

EXCAVATIONS AT TAS-SILG, MALTA
A PRELIMINARY REPORT ON THE 1996–1998 CAMPAIGNS CONDUCTED BY THE
DEPARTMENT OF CLASSICS AND ARCHAEOLOGY OF THE UNIVERSITY OF
MALTA

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INTRODUCTION*

THE SITE

The area known as Tas-Silg is situated in the south-eastern part of the island of Malta, close to Marsaxlokk harbour (figs. 1a and 1b). In reality the place name refers to the small church dedicated to Our Lady of the Snows (hence Tas-Silg) situated at the point where the narrow road from Zejtun forks out in two directions: to Delimara and Xrobb il-Ghagin due south-east and to Marsaxlokk village due south-west. A British-period fort occupying the highest point of the elongated hill further south along the first road also carries the same place name. The lower and more compact hill on which the excavations have been conducted is called 'Ta' Berikka',¹ but since it is so close to the above-mentioned church (only 50 m to the north) the tradition of calling it Tas-Silg is now well established and there is no sense in changing it.² The site has a commanding view of the Marsaxlokk harbour to the south and overlooks two other bays, Marsascula and St Thomas's bay, to the north-east. On all sides the slope is broken up by man-made terraced fields (pl. II: 1).

There is no doubt that the topography of the site must have been a determining factor in its choice for the establishment of a religious centre in the Temple period of Maltese prehistory (3000–2500 BC), though one must keep in mind that close to Tas-Silg there are three other prehistoric temple sites, each one with a completely different topography. The Temple people were quite introverted in their cultural isolation and do not seem to have been much interested in seafaring and in the outside world. The situation changed radically in the following age, the Bronze Age, when the island was occupied by people who set up villages on naturally

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Mediterranean Academy for Diplomatic Studies (1998), and Ms Mabel Brook (1998).

The drawings are by Nicholas C. Vella (figures 1–8, 14) and Claudia Sagona (figures 9–13).

¹ Also known as 'Birricca'. It is in a field 'near Birricca in the district known as "Tal Hereb" between Zejtun and the Tas-Silg chapel' that remains of a 'Roman house' were reported to have been found by a farmer in 1923: Museum Annual Report 1923–4, 5.

² See the preliminary reports of the *Missione* excavations listed below in n. 9, and later publications, e.g. A. Bonanno in: A. Mifsud–C. Savona Ventura (eds.), *Facets of Maltese Prehistory* (1999) 209–24; and N. Vella *ibid.* 225–39. Perhaps the preference for this place name might have been influenced by the previous excavators' desire to establish a continuity of religious cult on the site from prehistoric to modern times.

defensible hilltops, occasionally fortifying them with artificial ramparts. The Tas-Silg hill with its temple ruins was occupied by these people, but it is not as yet clear for what purpose.

The scenario changed again in historical times when the central and western Mediterranean started to be parcelled out among the commercial powers originating in the eastern Mediterranean. The Greeks do not seem to have even tried to colonize Malta as they did in neighbouring Sicily. The Phoenicians, however, did occupy the island, apparently through a slow process of peaceful penetration and eventual political and cultural assimilation. It was in this period that the ruins of the megalithic temple were transformed into a Phoenician extra-urban shrine dedicated to Astarte, which in time expanded into a fully-fledged sanctuary with an international reputation. The last chapter in the millennia-long history of the site was written when the colonnaded courtyard in front of the old temple was transformed into an early Christian church. Any use made of the site in the following Arab period is, once again, poorly understood.

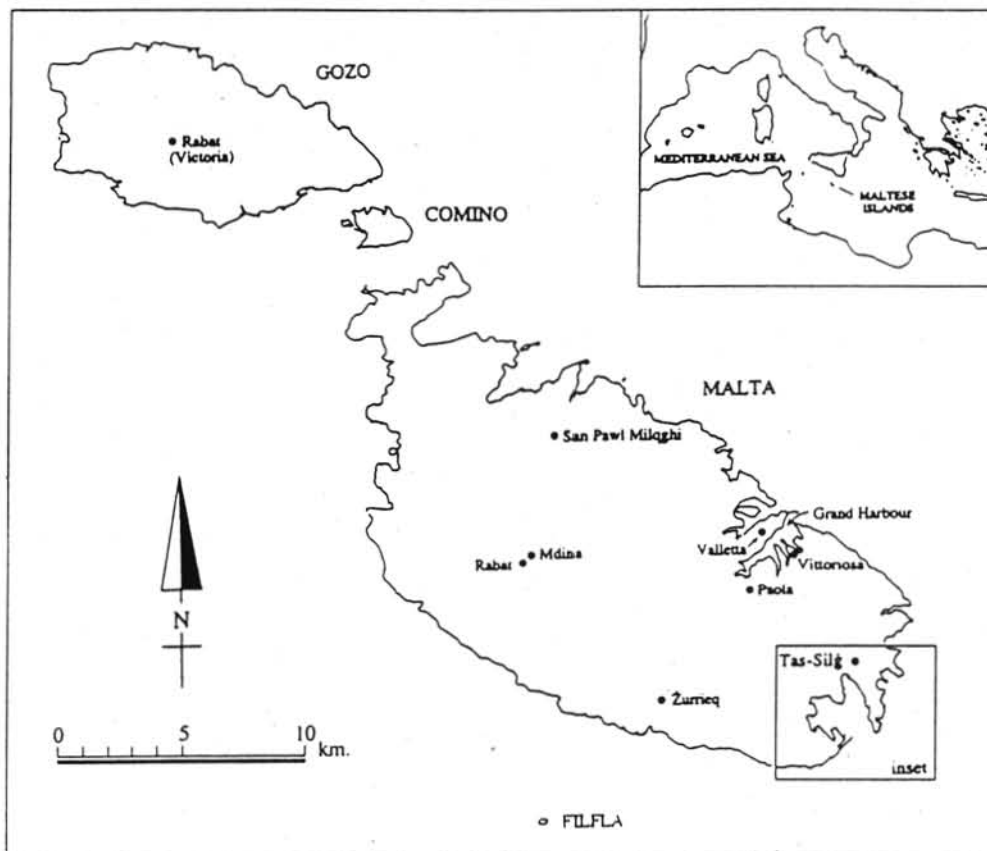


Figure 1a. Location of Tas-Silg, Marsaxlokk, Malta.

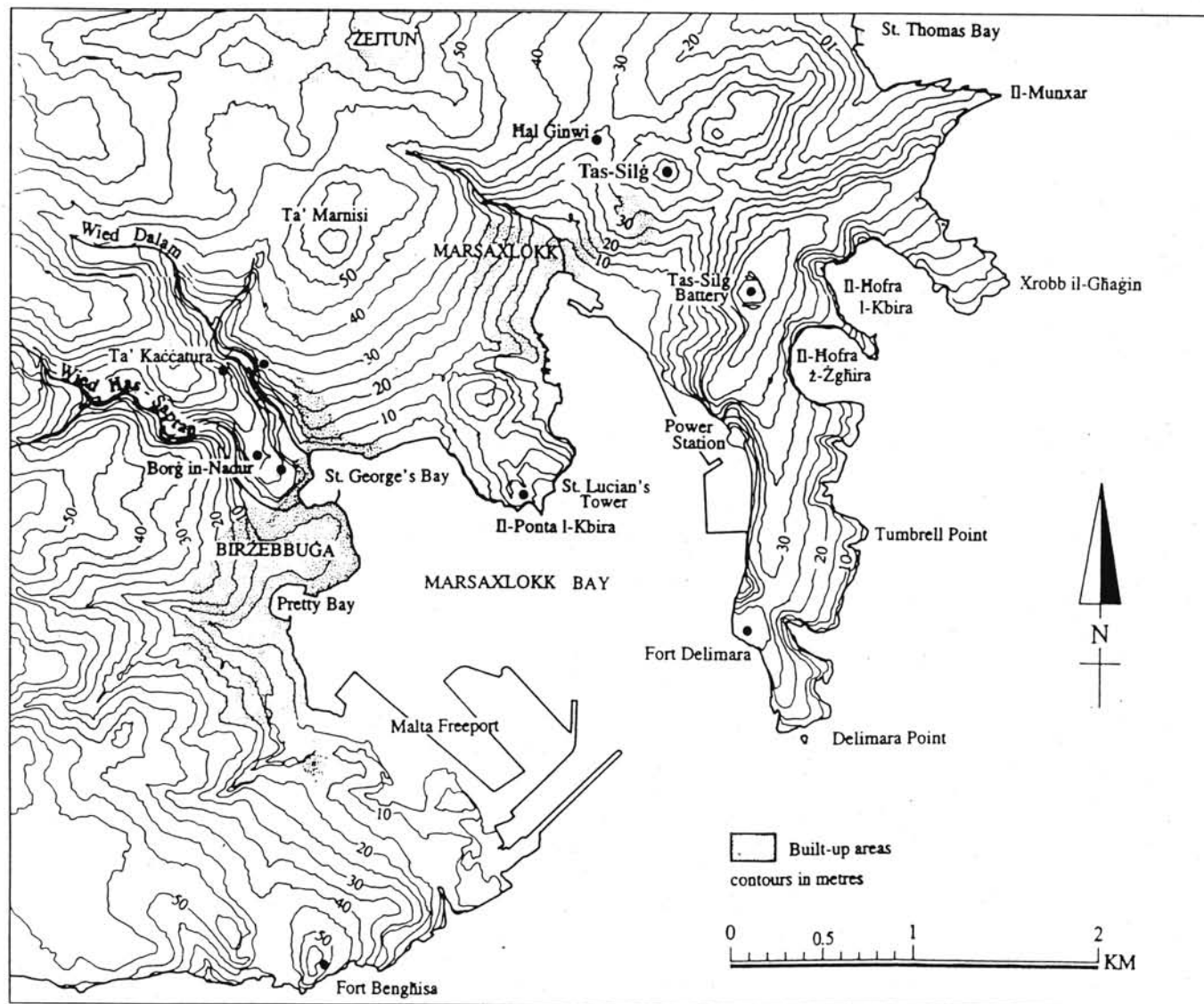


Figure 1b. Location of Tas-Silg, Marsaxlokk, Malta.

HISTORY OF THE SITE

We first hear of the sanctuary in the 1st century BC, when the Roman orator and lawyer Cicero referred to it as the sanctuary (*fanum*) of Juno in his prosecution speeches against Verres (*Verr.* ii 4, 103–4). The temple was revered by all, he tells us, including pirates and Numidian princes, but Verres, the notorious corrupt governor of Sicily and Malta, had no qualms in plundering it of its treasures. The location given by Cicero ‘on a promontory not far from the town’ is not very helpful in the Maltese context where intrinsically distances tend to be short. Nor are the coordinates given by the 2nd-century AD geographer Ptolemy (*Geogr.* iv 3, 13) for the sanctuary of Hera (Juno), since they place it to the east of the island.

After that, the memory of the sanctuary was lost until, in early modern times, Jean Quintin d’Autun, a French chaplain of the Order of the Knights of St John, identified it with impressive stone remains which he saw in the vicinity of the Grand Harbour.³ These are no longer extant where he places them unless, through some confusion of topographical features and place names, he was in reality referring to the megalithic temples on the Kordin promontory inside the same Harbour. Near Marsaxlokk harbour, moreover, he also saw similar but more extensive remains which he identified with the sanctuary of Hercules. From a careful analysis of his description of the latter, however, it is apparent that he was referring to the prehistoric megalithic remains of Borg in-Nadur, rather than those of Tas-Silg.⁴

The location of the sanctuary of Hercules was shifted to Tas-Silg for the first time by Giovanni Francesco Abela, the Maltese historiographer of the Knights. Judging from the ‘quality, location, and shape of the building’, as well as from minor discoveries of *medaglie, pezze di statue d’idoletti, e d’altre cose* discovered at the place called *Kasar*, Abela was convinced that the ‘few courses of large, well-dressed stones’ that he saw there belonged to the temple of Hercules.⁵ This identification was supported by Giannantonio Ciantar in the following century who described the first excavation attempts on the site.⁶

In 1787 the French traveller Jean Houel indicated that by his time the accepted ‘tradition’ placed the temple of Hercules on the hill of Tas-Silg. There, he described in some detail, and illustrated by an engraving, a long and beautiful wall, several courses high, of which only scanty traces survive today.⁷ Finally, at the beginning of the 20th century, the German scholar Albert Mayr described the archaeological remains on the hill of Tas-Silg where he noticed the presence of a small triglyph frieze and of Punic pottery, and discovered a small marble statuette. Ruling out the possibility of their belonging to a private house, he suggested that they should rather have belonged to a temple, perhaps that of Hercules.⁸

Such an identification, however, was seriously put into question when this site was excavated by an Italian archaeological mission from the University of Rome between 1963 and 1970.⁹ Several scores of inscriptions were uncovered, mostly on clay vessels and sherds,

³ J. Quintin, *Insulae Melitae Descriptio ex Commentariis Rerum Quotidianarum* (1536) A4. See discussion in A. Bonanno in: L. Bugeja–M. Buhagiar–S. Fiorini (eds.), *Birgu. A Maltese Maritime City* (1993) 15–30.

⁴ See discussion in A. Bonanno, *Melita Historica* VIII 3, 1982, 190–204.

⁵ G. F. Abela, *Della Descrittione di Malta* (1647) 108. Abela’s description of the ruins fits those visible at Tas-Silg much better than the prehistoric ones at Borg in-Nadur. See *contra* M. Buhagiar, *Melita Historica* XII 1, 1996, 3–4.

⁶ G. A. Ciantar, *Malta Illustrata ovvero Descrittione di Malta*, I (1772) 460–2.

⁷ J. Houel, *Voyage pittoresque des Iles de Sicile, de Malte et de Lipari*, IV (1787) 92–3 pl. 255.

⁸ A. Mayr, *Die Insel Malta im Altertum* (1909) 129–30.

⁹ Hereafter referred to as *Missione*. The yearly campaigns were published in a series of preliminary reports, one for each year: V. Bonello *et al.*, *Missione Archeologica Italiana a Malta: Rapporto Preliminare della Campagna 1963* (1964); M. Cagiano de Azevedo *et al.*, *Missione Archeologica Italiana a Malta: Rapporto Preliminare della Campagna 1964* (1965); *id.*, *Missione Archeologica Italiana a Malta: Rapporto Preliminare della Campagna 1965* (1966); *id.*, *Missione Archeologica a Malta: Rapporto Preliminare della Campagna 1966* (1967); C. Bozzi *et al.*, *Missione*

all invoking a female divinity, Astarte and Tanit in the Punic language and script, and Hera in Greek characters.¹⁰ The name of Hercules or his Punic counterpart Melqart did not occur even once. Thus it was established that the temple of Juno referred to by Ptolemy and much praised by the Roman orator Cicero was to be identified with the remains of Tas-Silg.

Before 1963 the crest of the Tas-Silg hill consisted of a number of small fields separated by the Zejtun-Delimara road. It was one of three sites selected by the *Missione* for intensive and extensive excavation, which was mainly intended to explore the then still virgin territory of the Phoenician-Punic period of the Maltese islands. One of the unexpected discoveries of the very first excavation campaigns was the presence of the remains of a *Tarxien*-phase megalithic temple which seems to have formed the first religious nucleus, on which a Phoenician temple was modelled, and which eventually expanded into a full-scale sanctuary in Hellenistic and Roman times.¹¹

The Department of Classics and Archaeology of the University of Malta has been conducting short excavation campaigns at Tas-Silg every year since the summer of 1996 under the co-directorship of the editors of this report, with Simon Mason and Nicholas C. Vella as field supervisors.¹² These excavations are limited to the unexcavated areas in the section of the site to the south of the Zejtun-Delimara road, just outside the structures of the sanctuary itself (**fig. 2; pl. II: 1**). They are intended to supplement and complement the corpus of knowledge already acquired from the previous excavations by new data of a stratigraphic and scientific nature, besides providing a training ground for future archaeologists.¹³ They are also expected to throw more light on the debated question of the relationship between the Phoenician colonizers and the prehistoric inhabitants of the island.¹⁴

The following sections indicate that the site of Tas-Silg remains a very promising one and that there is still much to learn from it on some of Malta's important phases of history in antiquity.

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THE STRATIGRAPHY

Between 1996 and 1998, the excavations were entirely contained within the enclosed field lying to the south of the Zejtun-Delimara road. This area of about 0.7 hectares comprises a terrace situated at about 45–46 m above sea level at its northern half with a sheer drop down to a relatively level field at about 41 m above sea level at the southern extreme. The terrace runs for 15 m south of the modern road and towards the centre of the site it extends for a further 15 m to form a promontory (**fig. 2; pl. II: 1**).

Archeologica Italiana a Malta: Rapporto Preliminare della Campagna 1967 (1968); G. Busuttill *et al.*, *Missione Archeologica Italiana a Malta: Rapporto Preliminare della Campagna 1968* (1969); M. Cagiano de Azevedo *et al.*, *Missione Archeologica Italiana a Malta: Rapporto Preliminare della Campagna 1969* (1972); M. Cagiano de Azevedo *et al.*, *Missione Archeologica Italiana a Malta: Rapporto Preliminare della Campagna 1970* (1973). These reports are hereafter referred to as *Missione 1964*, *Missione 1965*, etc.

¹⁰ See, in particular, G. Garbini in: *Missione 1964*, 83–107; id. in: *Missione 1965*, 79–101; id. in: *Missione 1966*, 53–80; id. in: *Missione 1967*, 43–8; id. in: *Missione 1968*, 47–8.

¹¹ A. Ciasca, *Kokalos* 22–23, 1976/7, vol. I, 162–72.

¹² The names of the area supervisors will be supplied in the final reports.

¹³ The other aims of the excavations are listed below in the section on Stratigraphy.

¹⁴ On this moot question see, for example, P. Brusasco, *Journal of Mediterranean Studies*, 3, 1993, 1–29; A. J. Frendo in: W. H. Waldren–J. A. Ensenyat–R. C. Kennard (eds.), *Ritual, Rites and Religion in Prehistory: IIIrd Deya International Conference of Prehistory*, vol. I (1995) 114–21; Bonanno loc. cit. (n. 2).

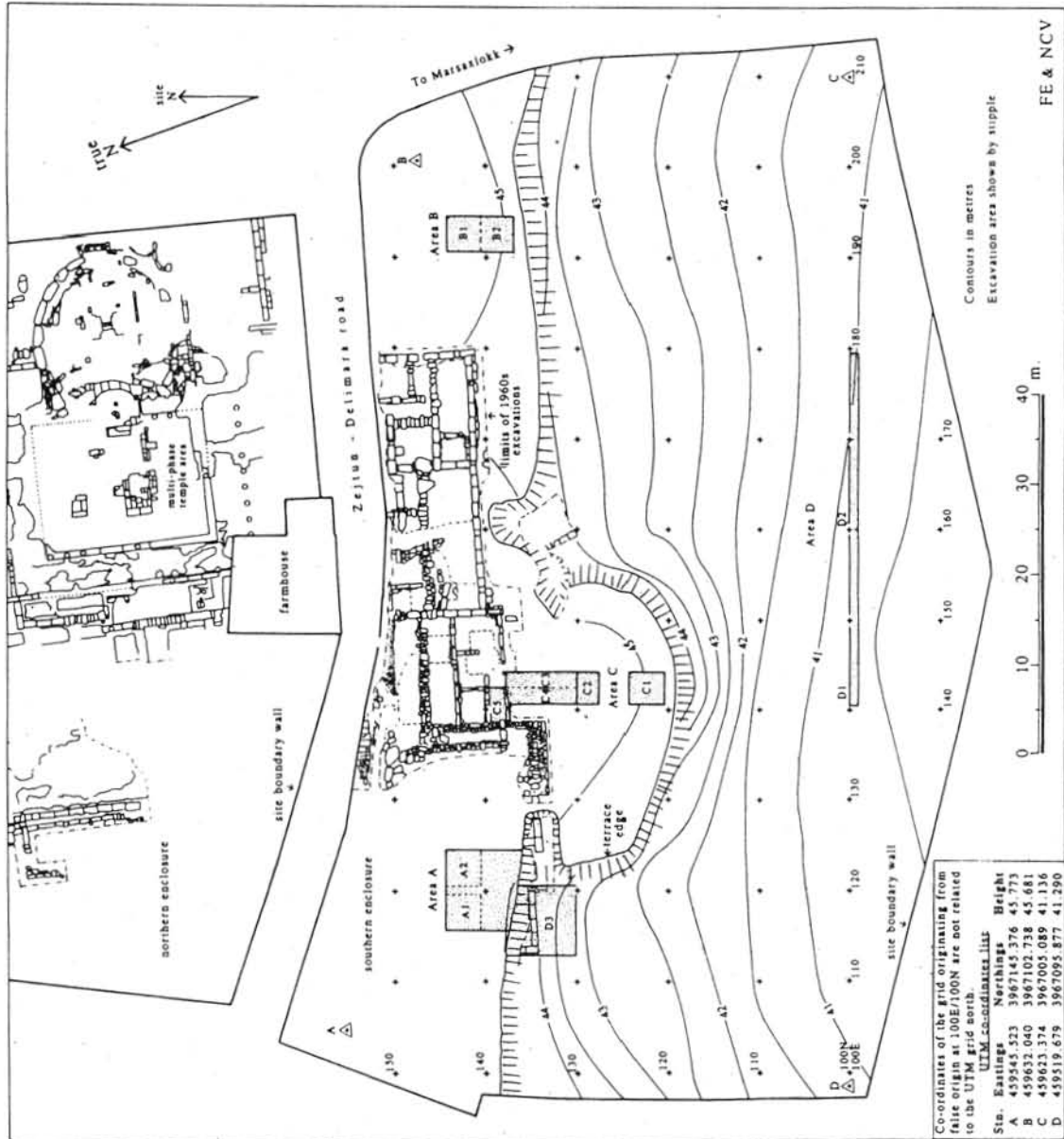


Figure 2. Plan of Tas-Silg: archaeological site and location of trenches.

Previous investigations by the *Missione* in this area had reported the discovery of structures which formed part of the temple complex immediately to the north.¹⁵ The on-going investigations by the University of Malta have been designed with the following aims:

1. to understand the formation of the terrace, and in particular the promontory located towards the centre of the site, with the aim of establishing a stratigraphic sequence and a pottery typology to go with it;
2. to assess the evidence for activity in the lower field to the south of the terrace;
3. to understand the nature of the depositional processes that created the alleged 'votive dumps' identified by previous excavators, and to supply a proper definition of these 'dumps';
4. to attempt a reconstruction of the economic and environmental history of the island for the time that the southern part of the site was in use.

With these points in mind, four areas were selected for weed clearance and excavation (fig. 2). Initially, during 1996, each of the areas to be investigated was deliberately positioned away from the *Missione* excavations to encourage an independent assessment of the deposits. In subsequent campaigns, trenches in Areas C and D were extended to include remains uncovered by the *Missione*.

The trenches in the upper terrace were primarily located to provide a representative coverage of the terrace area beyond the *Missione* excavations, to its west (Area A: 115E/136N–125E/145N), east (Area B: 190E/137N–195E/145N), and south (Area C: 140E/120N–145E/140N). Area A initially comprised two 4 x 4 m trenches (A1 and A2) adjacent to each other and separated by a baulk. In 1997 this was removed, and the combined trench was extended southwards to the terrace edge where it overlooked trench D3. The position of Area A was determined by a substantial wall known to extend into the terrace at its base, the objective here being the investigation of the deposits overlying this wall. What started as a 4 m square trench known as trench B1 was extended in 1997 by a further 3 m towards the terrace edge to form trench B2. Area C, located on the promontory, consists of a number of trenches. An initial 4 x 4 m trench, C1, was situated to assess the deposits forming the extreme edge of the promontory. This was abandoned when it was realized that these deposits could have been disturbed by the previous excavators. Instead, a smaller trench, C2, was excavated to relate the deposits inside it to a *cocciopesto* floor uncovered in the area by the *Missione*.¹⁶ When the floor was not located, a 20 m-long extension (consisting of trenches C3 and C4) was cut; it ran up to C2 extending northwards to the building uncovered by the *Missione*. Further investigation in 1998 was undertaken in another trench, C5, located within the building remains, in order to relate the terrace deposits to the building sequence.

In the lower terrace, Area D, three trenches were excavated. D1 (140E/98.5N–160E/99.5N) and D2 (160E/98.5N–180E/99.5N) were two narrow trenches each measuring 20 x 1 m. Here the aim was to investigate the nature of the deposits and an anomaly identified on an aerial photograph by the *Missione* team.¹⁷ As mentioned earlier, trench D3 (113E/130N–120.3E/136N) was located immediately below Area A.

What follows is a summary of the preliminary results from each of the areas investigated between 1996 and 1998. The general nature of the archaeological deposits is provided together with a description of the features and deposits which are characteristic of each area. The method of excavation was meticulously stratigraphic. The smallest indivisible unit of stratigraphy was termed Stratigraphic Unit (SU). This may be defined as the product of any

¹⁵ A. Ciasca in: *Missione* 1964, 65–7, 69–72; ead. in: *Missione* 1965, 63–7; C. Caprino in: *Missione* 1970, 31–46; ead. in: *Missione* 1973, 43–57.

¹⁶ *Missione* 1973, fig. 5 pl. 34: 2.

¹⁷ *Ibid.* fig. 1.

action, whether it leaves a positive record (e.g. a layer of soil, a wall, a coffin) or a negative record (e.g. a cut, a pit) within the stratigraphic sequence. Each SU was allotted a unique number. Some stratigraphic units were dry-sieved (2 or 5 mm mesh), while most had samples lifted for wet-sieving and environmental analyses. Special finds, including inscribed sherds, coins and metal objects, worked stone, and articulated bones, were recorded three-dimensionally *in situ*, given a number, and bagged individually. Such finds were so termed because they had a special significance for the excavators.

AREA A (figs. 3, 4)

The removal of the separating baulk in 1997 and the extension southwards of the original trenches A1 and A2 allowed us to identify a general sequence of activities in this area which, from the earliest to the latest, ran as follows: a red deposit; limited structural evidence representing occupation; deposits indicating abandonment; rubble deposits indicating the destruction of earlier structures; a number of ashy deposits including pits; and a horizon of agricultural deposits of recent date.

The agricultural horizon (fig. 3)

Consistent across the entire trench was a mixed topsoil overlying subsoil deposits (SU 2, 202, 206) which were more compact and contained a higher volume of pottery than the topsoil. Removal of the topsoil in the western half of the trench revealed a rubble wall (SU 203) built of irregular blocks of Globigerina limestone and aligned north/south. This was overlain by an area of irregular stones (SU 212) at its southern end, and was truncated by a modern cut (SU 208) at its northern end. At its southern end the wall was discontinuous and only parts (SU 21 and 31) were uncovered, in part overlaying a mortar bedding (SU 26). At the extreme end the wall overlay what remained of a retaining wall (SU 59) for the main terrace. Its foundation trench clearly cuts another field wall (SU 57) which follows a slightly different alignment to that of the later wall SU 203.

A number of deposits were assigned to this agricultural phase. They included numerous localized layers of grey soil and stony and rubble deposits (including SU 22) which extended to a depth of approximately 1 m in the eastern half of the trench (A1 and A2 combined), but much less in the west. This is suggestive of different levels of field terracing dictated by underlying structures (see below).

Ash deposits and pits (fig. 3)

In 1996 two ashy deposits were revealed beneath the agricultural horizons in trench A1. In the north-west corner a fine ash layer (SU 6) was found, containing only a small amount of pottery. It spread over an area of 1.44 x 0.71 m and was 0.17 m deep. The deposit of ash was found in a shallow depression in the surface of a layer of loose grey soil mixed with rubble (SU 8), while another ash deposit (SU 11) was contained within a more apparent depression or pit (SU 14) which truncated layer SU 8. The ash deposit SU 11 produced a large assemblage of pottery and faunal remains; it was covered over by a rubble deposit (SU 10). The pit SU 14 measured 1.68 x 1.44 m and was 0.57 m deep.

In the same year, an extensive layer of irregular stones (SU 204) was uncovered beneath subsoil in the south-eastern corner of trench A2. This was truncated by a substantial pit (SU 207) with an east/west dimension of 1.25 m and a north/south one of 0.64m. The pit was steep-sided with an even base. In 1997 its extent was traced southwards by a further 1.5 m. Its fill (SU 205) was a grey ash deposit which contained a large assemblage of pottery, a quantity of animal and fish bones, seashells, and sea urchin needles. The grey ash became progressively darker and more compact towards the base of the pit. It was dry-sieved through a 2 mm mesh, and environmental samples were also taken. A terracotta pendant (TSG96/205/2) was recovered through sieving, as were a coin, inscribed sherds, and a glass fragment. Further excavation in 1997 of the same fill (SU 25, 34, 71) produced much the same assemblage but also a coin, a metal ring, and a fragment of a terracotta figurine (TSG96/25/24). A lower fill (SU 41) which contained rubble was also excavated.

Destruction and disuse

In trench A1, layer SU 8 appeared to extend across the entire square. It sealed a rubble fill of irregular stones (SU 9) which in turn filled a shallow depression (SU 13) measuring 1.90 by 0.98 m in extent (fig. 3). In the south-east corner of the trench, an ash deposit (SU 12) was revealed beneath SU 8. Covering an area of 1.36 x 1.04 m and 0.25 m deep, SU 12 contained a large assemblage of faunal remains, sea urchin needles, and charcoal.

The ash pit SU 207 was dug into an extensive rubble deposit (SU 204) which spread over much of the north-eastern areas of trench A2. This was removed to reveal a number of deposits: in the north-eastern corner of the trench a layer of fine Globigerina limestone chippings (SU 217) was revealed in fine limestone powder. This was probably the lower deposit of the rubble SU 204. It was partially excavated in 1996 to reveal two large limestone slabs (SU 218) adjacent to the eastern edge of the trench (fig. 4; pl. 7: 1). Three brown deposits (SU 210, 213, and 214) were also revealed below SU 204. SU 213 and 214 were probably the same deposit and contained a large amount of pottery, bone, and shell. They were excavated to reveal a more compact layer (SU 219), 1.50 x 2.50 m in extent, which formed a heap over a number of dressed stones (SU 223) of Globigerina limestone (fig. 4). SU 219 was removed to reveal more of SU 223 and a dark brown deposit (SU 222) which was left unexcavated. Beneath SU 214 compact layers (SU 221 and 216) were uncovered. The latter had limestone inclusions set in a fine matrix only 0.08 m thick; it contained no pottery and was found to cover a layer of rubble (SU 220).

This evidence for structures SU 218 and 223 overlain by a number of compact brown layers and rubble suggests a period of initial disuse followed by partial destruction of the structures prior to the use of the area for a period for disposal of 'rubbish' in pits.

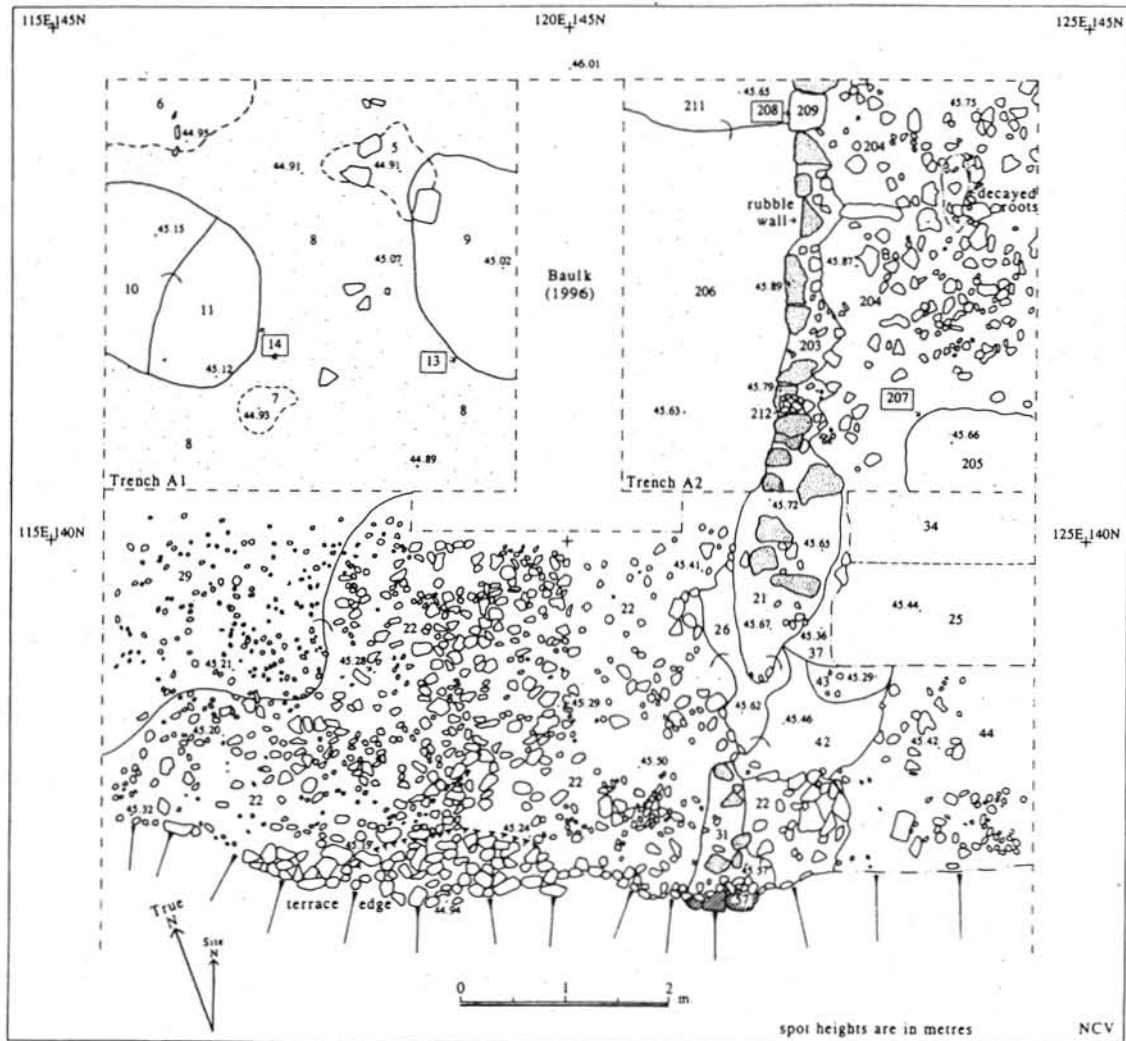


Figure 3. Area A: plan of agricultural horizon and ash deposits.

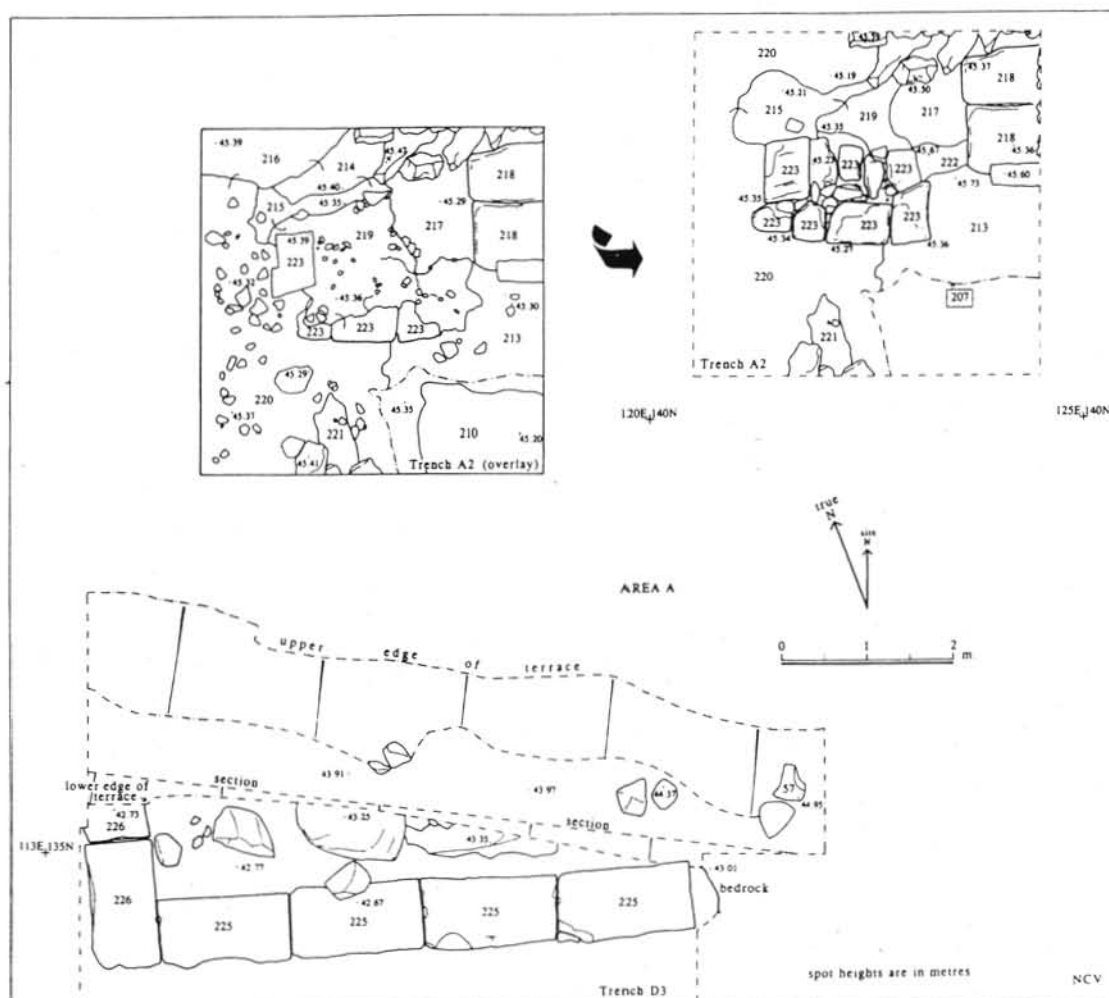


Figure 4. Area A: plan of disuse (overlay) and occupation horizons and Trench D3.

Occupation (fig. 4; pl. 7: 1)

From the structural remains uncovered to date, very little can be concluded. The two stone slabs, SU 218, were roughly rectangular and measure 0.57 x 0.69 m and 0.75 x 0.76 m respectively. Their form and position would suggest that they are part of a floor of the sort uncovered elsewhere at Tas-Silg.¹⁸ On the other hand, structure SU 223 comprised five large dressed stones, four of which aligned on an east/west axis; the fifth stone formed a right angle turning northwards at the west end. At a lower level four large undressed stones butted the first series to the north. The larger stones have a white mortar in the joints. This structure has been provisionally interpreted as a wall which extends for 1.80 m east/west and 1.12 m north/south. SU 223 seems to be set on rubble although excavation has not been undertaken to assess the underlying deposits.

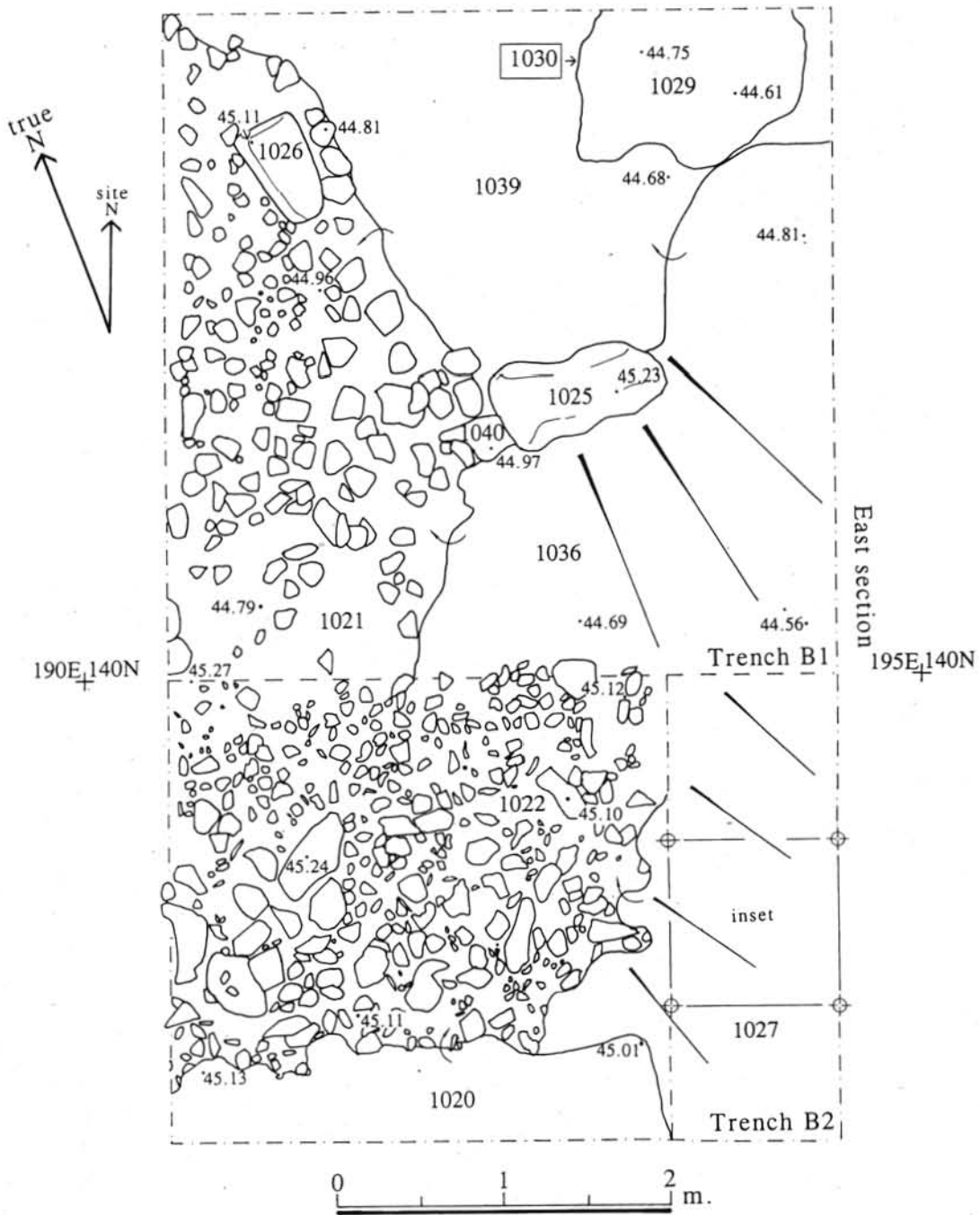
The red soil (fig. 4)

The earliest stratigraphic unit identified in trench A2 to date is a fine loose reddish layer (SU 215) which underlay rubble layer SU 220. This was left unexcavated.

AREA B (figs. 5, 6, 8; pl. 7: 2)

The first deposit encountered in this area was a loose brown topsoil which was removed to reveal a subsoil (SU 1000/1020) which extended across both trenches. Beneath this subsoil a

¹⁸ Missione 1973, pls. 24: 1; 29: 3-4.



spot heights are in metres

NCV

Figure 5. Area B: general plan, showing position of inset (fig. 6).

remarkable sequence of what appear to be dump deposits was excavated. The majority of these were extremely rich in both pottery and faunal remains. In general the deposits sloped down to the south-east, away from the structural remains uncovered by the *Missione* (fig. 8).

Below the subsoil in the north part of trench B1, a loose grey ashy layer (SU 1002) was uncovered overlying a stony layer (SU 1003). SU 1002 produced a large assemblage of pottery, shell, and bone, besides a bronze hook. In

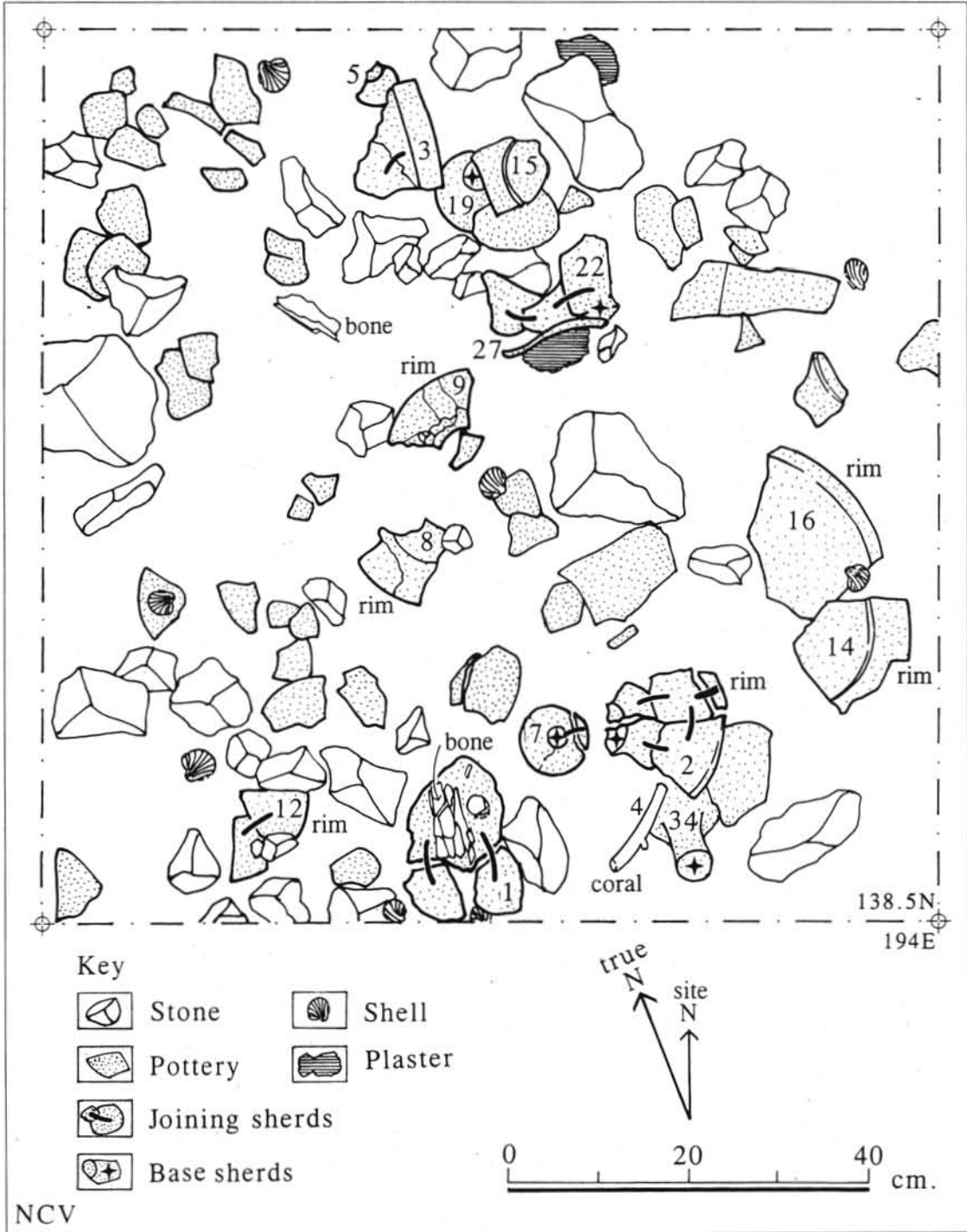


Figure 6. Area B: plan of part of SU 1027, spit 1.

trench B2, a loose ashy layer (SU 1027) was uncovered below the subsoil; it was also found to cover a compact layer of stones (SU 1022) (fig. 5). SU 1027 produced a large amount of pottery including inscribed sherds; some vessels appear to have been broken *in situ* (fig. 6; pl. 7: 3). Organic material, found in association with the pottery and fragments of plaster, included animal bone, land and marine shells, and a piece of deep-sea coral. To facilitate an analysis of the spatial configuration of the entire assemblage, with the eventual aim of reconstructing its formation processes, the deposit was recorded in detail and the finds catalogued as they were uncovered. The deposit was subdivided into 1 m squares and excavated in recordable 10 cm spits. Some unusual finds and whole or fragmentary pots from re-fitting sherds were allocated to numbered units, drawn *in situ* (1:4) and bagged by unit. The rest of the deposit was dry-sieved (2 mm) by spit, and environmental samples collected. The lower area of the deposit in the south-east corner of the trench remains to be excavated. It is probable that SU 1002 and 1007 are parts of the same deposit.

The stony layer SU 1003 contained a large amount of pottery including many inscribed sherds and also, similarly to SU 1002, broken shallow plates and trefoil juglets. Seashells, and fish and animal bone were retrieved. Stratigraphically comparable to SU 1003, the compact layer of irregular stones, SU 1022, was revealed beneath the subsoil and SU 1027 in trench B2 (pl. 7: 2). SU 1022 included considerable fragments of dressed stones and large pieces of pottery. On removal of a 1.5 m-wide stretch along the western section, a loose grey layer (SU 1033) was encountered consisting of the usual mixture of potsherds and complete pots with significant quantities of animal bone and shell. This was the deepest deposit exposed in trench B2.

In trench B1 (pl. 7: 2), a series of grey ashy (SU 1005, 1008) and brown sandy deposits (SU 1007, 1009) were exposed below SU 1003; another layer (SU 1006) was defined as a mixed deposit of ash and sand. Both layers, SU 1006 and 1009, contained irregular stones. The loose ashy layer SU 1005 appeared to be similar in consistency to SU 1002 and contained a similar assemblage of finds, including a complete plate found in an inverted position. Besides pottery, SU 1008 contained a bronze nail, a glass bead, a coin, and a piece of moulded plaster (TSG96/1008/6); SU 1009 also contained pieces of plaster and worked stone, bone, and seashells. A compact layer (SU 1004) which was traced below SU 1008 was removed over much of the trench to reveal a loose deposit (SU 1010) underneath it. A coin and inscribed sherds were lifted from SU 1010. Cutting into SU 1010 in the south-east corner of the northern trench beneath SU 1009 a shallow irregular pit (SU 1017) was identified extending into the East section. It was filled with a sandy ash deposit (SU 1013) mixed with pottery (including inscribed potsherds), plaster, and bone. Another shallow pit (SU 1014) was identified, also cutting through SU 1010. It had two fills: a fine grey deposit (SU 1011) and a paler one (SU 1015), both of which contained quantities of pottery, animal bone, shell, and fragments of charcoal. Fragments of terracotta figurines (TSG96/1011/1; TSG96/1011/3) were recovered from SU 1011 together with an inscribed stone fragment and a glass bead.

SU 1010 was found to be sealing a number of deposits. Covering much of the south-eastern quadrant of trench B1, the light grey layer (SU 1019) extended from a large stone (SU 1025) to the South section and was cut by SU 1017 to the east; besides the usual assemblage of pottery, a fragment of a tile and a coin were recovered. Partially overlain by SU 1019, a loose brown layer (SU 1016) was traced over the north-eastern quadrant of the trench. A localized deposit of brown soil (SU 1024) was excavated in the north-western corner of the trench. This may be stratigraphically contemporary to SU 1016.

Along the central north/south axis of trench B1, partially sealed by both SU 1016 and 1019, a deposit of fragmented *Globigerina* limestone chippings was found. Initially this was considered to be a single deposit (SU 1028), but examination determined that this deposit was in fact made up of three parts to include also SU 1032 and 1035. SU 1028 contained a few pieces of pottery, while SU 1035 contained pottery as well as animal bones; SU 1032 was sterile.

Beneath SU 1016, adjacent to the North section, a pit (SU 1030) was traced, filled with a loose grey deposit (SU 1029) that contained a rich assemblage of finds (fig. 5). This included complete and broken ceramic vessels, bird and mammal bones (including mandibles), sea urchin needles, shells, a pin and a buckle of bronze, and several beads; one of the bowls was inscribed. A loose light-grey layer (SU 1031) underlay SU 1016 and contained large pottery fragments. It overlay a grey ashy layer (SU 1039) in the north-east corner of trench B1, which in turn had two separate deposits (SU 1037 and 1038) within it; all three layers were particularly rich in finds, and a small piece of gold foil was recovered from SU 1038. Below SU 1019 a localized ashy layer mixed with stones (SU 1023) was uncovered. Layer SU 1023 included many potsherds and damaged vessels, sea urchin needles, shells, and a fragment of an animal's mandible. SU 1023 overlay layer SU 1036, a light grey compact deposit, much of which was originally exposed upon removal of SU 1019. SU 1036 was contained in a roughly triangular area which sloped down from the stone SU 1025 to the south-eastern corner of the trench. Beneath this deposit two further layers were uncovered: the first (SU 1041) was a fairly compact brown deposit that contained large friable pieces of limestone; the second (SU 1042) was looser. Their relationship remains to be established in future

seasons, although it is clear that SU 1041 overlay an extensive south-sloping rubble layer (SU 1021), as does SU 1039 to the north-east. The relationship of SU 1021 to the stone SU 1025 in the centre of the trench remains to be established.

From the work carried out in Area B thus far, it seems that the term 'midden' as used by S. Needham and T. Spence¹⁹ would best explain some of the sequence of deposits uncovered. The spatial patterning of the pottery (including the angle of dip of sherds or complete pots as observed in plan and in the trench section) and the inclination southwards of alternating layers of different colours and composition (SU 1027, 1005–1009) (fig. 8), suggest that the material was dumped deliberately and episodically from the higher area of the site, after it had been in use elsewhere. The good condition of the pottery in terms of fragmentation (whole pots having been recovered and others being restorable) and abrasion of the fabric (hardly any, in fact) suggests that we are dealing with a 'special dump', most probably connected with the ritual activities that took place in the central part of the complex to the north. Further work has to be done on the assemblages recovered to quantify the preliminary observations being made here. The objective is to model refuse cycles in order to draw conclusions regarding the changing activity status of this sector of the site.

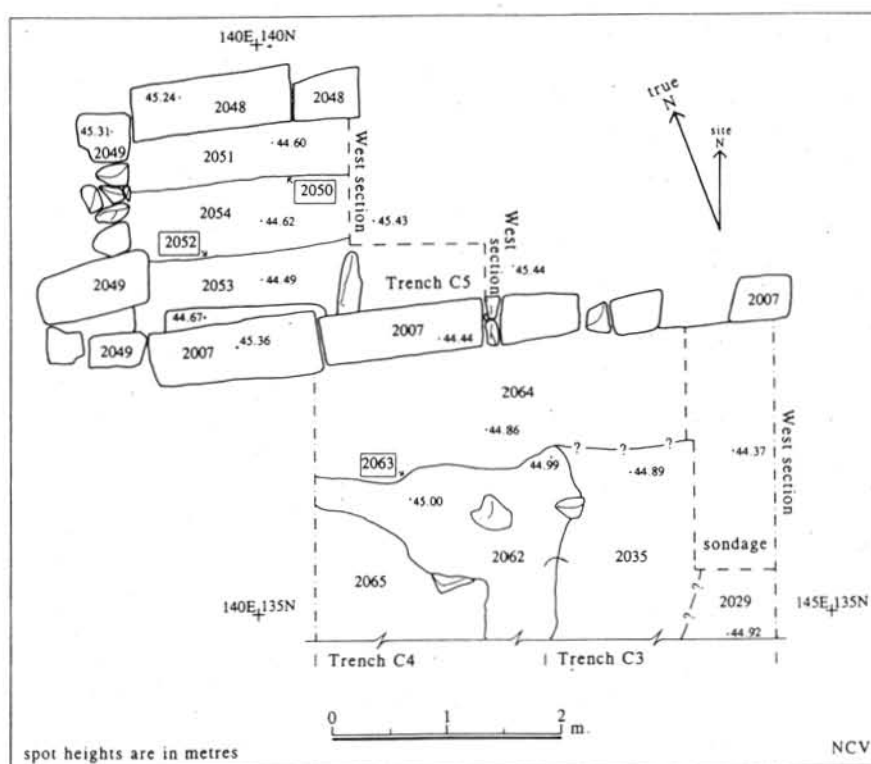


Figure 7. Area C: general plan.

AREA C (figs. 7, 8)

Removal of topsoil in trench C1 located on the tip of the promontory of the upper terrace uncovered a rubble layer in three distinct linear concentrations (SU 2001, 2002, 2003). Within SU 2002 a flat stone was seen to bear an incised benchmark sign, suggesting that this area had been disturbed in recent times. The rubble deposits were removed to reveal a much more

¹⁹ S. Needham–T. Spence, *Antiquity* 71, 1997, 80.

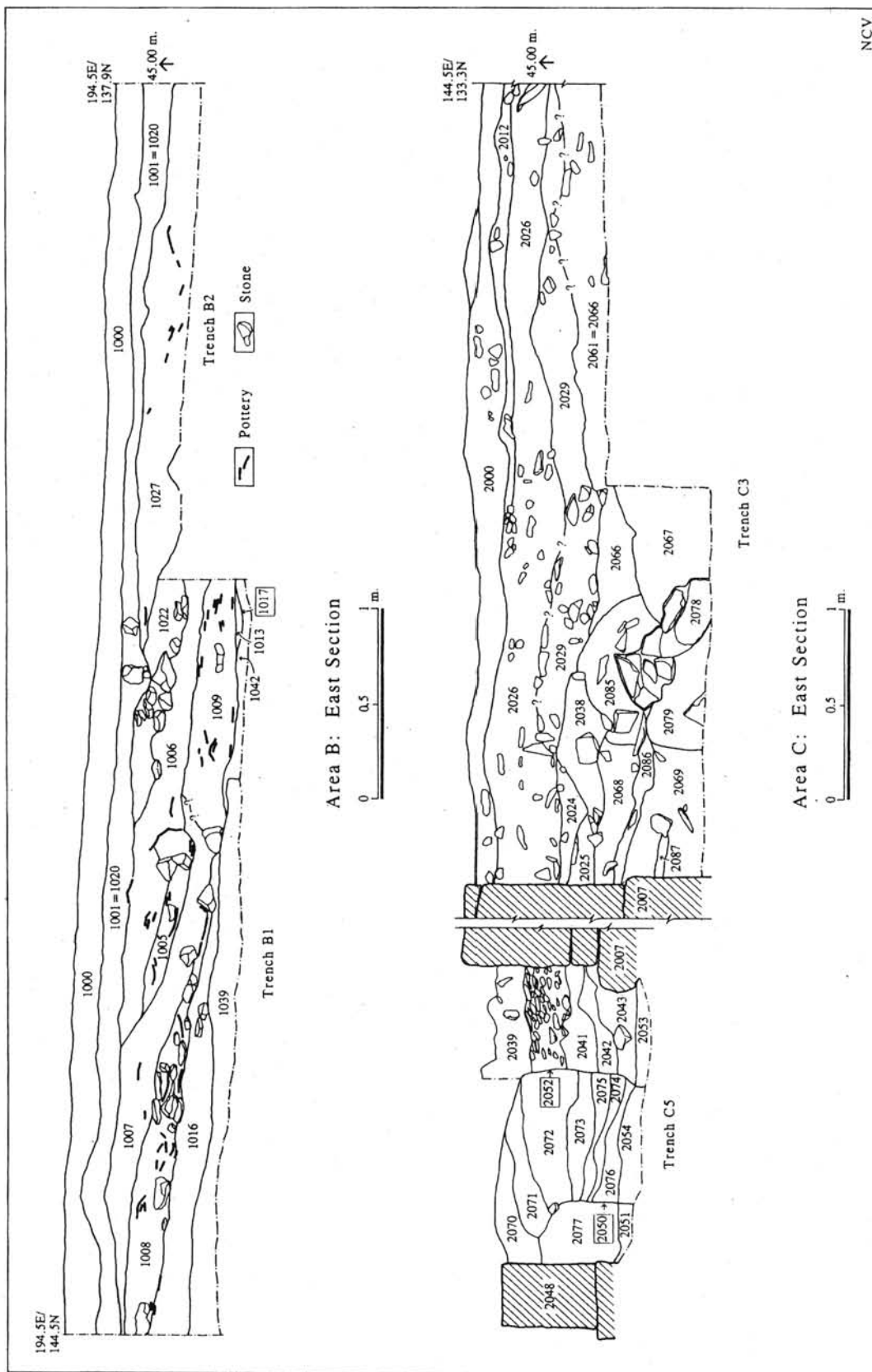


Figure 8. East sections of Areas B and C.

NCV

compact deposit (SU 2005) which was excavated to an arbitrary depth of 1 m. Digging was relocated to trench C2 in order to try to trace a reported *cocciopesto* flooring (above). Topsoil was removed to reveal a very compact layer which was thought to correspond with SU 2005. When no *cocciopesto* was revealed in C2, excavation shifted to the north by setting out the two adjacent trenches C3 and C4. The northern limit of these trenches was found within the remains of structures uncovered by the *Missione*; only here were traces of eroded *cocciopesto* (SU 2006) revealed, lying over a yellowish deposit. Work on the structures revealed a line of ashlar blocks (SU 2007) of which only one block had been visible at the end of the *Missione* campaigns, jutting above the *cocciopesto* floor.²⁰

Below the topsoil in trenches C3 and C4, excavation revealed two pits: the first filled with a reddish soil (SU 2008), adjacent to one of the blocks of wall, SU 2007, was cut by the *Missione* and is clearly visible in the published photos;²¹ the second (SU 2013) extended for 3 m southwards from wall SU 2007 and was filled by a mixed deposit of rubble and greyish soil (SU 2010) with a friable lime deposit (SU 2011) traced along the south and east edges of the pit. Pit SU 2013 truncated a compact grey layer (SU 2012). In general, the sequence of deposits over the two trenches can be grouped into several horizons. The uppermost horizon corresponds to a series of compact layers (SU 2009, 2012, 2014, 2015, 2018, 2019, 2026) which are probably related to the consolidation of the terrace beyond the building and include a preparation for the *cocciopesto* flooring. Beneath these deposits a series of rubble layers (SU 2021, 2029, 2030) spread across most of the trenches. In the southern area of both trenches, rubble layer SU 2030 was overlain by a number of grey ashy deposits (SU 2035, 2057, 2060) which were in turn truncated by two pits (SU 2058 and 2059). In the north-eastern corner of the trenches a number of brown soils (SU 2024, 2032, 2033, 2031, 2037) and rubble (SU 2025) appear to post-date the rubble layers and are sealed by the compact layers. These deposits seem to form a localized consolidating or levelling fill.

Of the deposits described thus far, a few were noteworthy for their assemblages. From the upper sequence of compact layers, both SU 2009 and SU 2012 contained a considerable assemblage of pottery, including inscribed sherds, bones, and shell. The assemblage collected from SU 2026 was notable in that it included a small bearded head of a stone figurine (TSG96/2026/3), various inscribed potsherds, and painted pottery, while the finds from SU 2019 included a number of beads, pottery broken *in situ*, and fragments of worked stone.

Overlying the rubble layer SU 2030 in the southern end of the trenches, and sealed by layer SU 2012, a number of ash deposits were recorded, including SU 2034 and 2045. The finds from SU 2034 were recorded and catalogued in detail. Discrete groups were allocated to numbered units, drawn *in situ*, and bagged by unit, so that subsequent study would determine the quantity of joining sherds and whether these were located in close proximity to each other.

Upon removal of SU 2021, excavation to the south of wall SU 2007 was carried out with the aim of identifying any construction cuts related to the wall. A loose grey-brown deposit interspersed with irregular stones (SU 2064) was uncovered below SU 2021 and was thought to fill a cut (SU 2063) adjacent to and parallel with the wall; the same cut truncated a very compact layer with lime inclusions (SU 2062) which in turn overlay a loose brown deposit (SU 2065).²² Neither of these two deposits has been excavated. To the east of these deposits, in the north-east corner of trench C3, a sondage was excavated stratigraphically to a depth of 1.7 m in an attempt to identify any cuts related to wall SU 2007. The probable cut, SU 2063, was not identified in the East section of the sondage. Instead, a series of deposits was found below the compact dark brown layer SU 2037 (fig. 8). These deposits included a loose sandy yellow-brown soil (SU 2038) which overlay a dark grey deposit (SU 2068) that sloped southwards from wall SU 2007, and a lime-ashy soil (SU 2085). Below SU 2068, a yellow layer (SU 2086) was revealed also sloping away from the wall. At the bottom of the sondage, SU 2086 overlay a loose ashy brown deposit (SU 2069) which was excavated to an arbitrary level; a large concentration of potsherds was recovered from this deposit, while a yellow lens (SU 2087), thought to be an area of decayed *Globigerina* limestone, was noticed within SU 2069 in the East section (fig. 8). Within the southern half of the sondage, three deposits were identified below SU 2085 and 2066. These deposits consisted of the following from north to south: an area of rubble with dark brown soil (SU 2079), completely devoid of pottery, bone, or shell; a concentration of large irregular stones mixed with an ashy soil (SU 2078); and a slightly compact yellow soil (SU 2067) with a few potsherds. The combined surface of these three deposits, which rises up southwards, suggests potential truncation, with deposits SU 2038, 2085, 2068, 2086, and 2069 filling the resulting pit or trench. Further work needs to be done in this area to verify whether this is the case.

²⁰ *Missione* 1973, fig. 5 pls. 37: 2; 42: 1.

²² C. Caprino in: *Missione* 1973, 43–57.

²¹ *Ibid.* pl. 42: 1.

In 1998, it was decided to clarify at what level the structures to the north of Area C were constructed. To this purpose, a new trench, C5, was laid out, delimited by walls SU 2048, 2049, and 2007 (figs. 7, 8). Excavation had already been undertaken here by the *Missione*,²³ but section drawings of the sondage were not reported. Work in this area involved the removal of eroded backfill deposits (SU 2036, 2046, and 2047), followed by the cleaning and cutting backwards of the East sections between walls SU 2007 and 2048. This work enabled us to identify and record the construction cuts for all three walls together with a sequence of pre-construction deposits and post-construction levelling fills.

It was now apparent that the parallel walls SU 2007 and 2048 were built onto wall SU 2049. The construction trenches SU 2052 and 2050 for walls SU 2007 and 2048 respectively, clearly cut the construction trench SU 2055 for wall SU 2049. Cuts SU 2052 and SU 2050 were identified in the East sections, and a sequence of pre-construction deposits was recorded (fig. 8). Wall SU 2048 has two construction fills, the uppermost (SU 2077) being a pale brown deposit which overlay a stony-grey deposit (SU 2051). The latter produced potsherds, bone, shell, and several irregular stones. Wall SU 2007, with a reddish soil deposit (SU 2008) between its dressed blocks, had a number of fills in its foundation trench, including SU 2041–2043, and 2053; they all contained potsherds, shells, and animal bone.

Both wall foundations were originally dug into a sequence of at least seven deposits to the level reached in the investigations. The uppermost deposit (SU 2073) was a brown soil with white limestone inclusions. This overlay a brown ashy soil (SU 2075) which sloped southwards to seal SU 2074, a layer of crushed limestone which again sloped southwards.

AREA D

Trenches D1 and D2

The sequence of deposits uncovered in these narrow trenches consisted of a brown subsoil (SU 3001) beneath topsoil from which several shells of the *murex* variety were lifted. SU 3001 covered a compact layer of large irregular stones (SU 3003) over the entire trench, except for an area where a brown deposit (SU 3009), containing large pieces of pottery, was identified. This was thought to be the fill of a pit but the limited width of the trench made it difficult to ascertain this. In layer SU 3003 a sondage was dug at either end of the trenches D1 and D2; the rest was left unexcavated. Beneath SU 3003 a reddish-brown layer (SU 3004) was excavated which included rather coarse pottery; this in turn sealed a browner deposit (SU 3011) which had no finds. Excavation was stopped at an arbitrary depth of 1.05 m from the surface. It is thought that layer SU 3003 could be related to the anomaly identified on the aerial photograph and in a geophysical survey conducted in the lower terrace, but further excavation is required to confirm this.

Trench D3 (fig. 4; pl. 8: 1)

In this trench at the bottom of the terrace below Area A, the *Missione* excavations had uncovered the remains of three walls (SU 224, 225, and 226). It was decided that in order to understand the formation of the terrace at this point it would be necessary to give a general clean-up to this area. The terrace face, which had collapsed since the 1960s, was cleared of debris, and the walls were exposed along with a number of boulders. It was noted that the blocks of wall SU 225 had the characteristic marks produced by a mechanical shovel, thus providing an insight into how this area had been cleared in the recent past. A ledge cut into the friable bedrock to accommodate wall SU 225 was rediscovered. Further up the terrace face, scanty remains of a rubble retaining wall which ran along the terrace itself were identified. Deposits of flat irregular stones, ash, and limestone powder were also noted in the section face. The terrace face was stepped for safety reasons, and drawn. At the end of the 1996 campaign, the terrace face was stabilized by a retaining wall built of spoil-filled sacks. This precaution has been successful.

Simon Mason and Nicholas C. Vella

²³ *Missione* 1965, pl. 18; *Missione* 1970, pls. 30–1.

POTTERY

The analysis of pottery from Tas-Silg seeks to address a number of objectives. One aim is to determine the scope of the prehistoric presence at the site, clearly apparent in a number of sherds recovered over the last three campaigns, that presumably belong to the Temple Period. Another is to clarify the nexus between the late prehistoric period and the arrival of the Phoenicians through an elucidation of the Phoenician ceramic horizon in Malta at the end of the Bronze Age. Tas-Silg also affords the possibility to establish, through physical and chemical clay characterization, a detailed range of wares for the Punic period. Similarly, it has the potential to clarify certain typological aspects of the repertoire, especially the development of specific shapes such as bowls and plates which have proved difficult to seriate at Punic sites generally.²⁴ Finally, the Tas-Silg assemblage will go far in providing a more holistic understanding of Maltese Punic pottery, the study of which has necessarily relied heavily on tomb groups.²⁵

The sequence and chronology of prehistoric wares developed by J. D. Evans and D. H. Trump have been adopted here.²⁶ For the Punic phases, on the other hand, reference is made to a sequence recently devised, largely based on tomb evidence (table 1).²⁷

Phase	Date	Broad Cultural Developments
I	c.1000–750 BC	Archaic Phase I: Period of trading contact and sporadic settlement
	750–620 BC	Established Phase I: fully-fledged Phoenician colonization
	620–600 BC	Late Phase I to Early II
II	600–500 BC	Period of introversion: minimal foreign influence
III	500–400 BC	'Classic' Punic: Phase III
	400–300 BC	'Classic' Punic: Late Phase III to Early IV
IV	300–100 BC	Incipient 'Romanization': includes the Roman conquest of Malta in 218 BC
V	100 BC–c.AD 50	'Romanization' of the local repertoire
VI	c.AD 50 onward	Romano-Punic

Table 1. Cultural periodization of Punic Malta.

²⁴ Shapes such as lids are rare in tomb contexts, but they have been found among the Tas-Silg material, see for example here, fig. 9: 2.

²⁵ C. Sagona, *Meditarch* 9/10, 1996/7, 29–52; ead. *OxfJA* 18, 1999, 23–60; ead. *The Archaeology of Punic Malta* (forthcoming).

²⁶ See J. D. Evans, *The Prehistoric antiquities of the Maltese*

islands (1971); D. H. Trump, *ProcPrehistSoc* 27, 1961, 253–62; id., Skorba (1966), for fundamental works concerning prehistoric Maltese pottery.

²⁷ Table 1 has some minor modifications on the chronology outlined in C. Sagona, *Meditarch* 9/10, 1996/7, 39. The chronological subdivision is discussed at length in Sagona, *The Archaeology of Punic Malta* (forthcoming).

PREHISTORIC POTTERY

Although the prehistoric material recovered from the site is limited in quantity and derives from secondary depositions, the range is rich and varied. Sherds of various kinds representing no fewer than six prehistoric wares are stratigraphically intrusive, found among predominantly Punic material. Each piece is invariably handmade.

Sherds from one vessel bear ornamentation that is typical of the *Ggantija* Wares, hitherto unreported from Tas-Silg. The fragments display the characteristic highly burnished surface and distinctive scratched design executed after firing; the scratches were enhanced by bright red ochre (**fig. 9: 3; pl. 8: 2**).²⁸ Their walls are very thin and belong to a deep and carinated, open bowl that is comparable to late 'Copper Age' or 'Temple Period' wares from *Ggantija*.²⁹ Trump described the use of ochre on similar vessels at Skorba as 'plentiful'.³⁰ The period is broadly dated to the late 4th millennium and thus testifies to the antiquity of occupation at Tas-Silg.³¹

Several other sherds are reminiscent of vessels from the Hal Saflieni Hypogeum. One sherd bears a strong resemblance to the partly hatched, curvilinear designs that decorate bowls from that site (**fig. 9: 5; pl. 8: 4**). The fragment illustrated here is from a very thin-walled, well-modelled closed vessel.³² Other sherds, one from a conical bowl, have deeply incised designs filled with white paste (**fig. 9: 9–10; pl. 8: 3** top right). The bowl is heavily decorated on the underside. This ornamentation, together with the burnished finish and the finely modelled rolled rim, are akin to the Hal Saflieni examples.³³ The final example from this category is a sherd from a large vessel with scratched design that had a small pierced lug attached high on the shoulder above the offset (**fig. 9: 1**); a small hole had been biconically drilled beside the lug.³⁴

Some materials represent the *Tarxien* phase. The clay is dark with traces of burnished interiors. Sherds carry distinctive pellet decoration which can be compared with that of pieces from *Tarxien* (**fig. 9: 11–12**).³⁵ Another decorative technique comprises vertically scratched lines on the exterior that may have been originally enhanced by white paste (**pl. 8: 3** bottom right).³⁶ One large vessel was built by joining vertical slabs of clay (**fig. 9: 13**), a technique not commented upon in previous studies, which have generally noted coil-made wares at *Tarxien*.³⁷

²⁸ Parallels for this can be found in Evans op. cit. pl. 61: 11, 13–15, 17, which are similar in shape; 184, G/P. 4, G/P. 13–15, G/P. 2, for descriptions. In the case of pl. 61: 13 and 17, they have curvilinear scratched designs; on no. 17 the incisions have been infilled with white paste; pp. 215–16 for the comments on the use of red ochre. Traces of red ochre infill are evident on vessels from Hal Saflieni, though these have different shapes: see p. 60 pl. 35: 7–8.

²⁹ Trump art. cit. (n. 26) 39 fig. 36: d; pl. 31: a, from Kordin, for a similar bowl shape.

³⁰ The use of incised decoration with white in-fill and red ochre wash was first recorded for Neolithic contexts at Ghar Dalam, *ibid.* 38.

³¹ Chronological tables can be found in: Trump art. cit. 20 Table 1; A. Bonanno, Malta. An Archaeological Paradise (1993) 5.

³² Evans op. cit. (n. 26) 60, S/P. 13, S/P. 12, and S/P. 1, figs 7: 2–3; 10: 6 exterior of bowls and a plate. Cf. earlier Tas-Silg finds, *Missione* 1965, pl. 31 top right and middle left.

³³ Evans op. cit. 61, S/P. 18, fig. 5: 4 pl. 35: 5. Cf. the Italian finds illustrated in *Missione* 1965, pl. 31 centre.

³⁴ Evans op. cit. 40–1, BM/P. 1, fig. 4: 9 pl. 34: 3 from Bur Mghez cave; 60, S/P. 8 and S/P. 15, fig. 5: 6, 11 from Hal Saflieni.

³⁵ J. D. Evans, Malta (1959) pls. 42–3; *id.* op. cit. (n. 26) 139, 220, T/P. 19, T/P. 26, T/P. 23, T/P. 33, figs. 22: 2, 10; 23: 1; 24: 1 pl. 45: 3–6. Bonanno op. cit. (n. 31) 41 pl. D, illustrates two pellet-decorated bowls. Sherds with this distinctive decoration were found at Tas-Silg during the Italian excavations: *Missione* 1965, pl. 31 bottom middle.

³⁶ Evans op. cit. (n. 26) 90, Q/P. 2 pl. 39: 13 from Hagar Qim, and 61, S/P. 30 and S/P. 19 pl. 35: 10–11 from Hal Saflieni Hypogeum. Vertically scratched and coated with white paste was a technique of the *Tarxien* phase, 220. The scratches are thought to have helped the adhesion of the paste coating. Cf. earlier Tas-Silg finds in *Missione* 1965, pl. 31 bottom right.

³⁷ Evans op. cit. (n. 26) 220.

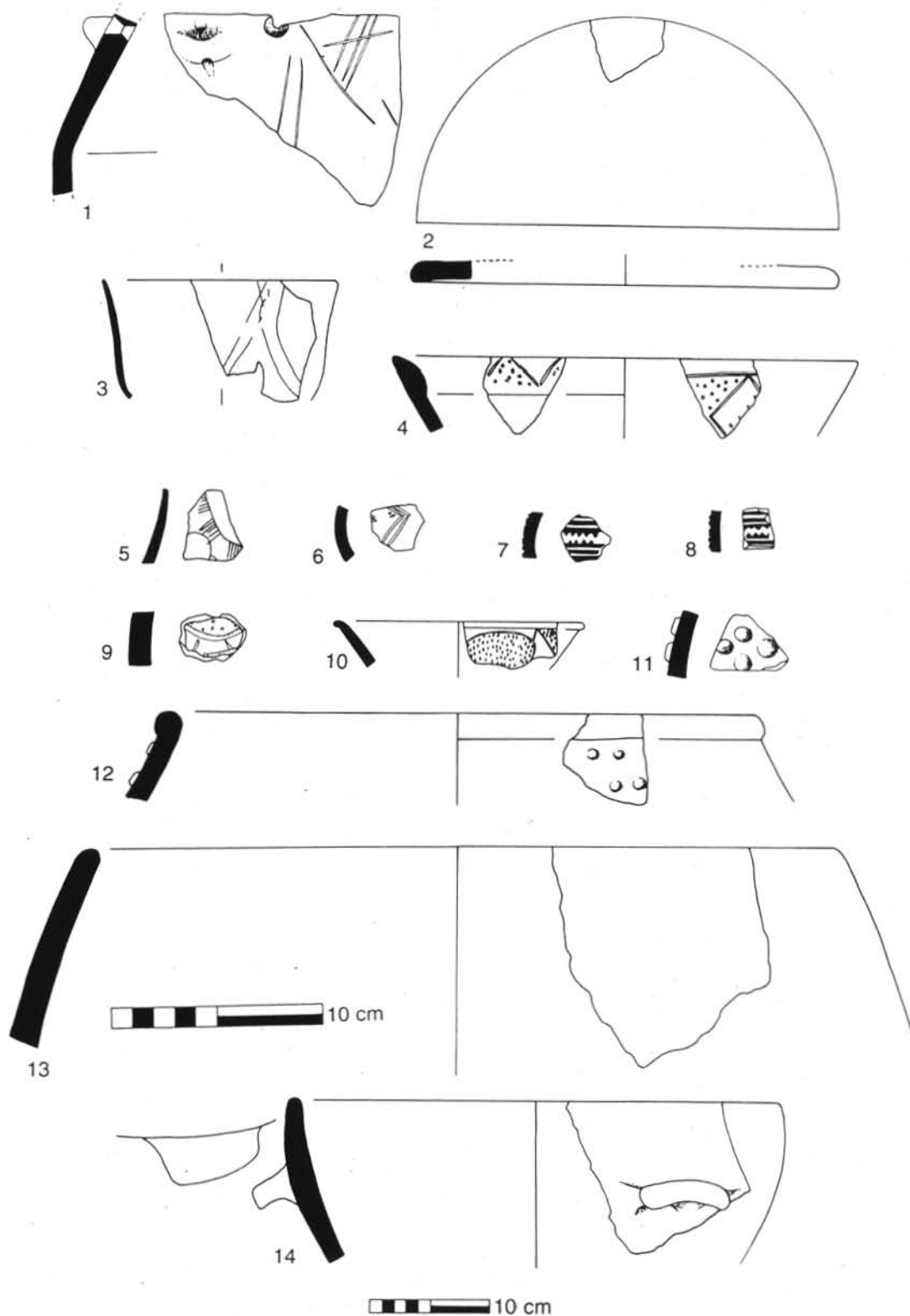


Figure 9.

1. TSG96/25/2; 2. TSG96/205/26; 3. TSG96/219/1 (pl. 8: 2); 4. TSG96/2061/9 (pl. 8: 3, top left);
 5. TSG96/11/13 (pl. 8: 4); 6. TSG96/1010/9; 7. TSG96/1010/1; 8. TSG96/1000/1;
 9. TSG96/17/5; 10. TSG96/2061/7 (pl. 8: 3, top right); 11. TSG96/1016/9;
 12. TSG96/unstratified/79; 13. TSG96/2061/17; 14. TSG96/205/15.

A sherd from a 'Thermi Ware' bowl, assigned to Early Bronze Age of the Aegean, was recovered from Area C (fig. 9: 4; pl. 8: 3 top left).³⁸ Thermi Ware is characterized by a heavily incised and punctured design of triangles pendant from the thickened lip. According to Trump, the latter decorative technique is rare at Skorba.³⁹

Deeply excised line and meander designs of 'Foreign Bahrija' type are illustrated in fig. 9: 7–8. Trump related this dark-faced ware with cut-out designs to finds in the Fossa Grave Culture of Calabria.⁴⁰ The pottery is dark throughout and burnished on both surfaces.⁴¹ White-infilled incised decoration in zigzag and spotted motifs are also represented (fig. 9: 6).

A substantial sherd from a large, conical-shaped bowl with thick walls was found in Area A (fig. 9: 14). Its burnished surface is slightly crazed in the characteristic *Borg in-Nadur* manner;⁴² however, it has a horizontal ledge-handle similar to those on cooking pots of the Archaic Phase I, and horizontal loop handles do occur on urns in early tombs in Malta.⁴³ The bowl owes more to the vernacular repertoire of Malta than to early Phoenician elements coming into Malta sometime around the 8th century if not earlier. It was found with other handmade wares, including a ledge handle from a second vessel and sherds of smaller conical bowls with simple rims.⁴⁴ This earlier material may have been churned up as a result of building or other activities in the vicinity.

PHOENICIAN-PUNIC POTTERY

Pottery from the Punic period at Tas-Silg represents the largest component of the finds. The following is a summary of the provisional ware types.

Chalky Reddish-Yellow Ware

As yet only a few sherds have been recovered which belong to the Late Borg in-Nadur/Phoenician period (Archaic Phase I).⁴⁵ They are handmade from a soft and friable, reddish-yellow clay, often quite dark at the core (in the range of 10YR 7/2–4), baking orange to red at the surface (around 7.5YR 6/6–8); the clay has a moderate to large amount of mixed gritty particles. Red, dark red, or mottled blackened slip (in shades of 2.5YR 5/6–6, 4/6–4/8) can coat the surface. Breaks are usually eroded and dull. The recognizable shapes at Tas-Silg include bowls. This ware type finds parallels at Mtarfa,⁴⁶ Buskett Gardens,⁴⁷ Ghajn Klieb⁴⁸ and Rabat⁴⁹ in Malta, and in Gozo.⁵⁰

³⁸ Cf. Evans op. cit. (n. 26) 141, T/P. 314, figs. 24: 2; 38: 4 pl. 46: 16; Annual Report of the National Museum, Valletta (hereafter MAR), 1956–1957 pl. 5. Trump art. cit. (n. 26) 45 fig. 44: h–i pl. 31: d. The ware is known at Lesbos from the Aegean Early Bronze Age.

³⁹ Trump art. cit. 45–6 fig. 44: g–i, especially bowl 'i'. See pl. 31: d for a complete *Thermi* bowl on conical pedestal.

⁴⁰ Ibid. 259 pl. 16 lower left. The 'Foreign Bahrija', dark-faced ware belongs to the Prehistoric Bahrija phase of Malta.

⁴¹ Cf. Evans op. cit. (n. 35) pl. 97; id. op. cit. (n. 26) 106, B/P. 1, B/P. 4, and B/P. 5, fig. 11: 1–2 pl. 43: 4, 7–8 from Bahrija.

⁴² Some incised *Borg in-Nadur* wares have been found in the recent Tas-Silg investigations comparable to sherds published in Missione 1965, pl. 32 middle.

⁴³ A tomb at Qalillija, found on 18.4.1914, now on display in the National Museum of Archaeology, Valletta, has such an urn.

⁴⁴ Conical bowls are found in Late Bronze Age/Phoenician contexts such as in the pit at Mtarfa excavated by Ward-Perkins in 1939: see J. B. Ward-Perkins, MAR 1938–1939, xii; id. *Antiquity* 16, 1942, 34; also Evans op. cit. (n. 35) 181–2; id. op. cit. (n. 26) 107; Trump art. cit. (n. 26) 261–2; C. Sagona, *OxfJA*18, 1999, 23–60.

⁴⁵ For example, TSG96/2019/7, a rim sherd with two ridges under the rim.

⁴⁶ See n. 44.

⁴⁷ A tomb find at Buskett Gardens, MAR 1937–1938, iii–iv.

⁴⁸ A tomb find at Ghajn Klieb, MAR 1937–1939, iv.

⁴⁹ A tomb find at Rabat, discussed in: MAR 1926–1927, vii; M. Murray, *Ancient Egypt*, II, 1928, 49; a record was made of the tomb in a large folio manuscript held in the National Museum Library, dated 3.12.1926.

⁵⁰ A tomb find in Gozo. See T. Zammit, Notebook VII, 41–2, ms. held in the library of the National Museum of Archaeology; MAR 1937–1939, iv.

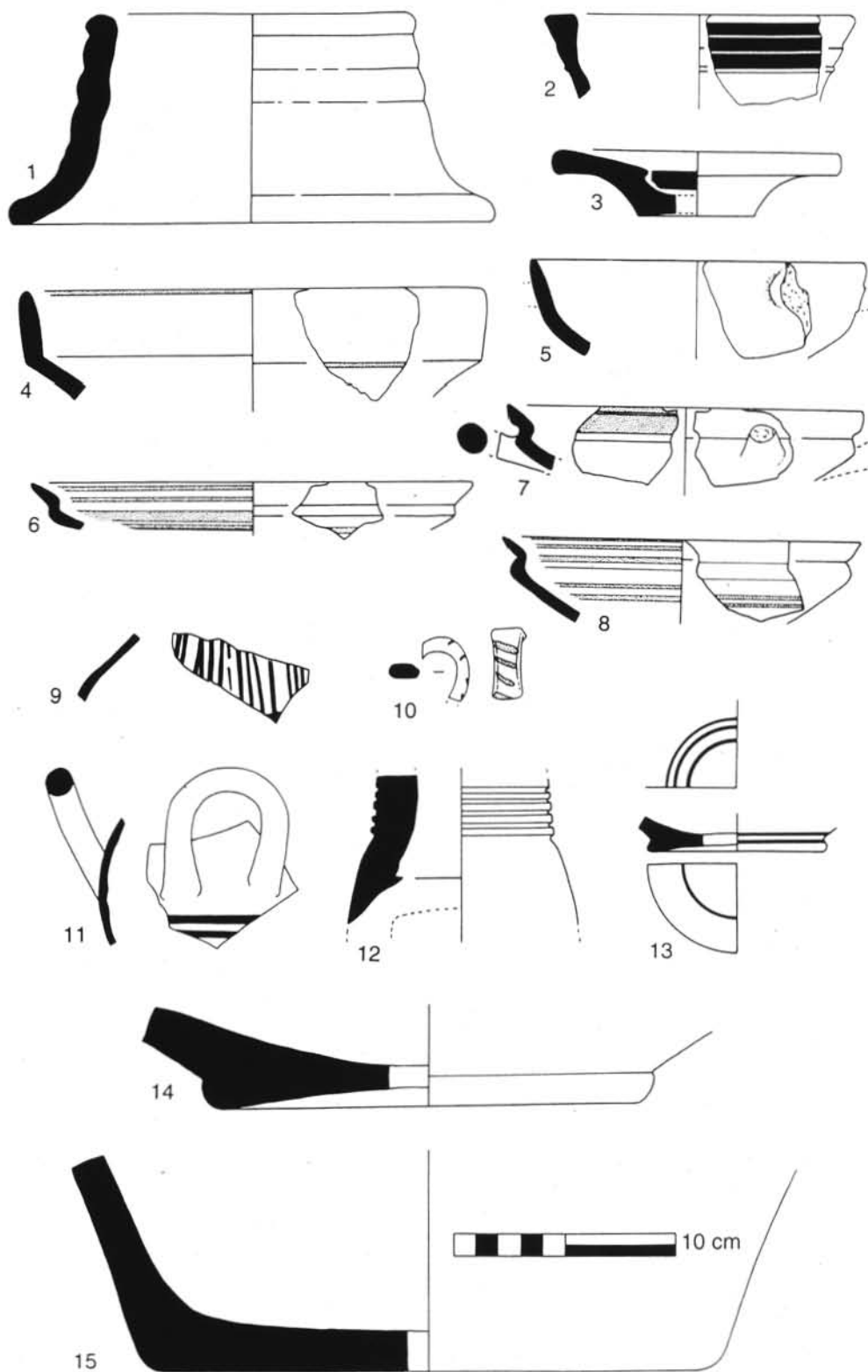


Figure 10.

1. TSG96/1002/16; 2. TSG96/203/6; 3. TSG96/2/12; 4. TSG96/2010/3; 5. TSG96/205/13;
 6. TSG96/2006/1; 7. TSG96/2061/16; 8. TSG96/2026/15; 9. TSG96/2061/18;
 10. TSG96/1008/47; 11. TSG96/2061/15; 12. TSG96/1004/1; 13. TSG96/205/28;
 14. TSG96/205/14; 15. TSG96/205/32.

Coarse Grey Gritty Ware

Coarse Grey Gritty Ware is represented by a small group of wheelmade sherds from Area C⁵¹ made from a moderately gritted clay, generally grey at the core (Grey N6/1–N5/), hard in texture, thick-walled, and baking pale reddish-yellow to pink at the surface (5YR 6/3–7/4). Pale green to yellow slip (paler than 2.5Y 8/3) is often applied to the surface. Bands occasionally decorate closed vessels, such as jugs, flasks, and bowls (**fig. 10: 4**); the painted lines are around 5–10 mm wide and dark grey to red (10R 4/4).⁵²

This fabric developed from a reddish-yellow gritty ware of the late Phase I of which there is, as yet, no trace among the pottery in the southern sector.⁵³ In turn, it was the prototype of the so-called Crisp Ware which predominates at the site, and was the favoured ware at the *floruit* of the Phoenician/Punic culture in Malta. It is datable to Phase II.

Thick-slipped Crisp Ware

Preliminary examination of the pottery indicates that Tas-Silg corresponds to Phase III as determined for funerary contexts of Punic Malta. Chronological markers from within the Punic repertoire can be found in a fragment of thick-walled lamp⁵⁴ and beautifully finished kylix fragments (**fig. 10: 5**).

The fabric of these pieces is characterized at the core by even-coloured, dark brown to grey-brown paste (around 7.5YR 5/2–3), fine mixed grit temper with occasional larger white particles and compact texture. A thick, waxy slip, markedly paler than the core, is applied to the entire surface. The slip is pale, in shades of pink (7.5YR 8/3) to pale yellow (2.5Y 8/2 or paler). The surface is often thoroughly burnished, particularly on the base of lamps, probably to render the vessel more impervious. Large blisters often distort the surface of the vessels, a flaw seen especially on thick lamps, but also observed on kylikes and bowls, usually on the interior of the vessels.⁵⁵ Most distinctive is the attention paid to the finish.

Crisp Ware

Crisp Ware encompasses a large body of ceramic material. It was produced in the *floruit* of Punic culture in Malta and is the dominant ware at Tas-Silg. Early fragments of Crisp Ware⁵⁶ tend to be refined, well-fired, and evenly pale red to red in colour (5YR 6/6–7/6) through the thickness of the sherd. Yellow to pink slip (around 10YR 8/3 or 5YR 8/4) is applied to the surface and further decorated with painted red bands (10R 4/4–6/6) of varying thickness. Bowls or kylikes with high shoulders and offset rims figure among the early Crisp Ware (**fig. 10: 6–8** rims and **10: 13** base; **pl. 8: 5**).

⁵¹ Shapes include wide-necked jugs and bowls with off-set rim, and an amphora handle.

⁵² This ware was found in a single-use pit-grave at Mtarfa on 26.8.1939. The pottery is held in the stores of the National Museum of Archaeology, Valletta.

⁵³ Reddish-Yellow Gritty Ware is the later development from the Chalky Reddish-Yellow Ware. The ware is known from Punic tombs such as Ghajn Qajjed, found on 22.9.1950. See J. G. Baldacchino, *Proceedings of the British School at Rome* n. s. 8, 1953, 32–41; MAR 1950–1951, iii–iv. It also occurs at Mtarfa found on 22.3.1927. See MAR 1926–1927, viii. Both tomb groups are held in the National Museum of Archaeology, Valletta.

⁵⁴ Lamps of this type are found in numerous tombs such as

Qormi, found on 21.10.1955. See MAR 1955–1956, 5 pl. 1: fig. 2 bottom right.

⁵⁵ Kylikes similar to **fig. 10: 5** are known from private collections in Malta. Fragments of this type have so far been recognized among the material from Area A and Area B (e.g. TSG 96/1002/2). Similar kylix fragments from the Italian excavations at Tas-Silg were published in: *Missione* 1965, fig. 5: 6; *Missione* 1973, fig. 19: 6.

⁵⁶ Early Crisp Ware is used for bowls and kylikes with high shoulder and offset rims (**fig. 10: 6–8**, **pl. 8: 5**); shapes which do not occur after Phase III. The offset is replaced by curved walls (such as that in **fig. 10: 5**). A bowl with off-set rim was found in a tomb at Paola. See J. G. Baldacchino, *BSR* 19, 1951, Tomb 7, 11, fig. 11: E22 pl. II: 2; MAR 1948–1949, iii, listed as Tomb 1.

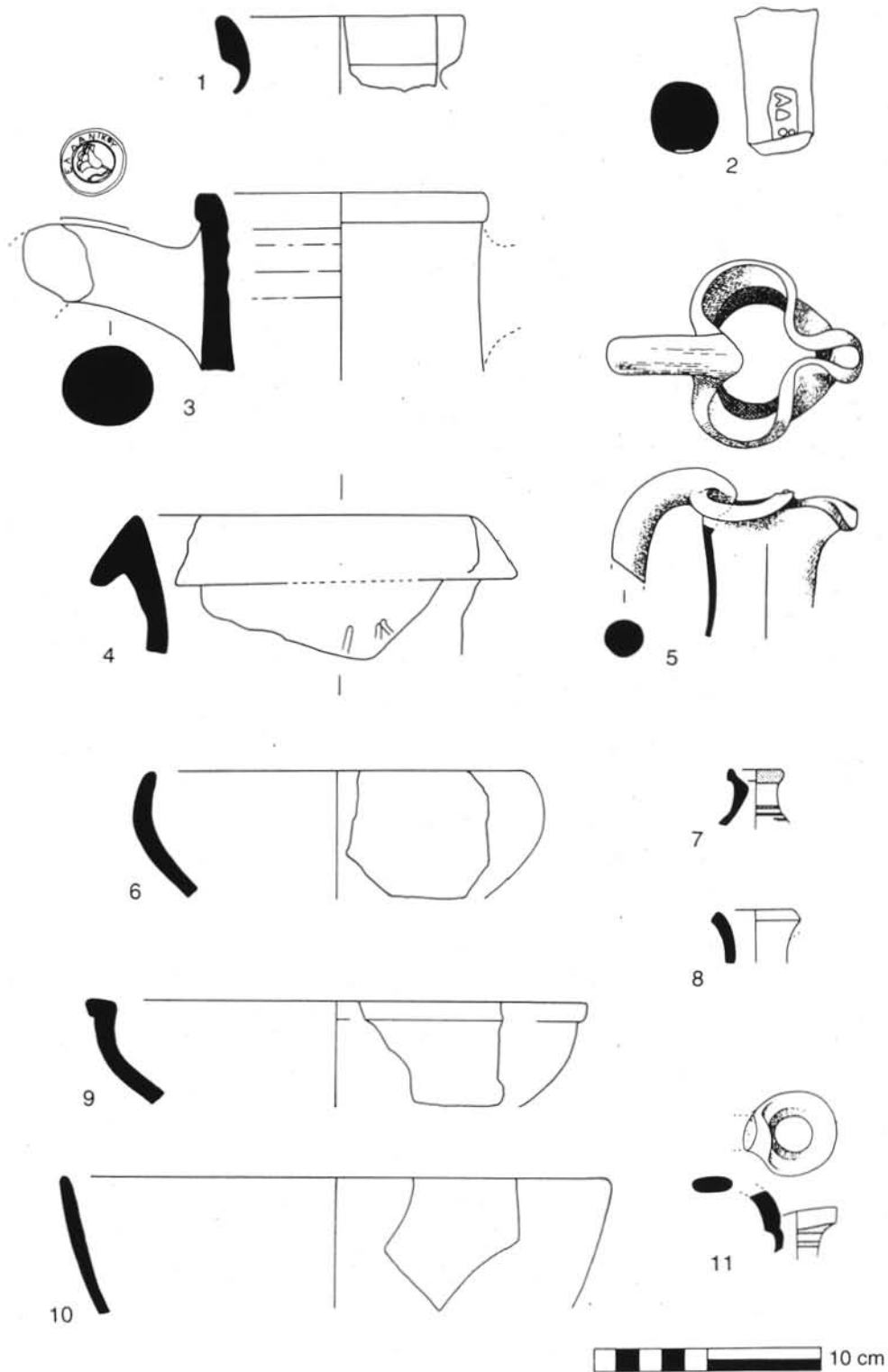


Figure 11.

1. TSG96/205/21; 2. TSG96/2/1; 3. TSG96/1003/11; 4. TSG96/204/1; 5. TSG96/41/9;
6. TSG96/205/23; 7. TSG96/2012/11; 8. TSG96/205/31; 9. TSG96/205/16;
10. TSG96/205/20; 11. TSG96/205/7.

This fabric was extensively used from the late Phase III to Phase IV (i.e. from the 4th century BC), and chronological distinctions thereafter rely on the changes in pottery shapes and, to a certain degree, shifts in decorative features. Crisp Ware at Tas-Silg varies considerably in colour from vessel to vessel, probably due to firing conditions.⁵⁷ Red-coloured paste is quite common, though variations range from reddish-yellow to those that are dark at the core. Some sections are clearly a colour sandwich with the darker fabric reddening toward the surface (**fig. 13: 8**). The paste is generally compact with very fine to medium mixed grit inclusions and some fine voids throughout; the fabric has a 'clinker' crispness, breaking with a sharp edge.

Surface treatment includes smoothing, not burnishing. Slip colours vary: hues can be close to the core colour (tones of red **fig. 13: 7**), or have a two-tone effect with pale yellow slip on the upper vessel, baking red lower down. Some vessels have pale yellow slip over most of the vessel. Closed vessel shapes are frequently dark on the inner face, a characteristic also seen on the interior of some bowls, and it is likely that this results from temperature differences during firing.⁵⁸ Bands of red paint (shades of 10R 4/4–5/3) over the pale slip have been found to decorate various vessels such as bowls (**fig. 13: 4**) and jug fragments (**figs. 10: 10; 11: 11**).⁵⁹ Remnants of two-handled, pale-slipped urns with dark red to brown painted bands around the rim, shoulder, and base are present in the Tas-Silg deposit (similar to **fig. 10: 2**).⁶⁰ They occur elsewhere in the Mediterranean at sites such as Carthage,⁶¹ in Sicily,⁶² and at Puig des Molins on Ibiza.⁶³

The range of pottery shapes is striking. Bowls and small, wheelmade plates, some deep with central well (**fig. 12: 2**), others with wide floors (**fig. 12: 1**),⁶⁴ predominate. Although most vessels are fragmentary, around twelve were recovered nearby complete from Area B. Small, conical-shaped bowls with simple rounded rims are numerous (**fig. 13: 7, 9**) and some have a slightly more featured rim (**fig. 13: 1, 5–6, 11**). Other diagnostics include rims from closed jars such as amphorae (**fig. 11: 1**) and jugs (**fig. 11: 5, 8**). The latter can carry pincer marks used to fashion spouts at the rim (**pl. 9: 3**). Some fragments have handle stumps that clearly indicate that the handle was drawn up higher than the rim (**fig. 11: 11**).⁶⁵

Of special note is a body sherd with ivy leaf design (**fig. 12: 12**). Rare in Malta, this motif is known from a jug at Paola⁶⁶ as well as from another complete spouted jug and a jug fragment on display in the Gozo Museum.

⁵⁷ Inconsistency in colouring of the fabric and slip may indicate that less care was taken in producing these vessels. One of the outcomes of the excavations may be to determine whether the Crisp Ware vessels (at least) were mass produced to serve the immediate, rather than long-term, needs of the sacred site.

⁵⁸ For an example of a darker interior: TSG 96/1009/30. On sherds where the core is two-toned, the inner section is usually darker.

⁵⁹ Jugs similar to **fig. 11: 11** can be seen in Missione 1973, **fig. 15: 2–3 pl. 48: 2** from Tas-Silg.

⁶⁰ Cf. complete urns in the collection of St Agatha's Museum, Rabat, illustrated in P. Vidal González, *La Isla de Malta en Época Fenicia y Púnica* (1996) 66–7 nos. 106 (inv. no. J4), 107 (inv. no. J2), 108 (inv. no. J3), 109 (inv. no. J11). Examples came from the excavations at S. Paolo Milqi, Malta. See Missione 1969, **fig. 8: 16, 24–6 pl. 30: 2–4**. P. Cintas, *Céramique Punique* (1950) **pl. 30 no. 359**, depicts an example from Rabat, Malta, after T. Zammit, *Bulletin of the Museum 1, no. 3, 1931, fig. 19 top shelf*.

⁶¹ R. P. Delattre, *Cosmos*, Feb.–Mar. 1898, 4, **fig. 6 bottom middle**.

⁶² Examples from Lilybaeum, NSc 1969–1970, 732–4 **fig. 71**.

⁶³ J. H. Fernández, *Excavaciones en la Necrópolis del Puig des Molins (Eivissa)* (1992) **figs. 26–7 nos. 76–7; 1923 campaign, Hypogeum 38, vol. I, 206–7 item 564; vol. III fig. 115; 564 pl. CII. 564 dated to 220–190 BC, which is later than the date proposed here; also from Ibiza, A. R. Rianza, Colección de Cerámica Púnica de Ibiza en el Museo Arqueológico Nacional (1980) 14 Type 1.1 **fig. 3: 1 colour pl. 1 pl. 2: 1, dated to the 4th century BC**.**

⁶⁴ Cf. plates with wide floors similar to **fig. 12: 1**, also from Tas-Silg, in: Missione 1973, **pl. 48: 1**.

⁶⁵ Jugs with upswing handles are well represented in the collections and were found in the Italian investigations at Tas-Silg in 1970. See *ibid.* **fig. 15: 2–3 pl. 48: 2**.

⁶⁶ Baldacchino *art. cit.* (n. 56) Tomb 3, 3–9 **fig. 9 pl. III: 2**; illustrated recently in E. Acquaro (ed.), *Along the routes of the Phoenicians* (1998) 104, where it is dated to the 3rd



Figure 12.

1. TSG96/205/10; 2. TSG96/3/4; 3. TSG96/41/4; 4. TSG96/19/13; 5. TSG96/214/4;
6. TSG96/205/3; 7. TSG96/3/3; 8. TSG96/41/10; 9. TSG96/8/1; 10. TSG96/19/2;
11. TSG96/2/11; 12. TSG96/unstratified/26; 13. TSG96/52/1; 14. TSG96/1002/3;
15. TSG96/12/11 (pl. 7: 3).

Inscriptions were encountered on the underside of bowls and on the shoulders of closed vessels (figs. 12: 2; 13: 1–2).⁶⁷ The inscriptions were frequently cut into the clay prior to firing; some were cut into quite soft clay whereas others were made when the vessel was leather-hard. Painted markings were found on the neck of an imported amphora (fig. 11: 4), but this technique is otherwise not represented. It is worth noting that while inscriptions are not infrequently found on the pottery at Tas-Silg, they are rarely seen on vessels placed in the Punic tombs of Malta.⁶⁸

Crisp Ware can also be coarse, used for thick-walled vessels, especially the large open bowls with pendant rim. Again the vessels are wheelmade but the grit inclusions range from fine to very large with the fabric often having an open-textured appearance with large voids in the paste. Pale slip is frequently applied to the exterior of closed vessels, or, if open, to both interior and exterior surfaces. Bases are heavy and flat (fig. 10: 15), but well-made, concave disc bases are present among the material (fig. 10: 13–14). This fabric was used in the manufacture of a thick-walled incense stand with deeply incised lines around the stem (fig. 10: 12). The incense stand (*thymiaterion*) attests to the religious function of Tas-Silg. These objects are occasionally found in funerary contexts, but their primary role as cult objects in religious ceremonies is known throughout Phoenicia, from the eastern homeland to the western colonies.⁶⁹

Pot stands are rare in Malta; one came from the Ghajn Qajjied tomb, considered pivotal in the dating of Phoenician colonization of the island.⁷⁰ Another has now been identified among the sherd material from Area B (fig. 10: 1),⁷¹ but this Tas-Silg example is likely to date early in Phase III. Significantly, this find indicates that stands of this type were used in Malta in non-mortuary contexts. A similar stand is illustrated from the excavations at Motya, Sicily.⁷²

Biscuit Ware

A distinctive two-toned fabric, known as Biscuit Ware,⁷³ has also been recognized among the fragments at Tas-Silg. The ware combines a fine red matrix clay with a yellow crumbly material similar in appearance to pulverized, decayed limestone; although evenly mixed, the two clays remain unblended. The scheme constructed for the Punic tomb pottery of Malta suggests that the Biscuit Ware carries into Phase IV for it is known to have been used in the construction of cinerary urns of that period. At Tas-Silg, the ware was used in the manufacture of large open bowls with pendant rims (fig. 13: 13–14). Pale slip, similar to the crisp wares, is applied to the surface and this can have a striated effect from smoothing or from use wear. Slips range in colour from greenish, to yellows and pinks.

century BC. A similar design (perhaps from the same vessel) was recovered in the Italian campaign of 1973. See *Missione* 1973, pl. 54: 3 bottom right.

⁶⁷ A few inscribed sherds have been illustrated from the Italian excavations at Tas-Silg: *Missione* 1964, 30–3 fig. 15: 1–7 pl. 29: 3 bottom; *Missione* 1968, pl. 17.

⁶⁸ One large jug in St. Agatha's Museum, Rabat, inv. no. J82, has a detailed inscription scratched on the shoulder: see Vidal González op. cit. (n. 60) 69 no. 114. This jug falls late in the Punic repertoire, c. 100 BC to c. AD 50. Punic potters' marks of any sort number less than five out of the hundreds of vessels examined in the National and private collections in Malta. Stamp seals under the handles of Phase IV amphorae are the only other markings observed.

⁶⁹ Incense stands have been discussed by various authors: from Tas-Silg, S. Moscati, *Oriens Antiquus* 8, 1966, 15–18, 151–4; W. Culican in: R. Y. Ebeid–M. J. L. Young (eds.), *Oriental Studies Presented to B. S. J. Isserlin* (1980) especially 93–101 fig. 3; T. C. Gouder, *Heritage*, 1978, 176, illustrates a fragment from a stone incense stand found in Rabat, now in the National Museum; H. G. Niemeyer, *MM* 10, 1969, 96–101.

⁷⁰ Baldacchino art. cit. (n. 53) 37 fig. 5: J1 pl. 14 left.

⁷¹ TSG96/1002/16.

⁷² Cf. F. Bevilacqua, *Mozia VII* (1972) 30–2 pl. 21: 2 right.

⁷³ See, for examples of Biscuit Ware Rabat, St Agatha's Museum, inv. nos. F 89 (amphora) and U82 (cinerary urn).

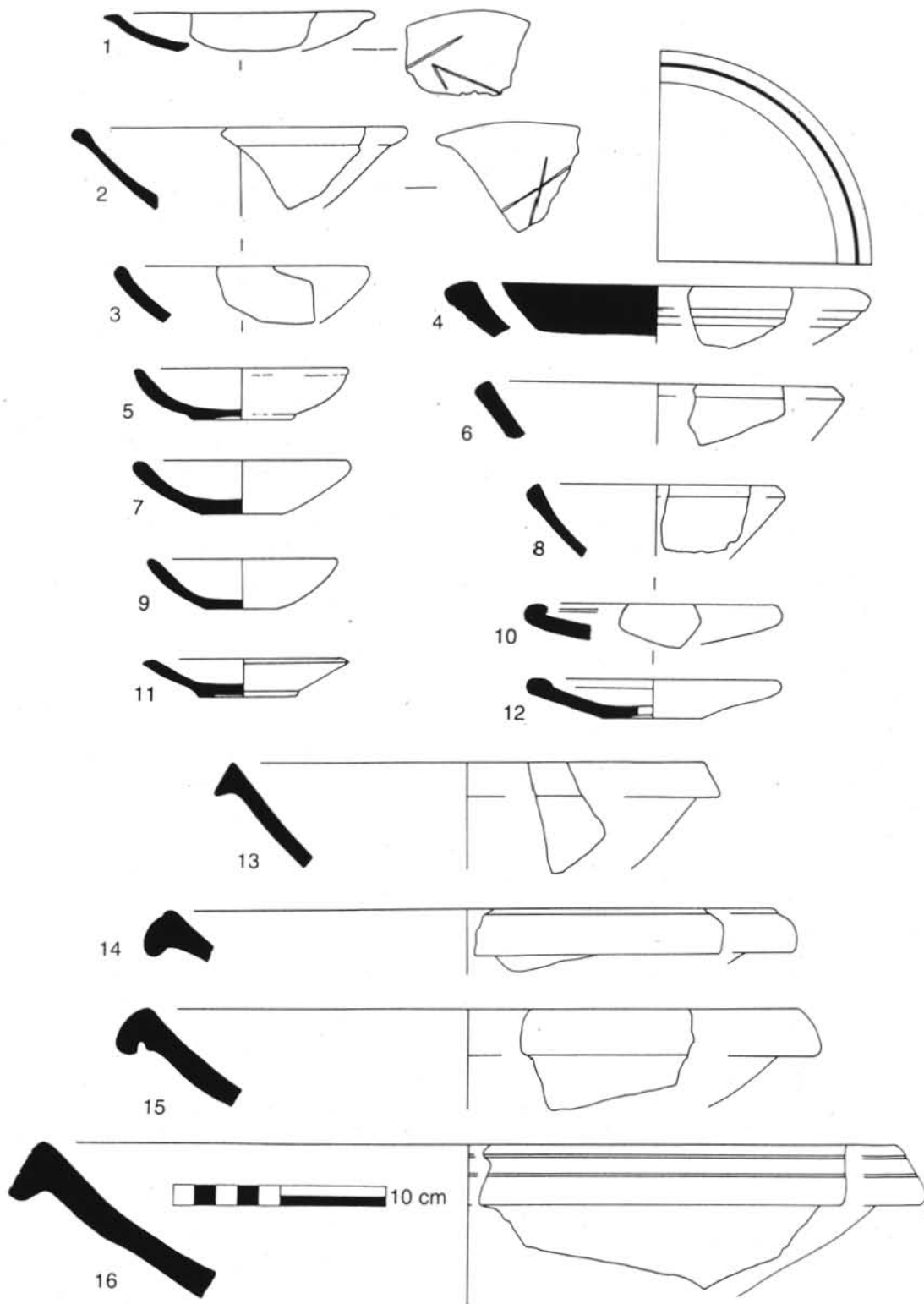


Figure 13.

1. TSG96/204/8; 2. TSG96/204/7; 3. TSG96/205/17; 4. TSG96/205/30; 5. TSG96/205/24;
6. TSG96/205/29; 7. TSG96/205/9; 8. TSG96/205/8; 9. TSG96/205/27; 10. TSG96/205/25;
11. TSG96/1008/12; 12. TSG96/205/22; 13. TSG96/205/18; 14. TSG96/205/19;
15. TSG96/205/12; 16. TSG96/205/11.

Brown Soft Ware

A few sherds have been isolated which are made of a Brown Soft Ware. Shapes include bowls, some with squared rim (fig. 11: 9), small shallow bowls of the simple conical shape (fig. 13: 3), and lids (fig. 9: 3).⁷⁴ The colour is brown (7.5YR 5/6) throughout with a self-slipped or wet-smoothed surface. The walls of the vessels are thicker and are moderately coarse. Unlike Crisp Ware which is hard-fired, these sherds have a dullness and a soft quality about the fabric. The surface has an almost soapy feel: smoothed, with an 'oatmeal' texture, formed when the slip covered the underlying gritty inclusions. The grits are coated, but not obscured (fig. 13: 3).

Bricky Red Ware

Some sherds are made of a Bricky Ware, an even-coloured, crisp fabric, heavily gritted with even, medium-sized, generally white inclusions. A thin, dark red slip can be applied. This ware breaks with a jagged edge. It is made from red to reddish-brown clay (2.5YR 5/2-6). The ware is represented at Tas-Silg by wheelmade cooking pots with thin walls and flaring rims (fig. 12: 3). Round-sectioned handles are attached high on the shoulder and drawn up to the rim. An inner lip was fashioned to receive a lid. Minor rim variations have been observed among the sherd material. The Tas-Silg finds may determine whether these variations are chronological developments of the cooking-pot shape.⁷⁵ A few examples from closed vessels, such as jugs, have been recorded in Bricky Ware (fig. 12: 5-7).

Macroscopically, this ware does not appear to be local. It is found widely around the Mediterranean, but the origins of this cooking-pot ware (if indeed there is more than one origin) are problematic. Italy is likely to be one place of production,⁷⁶ but it has been suggested that cooking pots of this material were also products of the Aegean.⁷⁷ They are not found in the Maltese Punic tombs. One further intriguing aspect of the cooking-pot fragments at Tas-Silg is that a number were inscribed prior to firing.⁷⁸ It seems unlikely that such vessels were produced elsewhere, inscribed, fired, and then taken to Malta for use in some ritual activity at Tas-Silg. It is more reasonable to suggest that they were produced close to the site for use at the sanctuary. Were the vessels made by itinerant potters? Did they transport their unfired clays and work closer to their markets? It is hoped that clay sourcing and analysis of sherd material will determine whether the Tas-Silg examples are local in all aspects.

The Maltese cooking pots, though coarse, are akin to the small bowls made of a finer ware (here, Refined Bricky Red Ware) which appeared in the late Punic tombs at Rabat,⁷⁹ for example, and a few fragments have also been identified at Tas-Silg (fig. 12: 4). The vessels are made from the finer ware and have more in common with early Roman bowl shapes than

⁷⁴ Lid fragments were found at Mtarfa among pottery sherds of primarily Chalky Reddish Yellow Ware of the late *Borg in-Nadur*, in association with a single Punic lamp made from the same material, Sagona art. cit. (n. 25) 1999, fig. 6: 1, 8. Lids do not figure greatly in the Punic tombs of Malta.

⁷⁵ Examples of cooking pots of the type from Tas-Silg were published in *Missione* 1965, fig. 6: 9-10.

⁷⁶ J. W. Hayes, *Hesperia* 42, 1973, 467, argued for an Italian origin for this ware in his study of the Roman pottery from Corinth, describing the fabric as 'orange to gray clay with a heavy tempering of large white flinty grits ... this is standard local coarse ware of the Roman period'. A. M. Bisi, *RStFen* 5, no. 1, 1977, 38-9 pl. 11: 4-5, discusses and illustrates two complete cooking pots, with lids, of the sort found at Tas-

Silg, held in the Brussels Museum. She has documented similar vessels from North Africa, Sardinia, and Sicily; the cooking pots are broadly dated from the 4th to the 2nd cent. BC.

⁷⁷ K. Warner Slane, *Hesperia* 55, 1986, 305.

⁷⁸ Recently A. Frendo has discussed a long inscription on a similar cooking pot from Zejtun in *PEQ* 131, 1999, 24-35. Others from the *Missione* excavations include *Missione* 1964, pls. 27-9.

⁷⁹ The small bowls are referred to as 'tubs' by R. D. Barnett-C. Mendleson (eds.), *Tharros* (1987) 127 no. 1/11. Cooking pots from domestic quarters at other sites do not appear to be inscribed.

local forms. Considering that the southern sector has not yielded sherds with red glossy slips characteristic of Roman Arretine or related wares, or local Romano-Punic forms such as carinated bowls and bowls with everted oblique rims,⁸⁰ it is likely that this area had ceased to be used for dumped material in the early 2nd century BC.

Imported Wares

Some imported wares are conspicuous among the pottery. Several fragments come from small Attic aryballois with lustrous black slip and elaborate palmette decoration (**fig. 12: 8–11**). Only one of them has been found in a reasonably well-recorded tomb context on the island, at Paola; others, held in private collections, are likely to have come from tombs opened long ago.⁸¹ The Italian excavations at Tas-Silg also found sherds with similar palmette decoration.⁸² These small vessels are well-known from sites around the Mediterranean and are dated to the 2nd quarter of the 4th century BC; they provide chronological fix points for tomb complexes at sites such as Puig des Molins and Ampurias.⁸³

Another type of Attic aryballos is decorated with a fine net-design on black background with white spots at the intersecting lines of the net (**fig. 12: 13; pl. 9: 4**).⁸⁴ Comparisons can be found at other sites where they are dated to the 4th century BC.⁸⁵

Some fragments stem from imported unguentaria characterized by a refined fabric, either red or pink-buff in colour. One neck from a small vessel has a red painted rim with further bands on the shoulder (**fig. 11: 7**). Painted unguentaria are occasionally found in the Punic tombs of Malta, but they are rarer than the plain versions.⁸⁶ The painted type can be assigned a date in the early 4th century BC.⁸⁷

A date in the 3rd century BC for SU 1002 in Area B is supported by the presence of a closed lamp with single nozzle in the Rhodian tradition (**fig. 12: 14**),⁸⁸ that is comparable to lamps found in a much used, multi-chambered tomb in the Selmani district of Benghazi.⁸⁹

An unusual sherd with bold, ivy-leaf decoration painted on the exterior in thick red paint (**fig. 12: 15; pl. 9: 1**) comes from Area C.⁹⁰ The design is based on a Greek pattern, but the vessel was made of a micaceous fabric, probably of North African origin. The ivy-leaf motif is reminiscent of the decoration on an askos in the shape of a mouse found in Thapsus, North

⁸⁰ The shape is illustrated in Sagona art. cit. (n. 27) fig. 2: 17 pl. 13: 3 front row, second from left, for the flaring rimmed shape and fig. 2: 14, 16, 18 pl. 13: 3 back row, two on right, and front right.

⁸¹ The Paola example is published in Baldacchino art. cit. (n. 56) Tomb 3, 3–9 fig. 10: D2 pl. 3.

⁸² For Attic lekythoi fragments with palmette designs from Tas-Silg, see Missione 1973, pl. 53: 4.

⁸³ See D. Robinson, *Excavations at Olynthus V* (1933) pls. 142–3, and id., *Excavations at Olynthus XIII* (1950) pls. 146 and 160. For examples from Puig des Molins, see Fernández op. cit. (n. 63) nos 5, 136, 479, 532, 807, 882, and 1124; vol. 3, 118–19; for examples from Ampurias, see M. Almagro, *Las Necrópolis de Ampurias*, vol. I. *Introducción y Necrópolis Griegas* (1953) 59: Tomb 23 fig. 23: 1 (dated 325 BC); p. 90: Tomb 90 fig. 65: 8 (dated 350–300 BC); pp. 96–7: Tomb 103 fig. 73: 3 (dated 350 BC).

⁸⁴ The example is TSG 96/52/1.

⁸⁵ For Attic aryballois with spotted net decoration, see B. A. Sparkes in: Barnett–Mendleson (eds.) op. cit. (n. 79) 60 Tomb 7 pls. 25: 7/5; p. 85 Tomb 13 pls. 13/4; from

Ampurias: Almagro op. cit. (n. 83) Tomb no. 49 fig. 34 (dated 400–350 BC), Tomb 101 fig. 72: 12 (dated 400–350 BC).

⁸⁶ Cf. examples from Tharros: T. C. Mitchell in: Barnett–Mendleson (eds.) op. cit. 52 pl. 6: 25, 5/6.

⁸⁷ See E. Cuadrado, *AEspA* 50–51, 1977–78, 390 fig. 1: A–iv, for the vessels with red-painted bands; examples from Ampurias are dated from c.400 to 350 BC: Almagro op. cit. 302 no. 3; for Puig des Molins, see Fernández op. cit. campaign 1921–Hypogeum 23, item 90, vol. I 86–8; vol. III fig. 43. 90 pl. 38. 90; 1928 campaign—unprovenanced material, vol. 1, p. 332/3, item 1064, vol. 3, fig. 188. 1064 pl. 167. 1064.

⁸⁸ Cf. R. H. Howland, *The Athenian Agora, IV. Greek Lamps and their Survivals* (1958) 99–101 Form 32 pl. 41: 425, 429 (dated around the 2nd quarter of the 3rd century BC to c.200).

⁸⁹ J. S. Dent *et al.*, *LibyaAnt* 13–14, 1976–1977, 163–5, especially no. 80 fig. 10: 80. The finds in the tomb are dated from the early 2nd century BC to the 1st century AD.

⁹⁰ Trench C3, from the upper section, TSG96/unstratified/26.

Africa.⁹¹ A similar fragment, perhaps part of the same vessel, was found during the Italian excavations at the site in 1970.⁹²

Diverse fragments of imported amphorae suggest that Tas-Silg was drawn into a cosmopolitan sphere through trade and through the temple patrons from various backgrounds.⁹³ From Area B comes a well-preserved, stamped Rhodian amphora handle (**fig. 11: 3; pl. 10: 1**)⁹⁴ with the characteristic round boss featuring a rose with bent stem and endorsed by 'Hellanikos'. It can be dated to the 3rd century BC, to 'the term of Aristonidas, month Artamitios'.⁹⁵ Others with this name were found in the Athenian Agora,⁹⁶ and one similar stamp was recovered from Carthage.⁹⁷ A handle fragment from a large imported amphora is impressed with a rectangular stamp; three letters survive (**fig. 11: 2**).

Finally a single sherd with a surviving horizontal handle from a closed vessel (**fig. 10: 11; pl. 9: 6**) is reminiscent of an urn form known at Carthage;⁹⁸ the painted body sherd (**fig. 10: 9**) probably belonged to a very similar vessel. The form is otherwise not represented in funerary contexts in Malta and must be considered an imported shape not adopted by the local potters.

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THE PUNIC INSCRIPTIONS

This section is meant as a set of preliminary observations on some of the many Punic letters generally incised on pottery vessels which were retrieved during the first three seasons of excavation between 1996 and 1998. Fifteen stratigraphic units were chosen for examination: SU 25, 34, 41, 50, 55, 71, 204, and 205 from Area A; SU 1002, 1005, 1006, 1008, and 1009 from Area B; and SU 2069 and 2061 from Area C. In fact only fourteen of these units yielded any Punic letters, since SU 2069 in Area C contained none.

According to the list of special finds held in the archive, these fourteen stratigraphic units are supposed to have yielded a total of 87 finds (generally pottery sherds, sometimes complete pottery vessels, and once a small piece of stone, TSG96/25/10) on which one or more Punic letters were incised; there is one example (**fig. 14: 1**) where the letters are painted and not incised on a ceramic vessel. The letters incised on the ceramic vessels were sometimes executed before the latter were fired, at other times after firing. It should be pointed out that some of the finds do not contain any Punic letters at all; thus, for example, on close analysis it seems that find TSG96/25/2 has a series of scratches which do not constitute any Punic letters at all.

⁹¹ The askos is illustrated in A. Ben Abed Ben Khader-D. Soren, *Carthage: a Mosaic of Ancient Tunisia* (1987) 157 no. 21, dated to the 3rd century BC.

⁹² *Missione* 1973, 63 pl. 54: 3 bottom left. The sherds may be from the same vessel.

⁹³ Earlier investigations at Tas-Silg also recovered a diverse collection of amphorae: *Missione* 1967, fig. 4: 25-6, 29-30; 5: 18-25; *Missione* 1968, fig. 5: 2 pl. 13: 4; figs. 11: 4-6; 12: 2-5; 15: 7; 17: 4-8; 18: 1-8.

⁹⁴ Area B, TSG96/1003/11. Another Rhodian stamped handle fragment from Tas-Silg was published in *Missione* 1964 pl. 23: 1.

⁹⁵ V. R. Grace, *Amphoras and the Wine Trade* (1961) 10 fig. 23, illustrates an identical stamp from the Athenian Agora; see also fig. 22 left, depicting the Rhodian amphora which carries the stamp, dated to the 3rd century BC.

⁹⁶ Athens, Agora SS 317 found in a Hellenistic context: see V. R. Grace, *Hesperia* 3, 1934, 238.

⁹⁷ *Ibid.* 238. Grace questions the 180-150 date assigned to the example from Carthage.

⁹⁸ Delattre art. cit. (n. 61) 5 fig. 7 middle right. A similarly shaped vessel was recovered from a tomb at S. Paolo Milqi, but its fabric is described as buff with pale slip. See *Missione* 1969, 101 fig. 8: 15 pl. 30: 1.

The Punic letters on any one find range from a minimum of one to a maximum of four. Generally this is owing to the fact that the object concerned is fragmentary, such as a body sherd; however, there are cases when a complete pottery vessel, for example find TSG96/1005/1 (fig. 14: 2), has only one letter. In such instances, it is logical to assume that we are probably dealing with abbreviations. As it will be shown below, the letters are very similar to the multiple Punic letters found in the previous excavations. This means that their date ranges between the 3rd and 2nd centuries BC.

Some of the aforementioned Punic letters will now be briefly presented by way of a small sample of the type of Punic epigraphy which was encountered at Tas-Silg between 1996 and 1998. The longest extant Punic word is incomplete; it consists of four letters, namely **štrt**

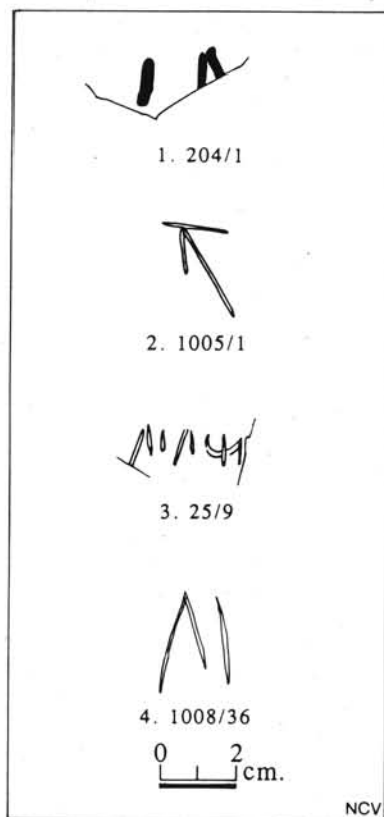


Figure 14.

Punic inscriptions from Tas-Silg.
1. TSG96/204/1; 2. TSG96/1005/1;
3. TSG96/25/9; 4. TSG96/1008/36.

sanctuary'?¹⁰⁴ In this sense, it is then also easy to explain the letters **It** incised on find TSG96/35/3 as meaning 'for the offering'; the pottery vessel in question would be reserved

(fig. 14: 3). These were deeply incised on a sherd (TSG96/25/9) before firing. It is obvious that the letter **ʿ** is missing, and that we are dealing with the name of the goddess **ʿštrt**, Astarte. These same four letters had been retrieved in the previous excavations.⁹⁹ Astarte's name is also present in the letters **lʿš** on find TSG96/34/3. These three letters are made up of the preposition *lamed* meaning 'to' and the first two letters of Astarte's name in Punic, namely **ʿ** and **š**. These letters had also been found in the former excavations,¹⁰⁰ and it is clear that we are dealing with a dedication to Astarte. Finally, this goddess's name has also been evidenced in the last three letters of her name in Punic, namely **trt** (finds TSG96/2061/10 and TSG96/2061/5). Even these letters had been previously encountered.¹⁰¹

The letter *taw* on its own has been found on finds TSG96/25/17 and TSG96/1006/4. It had also been found in the previous excavations where it had at first been interpreted as an abbreviation for the name of the goddess Tanit.¹⁰² Later this interpretation was abandoned in favour of the letter *taw* being viewed as the final letter of Astarte's name.¹⁰³ However, I would like to propose tentatively another solution. Seeing that it is a commonplace that the sanctuary of Tas-Silg was dedicated to Astarte during the Phoenician-Punic period when many votive pottery vessels were offered to her, is it not logical to think that, just as at Masada, the letter *taw* incised on ceramic vessels was used as an abbreviation of the North-West Semitic word **tr(w)mh** meaning 'heave offering', 'contribution for the

⁹⁹ B. Pugliese in: *Missione 1964*, 97 pl. 27: 6.

¹⁰⁰ *Ibid.* 97 pl. 28: 3.

¹⁰¹ *Ibid.* 98 pl. 28: 1.

¹⁰² G. Garbini in: *Missione 1964*, 91.

¹⁰³ M. G. Guzzo Amadasi in: *Missione 1972*, 122.

¹⁰⁴ J. Hoftijzer-K. Jongeling (with appendices by R. C. Steiner, A. Mosak Moshavi and B. Porten), *Dictionary of the North-West Semitic Inscriptions (1995)*, 1201 and refs. there.

for the use of the offerings to be made in the temple. Even the letters **lt** had been found in the previous excavations where, however, they had been interpreted analogously to the letter *taw* as shown above, therefore meaning either 'to Tanit' or indeed 'to Astarte'.¹⁰⁵

Find TSG96/204/1 (**fig. 14: 1**) is interesting in that it has two Punic letters which are not incised in the clay but painted on it in red. The two letters in question are **gn** which had been found quite abundantly in the previous excavations at Tas-Silg, though up to the end no satisfactory definitive interpretation for them had been offered.¹⁰⁶ It is interesting to note that in Phoenician epigraphy there is evidence for the phrase [s]pr ʾgnn in the sense of 'birds of enclosure'.¹⁰⁷ The word ʾgnn may be tentatively viewed as a variant of **gn**, thereby consisting of **gn** preceded by a prothetic *alef* and followed by an emphatic *nun*; an analogous example is provided by the Hebrew particles **hn** and **hnhh**. In this sense, **gn** would mean 'enclosure' which stands for 'birds of enclosure'. The latter means 'domestic fowl/birds' which could very well have been offered in the sanctuary of Tas-Silg. Such an interpretation of **gn** will help us also to understand the letter **g** which appears on its own in finds TSG96/41/4, TSG96/1005/1, TSG96/1008/3, and possibly TSG96/1008/12. Find TSG96/1005/1 (**fig. 14: 2**) is most interesting since the letter **g** is here found incised on a complete bowl, also cut by a horizontal line at the top; it can be simply viewed as an abbreviation of **gn**. This single letter *gimel* does not seem to have been retrieved in the previous excavations.

The letter *mem* is found alone incised on multiple ceramic vessels; it is the cross-shaped type which had already appeared in Punic times and which later became much more common in the Neo-Punic period.¹⁰⁸ It can be seen on finds TSG96/1009/28, TSG96/1009/27, TSG96/1009/3, TSG96/1009/26, TSG96/55/1, and TSG96/1008/36. In the last example (**fig. 14: 4**), the *mem* is incised on a very large bowl. For the moment, it seems that the best interpretation for this single letter is to view it as a possible abbreviation of the word **mqdš** meaning 'sanctuary'.¹⁰⁹ Thus, it appears that the letter *mem* would have been used to single out those pottery vessels which were to be reserved for use in the Punic sanctuary at Tas-Silg.

The aforementioned examples constitute a small sample of the type of Punic inscriptions being retrieved in the current excavations at Tas-Silg. The fragmentary nature of the evidence coupled with the use of Punic abbreviations does not allow for any easy analysis. However, it certainly provides interesting clues and tentative solutions which will help us better to appreciate the Punic period at the holy site of Tas-Silg.

Anthony J. Frendo

ART

The quantity of art material found in these three campaigns is small by any standard. The quality of the finds, except for one or two cases, is also far from satisfactory. This was, for various reasons, quite expected. In the first place, the area being explored lies outside the main sanctuary building where one is more likely to find casualties of wilful destruction or abandonment. Secondly, the pace of our excavation has been consistently and purposely very slow, for the reasons explained in the Introduction. Thirdly, even the large-scale excavations

¹⁰⁵ Garbini, op. cit. (n. 102) 89–90; G. Garbini in: Cagiano de Azevedo *et al.* (1965) op. cit. (n. 9), 82–3 pls. 38: 5–39: 2; see also n. 103.

¹⁰⁶ Guzzo Amadasi op. cit. (n. 103) 122; M. G. Guzzo Amadasi in: *Missione* 1973, 90.

¹⁰⁷ F. Brown *et al.*, *A Hebrew and English Lexicon of the Old Testament with an Appendix containing the Biblical*

Aramaic (1951, reprint with corrections of the 1906 edition), 171 and reference there.

¹⁰⁸ J. Brian Peckham, *The Development of the late Phoenician Scripts* (1968) 186 pl. 16 (row 2); p. 188 pl. 17 (especially row 5).

¹⁰⁹ Hoftijzer–Jongeling op. cit. (n. 104) 679 and refs. there.

by the *Missione* in the 1960s inside the main building complex failed to produce outstanding works of art comparable to those encountered regularly in similar holy places on either side of the Mediterranean littoral. The only feature one might have hoped to encounter in this area was a *bothros*, a *stipe votiva*, a ritual deposit or pit in which all votive waste was dumped, ceremonially or otherwise. Very often these deposits annexed to sanctuaries contain dumped surplus of votive offerings, including terracotta figurines and, in rarer cases, fragments of statuary. But nothing resembling a *bothros* in the full sense of the word has so far been identified.

To start with, no painting or other two-dimensional representation has yet come to light: neither fragments of wall-paintings (or any other type of painting) nor of figured mosaics. Painted pottery, on the other hand, is represented by at least two sherds of Greek vases, one of which shows the legs and part of the lower body of a man in black-figure technique (TSG96/2026/6) (pl. 9: 5), several fragments of South Italian red-figure lekythoi, and a few other fragments of probably locally produced vessels with painted vegetal motifs.¹¹⁰

Plastic art, on the other hand, is represented by a handful of objects which can be grouped under two headings: (a) figurative sculpture and (b) architectural decoration. A separate classification can be made by material, mainly: (1) stone and (2) moulded fired clay, or terracotta. One fragment of architectural decoration is in plaster stucco.

FIGURATIVE SCULPTURE

The jewel in the crown of the limited artistic repertoire of this excavation is a very small terracotta pendant in the shape of a female head with a copper wire suspension-loop fixed onto the top of the head (TSG96/205/2) (pl. 9: 2). In view of the gilding, which survives in places, it is likely to have served as an earring or a pendant from a necklace. It is typically Hellenistic, both iconographically and stylistically, with parallels in many other parts of the Hellenized Mediterranean. Given the modest material, and the physical context of the find, it is likely to have been a votive offering made by a female member of the congregation who could only offer a gilt terracotta substitute for a real gold one. The context in which it was found, the grey ash deposit (SU 205) in Area A, filling a largish rubbish tip and containing considerable quantities of organic remains and pottery,¹¹¹ as well as the poor state of preservation of the gilding, suggest that the pendant had lost its value both as an item of personal jewelry and as a votive offering at the time it found itself in the present archaeological context.

The discovery of the head of a terracotta figurine representing Eros in the fully-fledged Hellenistic tradition (TSG96/25/24) in Area A provides further confirmation of the presence of this cultural component during the 3rd and 2nd centuries BC, the approximate date of the figurine. Hellenization is evident not only in style but also in content—an Eros is not what one might expect to find in a purely Punic religious environment. On the other hand, an alternative identification of the head is with Harpocrates, the Egyptian child-god, normally represented with a finger raised to his lips. The rosette-like arrangement of the curls above the centre of the forehead seems to point in this direction. Although SU 25 to which the head belongs bears a different number, it was in fact part of the same fill as SU 205 in which the terracotta pendant was discovered.¹¹² Thus the context suggests a surplus (and broken) votive offering that was dumped together with other waste matter from the sanctuary.

¹¹⁰ See section on Pottery, above. A fragment of a black-figure lid was discovered at Tas-Silg in 1964: A. Ciasca in: *Missione* 1965, pl. 41: 1.

¹¹¹ See section on Stratigraphy, above.

¹¹² See section on Stratigraphy, above.

Another terracotta fragment, this time belonging to a much larger and hollow statuette, preserves only the lips and part of the chin of a human figure (TSG96/2016/1) (**pl. II: 2**). It comes from Area C and was found in SU 2016 which is the same as SU 2000, that is, topsoil. The features are very sharp, and the figurine must have derived from a good quality, possibly a first generation, mould. Once more, the general impression is of a Hellenistic date but a more careful examination and good parallels from dated contexts might provide a more secure date.

From the same Area C, but from a lower layer (SU 2026), comes a head of a bearded man, this time in stone (TSG96/2026/3) (**pl. II: 3**). It portrays an Oriental-looking personage with a thick, massive neck and wearing a compact mass of hair. The latter is sharply outlined, sparing a low forehead and dipping obliquely to the nape with a slight drop behind the ears. The beard is equally stylized and sharply outlined in the Oriental fashion. The overall impression is somewhat Archaic, and the iconography and style recall Cypriot male statuary.¹¹³

Area B has produced two fragments of largish hollow terracotta figurines. They have different fabrics and belong to different figurines. The first one (TSG96/1011/3) consists of the nose and part of the right half of a human face, including the eye, the cheek, and the upper lip. The workmanship is of high quality and reveals post-mould retouching for the highlighting of features, especially the eye. The bulging eyeball and the slightly raised edge of the upper lip seem to suggest an Archaic date. In fact, the fragment recalls very closely the female 'votive protome' from the *tophet* of Motya, with the dimensions of which it seems to correspond.¹¹⁴ The second fragment preserves only the fingers and the back of the left hand (TSG96/1011/1). The fingers are wrapped around an object which is not identifiable. The stratigraphic context (SU 1011) of both fragments is a fine grey deposit, one of two fills of a shallow pit (SU 1014) cutting into a loose deposit in trench B. Both fills contained quantities of animal bone, shell, and pottery.¹¹⁵

ARCHITECTURAL DECORATION

The most pleasing item of this group is certainly a stucco fragment belonging to some architectural decoration. Found in Area B (TSG96/1008/6), it has the shape of a stylized palmette (**pl. II: 1**). It is 8 cm high and made of very hard and compact stucco which contains silica and powdered marble. It is of extremely fine workmanship and is probably imported.¹¹⁶ It almost certainly formed part of the vegetal decoration between the volutes of an Ionic capital in the Hellenistic tradition, like the one labelled 'of Sicilian type' from the peristyle house at Monte Iato dated tentatively to the 2nd century BC.¹¹⁷ The context of the find (SU 1008) is yet another grey ashy deposit, in this case containing also a bronze nail, a glass bead, and a coin.

Another fragment comes from Area A and preserves a very small part of an egg-and-dart motif (TSG96/22/13) (**pl. II: 2**). The decoration is deeply carved on very hard, coarse-grained limestone. The slight curvature of the surface of the lower border suggests a curved

¹¹³ The man's beard recalls that of a terracotta head in a private collection illustrated in Missione 1965, pl. 68: 1. Note that the black-figure sherd mentioned above (TSG96/2026/6) came from the same stratigraphic unit.

¹¹⁴ M. G. Guzzo Amadasi in: A. Ciasca *et al.*, *Moza V* (1969) 61–2 pl. 64. It should be remarked, however, that an 'Archaic' terracotta fragment would be out of place in a

4th–1st-century context. It would, therefore, have to be considered residual.

¹¹⁵ See section on Stratigraphy, above.

¹¹⁶ On Roman stucco work see D. Strong–D. Brown (eds.), *Roman Crafts* (1976) 209–21.

¹¹⁷ R. Wilson, *Sicily under the Roman Empire* (1990) 19 fig. 14.

moulding, possibly the central decorated torus of an Ionic moulding. The fragment is too small to suggest proper dating. Its stratigraphic unit (SU 22) is one of 'numerous localized layers of grey soil and stoney and rubble deposits' which have been assigned to the latest, so-called 'agricultural', phase.¹¹⁸ So far, however, this group of layers has not been found to contain anything later than 3rd–1st centuries BC.¹¹⁹

Finally, a worked stone fragment from precisely the same context might well be part of a stela carved from a hard, rough-textured limestone, perhaps local Coralline (TSG96/22/2) (pl. 10: 2). What survives looks like a corner of a shallow rectangular frame which is similar to that normally found on stelae, especially Phoenician-Punic ones, such as those found on Motya, at Monte Sirai, Carthage, and elsewhere.

CONCLUSION

Like the rest of the archaeological material of Tas-Silg, including the architecture, the artistic remains reveal the encounter and syncretism of two different cultures: the Oriental (Phoenician-Punic) and the Hellenistic. This syncretism had already been revealed by the small finds unearthed in the sanctuary itself in the 1960s, and to a great extent the situation outside the complex confirms what was already apparent inside.

This ambivalence is also seen in two pieces found in the same trench, Area C. One, the stone head (TSG96/2026/3), which could be of local production, represents the Oriental culture; the other, a fragment of the face of a terracotta statuette (TSG96/2016/1), is certainly a Hellenistic product imported from some Eastern or central Mediterranean Greek city. Only a chemical and microscopic analysis of the clay of this and of the other terracotta figurines will reveal the real place of origin.

Noteworthy too is the fragmentary state of practically all finds. This seems to corroborate the impression that the finds belong to refuse coming from the sanctuary to the north. In spite of this apparently unpretentious environment of excavation, we are confident that when all the evidence is brought together, the final result will make a substantial contribution to the corpus of knowledge about the site and about the archaeology of Malta in general.

Anthony Bonanno

THE MOLLUSCAN REMAINS

The following account is a preliminary report on the molluscan material examined to date, which includes that recovered between 1996 and 1997.

MATERIAL AND METHODS

The material examined came from three Areas A, B, and C. Three types of samples were examined for molluscs.

Bulk samples of approximately 30 litres volume were treated in a water separation machine ('flotation tank') constructed according to blueprints supplied by the Museum of London. The float was passed through graded sieves (1 mm and 250 micrometre mesh, in that order) and then air-dried and sorted. The sediment remaining in the machine, after all the flot was separated off, was air-dried and sieved through graded sieves of mesh size 8 mm, 4 mm, 2 mm, and 1mm in that order, following which each fraction was sorted by hand to separate out organic remains.

¹¹⁸ See section on Stratigraphy, above.

¹¹⁹ See section on Pottery, above.

Samples collected for pollen analysis ranging in volume between 50 cm³ and 1,000 cm³, depending on provenance, were dry-sieved through graded sieves (8 mm, 4 mm, 2 mm, and 1 mm) and any molluscs present were picked out by hand.

The third type of sample consisted of mollusc shells picked by hand by the excavators during the dig.

Mollusca were identified using published manuals and keys and by comparison with the reference collections of the Department of Biology of the University of Malta.

RESULTS AND INTERPRETATION

NON-MARINE MOLLUSCS

The non-marine Mollusca identified from the samples studied and their general habitat preferences are given in **table 2**. In this table, all specimens from the same stratigraphic unit are listed together, irrespective of the type of sample they originated from, and therefore relative abundances are indicative only, as sampling effort was not uniform. A quantitative analysis will be presented in a future report. Apart from the species listed in **table 2**, most samples also contained varying amounts of unidentifiable shell fragments, which are not reported. Also not reported are those samples from which only unidentifiable fragments were recovered.

Twenty species of non-marine molluscs were recorded from the Tas-Silg excavations, one of which is freshwater, and the rest strictly terrestrial. In terms of habitat preferences, these species may be classified into the following groups:

Ubiquitous	Eurytopic; found in most types of habitat present in the Maltese Islands, including both natural and anthropogenic ones.
Xeric	Occur in habitats that do not receive any substantial water during the dry season.
Mesic	Occur in habitats that are not wet but that do not remain dry for very long periods, even during the dry season.
Subterranean	Burrow in soil or live in microcavities in soil, or under deeply embedded stones, or in caves.
On vegetation	Open habitats with vegetation, including gardens and fields.
Freshwater	Freshwater habitats.

The distribution of the species recorded, in terms of this broad classification, is shown in **fig. 15**. Predictably, ubiquitous species, that is, those with catholic habitat requirements, are the most represented (9 species). These are the least interesting from the point of view of environmental interpretation. Also not very interesting from this point of view are the subterranean species since these may have burrowed into the deposit at any time after its formation and only serve to show that the strata were buried! The other species are more indicative, however. The xeric forms present (4 species) are those found in open rocky habitats, such as steppic or *garigue* communities. One of these, *Marmorana melitensis*, is characteristic of shady rocky habitats,

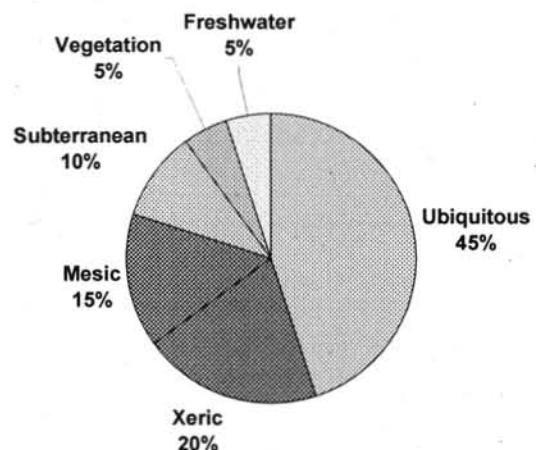


Figure 15. The percent distribution of 20 species of non-marine molluscs recorded from Tas-Silg, in terms of broad habitat categories.

SPECIES	SU 25	SU 34	SU 50	SU 55	SU 71	SU 205	SU 1008	SU 1009	SU 2061	SU 2069	TOTAL	HABITAT
<i>Pomatias sulcatus</i>	7		1	4	2	2			1		17	Ubiquitous
<i>Planorbis moquini</i>	1										1	Freshwater; springs
<i>Truncatellina callicratis</i>	1										1	Leaf litter
<i>Granopupa granum</i>						3	3				6	Xeric environments, esp.karstland
<i>Chondrula pupa</i>					1						1	Ubiquitous
<i>Oxychilus draparnaudi</i>	1					1					2	Damp environments
<i>Oxychilus hydatinus</i>									2		2	Semi-subterranean; soil or stones
<i>Cecilioides acicula</i>	1877	2552	111			67	333				4940	Subterranean; soil
<i>Ferussacia folliculus</i>	84	18	8	1	43	10	4	1	3		172	Damp environments; leaf litter
<i>Rumina decollata</i>	16		3	3	4	3	2	1	6		38	Xeric environments
<i>Papillifera papillaris</i>	20	4	2		6	6	19				57	Ubiquitous
<i>Trochoidea spratti</i>	26	17	6	2	8	13	15		1		88	Xeric environments, esp. karstland
<i>Ceruella caruanae</i>	6			15	6	4			13		44	Ubiquitous
<i>Ceruela cf. cisalpina</i>					4						4	Ubiquitous
<i>Cochlicella acuta</i>	1438	358	934	2	179	1589	650	1	58		5209	Ubiquitous
<i>Caracollina lenticula</i>	243	185	144	2	237	27	161	3	7		1009	Ubiquitous; habitats with soil
<i>Theba pisana</i>									4		4	Ubiquitous; esp. coastal habitats
<i>Marmorana melitensis</i>									1		1	Xeric rocky habitats receiving some shade
<i>Eobania vermiculata</i>	21	2	1	28	25	16	2		61	2	158	Ubiquitous
<i>Cantareus apertus</i>	1								10		11	Steppic habitats and cultivated areas
TOTALS	3742	3136	1210	57	515	1741	1189	6	167	2	11765	

Table 2. Tas-Silg Excavations 1996–1997: total identifiable non-marine Mollusca recovered by all methods and the general habitat preferences of the species.

suggesting the presence of shade such as provided by rock faces, boulders, or high walls. Three species are mesic (*Truncatellina callicratis*, *Oxychilus draparnaudi*, and *Ferussacia folliculus*). All three are associated with leaf litter and indicate the presence of relatively thick vegetation that may be natural or may represent cultivated habitats such as gardens. *Cantareus apertus* also suggests vegetated habitats. The single specimen of *Planorbis moquini* found is very interesting since it not only shows the presence of fresh water, but also of running water, as this is a species of springs rather than ponds. This may suggest the presence of either a spring or of more or less continuously flowing irrigation water.

What is absent is almost as interesting as what is present. No *Muticaria* are present, suggesting the absence of karstland, which is hardly surprising since this forms mainly on Coralline limestone, which is absent from the locality. Neither are any woodland species present (notably *Lauria cylindracea*) suggesting the absence of a dense tree cover. Given the presence of fresh water, it is surprising that no species characteristic of ponds or other standing bodies of water have been found. This may be an artefact of sampling or may actually indicate that such standing water was not present. It is also interesting to note that no specimens of *Cantareus aspersus*, the common edible snail that is now ubiquitous in the Maltese Islands, were found.

Of the species found, none are presently used as items of food in the Maltese Islands, although *Eobania vermiculata* is consumed elsewhere in the Mediterranean. Actually, all large land snails are edible even if they are not equally palatable. Since when cooked the soft parts of the animals are easily extracted from the shells without damaging them, it is not possible to distinguish shells that represent 'kitchen waste' from those that have died naturally.

A number of the specimens examined showed signs of breakage of the shells that is usually associated with animal predation (table 3). It would appear that a substantial portion of the *Cerneuella caruanae* and the majority of the *Theba pisana* and the *Eobania vermiculata* recovered from the deposits, may have been transported to the site due to animal activity. In the case of *Eobania vermiculata* it also suggests that the Tas-Silg inhabitants did not use this snail as an item of food.

SPECIES	SU 25	SU 34	SU 50	SU 55	SU 71	SU 205	SU 1008	SU 2061	SU 2069	TOTALS
<i>Cerneuella caruanae</i>	3(50%)	–	–	7(47%)	0(0%)	1(25%)	–	2(15%)	–	13(30%)
<i>Theba pisana</i>	–	–	–	–	–	–	–	3(75%)	–	3(75%)
<i>Eobania vermiculata</i>	13(62%)	0(0%)	0(0%)	18(64%)	7(28%)	10(63%)	2(100%)	46(75%)	2(100%)	98(62%)

Table 3.

Non-marine molluscs from the 1996–1997 Tas-Silg excavations that showed signs of animal predation. The actual number of specimens is given as well as the proportion of the total number of individuals of that species collected that showed signs of predation (as percentage).

MARINE MOLLUSCS

The marine Mollusca identified from the samples studied and their general habitat preferences are given in table 4. As for the non-marine species, all specimens from the same stratigraphic unit are lumped together, irrespective of the type of sample they originated from, and therefore relative abundances are indicative only, as sampling effort was not uniform.

Given that many of the specimens were eroded and/or fragmented, the number of individuals in the samples was established according to the following criteria:

- a limpet shell was considered to constitute an individual shell if the apex was present;
- a spiral gastropod shell was considered to constitute an individual shell if the apex was intact or if the bulk of the body whorls were intact;
- a bivalve valve was considered to be a single individual if the major portion of the umbo was present.

SPECIES	SU 25	SU 34	SU 30	SU 55	SU 71	SU 204	SU 205	SU 1002	SU 1005	SU 1006	SU 1008	SU 1009	SU 2061	SU 2069	TOTAL	HABITAT
<i>Arca noae</i>							1								1	Shallow infralittoral rock with algae
<i>Bittium</i> sp. ¹		1													1	Ubiquitous in infralittoral
<i>Bolinus brandaris</i> ²			1	2f			1						1		3	Infralittoral sandy bottoms
<i>Cerastoderma glaucum</i>	80 + 36f	8 + 1f	1	5 + 25f		8	15 + 5f	148 + 8f	15 + 21f	28	114 + 10f	122 + 7f	15 + 14f	1	560	Brackish water muddy bottoms; lagoons
<i>Cerithium rupestre</i> ³	9												1		10	Shallow infralittoral rock with algae
<i>Cerithium</i> sp.								1							1	?
<i>Cerithium vulgatum</i> ³	18 + 7f	3	1	7		1	7				1		1		39	Shallow infralittoral sand-mud bottoms
<i>Columbella rustica</i>	1f	1	1	1			6								9	Shallow infralittoral rock with algae
<i>Conus ventricosus</i> ⁴	2			1			1		1						5	Shallow infralittoral rock with algae
<i>Gibbula adansonii</i>	1			2			2						1		6	Shallow infralittoral rock with algae
<i>Gibbula ardens</i>	1														1	Shallow infralittoral rock with algae
<i>Gibbula divaricata</i>	1	1					2						6		10	Shallow infralittoral rock with algae
<i>Hexaplex trunculus</i> ³	16 + 13f	1				1	1 + 1f	3 + 1f	2f		3 + 1f		5 + 2f		30	Infralittoral muddy bottoms
<i>Luria lurida</i>													1f		1	Infralittoral rock with algae
<i>Melarhaphes neritoides</i>				1							1				2	Supralittoral rock
<i>Monodonta articulata</i> ⁵	10		1	4			2						5		22	Mediolittoral rock
<i>Monodonta turbinata</i> ⁶	41 + 8f	5 + 1f	5	25		1	61		1		1		81 + 11f	1	222	Mediolittoral rock
<i>Muricopsis cristata</i>	1														1	Infralittoral rock with algae
<i>Nassarius costulata cuvierii</i>													1		1	Fairly ubiquitous in shallow infralittoral
<i>Ostrea edulis</i>													1		1	Rocky and coarse substrata
<i>Patella caerulea</i>	12 + 1f			2f		4	6	1	1 + 2f	2	7 + 2f	3	18 + 1f	1	55	Mediolittoral rock
<i>Patella rustica</i>	114 + 8f		9	15 + 13f	1		42	2		1	1		99 + 7f		284	Mediolittoral rock
<i>Patella ulysiponensis</i>	13			4							1	1	13		32	Mediolittoral rock
<i>Pirenella conica</i>	2														2	Shallow infralittoral; reduced salinity
<i>Pisania striatus</i>							1								1	Shallow infralittoral rock with algae
<i>Tapes decussatus</i>	23 + 124f	2f	1f	2 + 30f			1f	1	35f		21	3 + 1f	15 + 38f		65	Shallow infralittoral sand-mud bottoms
Others	1 ¹⁰			9f ⁹			3f ⁷ + 1 ⁸		1f ⁹						2	
TOTALS	345	20	19	67	1	15	149	155	19	31	150	129	264	3	1367	

Table 4.

Tas-Silg Excavations 1996–1997: total identifiable marine Mollusca recovered by all methods and the general habitat preferences of the species. Superscript numbers correspond to the notes below the table; f = shell fragments.

Notes:

1. Single individual, lacking aperture.
2. The individual from SU 50 was broken open; those from SU 55 were reduced to their apices; that from SU 205 had some damage in the region of the aperture.
3. Numerous *Cerithium* were broken open, especially the larger individuals.
4. The specimen from SU 55 had a hole drilled through the apex, where the protoconch would have been. The other specimens were small in size.
5. Many individuals had broken apertures or were missing the apex.
6. Many individuals had their apex removed.
7. Fragments of test of sea urchin (*Paracentrotus lividus*).
8. Oxidized and eroded trochid shell.
9. Probably fragments of *Monodonta* sp.
10. Eroded vermetid shell.

Twenty-two species of gastropods and four species of bivalves were identified from the Tas-Silg excavations. All are common Mediterranean shore and shallow water species. The species present indicate that a range of habitats was accessible to the inhabitants of Tas-Silg, as follows:

- Gently sloping rocky shores;
- Rocky bottoms with photophilic algae at depths of 0 to 10 m;
- Sandy or sandy-mud bottoms in shallow water;
- Lagoons or semi-enclosed water with reduced salinity and a muddy bottom.

With the exception of the last environment, all these habitats presently occur round the Delimara Peninsula and in Marsaxlokk Bay. Although brackish water lagoons do not now occur in the vicinity of Tas-Silg, they occurred in the historic past (the so-called Marsaxlokk 'fishponds' at Il-Ballut) and still occur at Marsascula ('Il-Maghluq').

It is interesting to note that one very common and widespread habitat, that of sea-grass meadows, seems not to be represented. With the exception of *Bittium*, of which only a single specimen was found, none of the molluscs characteristic of this habitat occurred in the samples. As will be discussed below, the bulk of the marine remains represent kitchen waste. Therefore, species characteristic of sea-grass meadows may not be represented because this habitat was not harvested for edible species, rather than because sea-grass meadows were not present.

EDIBLE SPECIES	NON-EDIBLE SPECIES	UNKNOWN
<i>Bolinus brandaris</i>	<i>Bittium</i> sp.	<i>Cerithium</i> sp.
<i>Cerithium vulgatum</i>	<i>Columbella rustica</i>	<i>Muricopsis cristata</i>
<i>Hexaplex trunculus</i>	<i>Conus ventricosus</i>	<i>Gibbula adansonii</i>
<i>Monodonta articolata</i>	<i>Luria lurida</i>	<i>Gibbula ardens</i>
<i>Monodonta turbinata</i>	<i>Melarhaphe neritoides</i>	<i>Gibbula divaricata</i>
<i>Patella caerulea</i>	<i>Nassarius costulata cuvierii</i>	
<i>Patella rustica</i>	<i>Pirenella conica</i>	
<i>Patella ulyssiponensis</i>	<i>Pisania striatus</i>	
<i>Arca noae</i>		
<i>Cerastoderma glaucum</i>		
<i>Ostrea edulis</i>		
<i>Tapes decussatus</i>		

Table 5.
Edible and non-edible species of marine molluscs recovered from Tas-Silg.

About 50% of the species identified are edible (**table 5**). In terms of abundance, 96% of all individuals recovered (fragments excluded) belonged to the edible species (**table 4**). It is therefore clear that the deposits represent dumped kitchen waste. The larger edible species (for example, *Hexaplex trunculus* and the larger individuals of *Cerithium*) tended to have broken apertures and/or apices. Trochids (for example, *Monodonta* and some *Gibbula*) had their apices removed. These treatments facilitate extraction of the edible soft parts from the shell.

Although the non-edible species may represent incidental by-catch, some may have been deliberately collected for their ornamental value (for example, the cowrie *Luria lurida*, the dove shell *Columbella rustica*, and the cone shell *Conus ventricosus*). By-catch species tend to be found in low numbers. However, six *Columbella rustica* were recovered from sample SU 205, suggesting that collection of these shells was deliberate. It is also interesting to note that the *Conus ventricosus* from sample SU 55 had a hole drilled through the apex where the protoconch would have been, indicating that it might have been prepared to form part of an ornament.

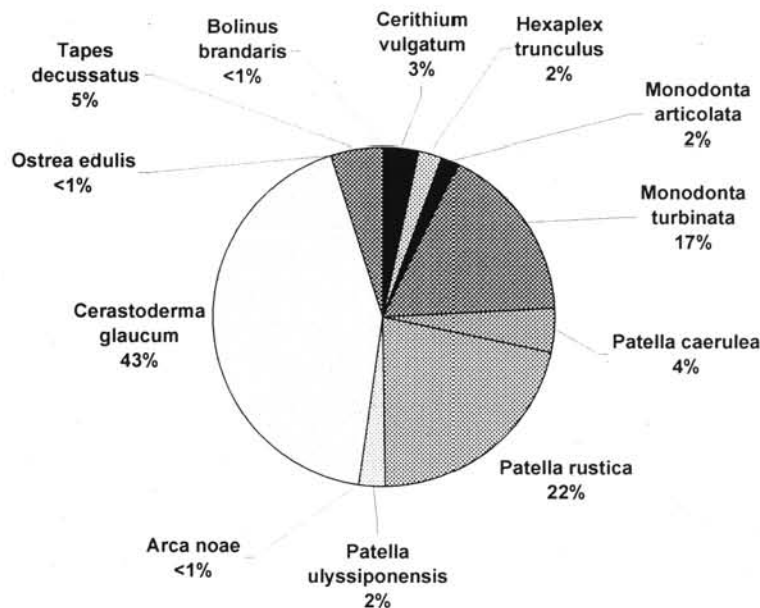


Figure 16. Percentage distribution of the different species of edible molluscans recovered from Tas-Silg.

From **fig. 16** it is evident that just three species, *Cerastoderma glaucum*, *Patella rustica*, and *Monodonta turbinata*, between them contribute about 82% of the remains of edible molluscs recovered. This is interesting since *Patella rustica* and *Monodonta turbinata* are shore animals, occurring just above and just below mean sea level respectively, while *Cerastoderma glaucum* is a lagoonal species inhabiting very shallow enclosed muddy bottoms. This suggests that in the main it was shore and near-shore environments that were exploited for food by the inhabitants of Tas-Silg.

DISCUSSION

The deposits from SU 25, 34, 50, 55, 71, and 205 in Area A and SU 1008 in Area B have been described by the excavators as a series of grey ash deposits. The deposit from SU 1009 in Area B and SU 2061 in Area C is described as a loose brown sandy deposit, while SU 2069 in Area C is described as a loose ashy brown deposit. It would appear therefore that the deposits investigated consist of dumped material. The animal remains in these deposits have two possible origins. They either represent individuals that found their way into the deposits naturally—they died *in situ*, burrowed into the deposit, were carried there by wind or water, were transported by other animals, or simply 'fell in' from the surrounding environment—or

else they represent material that was deliberately dumped by people. It is obvious from the results presented above that the animal remains recovered owe their origin to both processes: some remains are autochthonous and are indicative of the environment of the site and its surroundings, while others are allochthonous and represent 'kitchen waste' and other anthropogenic material. Such material is not necessarily indicative of the environment at the site and its surroundings, but it does provide useful information about the environments accessible to the inhabitants of Tas-Silg at the time the deposits were laid down, as well as to their cultural and economic activities. Here we discuss environmental aspects only.

NON-MARINE MOLLUSCS

While some of the species recovered are edible, the bulk of the remains do not appear to be kitchen waste but to represent species that lived in the general area and found their way into the deposit autochthonously. A few species showing signs of animal predation were probably transported by their predators. Subterranean species probably actively burrowed into the deposit and are not necessarily coeval with the stratum in which they were found.

If this interpretation of the origin of the material is correct, it suggests that the site consisted of a mosaic of open ground, low grassy vegetation, more luxuriant vegetation under which leaf litter collected, and a source of freshwater, probably running. Rocky outcrops or walls or buildings were also present. Taken together, this suggests agriculture or gardens.

MARINE MOLLUSCS

The bulk of the marine molluscan remains recovered were of edible species, suggesting that the deposits excavated represent rubbish tips. The few specimens of non-edible species recovered were either those 'collected' more or less accidentally with the edible species, or else those collected live or picked up as empty shells for their ornamental value. The bulk of the remains of edible species belonged to forms that live on rocky shores or else burrow in shallow muddy bottoms. This suggests that the Tas-Silg people were foraging for shellfish in very shallow water only, possibly by wading. The range of marine habitats indicated by the edible and non-edible molluscan remains recovered suggests that these foraging activities were limited to the environs of the Tas-Silg site, namely within Marsaxlokk Bay and round the Delimara peninsula.

Patrick J. Schembri

(with the collaboration of Anthony Falzon, Katrin Fenech, and Michael J. Sant)

ANIMAL BONES

At this stage it is not yet possible to present any detailed statistical analysis of the faunal assemblage from Tas-Silg. The following is a brief overview of the animal bones recovered from the site up to the 1997 season, together with a preliminary evaluation of the research opportunities that the assemblage provides us with. The excavations have so far yielded a considerable amount of animal bones, numbering several hundreds.

THE ASSEMBLAGE

The remains recovered from all areas opened so far include domestic mammal bones, fish bones, and bird bones, as well as bones belonging to micro-mammals. Domestic mammals are by far the most common, even though there is a considerable representation of both bird and fish bones.

The greatest number of macro-mammal bones belongs to ovicaprids (sheep and goats) as it is to be expected in a semi-arid Mediterranean context. Larger animals such as cow, however, are also present, albeit in smaller numbers. Further study of the assemblage will give more definite species ratio and body part representation. At this stage however, it is already obvious that a considerable percentage of the mammal bones recovered are not meat-bearing parts. The most common elements come from the axial skeleton (including horn cores, mandibles, and vertebrae) as well as the lower metapodials (in particular metacarpals, metatarsals, and third phalanges). A cursory examination of tooth wear and eruption indicates that a considerable number of young individuals were being killed. This is further confirmed by the not infrequent occurrence of unfused bones. Butchery marks are also quite common on various parts of the skeletons.

Fish and avian remains have mostly been recovered through sieving (although some bird bones were quite large, measuring up to a few centimetres in length). Fish bones are not limited to any particular part of the body, and fragments of skull and mandibles (showing examples of both molariform and pointed dentition), as well as parts of the spine, have been recovered. Large numbers of sea urchin remains have been also retrieved, including fragments of the test, the Aristotle's lantern, and a huge number of spines.

TAPHONOMY AND INTERPRETATION

All classes are present in every area opened so far. It appears that the greatest concentrations of animal bones come from 'ashy' or burnt deposits, although carbonized bones seem to be relatively rare. This could indicate that the bones themselves were not exposed to an open flame, and presumably any burning that produced the ash occurred before the bones were deposited in their final archaeological level. It is not as yet clear whether the bones indicate (a) domestic cooked meals, (b) ritual meals, or (c) simply uncooked offerings. The tendency of the meaty parts of the skeleton to be missing suggests that parts of the carcass were consumed, and the bones thereof deposited, elsewhere. This however requires further analysis.

The absolute lack of any articulated bones is also striking. If the areas we are digging are the location of the original placement of the bones, and assuming that we are potentially dealing with remains of 'scrap meat', one would expect to find at least the occasional articulated bone. (This of course only holds if the butcher/s did not go through the pains of actually disarticulating every vertebra and all the metapodials, for example, for further use.) What we are looking at, however, particularly in Area B, bears more resemblance to a secondary dumping site, during the formation of which bones became disarticulated. More biostratigraphic and diagenetic data are required in order to help us build a clearer picture.

FUTURE ANALYSIS

The Tas-Silg animal bone assemblage is very promising in terms of potential new zooarchaeological study in a Maltese context. The fact that Tas-Silg is one of the very few sites on the island encompassing all the major cultural periods until Norman times makes it even more important. Future analysis will be directed towards the study of:

- (a) ancient stock economy and animal use;
- (b) aspects of palaeoenvironmental changes; and
- (c) patterns of animal use within a continuously re-utilised religious environment.

Andr  Corrado

PALYNOLOGY

Very little is known about the vegetation history of the Maltese Islands during the Holocene (last 10,000 years) or about the history of human impact on the Maltese flora since the first colonization. Pollen assemblages have been recovered from two late prehistoric sites,¹²⁰ but the vegetation of the Punic period was previously unknown.

Tas-Silg offers the opportunity to test the utility of the palynofacies technique¹²¹ in a Mediterranean context. Since the introduction of this technique into geoarchaeological studies in the late 1980s, it has been applied only in the UK and the Middle East. The palynofacies technique analyses all the particulate organic matter (phytoclads) in a palynology sample, rather than just the pollen and microcharcoal which are counted by most pollen analysts. This technique offers the possibility of recovering useful environmental information from sites where little or no pollen is present but other, more durable, types of organic matter are preserved. Since some types of human activity generate characteristic palynofacies assemblages, the technique also offers insights into human behaviour not normally available from standard pollen analysis.¹²²

Two samples were submitted for palynology from layers in the Punic site at Tas-Silg from the first two seasons of excavation. These were from SU 34 and SU 1008, both described by the excavator as 'ash pit'. The samples were both stony unconsolidated light grey silts, with a considerable admixture of ash and occasional bone fragments, land snails, echinoderm fragments (especially SU 34), and other detritus.

PREPARATION TECHNIQUES

The samples were boiled in 10% potassium hydroxide solution for ten minutes to dissolve humic matter, then sieved through 100 micron and 10 micron nylon sieves to remove coarse and fine particles, respectively. The resulting suspension was swirled on a clock-glass to remove silt, and then stained with safranin and mounted in 'Aquamount' for microscopic examination at 400x magnification. In both samples, several transects chosen at random were counted for phytoclads (particulate organic matter found in palynological preparations and used in palynofacies analysis).¹²³ Then SU 34, which had been found to contain pollen, was systematically examined and all pollen counted.

PALYNOFACIES

The results of the palynofacies counts can be seen in **table 6**. Both contain significant amounts of amorphous organic matter and thermally mature (charred) material. SU 34, however, also contains abundant plant cell walls and cuticles and material derived from fungi, including hyphae, spores, vesicular arbuscular mycorrhiza, and zoospores. In the table, 'x' records presence, but at less than 1%.

POLLEN ANALYSIS

The pollen count for SU 34 is shown in **table 7**. There was no pollen in SU 1008. The spectrum is dominated by pollen of Lactucae, with some Asteraceae and *Pinus*. Also present is a variety of tree pollens—*Juniperus/Tetraclinis*, *Tamarix*, *Olea*, *Juglans*, *Carpinus*, and

¹²⁰ Evans op. cit. (n. 26); J. M. Renfrew, *Antiquity* 46, 1972, 473–84.
144–6.

¹²² Ibid.

¹²¹ C. O. Hunt–G. M. Coles in: E. A. Slater–J. O. Tate (eds.), *Science and Archaeology*. BAR, British Series 196 (1988)

¹²³ Ibid.

Corylus. Poaceae pollen are fairly common. Cereal pollen is present, and there is a fairly diverse herb flora including *Plantago*, *Artemisia*, *Galium*, Caryophyllaceae, Chenopodiaceae, ?*Linnaea*, and Cyperaceae.

	SU 34	SU 1008
Amorphous	12	56
Plant cell walls & cuticle	38	1
Pollen	x	
Thermally mature <i>Poaceae</i>	1	
Thermally mature	8	41
Fungal hyphae	24	1
Fungal spores	3	x
Vesicular arbuscular mycorrhiza	13	1
Fungal zoospores	x	

Table 6.
Palynofacies counts (%) from Tas-Silg.

INTERPRETATION

The palynofacies counts can be interpreted in the following way. Amorphous matter is common on prehistoric archaeological sites¹²⁴ and in soils. It seems to reflect the intense production of bacterially degraded organic residues of human activities. The thermally mature material is 'microcharcoal' and is generated in these contexts by burning, mostly of wood. Charred Poaceae would predominate on crop processing sites, and their virtual absence is consistent with parts of the Tas-Silg site having other functions. The plant cell walls and cuticle reflect plant detritus, which has become incorporated in the site, perhaps as dumped waste products. The soil in these deposits, and particularly the organic matter in SU 34, was colonized not long after deposition by fungi, and this is shown by the high proportion of fungal hyphae and fungal spores in the count for this sample. Fungal symbionts on plant roots—vesicular arbuscular mycorrhiza—and other soil fungal remains—fungal zoospores—were also present in these deposits. This may reflect material already present in soils on the site, as will be argued below for Lactucae and other composites. Alternatively, these may reflect the growth of soil fungi within these deposits since the Punic period.

The pollen assemblage from SU 34 shows an extremely strong taphonomic bias. It is certain that Lactucae, Asteraceae, and *Pinus* are significantly 'over-represented' relative to the other taxa. This is a common occurrence in soil pollen assemblages¹²⁵ and reflects survival by these taxa of the bacterial degradation and oxidation of the assemblage from which they were derived. It is suggested here that these taxa were present in the soil of the Tas-Silg site and that they became incorporated in the deposit as the result of the inwash of soil-derived material during the Punic period. Most of the other pollen—particularly taxa like *Juniperus/Teraclinis*—are rather fragile and would be unlikely to survive prolonged periods of degradation in a soil profile. They can therefore be regarded as essentially contemporaneous with the deposit being exposed. The survival of pollen in this type of

¹²⁴ Ibid.

¹²⁵ C. O. Hunt in: O. K. Davies (ed.), *Archeopalynology*,

	SU 34
<i>Juglans</i>	1
<i>Carpinus</i>	1
<i>Corylus</i>	1
<i>Pinus</i>	34
<i>Juniperus/Tetraclinis</i>	3
<i>Tamarix</i>	4
<i>Olea</i>	1
Rosaceae	1
Poaceae	21
Cereal	3
<i>Artemisia</i>	2
<i>Galium</i>	1
<i>Plantago</i>	2
? <i>Linnaea</i>	2
Caryophyllaceae	1
Lactuceae	174
Asteraceae <i>Bellis</i> type	16
Asteraceae <i>Carduus</i> type	5
Asteraceae <i>Bidens</i> type	5
Asteraceae <i>Aster</i> type	3
Chenopodiaceae	2
Cyperaceae	1

Table 7.
Pollen analysis of SU 34.

context suggests that the deposit was left exposed long enough to allow some pollen to accumulate, before being rapidly covered. If the deposit had accumulated slowly, it is probable that oxidation and bacteria would have destroyed the pollen.

The tree species *Juglans* (walnut), *Carpinus* (hornbeam), and *Corylus* (hazel) are now not native to the Maltese Islands. Four explanations for their presence are possible. First, they blew in from other countries—these species are still present in Sicilian montane vegetation.¹²⁶ Second, they represent a relict woodland flora still persisting at that time. Third, they were members of an early Holocene woodland flora, already extinct by Punic times, and their pollen was present in soils which then recycled into the deposit. The third possibility is considered relatively unlikely because the preservation of these grains is not notably worse than the preservation of the other species. Fourth, these and the other tree species may reflect a grove in the precincts of the site. The pollen of *Pinus* (pine), *Juniperus/Tetraclinis* (juniper/Sandrac), and *Tamarix* (tamarisk)—all except

juniper native trees in the Maltese Islands—otherwise suggests areas of scrubby vegetation or small trees.

The other taxa suggest a mosaic of habitat. Poaceae (grasses) are quite common and they, together with some of the Asteraceae (daisy family), the *Plantago* (plantain), *Artemisia* (wormwood), *Galium* (cleavers), and Caryophyllaceae (sandwort group), suggest a locally predominantly grassy, steppic landscape. Cereal pollen, *Olea* (olive), and Chenopodiaceae (goose-foots) are suggestive of areas of cereal and olive cultivation. The *Carduus* (thistles) and Rosaceae (rose family), which are both spiky plants, perhaps suggest uncultivated wasteland or other marginal habitat colonized by weeds. Alternatively, these and a number of other plants like *Bellis* (daisy), *Aster* (aster), *Bidens* (bur-marigolds), and *Linnaea* (bellflower), have ornamental flowers and may thus reflect some type of garden around the site.

¹²⁶E. Lanfranco, personal communication (1997).

DISCUSSION

The palynofacies and pollen analysis of samples from Tas-Silg are the first data on the vegetation and landscape of the Punic period in Malta. The palynofacies assemblages point clearly to human activity, with the production of organic residues of some sort and the burning mostly of wood. The area concerned was not used for cereal processing.

The pollen and palynofacies from SU 34 shows a strong taphonomic bias, suggesting the inheritance of some pollen and fungal remains from an existing soil profile. Nevertheless, the evidence is strongly suggestive of a mosaic of grassland, arable farming for cereals and olives, and areas of scrub and small trees when the deposit was exposed. In the Maltese context, this was a relatively undegraded landscape. It contrasts strongly with the evidence for highly degraded landscapes found in the Roman fill of the Victoria Caves, Gozo,¹²⁷ and appears closer in style to late prehistoric sites.¹²⁸

It is thus likely that the landscape of the Maltese Islands during the Punic period was not very intensively used and that the degradation leading to its present state started only during the Roman period. Further work is urgently needed to 'fill the gaps' in the floristic sequence in the Maltese Islands, but this research shows that it is possible, given suitable conditions.

Chris O. Hunt

CONCLUSION

The site of Tas-Silg is unique for Malta: being multi-period in nature, it covers about 4,000 years of occupational history. This preliminary report shows how the continuing University of Malta project is attempting to unravel the formation processes that have created the archaeological record at this site. Due attention is being given to the agricultural levels and terraces that are a dominant feature of the Maltese landscape. A picture of Punic religious ritual is also starting to emerge from a systematic and patient excavation of those ashy layers that, as we have tentatively suggested, constitute middens. A recent doctoral thesis about Phoenician and Punic non-funerary religious sites in the Mediterranean¹²⁹ makes clear that a study like the one undertaken here can fill an important gap in our knowledge and provide the sort of information that has often been neglected, as attention has hitherto focused on architectural remains and art objects. The preliminary results presented here, especially those related to the Late Punic phase of the site, are already redressing this imbalance. The occurrence of organic remains pertaining to domestic fowl, fish bones, and seashells, in association with evidence suggestive of the existence of running water, a grove, and a garden, at a site dedicated to the Phoenician goddess Astarte, provides evidence of rituals long suspected from the written sources but never properly proven archaeologically. If our reading of the data is correct, the possibilities that emerge for a better understanding of Phoenician and Punic culture in general, and religious ritual in particular, from further excavations and painstaking analyses are immense. To that end, the University of Malta project at Tas-Silg continues.

¹²⁷ C. O. Hunt and P. J. Schembri, unpublished data.

¹²⁸ Evans *op. cit.* (n. 26); Renfrew *op. cit.* (n. 120).

¹²⁹ Nicholas C. Vella, *Ritual, Landscape, and Territory:*

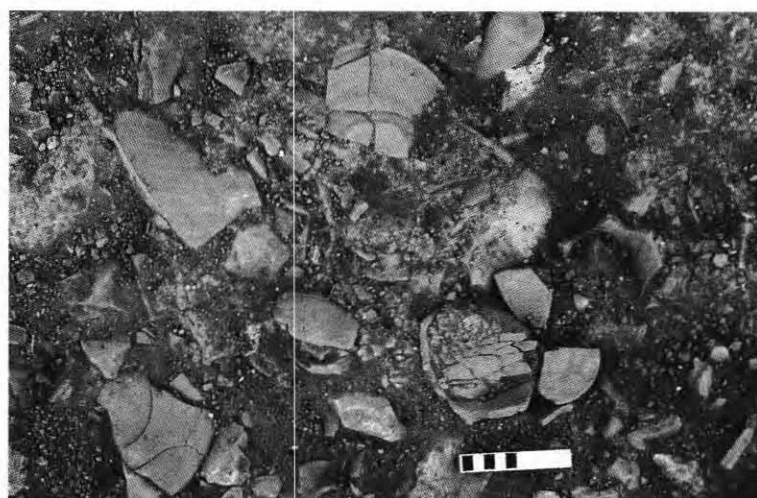
Phoenician and Punic Non-Funerary Religious Sites in the Mediterranean. An Analysis of the Archaeological Evidence (unpub. Ph.D. thesis, University of Bristol, 1999).



1. Area A: Trench A2 at the end of 1997 season showing slabs [218] (left), structure [223] (middle right), and layer [210] (back left).



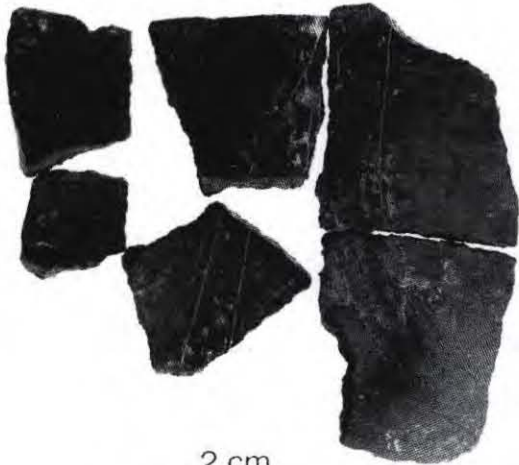
2. Area B: Trench B1 (background) with stone [2025], and Trench B2 with layer [1022] (foreground).



3. Area B: Detail of SU 1027, spit 1.



1. Terrace face separating areas A and D3 with ashlar walls [224] and [226] (foreground).



2 cm

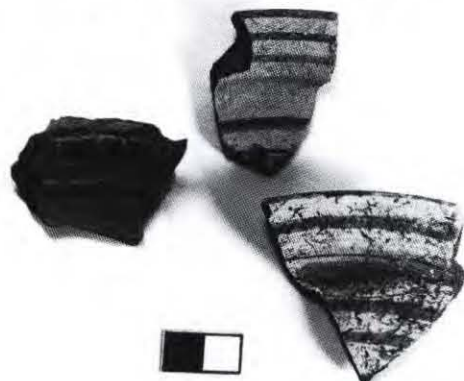
2. TSG96/219/1 [fig. 9:3]. 1:1.



3. Top left, TSG96/2061/9 [fig. 9:4]; Top right, TSG96/2061/7 [fig. 9:10]; Bottom left, TSG96/2066/1 [similar to fig. 9:3, pl. 8: 3]; Bottom right, Area C/unstratified/44. 1:2.



4. TSG96/23.7.96 [fig. 9:5]. 1:1.



5. Left, TSG96/2026; Top, TSG96/2006; Right, TSG96/2026. 1:2.



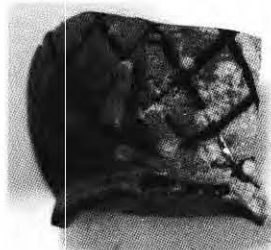
1. TSG96/12 [fig. 12:15]. 1:1.



2. TSG96/205/2. Gilt terracotta pendant in the shape of a female head. H. 2.9 cm (including copper ring).



3. TSG96/2061. 1:2.



4. TSG96/2. 1:1.



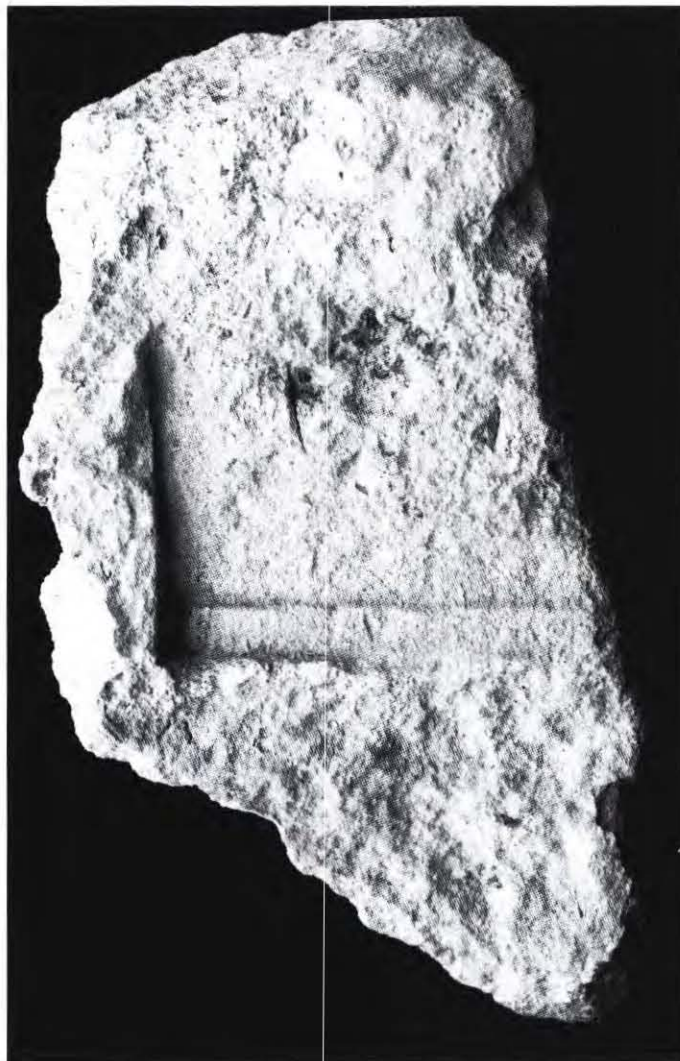
5. TSG96/2026/6. Fragment of black-figure style painted pot, showing the lower part of a striding figure. Max. H. 1.9 cm.



6. TSG96/2061 [see fig. 10:11]. 1:1.



1. TSG96/1003/11 [see fig. 11:3]. 1:1.



2. TSG96/22/2. Worked stone fragment, probably part of stele. Max. H. 21 cm.



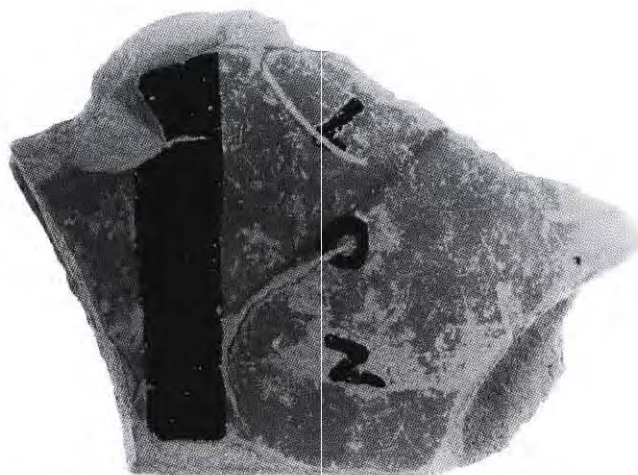
1. TSG96/1008/6. Stylized palmette, fragment of stucco architectural decoration. Max. H. 8.0 cm.



2. TSG96/22/13. Egg-and-dart motif, part of a stone architectural decoration. Max. H. 4.7 cm.



1. Panathenaic amphora fragment. Sydney Nicholson Museum 97.76.
Photo courtesy Nicholson Museum. H. 16.2 cm.



2. Panathenaic amphora fragment. Sydney Nicholson Museum 97.74.
Photo courtesy Nicholson Museum. H. 6 cm.



1. Aerial view of Tas-Silg with modern road dividing the site in two.



2. TSG96/2016/1. Fragment of a hollow terracotta figurine, showing the lips and part of the chin of a human figure. H. 2.3 cm.



3. TSG96/2026/3. Small stone head of a bearded, Oriental-looking man. H. 2.9 cm.