

Ancient Burials At The Hippodrome of Gerasa / Jarash¹

Ina Kehrberg and Antoni A. Ostrasz (1929 - 1996)

This article is about the archaeological contexts of burials uncovered during our excavations of the Jarash hippodrome and periphery between 1984 and 1996 (Ostrasz 1989, 1991, 1993, 1994; Kehrberg and Ostrasz 1997; Kehrberg 1989, 2001, 2007, 2009). Our systematic excavations of the entire circus were a vital element in the careful removal of rubble and exposure of extant remains, in their subsequent archaeological and architectural study for restoration, and in gaining an understanding of the building's history of occupation and that of its people. The interred, doubly entombed by the earthquake tumbles, were an integral part of the archaeological study of the site. Documentation and as yet unpublished research findings, like our unfinished manuscript on the mass burials in W2 and W3 (*infra*) were made available to osteoarchaeologists who came to examine the skeletal remains for their own research projects (see e.g. Hendrix 1995). However, some publications have been misinformed by failing to acknowledge our project or publications (Sandias 2011). It therefore seems timely to fill the gaps and present a concise account of the archaeological data pertaining to and surrounding the burials at the hippodrome.

Introduction

We have already mentioned in previous publications that the hippodrome site began

in the Late Hellenistic - Early Roman period as a quarry and cemetery of hypogean tombs (e.g. Ostrasz 1989; Kehrberg and Ostrasz 1997; Kehrberg 2004, 2011). The necropolis (**Fig. 1:1**) and quarry were closed permanently when Hadrian visited Gerasa and instigated his master plan to upgrade Gerasa's township that had grown from the 2nd century BC Seleucid foundations of *Antioch-on-the-Chrysorhoas*. New cadastral zones were drawn up to embellish the prosperous but still relatively modest provincial town. Ambitious building projects were to bring about Hadrian's vision of Roman Gerasa, indeed encompassing most of what we know and still see today. Knowing of Hadrian's ambitions in the arts, work may have begun under his direct tutelage during his stay in 129 / 130 AD, certainly shortly after (Kehrberg 2011). The building programme included the city wall and expanding secular and religious precincts on previous cemetery grounds in the southern and northern areas and beyond the city gates (Kehrberg and Manley 2001, 2002). The hippodrome site was probably the most important extramural zone as it comprised the Roman road approaching Gerasa from Philadelphia: it was here that Hadrian's Arch was built, followed shortly after by the hippodrome or Roman circus by about the middle of the 2nd century². Trenches of the closed quarry and sealed hypogean tombs formed some of

1. Excavations were a permanent part of the Jerash Hippodrome Restoration Project 1984-1996, sponsored by the Dept of Antiquities of Jordan (DoA) and directed by architect Antoni Ostrasz; Ina Kehrberg was the ceramics/small finds specialist archaeologist of the project.

2. The actual time it took to build the circus remains hypothetical but we know that construction began in the first half of the 2nd century and that chariot racing took place there well before the end of that same century (Ostrasz 1989a, 1989b, 1991; Kehrberg 1989; Kehrberg and Ostrasz 1997).

the foundations for the new Roman edifices, as evidenced in particular at the hippodrome (**Fig. 1:2-3**)³.

Except for being part of the south-east *cavea* and *carceres* foundation, these earliest rock-cut tombs at the hippodrome site do not concern the circus as such, its builders or subsequent occupants. I will leave these burials aside in particular since I have already discussed aspects of this early cemetery in a wider study of Late Hellenistic Gerasa and its cultural origin (Kehrberg 2004, 2006). We will instead introduce the burials pertaining to the later occupancies of the circus structure and periphery. Photographic documentation is poor as we lacked an appropriate camera at the time of excavations, but this did not impede our methodical work. Like other contexts, if not more so owing to their delicate nature, the burials were carefully excavated and recorded *in situ*. The excavations of the mass graves in chambers W2 and W3 (*infra*) took over two years, from 1991 to 1993, partly because of the large, compact mass of bone that had been crushed by earthquake tumbles of the vaults and *scalaria*, but also because the fragile skeletons of well over 200 bodies could only be excavated during the dry season (Ostrasz 1993, 1994; Kehrberg and Ostrasz 1997). The skeletal remains were kept in their separate lots according to excavated loci in order to correlate them with the excavation sequence and other finds from the same loci or lots (**see Fig. 15:1**). They were subsequently examined in storage by osteoarchaeologists (e.g. Hendrix 1995 and *supra*)⁴.

The Burials

The plans at (**Fig. 1**) map the south-west

necropolis and late Hellenistic - Roman hypogean tombs excavated at the hippodrome site that belong to the pre-130 AD phase prior to the circus. Plan 2 and Section 3 show the west - east section of the aforementioned *cavea* foundation trench in chamber E45 that was founded on quarry cuts and a hypogean tomb. While the schematic plans at (**Fig. 2**) provide an overview of the excavation history of the hippodrome, the hippodrome ground plan at (**Fig. 3:2**) marks the locations of burials belonging to secondary occupancies or the industrial phase of the circus building and periphery (Kehrberg and Ostrasz 1997).

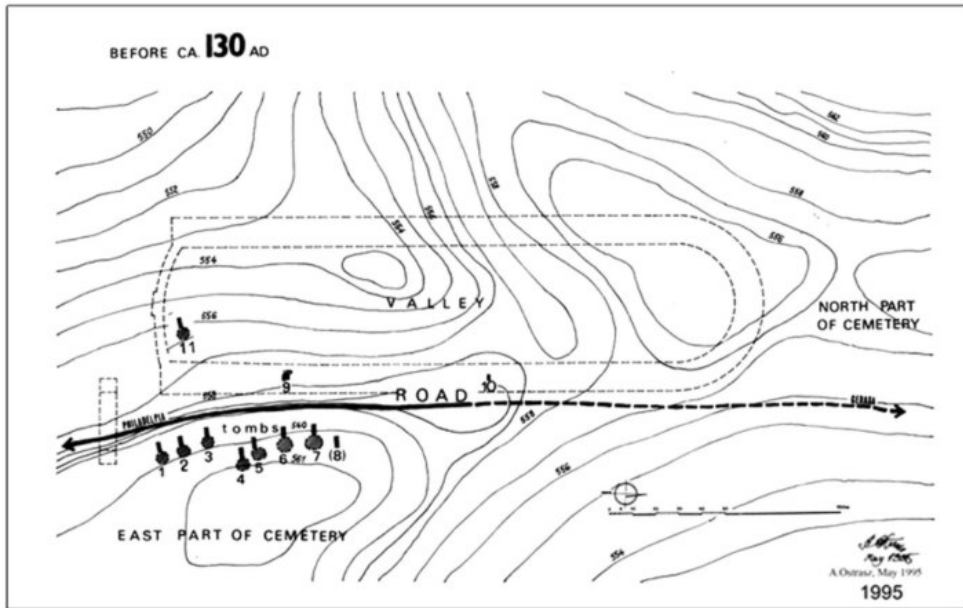
The burials, or rather the graves and their contents - deliberate offerings or part of the ground into which the graves were placed - are presented in chronological order approximating the dates of interment. These simple burials were placed in the *cavea* chambers of the hippodrome or were buried in the grounds outside it, but never in the arena. Most of the graves in the chambers were superimposed by debris of later occupancies, usually workshop dumps that at times contaminated the upper layer covering the tomb, a situation exacerbated by earthquake tumbles. This, as well as the practice of digging a pit and covering the burial with the dug-up dirt, made precise dating of burials without grave goods more difficult.

However, one can safely posit that the simple graves belong to the second or industrial phase of occupancy at the hippodrome encompassing the later 3rd to the late 6th / early 7th centuries, or Late Roman to Late Byzantine periods, excepting the two mass graves of the mid-7th century plague victims interred there after an interval of abandonment (*infra*).

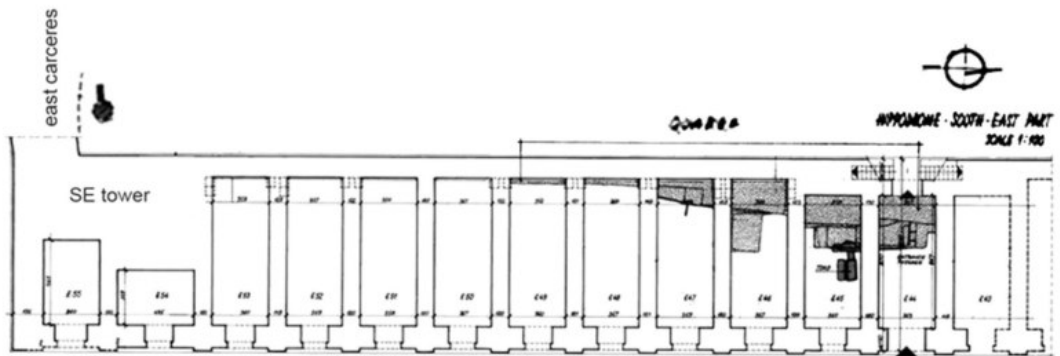
3. See figures in Ostrasz 1989, 1991; re. a Late Hellenistic - Early Roman round 'temple tomb' at the hippodrome site see Abu Dalu 1995, Seigne and Morin 1995 and Kehrberg 2004.

4. Mark Kehrberg-Ostrasz assisted in the excavation of the skeletal remains in chambers W2 and W3; he helped with finds sorting and restringing the beads according to clusters found with the bodies, see Fig. 18 (Ostrasz 1994; Kehrberg and Ostrasz 1997). For

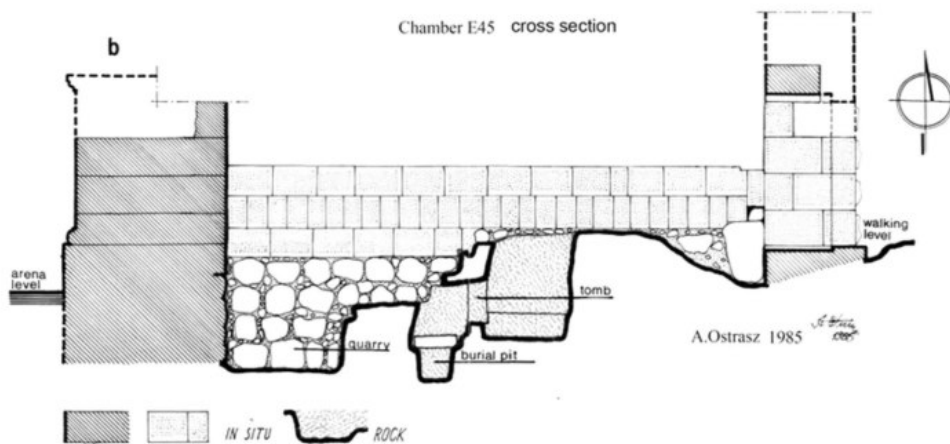
the estimated number of skeletons see Hendrix 1995. Scanned sketch plans at **Figs. 15 and 16** are not to scale but plot accurately the find spots and layers in W2 and W3. I have retained Antoni's measurements and descriptions to show his attention to detail in the field. The same comments apply to his sketches of the other excavations of burials at **Figs. 6 and 8**. The sketch plans (labels) accompanied the finds and bones from each context, layer and / or locus.



1. A.Ostrasz: site plan before the construction of the hippodrome marking hypogean tombs (1995)

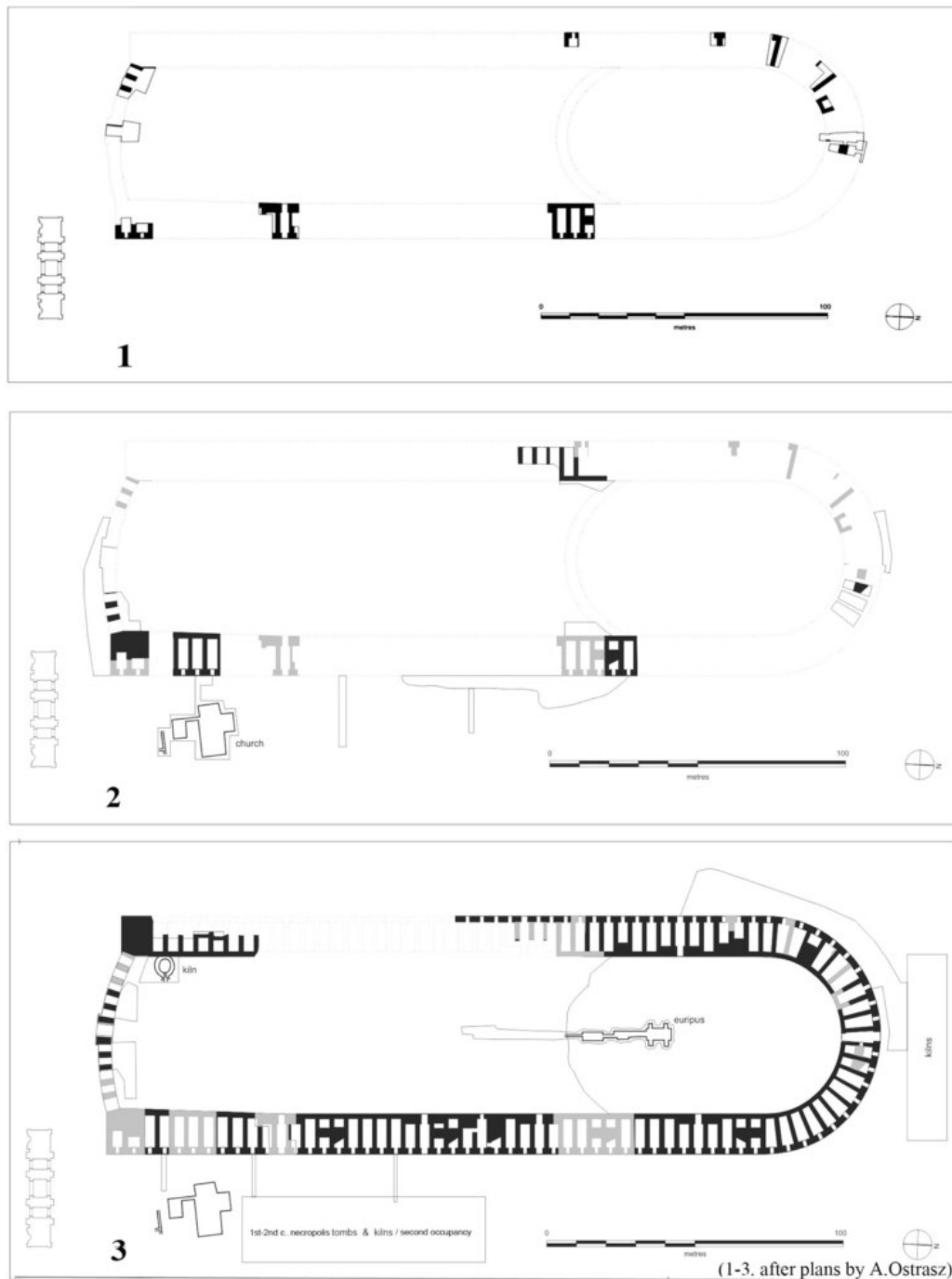


2. A.Ostrasz: East Cavea chambers E55-E43: foundations with quarry and tombs (1985)



3. Hypogean tomb in chamber E45, foundation level of the east cavea (A.Ostrasz 1985)

1. The site before and during construction of the hippodrome.



Histogram of exploration of the hippodrome and surrounding area: **1.** 1931 and 1933 trenches, E.B. Mueller (in Kraeling 1938); **2.** 1982 and 1983 trenches, Polish Team M. Gawlikowski, A.Ostasz, T.Scholl and A. Musa (JAP I); **3.** 1984-1996 complete recording and excavation of tumbled remains and continuous total excavation to the foundations of the circus with annexed outer buildings and outlying structures, including the tombs of necropolis phase and post-hippodrome occupancies, restorations and preservation, A.Ostasz and I.Kehrberg (Consultant for Computer imaging A.Wilson, ACL, Univ. of Sydney)

2. Excavations at the hippodrome until 1996.

As stated above, the main purpose of this article is to provide *in situ* archaeological evidence for dating the interments: this is best done by illustrating loci and representative finds (**Figs. 1 - 25**) with a concise account of deposits pertaining to and / or immediately surrounding each burial context⁵.

Sequence of Burials

Burials inside cavea chambers

Chamber E29 HCh88.E29.2

Infant burials below threshold of door in transverse wall between chambers E29 and E30.

Chamber W8 HCh96.W8.2-3

Burial: body buried in dirt floor of chamber.

Chamber W1 HCh91.W1.Gr. 2

Grave 2 burial.

Chamber W2 HCh91-93.W2.2

Mass grave of mid-7th century plague victims.

Chamber W3 HCh92-93.W3.2

Mass grave of mid-7th century plague victims.

Query Chamber E46 HCh85.E46.3b

Cremation burial in jar; reburial of disturbed burial?

Burials in front of east cavea

HCh91.E18/19.Gr.1, in front of

Grave 1: burials (adult and one infant) in front of chamber E18/19 (periphery of east cavea) - four Late Roman glass *unguentaria*.

HCh92.E12.Gr., in front of

Grave: single burial in front of chamber E12.

Burials inside cavea chambers

1- HCh88.E29.2 (**Figs. 5 - 7 and 24**)

Infant burials below threshold of doorway in transverse wall between chambers E29 and E30.

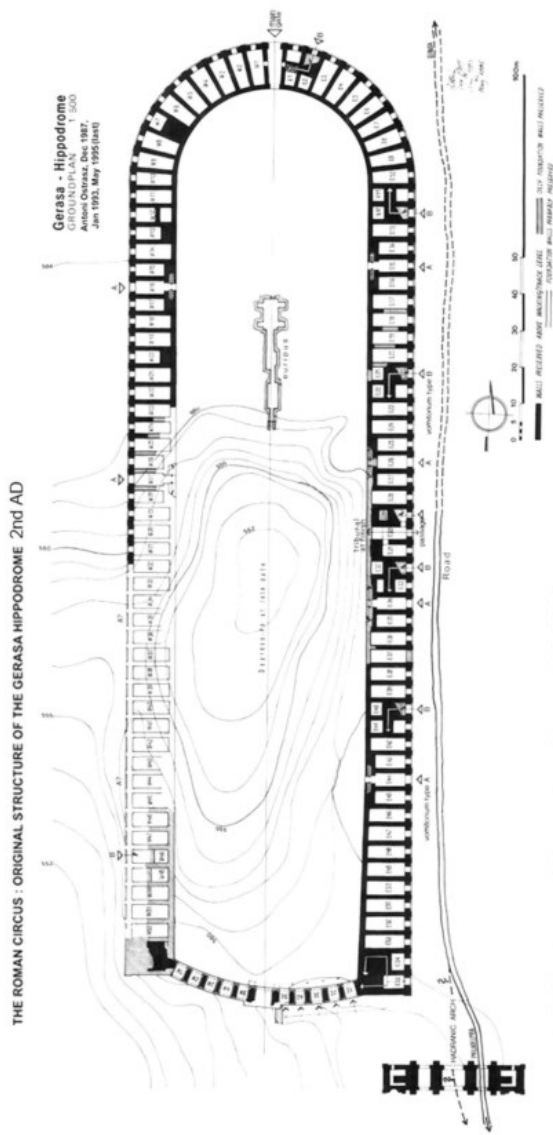
Description of Context Deposits (**Fig. 6:1-9**)

The pottery assemblages from loci shown in sketches nos 1 - 9 (**Fig. 6**) are part of burials A and B and surrounding find spots. The forms belong to the Late Roman or later 3rd - 4th century, of which some examples are illustrated at (**Fig. 7**). Typical of this period is the hippo lamp fragment (**Fig. 7:4**; cf. Kehrberg 2011b: 143) from a large deposit of this Late Roman lamp-type. Like the lamp fragments, the pottery shown at (**Fig. 7**) belongs to an accumulative waste dump of the workshop in chamber E29, of which the Tyche appliqué no. 3 is an exceptional piece that once adorned a closed jar (see the negative ribbing). Here is not the place to discuss the forms, but merely to point out the conformity of the wares pertaining to the later 3rd and 4th centuries produced at the hippodrome workshops. The bronze bell fits comfortably within that time span; it is one of two examples excavated at the circus. To judge from the quantity or depth of accumulation of waste deposits as well as typological hallmarks, the infants (burials A and B) had been interred early during the production of the pottery workshop; the pottery and lamp fragments associated with and covering the actual burials below the slabs of the thresholds belong to the later 3rd - early 4th century rather than to the mid- to late 4th century when the pottery workshop ceased operating. This is borne out by the successive waste deposits below the tumbled remains of the vault, sealing the chamber's final waste deposit layers that contained a number of coins preliminarily dated by Bowsher to the 4th century (**Fig. 24: 9-11**)⁶.

5. A detailed report of the excavations is given in Volume I of the final publications of the 1984 - 1996 hippodrome project by A. A. Ostrasz; the pottery and other finds are presented by I. Kehrberg in Volume II (White - Levy Program for Archaeological Publications, Harvard University; in prep.). This article will not discuss issues and opinions related to cultural periods surrounding the burials at the hippodrome or the artefacts that have in part been published by me and which will be examined in full in the final publications

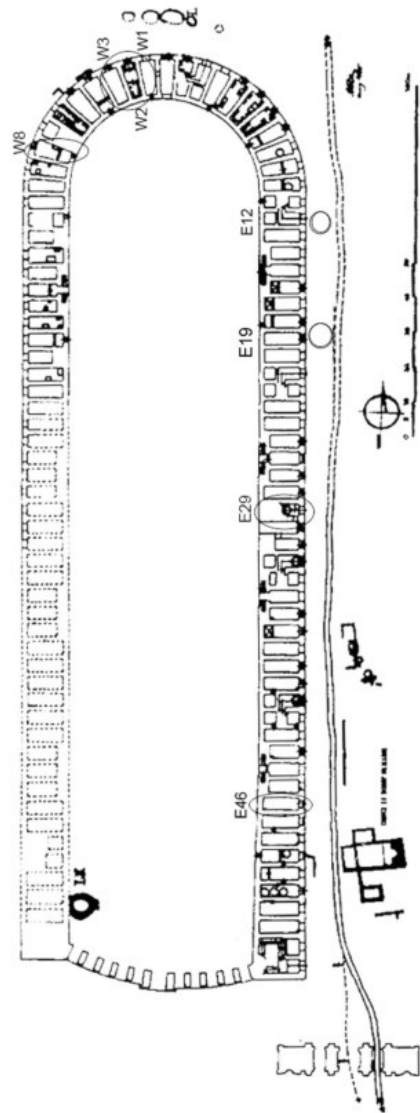
6. Christian Augé and Julian Bowsher will publish their readings of the coins from the 1984 - 1996 excavations

in our final hippodrome publications. Preliminary identification was done during Antoni's lifetime, being recorded by Augé and Bowsher on the coin catalogue cards (see Plates 4a-b), and subsequently listed for each chamber by Antoni. In this context of dating sequences of events or stratified layers, it is interesting to note that both coins from the tumbled remains of the vault and scalaria in E29 date to the first half of the 2nd century, the construction period of the hippodrome, sandwiching the secondary Late Roman and Byzantine occupancies in the chamber neatly between its foundation and construction of the earlier part in the 2nd century.



1. Original groundplan and periphery, A.O.1995

From later 3rd - early 7th century AD



2. Groundplan of the circus building adapted as industrial complex , A.O.1995

3. Ground plans of the Roman and Byzantine hippodrome.

It is important to note that there were linkages between separate loci or deposits in the form of pottery fragment joins. This shows that the E29 workshop did not produce frequently, nor over a long period of time. Among the homogeneous assemblages from the deposits, it is interesting to note only one intrusive Late Byzantine bowl fragment (similar to the type shown at **(Fig. 20:13-15)**), suggesting a possible date for the earthquake damage at E29 of the 6th century as evidenced at other parts of the hippodrome and other monuments of Jarash, albeit not as devastating as the subsequent destructions by the 650 and 749/50 earthquakes (*infra*).

2-HCh96. W8.2-3 (**Figs. 7 and 24**)

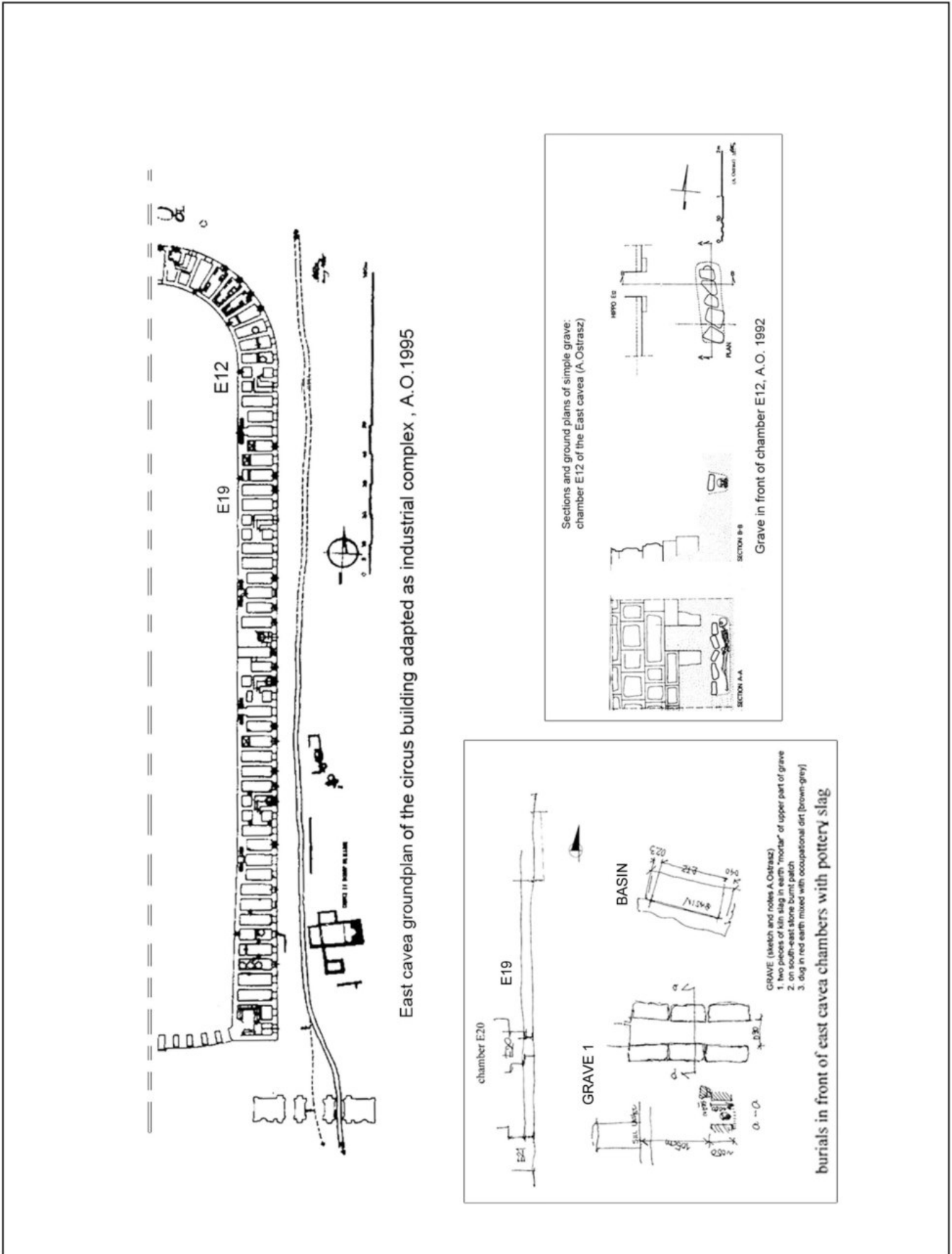
A coin from the grave fill (**Fig. 24:6**) places the burial in W8 in the Early Byzantine period; this date or period is corroborated by two coins from the surrounding deposits (**Fig. 24:7-8**) of the same type, that have been preliminarily dated to the 4th or beginning of the 5th century by Bowsher. The pottery from loci sketched *in situ* (see **Fig. 8**), that were part of as well as surrounding the burial context, support an end-of-4th to (possibly) an early 5th century date. Plates 6 and 6a show the homogeneous wares and types produced at the hippodrome workshops from the Late Roman to Early Byzantine periods. This precludes a Late Byzantine date for the burials, even though that type of coinage is found throughout 5th and even 6th century deposits. It seems highly unlikely that coin no. 6 could be intrusive and slipped into the grave as a result of earthquake. It is both too light and could only have been carried there embedded in soil and with other deposits. The stratification is straightforward in that it is obvious the grave was dug into the original dirt floor inside the chamber. This is further evidenced by the few sherds in the soil that directly covered the grave (**Fig. 11:3**); the dirt was part of the deposit that was excavated for the grave. The sherds date to the Roman period, or construction of the circus in the first half of the 2nd century. This 'inverse' chronology or stratification was also found in

two other graves in chamber E46 and W1 (*infra* and **Fig. 13**). Last, but not least, the glass vessel at (**Fig. 10:5**) corroborates an Early Byzantine date for the middle part of the secondary occupation.

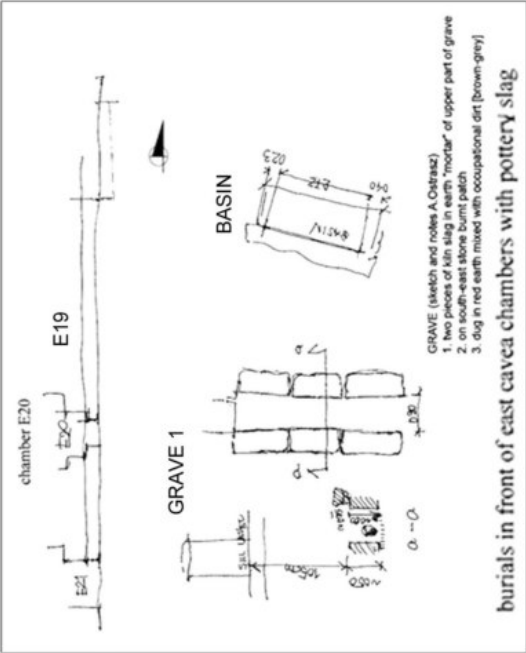
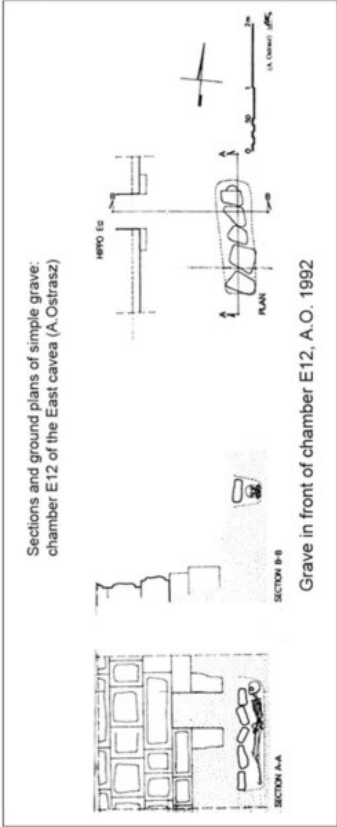
The photos at (**Fig. 9**) illustrate the carefully prepared inhumation, in which the pit grave was lined with stones. It is clear from its position along the intrusive wall shown in sketches at **Fig. 8**, as well as from waste deposits accumulated above, that the body would have belonged to an earlier generation of occupants, possibly associated with the early 5th century workshop.

3-HCh85. E46.3b (**Figs. 1, 3:2 and 13**)

The following burial deposit found in east *cavea* chamber E46 may be best understood when looking at its context, which is part of the aforementioned quarry-cum-hypogean tombs foundation trench at the south-east *cavea* (*supra*). It appears that we are dealing with a Roman cremation burial, at any rate pre-130 AD (**Fig. 1:1**), which was disturbed and reburied by Byzantine occupants. The reason for this proposition is that the pottery with the charred remains dates to both the Roman and the Byzantine period. One might posit that the cremated remains were in a Roman jar and that the fragmentary remains of the jar and bones were reinterred in a Byzantine-period storage jar, which was sealed with gypsum available at the site from previous tanneries (Kehrberg 2007). The storage jar is difficult to date precisely within the Byzantine period and the secondary interment could have occurred any time during the 5th and / or 6th century. Workshops are attested in that part of the *cavea* from the Early Byzantine period onwards (Ostrasz 1989, 1991; Kehrberg 2009). That it cannot have been a Byzantine burial is demonstrated by the cremation; while cremation could occur in the pre-Christian Roman period there were none at Byzantine Jarash. Nor could the reburial have occurred after the Byzantine period, as it was covered by dense layers of pottery dumps pertaining to Late Byzantine hippodrome workshops (Kehrberg and Ostrasz 1997) and



East cavea groundplan of the circus building adapted as industrial complex , A.O.1995



4. Post-chariot racing occupancies: burials at the hippodrome.

to their tumbled remains. The stratigraphic sequence suggests instead that it had occurred before the end of the Byzantine period.

4-HCh91. W1.Grave 2 (Figs. 3:2 and 13)

There is not much artefactual evidence with which to date the grave in chamber W1, but it is clear from the context that the burial did not predate the abovementioned tombs and instead belonged to the Late Byzantine period. Indeed, the deceased may have belonged to the last generation of occupants at the hippodrome, being interred shortly before all workshops and the entire building complex were abandoned towards or at the end of the Byzantine period. If the few pottery sherds associated with the burial context hint at a scenario similar to that at chamber W8, the context at W1 is more defined and, indeed, minimalist. The Late Byzantine Jerash bowl fragment and Late Hellenistic and Early Roman lamp fragments provide *termini post and ante quem* for the building of the circus. The lamp fragments found covering the grave belong to the construction fill of the hippodrome, dug up from the foundation or original 'floor level' of the chamber into which the grave was cut. The Jarash bowl fragment epitomises the final flourishing phase of the hippodrome pottery workshop productions⁷ and could indeed be one of the many examples of Jerash bowl productions found in the workshop pottery dumps in W2 and W3 (*infra*).

5-HCh91-93. W2 and W3.2: mass grave (Figs. 13 - 25)

The mass burials in chambers W2 and W3 have already been published, in the first instance by us (Ostrasz 1993; Kehrberg and Ostrasz 1994, 1997) and subsequently by various authors on osteological studies of the skeletal remains, the main reason for this article (*supra*).

Therefore, it suffices to summarise the archaeological

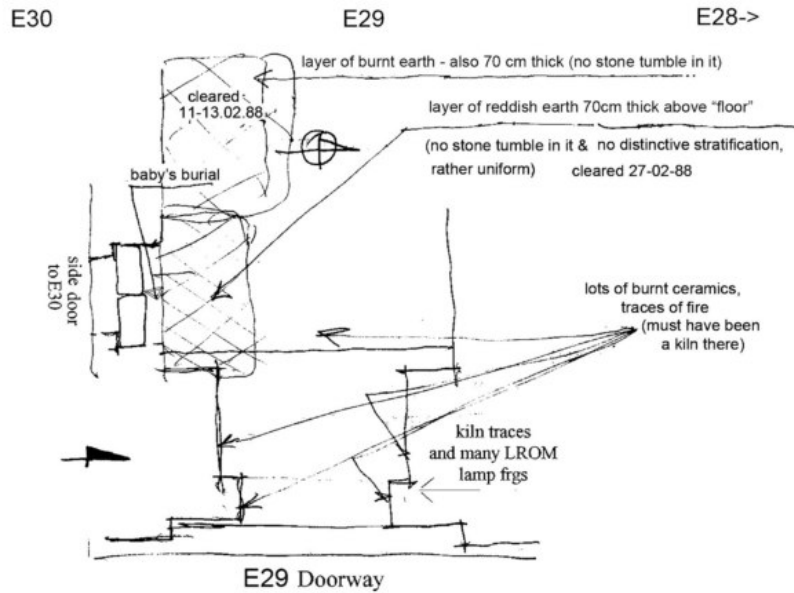
evidence for dating the mass graves and to consider the most likely cause of death. The rich archaeological data retrieved from our excavations of chambers W2 and W3 in fact provide a comprehensive sequence for the building of the circus and occupancies occurring at the hippodrome. The latter began with workshops dating to the last decades of the Late Roman period, the earliest evidence for occupancy in both chambers.

In chamber W3, the occupancy is attested to by a misfired pottery dump found directly on top of the constructional fill within the foundation wall. In chamber W2 it is attested to by a group of large vessels placed along the walls of the south part of the chamber (Figs. 16:2 and 16:7) that were found partly filled with a dried lime-like substance (gypsum). The vats or vessels were set on top of the construction fill in rows, with the space between the east, south and west rows being filled with dirt. The top of this fill was the walking surface at half the height of the vessels. This dirt contained mostly sherds of the 1st century BC/AD, with a handful of Late Roman sherds in the uppermost layer; two coins in mint condition of Constantine I in the upper layer point to the first decades of the 4th century as the date for the placement of the vessels in the chamber.

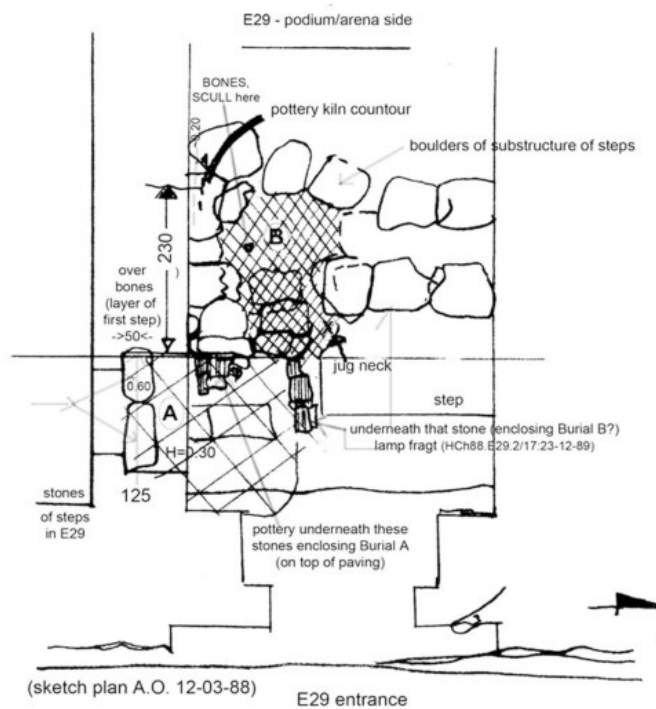
These workshop installations in W2, a Late Roman tannery (Kehrberg 2007), were covered with a compact layer of misfired and unfired Late Byzantine pottery (Kehrberg and Ostrasz 1994: 546-7). (Figs. 19-23) amply illustrate the rich finds in both chambers and are representative of the prolific output of the Late Byzantine potters. Previous publications (esp. Kehrberg 2009) detail productions at the Late Byzantine workshops of the hippodrome; some of the unfired ceramics are shown here for the first time (Fig. 22). As mentioned earlier, this article is not about ceramics *per se* (fn. 6), but to inform about the excavation and find contexts.

7. Barring sporadic reoccupations or squatting from the end of the 7th or early 8th century onwards, almost a century after abandonment

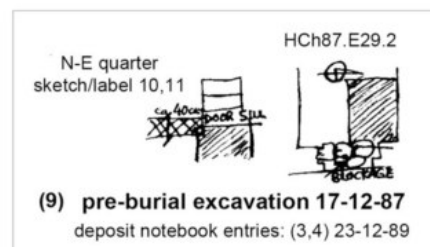
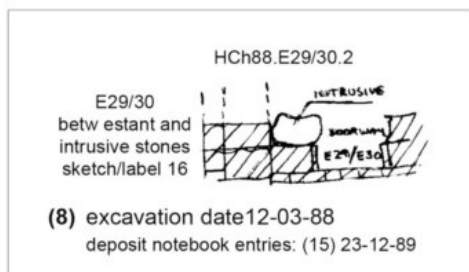
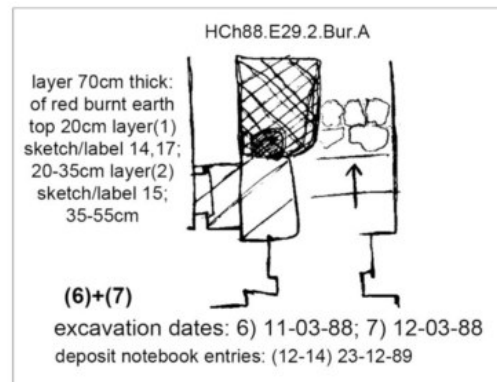
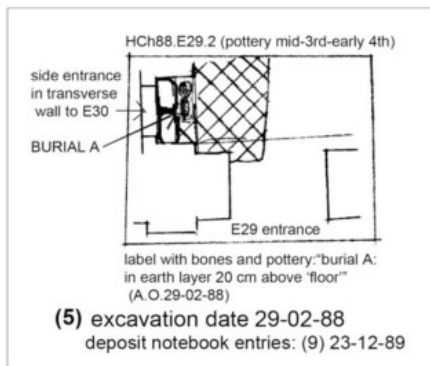
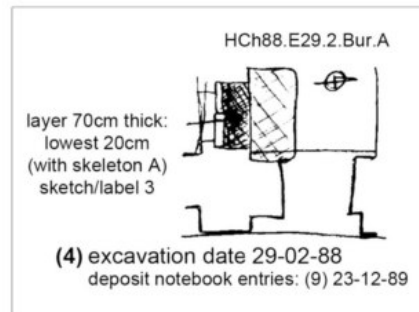
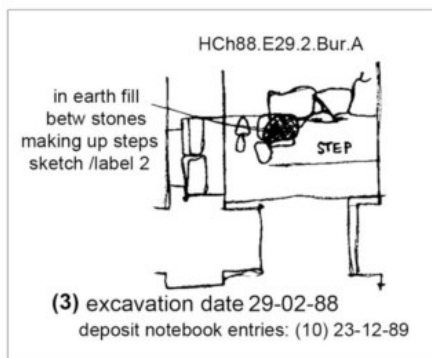
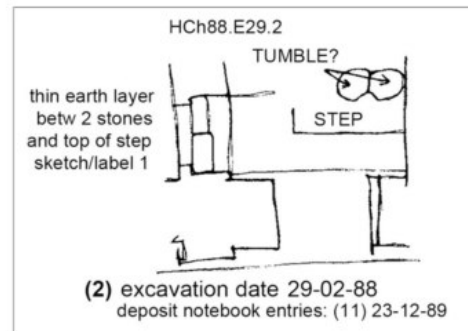
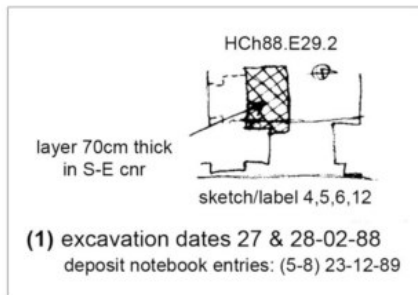
(Kehrberg and Ostrasz 1997; Kehrberg 2009 and 2016) when memory of the mass graves may have waned.



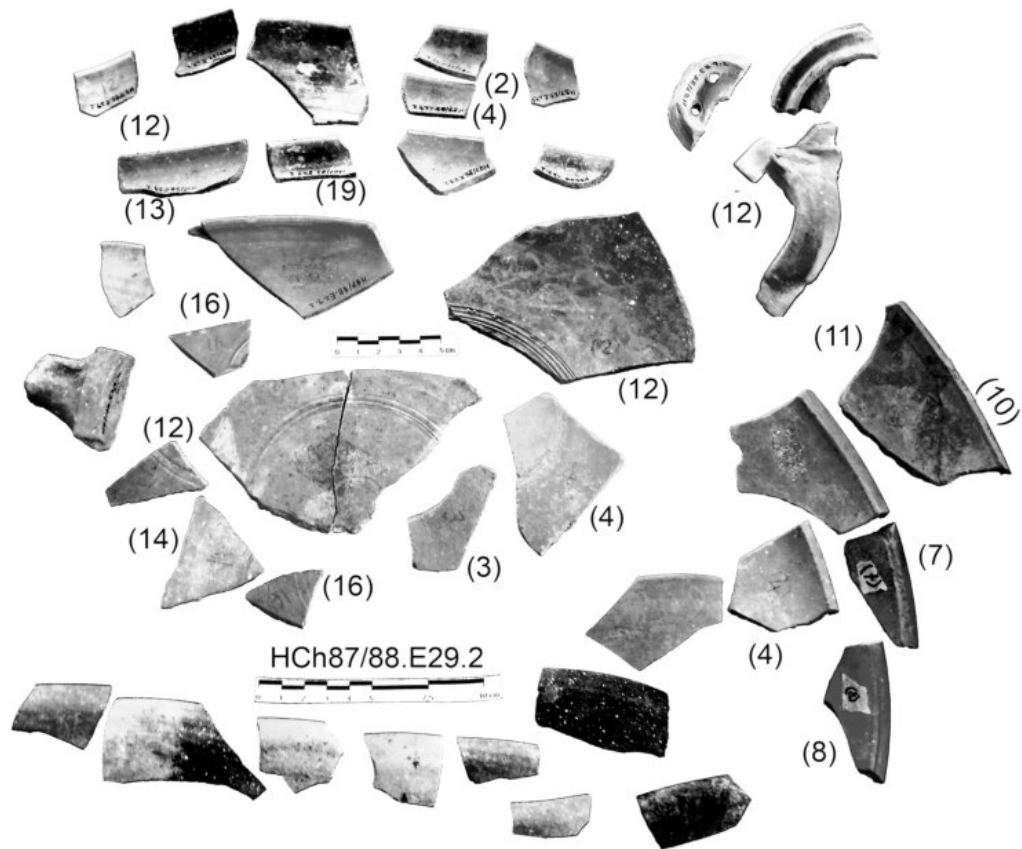
(1) general plan of excavations in east cavea chamber E29 from 11-13 and 27. 02.1988



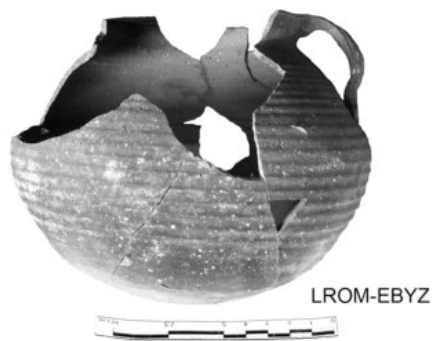
(2) detail sketch of loci:burials in chamber E29; E29/30:excavated 12-03-1988



6. Sketch plans of pre-burial and burial loci: HCh87/88. E29.2 (A.O. 1987/88).



1 examples of joins from separate deposits (x), see Fig 6



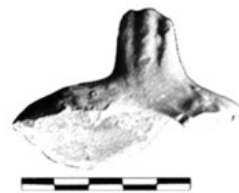
2 HCh88.E29.2 (Fig. 6:1, data entries 5-8: thick layer above "floor" and burial): cooking pot JH917



3 HCh88.E29.2. (14): applique head of Tyche JH646, cf Fig 6: 6,7

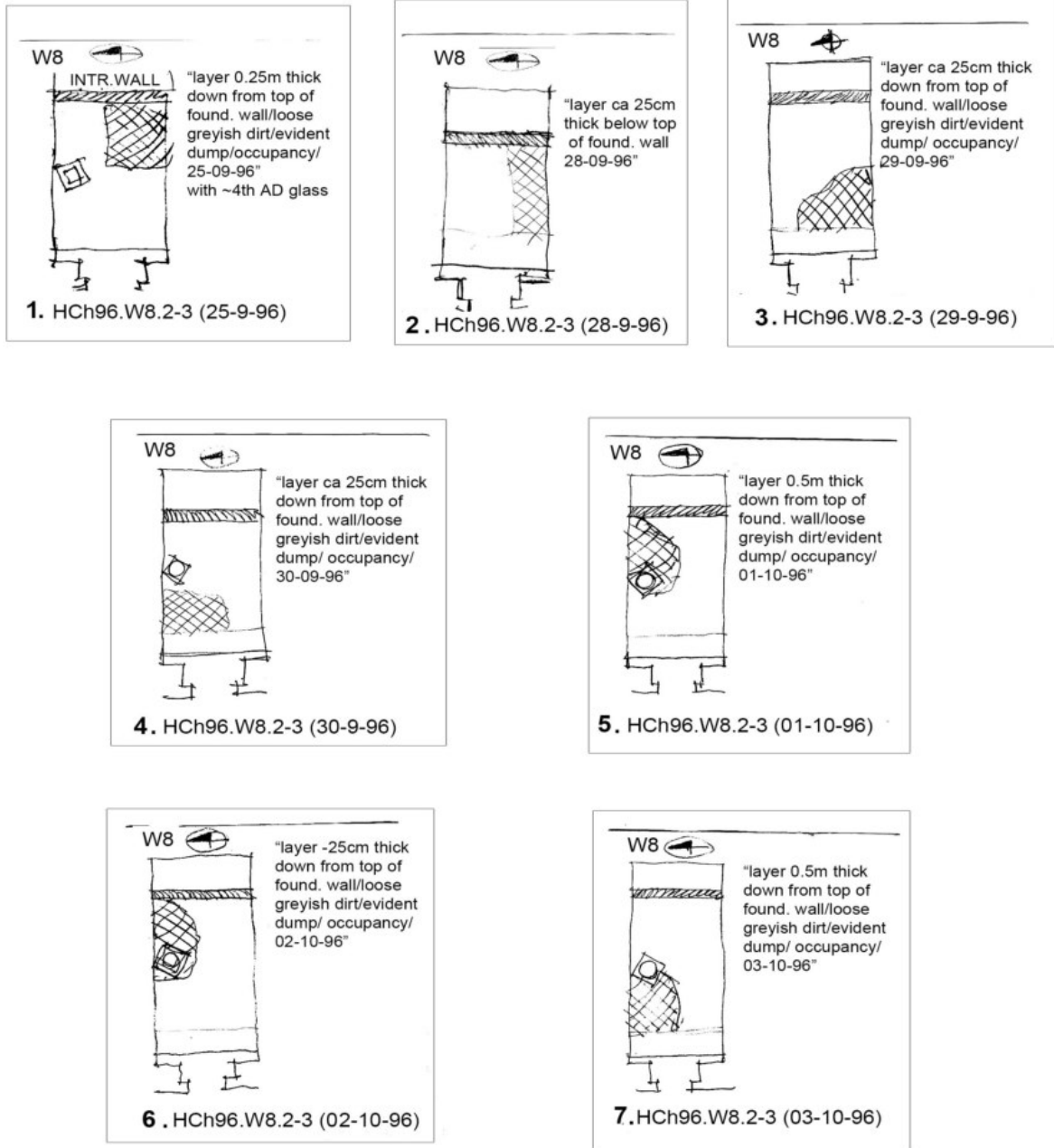


5 HCh88.E29.2.see Fig. 6:1(8) data entry: bronze bell JH12



4 HCh87.E29.2.JH90: 'HIPPO Lamp', cf. Kehrberg 2011b:143, 145; Fig.2:32c,

7. Pottery and bronze bell from various deposits above and with burials E29.2.



8. Sketch plans made in situ during excavations in W8 (A.O. 1996).

Section 1 at (**Fig. 15** illustrates the lower cross-section in chamber W2 and the layers or ‘lots’ of excavated deposits, in particular noting coin finds associated with the workshop. Sketch 2 is a schematic section along the chamber providing a realistic rendition of the tumble within the chamber that we excavated carefully.

Photos at (**Fig. 14**) provide a glimpse of the difficulty of excavating the skeletal remains in both chambers W2 and W3. The photos speak for themselves; top plans at Plate 8 show some detail of single find spots. Each context (level, locus or lot) was documented by Antoni during excavation in the field. Apart from being routine recording, this documentation proved vital in reconstructing the finds directly associated with some of the skeletal remains, actually individual victims of the plague. It seems there were no accoutrements of the type one would expect in normal burials, which can be explained by the nature of the mass graves. We noted in 1994: “The corpses appear to have been dumped in the chamber (on top of the ceramic dump) with no regard to any burial custom. One can assume that this was done in a hurry. The corpses were hardly covered with any soil. This manner of disposal is common in times of plague.” (Kehrberg and Ostrasz 1994: 549). The modest jewellery bespeaks of simple individuals (**Figs. 15:3, 17 and 18**); the beads, while not restrung in a precise pattern, do however belong together and can be associated with single individuals, as can the bronze and iron finger rings and bracelets. Of particular importance is one coin found with beads among the crushed bones of one individual, viz. a gold tremissis of either Constans II (641 - 685) or Constantine IV (668 - 685) as identified by Augé. To reiterate what we stated in 1994, the coin provides a *terminus post quem* for both the burials and the earthquake that caused the collapse of the vaulted chamber sketched at (**Fig. 15:2**).

Whilst at the very beginning of the excavation of chamber W2, we initially considered that the entombed individuals may have been victims of a late earthquake (Ostrasz 1993: 499), further

excavation and the discoveries of the same scenario in chamber W3 confirmed that the burials were mid-7th century plague victims (e.g. Conrad 1986), corroborated by the coins associated with individuals; there were several dating to Late Antiquity, contemporary with the gold coin. Indeed, the chronological gap between the top layers of the pottery dumps in both chambers overlaid by the burials and the coins associated with the dead provide solid evidence for the victims being those of the 7th- rather than the 6th-century plague. According to Augé, the gold tremissis is most probably attributable to Constans II, thereby fitting the mid-7th century plague. The two intact glass vessels from W3 (**Fig.10: 6**), protected from being crushed by a column drum under which they had been placed, also date to the late 6th - 7th century, all of which accords with archaeological data from the other cavea chambers which places the closure of workshops and abandonment of the entire building or site no later than the beginning of the 7th century (Kehrberg 2009). The gold coin, especially, seems to indicate what we had suggested in 1994, that the burials were done speedily to avoid contamination and that bodies were obviously barely touched, let alone searched, and were buried as they were found. The abandoned building was an appropriate site outside the walled city. The earthquake, most likely in 650 AD, sealed the graves; as mentioned above the tumbled vault and *scalaria* contained pottery as well as coins dating the construction of the circus. In this sense the two chambers represent the entire history of the building and site from beginning to end.

East Cavea Periphery

6-H91. Gr.1 (**Figs. 3 - 4 and 10**)

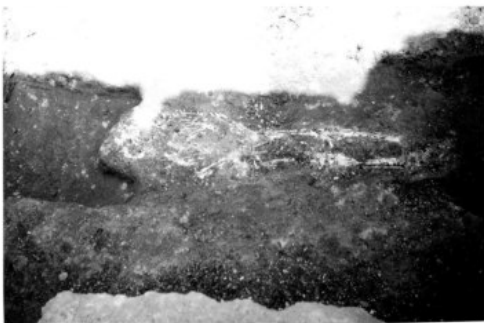
Context Description

“Hippo / area east of east outer wall / in front of E18/19 / grave south of ‘stela’ structure / in fill of grave together with skeletons / 7-09-1991” (A.O.; labels with skeletal remains; pottery sherds and glass).

Deposit



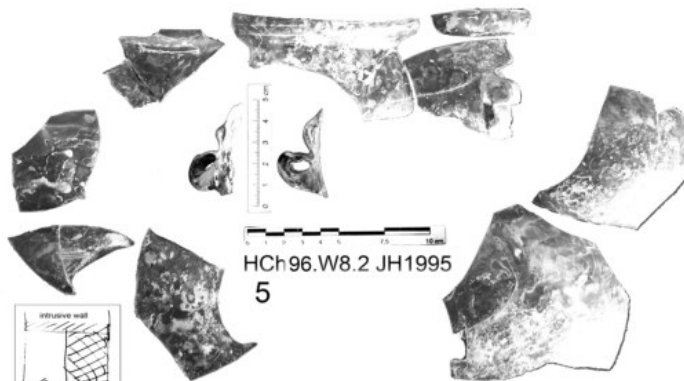
intrusive wall (A.Ostrasz 1996)



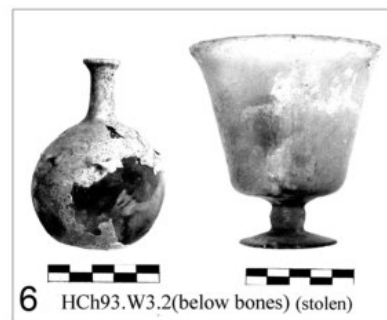
9. HCh96.W83b. Burials in west cavea chamber W8 (A.O. 1996).



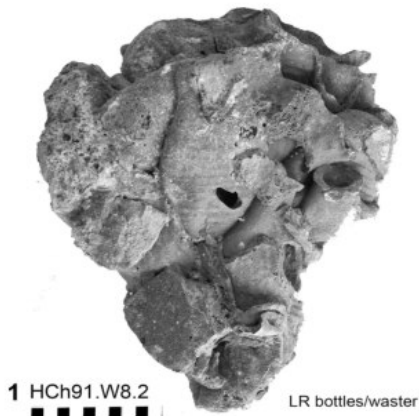
1-4: H91. Grave 1 in front of E19



"layer 0.25cm thick/down from top of foundation wall/
loose greyish dirt/evident dump/occupation/ 25-9-96"(A.O.)
pottery dump later 3rd-4th c.AD

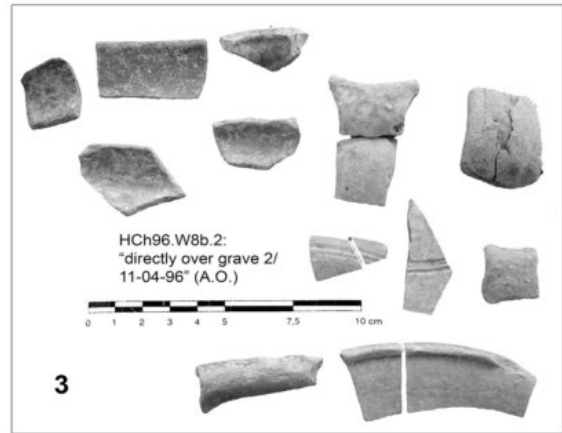


10. Glass vessels associated with and in burial contexts.



1 HCh91.W8.2

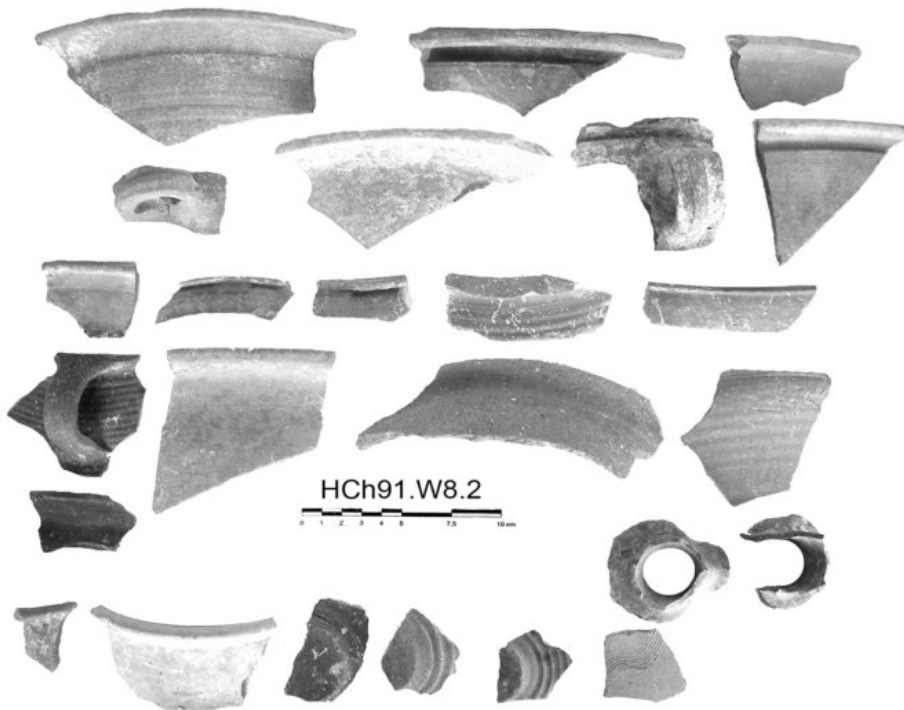
LR bottles/waster



HCh96.W8b.2:
"directly over grave 2/
11-04-96" (A.O.)

3

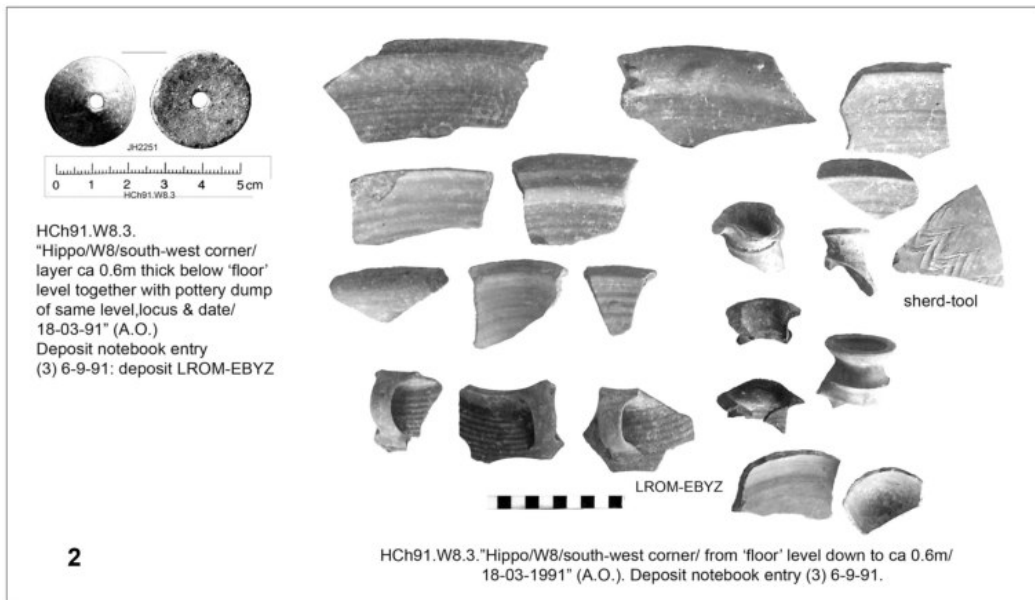
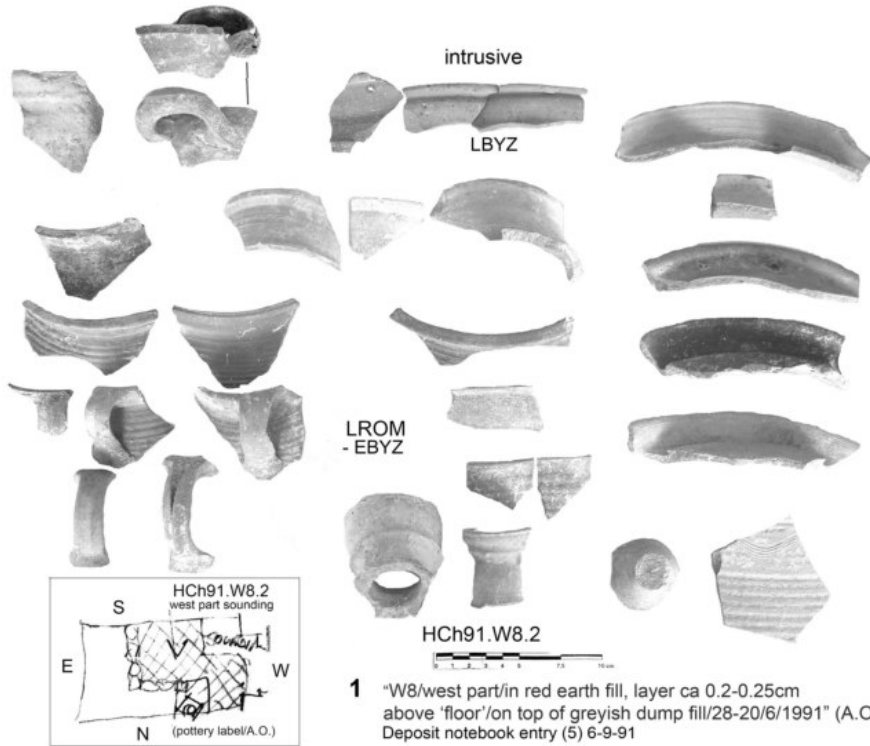
"Hippo/W8/south-west corner/layer ca 0.5m thick corresponding to 4th doorway stone below arch (together with 'beautiful' waster/ 17-3-91" (A.O.). Deposit notebook entry: (2)6-9-91 together with LR (late 3rd-4th) pottery parallel to E2.2 (I.K.)



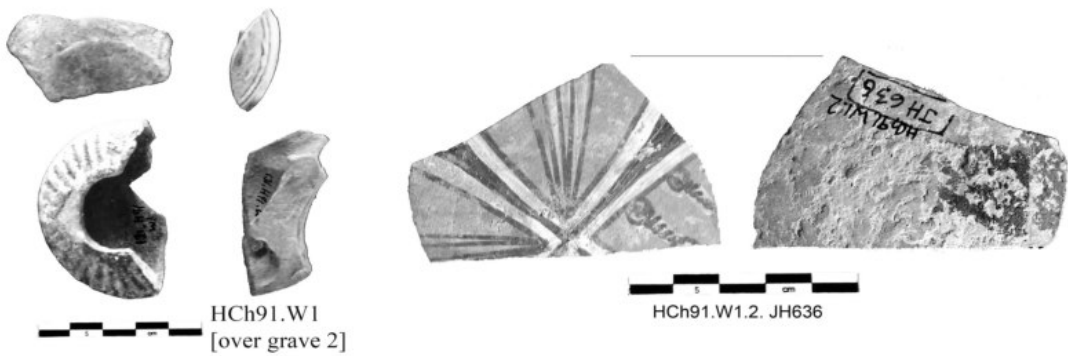
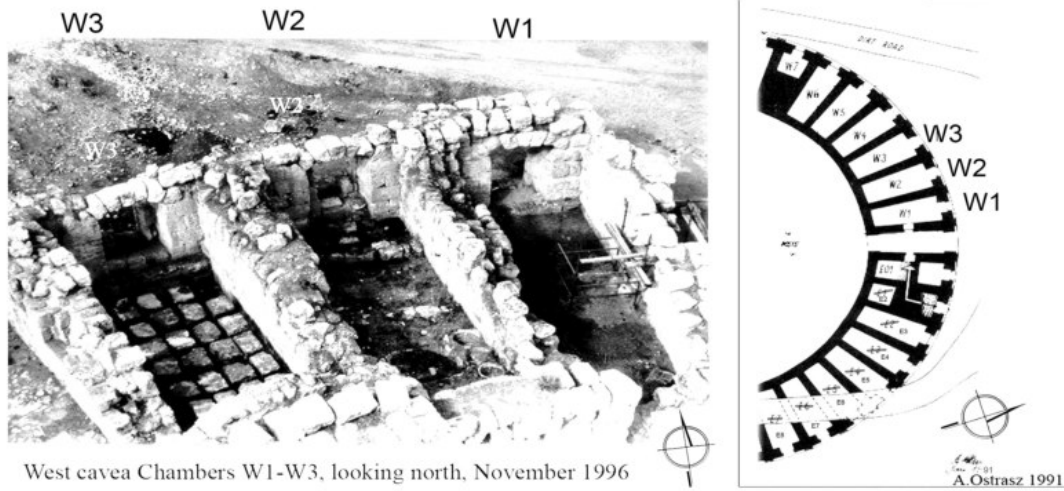
HCh91.W8.2

2 "Hippo/W8/south-west corner/layer ca 0.5m thick corresponding to 4th doorway stone below doorway arch (together with beautiful waster)17-03-91" (A.O.)
Deposit notebook entry (2)6-9-91: LROM-EBYZ

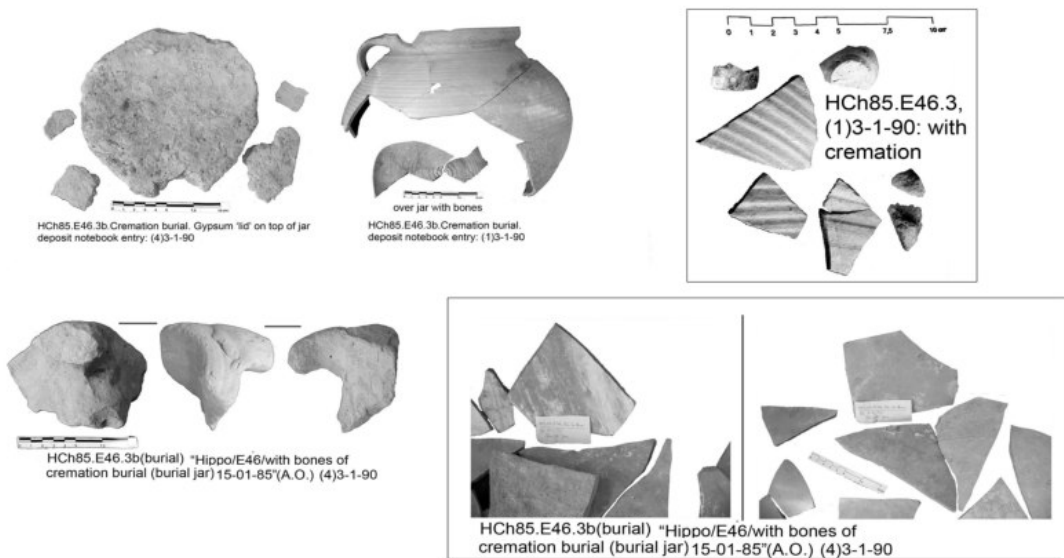
11. Roman, Late Roman - Early Byzantine pottery in west cavea chamber W8.



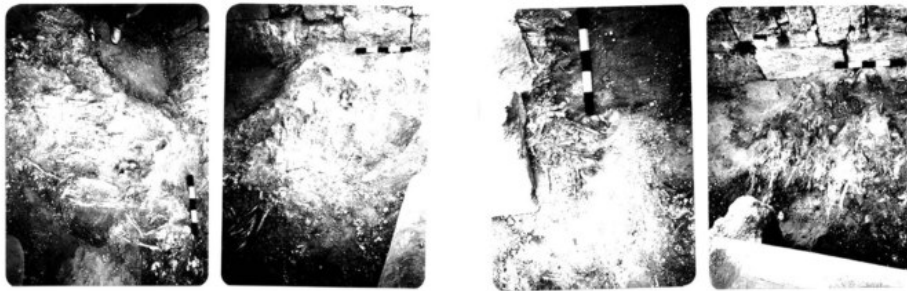
12. Roman, Late Roman - Early Byzantine pottery in west cavea chamber W8.



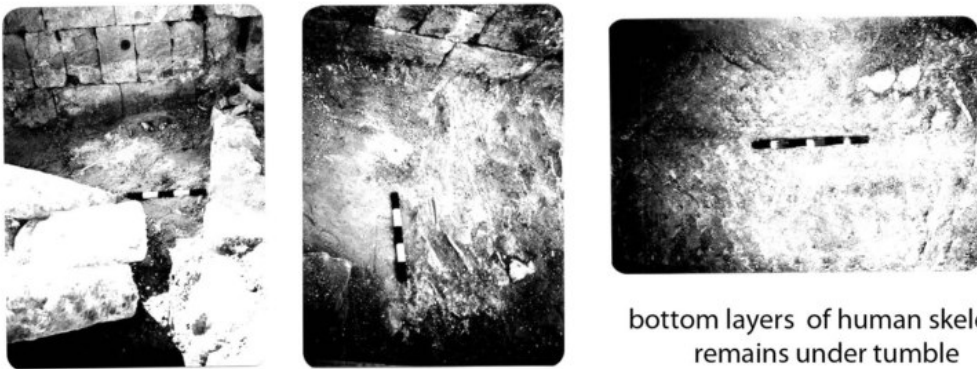
Grave 2, chamber W1 adjoining mass graves in W2 and W3



13. Cremation burial in chamber E46 (reburial [?]); burial in chamber W1.



mid- layers of human skeletal remains under tumble



bottom layers of human skeletal remains under tumble



installations in chamber W2 :
after excavation /removal of layers of
tumble, skeletal remains and pottery dump

HCh92,93.W2

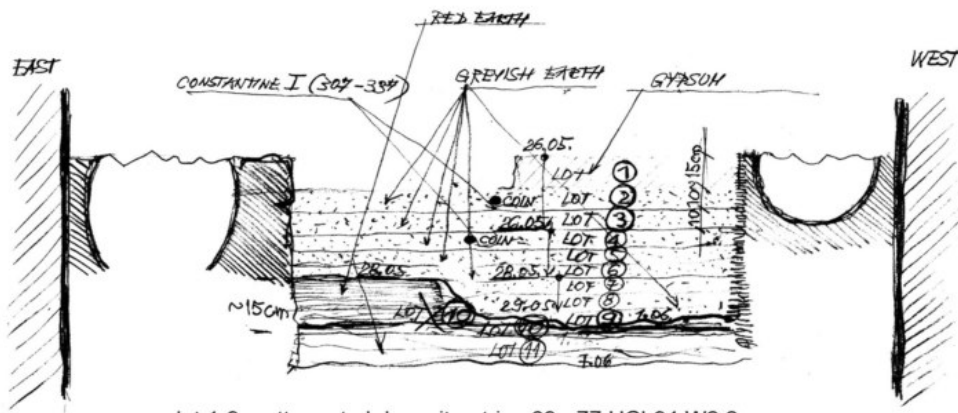


HCh93.W3.



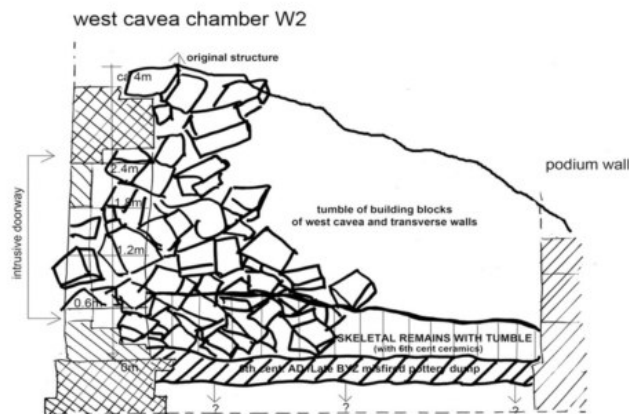
HCh93.W3.

14. West cavea chambers W2, W3: mass graves of mid-7th century plague victims (A.O. 1992/93).

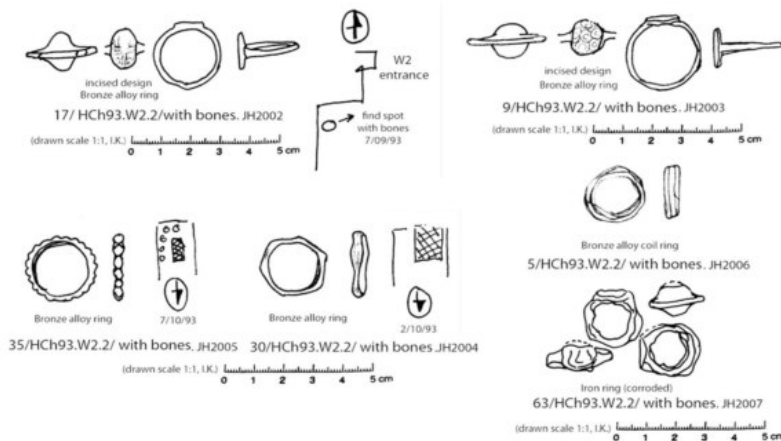


lot 1-9: pottery et al deposit entries 69 - 77 HCh94.W2.2
lot 10-11: pottery et al deposit entries 78, 79 HCh94.W2.3

- 1 Hippodrome, west cavea chamber W2: workshop: sounding between vats (A.A.Ostrasz 26-05-1994: sketch not to scale)



- 2 Sketch by A.A. Ostrasz: N-S section of W2 with intrusive doorway to workshop: earthquake tumble and levels of reoccupancies.



- 3 Jewellery found with human skeletal remains in chamber W2 (Pl.9)



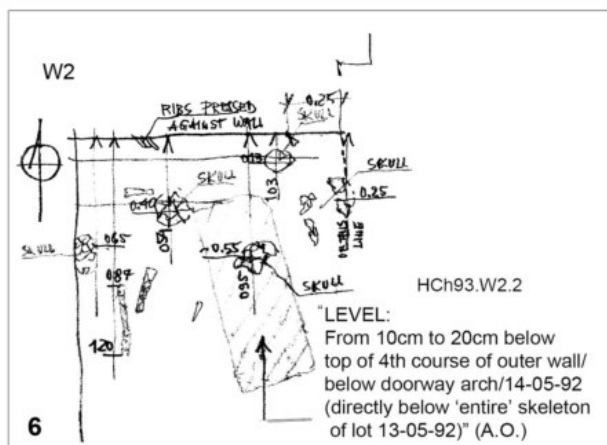
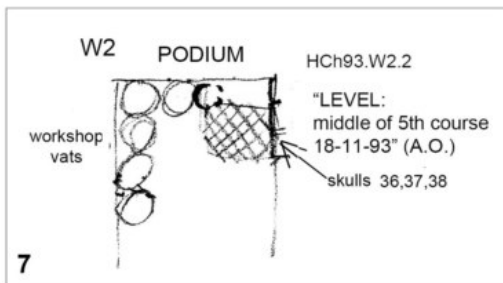
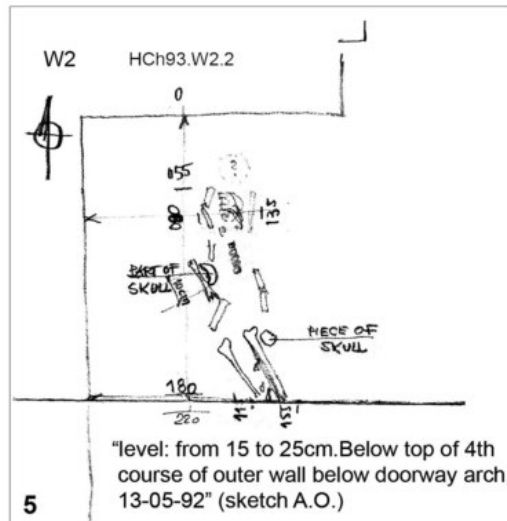
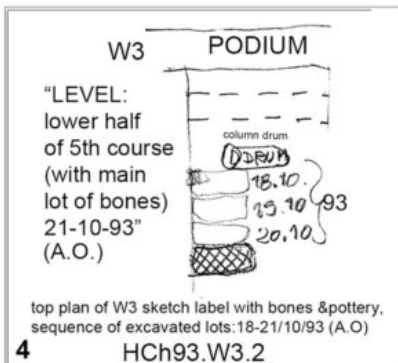
1 West cavea chambers W1-W3: view from north to south overlooking the outer periphery and inner arena (photo A. Ostrasz 1995)



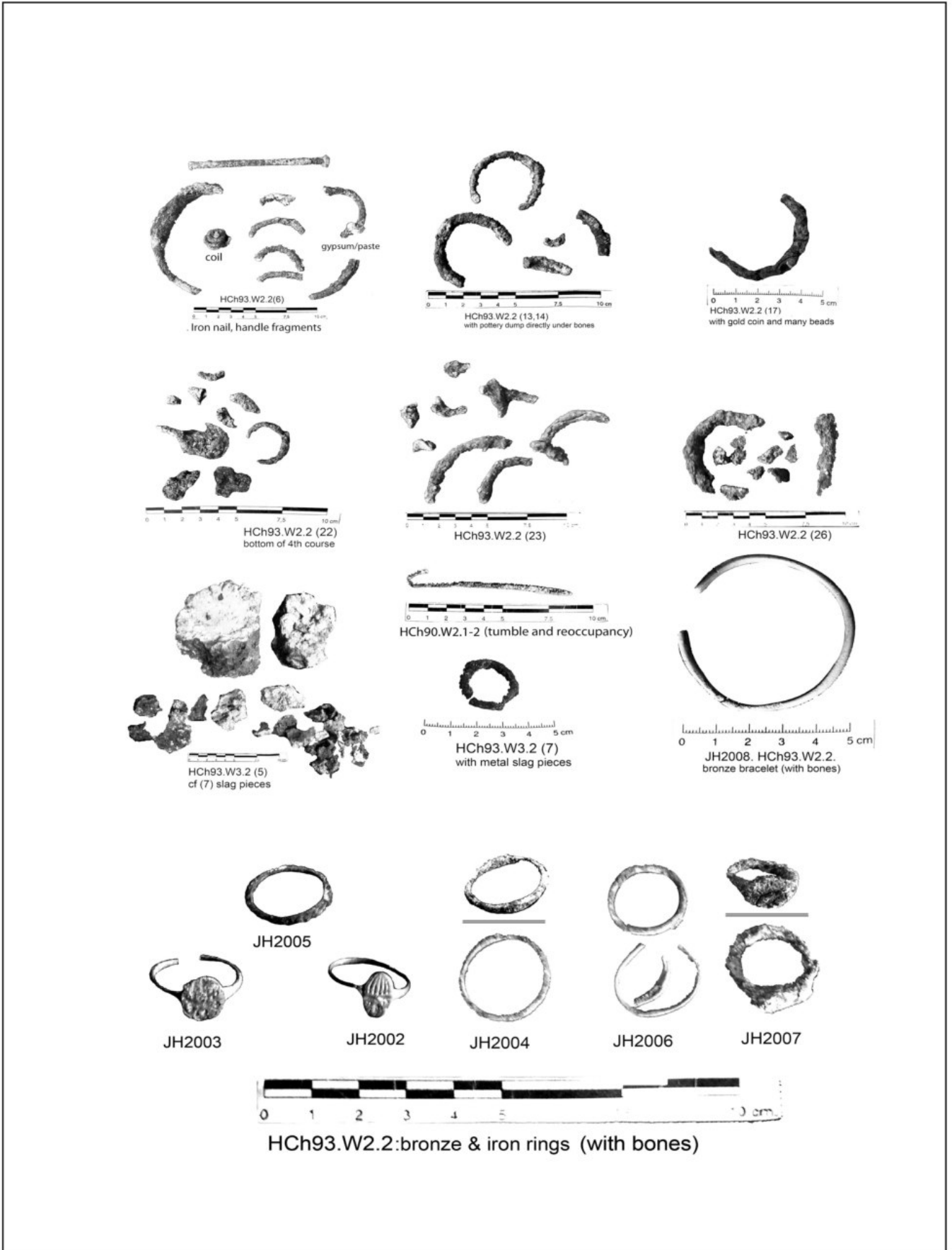
2 West cavea chamber W2 after excavation with deep sounding near sunken vats; looking south. (in W 3: tumbled seat stones arranged for restoration) (photo A.Ostrasz 1995)



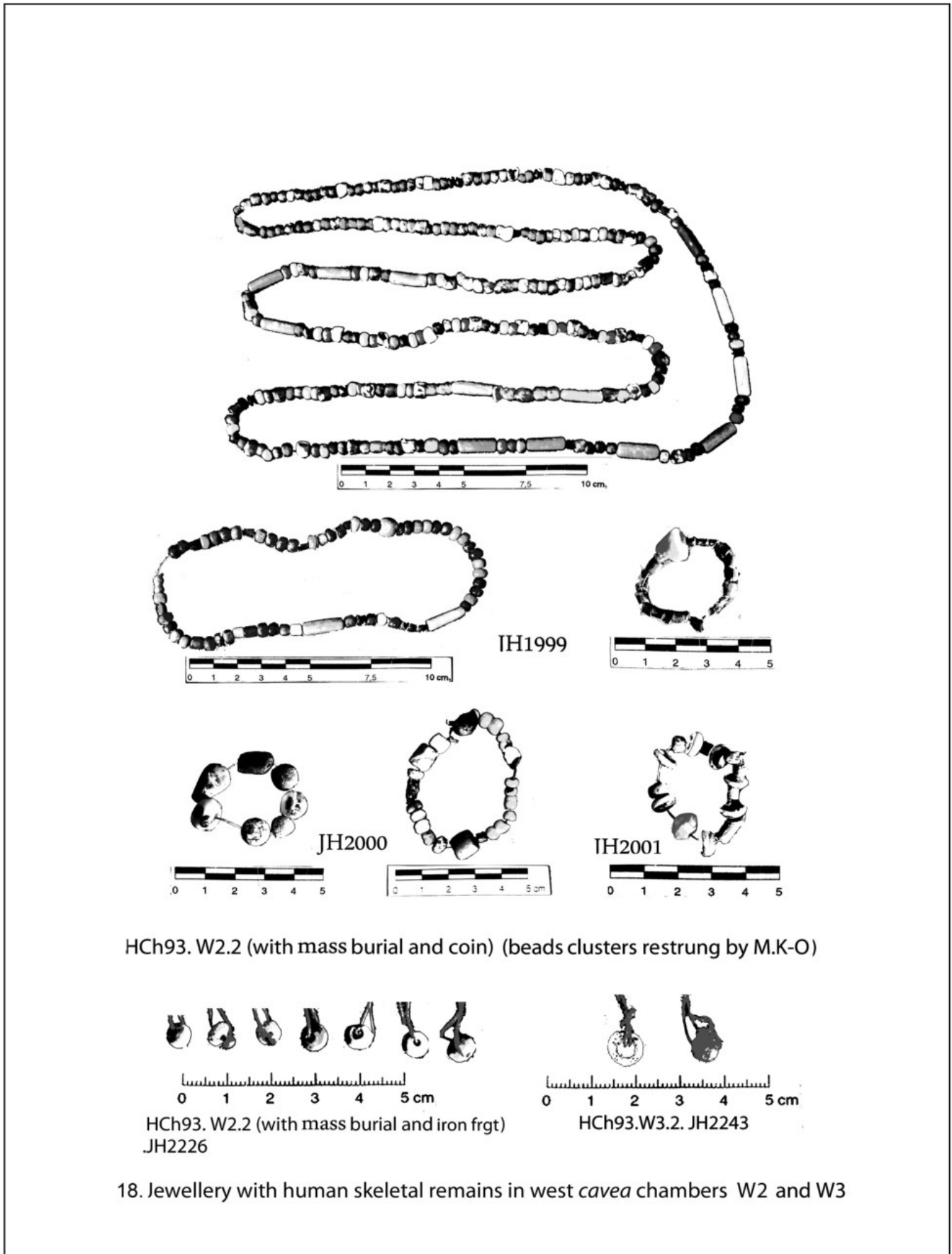
3 Original entrance to chamber W2 and intrusive secondary workshop door (photo I.K. 2006)



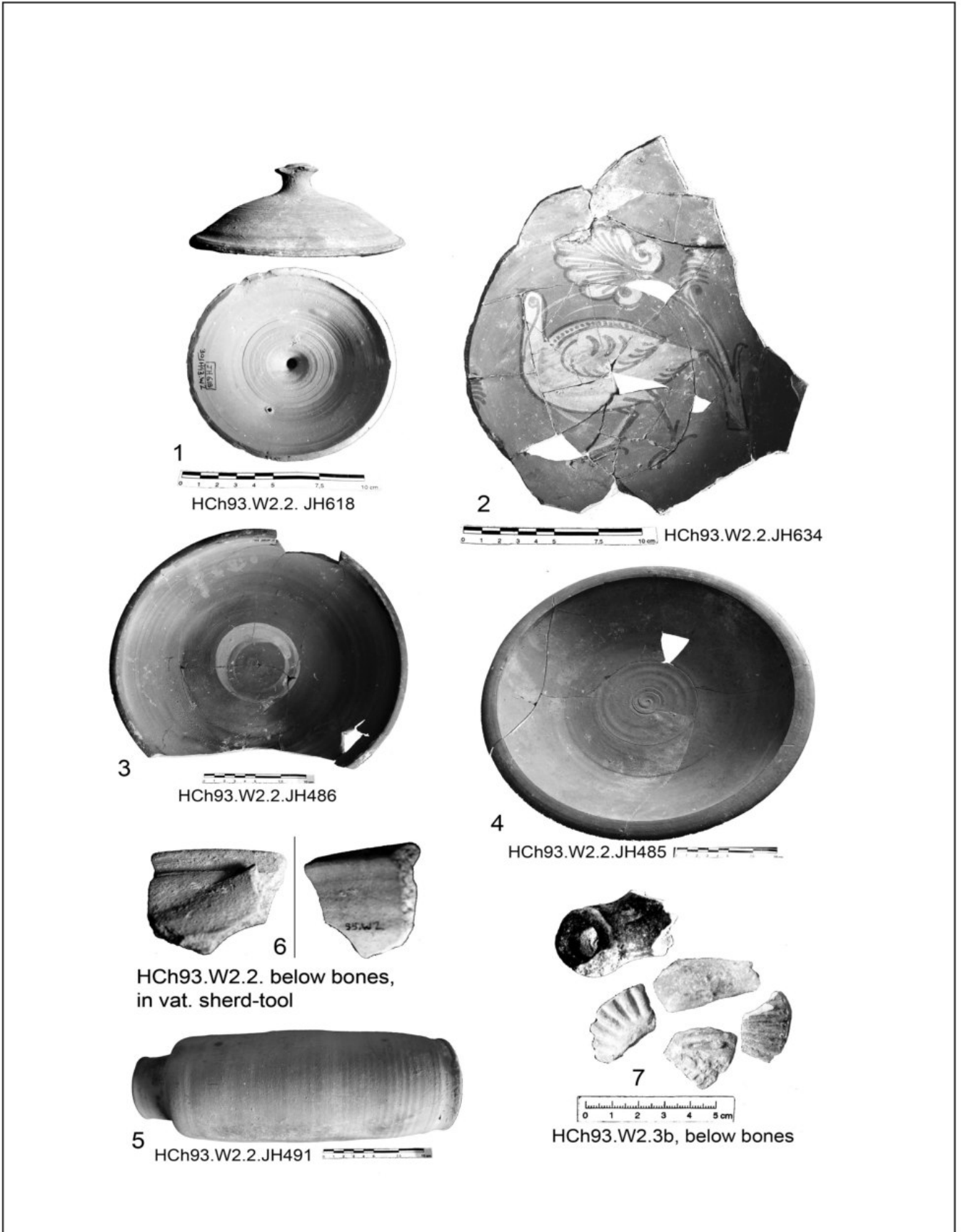
16. (1-3) Post-excitation: cavea chambers W2, W3; (4-7) in situ plans during excavations (A.O. 1992/93).



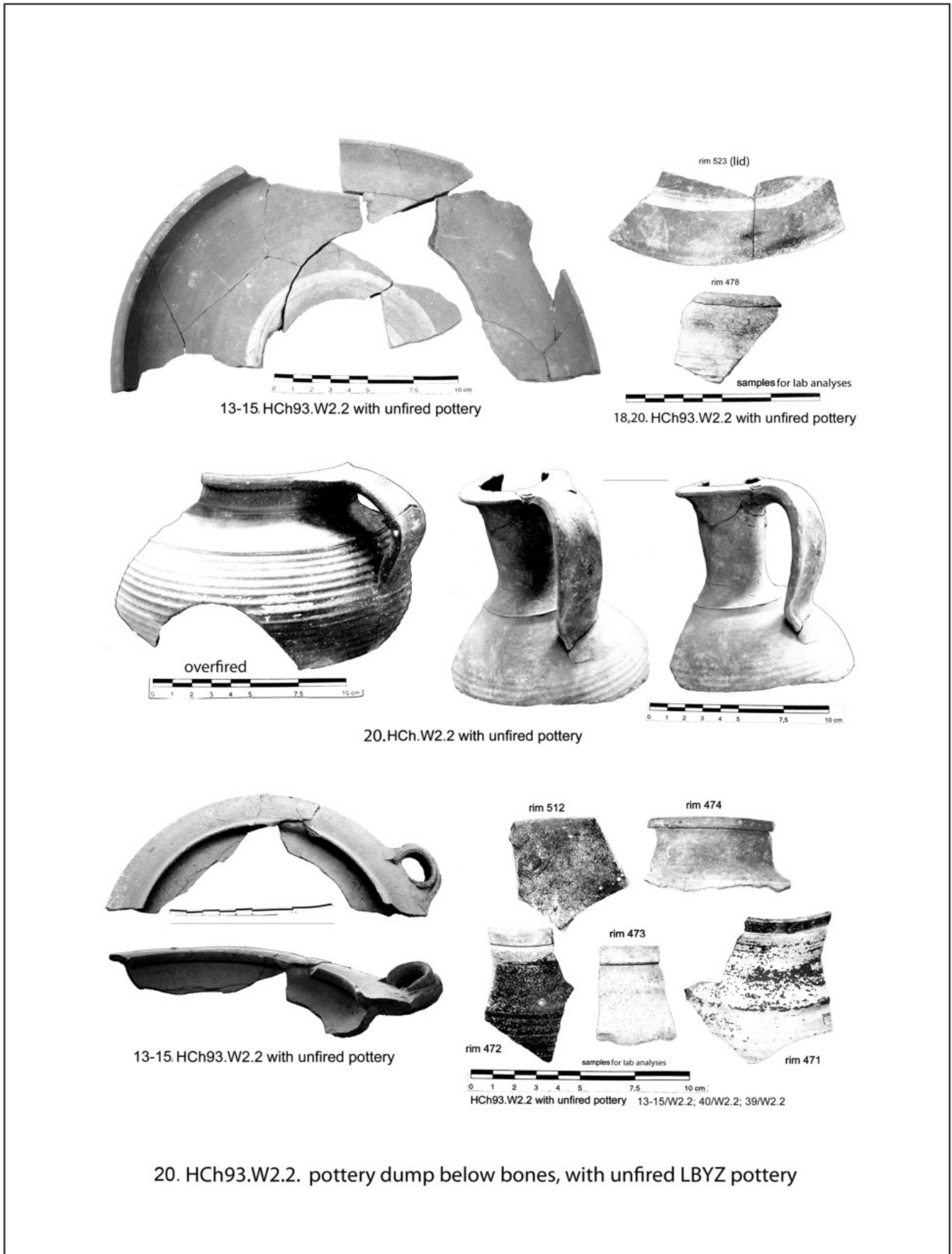
17. W2 and W3: 'chambers of the dead': metal jewellery of mid-7th century plague victims.



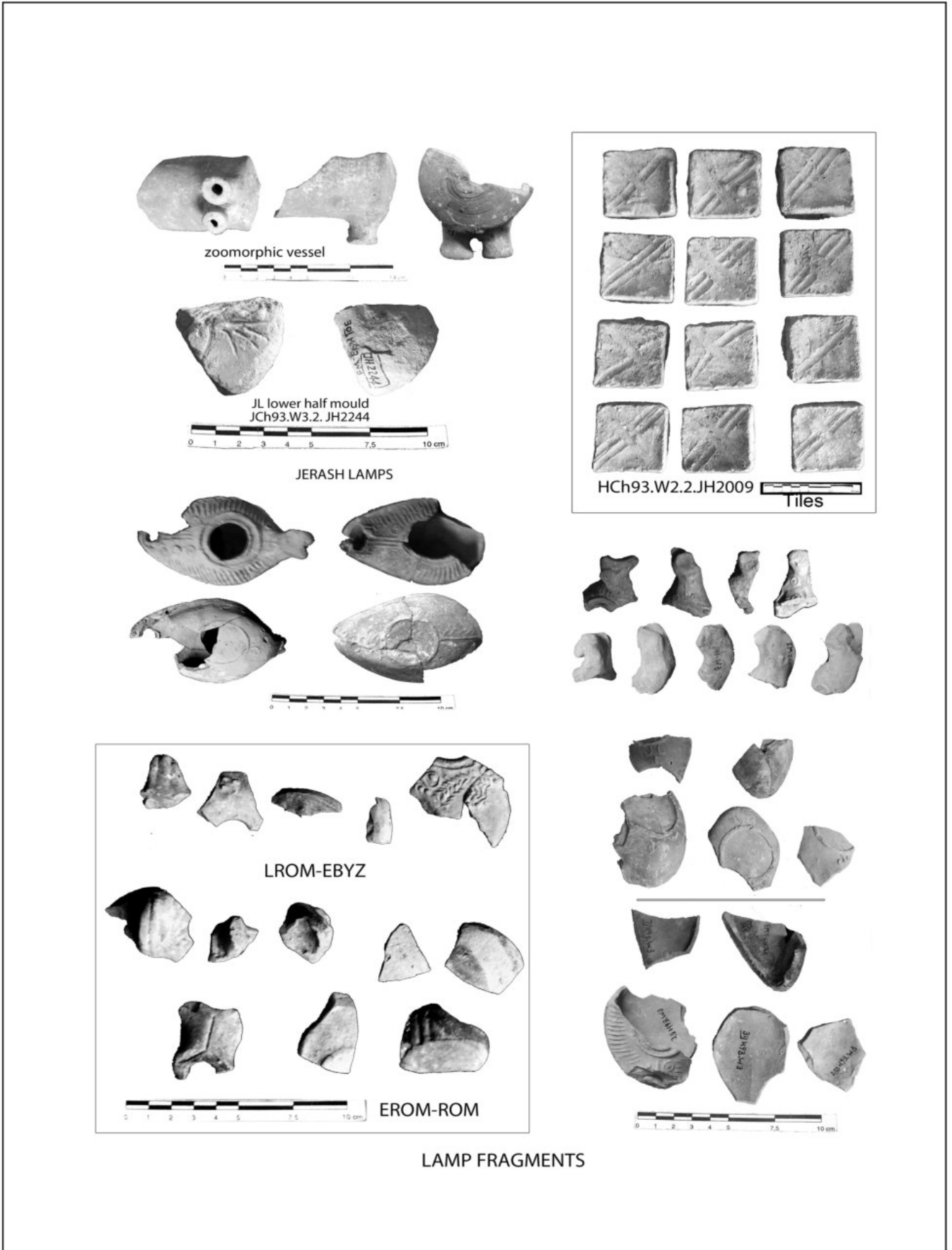
18. Glass bead jewellery with skeletal remains in chambers W2 and W3.



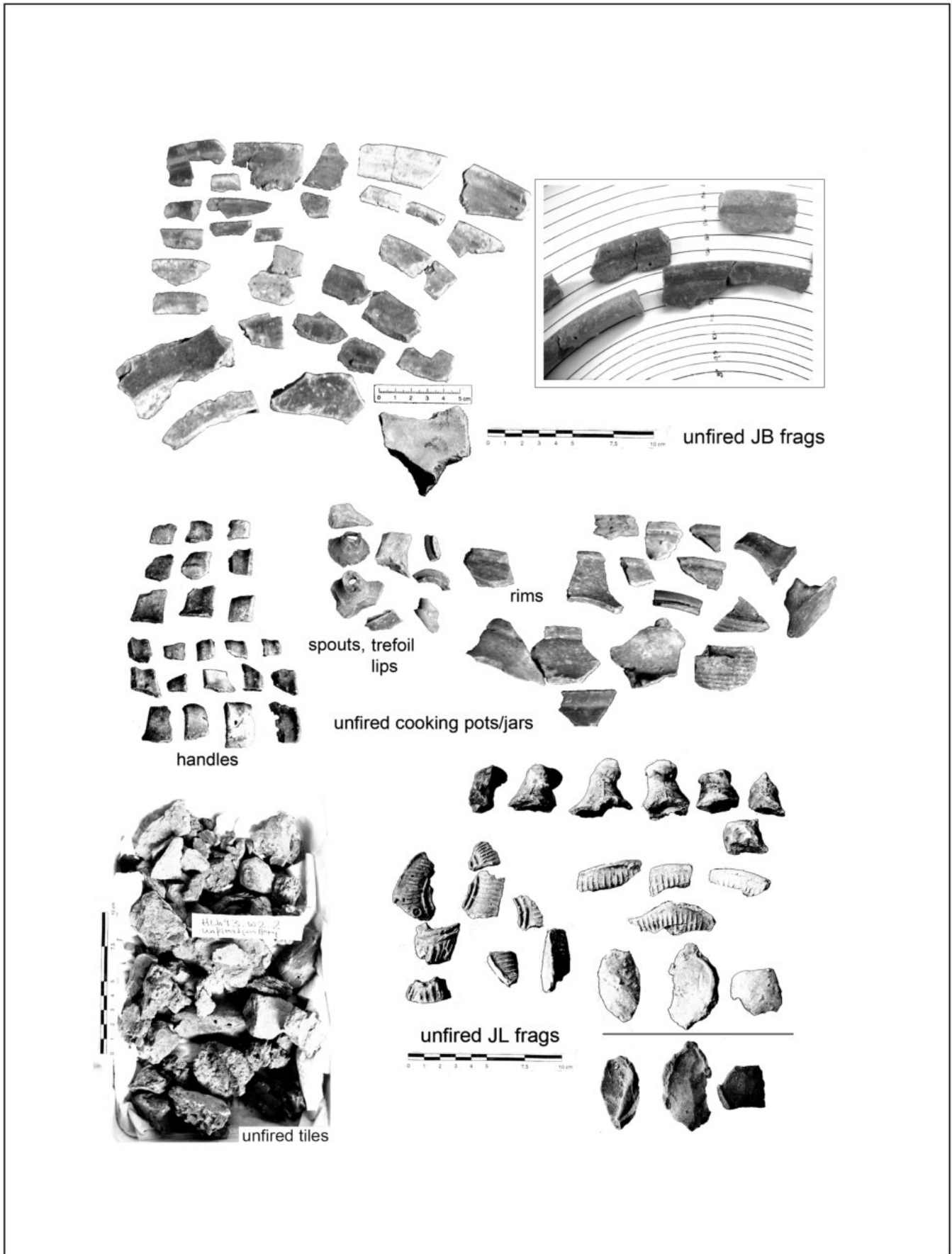
19. Three periods in chamber W2: (1-5) second industrial occupancy: pottery dumps; (6) first secondary occupancy of tanners; (7) pottery from foundation level.



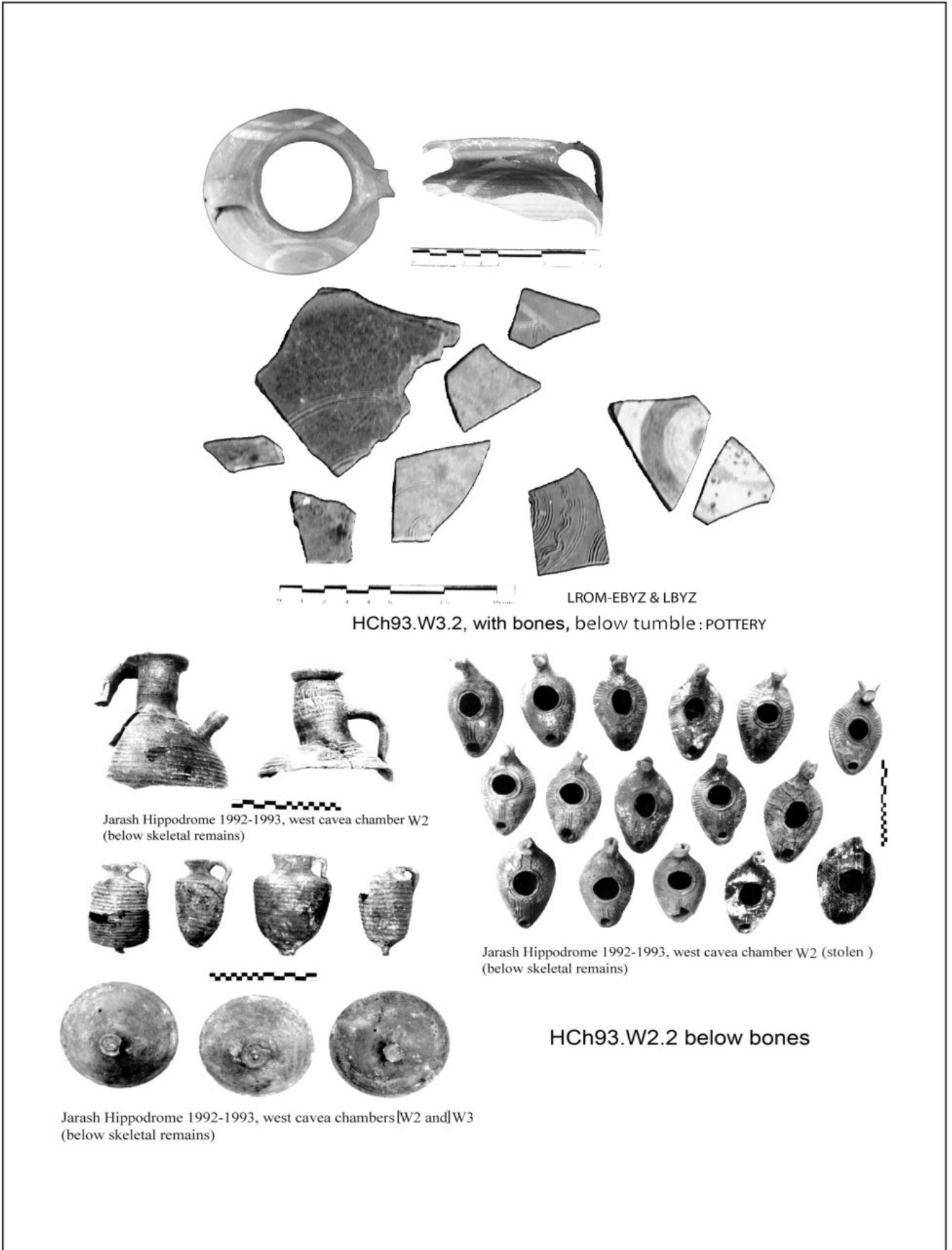
20. HCh93.W2.2: pottery dump below bones, with unfired Late Byzantine pottery.



21. HCh93.W3.2: mould-made and other ceramic objects found with bones below tumble.



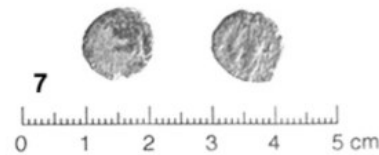
22. Unfired pottery (Jerash bowls; Jerash lamps; jars; tiles) under skeletal remains in chamber W2.



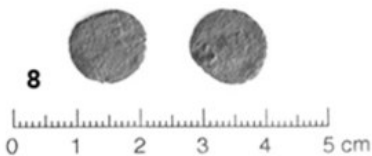
23. Misfired ceramics and other fragments from chambers W2 and W3, with and below bones.



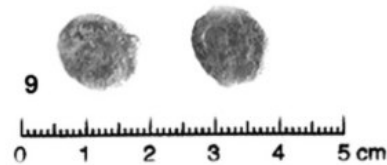
HCh96.W8b.3(b) "fill of grave/1 (2/04/96)" (A.O.)



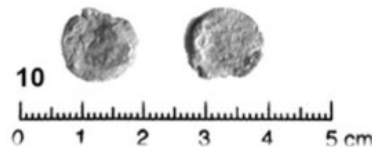
HCh91.W8.2. "W8/ 'floor level'/ 26-03-91" (A.O.)
 coin cat no JH1433: "prob...Antioch,..period 383-395..." (J.B.)



HCh91.W8.2. "W8/middle of chamber/ 'floor level'/ 27-03-91" (A.O.)
 coin cat no JH1434: "(?) late 4th - beg. of 5th cent?" (J.B.)



HCh87.E29.2. "E29/ east half of chamber directly above layer of earth fill
 (ca 0.8m above 'floor' level)/under tumble (rather in tumble)/ cf glass and lamp frag
 of same locus and excvsn date/ 7-12-87" (A.O.)- see sketch plan Fig.7:9
 coin cat no JH1340: "(?) prob middle-2nd half of 4th cent," (J.B.)

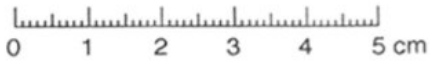


HCh87. E29.2 "E29/ east half of chamber directly above layer of earth fill
 (ca 0.8m above 'floor' level)/under tumble (rather than in tumble)/ cf glass and lamp frag
 of same locus and excvsn date/ 7-12-87" (A.O.)
 coin cat no JH1341: "(?) late 4th cent. ?" (J.B.)

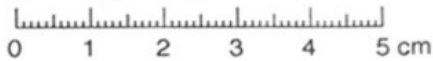


HCh87.E29.2 "E29/east half of chamber/directly above layer of earth fill
 (ca 0.8m above 'floor' level)/under tumble (rather than in tumble)/
 (compare glass & lamp frag of same locus & excvsn date/7-12-87" (A.O.)
 coin cat no. JH1032: "(follis')..ImpCo[nstantine I..] roughly 312-320.." (J.B.)

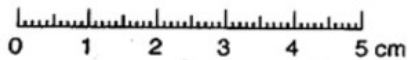
24. Coins in hippodrome chambers with burials in W8 and E29.



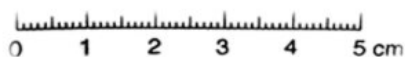
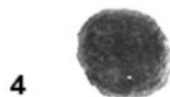
HCh94.W2.2. "trench across chamber, lot (4): see ceramics/ 6-05-94" (A.O.)
Coin cat no.108, JH992: "AE, diam 20mm; obv. IMP Constantinus PF AVG..." (J.B.)



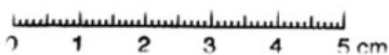
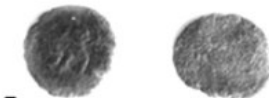
HCh94.W2.2. "trench across chamber, lot (2): see ceramics/ 6-05-94" (A.O.)
Coin cat no.109, JH993: obv.IMP Constantinus PF AVG; diam 20mm..." (J.B.)



HCh93.W2.2 "W2/ N-E part -->/ level of 5th course (over flagging)/ under skeletal remains/ stm 2/ 9-09-93" (A.O.)
coin cat no JH1411: " ca 11mm diam/ illegible/ T.O. something on rev. ca 4th?" (J.B.)



HCh93.W3.2. "W3/ layer of lower half of 5th course below arch of doorway with disintegrated bones/ --> verte/ 3-11-93" (A.O.)
coin cat no. JH1424: " 13mm diam, obv. diad bust, rev illegible, 3rd quarter 4th cent." (J.B.)



HCh93.W3.2 "W3/north part -->verte/ level of middle of 5th course below arch of doorway/ together with skeletal remains/ stm 2/ 20-11-93" (A.O.)
coin cat no JH1426: "15mm diam/ obv illegible, rev stg emp with captive...ca 364-75 AD" (J.B.)

“Few Late Roman (3rd - 4th) pottery sherds and four Late Roman glass unguentaria: 3 intact and one complete, fragments.” (I.K.).

This grave contained an adult and a young child, carefully interred with clearly distinctive burial gifts of four small glass *unguentaria* or phials (**Fig. 10:1-4**). The glassware and shapes date to the Late Roman period, corroborated by pottery fragments found within the fill of the burial. As in the other graves, the individuals were seemingly cared for, evidenced by the careful construction of a simple pit or shaft grave lined with stone slabs. The location (**Fig. 4**) and date suggest that the dead belonged, as previously, to a family of the potters working and living at the hippodrome, possibly associated with one of the east *cavea* workshops nearby. The location of each burial plot is clearly deliberate and may indicate some commercial zoning pertaining to workshop units, which may in turn signify bought or rented ‘rights’ of specific terrain occupied by each workshop and family, and possible extensions: in other words no random squatting and thus burial grounds. It will be interesting to pursue this inquiry at other sites, but for now it suffices to state that the family of the dead belonged to Late Roman potters. The glass phials, a relatively costly import, are evidence of sufficient if modest earnings within the family. Glass was rare at Gerasa, especially before the boom of church-building in the 5th and 6th centuries which introduced glass window panes, glass lamps (candelabra) and vessels for the churches and chapels, and tesserae, together with itinerant glass workers evidenced by in situ finds at the hippodrome and other parts of Byzantine Jarash (Kehrberg 1986).

It is conceivable that the single burial in front of east *cavea* chamber E12 (**Fig. 4**) belongs here. Without distinctive pottery or other finds one cannot date the interment other than by its context, which places it within the secondary

or industrial phase of the hippodrome, i.e. belonging to a family of potters. One may posit, however, since the manner of construction of the grave and its location is the same as the burial in front of E19, that it may be roughly contemporary and that the inhumation occurred before the church was built around 570 AD (**see plan Fig. 3:2**). In all, the scenario fits the earlier industrial phase or Late Roman - Early Byzantine pottery workshops⁸.

To end this concise account of the secondary burials at the hippodrome, it is hoped that it provides sufficient information pertaining to the burials to allow for a better comprehension of the published osteological studies. The purpose here is to show the archaeological evidence placing the burials into socio-historical contexts. The final hippodrome publications will discuss and present in full data shown at (**Figs. 1 – 25**).

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Abbreviations

- ADAJ* Annual of the Department of Antiquities of Jordan
AJA American Journal of Archaeology
JAP I, JAP II Jerash Archaeological Project
Vol. I, 1981-1983 (DoA, 1986, Amman);
Vol. II, 1984-1987 (DoA/SYRIA66, 1989)
SHAJ Studies in the History and Archaeology of Jordan. DoA. Amman.
WLC 2011 S. Mithen & E. Black (eds.),
Water, Life and Civilisation: Climate,
Environment and Society in the Jordan
Valley, Cambridge University Press, 2011.

8. There were no Late Roman - Early Byzantine tannery workshops operating along the east *cavea*; the tanneries clustered in the northern east - west or

curved end and west chambers of the *cavea*, close to a lime kiln complex (Fig. 3:2) in front of the north main gate to the arena.

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