrow alley, 7 m, entrance to SE, dressed stone entrance with concrete against stone outcropping

z063 house 435690 1571396
Zafr, Bayt Saleh al-Burati, E of Hamud 'Abdullah's house, down slope from there

z064 house 435624 1571389
Zafr, Bayt 'Ali Hussain and Sa'ad Saleh al-Zafr, goat relief

z065 wall 435615 1571389
Zafr, W of Bayt 'Ali Hussain Sa'ad Saleh al-Zafr, T 0.7 m

z066 tomb entrance 435610 1571423
Gahw, al-, entrance to W, Hamud al-Tam al-Zafr, dwelling, carved stone: bucranium and woman, old no. 12

z067 cistern 435603 1571421
Gahw, al-, W of z066, entrance to S, W of z061 and below house of Hamud al-Tam al-Zafr

z068 house 435598 1571426
Gahw, al-, Bayt Hamud al-Tam al-Zafr

z069 bedrock, cut 435594 1571418
Gahw, al-, below and W of z068, house foundations, water channel cut into bedrock

z070 mosque, old 435579 1571425
Gahw, al-, next to rock cut chamber, entrance e, old no. 19

z071 chamber entrance 435579 1571425
Gahw, al-, stair going from old mosque to rock cut chamber, entrance to W

z072 cave entrance 435581 1571419
Gahw, al-, upper and lower chamber, latter reachable by stairs, entrance upper chamber rectangular with channel

z073 cave entrance 435576 1571419
Gahw, al-, lower chamber of z073

z074 cave entrance 435487 1571413
al-Gahw, al-, S of z072 and z073, entrance to S, old no. 23

z075 cave entrance 435593 1571407
al-Gahw, al-, E of z074, entrance to S, old no. 24, deep single chamber

z076 cave entrance 435564 1571407
al-Gahw, al-, S of z074, entrance to S, down hill and W of z074, 3 badly eroded chambers

z077 cave entrance 435567 1571400
Gahw, al-, S of z076 and lower, entrance to S chambers

z078 cave entrance 435569 1571405
Gahw, al-, next to (w of) z077 and lower, entrance to S, walled in chambers

z079 cave entrance 435501 1571448
Dahah, al-, W and S of z078 down the hill, Bayt Ahmad Mus'id Assad, above entrance to SW

z080 cave/tomb entrance 435503 1571454
Dahah, al-, double chamber, above z079 cut into cliff

z081 cave entrance 435597 1571454
Dahah, al-, house and cave W of z079, base of cliff is worked, arch entrance arch inside separates front and back chamber

z082 cave entrance 435513 1571437
Dahah, al-, high in the cliff, W of z081, «Himyarite prison»

z083 cave entrance 435510 1571435
Dahah, al-, high in the cliff, below z082

z084 cave entrance 435524 1571441
Dahah, al-, wide opening, single chamber shallow rock face runs SE/NW

z085 cave entrance 435521 1571449
Dahah, al-, above and behind z083 in cliff

z086 cave entrance 435517 1571453
Dahah, al-, above and behind z083 in cliff

z087 cave entrance 435513 1571457
Dahah, al-, above and behind z083 in rock face, nice cut rectangular entrance and rectangular rear, entrance to SW, old no. 44

z088 cave entrance 435510 1571461
Dahah, al-, above and behind z083 in cliff, old no. 45, faced with stone wall, main and subsidiary chambers, rectangular door

z089 cave entrance 435504 1571472
Dahah, al-, above and behind z083 in cliff, entrance to W, opening filled in/closed W dressed stones, old no. 46

z090 cave entrance 435500 1571582
Dahah, al-, last of the series, old no. 41, Marrabat al-Khiyul al-Suflah, rectangular entrance, multiple chambers
z091 cave entrance 435511 1571465
Dīhāb, SE of z090 and higher in cliff, entrance with gallery, perpendicular chambers, Marrabat al-khiyul al-ilya (upper)

z092 cave entrance 435529 1571458
Gāhw, al-above z091, gallery with perpendicular chambers, Marrabat al-Khiyul al-Ilya (Ilya=upper)

z093 cave entrance 435537 1571448
Gāhw, al-, SE of z092 at same level, Ahmad Meshed Assad’s house, directly S

z094 cave entrance 435547 1571541
Gāhw, al-, few metres uphill from z093, entrance to NW

z095 cave entrance 435566 1571452
Gāhw, al-, above (ne) of cave z094, entrance to S, multiple chambers

z096/cave entrance 435568 1571427
Gāhw, al-, S of z095, entrance to N, 3 chambers, 1 cistern, just N of open air mosque, H 4.3 m

z097 cave entrance 435575 1571426
Gāhw, al-, below courtyard of mosque z071, stairs leading down

z098 cave entrance 435608 1571454
Gāhw, al-, at S foot of H Raydān and immediately N of Zafār, entrance to S/SE

z099 wall 435628 1571524
H Raydān, above wall z009, NNE/SSW and SE/NW, 4.0 x 0.5 m

z100 wall 435616 1571531
H Raydān, NW/SE, 10 x 0.4 m

z101 heavy wall 435541 1571609
H Raydān/Gusr, NW/SE, 1.1 m wide

z102 wall 435537 1571608
H Raydān/Gusr, NE/SW, 10 m

z103 heavy wall 435502 1571646
H Raydān/Gusr, NW/SE, preserved 65 m, 3 m wide

z104 heavy wall 435488 1571670
H Raydān/Gusr, NNW/SSE, 25 x 1.5 m

z106 wall 435481 1571658
Gusr, W side of wall preserved

z107 heavy wall 435520 1571680
Gusr, NNW/SSE, 30 m

z108 wall and terrace 435483 1571633
Gusr, W side, NNE/SSW, 20 x 0.4 m

z109 wall 435450 1571672
Gusr, al-, W slope, NNE/SSW, c. 45 m
C 35 m down slope

z110 terrace/robbed wall 435446 1571678
Gusr, al-, top, W side, above wall z109, worked face of bedrock above/behind it, just over edge

z111 cliff, worked 435696+ 1571519+
Suḥd, al, NE/SW, 20 m, 4 m high

z112 wall 435435 1571703
Gusr, al-, above wall z318 at edge of summit of Gusr, c. 18 m, N/S, rough stone up to 2 m in height preserved

z113 stone square, room 435452 1571693
Gusr, al-, W end, NNE/SSW, 20 x 16 m, poor preservation and masonry, incomplete

z114 house 435634 1571357
Zafār, Bayt Hussain Mhd al-Waqdat, double house, other house is z047

z115 mosque, new 435630 1571355
Zafār

z116 house 435639 1571343
Zafār, Bayt Saleh ’Abdullah Mhd al-Anābī, NW of z115

z117 house 435624 1571379
Zafār, Bayt Saleh Mus’id al-Anābī

z118 house and stall 435609 1571309
Zafār, Bayt Saleh Mus’id al-Anābī. SW of 117. Dated 1991

z119 house 435623 1571297
Zafār, Bayt Ali Farhan al-Sa’ad, SW of z117

z120 house 435639 1571292
Zafār, Bayt Mhd Ġasim al-Zafārī, ene of z119, E side. L 8 m

z121 house 435641 1571288
Zafār, Bayt Mhd Ġasim al-Sa’ad, 1/2 of house z120, length E side 8 m, Ḥimyari relief as decoration

z122 house 435647 1571284
Zafār, Bayt Gamal Tāher al-Zafārī, built onto z121 to S

z123 house 435656 1571299
Zafār, Bayt Gamal Abd ‘Ali Mhd al-Sa’ad, NE of z121
z124 house 435666 1571286
Zafar, Bayt Saleh 'Ali al-Sa'ad, S of z123, 1 owner, 1 of the 2 houses is a flour mill

z125 house 435579 1571285
Zafar, Bayt Ahmad Abd al-Anabi, 40 m S of z118

z126 house 435583 1571273
Zafar, Bayt Ahmad Abd al-Anabi, SE of z125

z127 house 435610 1571284
Zafar, Bayt Saleh 'Ali al-Sa'ad, S of z119

z128 house 435624 1571309
Zafar, Bayt Saleh Mus'id al-Anabi, NE of z127

z129 house 435631 1571286
Zafar, Bayt Saleh 'Ali al-Sa'ad, S of z128

z130 house 435629 1571269
Zafar, Bayt Mhd Saleh Abdullah al-Zafari, directly S of z127

z131 house 435623 1571277
Zafar, Bayt Mhd Saleh Abdullah al-Zafari, directly S of z130

z132 house 435641 1571265
Zafar, Bayt Mhd Saleh Yahya al-Zafari, SE of z131

z133 house 435670 1571265
Zafar, Bayt Abdullah Saleh 'Ali Saleh al-Zafari, SSE of z124

z134 house 435685 1571252
Zafar, Bayt Ahmad Saleh 'Ali Saleh al-Zafari, directly SSE of z133, next to polygon point 107

z135 house 435699 1571235
Zafar, Bayt Ahmad 'Abdullah Mus'id al-Zafari, SSE of z134

z136 house 435719 1571220
Zafar, Bayt Abdu 'Abdullah Ahmad al-Zafari, SSE of z135

z137 house 435723 1571201
Zafar, Bayt 'Ali Saleh al-Zubaidi, directly SW of z136

z138 house 435709 1571194
Zafar, Bayt 'Ali Saleh al-Zubaidi, directly SE of z137

z139 house 435740 1571215
Zafar, Bayt 'Ali Abdullah Ahmad al-Zafari, E of z137

z140 house 435634 1571256
Zafar, Bayt 'Ali Gasim Said Mas'ud al-Zafari, directly S of z132

z141 museum 435683 1571165
Zafar, museum

z142 reservoir 435549 1571237
Zafar/'Uqlat, al-

z143 wall 435587 1571537
H Raydan, E/W, 8 x 0.6 m, NNW from z028

z144 graves, Him. 435965+ 1571418
'Ashabi, G al-, 2 graves newly exposed

z145 wall 435550 1571537
H Raydan, NW/SE, 10 m, SW side, 6 m below z020

z146 cave entrance 435522 1571414
Dahah, walled entrance, above house of 'Ali al-Mas'udi

z147 cave entrance 435526 1571411
Dahah, al-, walled entrance, left of dwelling of Thabit al-Mas'udi

z148 cave entrance 435527 1571408
Dahah, walled entrance, dwelling of Thabit al-Mas'udi

z149 excavation 435640 1571580
H Raydan, = zcow001

z150 wall 435587 1571537
'Ashabi, G al-, NE/SW, 10 x 0.8 m wide, »temple«

z151 house 435714 1571240
Zafar, Bayt 'Ali and Mhd 'Abdullah Mus'id al-Zafari, E of house z135

z152 house 435550 1571210
Zafar, Bayt 'Abdullah Hamud al-Zafari, next to cistern z142

z153 house and stall 435543 1571270
Zafar/Qism al-Dair, Bayt Abdullah Saleh al-Anabi

z154 cave entrance 435624 1571327
Zafar, faces NNW, 20 m NE of z118

z155 house 435668 1571314
Zafar, Bayt Hamud al-Tam al-Zafari, W of z052

z156 house 435668 1571314
Zafar, Bayt Gamal Tahir al-Zafari, directly W of z155

z157 Zafar, Bayt Hamud 'Abdullah Ahmad al-Zafari, directly W of z156
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z158 house 435668 1571314
Zafar, Bayt Faisal ‘Ali Firhan al-Zafari, directly W of z157

z159 house 435668 1571314
Zafar, Bayt Najj Saleh ‘Ali al-Anabi, directly E of z159

z160 house 435689 1571319
Zafar, Bayt Najj Saleh ‘Ali al-Anabi, directly E of z159

z161 cave entrance 435681 1571294
Zafar, 20 m S of z159, faces E

z162 stall 435694 1571280
Zafar, SE of z161

z163 house 435702 1571440
Zafar, Bayt Mhd Saleh Ahmad al-Anabi, E of z057

z164 house 435647 1571348
Zafar, Bayt Saleh Abd Mhd Hussain al-Anabi, across from new mosque in Zafar

z165 rock cut face 435559 1571421
Ghay, al- W of z073

z166 cave entrance, wall 435550 1571418
Ghay, al- entrance faces SSW, E of z167, old no 56, next to house of Yahyah and Ahmad Mus’id

z167 house 435531 1571424
Dahah, al-, Bayt Yahya and Ahmad Mus’id al-Zafari, W of z166

z168 house 435539 1571428
Ghay, al-, NNW/SSE, E of z167

z169 cave entrance 435519 1571436
Ghay, al-, corner of house Ahmad Mus’id al-Zafari

z170 cave entrance 435526 1571412
Ghay, al-, 10 m SW of z167

z171 cave entrance 435494 1571332
Zafar, 2 entrances of 1 cave, W cave, 200 m NNW of z153

z172 cave entrance 435483 1571318
Zafar, 2 entrances of 1 cave, E cave, 200 m NNW of z153

z173 mosque enclosure 435607 1571460
Ghay, al-, 60 m N of z064, unroofed

z174 cistern 435570 1571075
Zafar/Aradat 15.5 x 11.0 x 7.0 m, backwall 7 m high

z175 wall 435645 1571557
H Raydan, E side, 8 m below z014, excavated 10.09.00

z176 tomb 435484 1571084
Zafar, SW side, N of al-Dahat al-Sahrar, good workmanship

z177 tomb/cave 435650 1571320
Zafar, W of z049, entrance to e

z178 wall 435623 1571485
Ghay, al-, corner of large well-hewn blocks of a large building, walls NNW/SSE, excavated 2000

z179 stone square, heavy ‘Uwarr, al-, NNW/SSE, 8 x 14 m

z180 heavy wall ‘Uwarr, al-, NE/SW, 40 x 1.5 m

z181 heavy wall ‘Uwarr, al-, NE/SW, 26 x 1.8 m

z182 heavy wall ‘Uwarr, al-, NE/SW, 16 x 1.5 m

z183 heavy wall ‘Uwarr, al-, WSW/ENE, 60 m, best preserved in the area, crosses road

z184 stone square, heavy 435974 1571075
Hayfa, al-, heavy stone oppos. bastion z185, NW/SE, 10 x 14 m

z185 stone square, heavy 435946 1571080
Hayfa, al-, NE/SW, large bastion oppos z184, width 10 m

z186 heavy wall 435927 1571083
Hayfa, al-, NNE/SWW, 16 m, U-shaped

z187 heavy wall 435915 1571094
Hayfa, al-, NNE/SWW, 30 m+, with offset wall, S fortification

z188 heavy wall 435890 1571005
Hayfa, al-, NNW/SSE, 60 m, casemate walls

z189 heavy wall 435872 1571084
Hayfa, al-, NNW/SSE, 45 m, 1.55 m wide, casemate wall, connects with Hayfa z209

z190 entry to Zafar 435830 1571044
Zafar/Mudarrag, al- entry E/W to present-day village, largely destroyed 2004
<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Coordinates</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>z191</td>
<td>House, Bayt Saleh Muslah al-Zafarani</td>
<td>435742 1571089</td>
<td></td>
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<tr>
<td>z192</td>
<td>House, Bayt Ahmad Saleh al-Zafarani</td>
<td>435728 1591108</td>
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<td>z193</td>
<td>House, Bayt Nagi Saleh ‘Ali al-Anabi</td>
<td>435707 1571127</td>
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<td>z194</td>
<td>Stall, Bayt Muslah al-Anabi</td>
<td>435698 1571131</td>
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<td>z194a</td>
<td>House, Bayt ‘Ali al-Anabi</td>
<td>435682 1571142</td>
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<tr>
<td>z195</td>
<td>House, Bayt Mhd Saleh ‘Ali al-Anabi</td>
<td>435687 1571150</td>
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<tr>
<td>z196</td>
<td>House, Bayt Ahmad Mhd ‘Ali al-Zafarani</td>
<td>435665 1571141</td>
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<td>z197</td>
<td>House, Bayt Abdul Fatah al-Zafarani</td>
<td>435652 1571150</td>
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<td>z198</td>
<td>House, Bayt Saleh Mhd al-Zafarani</td>
<td>435658 1571157</td>
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<td>z199</td>
<td>House, Bayt Mhd Saleh ‘Ali al-Anabi</td>
<td>435612 1571153</td>
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<td>z200</td>
<td>House, Bayt Himyar Tahir al-Zafarani</td>
<td>435607 1571175</td>
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<tr>
<td>z201</td>
<td>House, pumphouse, Himyarite</td>
<td>435596 1571160</td>
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<td>z202</td>
<td>House, Bayt Ahmad Mhd Saleh al-Zafarani</td>
<td>435586 1571161</td>
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<td>z203</td>
<td>House, Bayt ‘Abdullah Saleh al-Anabi</td>
<td>435591 1571180</td>
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<td>z204</td>
<td>House, Bayt Ahmad Mhd Saleh al-Zafarani</td>
<td>435576 1571168</td>
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<td>z205</td>
<td>House, Bayt Ahmad ‘Ali Mus’id al-Zafarani</td>
<td>435558 1571187</td>
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<td>z206</td>
<td>House, Bayt Hamud ‘Ali Mus’id al-Zafarani</td>
<td>435564 1571196</td>
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<td>z206a</td>
<td>House, Bayt Hamud ‘Ali Mus’id al-Zafarani</td>
<td>435556 1571193</td>
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<tr>
<td>z207</td>
<td>Heavy wall, Hayfa, ENE/WSW, 15 x 4 m, S fortification</td>
<td>435970 1571092</td>
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<tr>
<td>z208</td>
<td>Heavy wall, ‘Uwar, al-, WNW/ESE, 3 m</td>
<td>435651 1571095</td>
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<tr>
<td>z209</td>
<td>Heavy wall, Hayfa, al-, NW/SE, 12 m, S fortification, connects with z189</td>
<td>435903 1571039</td>
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<tr>
<td>z210</td>
<td>Heavy wall, ‘Uwar, al-, NNW/SSE, 18 m, continues as foundation terrace +40 m</td>
<td>435074 1571178</td>
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<tr>
<td>z211</td>
<td>Tomb, Bayt, August filled with water</td>
<td>436086 1571163</td>
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<tr>
<td>z212</td>
<td>Tomb, ‘Uwar, al-, August water 4 m deep, 5 steps in entrance</td>
<td>436080 1571191</td>
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<tr>
<td>z213</td>
<td>Tomb, ‘Uwar, al-, August water 4 m deep, 8 x 8 x 5 m, 5 steps in entrance</td>
<td>436081 1571212</td>
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<tr>
<td>z214</td>
<td>Cemetery, Himyarite</td>
<td>384351+ 1571149</td>
<td>N of Gusr, area called ʕabaya, robbed in 1998 (Info: Saleh Methuna Ali Gulais) near Haddah</td>
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<tr>
<td>z215</td>
<td>Wall, ‘Uwar, al-, W wall of reservoir, ESE/WNW, 110 m, extends through wall to S, concrete in SW corner</td>
<td>435014 1571096</td>
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<tr>
<td>z216</td>
<td>Wall, ‘Uwar, al-, E wall of reservoir, ESE, wall robbed, NE part of reservoir but not corner</td>
<td>436131 1571088</td>
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<td>z217</td>
<td>Wall, ‘Uwar, al-, S side of reservoir, 1 course visible</td>
<td>436102 1571055</td>
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<tr>
<td>z218</td>
<td>Tomb, Girbat al-‘Uwar, W side of road, August filled with water, 03.2004 destroyed</td>
<td>435998 1571317</td>
<td></td>
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<tr>
<td>z219</td>
<td>Wall, Danan, al-, NE/SW, 9 m</td>
<td>436031 1571857</td>
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<tr>
<td>z220</td>
<td>Stair/ramp, Hayfa, al-, NE/SW, 5 m</td>
<td>435897 1571097</td>
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<tr>
<td>z221</td>
<td>Heavy wall, Hayfa, al-, NE/SW, 8 m, meets z189 at 90</td>
<td>435879 1571080</td>
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<tr>
<td>z222</td>
<td>Wall, Hayfa, al-, ENE/WSW, 9 m</td>
<td>435837 1571070</td>
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<tr>
<td>z223</td>
<td>Heavy wall, Hayfa, al-, NW/SE, 10 m, perpendicular to S city wall, parallel to terrace wall</td>
<td>435932 1571123</td>
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</tbody>
</table>
Zafār, Capital of Ḥimyar, Ibb Province, Yemen

z224 wall 435873 1571137
Laqya', Ġ al-, NNW/SSE, 18 m

z225 wall 435504 1571137
Zafār, NNW/SSE, 20 m, medieval house foundation?

z226 wall 435499 1571123
Zafār, W, NNW/SSE, 8 m

z227 stone square (house) 435515 1571108
Zafār, W, NW/SE, 8 x 10 m, medieval?

z228 stone square (house) 435539 1571100
Zafār, W, 8 x 8 m, medieval house foundation?

z229 stone square (house) 435528 1571111
Zafār, W, medieval house foundation?

z230 stone square (house) 435549 1571123
Zafār, NNW/SSE, 15 m

z231 stone square (house) 435550 1571137
Zafār, W, medieval house foundation?

z232 stone square (house) 435528 1571111
Zafār, W, medieval house foundation?

z233 tomb 435476 1571177
Zafār/Šabat al-Dāhāh, S of z234, entrance faces WSW

z234 tomb 435472 1571181
Zafār/Šabat al-Dāhāh, filled with stone, entrance faces W

z235 tomb 435470 1571163
Zafār, W of, entrance faces W

z236 cemetery, Islamic 435625 1571208
Zafār/Maginnat, 1 grave deviates from qibla

z237 wall 435702 1571179
Zafār/Maginnat, next to Bayt Ali Saleh al-Zubeidi

z238 wall 435462 1571194
Zafār, NNW/SSE, 15 m

z239 reservoir wall 435548 1571221
Zafār/'Uqlat, S wall, E/W, 15 m

z240 reservoir wall 435533 1571238
Zafār/'Uqlat, W wall, NNW/SSE, 18 m

z241 reservoir wall 435546 1571249
Zafār/'Uqlat, N wall, E/W, 20 m

z242 tombs, Ḥimyarite 435925 1571531
Ḡirbat al-Ġirn, N/S, 10 x 10 m

z243 wall 435883 1571695
Dāhāh al-Qaylimān, NW/SE, 15 m

z244 rock 435734 1571224
Ḡirgir, 100 m fr. Bayt 'Ali Abdullāh to Bayt Muslāh 'Abdullāh

z245 wall 435891 1571704
Ḥarimat, al, NW/SE, 15 m

z246 tombs, Ḥimyarite 435884+ 1570702
Ḥamārī, Ġ al-, 10 tombs, recently robbed

z247 stone square, heavy 435827+ 1570731
Ḥamārī, Ġ al-, NW/SE, 13 x 20 m heavy stone square

z248 house 435755 1571228
Zafār, Bayt Naḍi 'Al al-Zafār

z249 cave/tomb entrance 435546 1571425
Ḡāw, al-

z250 cave/tomb entrance 435546 1571421
Ḡāw, al-, opens to W, next to house of Yahyah and Ahmad Mus'id (z167)

z251 cave/tomb entrance 435522 1571449
Ḡāw, al-, opens to S, next to house of Yahyah and Aḥmad Mus'id

z252 cave dwelling 435524 1571445
Ḡāw, al-, just S of polygon point 202 and slightly below it

z253 cave/tomb entrance 435514 1571442
Ḡāw, al-, a kind of garden in front of it, August full of water

z254 cave/tomb entrance 435521 1571436
Dāhāh, al-, in the row of caves beginning with z080

z255 tomb 435973 1571776
Danān, al-, entrance to S

z256 cave/tomb entrance 435540 1571411
Dāhāh, al, entrance to S, old no. 50

z257 cave/tomb entrance 435540 1571411
Dāhāh, al, entrance to S, old no. 51

z258 cave/tomb entrance 435540 1571411
Dāhāh, al, entrance to E, old no. 52

z259 cave/tomb entrance 435540 1571411
Dāhāh, al, entrance to S, old no. 53
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<thead>
<tr>
<th>Feature</th>
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<tr>
<td>House</td>
<td>z296</td>
<td>435676</td>
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<td>Adher, Bayt Ahmad Mus'id al-Zafar, built June 2003</td>
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<td>Rock</td>
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<td>Adher, NE/SW, 7 m, 30 m W of polygon point 138</td>
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<td>Stair</td>
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<td>Adher, upward to e, 4 m S of polygon point 138</td>
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<td>Cave/tomb entrance</td>
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<td>Ra's al-Sillat, entrance to N</td>
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<td>Excavation 2003</td>
<td>z300</td>
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<td>H Raydan, W of, excavation 2003, zm001 found here</td>
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<td>Wall</td>
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<td>Maqri', N/S, 20 m</td>
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<td>Wall</td>
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<td>Maqri', N/S, 30 m</td>
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<tr>
<td>Maqri', NE/SW, 10 m</td>
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<tr>
<td>Wall</td>
<td>z305</td>
<td>435323</td>
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<td>Maqri', NW/SE, 10 m</td>
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<tr>
<td>Heavy wall</td>
<td>z306</td>
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<td>Maqri', NNW/SSE, 50 m</td>
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<td>Wall</td>
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<td>Grave, Him</td>
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<td>Maqri', entrance to SSW</td>
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<td>Grave, Him</td>
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<td>Cave/tomb entrance</td>
<td>z314</td>
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<td>Zafar, NE slope, entrance to NW</td>
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<td>Cave/tomb entrance</td>
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<td>Cave/tomb entrance</td>
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<td>Cave/tomb entrance</td>
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<td>Zafar, NE slope, entrance to NW</td>
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<td>Cave/tomb entrance</td>
<td>z318</td>
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<tr>
<td>Gusr, al-, NW slope, E/W, 15 x 1 m, corner with z319, bastion</td>
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<td>Heavy wall</td>
<td>z319</td>
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<tr>
<td>Gusr, al-, NW slope, NNW/SSE, 25 m, corner with z318, bastion, dry masonry, beautiful stoneworking</td>
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<tr>
<td>Wall</td>
<td>z320</td>
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<td>Gusr, al-, NW slope, NNW/SSE, 8 m</td>
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<td>Wall</td>
<td>z321</td>
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<td>Gusr, al-, NW slope, NNW/SSE, 10 m</td>
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<td>Wall</td>
<td>z322</td>
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<td>Gusr, al-, N slope, N/S, 18 m</td>
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<td>Wall</td>
<td>z323</td>
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<td>Gusr, al-, N slope, NW/SE, 20 m</td>
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<td>Cave/tomb entrance</td>
<td>z324</td>
<td>435300</td>
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<tr>
<td>Zafar, W of, entrance faces WSW, August full of water</td>
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<td>Cave/tomb entrance</td>
<td>z325</td>
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<td>Zafar, W of, central stair</td>
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<tr>
<td>Dam</td>
<td>z326</td>
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<td>Suqaq, al-, N/S, c. 35 m wide and 4 m high</td>
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<td>Dam</td>
<td>z327</td>
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<tr>
<td>Zafar, W of, c. 60 m wide, 3 m high</td>
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<tr>
<td>Dam</td>
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<td>435260</td>
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<tr>
<td>Zafar, W of</td>
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<tr>
<td>Cistern</td>
<td>z329</td>
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<td>Gusr, al-, entrance to NE, 10 m NE of z295</td>
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<td>Zafar/Lawuha's, al, NW/SE, 15 m</td>
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<td>Heavy wall</td>
<td>z331</td>
<td>435740</td>
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<td>Zafar, NW/SE, 60 m, continues z330</td>
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<td>Heavy wall</td>
<td>z332</td>
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<td>Laqiya, G al-, NNW/SSW, 4 m</td>
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z333 heavy wall 435805 1571213
Laqiya, G al-, ENE/WSW, 10 x 10 m + 15 m, perpendicular offset, casemate(?)

z334 heavy wall 435498 1571260
Zafar/Qism al-Dayir, ENE/WSW, 10 x 10 m

z335 heavy wall 435508 1571281
Zafar/Qism al-Dayir, NW/SE, 6 m, next to Bayt 'Abdul-lah Saleh al-Anabi

z336 heavy wall 435518 1571276
Zafar/Qism al-Dayir, NE/SW, 8 m, stone square(?)

z337 heavy wall 435507 15715795
Gusr, al-, SE slope, NNE/SSW, 100 m

z338 wall 435526 1571818
Gusr, al-, N slope, NE/SW, 15 m

z339 wall 435526 1571818
Gusr, al-, N slope, WSW/ENE, 12 m

z340 stone square, room 435527 1571792
Gusr, al-, E end, NNW/SSE, 14 x 10 m

z341 stone square, room 435515 1571773
Gusr, al-, E end, NNE/SSW, 9 x 8 m

z342 corner stone 435484 1571785
Gusr, al-, N slope, NW/SE connects with z339

z343 corner stone 435477 1571791
Gusr, al-, N slope

z344 corner stone 435477 1571792
Gusr, al-, N slope

z345 wall 435410 1571760
Gusr, al-, NW slope, NNE/SSW, 32 m, 2 perpendicular offsets

z346 wall 435400 1571750
Gusr, al-, NW slope, NNE/SSW, 36 m

z347 stone square, heavy 436050+ 1570816
'Aswar, G al-, N wall: NNW/SSE (350), 30 x 30 m

z348 wall 436149 1571272
'Asabi, G al-, SW upper slope, NNW/SSE (350) of 'temple', 8 m

z349 cliff, worked 435751 1571547
Galye, al-, NNE/SSW, 30 m, conical hole, around pp138

z350 wall 435770 1571060
Zafar, W of z190, 4 x 3 m, probably tower, surrounds mp118

z351 wall 435440 1571699
Gusr, al-, W slope, corner, NNE/SSE and WSW/ENE, 18 m

z352 wall 435456 1571777
Gusr, al-, NW slope, foundation terrace

z353 wall 435352 1571857
Gusr, al-, W slope, N/S, foundation terrace

z354 foundation terrace 435409 1571844
Gusr, al-, N slope, NE/SW, 50 m

z355 foundation terrace 435450 1571817
Gusr, al-, NE slope, ENE/WSW, 40 m

z356 stone square, room 435506 1571777
Gusr, al-, top, NNE/SSE, 10 x 6 m

z357 stone square, room 435491 1571749
Gusr, al-, top, NNE/SSE, 15 x 10 m, corners on cardinal points

z358 stone square, room 435480 1571740
Gusr, al-, top, NNE/SSE, 13 x 7 m, u-shaped, corners on cardinal points

z359 wall 435334 1571868
Gusr, al-, N slope, NW/SE, 50 m

z360 wall and terrace 435530 1571765
Gusr, al-, SE slope, NW/SE, 50 x m

z361 heavy wall 435835 1571248
Laqiya, G al-, NW/SE, 170 x m, follows the slope, crenelated

z362 heavy wall 435905 1571165
Laqiya, G al-, S of z361, N/E, 15 x m

z363 heavy wall 435905 1571135
Laqiya, G al-, S side of, near z187

z364 heavy wall 435895 1571190
Laqiya, G al-, SE side of, links to z124

z365 heavy wall 435900 1571220
Laqiya, G al-, E side of, 3 different directions, links to z364

z366 stone square, heavy 435880 1571195
Laqiya, G al-, top of, NNW/SSE, 10 x 8 m, fortification
z367 heavy wall  435900  1571190
Laqiya, G al-, from top down slope to z361
z368 heavy wall  435890  1571180
Laqiya, G al-, near summit, NNW/SSE, 20 m
z369 conical hole  435760  1571566
Gahw, al-, 46 cm deep, 33 cm wide, 5 m E of polygon point 138
z370 wall  435548  1571500
H Raydan, W slope in excavation z300
z371 heavy wall  435930  1571070
Hayfa, al-, NE/SW, 5 m, E wall of z375
z372 heavy wall  435890  1571082
Hayfa, al-, NNE/SSW, 20 m, parallel to z221 and z376
z373 wall  435545  1571500
H Raydan, W slope in excavation z300
z374 room  435546  1571500
H Raydan, W slope in excavation z300
z375 cistern  435924  1571067
Hayfa, al-, between z371 and z396
z376 heavy wall  435895  1571065
Hayfa, al-, NE/SW, 15 m, continuation of z186
z377 floor  435919  1571067
Hayfa, al-, 4 m W from z396
z378 wall  435551  1571495
H Raydan, W slope in excavation z300
z379 wall  435550  1571497
H Raydan, W slope in excavation z300
z380 pavement  435549  1571493
H Raydan, W slope in excavation z300
z381 wall  435551  1571497
H Raydan, W slope in excavation z300
z382 room  435545  1571502
H Raydan, W slope in excavation z300
z383 wall  435544  1571503
H Raydan, W slope in excavation z300
z384 wall  435546  1571500
H Raydan, W slope in excavation z300
z385 wall  435546  1571500
H Raydan, W slope in excavation z300
z406 entrance
H Raydán, SW slope in excavation 2004

z407 slabs, stone
H Raydán, SW slope in excavation 2004

z408 entrance?
H Raydán, SW slope in excavation 2004

z409 heavy wall
H Raydán, SW slope in excavation 2004

z410 blocks, stone
H Raydán, SW slope in excavation 2004

z411 steps, stone
H Raydán, SW slope in excavation 2004

z412 blocks, stone
H Raydán, SW slope in excavation 2004

z413 pavement
H Raydán, SW slope in excavation 2004

z414 blocks, stone
H Raydán, SW slope in excavation 2004

z415 entrance
H Raydán, SW slope in excavation 2004

z416 pavement
H Raydán, SW slope in excavation 2004

z417 pavement
H Raydán, SW slope in excavation 2004

z418 pavement
H Raydán, SW slope in excavation 2004

z419 wall
H Raydán, SW slope in excavation 2004

z421 heavy wall
H Raydán, SW slope in excavation 2004

z422 pavement
H Raydán, SW slope in excavation 2004

z423 slabs, stone
H Raydán, SW slope in excavation 2004

z424 slabs, stone
H Raydán, SW slope in excavation 2004

z425 pavement
H Raydán, SW slope in excavation 2004

z451 heavy wall
Zafar, directly N of z240, NW/SE, 12 m preserved

z452 heavy wall
‘Azafat, ENE/WSE, 8 x 2.4 m, well masoned, greenish stone, together with z453, z454 and z455

z453 heavy wall
‘Azafat, ENE/WSE, 10 m, well masoned, greenish stone, parallel to z452 and z455

z454 heavy wall
‘Azafat, NNW/SSE, 2.8 m, well masoned, greenish stone, perpendicular to z452 and z455

z455 heavy wall
‘Azafat, ENE/WSW, 8 m with lacunae, well masoned, greenish stone, parallel to z453

z456 wall
Mirrat, al-, NW/SE, parallel to slope, SE of z306

z457 cliff, worked
Gusr, al-, NW/SE, 11 m, rest of walls

z458 quarry
Zafar/adj Dāhāt as-Šahrār

z459 wall
Šabat ǧī Marfad, NW/SE, 7 m, next to Ǧimyarite graves

z460 heavy wall
‘Azafat, NW/SE, 9 m, poorly preserved

z461 wall
Ḥayfa, al-, NNW/SSE, 30 m

z462 cliff
Đāhāh, ad, contains numerous graves, dwellings and chambers

z463 wall
Gusr, al-, NNE/SSW, 20 m, hydraulic mortar on cliff

z464 walls 4
Ḥayfa, al-, NE/SW, 14 m, parallel and perpendicular to the slope

z465 walls
Šabat ǧī Marfad, 2 parallel and 1 perpendicular, NNW/ SSE, 14 m those perpendicular to the slope

z466 cliff, worked
Ḥamari, Ǧ al-, hypothetical tower platform, 5 x 10 m
At the beginning of 2003, political unrest had become acute in the Yemen. Thus, the University of Heidelberg Expedition postponed its fieldwork, scheduled for February, until mid-August and September, when conditions had relaxed. A mission of research, training, and cultural resource management emphasizes the neglected late Ḥimyarite period (post 350–380 to 525 CE), prior to the fall of Ḥimyar as well as the Axumite invaders’ subsequent transfer of the capital to Ṣan‘ā’. This season’s activities consisted of: 1. mapping Ḷafār’s eastern flank, 2. continuing the cataloguing of artefacts housed in the Ḷafār Museum, and 3. excavating a large building structure on the south-west slope of the Ḫusn Raydān. These three project components help correct commonly-held oversimplifications that the site is: a. completely destroyed, and b. that Saba’, with its capital Mārib, is the «main» pre-Islamic kingdom in Old South Arabia.

**Mapping Ḷafār**

This season’s mapping of Ḷafār’s eastern flank illuminates the once elaborate, yet little-understood...
antique access and defensive systems. Surveyors from the University of Applied Sciences in Mainz laid the groundwork for more intensive study of the topography here, that enables other research methods, for example, geoprospection. The mapping increases the known topography by 22 ha as well as illuminates details of a first animated model of the ancient city, which was finished in 2002 (cf. Pl. 29, 1), and is useful as an instrument to more intensively study the size and position of the fortifications. Moreover, numerous placenames are as mapped available for study, which hopefully may contain Ḥimyarite fossil names. High resolution satellite imagery of the entire complex is under study.

The Ţafār Museum

The original agreement with GOAM foresaw the cataloguing of the artefacts housed in the site museum, notably which contains the largest collection of Ḥimyarite reliefs known. On stylistic grounds, the majority date to the late period. It is hoped that a careful study of this collection will reveal anchoring points for the development of Ḥimyarite style, which remain unarticulated.

Over the years, spurious registrations had grown perniciously, as a result of the piecemeal acquisition of numerous artefacts, notwithstanding a lack of organisational coordination. Previously, as many as three different reliefs or inscriptions may have borne the same inventory number, if not two different ones. Since many of the numbers had worn away, a verification of each and every one was a must. The team reduced four different inventory series down to one.

During the brief campaign of 2000, the team had first photographed and reorganised the museum magazine, ordering the reliefs by motif. This year, the high aesthetic quality of many and the reduction of anticipated subsequent printing costs for the catalogue, provided grounds for a professional photographer to replace the working photos with ones suitable for publication. With the rephotographing completed, the aesthetic value of the reliefs became even more evident than before. Digital technology enabled the optimising of the contrast, background, size, and resolution of the photos while still in the field. Recently, a team came together to finish the cataloguing per se of the reliefs.

In 2000, for lack of time, numerous, small, poorly preserved and/or iconographically redundant fragments, were neither registered nor photographed. This year, the photo team carefully reexamined the corpus for iconographic or stylistic unicata, thus increasing the number of registered reliefs from 821 to 900. These were reorganised and reshelved according to their new inventory number. We upgraded the museum, making numerous repairs, installing new exhibits, as well as vitrines. Additional shelving partly alleviates the badly crowded conditions in the magazine.

Excavation of the Building z300

Twenty years ago on the south-western slope of the Ḫuṣn Raydān, the long, fascinating building inscription (siglum: zm1) of the late Ḥimyarite, 5th cent. CE king Ṣuraḥbī’īl Ya’fūr came to light, in which he described his palace, Hargab 70. Surveyers designate this area z300. Owing to the fact that in late Ḥimyarite times Ţafār served as the capital, building remains at z300 dating to this period come as no great surprise. Moreover, very few Islamic finds and find contexts have thus far occurred anywhere at Ţafār, save the present-day village itself. The south-western slope of the Ḫuṣn Raydān, *intra muros*, was predestined for archaeological investigation, first because of its heavy layer of late antique/early medieval debris, which hopefully would protect it from stone robbing. Second, the proximity of z300 to the centres of the Raydān palace, especially in the saddle known as al-Ḡābw, indicates the building’s importance (Pl. 29, 2). Finally, a heavy concentration of worked marble and limestone blocks on the surface, gives further indication of an important building below, making z300 more desirable for excavation than other sites.

The upper 3 m of the 20 x 10 m excavation in the steep rubble slope proved to be disturbed by recent stone scavenging. At the end of the second day, the remains of walls came to light. Numerous fragments of architectural building sculpture awakened hopes

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that the architecture below would be at least partly intact.

In all, the excavators documented 25 contexts, 11 of them walls (Pls 30–32, 1). The latter enclosed four rooms, which were not entirely excavated for reasons of time. Notably, in room z374 burnt earthen strata were evident. Here, in the largely loamy, homogenous debris, concentrations of glass, beads, and relatively few of the usual relief fragments occurred. Typically, on the other hand, in the other three rooms, stone debris lay in very loose soil and stone. Except for room z382, in which a concentration of pottery sherds appeared, the find-distribution spread over the excavation surface remained constant.

The exterior (south-east face) of the north-east wall, z370, is more carefully masoned than the others. It bonds with the wall z385, being contemporary with it. Together with wall z373, these form the already mentioned room z374. Inasmuch as wall z385 closes by means of a large stone, it may be concluded that the latter forms a door frame. In the north-east profile of this room a further wall, z393, was manifest. This joins with wall z373 and its upper courses seem displaced c. 20 cm to the north-east. Its full form and preservation require investigation.

Bonded with each other, walls z373 and z386 also form a building unit. Here a doorway is located beside the end of the wall. The room z382 is closed off to the north-west by means of wall z384. The north-east profile is formed by stone debris. The exterior walls z385 and z386 are aligned, thus forming a structural/chronological unit.

A further wall, z394, is north-west/south-east oriented, and lies on an axis different from the others. Thereof, only a single course of slightly tipped stones were excavated. Similarly, of the wall z388, all that remained to excavate was a fragment, which thus is not described in detail.

In the south-east of the excavation surface at 2800.3 m above mean sea level, a broad pavement of basalt square plates irregular in size came to light (z380), to the south-west some 30 cm lower. To the north-west, the slabs were larger than those to the north-east. These slabs, which show traces of burning, border on the south-east side of wall z370. On this side where c. 2 m² of the slabs were missing, it was opportune to investigate beneath the pavement. Here in a c. 1.5 x 2 m sounding (depth: 2799.05 m to 2798.74 m) the trench struck bedrock. Wall z370 rested on an earthen shim layer thereon. This means that the wall z370 was erected before the pavement z380. Since the wall z370 was constructed as an outside wall, it appears that we have at this point the south-east exterior of a building complex; the pavement is a later addition. Owing to the location of plaster and marble fragments, we are dealing with the interior of rooms and the coarse slabs paved a courtyard.

A further interesting context, z392, which came to light in the above-mentioned sounding, can later be more closely investigated. The small sounding did not reveal whether this is a relict of a wall or that of a drain. Like z370, the context is located on a earthen levelling layer c. 15 cm above the bedrock.

Two further wall remains, z378 and z379, and a stone bank, z390, rest on the eastern part of the pavement z380, postdating it. The wall fragments form a right angle to each other. The original purpose of z390, which lies within this corner, remains unclear because it consists of only a single layer of stone, which have survived. This feature probably extends to the north beyond the excavation surface.

In 375 labourer-days some twenty labourers ultimately removed some 360 m³ of stone debris, which they deposited in five 30 m long terraces, regular in shape. There is no possible unclarity as to the original and the altered landscape in the mapping. Given the high concentration of sites near z300, this terracing was the only viable solution available. Large numbers of relief fragments came to light, the smaller ones too numerous to register and store. Labourers constructed a lapidarium on the uppermost terrace to deposit building stones too large and unsuitable to bring into the museum. A fence and a sign, prohibiting the removal of objects, protect the monument.

The most numerous type of find are stylistically late Himyarite relief fragments, for example, a large architectural niche (Pl. 32, 2). Most notable among the pottery are fragments of large storage vessels.

To judge from their relative similarity in shape, size, and position to each other, the excavated rooms may have been shops or storage chambers of a larger building complex, which has no close parallels in South Arabia. The large building, in fact, may be the Hargab palace.

P. Yule
FOURTH PRELIMINARY REPORT, SPRING 2004

Some 130 km south of the capital in Ṣan‘ā’, Zafār lies in the mountainous region (2800 m altitude) of the Ibb Province. In keeping with our late Ḥīmyarite emphasis, in 2004 excavation centered on this same period. Main activities included enlarging a trench, which we began in 2003 at the foot of the Ḥūṣn Raydān. We also took the opportunity to salvage excavate a deep shaft tomb in neighbouring al-ʿArāfah. Apace with this, student surveyors mapped 21 ha of the area east of al-Gusr (= al-Qasr, Pl. 33). On arrival, disconcerting collateral damage, which resulted from road building, necessitated salvage excavation at the village entrance. While good roads no doubt are a boon for the population, their construction has a decidedly negative impact on the local archaeological remains. For example, what remained of the 1500 year old antique entrance to Zafār village and its pavement were destroyed in early February. Unfortunately, before they could be documented, in al-ʿUwār Ḥīmyarite heavy walls and a large tomb (z218) also fell prey to the bulldozer. Site robbing has become a popular pasttime, and its untoward traces have become ubiquitous. Given a lack of effective legislation and enforcement regarding cultural resource management, and at the present rate of attrition, ten years from now Zafār and its surroundings will be in a far worse condition than they are today. In light of recent destruction, many of the contexts, which we have photographed since 1998 already have become historic.

The Excavation z400 South-west of the Ḥūṣn Raydān

By enlarging 2003’s excavation (trench z300), in 2004 in z400 we refocussed our work near the core of the Raydān palace in what is called al-Ḡāw (Pls 33, 34), more precisely on the south-west slope of the Ḥūṣn Raydān. The expansion of the already excavated surface offered the obvious advantage of enlarging the view of what is hoped to be a palace or temple structure in our emphasis period. Given the steep slope to the east of z300 (Pl. 35, 1. 3) and apprehensions about a possible lack of deep stratigraphy here, we postponed excavation in this direction and continued immediately to the south. A further reason for the choice of this particular site was its nearness to our disposal area – a logistic/financial consideration. Nor did we want to encroach on numerous other sites in the immediate area, bury them with the excavated debris, or falsify the topography as a result of random disposal. Finally, to judge from small soundings, other sites, such as on top of the Ḥūṣn Raydān (context z028) seemed particularly plagued by stone robbing. These failed to offer the preservation and deep stratigraphy desired – prerequisites for meaningful excavation.

This year’s excavation surface contained not only late Ḥīmyarite levels, but also a fragmentary earlier elaborate – even precision – architecture built presumably by and for the rulers to judge from the quality of the work. The excavation penetrated

71 This season was made possible by a generous grant from the Fritz Thyssen Stiftung. We thank the General Organisation for Antiquities and Museums (GOAM), particularly Yusuf Abdullah, its president, for allowing us to continue at Zafār. At the DAI research station in Ṣan‘ā’ owing to the steady hand of Iris Gerlach we were able to recuperate away from our base in Yarim and evaluate our data. The author thanks Yemenia Airways, which provided much-needed logistical support, thus freeing funds for posts that could not otherwise be financed.

The project leader enjoyed the excellent cooperation of the following Yemenite participants: ʿAbd al-Ans, GOAM archaeologist for Ibb Province, Saleh al-Numieri, foreman (GOAM) and ʿAli al-Naqib, GOAM government inspector. The team consisted furthermore of Michel Blumentroch and Burkart Dähne, surveyors. Anja Dreiser, Kristina Franke, archaeologists and Arabists. Corinna Bochert and Cornelius Mayer, of Eastern Atlas Geophysical Prospection, were responsible for the geophysical survey. Last but not least, Elke Schmidgen-Hager investigated the city defences. At home the following individuals and institutions supported the project: Werner Arnold (University of Heidelberg, director, Seminar for the Culture and Language of the Near East, project patron), Wolfgang Böhler (University of Applied Sciences in Mainz, director, Institute for Spatial Information and Surveying Technology), Gunnar Brands (University of Halle-Wittenberg, art historian), Claus-Peter Haase (Staatliche Museen zu Berlin, director, Museum for Islamic Art), Armin Kürzel, (University of Bonn, Mineralogical-Petrological Institute), Muhammed Maraqten (University of Mainz, epigrapher), and Alexander Sima † (University of Heidelberg, epigrapher). I thank the latter colleague for going over the manuscript, and being a general source of specialist information. Marcus Heid scanned and plotted diverse plans in an excellent manner. The excavation began on 03. 03. 2004 and ended on 09. 04. 2004.
deeper into the surface than in the adjacent z300, and successive building phases became identifiable.

Procedure

The 20 x 10 m excavation surface, z400, was divided into 1 m squares; the south-west corner corresponds to 0/0 and the north-east one to the point 10/20. The designations of the squares relate to the position in relation to the south-west corner. Owing to the complexity of the stratigraphy, the positions of the smallfinds were determined by square and not individually. At the end of the season the architectural remains were fixed using a tachymeter. The area/context designations are defined by deposits of the same consistency, material and colour. Building contexts received the numbers z401–z425.

Results

Following the removal of the surface debris, a large structure appeared, formed by areas consisting exclusively of stone, and those of stone mixed with earth. The eastern part of the trench contained collapsed debris, which increased manifestly in volume as the trench deepened. Our assumption (as in trench z300) at the beginning of excavation that where large and small stones occurred amassed together that we had encountered robbers' trenches, cannot be substantiated. In any case, below these funnel-like depressions a wall from the latest period as well as layers of earth came to light. Within the depressions Himyarite reliefs, glazed pottery, glass fragments and beads occurred. By virtue of the different masonry styles, materials and stratigraphy, three building phases are identifiable. But within this framework certain contexts and local stratigraphic sequences elude dating (Pl. 36, 1). Time and personnel were lacking in order to enable the removal the latest walls in order to get a clear picture of the earliest building remains. Twenty-five stratigraphic units were recorded, which include walls, pavements, less easily definable contexts, as well as fragmentary steps. Since complete rooms were obscured by intrusive walls and other such disturbances (Pls 34. 35, 2), they are not individually numbered, but rather are subsumed in the context numbers.

The Contexts

Latest Building Phase

The latest phase contains walls, made of rough-worked stone, were mostly covered with a thick layer of evaporation and water-laid calcareous white accretions. Regular hewn/worked stones from other contexts were secondarily used. In order to build with these damaged and rough-worked stones, smaller ones fill the interstices, thus stabilizing the walls, as nowadays still practiced. This building phase includes the walls, z401–z405, z409 and z421. Some of these may conceivably be the foundation walls of robbed buildings no longer extant, which would explain the depressions.

The contexts z401, z421, z409 (from west to east) designate a sandwich-wall made of stones, which contain an earthen fill. In the west, this wall is preserved as high as 1.30 m. At its eastern end, only 0.50 m is preserved. This curved wall is east/west oriented and at its easternmost end connects with z409. Locus z409 is preserved only two to three courses high, being about 1 m long. These courses are jerry-built possibly on packed earth. Area z421 designates a partly collapsed area of the wall. Since initially it was not clear whether a link would manifest itself between z401 and z409, we gave this context its own number. This area seems to have been repaired, since its masonry is irregular and is filled-in with debris. In fact, it is not clear if post hoc it was constructed in its present position.

Context z402 designates a wall, which only is recognizable in profile. It is oriented north-west/south-east, disappears in the profile, and is preserved in five to eight courses from 2.0 m to 2.5 m in height. Our resources sufficed to reach the lowermost stone course. This wall rests on top of the pavement z417.

The wall z403, consisting of two rows of stones bonded to each other, is north-east/south-west oriented and its position is clear, although it generally is poorly preserved. The south end is collapsed; the north end seems to bond with the south exterior of of wall z404. They form approximately a right angle with each other.

z404, a sandwich wall with a filling of earth and gravel, is north-west/south-east oriented. Its western part is evidenced with only a single layer – preserved in the east four courses (1 m) high. During the earliest work here it collapsed partly. Context z404 is
built on and in connection with feature z408 and z416. The foundation wall was visible in most but not all of its entirety. Its length was observed, as resources allowed this season. That part of it, which corresponds in its upper level with that of z403 is more or less debris. To the west it disappears into the edge of the trench.

Context z405 designates a wall built of two rows of stones, which are preserved at least in a single course. This bonds with the western portion of z403 at an 85°/95° angle. Nor is z405 parallel with z404. Nonetheless, z403, z404 and z405 define a space, the western wall of which was not investigated. The stratigraphic sequence within this three-wall complex is unclear because it was not possible to investigate the foundation trenches in profile. The seemingly older wall z408 was not damaged by the building of z401 and its good quality stone was not reused there.

Older Building Phase

The older building phase contains several building features the stratigraphic sequence or association of which varies in its certainty. In terms of their masonry they all consist of hewn stone, which however, differ from those of the oldest building phase (see below). They lie below layers of earth and do not seem recently disturbed.

Context z412 consists of four cleanly hewn dark grey basalt blocks, which underneath are pointed, and which preserve their original shape. Although their length varies to a maximum of 1.30 m, the width and breadth measure 0.70 m. They join cleanly with each other and their upper surface lies in one plane. Contexts z401 and z419 both consist of a single stone, show the same kind of masonry as well as kind of stone. On this row of stone, Sabaean inscribed pottery sherds with fingerprints occurred. Context z414 runs parallel to z412 in the latter’s northwest part. It consists of reddish, obdurate, neatly hewn mafic stones, which are 0.30 m high, and like those of z412 beneath are slightly pointed. Further to the north in this row two further blocks are of the same width, but are only half as long. One consists of basalt and the other of the above mentioned reddish hard stone. A further basalt boc of the same size lies before this last stone block. All of the blocks lie on one level. The upper surface of context z414 lies 0.30 m beneath that of z412. The interstice between the two rows of stones amounts to their combined width. South-east of z412 lie six slabs, z424, these at the same height at z412. Context z410 designates two dark grey slabs south-east of the slabs z424, which lie 0.20 m above them. A burnt layer lies above these contexts.

It seems possible that the first blocks from the stone row z414 are remnants of a larger feature. Between it and z412 lay a further row of blocks of the same width. This suggests a north-east/south-west stair, which descended to a structure here, which no longer exists. Given the same level and direction, the row z424 seems to belong to this structure, although stratigraphic evidence for this is lacking. In light of its orientation, z410 seems also to belong to the same context. Immediately to the south a broad collapsed area may be contemporary, but its association is unclear. Furthermore, at this point it may be mentioned that the column juxtaposed to z415 seems capped so as not to project into z410. Between these cut off column and z421 lies a worked stone, which in terms of its material, level and direction jibes nicely with z410. Similar stones also secondarily fitted into the later wall z401–z405 are in evidence, as well as in the wall z419, which has not yet been described.

Context z419 designates a poorly preserved wall fragment, the lowest course of which consists of two quadratic stone slabs, which share the same orientation with z414 without, however, fitting meaningfully into a larger context. The above-lying poorly constructed structure consists of three to four courses with a height of some 0.85 m. It is principally built from the stones in the same kind of masonry as z410, z412, z414 and z424. The resulting wall seems thus later than this complex, and cannot however, be attributed to any other structure.

The stone pavement z422 joins to the north with z380, that of the excavation z300. But while the slabs used for z422 are oriented north-north-west/south-south-east, those of z380 lie north-east/south-west. On the other hand, the pavement stones of z422 resemble closely in their material and colour those used in z380. The slabs consist of light brown, partly reddish hard stone, and are ±0.22 m in thick. Particularly in the north-western contact area of z422 slabs of the same red stone as that used in z414, occur. The slabs are in part damaged to such a degree that their original form no longer is identifiable. This holds particularly in the south-east where
the surface disturbance and discolouration, as in z380, indicate a fire. However, a burnt layer was not in evidence above this pavement. Nowhere does pavement z422 lie beneath another feature within the excavation area. To the south-east z422 seems, however, to be disturbed by context z414; thus, z422 is later than z414.

Context z417 designates two long slabs, which lie partly beneath z402. Their orientation corresponds with that of z422. Their fair appearance may in fact result from better preservation and not better workmanship. In addition, they are considerably longer and only 0.15 m thick. While, in the north-east the slabs from z422 and z417 jibe with each other, stratigraphic contemporaneity is possible, but not proven.

Context z406 consists of blocks in the north-western part of the trench. It includes a 0.07 m deeper lying 0.12 m thick stone slab and in the south an associated stone. This stone is not shaped like a block, but in its orientation and details of production it might well be the southern edge of the slab. At least three smooth black stones, z411, possibly only fragmentarily preserved, run from the centre slab in z406 in stair-like fashion to the south-east. This suggests an entrance/exit situation. In the west of this feature lies a further row of stones, z407. But the stone slabs in the north of the row lie c. 0.15 m higher. Similar fragments of slabs are located east of this row, z423, which lie on the same level with the northern slabs of z407. The suggestion of different building operations may explain the differences in this area since the various contexts have no direct stratigraphic relation with each other. In the earthen debris above this context finely worked relief fragments came to light, which differ clearly from the rest of the reliefs in the trench. Further finds include a bronze disc 1.3 cm in diameter and a thin bronze plate (7 x 2 x 0.4 cm).

Oldest Building Phase

The oldest phase of building distinguishes itself by means of the finely masoned slabs and blocks. Enframed by two blocks, the entrance z415 consists of a slab, which lies on other blocks, which are marginally drafted and pecked (Pl. 36, 2). These resemble most closely van Beek’s type 6: smooth face; on each panel, blocks and courses simulated by incised lines defining borders and pecked areas; pecking sparse and oblique in direction\(^{72}\). Lying somewhat to the east, a further block bore this same kind of rectangular field decoration. In the debris above this construction, numerous other such decorated fragments came to light. Furthermore, this debris contained smoothly worked fragments of polished limestone slabs. On top of the western block stood the fragmentary column already described in connection with z410. Just to the north, further stone slabs with the same finely worked smooth surfaces join the centre ones of z415 at the same height. Context z413 is an excellent limestone pavement in the easternmost part of the trench, which slopes slightly to the south. To the south it disappears below a massive heterogeneous slaggy accumulation, as visible, the 3 x 2 x 1 m thick burnt layer »Y«.

In the southern part of z413 several pavement slabs are missing, and to the north, one was tampered with antecently. A c. 0.07 m thick burnt layer, which contained much charcoal and some bone covered all of z413 and z415. A small bronze disc also came to light, which resembled at first glance that above in context z407. Like the aforementioned stone blocks, the slabs show traces of reddish and blackish discolouration, indicating a fire. Radiocarbon samples from here are being processed, and may yield a chronology for the entire complex. The debris above this construction contained fragments of large sculpted figures of humans and animals, which differed in their style from the usual floral and architectonic patterns common to the site. Whether the debris consists largely or entirely of material from this construction is not clear, but the presence of the marginally drafted pecked masonry is an argument for this association. Further slabs similar to those in z413 in their kind of stone, details of workmanship and orientation lie within and below z404, as well as west and east of z403. Context z418 designates the slabs in and below z404. These include at least four slabs, the upper surface of which have been smoothed. These border directly on z408, to the north of z404. Such consist of a centre slab and two laterally positioned blocks, whereby the southern one is integral with z404. These blocks do not, however, show the same decoration mentioned above. In any case, they form a right angle with z415.

A direct connection between these contexts was not determined this campaign; a wall of the late phase first must be removed. Further slabs of this same kind (z416) are located west of z403, between z404 and z405. Here three oblong, narrow slabs enframe the quadratic slabs—possibly an enclosure. Also east of z403 lay two such slabs (z425), which appear to continue below z403. It may be mentioned here that in connection with the slab z392 uncovered in sondage z391 last year just above the bedrock, that there may exist a stratigraphic correspondence. The connection of the slabs mentioned here and the contexts rests on similarities of their material, orientation as well as details of construction.

Comment

Trench z400 yielded many-faceted results, but the relative and absolute chronology will take on significant form only with further excavation and carbon determinations. That several phases of building exist is not simply probable, but also is stratigraphically clear. Four stratigraphic groups of contexts can be identified, which do not link with each other senso stricto (Pl. 35, 2). To reach more exact chronological results, the following operation are recommended: First, the excavation of 2003 (z300) must be expanded to the east in order to allow a more differentiated picture of the relation with this year’s excavation surface, in particular the pavements z380 and z422. It would be desirable also to expand z400 to the east in order to clarify the connection, on the one hand of wall z402, and on the other the extent of the nicely built flooring, z413/z415, in order to elucidate their associated building. Also, west of z400 a few metres must be removed in order to understand the contexts z403–z405, even if a deep stratigraphy cannot be expected here. The removal of the walls described in »Latest Building Phase« would allow us to understand the spatial appearance of the earliest building phase of the trench. Furthermore interesting would be a 5 x 5 m trench on the western edge the excavation z300, which hopefully would reveal the early structures and their finds, which came to light in z400 this season.

A future desideratum is also the evaluation of the pottery stratified in the architecture. A clear distinction between upper and lower levels is already clear, at least subjectively. For example, different pottery types, such as the rim decoration of fine ware with a yellow slip no longer occurred in the lower levels. But here a relatively rough ware came to light, some of which is attractively decorated. Such extensive details are in a further campaign possible and could easily bring interesting new results for the Old South Arabian chronology.

K. A. Franke

Finds

Despite their fragmentary condition, interesting indeed are reliefs, which for the first time have come to light in quantity in a late Ḥimyarite archaeological context. Most striking are representations of humans somewhat less than life-size, some of which are described in the following. To judge from their shape and size, the reliefs decorated buildings of different sizes including larger ones. One of these limestone fragments depicts the right shoulder of a male figure clad with a busily pattern-inscribed garment (Pl. 36, 4). Above to the left in the background is a paw-like motif and a so-called leaf-cross, neither of which has anything to do with the figure itself or its garb. On this and other sculptures slight traces of red paint are preserved, recognisable to the naked eye. Other smaller fragments of the garment patterning are attributable to this or to a similar statue. Larger in scale than this figure is a frontally depicted fragmentary face (Pl. 36, 3). Visible are an eye, cheek and part of the hair of a woman. Lacking close stylistic parallels for these two figures, by virtue of their context they may be considered mature/late Ḥimyarite. These and other such relief figures from the excavation and today in the site museum are represented aspevctively and often frontally, but rarely strictly so. Another frontal face with prominent curly locks and a schematically rendered ear (Pl. 36, 5) represents several similar reliefs in various states of preservation, which have been catalogued in the Zafār Museum73. The fragmentary forms to the right of the head are difficult to comprehend.

The discovery of several life-size sculptures awakens the question of their original context, positioned together or alone in the sacral or profane parts of the

73 The catalogue of the reliefs in the site museum is actively in preparation.
palace complex. The reliefs are not in situ, but occur in debris. Who do the reliefs depict? Their style may provide a hint. While the face in Pl. 36, 3 reveals at least some attempts at individuality, Pl. 36, 5 is schematically rendered, and perhaps shows a deity rather more abstract than expected of a mortal. On the other hand, a lack of obvious godly attributes and in the context of numerous other parallels deposited in the site museum, could be taken as an indication that we are dealing with depictions of mortals, and those wealthy enough to have commissioned sculpture. In other reliefs presumably from Zafar and housed in the site museum, the Himyarites depict themselves, their dwellings, sculptures and activities in a concrete fashion.

One of the most interesting fragments from a debris zone of trench z400 shows two arches flanked by columns and their capitals, which contain each a female figures, originally part of a row (Pl. 37, 1). A more complete version, which is immersed in a house wall in Bayt al-'A'wål, 3 km to the south of Zafar village, complements this image (Pl. 37, 3).

Local sources recount that like the other reliefs there, this last one originated from Zafar. Both friezes are of the same size and are rendered in the same style. That from z400 is a red limestone and that from Bayt al-'A'wål is similar but weathered to a light orange-grey. The frieze from trench z400 originally depicted at least four frontally rendered ladies, each inside an arch flanked with columns, column bases and capitals and each bearing a fruit in an effigial gesture. A close perusal of the Bayt al-'A'wål relief reveals from left to right a woman who seems to hold a pomegranate. The second and third women certainly hold this symbol of fertility, one of which shows a horizontal band of diagonal hatching. Of the fourth figure, visible is only the left column of its arch. Since the women's faces tip slightly downward, they were intended to be viewed from in front and below. These two reliefs may have adorned door lintels. In view of the ongoing weathering of the Bayt al-'A'wål relief, we recorded it – the only nearly complete one of its kind. The enigmatic subject matter, belongs in the cultic realm but fits neither into the worship of Judaism nor Christianity, despite its presumed 4th–5th cent. context.

An eye, muzzle and whiskers facing toward the right in a fragmentary large lionine representation are schematically, but competently rendered (Pl. 37, 2). To judge from the size of the fragment, were it depicted standing, the animal would have measured over 1.4 m in height. Curiously, no other fragments of such figures have come to light. This is first evidence for monumental Himyarite sculpture known to the writer.

Roman imports also came to light, including a terra sigillata foot sherd from the surface of a field just east of Zafar village known as Qism al-Tawil. From trench z400, and of excellent quality is an oval fragmentary opaque-white cameo rendering a peplophora raised on a translucent grey-green chalcedony ground (Pl. 37, 4). To judge from the shape of the stone and its edges, it was clasped.

The most numerous type of find in the museum and in the excavation are simply modelled ornamental relief fragments, which stylistically speaking may be designated late Himyarite. A variety of subjects and styles exists, ranging from abstract to naturalistic. Plant ornament and plant elements dominate, especially so-called leaf-crosses. The proportions of the human figures are stubby, as one might expect in the Omayyad/early Byzantine/early Christian periods. Their style and the preferred type of stone deviate decidedly from those of most known Old South Arabian sculpture. Further excavation will hopefully enable a stylistic differentiation between mature and late Himyarite sculpture.

Finally, numerous worked building stones were not of sufficient quality to warrant storing in the site museum, which is literally bursting with old and new finds. A lapidarium, which was laid out immediately south of z400 contains these. Relief fragments of lesser quality were buried in the museum courtyard for lack of space in the museum. At the end of the excavation season, the site and the lapidarium were fenced in.

P. Yule

Ringstone with a Jewish Aramaic Inscription

One of the villagers in Zafar owns an intaglio – an opaque, red cornelian, flat in section and ovoid in

74 Its lower surface is visible and reveals it to originally have been the outer face of a column capital. It shows as the main decoration two large birds of prey, evidently in late Himyarite style.

75 I thank A. Berger and J. Deckers (both Munich) for discussing this topic with me.
plan, allegedly from the ruins south of the city wall in Żafār South. The stone is in an excellent condition. A Tora shrine with a curtain dominates the composition (Pl. 37, 5). The name Yīsḥaq bar Ḥanīna appears engraved in reverse. Although the personal name Yīsḥaq appears in biblical Hebrew, Ḥanīna does not. The name is known in the time-zone 330 BCE to 200 CE76, but also later in the synagogue inscription at el-Hammeh77. Comparable representations occur, for example, in synagogue mosaics in Hammat Tiberias, Kapernaum Dura Europos or Bet Șean, but also on antique coins78. Different, but not very unusual, is that the Jewish-Aramaic owner is called «son of», not ben but rather aram bar.

On its own, the palaeography allows no clear dating. To judge from the script, names and iconography, a dating from the 2nd cent. CE onward seems likely. To judge from the script, names and iconography, a dating from the 2nd cent. CE onward seems possible. The kind of stone, its reversed inscription and the motif indicate it to be a seal79. Although a surface find, it is undoubtedly antique and provides welcome new evidence for the early Jewish settlers in the area.

G. W. Nebe

Mapping in Żafār

This season’s goal, the mapping of the area immediately east of al-Gusr (Raydān North), the northern fortification of ancient Żafār (Pl. 33), yielded a number of Ḥimyarite contexts. For example, just to the east the remains of an entrance way to the antique defences came to light. A second access in the middle of the eastern side of the ancient city must have led from a way, which still exists in the direction of nearby al-ʿArāfa (a proven Ḥimyarite settlement), but owing to changes in the size and shape of the surrounding fields and the houses in this part of al-Ḡāw is visible only in fragments. The nature and position of the city defences are currently under study, and in a future season the western flank will hopefully complete our understanding of the access and defences. First results in the mapped areas confirm the till now assumed existence of a double city wall, albeit only in fragments. A key and still unanswered question is whether towers occurred at regular intervals in the wall as platforms for defending archers.

Time sufficed to clean, measure and record selected subterranean structures including z067, a cistern (Pl. 38, 1. 2) carved out of the hard mafic and metamorphic bedrock in al-Ḡāw. This lies a few metres south-west of the old cube mosque (z070) and the enigmatic rock-cut chamber immediately below it (z071). Contexts z067, z071 and z096 (a second nearby cistern)80 are accessible by means of stairs, which during the rainy season lay below the level of the water. Measuring some 4.90 m in height and 6.50 m long, cistern z067 has a rather large storage capacity, exceeding that of the neighbouring z096. Its dating rests on its position in the midst of other contexts of presumed and certain Ḥimyarite date. Most importantly, these include the «royal tomb» z066, a bare few metres to the east and the aforementioned subterranean z071. The arguments for the dating of both of these contexts appeared in a previous preliminary report.

During the wet season a 9 m long rock-cut tomb, triangular in plan (context z255, Pl. 38, 3. 4) in the plain al-Danān, some 600 m to the east of al-Ḡāw, provides a source of water and a place to wash clothing. During the dry months we cleared and documented it. Access lies to the south by means of a step carved out of the rock. The method used for the removal of the rock here was presumably in large part fire-setting, which may have resulted in the rough and irregular walls. Toward the entrance, a rectangular rock-cut support bears the weight of the roof. But during its construction, the entrance appears to have caved in. Thus, the builders cut a 20 x 10 x 8 cm slot into the southern face of the support in order to position a horizontal beam here. To the south, the other end rested on the flanking entrance construction. This makeshift attempt to shore up the roof cannot have been very stable. Tombs such as z255 lay probably on roads, and provide an additional source of information for their position.

79 Enzyklopädie des Judentums 1971, 1072–1081, 1074; on seals from the 2nd to 5th centuries. In Babylonia from 634–44 the caliph forbade Christians and Jews from carrying seals, with exceptions of Exilarchen and Gaonen.
80 Infra for this cistern and the underground chamber z071.
Three large stone foundations, rectangular in plan, measuring over 10–35 m on a side, which were built in Ḥimyarite masonry technique, lie immediately to the south of Zafār village on the G. Aṣwar and G. Ḥamārī. Given their poor preservation, they are difficult to visualize, but may be sanctuaries extra muros, which C. Robin described in a lecture in Bamberg in 2002. Despite repeated efforts, it has not proven possible to locate an antique church in Zafār itself, even if one or more existed, as written sources attest.

In June a new access to Zafār village altered the area locally known as al-Mudarraq. This necessitated the partial remapping of newly uncovered building remains, including a Ḥimyarite cistern (z396, z397).

It is interesting to note that much of the stone robbing done in Zafār seems to have taken place fairly recently. The houses in the village, most of which are under 70 years old, are built of the local spolia. This gives an idea of when much of the pillaging took place.

**Geomagnetic Technology**

For the measurements we used a constellation consisting of five Fluxgate-gradient probes with a vertical separation of 0.4 m. The two sensors of the probes measure the vertical component of the earth's magnetic field with an accuracy of 0.1 nT (nano-Tesla). The measured gradient is insensitive for the typical large fluctuations of the earth magnetic field and determined only by the magnetisation of the ground.

The data were collected by a 6-channel data logger manufactured by the Heslab company at profiles with a line separation of 0.4 m and an inline separation of 0.05 m for each point. For presentation and further analysis the data were set to a grid of 0.2 m x 0.2 m and afterwards processed with a 3 x 3 median filter. Because of the high magnetisation of the ubiquitous basalt rock, the dynamic scales of the grey scale images range from ±90 nT up to ±180 nT.

**Archaeogeophysical Interpretation**

**Zafār/al-ʿUwār**

In 1971 W. Radt first sketch-mapped this large field terrace (Pl. 39) as ending in a dam at its northern (downhill) end81. But the developmental situation is more complicated than this because the field was enlarged down slope toward the north as early as the late Ḥimyarite period. In the south of the field a west-south-west/east-north-east striking anomaly indicates a wall just below the surface – the old terrace wall of the field. The centre instead shows geological structures, as seen also in the south as a white (negative), east/west striking band. In the north there are slight traces caused from the remains of walls but we could not articulate a close coincidence of negative vegetal growth patterns and geomagnetic anomalies.

**Zafār/Ḡirbat al-ʿUwār**

Just to the north, at Ḥirbat al-ʿUwār we investigated three smaller fields, each between 1000 m² and 2000 m² in size. Strong anomalies occur mainly

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81 W. Radt, AA 1971, 268 fig. 23.
along the uphill slope coming from construction debris as well of the terrace walls and of buried buildings. All three terraces contain slight anomalies obviously from foundations in the ground. In the lowest terrace there is a certain coincidence of plant patterns and anomalies. Weak positive (black) anomalies indicate fillings of pits.

Zafār/al-Ḥayfa

In the northern part beside the visible remains of walls we found a perpendicular north-south striking structure. Another wall runs along the northern terrace wall. At the north-east corner great anomalies with a gap in the centre may indicate a massive wall of about 5 m width, but it may be caused by a geological structure, too. Apart from those walls there are also other weak anomaly patterns. It is likely but not certain that foundations of buildings have survived beneath these marked zones.

The southern part of the surface is influenced by an outcropping basalt vein or dome, which complicates the interpretation of the geomagnetic data. Due to the extensive geomagnetic anomalies, there is no possibility to recognise archaeological structures. Only in the most southern part smaller anomalies show potentially interesting structural features.

Zafār/Gīrbat al-Ǧīrn

At Gīrbat al-Ǧīrn we investigated an area of about 3000 m² to localize tombs of a reported but till then unconfirmed Hīmyarite cemetery (Pl. 40). Geomagnetic anomalies concentrate mainly in the eastern corner of the area. Two larger anomaly patterns appear at the south-western border of the field, indicating possibly larger tombs. East-west and north-south graves axes exist. There is no evidence that the smaller anomalies in the northern part also belong to the cemetery. They are rather caused by pits and single basalt stones in the ground. The area of the cemetery extends only over the southern half of the area.

Summary and Conclusions

Generally the presence of basaltic rock is not conducive to a reliable archaeological interpretation of geomagnetic measurements. The ubiquitous geological influence on the measurements shows the capability limits of geophysical investigations at a site like Zafār. Nevertheless, it is possible to recognise structures and obviously empty areas even at small fields as seen here. Geomagnetic prospection is a suitable tool to get a quick view over potentially interesting surfaces without digging. As a result of the extreme disturbance of the foundations in al-Uwār and the aforementioned extension of this site toward the north, other geophysical prospection methods like ground penetrating radar and geoelectrics do not promise a significant growth of information in a reasonable time frame.

C. Meyer

Archaeometric Investigation of two Rock Samples

Two samples were selected for qualitative/quantitative analyses:

Sample 1: Sample of the bedrock from cave/tomb z073 in al-Ǧābw. The question, which we posed was, does the hardness of bedrock condition where tomb sites were selected? In other words, did the builders select locations where the stone was softer and easier to excavate?

Sample 2: The glassy deposit »Y« in the trench z400, a presumed palace area, flows over the early Hīmyarite pavement (see supra). Is it a result of a destruction by means of fire, or does it simply reflect industrial waste?

Polished surface cuts of the two samples were investigated with a CAMECA CAMEBAX microprobe (15 kV, 15 nA, 2 µm beam diameter). The standards used were oxides for Al, Ti, jadeite for Si, Na, Ca, sanidine for K and metals. Parts of the rock samples were ground for powder diffraction x-ray analysis (SIEMENS D5000, CuK).

Sample 1: Main mineral phases were anorthite, albite, diopside/hedenbergite, analcime and hematite. Orthoclase appeared to be not present. These results are consistent with an x-ray powder diffraction analysis. The hardness of the sample derives from the pyroxenes and the feldspars, being the major
constituents of the rock sample, which conforms with the local geology.\textsuperscript{82}

\textit{Interpretation:} The hardness of the basaltic bedrock seems to have played no role in the selection of a site for tomb or cistern excavation, the Himyarites accustomed, as they were, to working hard rock.

P. Yule

Sample 2: The sample exhibited an amorphous porous matrix, which appears to originate from Na, K, Mg, Fe, which contained vitrified feldspars as manifested by the typical glass x-ray diffraction pattern. This amorphous component of the material must have been produced at a temperature of at least 1000–1100 °C. Some pores of the matrix contained zinc and copper. The sample also contained in abundance a crystalline phase identified as an Al-rich augite (pyroxene).

\textit{Interpretation:} Formed partly of feldspar glass with charcoal inclusions (charcoal analysis forthcoming), the deposit Y brings to mind so-called slag walls, which are well-documented in fire destructions in early historic Europe, e.g. murus gallicus.\textsuperscript{83} The »palace-site« z400 is not plausibly explicable as an industrial site. Since the metals zinc and copper do not derive from the local rock, they rather may derive from associated metallic artefacts, which were molten in the fire.

P. Yule

The microprobes were analysed by B. Spiering, B. Barbier executed the x-ray analysis.

\textit{Rescue Excavation al-'Arâfa, Tomb Ar1}\textsuperscript{84}

During the past few years clandestine excavation generally have gotten out of hand in the Zafâr and al-'Arâfa area. Three months prior to our arrival, while digging a grave outside the village of al-'Arâfa, just 3 km west of Zafâr, the local inhabitants stumbled onto a large shaft tomb. This is located 500 m north of the centre of the village at the foot of the G. al-Husn, between the Gâbûbat al-'Aranîb and the G. Raydân (Pl. 41, 1. 2). More precisely, the site lies some 30 m south-east of the house of Abdullah Nasîr al-Hâkim in the terrace named al-Bayâda, which belongs to 'Ali Mus'id al-Hâkim. A few days after the author’s first visit, individuals showed him finds, which they had looted from the tomb. Most of these were copper and iron decorative fittings from wooden boxes or caskets. At the request of GOAM P. Yule started the excavation.

A visit to the site revealed a vertical shaft with a 1.5 x 2.6 m rectangular opening, which widened gradually a little toward its lower extremity (Pl. 41, 2). It was cut somewhat irregularly into the hard volcanic conglomerate with its large inclusions of fractured obsidian. Reportedly, the shaft was 14 m deep (Pls 41, 3; 42 a). On inspection, it proved to be choked with stone, earth and trash to a depth of 7 m below the surface. As the »tomb raiders« explained, after breaking into the burial chambers, on discovery of the grave goods, almost immediately they quarreled over the distribution of the loot, disbanded and refilled the entire complex, so as to avoid prosecution. The filling, which reached the ceilings of what proved to be two burial chambers, did not originate exclusively from the tomb, but contains also some of the surrounding surface soil.

Friendly inhabitants from al-'Arâfa were interested that archaeological work take place in their village. After a short time, Ḥâlid al-'Ansî of GOAM and the writer gained their trust and were shown more objects allegedly from this and other tombs. Interesting indeed were the associated equestrian tack and other such accoutrements, which the writer viewed in the village. For maximal lucidity as to the find situation, the finders (who became our workers) gave provenances naming the size and positions of the artefacts while being interviewed \textit{inside the chambers} themselves (Pl. 42 b, see below). Be this as it may, with all the grave robbing, which takes place in the area these days, finds may accumulate in the village for some time until local markets can absorb them. After a longer interval, the finder may forget


\textsuperscript{83} We thank Gerd Weisgerber for this information.

\textsuperscript{84} Without the liason on site of Shaikh Abdul al-Hâkim and 'Ali Mus'id al-Hâkim with the villagers, the work would not have taken place. The undersigned acquired the finds not already disposed of in al-'Arâfa for GOAM, which otherwise would have dispersed in local markets. The excavation took place from 10 March to 03 April 2004. Although the writer was accompanied by an inspector from GOAM, essentially he conducted the work alone. Site position: 14°13’16.08” N, 44°25’19.1” E; UTM 38p, 0437646e, 1572287n.
a provenance of no immediate importance for the sale. As a result of and despite these difficulties, the writer decided to investigate the tomb. A first impression of the finds is that they might illuminate the late Himyarite period and its ruling class in a manner consonent with the writer’s research design.

Excavation of the shaft began with four workers. A pulley was set up above and workers were lowered in. A warning sign inside the fenced in entrance served to prevent individuals from looking or falling into the shaft. As the excavation reached the chamber entrances lying to the north and south, it was possible to increase the number of labourers. A constant danger was rocks weighing up to 150 kg, which occasionally managed to free themselves from the steel cable and hook, which we used, and fall back down the shaft onto the excavators.

Located on the south side of the shaft, chamber 1 proved to be irregular in shape, small (2.5 x 2.5 m x height 1.4 m), and the debris filling at the entrance reached some 20 cm below the ceiling level (Pl. 43, 1). Its stone and dry earth filling ranged from 70–90 cm in thickness, which merged into a layer of moist soil – the old chamber debris. This contained remains of obvious recent disturbance (plastic bottles, cigarette packs etc.), which the robbers had churned down into it. At the rear of the chamber the new debris layer was thinner than the old one. It was hoped that the old and/or new debris would contain finds, which had escaped antique and recent robbing.

Chamber 2 (Pl. 43, 3) lies on the north side, is more regular in shape, and is considerably larger than the neighbouring chamber 1 (2.5 x 4.5 m, height 1.5 m). Its long axis is east/west oriented and neither in line with the axis of chamber 1 nor with that of the shaft. It also was filled with recently deposited stone and earth.

The Tomb Prior to its Robbing – Confessions of a Tomb Raider

‘Alí Mus‘id al-Hákim, one of the four discoverers of tomb Ar1, related the find situation to the writer: «I was the first to view the shaft and later its two chambers. To a depth of some 11 m, mixed large and small stone and earth filled in the tomb shaft. Beneath this, only loose soil occurred». After the robbers removed all of this, they found, «a wall of rough stones which blocked the chamber entrances».

«It was possible to peek into the south chamber». About 40 cm of dust lay on the floor, which Alí Missaid and his accomplices partly removed. On the west side lay iron bands and flat hook decorations from a wooden box, its wood had decayed owing to the moisture». Alí Mus‘id showed with this hands, compared to a measuring tape, a size of some 80x65 cm for this find group. «On the opposite side of the chamber lay a rectangular low paving of fist-size stones. Between them a belt (c. 1.2 x 0.05 m) lay extended, fashioned of gold threads». The S-curve decoration resembles the wave-like motifs of present-day brocade belts in the Yemen, which seem to have an antique origin. «The copper alloy corners lay in this chamber near the iron bands. The only preserved bone was a knee cap in the north-east area of the chamber. The tomb showed no sign of robbing».

«In the north chamber directly inside the entrance lay four large stones. Just beside the north wall lays the nosepiece of a bridle visible on the surface. More finds were present in this chamber, but were no longer available for study, having been sold in Yarím. A disheveled mass of iron bands lay in roughly rectangular form in the dust. Therein lay one iron stirrup and two circular openwork bronze phalera. One shows a radial arrangement of three birds of prey (Pl. 43, 2)85. The other was a radial arrangement of the heads of wild goats. The extant phalera preserves traces of enamelling in red, white and blue in the concentric channeled recesses. The iron j-hooks of the damaged and decayed wooden container were oriented lengthwise (c. 1.0 x 0.60 x 0.60 m, Pl. 43, 4). Two missing copper engraved plaques, c. 20 x 10 cm showing archers and ibexes also were reported. In June Sabina Antonini spotted an object in a shop in Šan‘ā‘, which fit the description of one of the lost artefacts (Pl. 44, 1)86. It appears to be a copper belt buckle decorated with two pairs of mailed horsemen separated by monograms. Many of the silver inlays have been pried out. The silver inlaid leafs are identical with ones on the nosepiece just mentioned. A second belt, also decorated with gold brocade, lay extended in the east part of the chamber». Conspicuously missing were a skeleton and pottery.

85 13.0 x 14.0 (pres.) x 0.8 cm.
The description of the find situation of chamber 1 as intact is internally inconsistent: The position of the kneecap away from the burial platform and a lack of a skeleton suggest that in fact, the burial was disturbed. The burial in chamber 2 was clearly disturbed: Some of the iron straps showed tell-tale twisting formed prior to their thick covering with corrosion. Only one stirrup was said to be found, but one would expect two. Most striking was a decorated copper noseband of a bridle from the north chamber. No traces of a horse or its burial were found. The finders destroyed the two fragile brocaded belts while removing them.

The Reexcavation and the Finds

Sieving the soil of the south chamber 1 yielded a variety of small finds including fine golden threads, pottery sherds and fragmentary iron bands. The latter match finds, which the al-'Arāf villagers sold to GOAM during the excavation87. Two kinds of iron bands exist; those which originally served to strengthen the wooden boxes, and curved branching ones, decorative in nature. None of the iron bands recovered from the robbers or from our reexcavation were bent in a 90° angle as if to wrap around a box-like container. Instead, some bands were pierced with nails to which wood fragments still adhered.

The sieved debris of the north chamber 2 also contained gold threads, iron fragments of an arrowhead, thorns of others and numerous fragments of knives and perhaps daggers of diverse size and shape (Pl. 44, 2). The threads adhered to the stones and to the corrosion of some of the iron bands. Chamber 2 yielded far more sieved finds than did the other chamber, including 2 kg of iron fragments, 800 g of animal bone fragments, a small bag of small pottery fragments also came to light. The teeth proved to be those of cattle88. Iron implements had wooden grips, possibly one of which is a knife.

Halid al-'Ans acquired diverse other finds from the villagers for GOAM and more particularly for the Zafār Museum, mostly fragmentary iron bands and rings. It is unclear to which of the chambers, or both, the latter can be attributed. For example, a small oblong wooden container of unknown function with a removable cover came to light (Pl. 44, 2).

The most important find is the copper bridle accessory, which the villagers cleaned in order to increase its saleability (Pl. 45)89. Given the narrow breadth of the noseband (9.5 cm), the associated horse may correspond to the Arabian breed, characterised notably by small and elegant heads90. Unfortunately, with the question of what kinds of horses were bred, trained and ridden, no Old South Arabian texts are available to help us91. The noseband bears five Sabaean monograms, pairs of fronds, leaves and rosettes, which are inlaid with silver and/or silver alloy (niello?)92. The surface is further enlivened with decorative punchmarks and delicate incising. The monograms reveal the owner’s identity and help date the piece (see below). The noseband would have been worn in such a way that the monograms could be properly read. Luxury articles, such as this bridle accessory, fit well in the context of Ḫimyar at its peak – which, given its size and wealth, must have been a craft centre. Presumably it was produced locally, although during the course of military undertakings it could have been acquired outside of Zafār.

The copper band fit over the animal’s nose and the bale fit snugly at its chin (see below). Unfortunately, despite reported traces of leather when first found, none have survived. Two metal flanges positioned left and right on the ends of the noseband (as worn) appear to have been recently clipped off, the cuts showing no sign of corrosion. Obvious bit fragments were not identifiable, and unfortunately the tack is incomplete. Nor are traces of use-wear observable. Given the uniqueness of the al-'Arāf noseband, in this preliminary report it deserves our attention. Roman, Parthian and Sasanian snaffle bits exist, but more common are leverage bits, including a related noseband and bit in the Metropolitan

87 See the appendix at the end of the article which was prepared without the benefit of enough time to write a proper catalogue.
88 Our thanks go to H.-P. Uerpmann for the identification, personal communication.
89 The entire assemblage is to be restored in a state of the art laboratory. My comments in this preliminary report regarding the condition of the bridle accessory are thus preliminary in nature.
91 Sima 2000, 63–81.
92 No analyses have yet taken place on the bridle accessory. But analysis of a coin of the Ḫimyarite royal series revealed a silver content of 99% purity (time-of-flight-neutron-defraction). I thank Armin Kirfel for this oral information.
In the case of the New York bit and its numerous relatives, when reining the horse the spoon tips upward and forward, gouging the roof of the horse’s mouth. The bar positioned immediately above the rein rings of the flanking bit levers holds the construction together\textsuperscript{99}. Referring again to the Sasanian reliefs, that bar would be located too far from the animal’s chin to serve as the fulcrum point for a possible lever bit. In these reliefs, given a lack of either a chin-chain or chin-bar, they do not evidence a true curb-bit (German: »Kandare«), whereby the scissors-like effect of pressure is applied to the top and bottom of the chin, so-called \textit{psalia} (Latin). Such finicky details evidently were simplified in the reliefs. However, the lever effect of the New York piece

93 Herrmann 1989, 760–762. 791 pl. 2 b. Most of her examples are Roman. This equipment must have influenced Sasanian tack, as in all other areas of contact between the two realms. But see also the Roman »hackamore« from Wiesbaden, in: Reallexikon germanischer Altertumskunde 23 (2003) 43 fig. 9 s. v. Pferdegeschirr (J. K. Koch). The present writer avoids here the term »hackamore« which is confusing in our context.

94 The lever bit measures c. 12.0 cm wide, 12.5 cm horizontally, 16.0 cm vertically in the position presumably as worn/used. This means that in our drawing the rein ring points downward and the palate spoons points upward to the right.

95 J. H. Stocqueler, The Military Encyclopedia, a Technical, Biographical, and Historical Dictionary (1853) 30: »A kind of nose-band of iron, leather, or wood, fixed to the nostrils of a horse, to curb or render him manageable through the pain it occasions«.


probably functioned by virtue of rings (that on the right side is broken and poorly visible) flanking the bit levers in order to fasten a chin-chain. By reining, one could thus apply pressure from the bit levers to the sensitive corners of the mouth, to the jaw and at the same time combined with a sharp pressure from the spoon, as described above. This is the way that palate spoons generally function. The palate spoon of the New York bit corresponds to W. Gaitzsch’s type B: a simple loop-like metallic construction. A further curb bit, which was excavated from Noruzmahale (Pl. 46, 1 c) in northern Iran, suggests that in the Parthian/Sasanian age such were more common than hitherto presumed. In the originally published drawing, its true appearance and hence function are unclear.

To further clarify the question of how the New York bit and its relatives functioned, one may again turn to Sasanian relief depictions, which show two double reins fastened solely to the bit lever, but not four individual reins mounted to the bit as well as to its lever, as in the case of modern curb-bits.

Aside from the bit, also missing from the al-‘Arāfa noseband is a strap or band around the underside of the jaw, to judge from the remains of removed fittings where one would be required to stabilize the entire construction as worn. A second would have fastened the noseband from the preserved metal tabs to the back of the poll. How exactly the noseband would have harmonised with the missing bit to keep the latter properly positioned in the horse’s mouth is not completely clear (Pl. 46, 1 c), notwithstanding Sasanian relief depictions such as that from Darābgird (Pl. 46, 1 d). Roman and Sasanian leverage bits and rigid bridles were to be used one-handed, the left hand also holding a >5 kg shield. The other wielded whatever weapon was used. Heavy-handed movements, such as those, which inevitably would occur in battle, probably produced edgy, if not disfunctional horses, with badly mangled mouths, prone to throwing their heads constantly. Barbaric by today’s standards, the bits and bridles just described got even more brutal into the Renaissance, with stronger lever bits, as attested to by numerous representations and excavated examples. Absolute performance was trained, doubtless at the cost of good character. Horses were expendable.

If stirrups in fact did occur among the grave goods at al-‘Arāfa, then they would have been unusual at this time in the Near East. Given the presumed harsh bitting, one would expect spurs as part of the riding equipment. But they are neither reported nor appear in contemporary representations, and for what it is worth, at the time of writing, are not documented in the region. It goes without saying that the bitting is only part of a constellation of equestrian helps, which complements the rider’s back, legs, balance and voice helps.

The aformentioned flat phalera (Pl. 43, 2) would have been worn as a decoration suspended from a girth slung from the saddle around the horse’s chest and/or croup. It has no close stylistic or iconographic parallels. In their absence, a provenance in Ḫimyar seems a likely guess.

P. Yule

THE INSCRIPTIONS

The dating for the tomb derives from a noseband of a bridle, which shows five late Ḫimyārite monograms, two of which are identical (Pls 45. 47). South Arabian monograms are assemblages of letters. They are formed with the totality of the letters of a proper name, of a personal epithet, of a constructed name, or of a name giving lineage. Rarely do they use all of the letters of a proper name and of a personal epithet. Occasionally they only make use of a part of the letters of a proper name or join a symbol with some letters.

The analysis of a monogramme does not permit an absolute certain identification of all of the letters since certain ones can be confounded with an initial element of beginning in the composition of another

\[\text{100 I thank A. Gelbhaar for discussing this matter with me. The palate spoon is not a «Zungenfreiheit» (port). Important is that the palate spoon of the New York bit is fixed and does not swivel on the bit. It is unlikely that the bit be reversed in position so that the spoon would tip upward with the point of leverage at the front.}\]

\[\text{101 This in German «Gaumendrücker» (a palate presser) was developed from the 4th cent. CE in blade and V-forms (Gaitzsch 1987, 219–256; Gaitzsch 1997, 497–511).}\]

\[\text{102 A rider depicted on a silver ladle from the Wadda Ḫudra in Hadramawt uses no stirrups. This piece was not in situ and not readily datable, cf. Breron – Bāḏaghi 1993, 88 pl. 24, 5. The excavators suggest a dating around the 1st cent. CE which can be dated later by dint of similar representations on metal bowls from graves in Amlah/al-Fawdaylah in the Sultanate of Oman.}\]

\[\text{103 Gaitzsch 1987, 219–239; Gaitzsch 1997, 497–511.}\]

\[\text{104 Cf. Herrmann 1989, 789 fig. 7 e (Bishapur VI).}\]
letter. For example, the appendix of alif possibly could be read nān; or the circle of yaṣṣ may conflate with the ‘ayn. The reading of monogrammes is therefore a perilous exercise with texts, which do not confirm the interpretation. Here are some of the possibilities:

Monogramme A
composed of the letters ’s² f õ t
possible reading: ’s²f’õt

Monogramme B
composed of the letters r s² ’’
possible reading but very uncertain: ’s²r’

Monogramme C
composed of the letters y f’ l
possible reading: ’lyf’

Monogramme D
This figure combines the royal Ḥimyarite symbol and two elements of a letter. This figure was already attested to in Ja 1816 from Širjān where it seems to correspond with the name of the lineage Ḥiṣḥ – the three other letters may be read from right to left: Kwkbn (name of the palace of the banū Haṣḥāḥ), ’l tb’ (name of the author of the text), ’g s²r (epithet of the author of the text).

This interpretation finds a certain reinforcement in the fact that the name ’lyf’, which can be read in monogramme C, is bourn by a Haṣḥāḥi (cf. Haṣṭi 1).

Monogramme E
same as monogramme C

Conclusion

It is possible that the inscribed piece was produced for an Haṣḥāḥi named Iliyafa. In this case, the two other monogrammes could give his epithet and the name of his horse.

C. Robin

Summary Comments on the 2004 Campaign

Planned research and fortunate happenstance at Zafār enabled the illumination mostly of the late Ḥimyarite Period, as evidenced from the data from the excavation, mapping, random finds of reliefs and inscriptions in the area. In addition, manifest in the excavation z400 was a stratigraphy, which offered a comparison of early, middle and late phases. Most interesting is the carefully fashioned early architecture of context z415, which indicates building of importance. A decline in building technique over time is readily visible. The early architecture contrasts with the roughly hewn stones of late period, which bring to mind Sasanian rough-stone masonry, but without evidence for cement or for stucco decoration. With the carbon determinations still pending, the marginally drafted and pecked masonry of van Beek’s type 6 are in evidence in z415, but are not fixed in point of time. Nonetheless van Beek wrote that these were known from a period between the 1st cent. CE and the «last Pre-Islamic period». For this age there are few comparisons, dated or not.

Despite the flawed nature of our information for the tomb Ar1 at nearby al-ʿArāfāt, clearly it is unique, the largest and most important of its kind from early or late Ḥimyar. Tomb Ar1 supplies a tantalizing view of the burial and grave good custom of Ḥimyarite noble of the banū Haṣḥāḥ. The burial customs are rather different than those which we know from Zafār. The palaeography of the monogrammes on the bridle accessory may point to between 150 and 400 CE105, but C. Robin prefers a dating in the 5th cent. (supra). The writer interprets a dating for the tomb in this later timespan, at a time when Ḥimyar was approaching its historic peak.

Mounted soldiers, such as the interred, were a small percentage of the armed forces relative to infantry106, who were of essential strategic importance. Whether a force was small or large, the strategy of the age still depended on them. Despite the fewness of arrowheads from tomb Ar1 or from other contexts in Ḥimyar, archery was a general feature of military tactics of the age in Arabia, Iran and the eastern Mediterranean, as best witnessed from relevant finds particularly in South-eastern Arabia107.

A fragmentary small (preserved L c. 40 cm) stone bearing a latish middle Sabaean inscription (possibly c. 350 CE) and a depiction of one or possibly

105 A. Sima, personal communication 22.06.2004.
106 Sima 2000 text nos. 16, 28, 31, 37, 45, 46, 48, 67 and 68.
more attacking knights in Sasanian-Ḥimyarite style brings to mind the Sasanian heavy cavalry (clibanarii) famed in antique written sources and in the archaeological evidence, where both ride and horse wore armour (Pl. 46, 2)\textsuperscript{108}. Behind the knight, the warrior wielding a battle axe (evidently of Indian type)\textsuperscript{109} removes this depiction from a possible Christian context of \textit{i.e.} St. George attacking a dragon.

Since little is known of the toreutic art of the Yemen at this time, the decoration of the noseband from tomb Ar1 cannot be maintained to be typical of the period, nor is the aforementioned toreutic casket ornament known from the numerous stone reliefs at Zafār.

The vague echo of the Sasanian world in the form of the nosepiece from tomb Ar1 is complemented by the early Sasanian style seal from tomb zg007\textsuperscript{110}. The Sasanian appearance of the relief in Pl. 46, 2 may simply be a more general period-style. Zafār hitherto has yielded little evidence relating to Sasanians. Evidently they simply inhabited what already was built and constructed little themselves.

The diverse subjects of late Ḥimyarite reliefs (especially those such as in Pl. 37, 3) suggest that a summary grouping of religions into the categories polytheistic, Jewish, Christian or perhaps »Raḥmānānish«, may oversimplify the real situation.

P. Yule

\textsuperscript{108} This dating rests largely on somewhat difficult palaeographic grounds. I thank A. Sima for advising me on this matter. The style of the relief gives a less exact dating.


\textsuperscript{110} \textit{Infra.} It is the only Sasanian seal known to bear Sabaean characters.
## List of Artefacts Recovered from Tomb Ar1

<table>
<thead>
<tr>
<th>Description</th>
<th>Length x Width x Height (cm)</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood</td>
<td>9.3 x 4.8 x 3.4</td>
<td>83</td>
</tr>
<tr>
<td>Cu corner 2 frs</td>
<td>20.0 x 10.7 x 0.9</td>
<td>237</td>
</tr>
<tr>
<td>Cu corner</td>
<td>11.2 x 10.5 x 9.5</td>
<td>341</td>
</tr>
<tr>
<td>Cu corner</td>
<td>10.5 x 10.4 x 10.2</td>
<td>267</td>
</tr>
<tr>
<td>Cu corner</td>
<td>10.5 x 10.3 x 9.5</td>
<td>260</td>
</tr>
<tr>
<td>Cu corner</td>
<td>11.0 x 10.3 x 10.3</td>
<td>346</td>
</tr>
<tr>
<td>Cu corner</td>
<td>11.0 x 10.6 x 10.4</td>
<td>292</td>
</tr>
<tr>
<td>Cu corner 2 frs</td>
<td>19.6 x 10.7 x 0.3</td>
<td>237</td>
</tr>
<tr>
<td>Fe ring</td>
<td>7.2 x 6.1 x 3.1</td>
<td>139</td>
</tr>
<tr>
<td>Fe ring</td>
<td>8.3 x 6.6 x 6.1</td>
<td>215</td>
</tr>
<tr>
<td>Fe ring</td>
<td>7.6 x 6.3 x 3.4</td>
<td>181</td>
</tr>
<tr>
<td>Fe ring</td>
<td>8.2 x 6.5 x 3.3</td>
<td>205</td>
</tr>
<tr>
<td>Fe ring</td>
<td>10.3 x 6.3 x 3.5</td>
<td>202</td>
</tr>
<tr>
<td>Fe ring + frs</td>
<td>11.8 x 9.3 x 3.5</td>
<td>303</td>
</tr>
<tr>
<td>Fe fr.</td>
<td>10.3 x 9.1 x 1.3</td>
<td>70</td>
</tr>
<tr>
<td>Fe fr.</td>
<td>8.5 x 4.8 x 1.2</td>
<td>78</td>
</tr>
<tr>
<td>Fe fr.</td>
<td>11.5 x 8.0 x 1.0</td>
<td>–</td>
</tr>
<tr>
<td>Fe fr.</td>
<td>40.8 x 15.3 x 1.0</td>
<td>–</td>
</tr>
<tr>
<td>Fe fr.</td>
<td>55.0 x 12.2 x 1.5</td>
<td>–</td>
</tr>
<tr>
<td>Fe fr.</td>
<td>34.4 x 13.5 x 0.9</td>
<td>–</td>
</tr>
<tr>
<td>Fe fr.</td>
<td>18.8 x 17.6 x 1.9</td>
<td>–</td>
</tr>
<tr>
<td>Fe fr.</td>
<td>25.5 x 13.7 x 1.4</td>
<td>–</td>
</tr>
<tr>
<td>Fe fr.</td>
<td>16.1 x 8.9 x 0.8</td>
<td>–</td>
</tr>
<tr>
<td>Fe fr.</td>
<td>18.3 x 13.8 x 0.6</td>
<td>–</td>
</tr>
<tr>
<td>Fe fr.</td>
<td>13.0 x 9.0 x 0.9</td>
<td>–</td>
</tr>
<tr>
<td>Fe fr.</td>
<td>15.8 x 9.7 x 1.0</td>
<td>–</td>
</tr>
<tr>
<td>Fe frs</td>
<td>8.4 x 1.5 x 1.5</td>
<td>–</td>
</tr>
<tr>
<td>Fe frs</td>
<td>35.1 x 9.5 x 1.2</td>
<td>–</td>
</tr>
<tr>
<td>Fe hook</td>
<td>4.9 x 4.6 x 4.3</td>
<td>–</td>
</tr>
<tr>
<td>Cu nosepiece</td>
<td>13.5 x 16.0 x 9.5</td>
<td>–</td>
</tr>
<tr>
<td>Fe small frs x225</td>
<td></td>
<td>–</td>
</tr>
</tbody>
</table>
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