The Medieval Town and Port of Damā (As Sib) on the Southern al-Bāṭinah Plain, Oman: Archaeological Fieldwork of the Italian-German-Omani Project in 2013

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ABSTRACT

In May 2013 Göesta Hoffmann and Maurizio Tosi had the opportunity to document some surface clusters of Islamic period remains in the wilayāt Sīb, along the coastal area between Wadi Al Lawami and Wadi Al Khars. This consisted mainly of pottery dated between the early to late Islamic period (8th to 20th centuries CE). In June 2013, on behalf of the then Ministry of Heritage and Culture, a first survey allowed us to recognise more archaeological materials focused around al-Rawḍah Roundabout and the remains of a fort made of mudbricks and heavily obliterated by vegetation further to the south. In light of written sources referring to the ancient settlement of Damā as located in the southern al-Bāṭinah plain probably identifiable as As Sib (Seeb), further field analyses were undetaken in September 2013 in order to define the geoarchaeological landscape via systematic survey, investigative excavations, and the definition of the paleo coastline pertaining to the fort. The results of the project support the hypothesis that the ancient town and harbour of Damā is indeed to be located in present day As Sib.

KEYWORDS: Al-Bāṭinah Plain, As Sib, Ancient Damā, Islamic Pottery, Portuguese.

مدينة دما (السيب) وميناؤها في العصور الوسطى في سهل الباطنة الجنوبي، عُمان: العمل الميداني الأثري للمشروع الإيطالي الألماني العُماني في عام ٢٠١٣

روموولو لوريتو، جوستا هوفمان، سيمونا بيراردينو، سيث بريستمان، ماريا غاجيوسكا، ديريك كينيت وإسماعيل المطراشي

الملخص:

في مايو ٢٠١٣، أتيحت الفرصة لجوستا هوفمان وموريزيو توسي لتوثيق بعض المجموعات السطحية من بقايا الفترة الإسلامية في ولاية السيب، على طول المنطقة الساحلية بين وادي اللوامي ووادي خريس. وتألفت هذه بشكل أساسي من الفخار الذي يعود تاريخه بين الفترة الإسلامية المبكرة إلى المتأخرة (من القرن الثامن إلى القرن العشرين الميلادي). في يونيو ٢٠١٣، ونيابة عن وزارة التراث والثقافة آنذاك، سمح لنا المسح الأول بالتعرف على المزيد من المواد الأثرية التي تركزت حول دوار الروضة وبقايا حصن مصنوع من طوب اللبن قد دمرته النباتات بشدة من جهة الجنوب. وفي ضوء المصادر المكتوبة التي تشير إلى أن مستوطنة دما القديمة تقع في سهل الباطنة الجنوبي والتي يمكن تحديدها على الأرجح باسم السيب (السيب)، أجريت المزيد من التحليلات الميدانية في سبتمبر ٢٠١٣ من أجل تحديد المشهد الجيولوجي الأثري من خلال المسح المنهجي والحفريات التحقيقية وتحديد خط الساحل القديم المتعلق بالحصن. تدعم نتائج المشروع الفرضية القائلة بأن المدينة القديمة وميناء دما يقعان بالفعل في السيب الحالية.

الكلمات المفتاحية: سهل الباطنة، السيب، داما القديمة، الفخار الإسلامي، البرتغالية.

Introduction

As Sib, also known as Damā in medieval sources, was an important harbour and port town since the early Islamic period, which has continued to be occupied until the present day (**Figs 1-2**). Despite written evidence for a settlement at the location, no systematic archaeological work had been undertaken until 2013, when two seasons of survey and one season of excavation were carried out by a team from the University of Naples l'Orientale, the Ministry of Heritage and Culture of the Sultanate of Oman (present day Ministry of Heritage and Tourism), and the German University of Technology, Muscat, Oman.[1]

The archaeological remains identified during the survey in June 2013 are scattered along the asphalt coastal road, between Wadi Al Khars and Wadi Ar Rusayl (southeast), crossing the al-Rawḏah Roundabout and continuing as far as Wadi Al Lawami (northwest), extending over 5 km (**Fig. 3**). The survey identified three main sectors of archaeological interest (see below). Of these, Sectors A and B were subsequently surveyed and excavated in September 2013. Iron Age materials from As Sib were identified by P. Yule after J.H. Humphries (Yule 2001), nonetheless no Iron Age materials were collected during our surveys.

The main evidence identified is summarized as follows:

- Sector A (23°38'5.04"N 58°14'41.19"E): a quadrangular structure, apparently a fort with two mudbrick towers and at least two walls still visible. The structure is located 3.5 km southeast of al-Rawḏah Roundabout, between Al Kharsa and `Awāmir (**Figs 2-3, 5**).

- Sector B (23°39'24.23"N 58°13'17.86"E): shell middens and a substantial accumulation of early to late Islamic pottery (8th to 20th centuries) on the surface, extending north of the al-Rawḏah Roundabout (**Fig. 3**).

- Sector C (23°39'52.06"N 58°12'22.37"E): this area, 2 km northwest of al-Rawḏah Roundabout, was pointed out by Mr 'Abd al-Rahīm al-Maimani as a place where a mudbrick building, similar in shape and architecture to the fort along Wadi Ar Rusayl, had been located until about 20 years ago. Some mudbrick structures are visible on GoogleEarth images from 2002 but have since been destroyed (**Fig. 4**). No excavation or fieldwalking survey has been carried out here, but the presence of a potential second fort should be noted.

The large amounts of pottery collected near al-Rawḏah Roundabout, as well as the extant architectural remains in Sector A, clearly indicated the need for excavation on the site. Furthermore, As Sib is a rapidly developing area, with construction encroaching on potential archaeological material year by year. Carrying out excavations as soon as possible was thus deemed imperative to salvaging archaeological data before it was permanently lost. The objectives of the following systematic survey and excavations were to identify the boundaries of historical Damā and to relate the archaeological data to historical evidence, in particular to Portuguese sources, which contain multiple references to the site. The results of this work are presented below. Following a summary of the site's historical context, results of the September 2013 fieldwork in Sectors A and B are presented. They are organised by sector and in each case, a description of excavation results is preceded by a summary of the results of the June and September surveys of 2013.

Historical Context

The local topography appears to favour the presence of an ancient settlement at As Sib. The location of the archaeological remains discussed here is optimal for water resources, as the site lies within the alluvial plain of the Wadi Ar Rusayl (to the east, between Al Kharsa and `Awāmir) and Wādī Luwami (to the northwest) at the south-eastern end of the al-Bāṭinah coastal plain. These form a particularly fertile and densely populated belt between the sea and the Hajar Mountains.

Historical sources confirm the antiquity of the settlement in this area. The earliest written references to ancient As Sib may come from Pliny's *Natural*

1 Several participants collaborated in field activities at different times: Gösta Hoffmann, Maurizio Tosi, Romolo Loreto, `Abd al-Rahīm al-Maimani, Ismā'īl al-Motrāshi, Roman Garba, Vincenzo Zoppi, Michela Gaudiello. Simona Berardino, Seth Priestman, Maria Gajewska and Derek Kennet joined in the effort to survey the available historical sources and implement the identification of Islamic pottery.

History, which mentions a "Batrasave" and a "Sibi/ Apate" on the coast of Oman. The former name may be a corruption of "batha Sīb" – "riverbed of Sīb", while the latter may refer to As Sib and, again, to a "batha" – riverbed. Due to the similarity of the names and to the postulated location of these sites, it is highly likely that either one or both refer to As Sib (Miles 1878: 172).

Figure 1*: As Sib urban area, 2023 aerial imagery (©GoogleEarth)..*

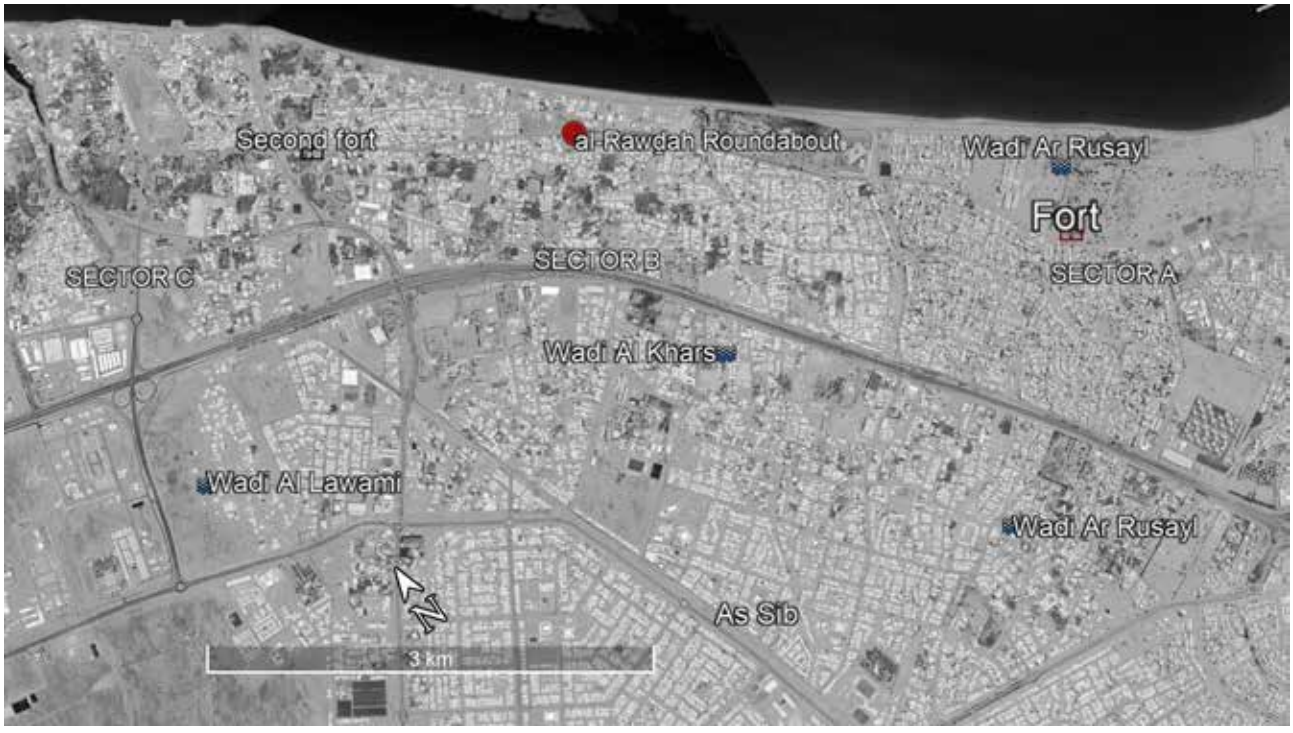

Figure 2*: As Sib urban area. Detail of the archaeological area, 2023 aerial imagery (©GoogleEarth).*

Figure 3*: As Sib urban area. Location of the archaeological evidence and wadis outlet in 2002 available historical imagery (©GoogleEarth).*

Figure 4*: Sector C after 2002 available historical imagery (©GoogleEarth)*

However, the first uncontested references to As Sib or Damā (an alternative medieval toponym) (al-Baṭṭashi 2016: 48) are elusive. J.C. Wilkinson claims that Damā was a settlement where Persians collected tithe in Sasanian times (Wilkinson 1977: 132). This is based exclusively on al-Yaʿqūbī's (d. 897 CE) list of ten ancient Arabian markets in his *Tārīkh Ibn Wāḍiḥ* and on Yāqūt's (d. 1229 CE) description of al-Julanda (and not Persian) rule in the pre-Islamic port of Dibba (contrasted with other parts of coastal Oman) (Yāqūt 1913: 492-493; Wilkinson 1973: 51). However, Damā is not actually mentioned in al-Yaʿqūbī's list (al-Yaʿqūbī 2018: 313-314). On the other hand, Yaqūt's geographical dictionary does describe Damā as a town known for its market "like Dabā". It also mentions that a companion of the Prophet Muhammad, Abū Shaddād, came from there (Yāqūt 1913: 492-49). This suggests that the town existed in the late pre-Islamic period, but any conclusions on its relationship to a Sasanian administration are tentative.

In the Islamic period, the 19th to early 20th century Omani historian Nur al-Dīn al-Sālimī describes the flooding of Damā in 865 CE in his famous history of Oman, *Tuḥfat al-Aʿyān bi-sīrat ahl ʿUmān* (1913), but without citing his sources (al-Sālimī 1931-32: 135). References to Damā and As Sib in Arabic texts continue throughout the medieval and early modern period. While it is never described as a particularly important port (indeed, it is conspicuously absent from the works of Ibn al-Mujāwir, al-Muqaddasī, and Ibn Mājid, despite the fact that they describe many towns along the Omani coast), it was clearly substantial enough to merit inclusion in some maritime itineraries. In the 13th century, al-Īdrisī lists Damā as a town in Oman (al-Īdrisī 1836: 155). In the 14th century, Ibn Baṭṭūta mentions a "Shaba", located between al-Qurayyat and Kalba; H.A.R. Gibb notes that the geographical position and similarity of spelling strongly suggest "Shaba" is another corruption of "Sīb" (Ibn Baṭṭūta 1962: 399). Neither al-Īdrisī nor Ibn Battuta elaborate on the site, which contrasts with their more detailed descriptions of other Omani ports such as Ḏofār, Masqat, and Ṣuḥār.

In 1636 CE, As Sib is described as a port that the Portuguese general "Rui Frere [de Andrada] built on the coast of Arabia" in a "List of Portuguese losses in India during the time D. Miguel de Noronha served as Viceroy of India, from October 1629 to December 1635" (al-Salimi & Jansen 2012). This is the first Portuguese reference to As Sib, and it indicates that the Portuguese must have carried out relatively extensive construction on the site. However, like other places mentioned in the document, such as Julfār and Dibba, it does not necessarily imply that the town was established by the Portuguese. The place name, variously spelled "Sib", "Sibo", or "Cibo", appears in later Portuguese letters between kings, military commanders, governors, and priests; these mentions are not particularly frequent, which suggests that the town was not of key strategic importance, but that nevertheless it had some military or economic value.

Fieldwork summary
As Sib Survey

In June 2013, a preliminary survey of Sectors A and B (i.e., the fort and the al-Rawḏah Roundabout areas) was carried out (Loreto 2014). The key finding was that while late Islamic material has been collected from both sectors, only Sector B yielded early and middle Islamic pottery (e.g., 8th to 13th centuries AD). The field survey was directed towards the identification of surface materials, collected after GPS coordinates were taken. No excavation was carried out, so only surface materials were picked up. Since the emergency nature of the enterprise and the limited time available this field survey can be considered as preliminary "" if compared to the more detailed survey performed in the surroundings of the military fort located at the outlet of Wadi Ar Rusayl (**Fig. 14**).

The September 2013 season began with a second survey, aimed at covering the area between the two find-spots, on the assumption that this constituted ancient Damā. An area of 3.5 x 0.5 km, extending from the likely ancient coastline (inferred from the fort in Sector A, whose function would have been to protect the entrance to the Wadi Ar Rusayl) inland (**Fig. 5**). It should be noted that due to the high concentration of modern buildings, the density of vegetation, and the presence of fenced, inaccessible land, the area that could be surveyed was limited (**Fig. 6**).

Figure 5*: Location of Sector A between Al Khars and `Awāmir as it appeared in available historical imagery from 2002.*

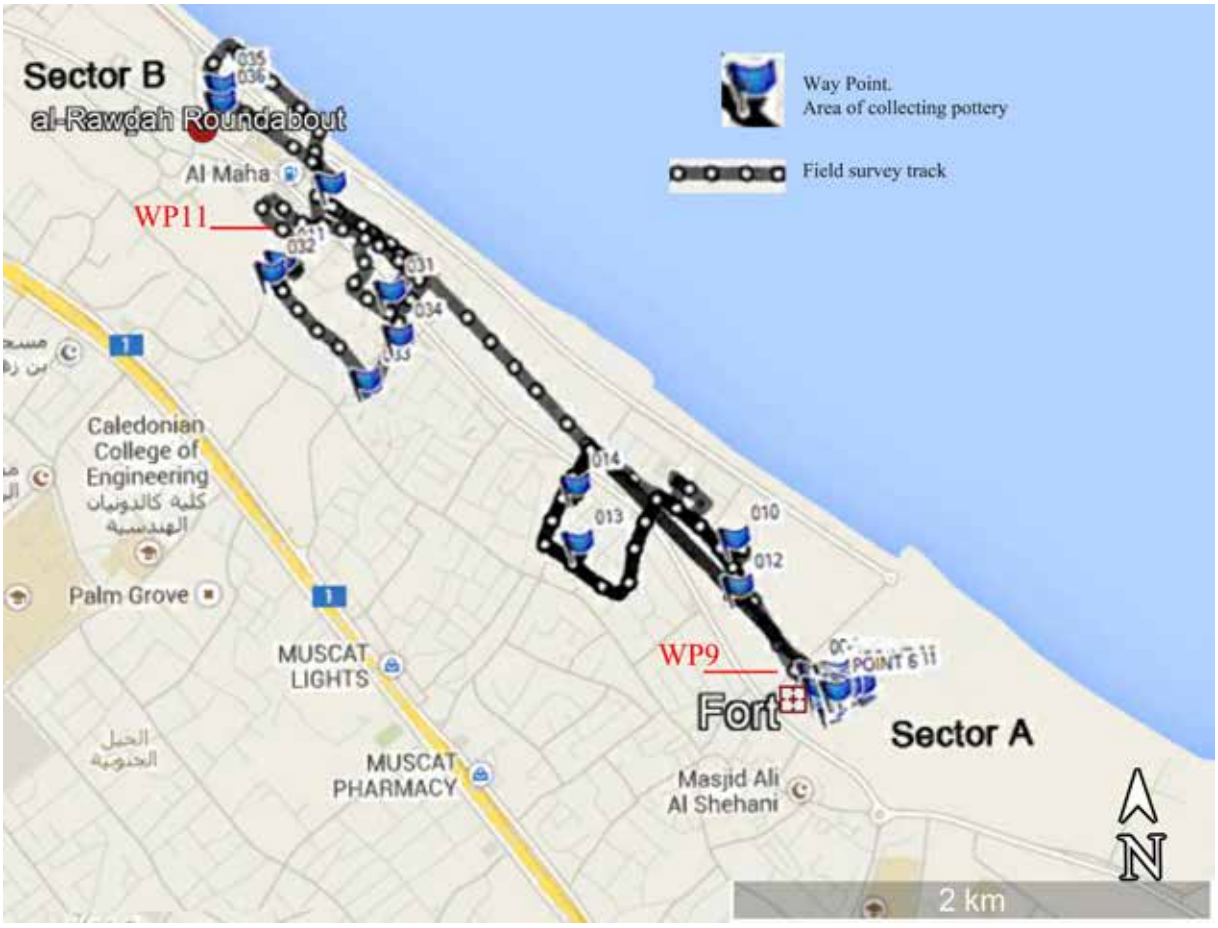

Figure 6*: General map of the field survey conducted in As Sib.*

Each area that could be surveyed was marked by Garmin Dakota 20 GPS coordinates, recording structural remains and any pottery scatters identified. The survey points were labelled as Way Point (WP) identification numbers (**Fig. 6**).

A total of 462 pottery sherds were collected, of which 88.5% comprised unglazed wares, with a high degree of variability by area. Of these, most were jars and cooking pots, and about 10% were decorated, mostly externally on the neck and shoulder. A summary of the areas, with their coordinates and a summary of finds, is given below (Tab. 1). Most pottery was collected from areas WP_12 and WP_35.

Table 1: *The investigated areas, with coordinates and a brief overview of the finds.*

Area code	Coordinates	Finds summary (diagnostic)	Fig. Area
WP_09	N23 38.141 E58 14.625	In addition to coarse sherds in red fabric, this area yielded two pieces of Chinese blue-on-white from Fujian of quite poor quality (CBW-FUJ) (**Fig. 7: a**). This is the only example of East Asian pottery found during this survey.	6
WP_10	N23 38.480 E58 14.424	Red and white coarse wares. Two sherds decorated with incised lines, one ring base sherd with brown opaque glaze (OPAQ.B) (**Fig. 7: b**), one rim with whiteish glaze on both sides (OPAQ#) (**Fig. 7: c**), one red sherd with white glaze and a reddish-brown line on the internal surface (SPW) (**Fig. 7: d**).	6
WP_11	N23 39.240 E58 13.138	White and many red coarse ware sherds, a few sherds with a brownish-red slip on both sides. Some sherds are decorated with rows of rounded impressions, parallel incised lines, and small incisions; this type has been found along the southern Yemeni coast (**Fig. 8: top row**). Two sherds of yellow bodied monochrome green glazed ware (YELO.GRN) (**Fig. 8: b)**, and a few sherds with a dark glaze, dated to the middle and late Islamic periods (MONO.Y and BAHLA) (**Fig. 8: c**).	6
WP_12	N23 38.364 E58 14.420	102 sherds, mostly of coarse red and white ware. A few sherds, including ring base fragments, with a grey fabric and a dark brown glaze on the internal surface (BAHLA) (**Fig. 9: a**). A few sherds with a yellow fabric and light blue glaze with underglaze painted decoration dated to the late Islamic period (YELO.MGP) (**Fig. 9: b**). There is also a single sherd decorated with a green splash on opaque yellow glaze – a unique example.	6
WP_13	N23 38.500 E58 13.959	Two sherds of red coarse ware.	6
WP_14	N23 38.638 E58 13.961	A few sherds of coarse ware.	6
WP_32	N23 39.215 E58 13.106	One sherd of white coarse ware.	6
WP_34	N23 39.037 E58 13.471	A few sherds of red coarse ware.	6
WP_35	N23 39.679 E58 13.001	109 sherds, mostly of red and white coarse ware, quite a lot of them are large and/or diagnostic. This area also yielded examples of opaque white glazed ware (OPAQ.W), manganese painted ware (YELO.MGP), and Bahla ware (BAHLA), as well as a single fragment of turquoise glazed ware (ALGAZ.T). Most diagnostics were attributable to the late Islamic period (**Fig. 10**).	6
WP_36	N23 39.679 E58 13.001	Multiple rims and body sherds of red coarse ware (**Fig. 11: a**). Two sherds of sgraffiato, hatched and mustard (GRAF.H, GRAF.M) (**Fig. 11: b**).	6

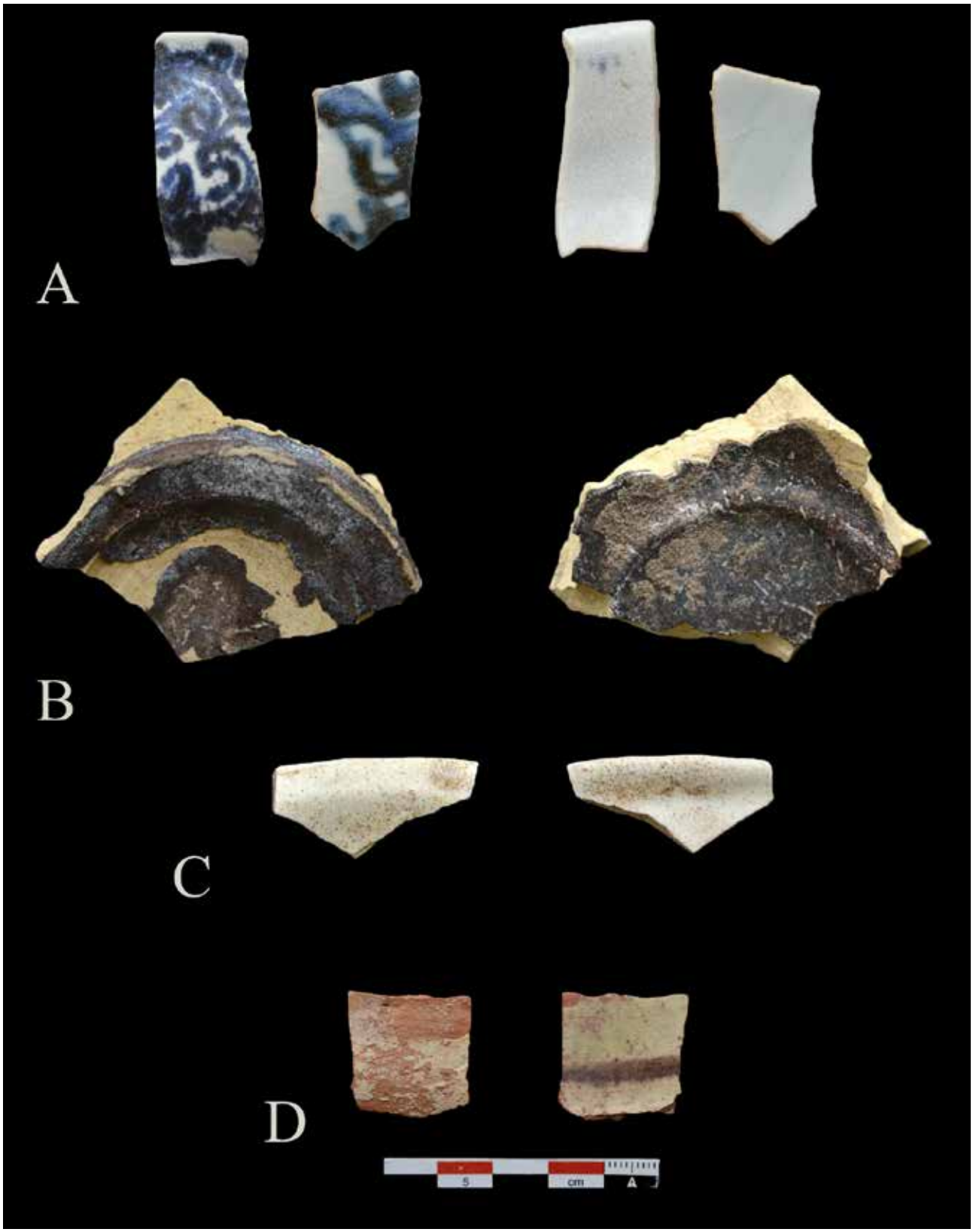

Figure 7*: A selection of sherds from WP 9-10: A: CBW, B: OPAQ.B, C: OPAQ.W, D: SPW.*

Figure 8*: A selection of sherds from WP 11: A: WHITE.INS and others, B: YELO.GRN, C: BAHLA.*

Figure 9*: A selection of sherds from WP 12: A: BAHLA, B: YELO.MGP.*

Figure 10*: A selection of sherds from WP 35: A: JULFAR and others, B: BAHLA.*

Figure 11*: A selection of sherds from WP 36: A: UNG, B: GRAF#.*

Taken together, the June and September 2013 surveys make it clear that the oldest pottery found is early (c. 8th to 10th century) and middle (c. 11th to 13th century) Islamic– such as turquoise alkaline glazed wares (ALGAZ.T), Samarra horizon pottery (OPAQ# and SPLASH#), and sgraffiatos (GRAF#), which come from the vicinity of the al-Rawḏah Roundabout (Sector B, **Fig. 12**) (Loreto 2014), while late Islamic (c. 17th to 20th century) material has been found in the entire survey area, including Sector A, Sector B, and the area between. This suggests that the ancient core of Damā was located close to the al-Rawḏah Roundabout, and that the settlement grew over time.

Figure 12*: Al-Rawḍah Roundabout survey's area*.

Figure 13*: Sector A before the excavation, view from the south*.

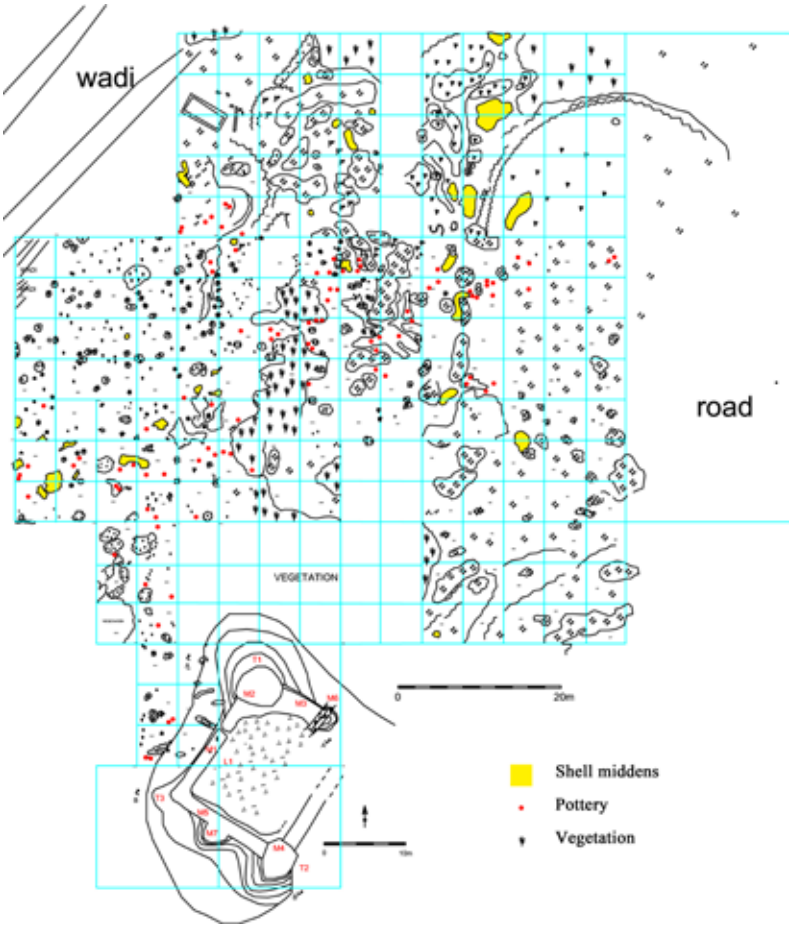

Figure 14*: Sector A. General plan after the excavation of the fort and the systematic survey.*

Figure 15*: Shell scatter north of the fort.*

Figure 16*: Examples of shells collected north of the fort.*

Figure 17*: Examples of shells collected north of the fort*.

Sector A

Preliminary surveys

The initial survey in June 2013 identified a mound in Sector A, with at least two mudbrick towers and two mudbrick walls visible on top. The aerial images from GoogleEarth show part of a quadrangular building measuring c. 20 x 20 m with two corners corresponding to the visible north and south towers. The structures are still preserved up to 2.5-3.5 m in height (**Fig. 13**). The pottery collected in the area was mostly dated to the late Islamic period (17th century and later). The latest dated artefact was an 1833 East India Company coin, suggesting occupation until the first half of the 19th century.

The June reconnaissance was followed by a systematic survey in September 2013. The area was divided using a multi-scalar grid (squares 125 x 125 m, 25 x 25 m, and 5 x 5 m). Each 5 x 5 m square was assigned a three-letter code, referencing these three levels. Parts of the area were covered with vegetation, which had to be cleared off before the survey (**Fig. 14**). The eastern part of the surveyed area was also disturbed by a bulldozer, which likely affected the position of ceramics and other artefacts. Despite these challenges, a preliminary study of the material, which comprised 380 sherds, has confirmed a complete absence of early or middle Islamic material, with all the identified pottery dated to the late Islamic period (monochrome green glazed ware, plain monochrome opaque white glazed ware) supporting the conclusions of the June survey.

Furthermore, the large amount of shell scatters found outside the fort (**Fig. 15**) suggests that the military structure was not the only locus of habitation in the late Islamic period, but that people probably lived in temporary/perishable shelters around the fort, extensively utilising marine resources for food (as suggested by the predominance of bivalves in the shell assemblage) (**Fig. 16**). Other types of shell identified attest to the local environment, with many examples of *Cypraeidae* (**Fig. 17: two top rows**), characteristic of rock and coral habitat (Bosch et al. 2008), as well as fewer specimens of *Strombidae,* characteristic of a sandy environment (Bosch et al. 2008). Rare examples of *Murex* and *Conidae* are also present (**Fig. 19: bottom row**).[2]

Excavations

Based on the results of the two surveys, Sector A was targeted for excavation in September 2013. The primary objectives were to:

- define the size, shape, and nature of the fort and to estimate the time needed to carry out a full excavation;
- gain an understanding of the preservation of the mudbrick and mud used in the fort construction to inform a future restoration programme;
- clarify, through the excavation of a stratigraphic probe, whether the fort was built on top of older levels or whether, as suggested by the surveys of June and September 2013, it was related exclusively to the late Islamic occupation of Damā.

The mound overlaying Sector A covers an area 25 x 25 m and rises to a maximum height of 3.5 m above the surrounding ground level. The outer walkway of the fort is 25 m above sea level and is oriented with the corners (towers) at cardinal points. The towers were labelled T1-T4 (north tower = T1; south tower = T2; west tower = T3, east tower = T4) (**Fig. 18**). The building stands at the confluence of the Wadi Ar Rusayl and the ancient coastline, at the eastern edge of the wadi slope. Almost the entire surface of the building was covered by vegetation. It has suffered significant damage from rain, which has dissolved most of the mud structures, including walls and towers (**Fig. 19**). The southwest wall connecting towers T2 and T3 was also damaged by tree roots.

The north tower (T1) is the best-preserved part of the building and was excavated first (**Figs 20-21**). The south (T2) and west (T3) towers were also cleaned and partially excavated, as were the northwest wall (M1) and southwest wall (M5), the latter including a small outpost (M7). The east tower (T4) was heavily damaged by recent bulldozer excavations and was not excavated.

2 The same shells are attested inside the fort in minimal quantities.

The excavated remains suggest that the fort was a quadrangular structure, c. 20 x 20 m, with towers at four corners. It is not clear whether the towers were circular or square, although a preserved 90° corner visible on the interior of M5, close to T3, suggests the latter. The wall and tower foundations were made of compacted mud or *terre pisé* (and not mudbrick) and survive to a height of 1.5 to 2 m. The superstructure was built from mudbrick, with the average dimensions of the bricks 17 x 14 x 10 cm. Traces of plaster were detected between the mudbricks of the north tower T1; although sparse, this is to be expected considering the high degree of mud abasement, and the entire structure may originally have been plastered. A white plaster coat would have protected it from environmental damage (rain, high temperature, etc).

Based on the size of a vent in the north Tower T1, we estimate the height of the superstructure at 2.5 m. The entrance was not detected. However, the southwestern wall (M5) shows a clear outpost (M7), facing the southwest side of the outer area of the fort. This has been interpreted as the likely entrance: considering that the fort was designed to protect the coast, it makes sense for the entrance to be hidden from the shore and protected.

The walls were built on a compacted earth floor (L1, **Fig. 20**), which appears to have been preserved across the whole building. According to a test sounding in the western corner of the fort, this floor was built with no preparation layer, directly on virgin soil. The inner area of the fort shows no evidence of subdivision, although this may have been achieved through perishable, wood or barasti structures (**Fig. 22**). A 0.40 m wide channel, probably used for drainage of the fort interior, cuts the northwest wall (M1).

The ceramic assemblage from the fort was very small, comprising only 32 sherds. The majority were unidentified, unglazed jars. No early or middle Islamic ceramics were identified, but some late Islamic pieces were found such as Bahla ware (BAHLA) and yellow bodied manganese underglaze painted ware (YELO. MGP). These support the late Islamic (17th to 19th centuries) dating of the fort, as suggested by the survey assemblage of ceramics and a coin.

A 2 x 1 m sounding excavated in the corner between M1 and M3, indicates that the fort was constructed directly on a sand deposit devoid of anthropogenic remains. We found no evidence for activity predating fort construction in this area.

Figure 18*: The fort at the beginning of the vegetation cleaning (on the left the north tower, on the right the south tower).*

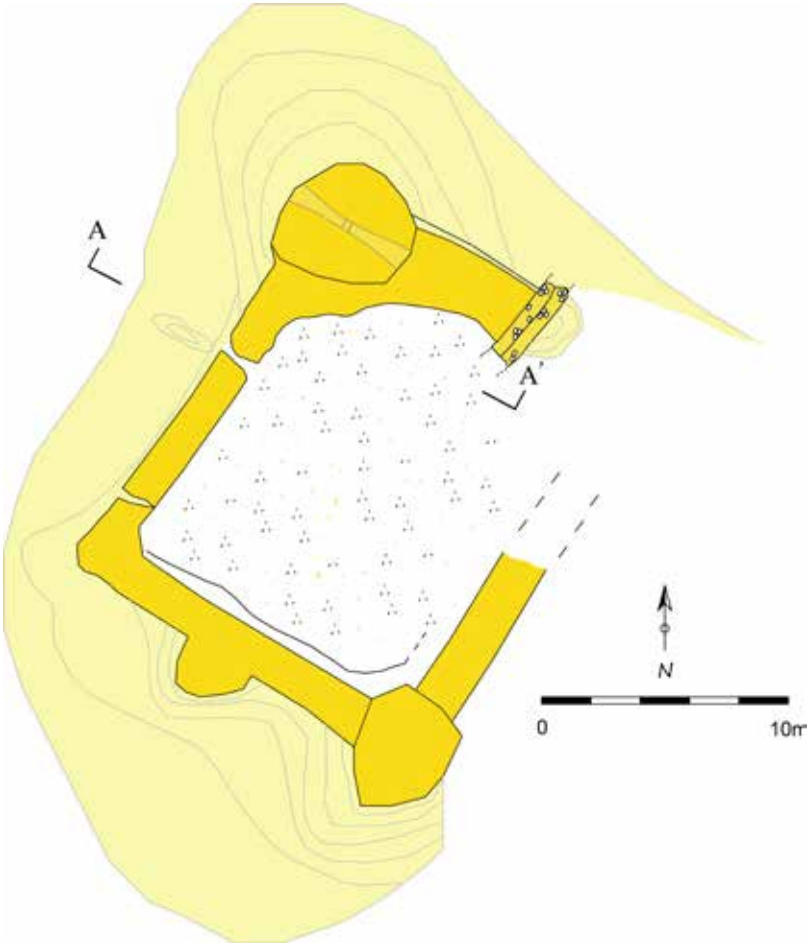

Figure 19*: General plan with indication of mud structures (yellow) and rain melted mud (yellowish).*

Sector B

Preliminary survey

Sector B, near the al-Rawḏah Roundabout (**Figs. 1-2, 12**), was initially surveyed in June 2013, yielding the largest amount of archaeological material of all areas (150 pottery sherds). The majority of sherds are unglazed and currently unidentified, although some reddish-paste and red-painted sherds appear Indian (Begley & De Puma 1991; Rougeulle 1991). The earliest group of pottery identified includes turquoise alkaline-glazed ware (ALGAZ.T) of the 8th to 10th century and plain white opaque-glazed bowls of the Samarra horizon (OPAQ.W) of the 9th to 10th century. The most abundant, however, are two types of sgraffiato: monochrome-green (GRAF.M/MONO.G) and hatched (GRAF.H) of the 11th to 13th century. A fourth common type is Bahla ware (BAHLA); a late Islamic type produced in central Oman between the 15th to 20th century.

A collection of possible Portuguese glass has also been identified, in particular a long-necked bottle dated to the 16th to 17th centuries. This type of glass vessel spread during the Portuguese occupation and disappeared after the Portuguese left (Medici 2005; Mendes 2002; Brill 1999).

The September survey between Sectors A and B confirmed that the latter contains the most early and middle Islamic material (ALGAZ.T and late GRAF), while late Islamic material has been found in both sectors and in the area in between. An additional survey of Sector B, covering the area not included in the June survey, was carried out before the September excavations. Over 500 sherds were collected (442 were identified), and the composition of the assemblage confirmed the previous dating

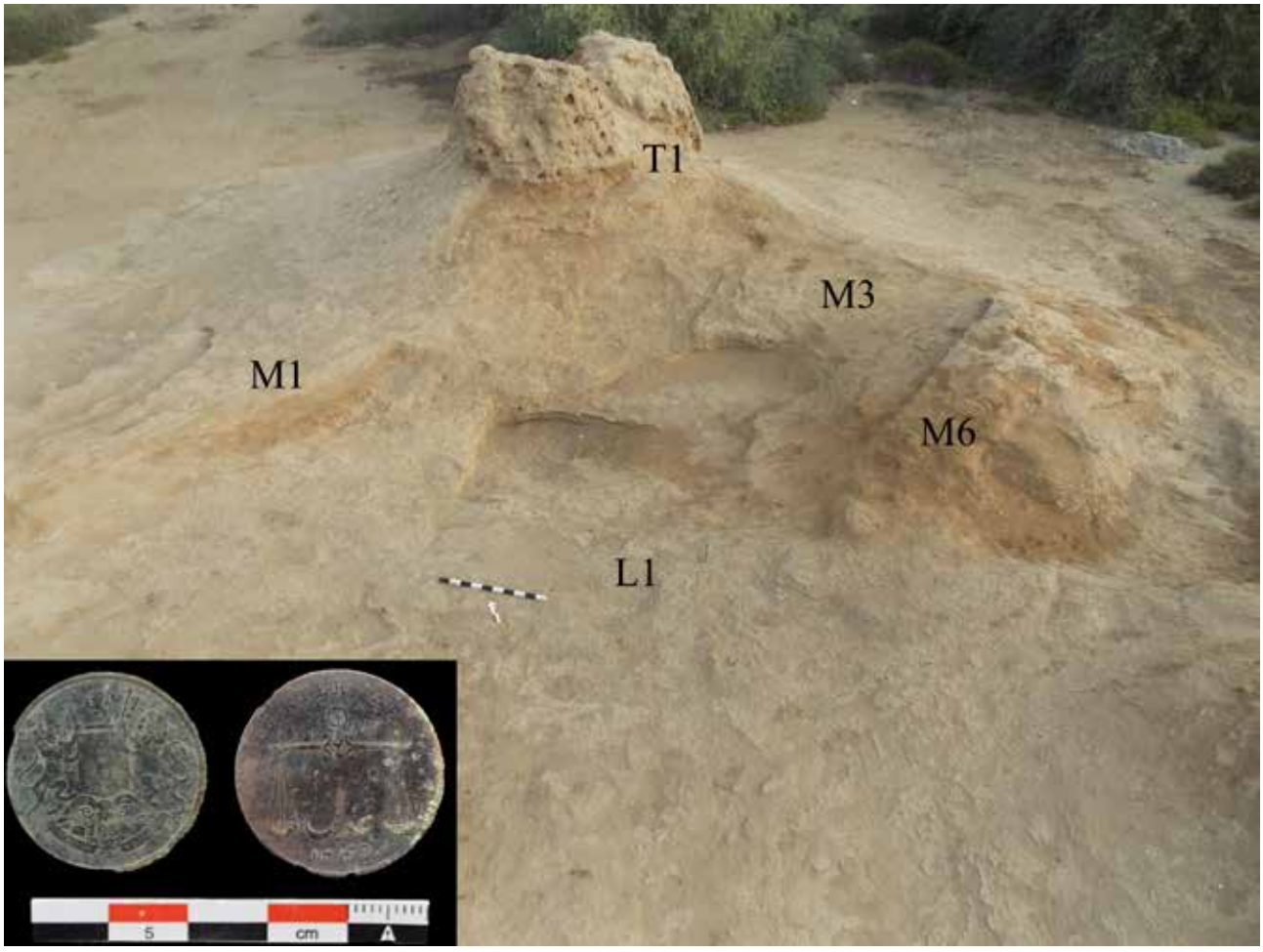

Figure 20*: Elevated view of T1 and related structures. On the right M6. In the middle the whole ground floor (L1).*

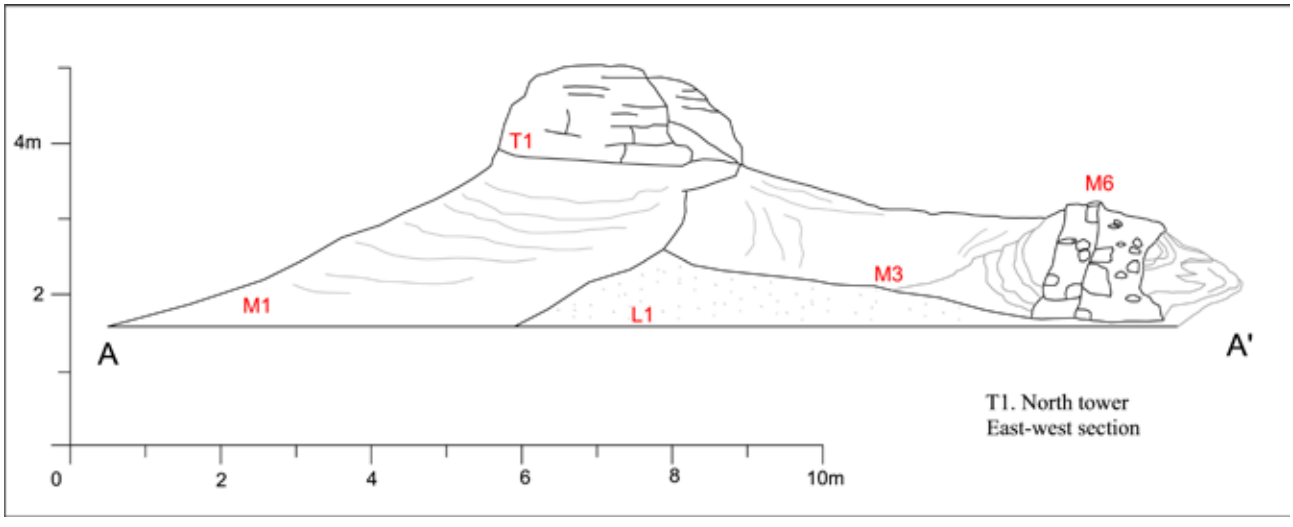

Figure 21*: T1 section.*

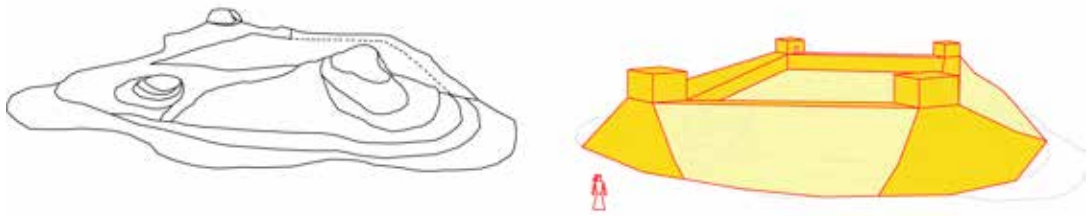

Figure 22*: Preliminary proposed reconstruction of the fort. View from southwest.*

of the area. Various types of sgraffiato were particularly well represented, accounting for 29% of the identified assemblage.

Excavations in Sector B

A first excavation trench covering an area of 5 x 5 m was opened north of the al-Rawḏah Rundabout, at the foot of an artificial mound. Although today, the mound is partially covered with modern buildings, this was not the case in 2002, and GoogleEarth imagery indicates the presence of structures and shell-midden accumulation on this mound (**Figs 23-24**).

After preliminary cleaning of surface garbage and topsoil with a JCB, nine archaeological levels were recorded. These are described in descending order from the latest (top) to the earliest (bottom).

Level 1: Surface, comprising sand, cement fragments, and pottery sherds dated between the early to late Islamic periods.

Level 2: Layer of sand (20 cm thick) and shell-midden material, mostly coming from food consumption; rare pottery fragments.

Level 3: Layer of sand (1 m thick), full of archaeological material. It formed over Level 4, a compacted earth floor, and was interpreted as the associated domestic occupation layer. The artefacts included various types of pottery (sgraffiato ware, fire-blackened cooking pots, large storage jars) (**Figs 25-26**), animal and fish bones, as well as a large quantity of shells. The latter were predominantly bivalves, with some *Cypraeidae, Strombidae* and *Conidae* also present. The species *Turritellidae* and *Potamididae,* especially *Terebralia palustris,* were common, which points to a mangrove environment.

Level 4: Compacted earth floor (30 cm thick), overlaying a second level of discarded material.

Level 5: Layer of sand and discarded material (40 cm thick) comparable to Level 3. It included late sgraffiato ware, animal and fishbones, and a shell assemblage comparable to Level 3.

Level 6: Level of compacted earth (10 cm thick) overlaying Level 7.

Level 7: Level of sand (10 cm thick), with some coarse ware sherds and a single piece of green glazed pottery.

Level 8: Compacted earth floor (20 cm thick).

Level 9: Layer of sand and discarded material comparable to Levels 3 and 5. A sherd of middle Islamic mustard sgraffiato was found, in addition to a bronze bell (**Fig. 27**).

The excavations were stopped in Level 9, 2.50 m below the surface, without hitting natural soil (**Fig. 28**).

Thus, Sector B yielded clear evidence of human activity dated from the 11th to 16th centuries. Layers of discard were periodically flattened and covered with beaten earth floors, but no further architectural remains associated with this activity have been identified. Remains such as animal bones (mammals and fish), shells, and fire-blackened cooking pots point to domestic occupation, while the large amount of pottery in comparison to Sector A suggests different uses of these two spaces. The presence of pre-11th century ceramics (ALGAZ.T, OPAQ#) on the surface, as well as the fact that the excavations did not reach natural soil, strongly suggest that occupation in this period began before the 11th century, at least as early as the 10th century and possibly earlier.

Figure 23*: Al-Raw□ah Roundabout excavation area*.

Figure 24*: Mound in al-Raw□ah Roundabout area in 2002*.

Figure 25*: Pottery from Level 3: late sgraffiato (GRAF) and champleve (CHAMP).*

Figure 26*: Pottery from Level 3: Top left late Islamic glazed ware; below storage jars*.

Conclusion

The 2013 archaeological campaign at As Sib, comprising survey and excavations, has allowed us to define the main archaeological areas, their periods of occupation, and the type of settlement on the site. Although the development of the modern city has strongly reduced the chance to define the spatial boundaries and urban characteristics of ancient Damā, we were still able to reach some conclusions by combining multiple sources of data (survey, excavation, historical research, ceramic analysis, malacology, environmental data, etc). Thus, our analyses follow a landscape approach that can improve the information potential of such disparate data, linking together information on the cultural and natural environment related to a significant and long-lived urban centre on the southern al-Bāṭinah.

It should be noted that during subsequent visits to As Sib one of the present authors (Kennet) found a Type 64 Sasanian jar at 23°39'28"N 58°12'36"E. This is a type now widely recognised as being dated to the late Sasanian period (e.g. Kennet 2004: 37-8, fig. 5), and is – so far – the earliest datable fragment of post-Iron Age pottery located at As Sib. In the same part of the site, relatively dense scatters of Samarra horizon wares of the 9th century, and late sgraffiato wares of the 11th to 13th centuries were observed within a radius of about 200 m around point 23° 39'28"N 58°29'00"E, and a fragment of early Longquan celadon close to 23°39'37"N 58°12'43"E. These finds are worth mentioning for two reasons: firstly, the Type 64 extends the date range of activity at the site back to the 6th or even 5th century, and secondly, the finds in this area indicate clearly that the survey undertaken so far

Figure 27*: Bronze bell from Sector B, Trench 1, Level 9, between discarded materials*.

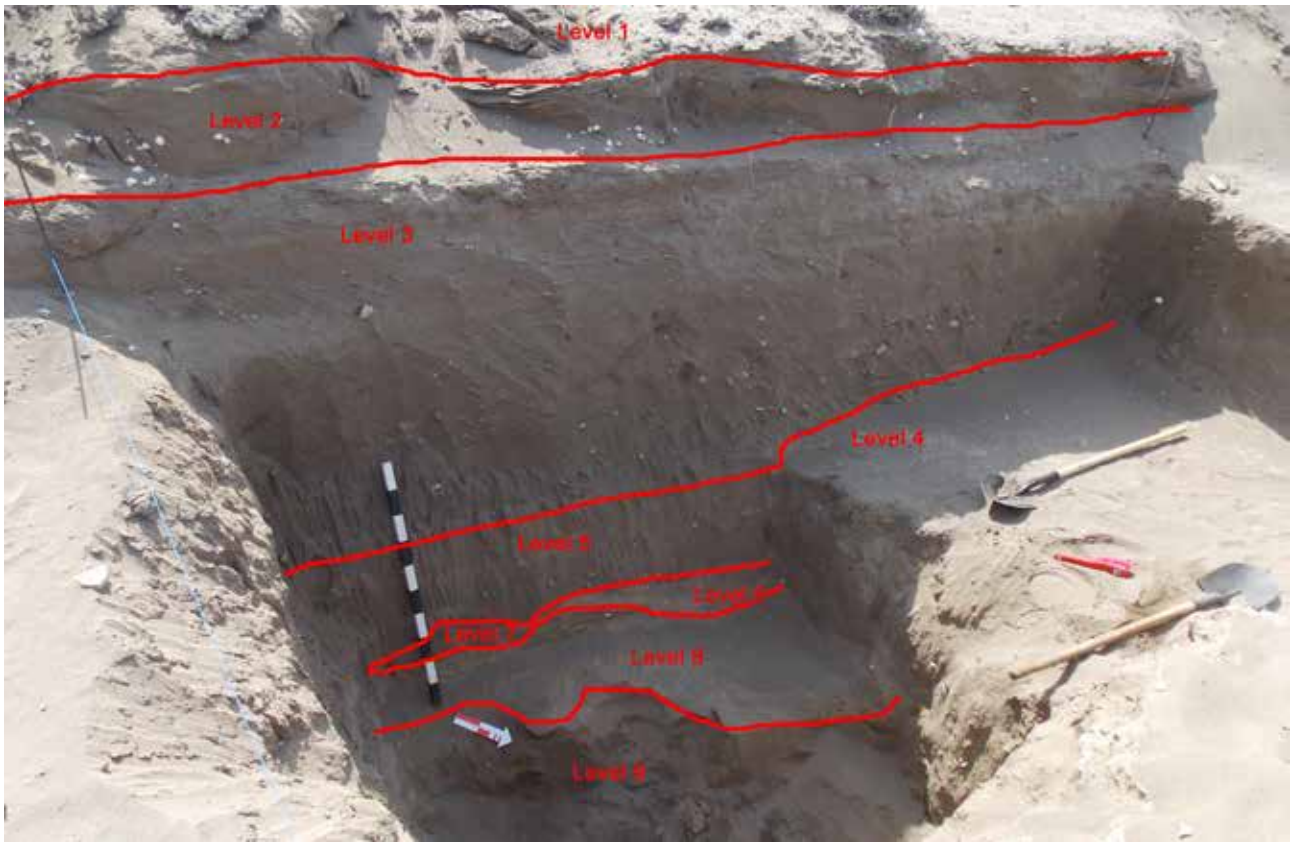

Figure 28*: Sector B, Trench 1 stratigraphy.*

has not yet mapped the full extent of early Islamic occupation at As Sib.

In Sector B (within the frame of this survey), i.e., the area around the al-Rawḍah Roundabout, we have defined what appears to be the ancient core of the site. It has pottery certainly dated from the 9th century together with categories that may extend earlier to the 8th century. Subsequent occupation extends through to the present day with a notable gap between the 14th to 16th centuries. Finds include both artefacts related to domestic activity (pottery for food consumption and preparation) and to regional and long-distance commercial connections (material from China, India, Iran, Iraq, and Portugal, as well as elsewhere in Oman). This confirms that, as historical sources suggest, medieval and early modern Damā was a significant commercial maritime harbour. What remains unclear at the moment are the location of architectural structures related to the household assemblages of Sector B, as well as evidence of how the area was provided with water: so far, no traces of wells or *aflāj* have been detected.

According to the analysis conducted by the German University of Technology, there is geological evidence of a paleo-tsunami along the coastline of Oman (Hoffmann et al. 2013), as well as historic evidence of past inundation events. These include a flood in 985 CE and a tsunami in 1008 CE, which is at a time when Sector B was seemingly occupied (Ambraesys & Melville 1982: 3 9; al-Sālimī 1931-32: 135). Such an event may partially explain why no architectural evidence for this phase has been detected. However, this is more likely to be due to the very limited excavation cover, especially as no evidence pointing to the inundation event has been identified.

The second area of the settlement identified in 2013 is the fort in Sector A, which testifies to a later period of occupation, probably between the 17th to 19th centuries. Although it is not clear precisely when

the fort was constructed, it was definitely occupied in the late 17th to early 19th century. The survey in Sector A clearly demonstrates that the occupation extended beyond the fort itself following a paleo-*khor* nowadays covered by alluvial sediments (**Figs 29-30**), although it was of a much more ephemeral nature. Further excavations of the building, this time with the aid of an architectural conservator, would help further clarify the shape and architectural features of the fort.

The archaeological complex at As Sib represents the site of a large-scale and long-term occupation on the southern al-Bāṭinah with a major concentration of activity in the early Islamic period (c. 8th–10th century) and continued significant development in the middle and late Islamic periods. The early Islamic occupation corresponds to a critical moment in history that witnessed the first urban-scale settlements in Oman, at Ṣuḥār (Williamson 1973a; Kervran 2004) and perhaps to some extent also at As Sib/Damā and Rās al-Hadd (Cleuziou, Reade & Tosi 1990: 34). This was a period of substantial intensification in agriculture, irrigation, and the exploitation of mining resources the al-Bāṭinah (Costa & Wilkinson 1987; Weisgerber 1980), coupled with the rising prominence of Oman as a central intermediary in the mercantile economy of the Indian Ocean. These factors are clearly reflected in the diverse material culture represented across the medieval settlement of Damā/As Sib and especially by the high quality of certain object categories, including pottery.

In considering the broader development of As Sib as indicated by the finds mentioned in this paper, it is possible to make the following observations on different periods:

Sasanian Period

The alkaline glazed Type 64 vessel mentioned above is indicative of late Sasanian activity, but the extent and duration of this activity is impossible to estimate from this single find. This may be an isolated example, or it may be indicative of a phase of activity at the site that has so-far remained undetected.

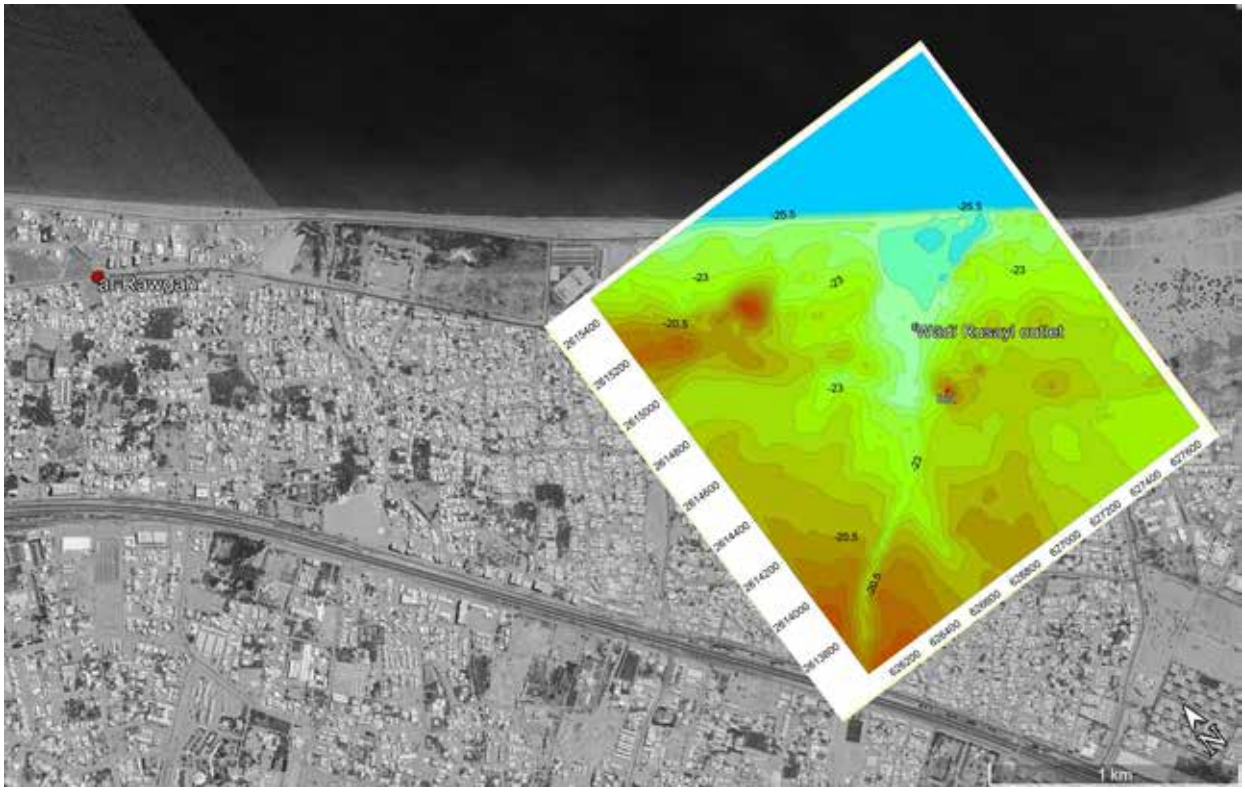

Figure 29*: The ancient coast line and the location of the fort (geomorphological elaboration by G. Hoffmann)*

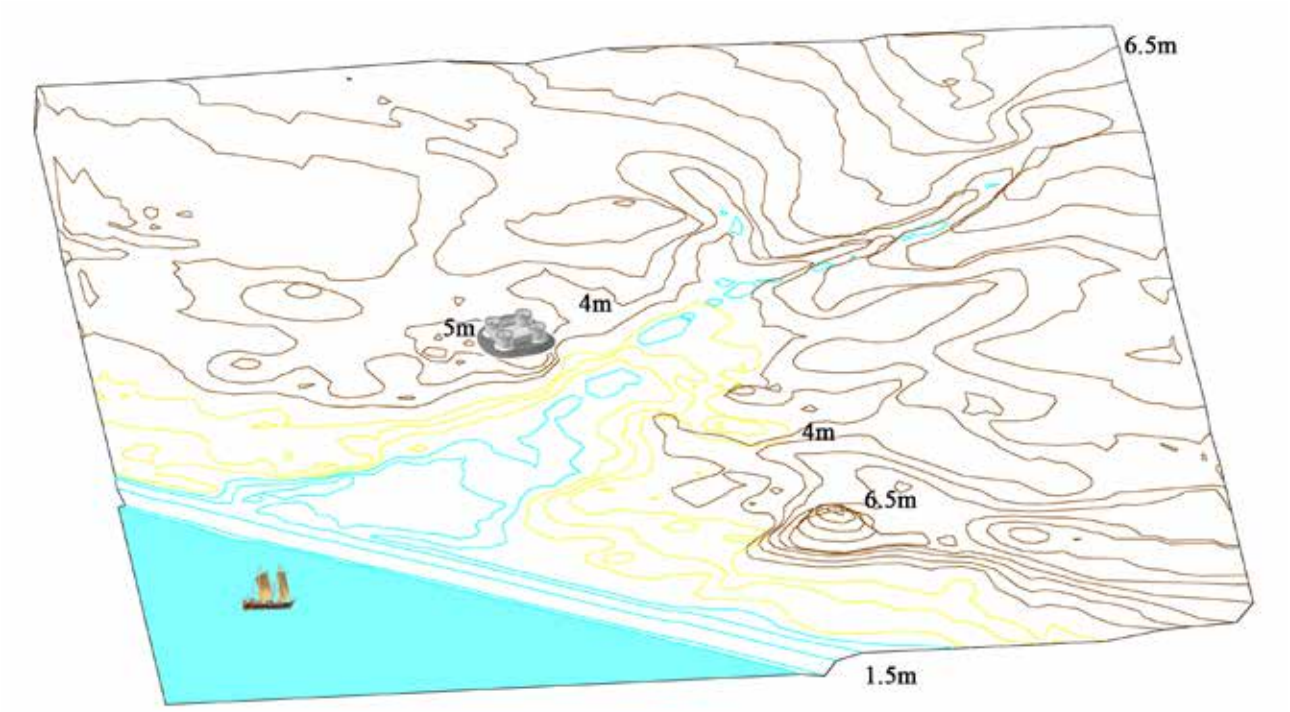

Figure 30*: 3D reconstruction of the wadi outlet guarded by the fort (3D model C. Cafora, topographic map G. Hoffmann)*

The 7th/8th centuries

So far it has not been possible to find any clear evidence of early Islamic activity at the site that certainly pre-dates the 9th century 'Samarra horizon' period. Such evidence is most likely to consist of Type 72 bowls of turquoise alkaline glazed ware (e.g. Kennet 2004: 37-8, fig. 5), but there are other types of this period that continue into the 9th century. It is therefore possible, even likely, that there was activity at the site at this time, but clear, irrefutable evidence for this has still not come to light.

The 9th century

Activity at this time is clearly indicated by the abundant presence of Samarra horizon wares, such as white opaque glazed ware (OPAQ.W), which are known to have begun circulating in the region between about 803-4 and 835-6 CE (Kennet 2004: 40-1). It seems that this is the time at which the site really developed into an intensively occupied and growing settlement. There is as yet no certain evidence of activity in the 10th century, but this is again a feature of the pottery typology. It seems likely that occupation continued during this time.

11th to 12th century

This period is clearly represented by abundant hatched sgraffiato ware (GRAF.H) (e.g. **Figs 29: a; 31; 32: c, g, i, n**).

12th to 13th century

This period is also well represented at the site by monochrome sgraffiato wares (GRAF.G/Y). It is interesting that this period is almost entirely absent from Ṣuḥār, 180 km further north on the al-Bāṭinah, which was, according to Williamson, in a phase of marked decline (Williamson 1973a: 19).

14th to 16th century

This is the period covered by the occupation of Julfār in Ras al-Khaimah (e.g. Kennet 2003). Interestingly many of the wares that were commonly found at Julfār, including Chinese

Longquan celadons, are almost entirely absent from As Sib and it is not at all certain that there was any substantial activity at the site at this time. It should be noted that this period was also hardly represented at Rustaq, so far as the recent Rustaq Batinah Archaeological Survey was able to detect (Kennet et al. 2016), although it is strongly represented at Qalhāt, 350km further down the coast (personal observation; Rougeulle et al. 2014).

17th to 20th century

This period, which should ideally be subdivided chronologically once more material is available for study, is abundantly represented at As Sib, in particular by wares such as yellow bodied manganese underglaze painted ware (YELO.MGP) and some of the Chinese wares. This takes the development of As Sib through to the modern era. It may well be that the town was re-founded upon an almost abandoned site at some time during the 17th or 18th century. This is a question that it still to be resolved.

Broadly speaking, the development of As Sib reflects wider trends in the development of Islamic period settlement in northern Oman and the UAE region. Most scholars would agree that there was a reconfiguration of settlement in the region during the 7th and 8th centuries, which resulted in a completely new pattern of occupation (e.g. Kennet 2012) and this is a pattern that has been found at Rustaq, 100 km further up the al-Bāṭinah where new settlements appear to have been founded following a long period of limited activity. It is possible that the site of As Sib first came into existence at this time and developed into an increasingly important port during the first three centuries Hijra.

The 11th to 13th centuries are represented at sites in northern Oman and the UAE (Whitcomb 1975), in some places this appears to be indicative of dense, vibrant activity, in other places, such as Ras al-Khaimah, of a more ephemeral nature (e.g. Kennet 1997). The strong representation here at As Sib is notable and may reflect the specific role the site had connecting the Omani interior to the sea via the Sumail gap.

The paucity of evidence for activity during the 14th to 16th century period at As Sib reflects, as has been said above, the pattern of development around Rustaq and on the al-Bāṭinah more generally. It is not clear why the al-Bāṭinah area should have undergone an apparent decline in activity at this time, whilst much of the rest of the region, for example Julfār, Hormuz, and Qalhāt was flourishing (e.g. Williamson 1973b; Kennet 2002; 2012). This fact may reflect the political and economic configuration of the region at this time.

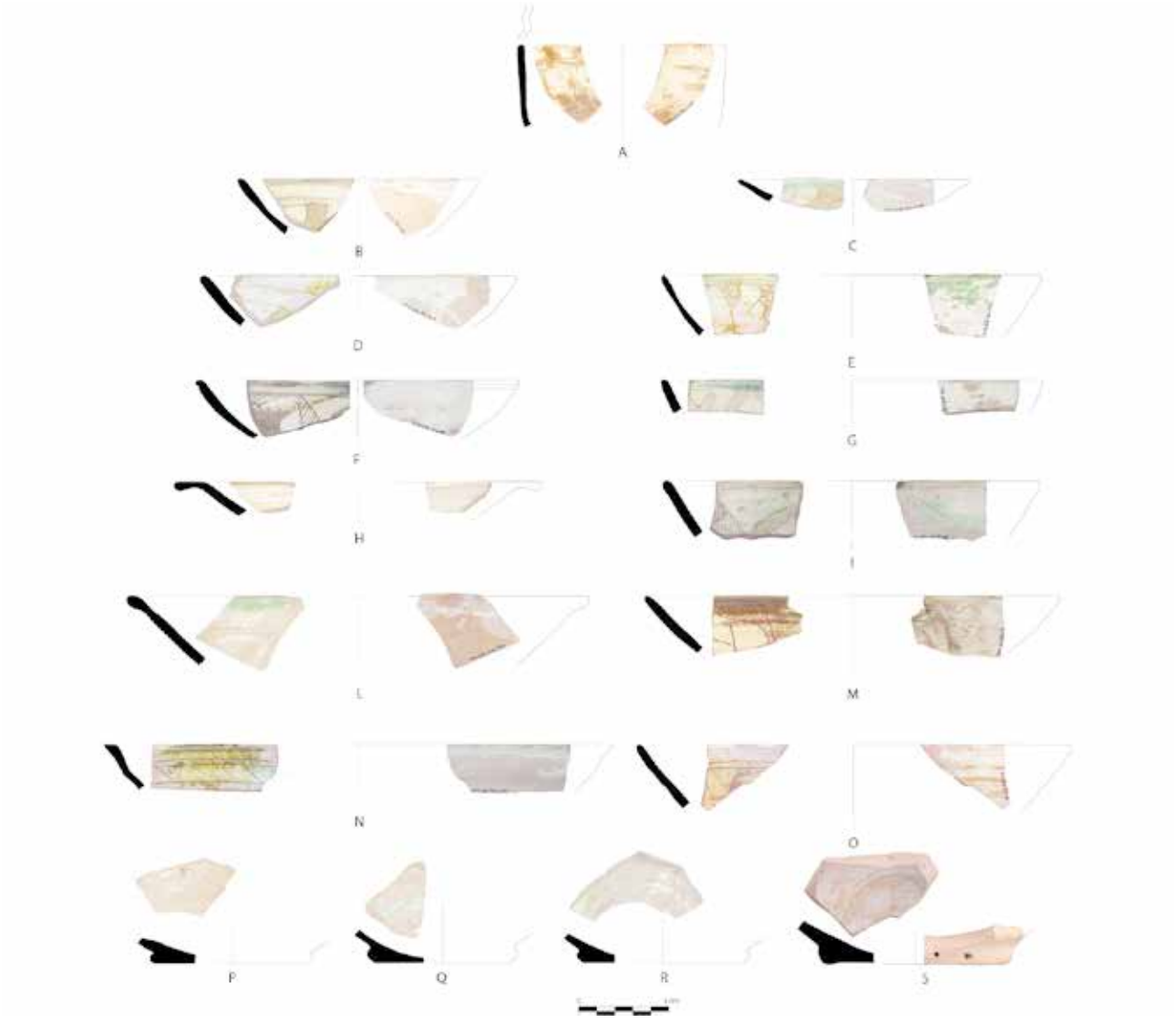

Figure 31*:*

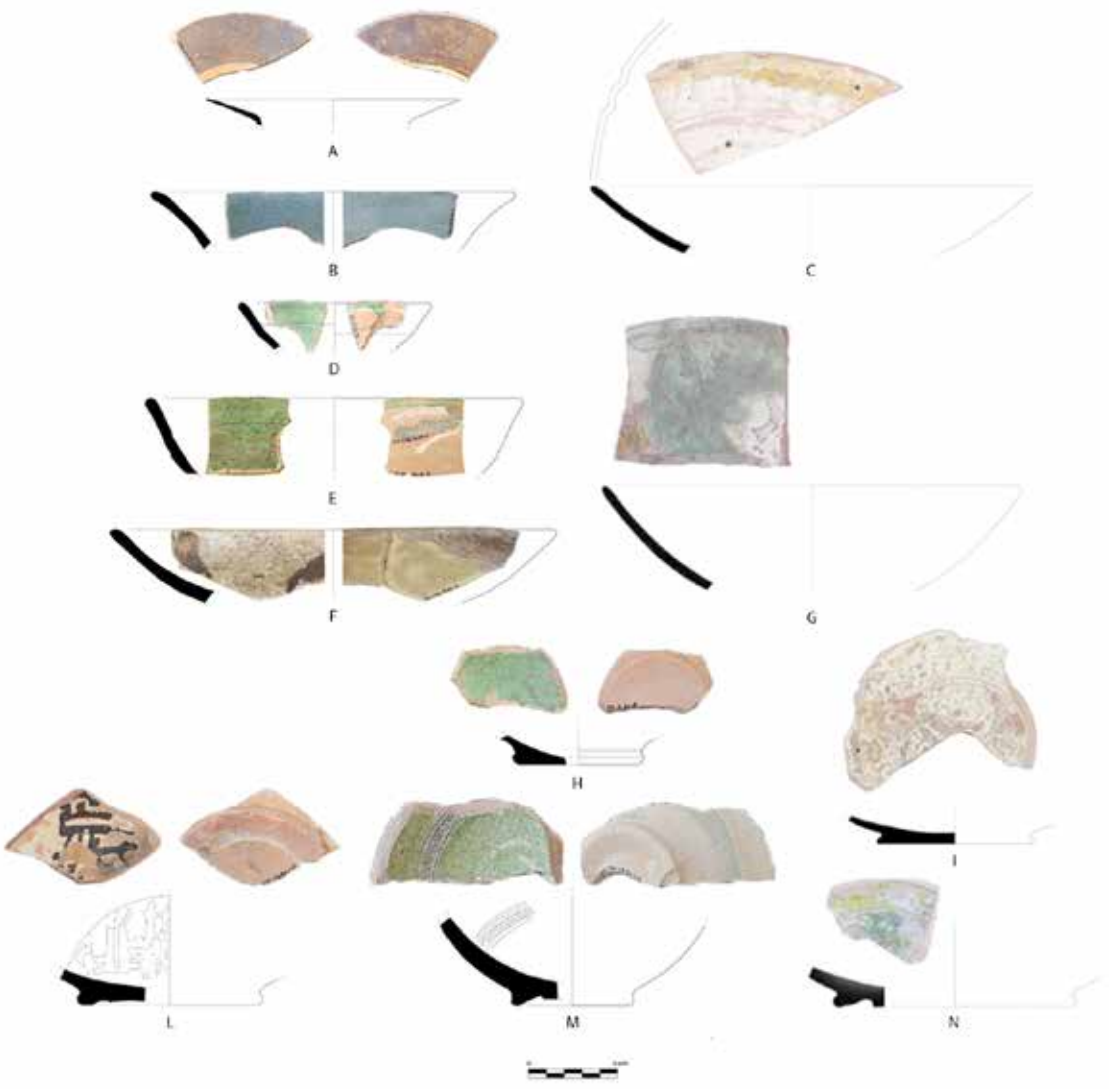

Figure 32*:*

Appendix: ceramic ware classes

This appendix includes a general description of the ceramic classes that have been identified in As Sib, including the areas where specimens have been found. They are listed according to their frequency in the assemblage. Figg. 33 and 34 show some of the sherds listed in the catalogue.

Unglazed Ware (UNG)

Includes: All the different types of unglazed pottery (unidentified) (**Figs 8: a; 9: a; 10: a; 26: b**)

Areas: Sector A (survey, Level 3, Level 5, Level 6); Sector B (survey, Level 1, Level 2, Level 3, Level 4, Level 5); Survey (WP9, WP10, WP11, WP12, WP13, WP14, WP34, WP35, WP36).

Number: 58% (957)

Identified shapes: Small jars (ovoid, globular or sub-globular) with a narrow neck and everted or horizontal rim, big jars with long neck and thickened or everted rim, medium size jars, vertical handles, flat or disk bases.

Fabric: Red, blackish, brownish, orange, grey, whitish, pinkish, white, beige, yellowish. Sandwich fabrics are also attested. Some are compact and fine fabrics, others are very coarse.

Comparisons: Various.

Dating: Various.

Comments: This is a catch-all class which includes all the unidentified, unglazed pottery from the site. Consequently, the specimens represented are very heterogeneous. Generally, the surfaces are simply polished, or covered by a slip. Very rarely sherds have been smoothed. Decorations are mostly concentrated on the shoulders of the vessels, but they are attested also on the walls and necks. Different kinds of ornamentation are attested: incisions (very common; single or multiple lines, segments, bands, waves, sometimes realized with a comb), impressions (dots, shell, or nail impressions), paintings (very rare; single or multiple parallel lines), applications (very rare; strip with or without impression). Complex decorative motifs are also attested, such as backgrounds created by engravings filled with dotted motifs. Some sherds, mostly from Sector B, are fire blackened.

Origin: Unclear.

Undetermined (UND)

Includes: All the glazed fragments whose surfaces are too corroded to identify the ceramic class, as well as all counted fragments for which there is no surface treatment information.

Areas: Sector A (survey); Sector B (survey); Survey (WP11, WP12, WP14, WP34).

Number: 14.3 % (235)

Identified Shape: Various.

Fabric: Various.

Parallels: Various.

Dating: Various.

Comments: na.

Origin: Various.

Sgraffiato Ware (GRAF)

Includes: Lead glaze sgraffiato ware with white slip and splashes (green, yellow, brown); hatched sgraffiato; late polychrome splash sgraffiato; green on white sgraffiato; other related wares; slip painted sgraffiato (**Figs 25: a; 31; 32: c, g, i, n**).

Areas: Sector A (survey); Sector B (survey, Level 2, Level 3); Survey (WP36).

Number: 6.24% (103)

Identified shapes: Bowls with unflexed or everted rim, rarely polylobate, ring (7,4 cm > ø > 9 cm) or disc (10 cm > ø > 14 cm) bases.

Fabric: Opaque, hard, compact. Matrix colour: 7.5 YR 8/4; 10YR 7/4. Inclusions: small and very rare, round and sub-angular; black, white, brown.

Parallels: Dreiser 2014: 373, 379; Kennet 1994: 191-192; Kennet 2004: 34-37; Priestman 2008: 270-274; Priestman 2013: 583-593; Rougeulle 2005: 228-230.

Dating: 11th-13th century.

Comments: The different types of sgraffiato are all grouped together because in several cases, tiny, eroded fragments with crystalline concretions are difficult to categorize. Furthermore, since the study is a preliminary screening, it did not seem necessary to split the *corpus*. Despite this, it is a very coherent and distinctive class. It is generally homogeneous and thin walled, although different thicknesses have been registered. The slip is attested inside

and sometimes also outside, with dripping that might suggest an immersion technique. Sometimes it produced a granular appearance because of the presence of impurities. Decorations are exclusively on the interior. Different patterns have been recorded: parallel lines, geometric elements filled with oblique lines, floral motifs, festoons, concentric circles, wings, palmette motifs, etc. In a few cases, one line of pseudo inscription crudely excised under glaze, parallel to the rim, is also attested. The style is pseudo-Kufic with triangular apices. The champlevé sgraffiato shows very simple decorative motifs. Lead transparent glossy glaze is always attested inside, sometimes outside in a small portion close to the rim. It is always colourless, except in a few cases in which the glaze has a yellowish tinge. This represents the ceramic class with the biggest post-firing passing hole number. The working hypothesis is that they were needed for the suspension of the vessel.

Origin: Southern Iraq and Iran.

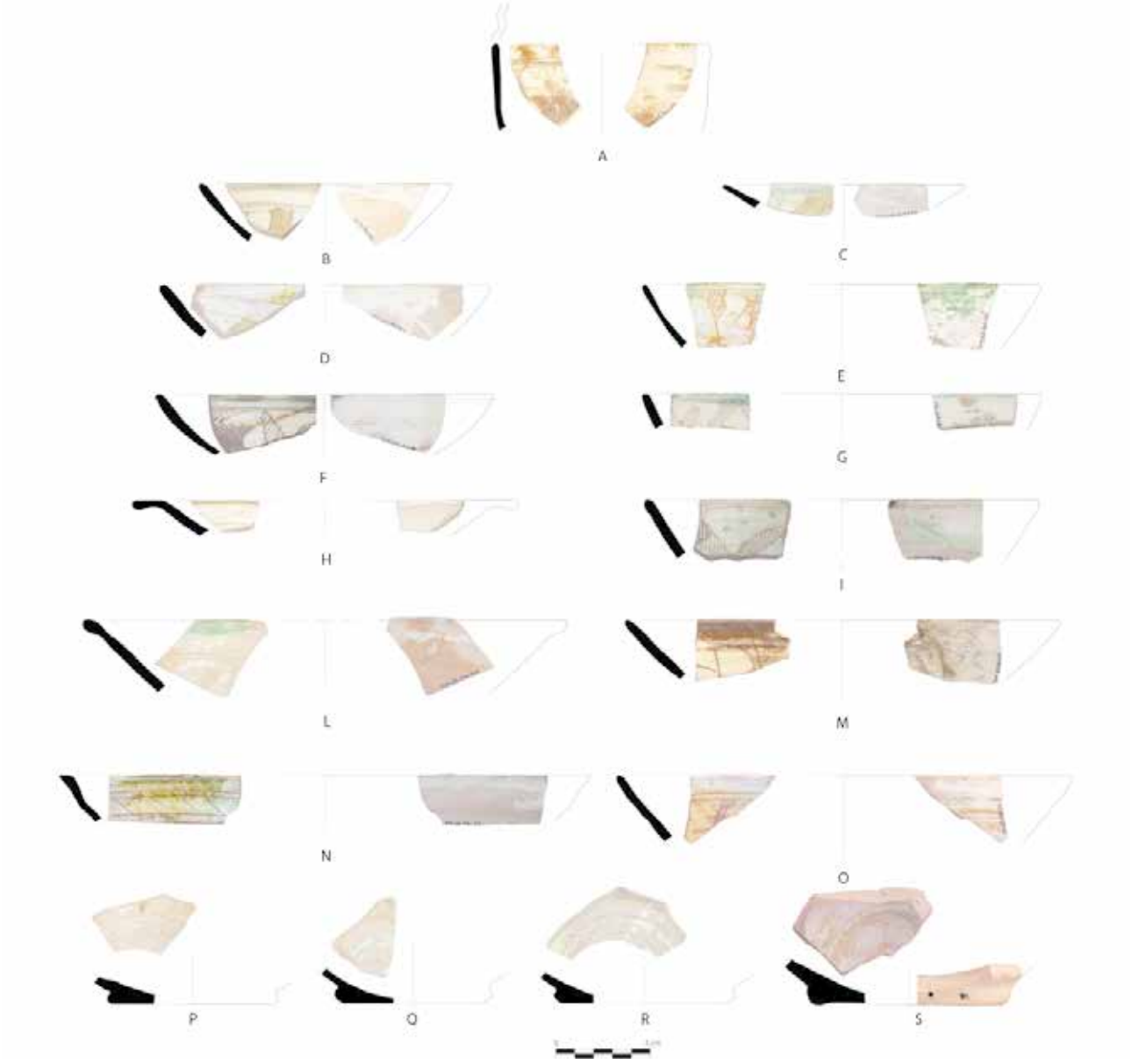

Figure 33*: A selection of fragments from Sector B. A-S: GRAF.*

White Opaque Glaze Ware (OPAQ)

Includes: Plain white opaque glaze ware, black decorated glaze (**Figs 7: c; 32: f, l**).

Areas: Sector A (survey, Level 6); Sector B (survey, Level 1, Level 2, Level 3); Survey (WP9, WP10, WP14, WP34, WP35, WP12).

Number: 3.63% (60)

Identified shapes: Undefined closed shapes (?), bowls, carinated walls, disc (5,5 cm < ø < 10 cm) and ring (ø = 6 cm) bases.

Fabric: Opaque, semi-hard, variable porosity. Matrix colour: 2.5Y 8/2; 2.5Y 8/3; 10 YR 8/2. Inclusions: small and very rare, round or sub-angular black, white, yellowish, grey.

Parallel: Kennet 1994: 192; Kennet 2004: 34; Priestman 2008: 266-267, 276; Priestman 2011: 108; Priestman 2013: 558-559; Rougeulle 2005: 225-226.

Dating: 9th-10th century.

Comments: The class shows a glaze coating with a variable thickness that tends to come off due to poor adherence to the wall, with a high degree of degradation. Dripping and irregularities have been also observed. Just three sherds show painted decoration in the centre of the vessel or on the walls, close to the rim. Few after-firing perforated fragments are attested.

Origin: Southern Iraq.

Turquoise Alkaline Glazed Ware (ALGAZ.T)

Includes: Turquoise Glazed Ware with or without underglaze applied decoration; Blue-Green Glazed Ware.

Areas: Sector A (survey, Level 6); Sector B (survey, Level 2, Level 4); Survey (WP12, WP35).

Number: 3.33% (55)

Identified shapes: Bowls; jars with neck; horseshoe-shaped handle; flat, ring and disc bases (13 cm < ø < 20 cm); flask.

Fabric: Opaque, semi-hard, porous and chalky. Matrix colour: 2.5Y 8/2; 2.5Y 8/3; 10 YR 8/2. Inclusions: small and rare, round or sub-angular; black, white, yellowish, grey.

Parallels: Dreiser 2014: 375, 379; Kennet 1994: 188; Kennet 2004: 29-30; Priestman 2008: 262-265; Priestman 2013: 555-556; Rougeulle 2005: 224-225.

Dating: 7th-10th century.

Comments: Vessels have thick walls and heavy, irregular glaze with a good adherence. Even if the glazing method is uncertain, it is possible that the vessels were left to dry upside-down, as demonstrated by the glaze that is thicker closer to the rim and has a less intense colour towards the bottom. Additionally, the glaze is concentrated in parallel strips. Sometimes interior and exterior glazed surfaces seem to be of different colours. Vessels present different degrees of degradation: in general, they are more degraded externally, and are bullous internally. Underglaze decoration (present on 25% of the sherds) mainly consists of clay strips or bands applied, sometimes pressed, at more or less regular intervals.

Origin: Southern Iraq.

Early Monochrome Green Glazed Sgraffiato (GRAF.G/MONO.G)

Includes: Early Monochrome Green Glazed Sgraffiato (**Fig. 32: d, e, m**).

Areas: Sector B (survey, Level 2).

Number: 3.09% (51)

Identified shapes: Bowls, ring feet (ø = 7 cm)

Fabric: Opaque, hard, compact. Matrix colour: 7.5 YR 8/4. Inclusions: small and very rare, round; black, white.

Parallels: Dreiser 2014: 374; Kennet 2004: 35-36; Priestman 2013: 580-581

Dating: 10th-12th century.

Comments: Vessels are characterized by the presence of a whitish slip and a lead gloss coating. The slip and glaze are always attested internally, while externally walls and feet are left plain. Slip tends to be thin, cohesive, and adheres to the wall. Sometimes, the external drips suggest the use of the immersion technique. Decorative patterns are very simple and sometimes quite crudely incised. Engravings and incisions create geometric decorative elements, such as lined and curved segments, parallel lines (more or less equidistant), reticulates, festooned motifs, ornaments defined in concentric circular spaces. Chromatic alterations

of the coating have sometimes been noted, with the green not being evenly distributed. Post-firing holes present in a couple of cases.

Origin: Southern Iran.

Opaque Black Glazed Ware (OPAQ.B)

Includes: all sherds characterized by a black, opaque glaze (**Fig. 7: b**).

Areas: Sector A (survey, Level 5); Sector B (survey, Level 3); Survey (WP10, WP11, WP35, WP12).

Number: 1.52 % (25)

Identified shape: Small jars with everted rim, bowls, ring bases.

Fabric: Opaque, porous, and chalky. Matrix colour: 2.5Y 8/3. Inclusions: small and very rare, round, black.

Parallels: Priestman 2008: 277-278, Priestman 2013: 567

Dating: 9th-10th century.

Comments: The class includes all the sherds with a black opaque glaze. Even if differences have been noted (glaze can be more or less glossy, shiny or granular) the pottery is all grouped together, at least until a more detailed study.

Origin: Southern Iraq.

Mustard Glazed Ware (MUST)

Includes:

Areas: Sector A (survey, Level 3); Sector B (survey, Level 1, Level 2, Level 4).

Number: 1.39 % (23)

Identified shape: Bowls (small and large) with unflexed or thickened inverted rim, disc bases (ø = 9,2 cm). A single closed form also identified.

Fabric: Opaque, semi-hard, medium porosity. Matrix colour: 2.5Y 8/3; 7.5 YR 8/4; 10YR 7/4. Inclusions: very small and sparse, black, white, brown.

Parallel: Dreiser 2014: 375; Kennet 2004: 43

Dating: 14th-18th century.

Comments: Slip rarely attested (brownish/reddish or white), inside and outside. The mustard glaze is dark and dull, and it is attested inside, more sporadically outside. It is also very compact, with a good adherence to the wall, but with a granular surface.

Origin: Unknown.

Mustard Glaze Ware Sgraffiato (GRAF.M)

Includes: Mustard Glaze Ware Sgraffiato (**Fig. 10: b**).

Areas: Sector B (survey, Level 5); Survey (WP36).

Number: 1.09 % (18)

Identified shapes: Bowl.

Fabric: Opaque, hard, compact. Matrix colour: 7.5 YR 8/4. Inclusions: small and very rare, black, white.

Parallels: Kennet 1994: 193, Kennet 2004: 35; Priestman 2013: 594-595.

Dating: 11th-13th century.

Comments: The class belongs to the Late Monochrome Sgraffiato tradition. It is glazed on the interior. Sometimes, the colour is altered by the bad state of preservation. The decorative patterns identified include curved and straight lines, more or less equidistant, oblique or parallel to the rim.

Origin: Southern Iran?

Yellow Bodied Manganese Painted Ware (YELO.MGP)

Includes: Manganese Painted Ware (Fig. 10: b).

Areas: Sector A (survey); Sector B (survey); Survey (WP12, WP35).

Number: 1.09 % (18)

Identified shape: Bowls?

Fabric: Medium-soft, yellowish.

Comparisons: Kennet 2004: 40-41; Power 2015: 10-12; Priestman 2013: 620-623; Priestman 2020: fig. 7: 8.

Dating: 17th-20th century.

Comments: This class is characterised by underglaze painting, mostly on the interior of the vessels, rarely on the exterior. Decoration comprises bands, waves and strips, sometimes crossing, painted on the surface or sometimes on a whitish slip. The glaze sometimes is transparent/light bluish, often very eroded.

Origin: Unknown.

Chinese Ware (CBW and others)

Includes: Chinese imitations, Chinese imports, underglaze painted stoneware, celadon, Chinese blue and white, and all related (i.e., East Asian or visually similar) ware that will be the object of further study (**Fig. 7: a**).

Areas: Sector A (survey, Level 3, Level 5, Level 6); Sector B (survey); Survey (WP11, WP35).

Number: 1.03 % (17)

Identified Shape: Small bowls, ring bases.

Fabric: Earthenware, stoneware, porcelain.

Comparison: Fusaro 2020: 79-80, Priestman 2013: 677-678.

Dating: Various.

Comments: na.

Origin: East Asia.

Monochrome Green Glazed Ware (MONO.G)

Includes: Monochrome Green Glazed Ware (**Fig. 32: h**).

Areas: Sector A (survey); Sector B (survey), WP11

Number: 0.97 % (16)

Identified shapes: Unknown.

Fabric: Compact orange or buff.

Comparisons: Kennet 2013: 43-44; Priestman 2013: 595-596.

Dating: 11th-13th century.

Comments: Lead glaze on the interior and partially on the exterior, especially close to the rim. Sometimes white slip present.

Origin: Southern Iran.

Monochrome Opaque Turquoise Glazed Ware (OPAQ.T)

Includes: Monochrome Opaque Turquoise Glazed Ware (**Fig. 32: b**).

Areas: Sector A (survey); Sector B (survey, Level 4); Survey (WP11).

Number: 0.85% (14)

Identified shapes: Bowls.

Fabric: Opaque, semi-hard, compact. Matrix colour: 10 YR 8/2. Inclusions: small and very rare, round, black, white.

Comparisons: Fusaro 2020: 77-78; Priestman 2011: 108; Priestman 2013: 566-567, 635-636.

Chronology: 9th-10th century.

Comments: Translucent gloss inside and outside that turns pale with degradation. Easily distinguishable from TURQ because of the thicker fabric.

Origin: Southern Iraq.

Bahla Ware (BAHLA)

Includes: Bahla Ware (**Figs 7: b-c; 25: b; 26: a; 34: a**).

Areas: Sector A (survey, Level 3); Sector B (survey); Survey (WP9, WP11, WP35, WP12).

Number: 0.73 % (12)

Identified Shape: Bowls, disc or ring bases. Deeply ribbed body.

Fabric: Opaque, very hard, dark orange/buff/gray fabric

Parallel: Dreiser 2014: 375, 378; Fusaro 2020: 82; Kennet 1994: 189; Kennet 2004: 42-43; Power 2015; Priestman 2008: 277-278; Priestman 2013: 631-632; Priestman 2020: 303; Živković et al. 2019: 4697-4698.

Dating: 14th-20th century.

Comments: The glaze is always attested inside the vessels without any preparation slip layer. It seems speckled, with darker or lighter spots. The glaze can be dark greenish, yellowish or brown, poorly distributed.

Origin: Oman.

Underglaze Painted Ware (UGP)

Includes: Underglaze Painted Ware.

Areas: Sector B (survey); Survey (WP35)

Number: 0.61% (10)

Identified Shape: Bowls.

Fabric: Various.

Parallels: Fusaro 2020: 79, Priestman 2013: 626-27.

Dating: 14th-18th century.

Comments: The vessels are mostly decorated on the interior, sometimes also on the exterior. The decorative patterns include parallel or intersecting

lines of different thickness and spots. The dominant colours of the background and painted decoration are midnight blue, turquoise, and light greenish.

Origin: Iran?

Green on Yellow Splashed Glazed Ware (SPLASH.P)

Includes:

Areas: Sector A (survey); Survey (WP12).

Number: 0.12% (2)

Identified Shape: Closed vessel?

Fabric: Pale orange/pink.

Parallel: Priestman 2013: 654.

Dating: 9th century.

Comments: Incised, impressed and applied decoration (might be stamped?). Green splash on opaque yellow glossy glaze.

Origin: Southern Iraq.

Brown and Green Glazed

Areas: Survey (WP11).

Number: 0.06 % (1)

Shape: Unknown.

Fabric: Various.

Parallel: Various.

Dating: Unknown.

Comments: Brown inside, green outside with a strip of brown.

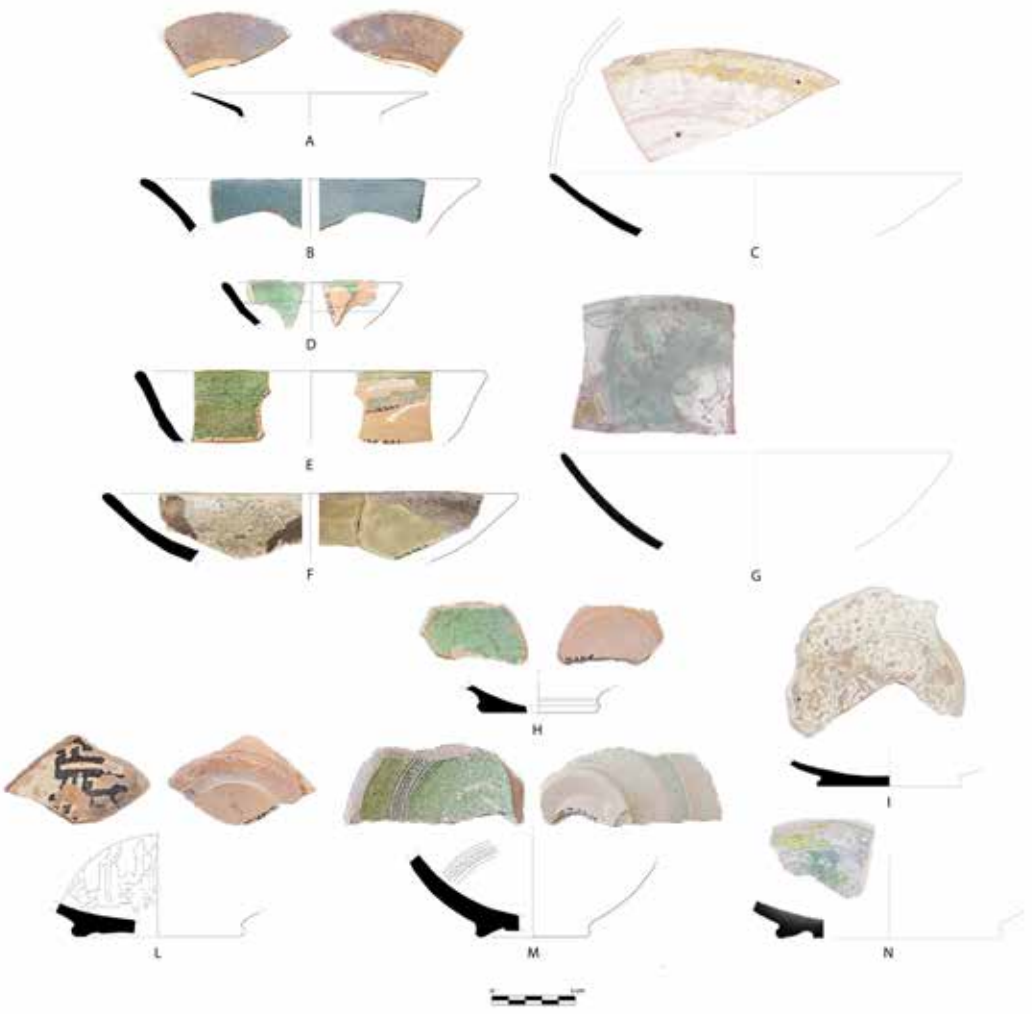

Figure 33*: A selection of wares from the excavation and the survey in Sector B. A: BAHLA; B: OPAQ.T; C, G, I, N: SGRAF; D, E, M: GRAF.G/MONO; F, L: OPAQ.*

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