

Gerasa as Provider for Roman Frontier Stations: A View Seen from Late Roman Pottery's Waste at the Hippodrome and the Upper Zeus Temple

Introduction

While the current rebuilding of the Jarash Hippodrome is designed to host mock gladiatorial shows and chariot races, the original second century structure of Gerasa is better known to scholars from early explorations of Gerasa (Müller 1938) but mostly through Antoni Ostrasz' excavations of 1984-1996, his architectural restorations and publications on the circus (Ostrasz 1989, 1991, 1993, 1995, 1997 and *fc*). The monument is equally well known among researchers for its secondary and long history of occupancy by potters' and other workshops and for its ceramics. The study of these has occupied the writer over the last two decades (e.g. Kehrberg 1989, 1992, 1994, 2001b and *fc*). This is not because of any exceptionally splendid pottery and lamps made there but largely due to their sheer abundance as a result of 400 years of uninterrupted pottery manufacture on a scale not known from other Jordanian Decapolis cities in the Roman and Byzantine periods. Generations of hippodrome potters and their families lived at the site and were engaged in ceramic manufacture at a magnitude comparable to workshops in the western Roman provinces and the pottery factories associated with the Roman military establishments.

The pottery and mould-made lamps in Figures 2 – 10 come from a Late Roman pottery kiln dump in the Hippodrome chamber E2 excavated in 1990 (HCh90.E2.2) (FIG. 1), and from another similar dump excavated in 1998 at the Upper Zeus Temple/North Temenos (JTZ98). The examples have been

selected from their assemblages for their relevance to this paper, rather than their typological range or representative scale within each context.

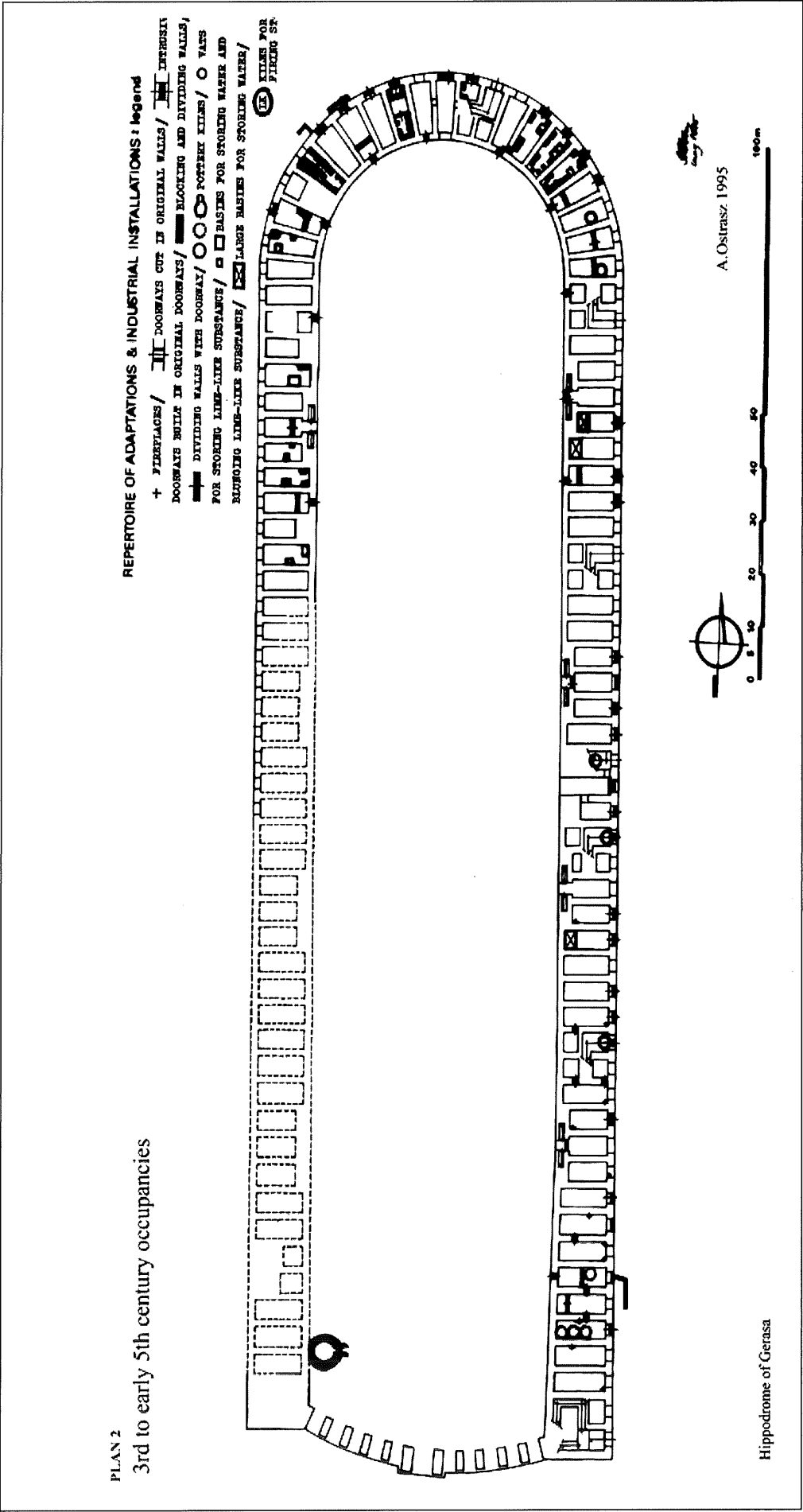
A delay in publishing the whole Hippodrome corpus¹, coupled with subsequent work on other monuments of Jarash, has provided a rare opportunity to explore new materials and ideas in depth. The culmination of time and opportunity enabled the writer to review accepted norms of classification methods applied to ceramic studies of classical periods and their [lack of] historical applications. This paper presents one of these enquiries, not a conclusive result, its main aim is to encourage new approaches in historical research for Jarash by exploring other possible interpretations of pottery, using examples from the Hippodrome and the Upper Zeus Temple excavations.

The Pottery and their Contexts

It was clear from the onset of excavation in chamber E2 of the Hippodrome that we were dealing with a very large and comprehensive deposit of discarded misfired Late Roman pottery. This dump was waste from a pottery workshop, not a secondary residual accumulation, and made it possible to close gaps and expand the hitherto known typological range of third-fourth century common ware pottery from Gerasa. It also emerged that some key forms that had been considered chronological "hallmarks" for the early Byzantine period now had to be revised (see below). This was mainly brought about by the overwhelming quantity and homogeneous quality

¹ My preparations for the publications of the ceramic study from the east cavea chamber 2 excavations and other hippodrome corpi were severely interrupted in the 1990s. It is fortunate, therefore, that I had already made available my work on the hippodrome corpus and catalogue studies to A.-M. Rasson-Seigne for her thesis on Roman pottery; she presented the material in a chapter on

the Hippodrome in the manuscript of her thesis. The complete excavation report of chamber E2, the finds corpus, pottery catalogue and detailed discussion including associated finds will appear in volume 2 of the final Hippodrome publications, on which I am now working (Kehrberg *fc*). The computerisation of my drawings and figures for this paper I owe to Sophie Vatteoni.



1. Groundplan of the hippodrome in its second phase of use after chariot racing: top plans of late roman and early byzantine workshop installations in the caveaa (a.A. Ostrasz 1995).

of the pottery types in a primary and well-dated assemblage. The relationship between types in the assemblage, associated finds and the sealed context itself secured a reliable basis for methodological revision of classical typologies².

A cluster of over 30 Late Roman coins found in the last, or upper third, layer of the pottery dump in chamber E2 provided the basis for a chronological revision of types. One coin was only in circulation during the first decade of the fourth century which gave a ceiling date for the end of the dumping of ceramic waste in chamber E2³. A scatter of other, including earlier Late Roman, coins found throughout the pottery dump put the first dumping of pottery waste within the later part of the third century; the excavated deposit was over 3m in height spreading over the whole width of the steps in vomitorium type B (see FIG.1:a) and had spilt through the doorway onto the dirt track outside the cavea⁴. The misfortune of a series of earthquakes, which destroyed the hippodrome in antiquity, proved to be our good fortune: 'Protective layers' of tumbled architectural blocks and seat stones sealed the contents inside the chambers of the cavea and protected them from contamination. Careful removal of the tumble for the study of the architecture gradually brought to light these as so many other undisturbed occupational sequences of the building (Kehrberg and Ostrasz 1997).

There is no room to adequately present the Late Roman and secondary history of the Hippodrome and its workshops described in preliminary accounts (see e.g. Ostrasz 1989, 1991; Kehrberg 1989, 2001b; Kehrberg and Ostrasz 1997), and the final publications of studies resulting from the 1996-2000 IF[A]PO project of the Upper Temple of Zeus Complex, cannot be anticipated here. However, the 1997-1998 excavations [summarised briefly by the director of the overall project, J.-P.

Braun (Braun 1998), and their pottery finds studied by the writer] are relevant to the discussion in this paper⁵. In the present study, references will be made to a large, homogeneous Late Roman pottery dump deposited at the North Temenos of the upper temple which shares most types of the Late Roman repertoire with the assemblage from Hippodrome chamber E2: both deposits compose the ceramic corpus for an investigation of Gerasaeen trade with Roman frontier stations in northern Jordan. As for absolute dates, a "lost purse" containing 155 coins sealed the deposit at the bottom level of the North Temenos fill and dated the pottery assemblage within to the late second and early third century (Augé 1998)⁶.

Single elements of Late Roman pottery typologies are not the subject of this enquiry: they have already been discussed with other examples from the same two contexts in an earlier SHAJ paper (Kehrberg 2001a). But some points, which arose from the aforementioned examination are summarised here because of their relevance to dating or categorising forms based on comparisons with single types from different sites – frequently with no quantitative indication in the assemblage or reference to the whole deposit of the context:

Chronological problems in comparative studies of similar contexts can be created artificially 1) by employing rigid frameworks to homogenize typologies for dating and 2) by reapplying single forms (chronological type forms or prototypes) as chronological pointers for other deposits without considering their original context. One solution to this deceptive dating method lies in avoiding random attribution of single types from homogenized typologies for concise dating; the other lies in integrating object studies and their typologies with the whole deposit and correlating their research to the overall enquiry from the onset of the project.

² In the majority of classical typologies, one example of a pottery type - be it rim, base or handle - was perceived as representative of the total number and accorded its generic place in an assemblage by absence/presence. This was then perpetuated in comparative studies for other assemblages.

³ The corpus of the Hippodrome coins will be written up by C. Augé and J. Bowsher in volume 2 of the Hippodrome publications, see Kehrberg *fc*.

⁴ The original spill in front of E2 and like many deposits from other chambers had been bulldozed in the 1960s-70s to make a dirt road for townspeople and a heliport north in front of the hippodrome. This action destroyed other ancient features like a lime kiln complex and it is feared, workshops or associated structures whose traces have been exposed when extending access roads for public

use.

⁵ The 1996-2000 excavations of the upper Zeus Temple complex, in which I took part as resident archaeologist and ceramicist, were part of the architectural studies for restoration undertaken by IF[A]PO and directed by J.-P. Braun. The ceramic waste deposits from the Upper Zeus Temple complex are not unlike hippodrome assemblages and have been part of my broader enquiries into chronological classifications versus productions - and more recently, trade with the Roman frontier outposts.

⁶ The coins of the Upper Zeus Temple excavations are studied and will be published by C. Augé. In his preliminary account, Augé noted that the latest coin dates to 206-209AD while the majority of the 155 are Decapolis coins of the Gerasa mint of the earlier part of the second century.

Figures 3, 5, 7, 9 and 10 representative pottery forms, which occurred in bulk at the Hippodrome and especially in chamber E2, where they are securely dated to within the later third and early fourth century (see n.6). Figures 2, 4, 6 and 8 represent similar pottery forms dated by their context at the North Temenos of the Upper Zeus Temple to the later second and early third century (see n.6). The Late Roman common ware pottery and lamps illustrating all figures belong to the standard Gerasa 'red ware' of that cultural period, with either a thin slip or dip-wash fired or misfired from pinkish beige to red to grey (carinated cups, see below). Larger bowls usually come with a thicker and often slightly burnished slip and second applied dip-wash; the platters and pans shown here are examples of Gerasa's derivatives of Pompeian Red Ware. As may be expected, the juglets and bottles are of the same ware and fired, or misfired (as in our contexts), at various shades of red to beige-brown to grey and slurried with occasional dip-wash. The production mode and standard are the same for both contexts and forms.

The two kiln waste sites are only a few hundred metres apart, within sight of each other, and each deposit was of the same kind. In other words, we have very similar research criteria with regard to origin, context, quantity, matrix of forms, quality and ceiling dates of later third/early fourth and later second/early third respectively. One may posit a working span of about 20 – 30 years per potter and the pottery workshops at the Hippodrome and near the upper Zeus Temple complex must have had at least one generation overlap or bridging generations, or knowledge of each others' productions.

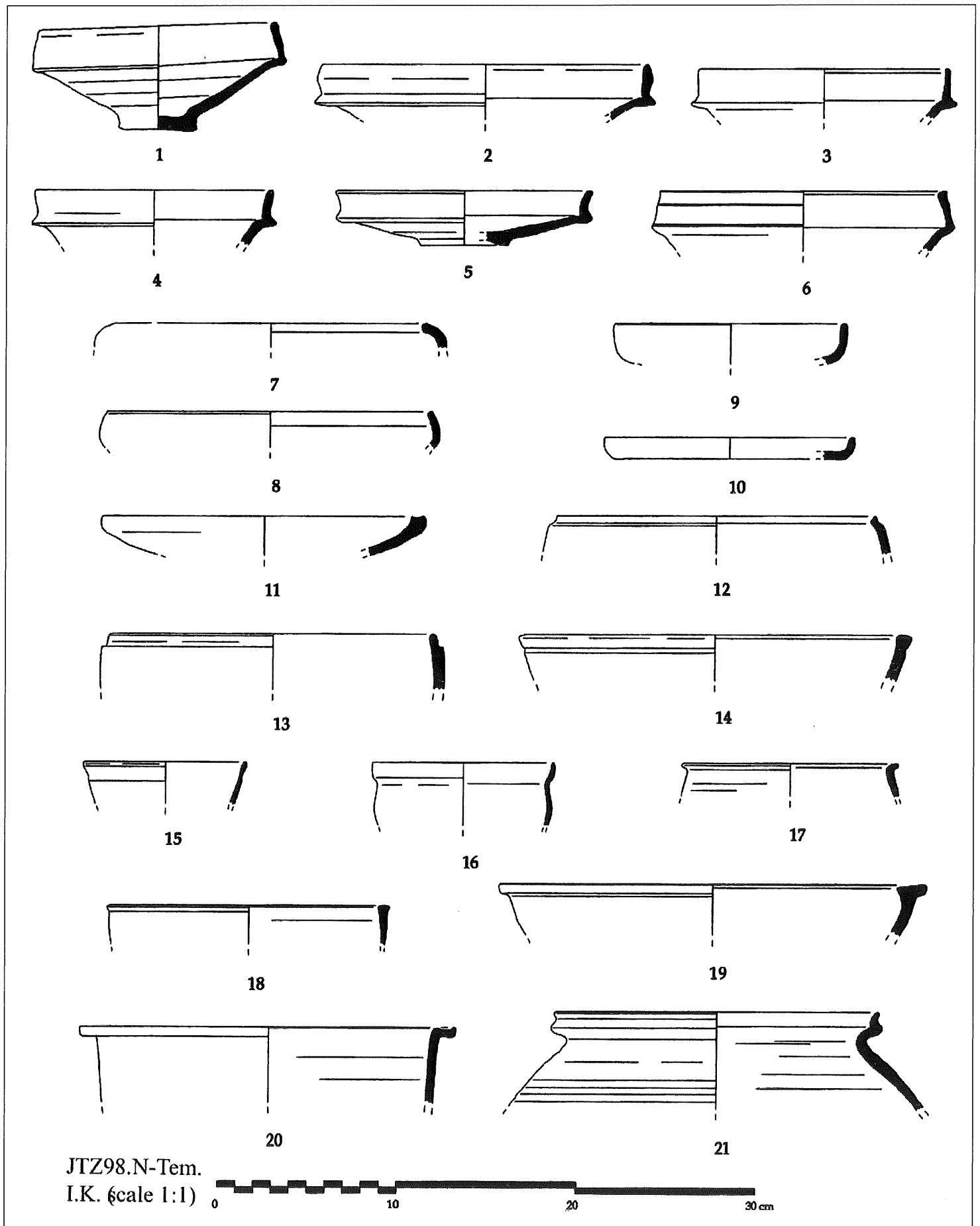
Late Roman forms made at Gerasa fitted the pottery repertoire of the romanised world at large, which explains a tendency towards generic yet rigid typologies but popularity curves of types current in Gerasa can be read more accurately as summarised in the following examples, remembering that they come from primary sources of production. If one takes the carinated cups (FIGS. 2:1-6; 3:13-15, 29-32; 4:48-52; 6:87-90; 7:33-35), their numerical position in the two assemblages differs significantly: their ratio to other forms is high at the North

Temenos dump and low at the Hippodrome dump. The cups belong to a range of second century types originally inspired by imported *sigillata* and since then mass-produced at Gerasa with no pretence at exact copying of contemporary imports. Their use is known until the third century, after which the cups only occur in mixed deposits of later foundation fills and residual contexts at Jarash.

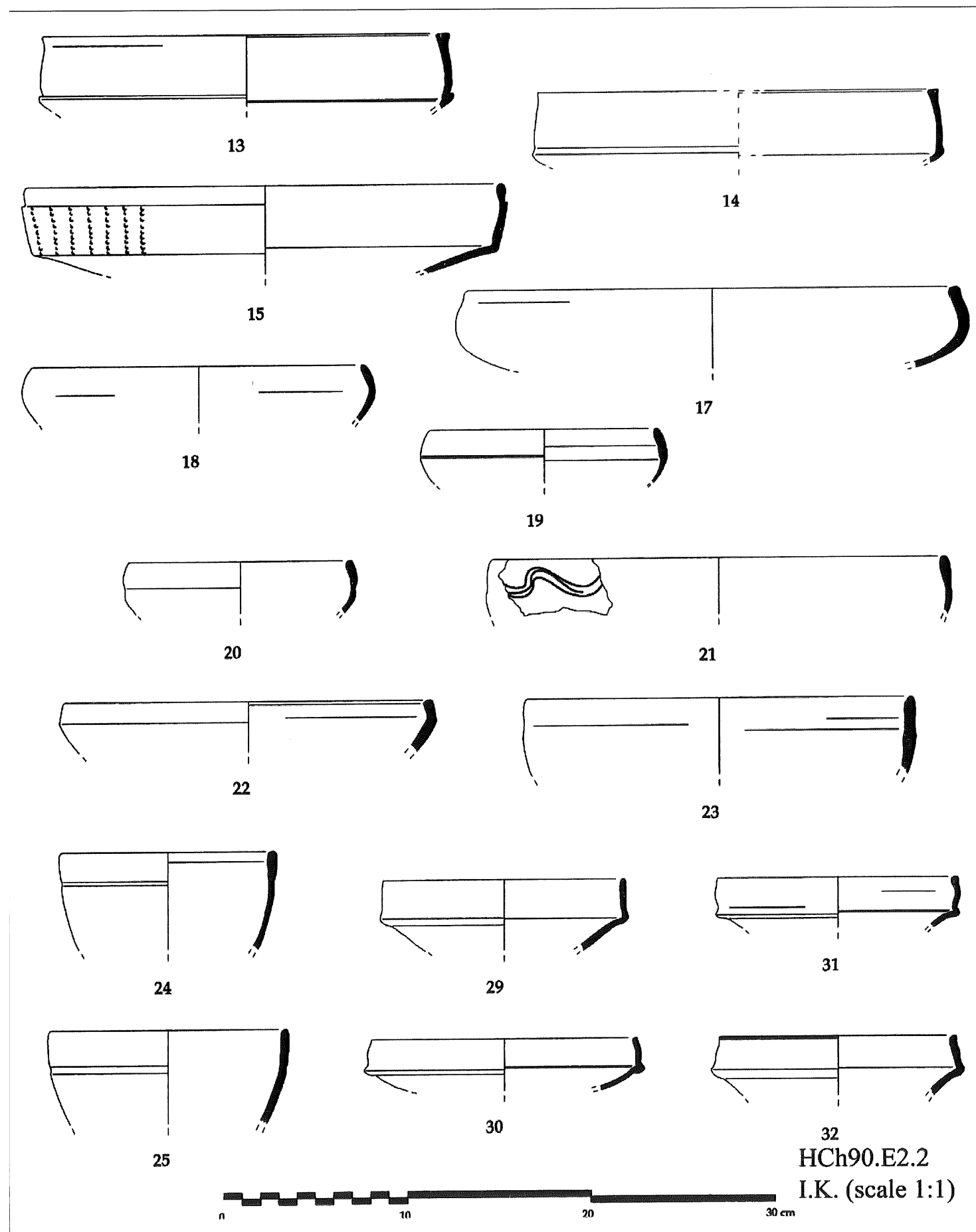
A larger carinated bowl, frequently with banded incised décor and a conical foot, accompanies the smaller cups (FIGS. 5:10; 6:91-95) in both contexts but their ratio is reversed: it is high to other forms at the Hippodrome and low to those at the North Temenos. In other words, whilst the small bowl or cup petered out during the early phases of the Hippodrome workshop, the large conical footed bowl was introduced at the time when the Upper Zeus Temple workshop began closing down, its peak of production having been during the latter half of the second century (and contemporary with the building of the upper temple) when it manufactured a large quantity of the cups⁷. The same applies to other dishes accompanying the cups and bowls, like the platters and pans (FIGS. 4:46, 55-57; 5:1-5; 10:54-61), in that some types number few at the Hippodrome chamber and are plenty at the North Temenos, while others are almost equal in number and yet others forms are rare or do not occur at all in either one or the other context. The key to correct placing of a pottery type in each context corresponds thus to the type's numerical position within the repertoire of the whole assemblage. If a deposit can provide such data, one may then be able to determine whether one or the other or groups of forms are at the beginning, at their floruit or at their petering out phase of popularity or production, which commonly overlaps. It would at least provide a relative date permitting better historical interpretation of the context. In our case study the statistical seriations and quantitative analyses actually correspond at the hippodrome to relative levels *in situ*, further supported historically by the hierarchy of coins in their separate deposits. These methods and findings are not new in pre- and proto-history but are as yet little applied in typologies of classical-periods artefacts for the purpose of dating

⁷ Even if the North Temenos dump was not put there by potters themselves but instead a deposit brought there from a nearby kiln dump by early third century builders of the Upper Zeus Complex (see Augé 1998 and Braun 1998), the dump material itself is of such homogeneity throughout its evenly spread large quantity across

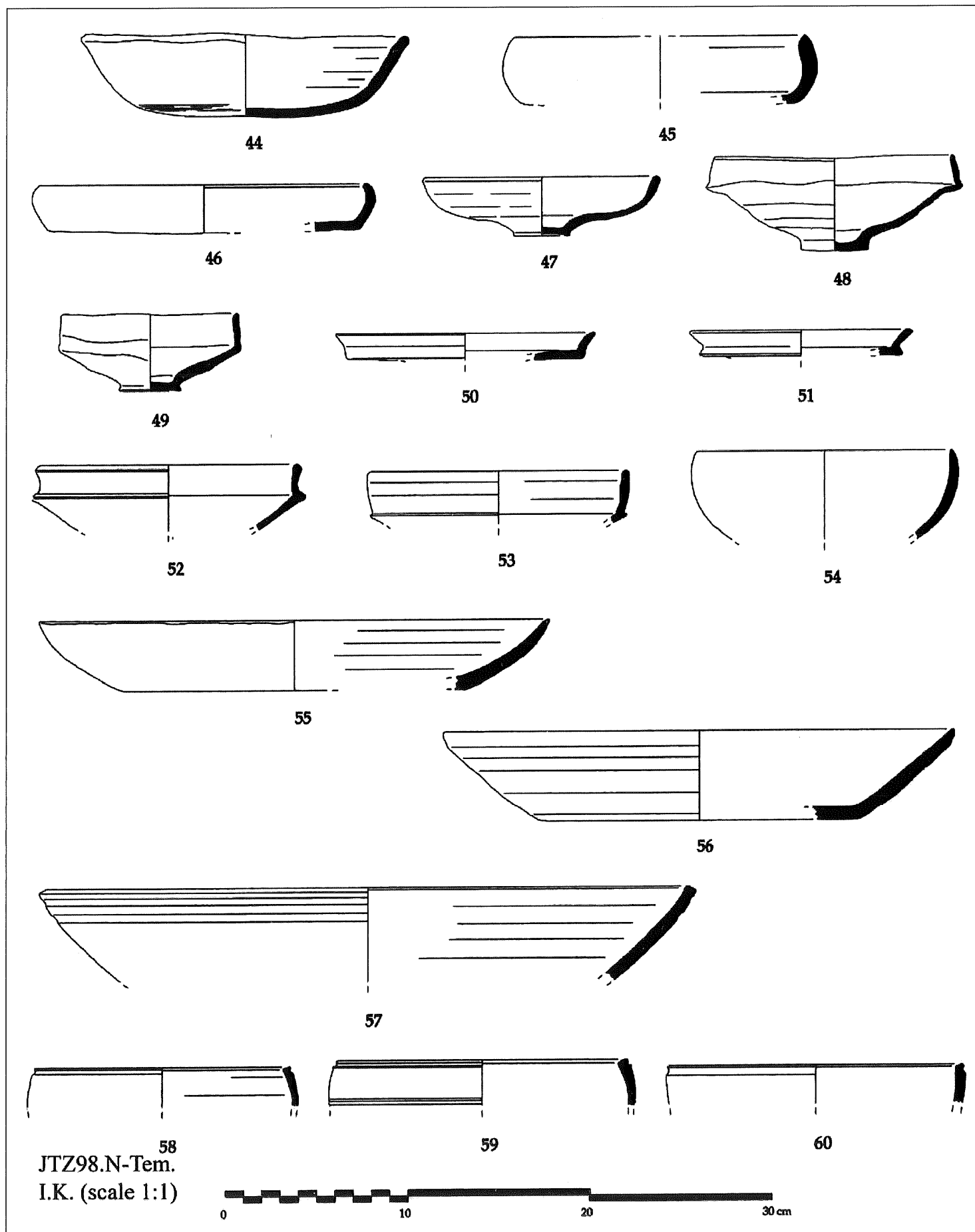
the bedrock of the unfinished floor of the North Temenos, that it denotes a one-time action and protects the integrity of the original deposit. The actual spreading of the false flooring or walking surface of the temenos is dated by the 'lost purse' mentioned above and contemporary with the latest pottery types in the kiln dump.



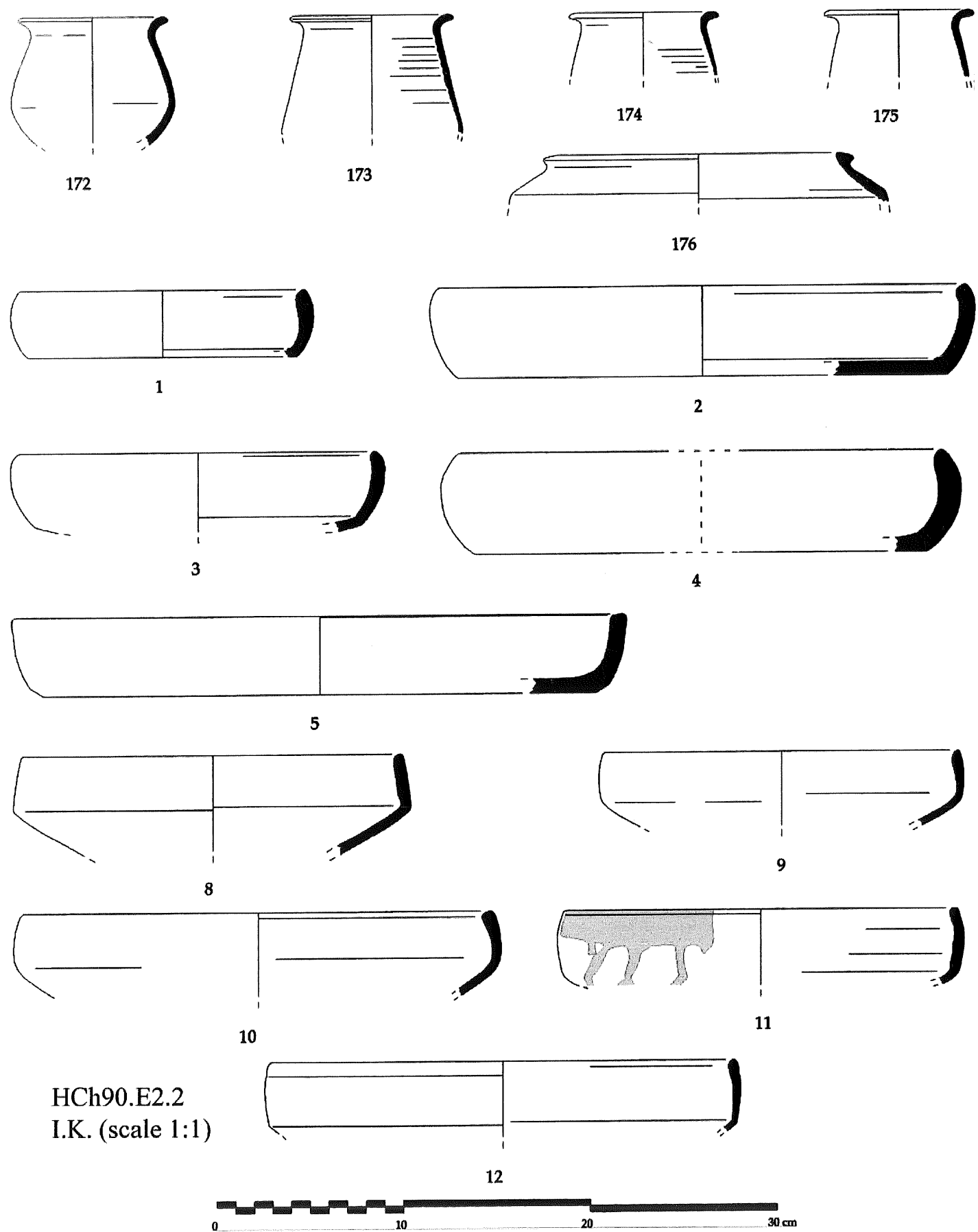
2. Jarash upper temple of zeus complex, excavations 1998, pottery workshop waste dump: table ware: cups, bowls and dishes.



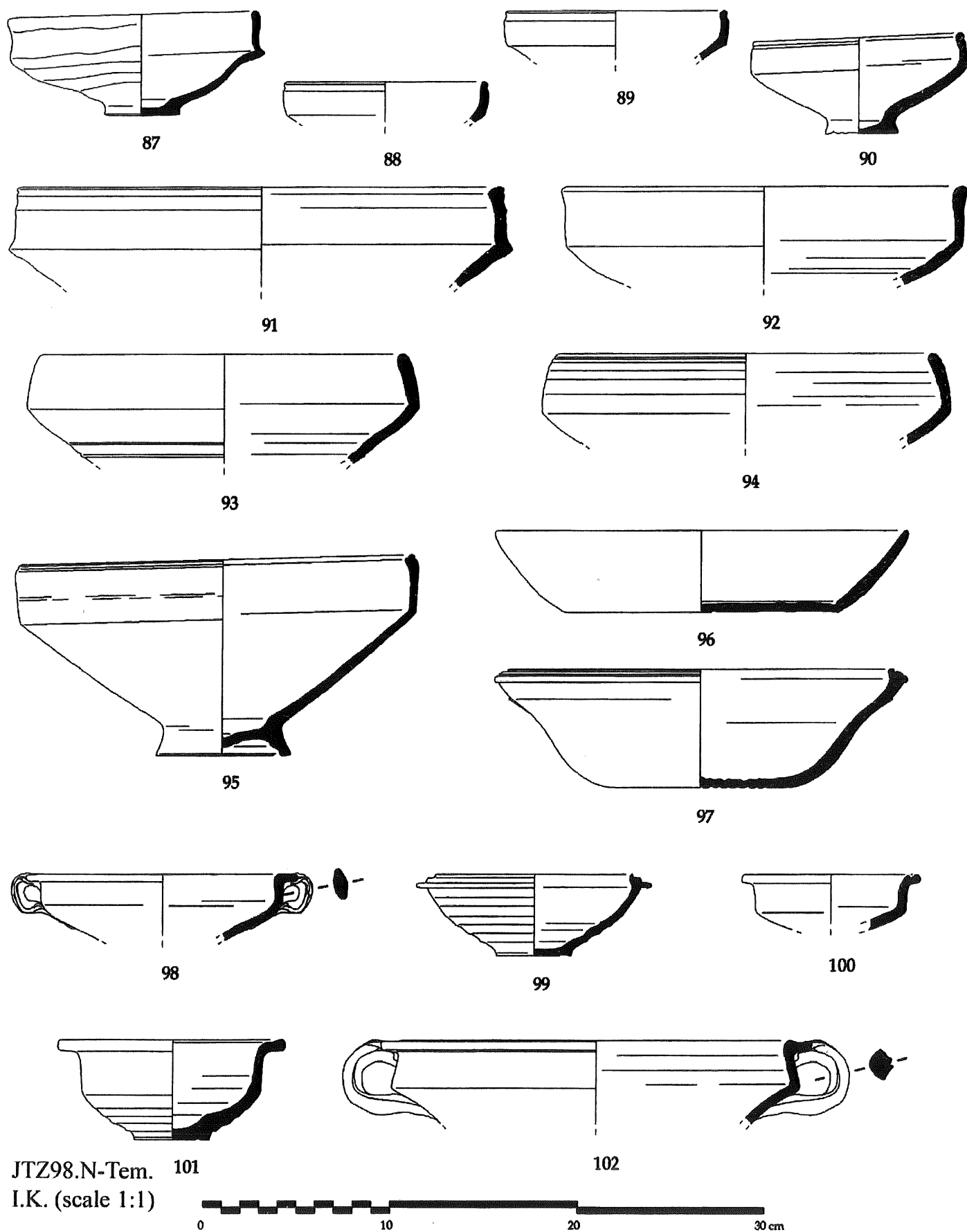
3. Jarash hippodrome 1990 excavations, cavea chamber E2 pottery workshop waste dump: table ware: bowls and dishes.



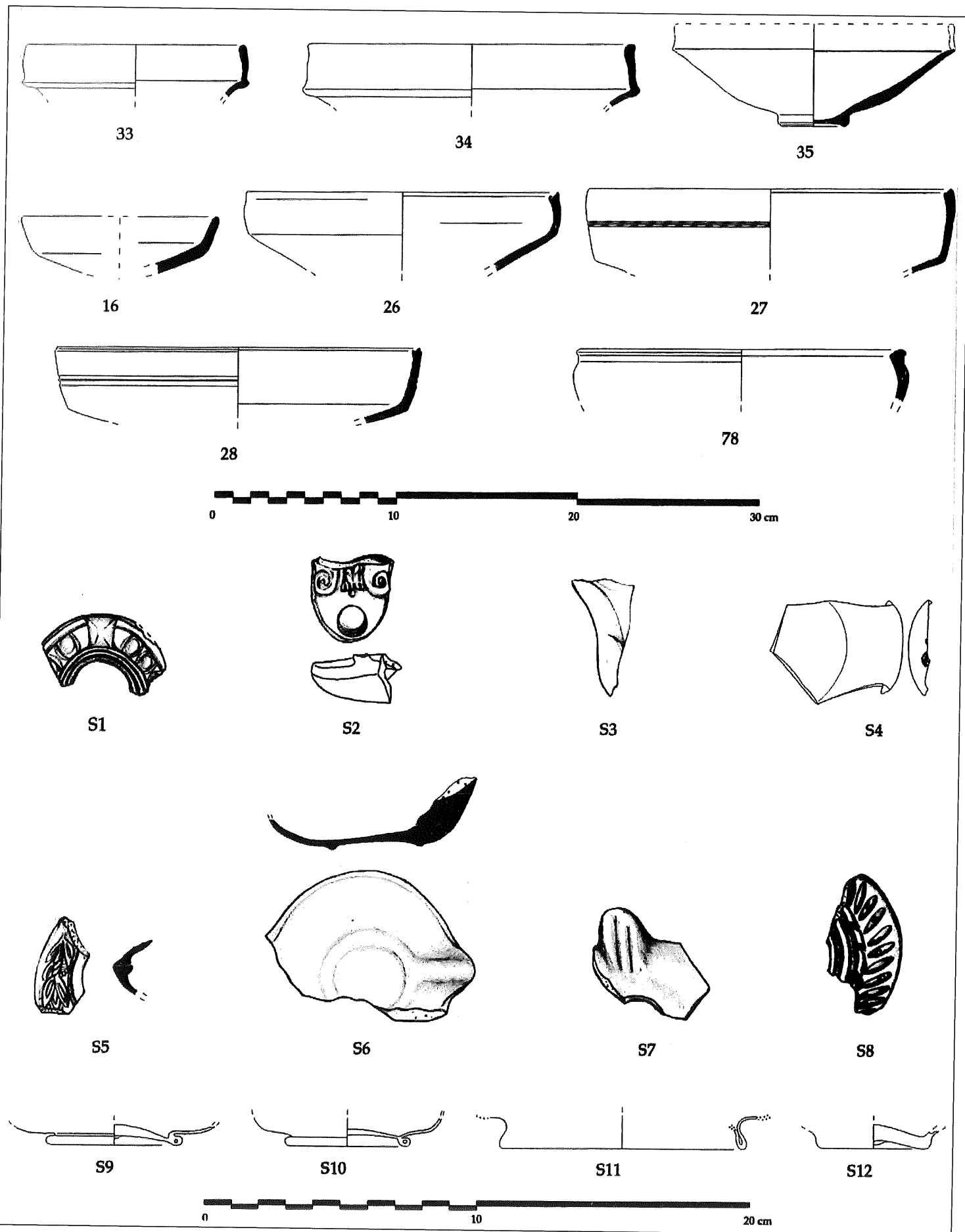
4. Jarash upper temple of zeus complex, excavations 1998, pottery workshop dump: table ware: cups and dishes.



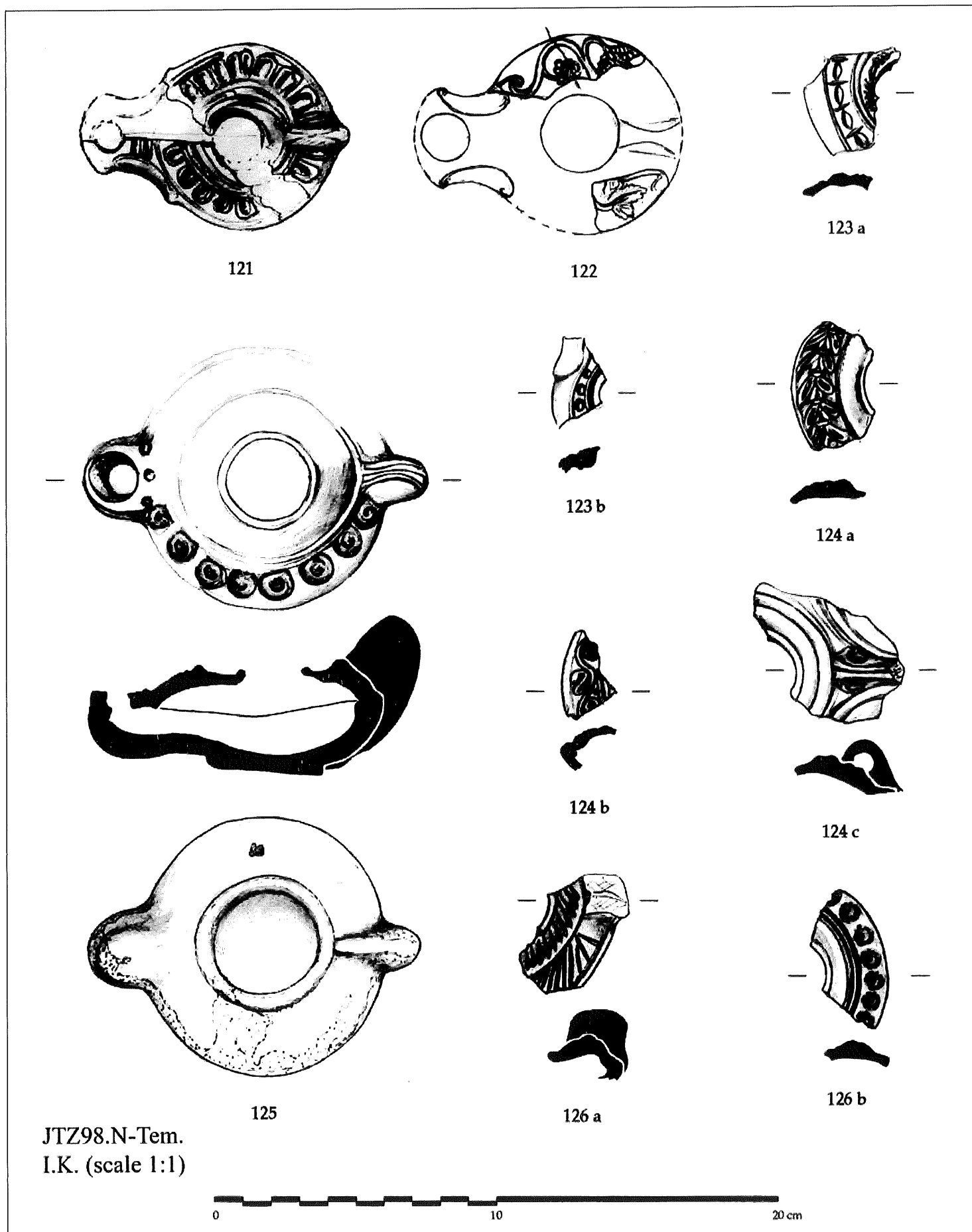
5. Jarash hippodrome 1990 excavations, cavea chamber E2 pottery workshop waste dump: table ware bowls, platters and jars.



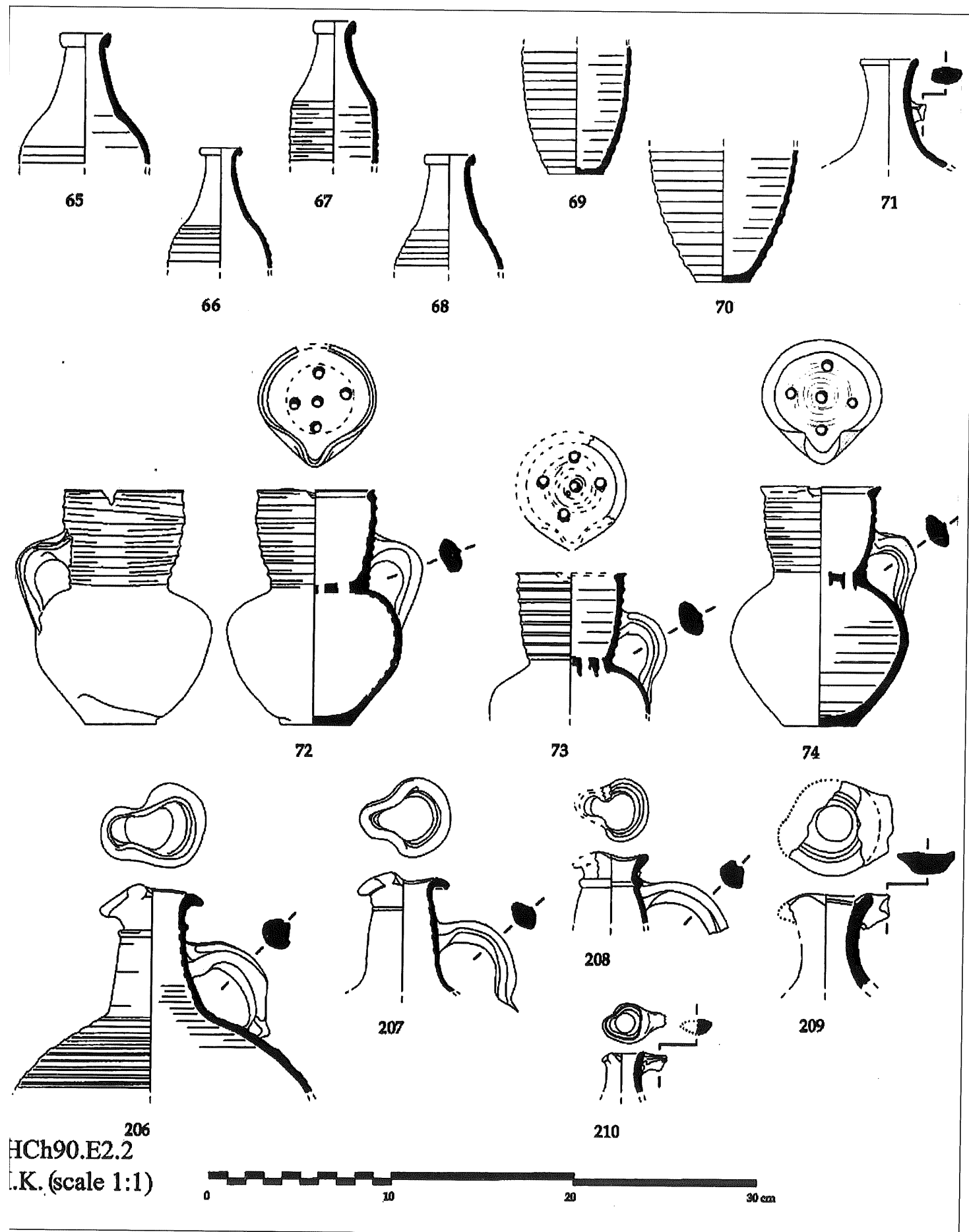
6. Jarash upper temple of zeus complex, excavations 1998, pottery workshop waste dump: table ware: cups and dishes.



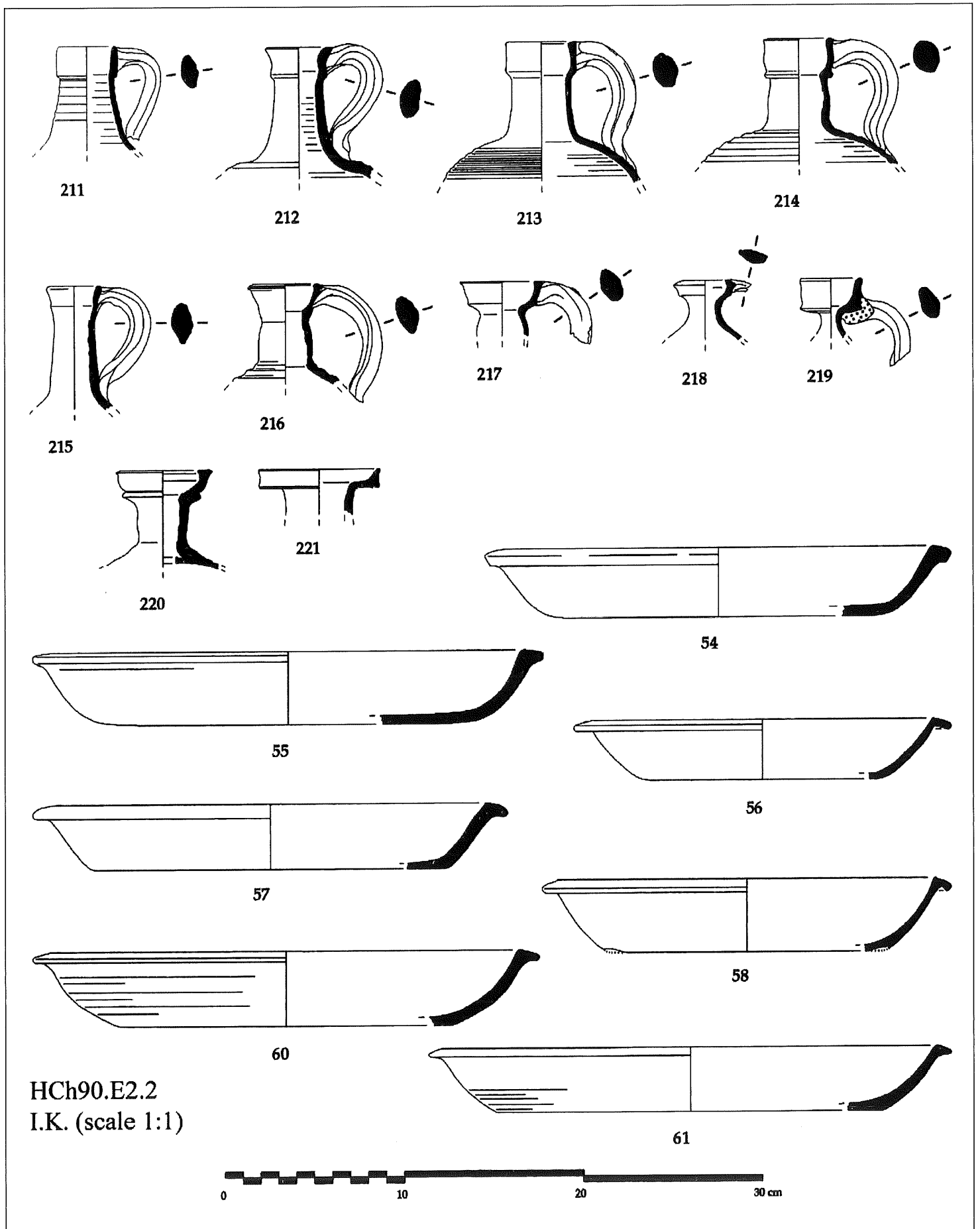
. Jarash hippodrome 1990 excavations, cavea chamber e2 pottery workshop waste dump: table ware: cups and glass dishes; lamps.



8. Jarash upper temple of zeus complex, excavations 11998, pottery workshop waste dump: lamps.



Jarash hippodrome 1990 excavations, cavea chamber E2 pottery workshop waste dump: table ware: bottles juglets and jugs; lamp fillers.



10. Jarash hippodrome excavations 1990, cavea chamber E2 pottery workshop dump: table ware: juglets and jugs, platters.

a context, or a form within (see n. 2).

The earlier reference to chronological ‘hallmarks’ denotes the small bottles (FIG. 9: 65-71), accompanied by lamp-fillers (FIG. 9: 72-74) and other juglets (FIG. 10: 211-221): their copious occurrence at the hippodrome (including other kiln dumps of the same period) now places the peak of their manufacture at Gerasa in the second half of the Late Roman rather than in the Early Byzantine period⁸; their scarcity in the North Temenos context makes their introduction at Gerasa in the early third century a likely case. Mould-made lamps (FIGS. 7: 56-58; 8: 125-126b) provide a similar picture where context, not the generic type or its iconography, is the key factor for dating. Deposits from Hippodrome kilns of the fourth and fifth centuries have demonstrated beyond doubt that moulded lamps and their stamped decoration cannot be used *ipso facto* to date contexts but rather the reverse applies (Kehrberg 2001b). Lamp types and their chronological ranking is further complicated and even compromised by ancient potters who recycled outmoded and discarded lamp moulds from earlier periods’ waste dumps or workshops and — still worse for the archaeologist — manufactured new lamp moulds by using impressions (negatives) taken from older lamp types discarded by the potters as non-sellable misfired lots⁹.

New Applications

One may well ask what the dating criteria of the Hippodrome pottery dumps and those of the North Temenos have to do with trade and provisions for the *limes*. This is very relevant to any enquiry focusing on a specific time-span and historical occurrence. It is important that we know, from the onset, the accurate date span and popularity curve of use or manufacture of a type, or group of types, cen-

tral to the enquiry. Only then may we ask ourselves why the dishes shown here have become so popular in the third century bringing about large-scale production, not only at the hippodrome and Upper Zeus Temple but evident elsewhere in Gerasa. Was it because the Gerasaeen urban population grew significantly or did people favour these dishes? This, in turn, could suggest a subtle change in style of living and food habits, i.e. type of meals, which again would lead to further questions, and a number of plausible answers¹⁰.

The marked increase in production noticeable at our two contexts and other contexts in Gerasa (Kehrberg 1997, 1998; Kehrberg and Manley 2003) may suggest a conscious adaptation to ‘modern’ city life, the so-called romanisation process of the local population and a widening circle of trade in the vicinity of Gerasa. However, lacking vital evidence of and from private houses, one cannot discuss adaptation to ordinary Roman living standards by the urban community, and for the same reason cannot suggest infiltration by foreigners in the ranks of Gerasa’s citizens. Pottery from kilns is not enough evidence, however plentiful, to argue that profound changes in attitude or infiltration began to take place on domestic levels or even dominated a large part of the society, making production of fashionable items profitable due to large-scale demands and thus creating trends.

But we can talk of vigorous trade in the Late Roman period because mass production, as evidenced at the hippodrome alone, reflect a very marked increase in demand, which would make little sense without markets further away. If one considers the studied or excavated output of Gerasa’s potters, which is after all a small fraction of the still unknown actual amount of produced Late Roman wares, it was already more than sufficient for the

⁸ The Late Roman floruit phase of manufacture or popularity for bottles at Jarash has been confirmed at other pottery dumps dated at Jarash to the third and fourth centuries and excavated at the Hippodrome, the Upper Zeus Temple complex, the Cathedral and the City Wall, see Kehrberg 1997 and 1998, 2001b; Kehrberg and Manley 2003.

A worst-case scenario was revealed at the hippodrome during excavation of chambers E8 and W4-3: we found two solid lamp matrixes of fired clay among the discarded pottery and lamps waste from two of the Late Roman and Early Byzantine pottery workshops installed at the hippodrome. These matrixes were the original models for making lamp moulds of two distinct but common lamp types. Matrix HCh92.E8.2 fits the Late Hellenistic first century BC period, matrix HCh95.W4-52 typifies the Early Roman or Herodian type lamp current in the first centuries BC and

AD (cf. Kehrberg 2006). Found anywhere else outside their original contexts, the matrixes would not have caused undue concern. But their place among discarded pottery waste from workshops already known to have plagiarized older-period lamps for their own and much later production did raise questions, in particular since the potters had reproduced the ‘replicas’ en masse (cf. Kehrberg 2001b).

¹⁰ On these and other related questions to life-styles, see the excellent study on the common ware of Tall Anafa by A. Berlin 1997; see also J. Magness’ paper of the Limes XVIII congress, ‘Amman’, 2000, where she refers to Berlin’s ground breaking work and further comments on pottery production and trade for the Roman army, reflecting influences or changes of local life-styles in ancient Israel and the Levant (Magness 2002: 198-203).

local markets of the township and surrounding areas. Other Decapolis cities also produced wares like Gerasa's and traded as well and with similar commodities, which included farm produce. I would like to suggest, or rather pose the question: is it is not conceivable that Decapolis cities like Gerasa flourished in part in the third century because in addition to their local markets they also provided goods for garrisons stationed along the Roman *limes* and other military outposts (Kennedy and Riley 1990; Parker 1986 and 2002), trading in pottery, foodstuffs and other commodities like leather. The fact that the Decapolis cities were linked to the Trajanic road network connecting north, central and southern Jordan, along or near which military road stations and forts were located, is too obvious an advantage to necessitate discussion here.

The hippodrome excavations have brought to light that beside Late Roman potters' workshops, the northern and western part of the cavea chambers also contained tanneries. The earliest lime kiln was on the same periphery and dates to the same period. The leather workers' installations date back to the later third century and are contemporary with the first potters there but unlike the potters, the tanners flourished only for about one century and ceased their production in the Byzantine period¹¹. At the same time, topographical evidence of contemporary remains of rustic and rupestral installations in the surrounding hills of the fertile Jarash Basin point to increased farming around Jarash, possibly linked with olive oil production in the walled city¹². Coupled with the steep rise of popularity of pottery forms associated with a Roman soldier's kit and the officer's mess of the first centuries AD, like the platters, pans, (compare e.g. FIGS. 4: 46, 55-6; 5:1-5; 6: 96,102 with Magness 2000: 198f., figs. 12.1:3; 12.3:5-7 and Ettlinger 1951: 109, fig. 9:3,7,8, 10-16) but also cups, bowls and jugs shown on the figures, one may be justified in directly associating the increased output of the above listed commodities at Gerasa with a demand

for provisions by garrisons manning the *limes* and, for example, the late second-third century road station excavated near Gerasa in az-Zarqā' valley (Palumbo *et al.* 1993: 95-96; figs. 8-9 bottles and jugs; figs. 10:5; 12 bowls platters and pans).

A number of permanent garrisons and smaller forts in western provinces accommodated their own potters who established their workshops near the garrisons catering equally for the growing surrounding settlement(s) (Dore and Greene 1977). Large corpi of well-known and still today basic reference studies classified their wares designed to suit the requirements of the Roman camps, like the lamp 'fabrikas' and 'terra sigillata' in Gaul. This specialised class of pottery, which spread throughout the Roman Empire, together with the advance of its legions, soon became prototypes for indigenous workshops trading with the occupying forces. Examples of local productions stretch from forts in Switzerland to Spain and Britain and the East (cf. Arubas and Goldfus 1995; Breeze 1977; Ettlinger 1951; Goldfus and Arubas 2002; Greene 1977; Magness 2002; Perrin 1977; Parker 2002, etc). In the eastern provinces like in northern and central Jordan, excavations of Roman forts and smaller road stations manned by the army revealed locally made standard pottery types as shown on Figures 2-10 and associated with the military at the sites (cf. above Palumbo *et al.* 1993; Parker 1987: Chapter 18: The Pottery, esp. on Figs. 90-93, 99, 118).

It was the *limes* conference in 'Ammān in 2000 that first prompted the thought of Gerasa's possible role as provider for stations along the desert frontier¹³. This association was strengthened by earlier studies on local markets in Roman Britain and other sites of the western provinces, which discussed evidence for direct purchases in local markets by soldiers stationed there (papers in Dore and Greene 1977). While auxiliary units also manufactured pottery, D. Breeze has pointed out in his earlier study that possible inferences could be drawn from recorded trading of local products in Egypt, Gaul,

¹¹ Dye shops and tanneries in the old town quarters of Fez in Morocco date back to the third century and recall the remains of the hippodrome installations. My chapter on the tannery workshops is forthcoming in volume 1 of the Hippodrome publications (Ostrasz *fc*).

¹² Several surveys of the Jarash area discovered structures pertaining to farmsteads of this period and rock-cut installations, their publications are awaited.

¹³ Cf. in particular Birley 2002, Carroll 2002, Pearce 2002 and Taylor 2002. Their papers are of interest for Jordan because

they address and demonstrate the organisational aspects of trading between Roman frontier stations and local markets. In some cases the distance between stations and local markets were an especially important consideration. As clearly demonstrated with the Western Frontier, distance and topographical barriers or difficulties did not deter trading in the East. Whether going overland by camel caravans or overseas [lit.] on ships, both the owners and their 'vehicles of transport' were capable to handle long and difficult routes before Roman occupation.

Macedonia and Britain and which could have included pottery. He goes on to say for Roman Britain: "It is unlikely that pottery was ever supplied in connection with taxation but the procedure for the purchase of supplies such as pottery from civilian contractors certainly existed" (Breeze 1977: 136-137). Several Roman non-military sites on the south-east coast of England and in Germany were shown to have been affiliated with forts along the *limes* in Holland through direct trade: pottery (as packaging) and foodstuffs from the east coast of England were shipped across the sea to the frontier in Holland or lower Germany (Taylor 2002). Native Germanic pottery produced in Cologne was again found at forts along the northern *limes*, where the pottery containers of traded food stuff were recycled in various ways by the legions (Carroll 2002).

Concluding Remarks

The findings referred to in this paper gave rise to my idea that Gerasa's explosion of pottery production in general during the main Roman periods in Jordan, and a noticeable predilection of types associated with soldiers of the Roman army, may have resulted from direct trade links with legions. Once we enter the Byzantine period, the predominance of certain associated forms ceases fairly abruptly. Although the forms shown on Figures 2-10 catered equally for the civil market, their popularity, rise and decline might have been stimulated by the increasing and decreasing demand by the military.

The title suggests a hypothesis, which needs to be explored with new research on ceramics and other materials, and with their enquiries based on historical and socio-economic grounds. It would also need laboratory analyses of the Roman pottery from the Hippodrome and other Late Roman pottery kiln contexts excavated in Gerasa, to be compared with similar test results of pottery found at forts. The study would further require collaboration between excavators and ceramicists of the various sites, it would need time and funding. Other Decapolis cities and their pottery could be considered for similar programmes. Pottery studies are vital to any scrutiny and understanding of the community that produced and used the ceramics. Fortunately, in many cases today the dates of pottery are seen as only an elementary, albeit necessary, part of research. However vital it is to provide an exact as possible date, as demonstrated in the first part of

the paper, building typologies as a dating tool is no longer an end in itself. Lacking historical enquiries at the onset, fluctuating typologies cannot find satisfactory explanations impoverishing our understanding of the population we examine.

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