

A pottery deposit of the 3rd c. A.D. from excavations in the Carthage circus by the University of Georgia

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Introduction (J.L.)

The deposit consists of 12 loci (4314 through 4325) excavated in 1985, and 11 loci (4329, 4335, 4336, 4338, 4342, 4344, 4347-48, 4351, 4360 and 4363) dug in 1987, in unit 4 of the circus site. According to R. Tomber, these 22 loci constituted a single deposit, an observation supported by occasional joins between sherds found in different loci.¹

¹ Joins were observed between sherds in loci 4317 and 4318, 4318 and 4319, 4324 and 4329, 4329 and 4336, 4351 and 4360.

Frequently cited works:

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Fulford 1984 = M. G. Fulford, "The coarse (kitchen and domestic) and painted wares," in M. G. Fulford and D. P. S. Peacock, *Excavations at Carthage: The British Mission*, vol. I.2. *The Avenue du Président Habib Bourguiba, Salamambo. The pottery and other ceramic objects from the site* (Sheffield) 155-231.

Fulford 1994 = M. G. Fulford, "The cooking and domestic wares," and "The deposits," in M. G. Fulford and D. P. S. Peacock, *Excavations at Carthage: The British Mission*, vol. II.2. *The circular harbour, north side. The pottery* (Oxford) 53-96.

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Heimerl 2014 = F. Heimerl, *Nordafrikanische Sigillata, Küchenkeramik und Lampen aus Augusta Vindelicum/Augsburg* (Münchner Beiträge zur Provinzialrömischen Archäologie 6).

Ikäheimo 2003 = J. P. Ikäheimo, *Late Roman African cookware of the Palatine East excavations, Rome: a holistic approach* (BAR S1143; Oxford).

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Şenol 2018 = A. K. Şenol, *Commercial amphorae in the Graeco-Roman Museum of Alexandria* (Études Alexandrines 44).

Sghaïer et al. 2023 = Y. Sghaïer, M. Bonifay, C. Touihri and I. Gourar, *La collection de référence des céramiques puniques, romaines et médiévales de Thapsus/Ras Dimass* (Tunis). continued overleaf

The American excavations and the archaeological context of the present deposit (N. J. Norman)

The pottery presented in this chapter comes from 12 loci that were dug at the Roman circus in unit 4² by a team from the University of Georgia in 1985 and a further 11 loci dug in the same unit in 1987, continuing work done in that unit in 1982-83 by the Universities of Michigan, Georgia, and Colorado.

A geophysical survey conducted in 1972 by a Polish team revealed the overall size and contours of the circus.³ In 1982, the American team placed its main trench just west of where the Polish survey had placed the W end of the south *cavea*, in the expectation of uncovering evidence of starting gates, the podium wall fronting the arena, and walls supporting the seating stands. The team first laid out 5 contiguous N-S units (0, 1, 2, 3, 4; each c.10 m wide E-W by 5.5 m N-S) over the *cavea*; eventually excavation was extended to the north to fix the location of the podium wall (unit 6) and examine the composition of the arena (unit 16). To the south of unit 4, a path in heavy use by local traffic was left unexcavated, but on the other side the excavation was extended by c.17 m (units 7, 8, 9 and 14) where in 1982-83 an extensive 7th-c. cemetery and several equid skeletons, dumped in layers of the first half of the 6th c., were found,⁴ as well as the Theodosian city wall of c.A.D. 424 or 425.

Excavation in this relatively small cross-section of the *cavea* suggested a mid-2nd c. construction phase followed by a 3rd-c. phase when the *cavea* was deepened and lengthened. A Tuniso-German team, however, which worked in the circus in 2015-2017, placed the initial construction of the barrier (*euripus*) and the N *cavea* in the late 1st c. A.D.,⁵ and F. Fauquet and J.-Cl. Golvin also believe that there was an earlier circus prior to that of the mid-2nd c.⁶

Although virtually no standing architecture of the *cavea* remained, robber trenches marked the locations of its support walls, the podium wall, and the first phase of the *carceres*. Different figures have been proposed for the depth of the *caveae*. I fixed it at c.24 m at the end of the 1985 season.⁷ Fauquet and Golvin proposed 17.2 m, but Golvin later proposed 26 m.⁸ The Tuniso-German team proposed c.15.75 m depth for the first phase of the N *cavea*, increasing to 17.05 m when piers were

Tomber 1986 = R. Tomber, "Pottery from the south side of the Circular Harbour," *CEDAC Bulletin* 7, 34-58.

Tomber 1988 = R. S. Tomber, "Pottery from the 1982-83 excavations," in J. H. Humphrey (ed.), *The circus and a Byzantine cemetery at Carthage*, vol. 1 (Ann Arbor, MI) 437-528.

Vegas 1994 = M. Vegas, "La céramique du 'camp' à Simitthus," in F. Rakob (ed.), *Simitthus II: Der Tempelberg und das römische Lager* (Mainz) 141-243.

Werff 1982 = J. H. van der Werff, *Uzita. Vondstenmateriaal uit een antieke nederzetting in Midden-Tunesië* (Utrecht 1982).

2 For a comprehensive report on all the work of 1982 and on the work done directly north of the line of the city wall in 1983, see J. H. Humphrey (ed.), *The circus and a Byzantine cemetery at Carthage*, vol. 1 (Ann Arbor, MI 1988).

3 A. Iciek, A. Jagodziński, J. Kolendo and J. Przeniosło, *Carthage: cirque – colline dite de Junon – Douar Chott. Recherches archéologiques et géophysiques polonaises effectuées en 1972* (Wrocław 1974), with a critique by J. H. Humphrey in id. (ed.), *Excavations at Carthage 1975 conducted by the University of Michigan*, vol. 2 (Ann Arbor, MI 1978) 195-216.

4 K. Rielly, "A collection of equid skeletons from the cemetery," in Humphrey (supra n.1) 297-323.

5 R. Bockmann et al., "The Roman circus and southwestern city quarter of Carthage," *LibSt* 49 (2018) 177-86.

6 J.-Cl. Golvin and F. Fauquet, "Les images du cirque de Carthage et son architecture: essai de restitution," in J.-P. Bost, J.-M. Roddaz and F. Tassaux (edd.), *Itinéraire de Saintes à Dougga. Mélanges offerts à Louis Maurin* (Ausonius Mémoires 9; Bordeaux 2003) 283-300.

7 N. J. Norman, "The architecture of the circus in light of the 1982 season," in Humphrey (supra n.1), especially 18-27 on the plan of the W end of the S *cavea* as interpreted after the end of the 1985 season. The only evidence for the most southerly (outermost) cross wall (no. 6) was a single fragment in the S part of our unit 4 (at least 24 m south of the podium wall) that employed a grey/black mortar distinctive of the Theodosian era at Carthage and thus presumably is part of a repair and/or closing of arcades.

8 J.-Cl. Golvin, *Les stades et les cirques antiques* (Lacapelle-Marival 2012) 109.

added in the late 2nd/early 3rd c. Nonetheless, regardless of the maximum depth of the *S cavea* and the location of its façade, the deposit published here was part of a dump which lay above the already-collapsed circus façade and extended southwards toward the Theodosian Wall. The dump lay above a wall with Theodosian-type mortar which we identify as a late repair. This massive dump of primarily domestic débris, estimated to have varied in height from 3 to 5 m in some parts, was excavated in 1983, 1985 and 1987 beneath 7th-c. occupation in unit 4.⁹ It extended across the entire width of unit 4. The tips were composed of loose sandy or brownish-gray soil matrix with quantities of ash. They were well stratified, with a decided slope that usually ran from north to south, and were periodically stabilized by desiccated or mortared surfaces.

The process of establishing the dump began with 4366, a very large locus that, unlike those just discussed, contained a substantial amount of construction débris such as faced mortar, painted plaster, *opus signinum* flooring, and large fragments of roof-tiles. included lots of construction debris such as faced mortar, painted plaster, bits of opus signinum floor, and roof tiles (some very large and almost whole) with few other finds and not a great deal of pottery. Also in 4366 were fragments of two female terracotta figurines with the hairstyle of Julia Domna, wife of Septimius Severus and a whole lamp possibly with AUGENDI incised on the bottom (see Rossiter, p. 79).

The pottery in this report that was excavated in 1987 came from the southern extension of trench 4: 4329, 4335, 4336, 4338, 4342, 4344, 4347, 4348 and 4351 (a large layer). They are all located in the same part of the square and are all stratigraphically-related, compositionally similar and yielded similar finds. There was a bone layer overlaid in places by cobbles at the bottom of 4351 which I think was laid down in order to support the late trench-built wall (4332, 4290, 4291, 4236). Following that layer came 4360 (with cat. nos. 1 and 202) and 4363 (with cat. nos. 60, 120 and 209). 4366 ("destruction deposit with walling and roof tiles") produced 35 kg of pottery.

The loci that yielded this pottery deposit were intended to level up the area in preparation for the 7th-c. occupation above. These were large layers, some as much as 50-60 cm thick. They included a very high concentration of pottery, along with coins (see below), lamps (see the next chapter), worked bone,¹⁰ metal, tesserae, painted plaster, and charcoal. They were laid down just after 4366 which established the dump. The later tips (excavated in 1982 and 1983, and previously published by Tomber) came from 4th- or early 5th-c. contexts. The pottery published here predates the dumping operation itself, which belongs to the very end of the 6th c., extending into the 7th.

List of coins from the deposit (L. Houghtalin with S. E. Sidebotham)

All coins were bronze (or, if an *antoninianus*, a bronze-heavy attempt at billon).

1985 loci

No coins were found in loci 4314, 4315, 4317, 4318, 4320, 4321 and 4323, while locus 4316 contained the unidentifiable 85-1-1512 and 85-1-1513. Locus 4322 contained the unidentifiable 85-1-1530, and locus 4324 contained the unidentifiable 85-1-1545, 85-1-1546, 85-1-1553 and 85-1-1555. Locus 4325 contained the unidentifiable 85-1-1557. Locus 4324 also contained:

- 85-1-1552 – late 3rd or early 4th c. Obv.: Bust r. Rev.: Illegible
- 85-1-1560 – Mint of Alexandria, Tetrarchs, 296-307, fraction. Obv.: Bust. Rev.: CONCORDIA[], 2 figs. standing. $\frac{B}{ALE}$ Cf. *RIC* 6, p. 667, nos. 46-48
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9 N. J. Norman, "The American excavations in the Roman circus at Carthage," *Cahiers des Études anciennes* 18 (1986) 89, with a brief mention of dump layers of the late 4th/early 5th c. excavated in 1982-83; ead., "Excavations in the circus at Carthage," *Archaeology* (May/June 1987), where pp. 47-48 and 50 mention the dump, originally over 5 m high, outside the back wall of the circus.

10 M. J. McDaniel, 'quin ipsa manubria cultellorum ossea'. *The catalogue of worked bone from the University of Georgia's excavation of the circus at Carthage, seasons 1985-90* (MA thesis 1991, Univ. of North Carolina at Chapel Hill).

Locus 4319 contained:

- 85-1-1519 – late 3rd or early 4th c. *antoninianus* or *foliis*
- 85-1-1520 – Gallienus or Claudius II, 253-270, *antoninianus*. Obv.: [JVS AVG Radiate bust r. Rev.: Jupiter standing l., holding scepter & thunderbolt, XI in l. field
- 85-1-1521 – 3rd c., *antoninianus*. Obv.: Radiate bust r. Rev.: [A]VG Fig. standing l., helmeted, holding spear in l. hand
- 85-1-1522 – 3rd c., *antoninianus*. Obv.: [JAVG Radiate bust r. Rev.: Fig. standing l., helmeted, holding spear in l. hand

1987 loci

No coins were found in loci 4336, 4338, 4342, 4344, 4347, 4348, 4360, and 4363. Locus 4329 contained 1 coin (87-1-25) which was not identifiable in terms of date or type. Locus 4351 contained 5 coins, four of which (87-1-213, 87-1-214, 87-1-791 and 87-1-792) were not identifiable in terms of date or type; the fifth was:

- 87-1-793 – mid- to late 3rd c. *antoninianus*. Obv.: Radiate bust r. Rev.: Quadruped standing l.

Introduction (continued) (J.L.)

Tomber studied the pottery in the field for three weeks in 1986 and two weeks in 1987, summarily recording and preliminarily identifying most of the pieces. Realizing that the deposit dated to a time period that is otherwise poorly documented by ceramic contexts at Carthage, she intended to publish it in 2020,¹¹ but other pressing commitments forced her to abandon this plan.¹² In May 2019, she invited me to co-publish the deposit. She handed the relevant documentation over to me when we met in London later the same year. On the same occasion, we agreed on the scheme of the publication. The corona lockdown prevented me from commencing work on the material until some time after Tomber's untimely death on May 1, 2022.¹³ As a result, I could not draw upon her enormous ceramic expertise and familiarity with the finds while writing this chapter, but I have endeavoured to produce a text that is as close as possible to what she had in mind.

The archive legacy (J.L.)

The documentation Tomber handed over to me consisted of:

- 1) Profile drawings of 280 selected ceramic finds, drawn in Carthage at the time of the excavations. Each find is labelled with a DN-number.
- 2) An Excel file comprising some 280 records, each corresponding to the drawing of a specific sherd and containing references to its locus and, in most cases, a brief preliminary identification of the ware and form.¹⁴
- 3) Clippings of most of the DN-numbered sherds, from which I have prepared the fabric descriptions and Munsell colour designations that are listed in the catalogue below.
- 4) An Excel file entitled "Quantified data, final" which comprises 1232 records, divided into categories such as fine ware, amphoras, plain wares, cooking wares, etc. In 831 instances these are also identified by "fabric" (e.g., African Red Slip Ware) and in 828 cases by "form" (in 336 cases with an added comment). Some of the fabrics, however, are not identified by form, and *vice versa*. I have changed Tomber's attributions only when it seemed possible, on the basis of current knowledge, to obtain more precise identifications than those proposed by her in the field.¹⁵
- 5) A text file "Notes for John", containing comments on some aspects of the quantification.

Methodology and terminology (R.T. and J.L.)

The scheme of this chapter follows the precedent established by Tomber in her previous publications of ceramic contexts from Carthage,¹⁶ supplemented by the ceramic terms suggested by

11 Pers. comm.

12 For an account of Tomber's life and bibliography, see J. Lund, D. Malfitana and J. Poblome, "Dis Manibus: Roberta Tomber (20th of January 1954 – 1st of May 2022)," *HEROM* 11 (2023) 7-16.

13 Tomber's final email to me was dated December 15, 2021.

14 Most of the attributions made by Tomber at the time of the excavation still stand, but in a few cases a scrutiny of the finds has led to greater precision, as she herself anticipated.

15 Tomber had given me a free hand to revise her attributions.

16 Tomber 1986, 34-35; Tomber 1988, 438-40. Her major 1986 publication of commonly-recurring pottery

Lund in his study of the circulation of ceramics in Hellenistic and Roman Cyprus.¹⁷ Hence, the term fabric denotes “the composition of a fired ceramic, including clay, inclusions, and pores, and excluding surface treatment”, while ware stands for “a class of pottery whose members share similar technology, fabric, and surface treatment”. This last term may or may not imply manufacture at a single geographical source: African Red Slip Ware was, for example, produced at several centres in present day Tunisia. The word shape is used in a general sense “referring to certain morphological characteristics of a vessel” (e.g., a dish), whereas form designates a specific classification, such as Hayes Eastern Sigillata A Form 4 A ... and Type indicates a single form in a specific ware. Class is used in accordance with the definition offered by the on-line version of the *Oxford Dictionaries*: “A set or category of things having some property or attribute in common and differentiated”.¹⁸ With regard to the shapes of the plain wares and cooking wares, the at-times generic names chosen by Tomber (e.g., jar, beaker, cooking pot, bowl, etc.) have been maintained since I could not check the individual sherds, which are stored in Carthage.¹⁹

- Fine wares is the conventional name for pottery presumably used for the serving and/or consumption of food and drink — i.e., slipped or glossed wares and thin-walled wares.²⁰
- Plain wares are “table vessels, probably used in food preparation and storage, or at the table”.²¹ The term is a subset of “coarse wares” as defined by J. A. Riley — i.e., functional, utilitarian vessels.²²
- Cooking wares are “vessels for food preparation, suitable for contact with fire”.²³
- The term transport amphoras refers to “vessels used for transportation and storage of perishables”.²⁴

Composition of the deposit (R.T. and J.L.)²⁵

The deposit comprised a total of 3078 quantified diagnostic sherds (i.e., rims, handles and bases), rising to 17,813 when the body sherds are included in the count (Table 1 overleaf). The total weight of the diagnostic sherds was 73.755 kg, a figure that rises to 264,599 kg if body sherds are included.

Fine wares (cat. nos. 1-74)

The 761 diagnostic fineware sherds amounted to 24.72% of the total and 2810 (16.17%) when the body sherds are included in the count. The corresponding figures by weight are 10.209 kg (13.84%) and 23.459 kg (8.87%) (Tables 1-2).

Diagnostic residuals (here defined as ceramics predating the middle of the 1st c.A.D.) amounted to less than 4.73% of the diagnostic fine wares,²⁶ with miscellanea and unidentified red slip wares making up less than 1% of the total.²⁷ These categories were dwarfed by African Red Slip ware,

types of the early to middle Roman period from a rescue excavation at the south side of the circular harbour (18 rue du 2 mars, 1934), which belongs with the chapter by S. Ellis in the same issue of *CEDAC Bulletin* 7, 14-22, has probably not been sufficiently recognised and utilized by subsequent researchers.

17 See Lund 2015, 34.

18 Cf. Lund 2015, 34, with references.

19 Tomber was the first to acknowledge that her terminology had evolved in this respect since her field-work in Carthage; she wrote to me that “I may have called all casseroles cooking pots — something I certainly would not do today!”.

20 Cf. Tomber 1988, 438; Lund 2015, 34.

21 Tomber 1988, 439.

22 J. A. Riley, “Coarse pottery,” in J. A. Lloyd (ed.), *Excavations at Sidi Khrebish Benghazi (Berenice)*, vol. II (Tripoli 1979) 92, where the term also covers transport amphoras and cooking wares. See also Lund 2015, 34.

23 Riley *ibid.* 97-98; Tomber 1988, 439.

24 Tomber 1988, 439.

25 This section is based on a revision and compression of Tomber’s quantification. The finds made in locus 4323 were not included in the quantification for some reason.

26 By count: diagnostic fragments 4.73%, all 2.88%; by weight: 3.35% (diagnostic) and 3.20% (all).

27 By count: diagnostic fragments 0.66%, all 0.89%; by weight 0.68% (all).

<i>Ware</i>	<i>Rim count</i>	<i>Rim weight</i>	<i>Base count</i>	<i>Base weight</i>	<i>Handle count</i>	<i>Handle weight</i>	<i>Sherd count</i>	<i>Sherd weight</i>
ARS 3 B	1	10						
ARS 3	4	15						
ARS 3?	1	5						
ARS 6 C	4	45						
ARS 6 C, Lamboglia 24	1	10						
ARS 6/28?	1	10						
ARS 8 A	2	10						
ARS 8 A, variant Lamboglia 1a	2	15						
ARS 8 B	2	15						
ARS 8 B, variant	1	5						
ARS 8, Variant	4	30						
ARS 9 A	2	10						
ARS 10 A	42	1480						
ARS 10 B	21	750						
ARS 14 B	6	170						
ARS 14	3	25						
ARS 14-15	1	10						
ARS 14-16	2	10						
ARS 14-17	31	360	1	40	0	0	0	0
ARS 14-17?	5	20			0	0	0	0
ARS 14-18	1	15						
ARS 15	7	70						
ARS 15 (Lamboglia 3b1)	1	10						
ARS 16	8	185						
ARS 18	1	45	1	20				
ARS 18-31, probably 31	3	45						
ARS 23 A	14	210	0	0	0	0	0	0
ARS 23B	46	735	0	0	0	0	9	80
ARS 24	12	50	0	0	0	0	3	10
ARS 26/181	1	5						
ARS 27	22	350						
ARS 28	5	25						
ARS 31	24	340					2	30
ARS 31.4 variant	1	10						
ARS 31/50	2	15						
ARS 32 B	2	100						
ARS 32	1	5						
ARS 36	1	20						
ARS 40 series	4	35						
ARS 40	2	15						
ARS 42	1	15						
ARS 42?							1	5
ARS 45 A	37	495						
ARS 45 B	6	45						
ARS 45?	1	5						
ARS 48	15	285						
ARS 49	8	69						
ARS 50 A	2	5						
ARS 50	9	30						
ARS 51	8	70						
ARS 52 B	1	20						
ARS 131?	1	2						

<i>Ware</i>	<i>Rim count</i>	<i>Rim weight</i>	<i>Base count</i>	<i>Base weight</i>	<i>Handle count</i>	<i>Handle weight</i>	<i>Sherd count</i>	<i>Sherd weight</i>
Closed form, possibly Forma Boninu 1971-72, fig. 46	1	3						
ARS mortarium	9	330	3	55	0	0	3	20
ARS flanged bowl, rouletted	2	10						
ARS 181	179	2145						
ARS 182	4	45						
ARS 183	2	15						
ARS 184	1	5						
ARS 185	1	5						
ARS rouletted							1	5
ARS closed vessels	1	5					2	1
ARS dish	1	5						
ARS lid	2	35						
ARS lid ?	1	5						
ARS feeding spout	1	15						
ARS, unclassified	125	745	1	5	1	5	1963	12530
Miscellaneous Red Slip	0	0	3	30	0	0	8	60
Unassigned	0	0	1	10	1	5	12	100
TOTAL	732	9839	20	315	9	55	2049	13250

which accounted for 94.61% of the diagnostic fine wares by count and 96.23% when the body sherds are included.²⁸

The residual fine wares included a fragment of a mould-made bowl (cat. no. 1), a trickle of black gloss, dark and brown slipped (cat. nos. 2-3), and Spanish colour-coated wares (cat. no. 4), as well as thin-walled wares (cat. no. 5) and fragments (not registered in detail) of bucchero, Eastern Sigillata A,²⁹ Italian-type and South Gaulish sigillata,³⁰ Thin-wall wares, and Pompeian Red Wares. Most of these categories were also present as residuals in the “Byzantine foundations” deposit published by Tomber in 1986,³¹ and they are well documented at other sites in Carthage.³²

As for African Red Slip Ware (cat. nos. 7-74), scholarly attention is increasingly turning to the kiln sites, where the ware was produced. Expanding the fabric division originally suggested by N. Lamboglia (sigillata chiara A, C and D), A. Carandini and his collaborators established a more refined classification (A¹, A², A^{1/2}, A/D, A/C, C¹, C², C³ and D),³³ which to a certain degree reflects the geographical location of the kiln sites in Tunisia. To some extent this division is now being superseded by our increased understanding of the kiln sites,³⁴ thanks to the work of J. W. Salomonson,³⁵ D. P. S. Peacock, M. Mackensen, M. Ben Moussa, C. Hasenzagl and

28 By weight: diagnostic fragments 96.68%, 96.12% if the body sherds are included.

29 Sghaïer *et al.* 2023, 68.

30 *Ibid.* 69.

31 Tomber 1986, 37, Table 2.

32 See, e.g., M. Mackensen, “XI. Spätantike Keramikenensembles und Baumassen in der südlichen Raumzeile der Insula E 218,” in F. Rabob (ed.), *Karthago III. Die deutschen Ausgrabungen in Karthago* (Mainz 1999) 454-65, and K. Schmidt, “Römische Keramik der späten Republik, der Kaiserzeit und der Spätantike,” in H.-G. Niemeyer, R. F. Docter, K. Schmidt and B. Bechtold *et al.*, *Karthago, Die Ergebnisse der Hamburger Grabung unter dem Decumanus Maximus* (Mainz 2007) 701-23.

33 *Atlante I.*

34 M. Bonifay, “The distribution of African pottery under the Roman empire. Evidence versus interpretation,” in A. Wilson and A. Bowman (edd.), *Trade, commerce, and the state in the Roman world* (Oxford 2018) 329.

35 C. Hasenzagl, A. Perugini, K. Ryckbosch and R. Docter, “The archaeological expeditions of Jan Willem Salomonson in Tunisia and Algeria (1960-1972),” *Tijdschrift voor Mediterrane Archeologie* 60 (2019) 54-59; Hasenzagl 2019; C. Hasenzagl, “Henchir el Biar re-collected: new evidence from J. W. Salomonson’s survey in 1968,” *BABesch* 96 (2021) 177-208.

others.³⁶ Their investigations have given us a good idea of the range of shapes and fabrics involved at the various production sites, but M. Bonifay has reminded us that “il faut bien admettre que la majeure partie des tessons retrouvés sur les sites de consommation ne sont pas attribuables avec certitude à l’un des ateliers précédents”.³⁷ He principally had the D category in mind, but the observation also holds true for others. Nevertheless, it seems possible — with due caution — to attribute most of the finds, in general terms, to NE, central, or SW Tunisia.

Vessels belonging to the earliest category (A) are well represented in the deposit.³⁸ The kilns producing them are thought to have been located in NE Tunisia, in the hinterland of Carthage.³⁹ A kiln site has been identified on Cap Bon,⁴⁰ but it is possible that the A category was also produced elsewhere in Tunisia.⁴¹

The geographical source of category A/D is disputed.⁴² Bonifay thinks that it was most likely Byzacene or Tripolitanian, but he does not rule out N Tunisia, for which Mackensen has hitherto found no evidence. The latter pointed instead to the presence of misfired examples of A/D vessels at Henchir el Guellal and Sidi Marzouk Tounsi in central Tunisia, and also to production of the A/D fabric in Tripolitania.⁴³ The latest vessels in our deposit belong to Category C,⁴⁴ which was manufactured in kilns at Sidi Marzouk Tounsi and Djilma in central Tunisia.⁴⁵

Plain wares (cat. nos. 75-139)

The plain wares amounted to 1027 diagnostic sherds (33.37%), but the number rises to 5496 (31.63%) when the body sherds are included in the count. The corresponding figures by weight are 25.371 kg (34.40%) and 68.785 kg (26.00%) (Tables 1 and 3).

These numbers are smaller than the corresponding figures in Tomber’s “Tank 2a” deposit, where the plain wares accounted for 62% of the total assemblage by weight.⁴⁶ However, this is probably due to the “plain wares in the lowest part of the fill” in Tank 2a being “part of a group that was dumped or re-dumped together”, perhaps — as Tomber suggested — “a cart load of pottery,

36 D. P. S. Peacock, F. Bejaoui and N. Ben Lazreg, “Roman pottery production in central Tunisia,” *JRA* 3 (1990) 59-84; M. Mackensen, *Die spätantiken Sigillata- und Lampentöpfereien von El Mahrine (Nordtunesien)* (München 1993); M. Ben Moussa, *Production de sigillées africaines: recherches d’histoire et d’archéologie en Tunisie septentrionale et centrale* (Col•lecció Instrumenta 23; Barcelona 2007). For discussions of the evidence from the kiln sites, see also Bonifay 2016, 519-28 with figs. 126-27; Mackensen 2019, 31-71; and C. Hasenzagl, “Bir Massouda Site 2: a case study of fifth - seventh century African red slip ware,” in J. Carlsen and J. Lund (edd.), *Roman Carthage: a reappraisal* (AnalRom58; 2024) 203-16.

37 Bonifay 2016, 525. Thus also Hasenzagl 2019, 8.

38 Hayes Forms 3-16, 27-31, 42 and 51-52.

39 M. Bonifay, C. Capelli and C. Brun, “Pour une approche intégrée archéologique pétrographique et géochimique des sigillées africaines,” in M. Cavalier, E. De Waele and L. Meulemans (edd.), *Industria apium. L’archéologie: une démarche singulière, des pratiques multiples. Hommages à Raymond Brulet* (Louvain 2012) 41-62; Bonifay 2016, 520-22; Mackensen 2019, 31-33 and 35-71; Hasenzagl 2019, 7-9, fig. 3; Sghaïer *et al.* 2023, 72-73.

40 By M. Ben Moussa (unpublished).

41 See M. Á. Cau, P. Reynolds and M. Bonifay, *LRFW 1. Late Roman Fine Wares. Solving problems of typology and chronology* (Roman and Late Antique Mediterranean Pottery, 1; Oxford 2011) 4; Bonifay, Capelli and Brun (supra n.39) 44-46, suggesting Oudhna; see, however, Mackensen 2019, 37.

42 Hayes Forms 18, 28, 31 and 32-36.

43 Mackensen and Schneider, *JRA* 2006; Bonifay 2016, 522-23; Mackensen 2019, 40; Sghaïer *et al.* 2023, 73. Recently for the Tripolitanian evidence, see S. Schmid and M. Weber in M. Mackensen, *Gheriat el Garbia* vol. 1 (2021) 157-63, with chemical investigations for two different A/D groups from there.

44 Hayes Forms 40, 42 and 45-52.

45 M. Mackensen and G. Schneider, “Production centres of African Red Slip ware (2nd-3rd c.) in northern and central Tunisia: archaeological provenance and reference groups based on chemical analysis,” *JRA* 19 (2006) 163-90; Bonifay 2016, 523-24; Mackensen 2019, 41-51.

46 Tomber 1986, 36.

TABLE 3: PLAIN WARES, QUANTIFICATION

<i>Ware</i>	<i>Rim count</i>	<i>Rim weight</i>	<i>Base count</i>	<i>Base weight</i>	<i>Handle count</i>	<i>Handle weight</i>	<i>Sherd count</i>	<i>Sherd weight</i>
Punic?, plain basin	1	190						
ER Jug 1	3	15						
ER Jug 1 variant	1	5						
ER Jug 2	1	10						
ER Jug 3	1	80						
ER Jug 3 A	48	1320						
ER Jug 3 B	3	35						
ER Jug 3 A/4 A	1	30						
ER Jug 3 B/4 B	10	185						
ER Jug 4	1	20						
ER Jug 4 A	83	900					2	35
ER Jug 4 A, related to	1	10						
ER Jug 4 B	40	315						
ER Jug 6	2	50						
Jugs with incised, impressed or painted decoration	2	10			7	185	4	45
Plain small jug/jar with biconical neck	2	30						
Plain Beaker with flaring rim	1	5						
Plain various beakers	2	50						
Plain jugs, unclassified	27	580	7	295	214	3085	15	80
Plain jugs/jars, trumpet-shaped mouth	2	25						
Two-handed jars	3	115	2	25	2	55	1	20
Various jars	2	15						
Unclassified plain jars with preserved handle attachment	6	175						
Imported jar	1	10						
Beaker with a flaring rim	2	20						
Various small jugs/jars/beakers	3	45						
Various beakers/jars with vertical or near-vertical neck and everted rim	5	65						
Table amphora	1	35						
ER Bowl 1	1	15						
ER bowl	2	30						
Bowls with a hooked rim	3	295						
Various bowls, jars, dishes	12	360	17	500			207	2670
ER Basin A	52	3150						
ER Basin B	27	2910						184
ER Basin C	11	1770						
ER Basin A-C	1	270						
Basins	3	125						
Mortaria	9	995	10	360			20	320
Bowl/mortarium	3	130					3	70
Brazier	3	155						
ER lid 1	6	70				1	1	
ER 1 lid?						1	5	
Unclassified lids	3	35				1	5	
Unclassified	69	655	304	5530	1	15	4216	39980
Imported							1	10
TOTAL	460	15310	340	6710	227	3351	4469	43414

most likely from a single kiln site, being damaged in transit and thus being discarded".⁴⁷

That said, the present deposit contained much the same range of Early Roman (ER) jugs as "Tank 2A".⁴⁸ Hayes defined the Early Roman Jug 1 type in 1976.⁴⁹ Tomber added ER Jug types 2-5 in 1986,⁵⁰ and she defined ER Jug type 6 from the examples in our deposit (cat. nos. 87-89).

The finds also included a range of other plain forms that were not represented in "Tank 2A", notably Early Roman Basins A-C (nos. 124-133), various dishes and bowls — including a form with a hooked rim (nos. 118-123), plain jugs/jars with trumpet-shaped mouths and beakers with a flaring rim (cat. nos. 107-108), lids, mortaria and braziers.

The range of forms and fabrics seems typical of Carthage. Thus, according to M. Fulford, ER Jugs 3-4 "accounted for two thirds of the plain ware from a group filling a tank on the south side of the circular harbour and dated to the late 2nd/early 3rd century ... The plain ware jugs were "densely packed with mixed large sherds that displayed clean breaks" at the bottom of the tank. An earlier, i.e. mid-to-late 2nd century date is possible for this primary fill ... Overall our evidence supports Tomber's suggestion ... of a 2nd-3rd century *floruit*".⁵¹ It would seem that most of the plain vessels were made in northern Tunisia,⁵² probably in the wider region of Carthage, but this suggestion needs to be tested using scientific clay analysis before it can be lent credence.

Cooking wares (cat. nos. 140-217)

The material comprised 1147 diagnostic wheel-made cooking wares (37.26%), or 4119 (23.71%) when the body sherds are included, and 28 hand-made diagnostic cooking wares (0.91%), or 550 (0.75%) when the body sherds are included. The corresponding figures by weight are 25.456 kg (34.51%) and 49.686 kg (18.78%) (Tables 1 and 4). The wheel-made cooking wares comprise a trickle of "non Black-top" cooking wares: examples of the "Early Roman Cooking Pot 1" and 1B, a variant of the "Early Roman Cooking Pot 2",⁵³ a number of jugs (cat. nos. 204-207), a beaker and lids (nos. 208-212). But the vast majority were of the African Black-top category (cat. nos. 149-189), which constituted c.80% of the diagnostic fragments by count and c.86% by weight. Leading the count were lids of Form 196 (cat. nos. 156-173), including variants 1 and 2 (408 rims weighing 9.44 kg),⁵⁴ followed by the casseroles of Form 197 (cat. nos. 174-187) (198 rims weighing 5.265 kg),⁵⁵ casseroles of Form 193 (cat. nos. 151-154) (184 rims weighing 1.226 kg),⁵⁶ and lids of Form 182 (147 rims weighing 5.265 kg).⁵⁷

J. P. Ikäheimo divided the African cooking wares into north and central Tunisian fabrics, distinguished by the clay colour and fabric. It is not possible consistently to subdivide our Black-top cooking wares on this basis since fabric descriptions are available only for the specimens in the catalogue. Of those, most examples of Forms 182, 183, 185, 193, 194 and 196 variant 1 seem to

47 Ibid.

48 For a definition of ER Jugs 1-5, see Tomber 1986, 42-43 *ad nos.* 33-52, fig. 2.

49 Hayes 1976, 102 and 104 no. D 12, fig. 17.

50 Tomber 1986, 42.

51 Fulford 1994, 70.

52 Cf. Bonifay 2004, 71-72. According to Tomber, no. 91 might be imported.

53 These categories were defined by Tomber 1986, 44 *ad no.* 107, fig. 4: "Early Roman Cooking Pot 1. A simple upright rim, concave on the inside and with a pronounced internal ledge", and *ibid.* 46 *ad nos.* 199-200, fig. 7: "Early Roman Cooking Pot 2. Broad flat rim with angular junction between rim and wall and a recessed band for a lid 'seat'".

54 Amounting to 41.61% of the wheel-made cooking ware rims by weight. This is considerably higher than the corresponding figure of 24% in the "Tank 2A" deposit (Tomber 1986, 36).

55 22.18% of the wheel-made cooking-ware rims by weight. This is in line with the corresponding figure of 21.4% in the "Tank 2A" deposit (Tomber 1986, 36).

56 8.79% of the wheel-made cooking-ware rims by weight.

57 23.20% of the wheel-made cooking-ware rims by weight.

TABLE 4: COOKING WARES, QUANTIFICATION

<i>Ware</i>	<i>Rim count</i>	<i>Rim weight</i>	<i>Base count</i>	<i>Base weight</i>	<i>Handle count</i>	<i>Handle weight</i>	<i>Sherd count</i>	<i>Sherd weight</i>
Early Roman Cooking pot 1	9	20						
Early Roman Cooking pot 1 B	2	5						
Black-top Early Roman Cooking pot 2, variant	2	30						
Black-top 182	147	5265						
Black-top 183	1	5						
Black-Top 184	1	5						
Black-top 185	5	40						
Black-top 192	5	150						
Black-top 193	101	1226					83	770
Black-Top 194	1	20						
Black-Top 196	7	220						
Black-top 196 variant 1	53	1239						
Black-top 196 variant 2	348	7985						
Black-Top 197	198	5035						
Black-top lid	28	401			1	100		
Black-top dish	1	5						
Black-top bowl	1	30						
Cooking bowls: Bonifay 2004, "autres formes"	1	22						
Black-top cooking pot	12	130						
Cooking wares, trefoil jugs	9	85	5	100	6	230		
Cooking wares, jugs	6	55	2	85	10	220	2	50
Lids in cooking ware	16	130			1	15		
Cooking wares, beaker	1	10						
Miscellaneous cooking pots	20	378	20	325			729	3835
Whelemade cooking wares, imported micaceous	4	50					14	110
Wheel-made cooking wares, unclassified	11	155	103	1420	9	265	2144	19465
Hand-made cooking wares, grog	6	140	2	50			14	250
Hand-made cooking wares, Pantelleria Ware	4	100	2	60			62	990
Hand-made cooking ware? Pantelleria Ware							1	10
Hand-made cooking wares							3	25
Hand-made cooking pot, Late Roman Cook Ware 8							1	5
Imported micaceous cooking ware	1	25	5	70			5	35
Imported micaceous hand-made/wheel-made	3	35	4	50			12	75
Hand-made cooking wares, imported	1	20						
Hand-made cooking wares, Campanian							4	20
TOTAL	1005	23016	143	2160	27	830	3074	25640

TABLE 5: TRANSPORT AMPHORAS, QUANTIFICATION

	<i>Rim</i> <i>count</i>	<i>Rim</i> <i>weight</i>	<i>Base</i> <i>count</i>	<i>Base</i> <i>weight</i>	<i>Handle</i> <i>count</i>	<i>Handle</i> <i>weight</i>	<i>Sherd</i> <i>count</i>	<i>Sherd</i> <i>weight</i>
Massaliote							1	10
Massaliote?							3	35
Greco-Italic or Dressel 1	1	20						
Early Amphora II	2	110					1	85
Keay Type I B	4	200	0	0	3	405	76	1920
Africana Piccolo/Keay Type III	4	220	0	0	0	0	70	1860
Africana IIA/Keay Type V	1	40						
Africana II C/Keay Type VI	1	50						
Africana II D/Keay Type VII C	2	140	0	0	1	405	82	2480
Africana II A-D			1	760				
Keay XIII A	3	70						
Keay Type XIII-XV			1	460	1	45	63	1220
Tripolitana III	2	350			1	75	6	165
Tripolitana III?	1	35					16	480
Tripolitanian	1	40	1	435	1	40	40	1180
African	8	495	1	180	19	2209	1453	45180
African?							6	125
African/Imported?					1	45	19	475
Campanian [buff, orange]	0	0	0	0	0	0	30	665
Campanian, Dressel 2-4, orange					1	70	3	15
Italian? Dressel 2-4					1	45		
Dressel 2-4, imported	2	25						
Dressel 6?	1	5					1	240
Galouise 4	0	0	3	190	0	0	1	10
Gauloise 4?							3	130
Spain, Almagro 51c							1	5
Tarraconese	0	0	0	0	0	0	5	95
Iberian? Mica	0	0	0	0	0	0	40	1235
Iberian? Schist	0	0	0	0	2	165	35	1485
Knidian	1	210	1	235	0	0	2	35
Proto LRA 2/Dressel 24 <i>similis</i>	1	50						
LR 3	5	25	1	15	9	215	272	2235
LR 3?	1	50	1	120	1	275	9	95
Kapitän 2	1	255	1	790	2	280	9	480
Amphoras, imported	1	10	2	250	4	300	755	18010
Amphoras, imported?	1	70	1	20	0	0	142	3760
Amphoras, imported, micaceous							5	100
Amphoras, buff	0	0	0	0	0	0	2	100
Amphoras, mould	2	135	0	0	0	0	40	3835
Amphoras unclassified	1	20	0	0	0	0	22	680
TOTAL	47	2625	14	3455	47	4574	3213	88425

belong to the north Tunisian fabric group, while the central Tunisian fabric appears to make up the majority of Forms 184 and especially 197.⁵⁸ Lacking a petrographic analysis, however, this suggestion should be regarded as no more than tentative.

⁵⁸ According to Bonifay (2004, 66-67), Forms 23A and B, 26 and 181 ("culinaire A") are mainly distributed along the Tunisian littoral between Cap Bon and the Algerian border, whereas Forms 181, 182, 184 and 185 ("culinaire B") are ubiquitous in Byzacena, and African Black-top ware Forms 191-198 ("culinaire C") are principally products of northern Tunisia. See further Sghaier *et al.* 2023, 84-85.

Exceedingly few cooking wares were imported from outside N Africa (e.g., a few examples of micaceous shallow dishes of unknown origin; nos. 201-202).

The cooking wares also included a small amount of hand-made cooking wares (nos. 211-18; slightly less than 1.5% of the total by count and weight of the rims), mainly examples of Pantellerian Ware (nos. 217-218), which is well documented from other excavations in Carthage, and a few body sherds of Campanian cooking wares, which also occurred in the "Tank 2a" deposit published by Tomber in 1986.⁵⁹

Transport amphoras (cat. nos. 232-276)

The transport amphoras comprised just 108 diagnostic sherds (3.51%), rising to 3321 (19.11%) if the body sherds are included. The corresponding figures by weight are 10.654 kg (14.45%) and 99.079 kg. (37.44%) (Tables 1 and 5).

As with the fine, cooking wares and plain wares, residuals were very scarce indeed, amounting to just two rims of Late Punic amphoras of Cintas type 312-313 (Early Roman Amphora Type II),⁶⁰ a few fragments of Massaliote,⁶¹ Campanian (Early Roman Amphora Type V),⁶² and Tarraconese (Early Roman Amphora VI) types,⁶³ as well as a rim of a Greco-Italic or Dressel IA amphora.⁶⁴ These types are all well documented in the early history of Roman Carthage.⁶⁵

Amphoras considered of N African origin made up 52.78% of the diagnostic fragments, rising to 56.10% if the non-diagnostic pieces are included.⁶⁶ Diagnostic imports from the W Mediterranean (Almagro 51c⁶⁷ and Gauloise 4⁶⁸) accounted for 9.26% by count, but the figure drops to 3.88% if non-diagnostic sherds are included.⁶⁹ Imports from the E Mediterranean, on the other hand, make up 23.15% of the diagnostic fragments, but 9.55% if the body sherds are included in the count.⁷⁰ The best represented of the latter classes are Knidian (cat. nos. 257-258), Mid Roman 3/Late Roman 3 (cat. nos. 263-265) and Kapitän 2 (cat. nos. 259-261),⁷¹ both presumably originating in W Asia Minor. There was also a fragment of Proto LRA 2/Dressel 24 *similis* amphora (cat. no. 262).

Building materials and varia

The fragments of building materials comprised 441 non-diagnostic finds (vaulting tubes,⁷²

59 Tomber 1986, 35-37, 44, nos. 116-18, fig. 4.

60 J. A. Riley, "'Local' amphoras," in J. H. Humphrey (ed.), *Excavations at Carthage 1975 conducted by the University of Michigan*, vol. I (Tunis 1976) 108-10.

61 Cf. Tomber 1986, 36, 44 no. 124, with reference to F. Benoit, "Amphores grecques d'origine ou de provenance marseillaise," *RStLig* 21 (1955) 32-43.

62 J. A. Riley, "Early imported amphoras," in Humphrey (supra n.60) 111-14. Cf. Tomber 1986, 36.

63 Riley *ibid.*

64 When dealing with fragments, it is not always easy to distinguish between the two, as pointed out by Tomber (1988, 35).

65 K. Schmidt, "Zwischen Zerstörung 146 v. Chr. und augusteischer Koloniegründung: Die keramische Evidenz," in C. Flügel, H. Dolenz, K. Schmidt and C. Baur, "Die Augusteische Gründungsphase der *Colonia Carthago Magnae in vestigiis Carthaginiis*," *RömMitt* 124 (2018) 353-423.

66 The corresponding figures by weight are 62.46% and 51.71%.

67 https://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=15 (viewed June 1, 2025).

68 F. Laubenheimer, *La production des amphores en Gaule Narbonnaise* (Paris 1985); D. P. S. Peacock and D. F. Williams, *Amphorae and the Roman economy* (London 1986) 142-43, Class 27; Bezeczky 2013, 134-35, Type 34; https://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=136 (viewed June 1, 2025)

69 The corresponding figures by weight are 4.69% and 4.42%.

70 The corresponding figures by weight are 23.65% and 5.41%.

71 A. Opat, "On the origin and evolution of the Kapitän 2 amphora type," in A. Kaldeli (ed.), *Amphorae from the eastern Mediterranean and beyond: production and distribution from the early to the late Roman period* (Nicosia 2022) 191-222.

72 S. Storz, *Tonröhren im antiken Gewölbebau* (Sonderschr. DAI Rom 10; 1994) Sghaier *et al.* 2023, 109.

TABLE 6: BUILDING MATERIALS, QUANTIFICATION

	<i>Sherd count</i>	<i>Sherd weight</i>
Vaulting tubes	301	3775
Tiles, African	29	1965
Tiles, Campanian	77	4805
Tiles, micaceous	3	300
Tiles, imported?	20	715
Tiles	1	80
Drain	10	420
TOTAL	441	12060

TABLE 7: VARIA, QUANTIFICATION

	<i>Rim count</i>	<i>Rim weight</i>	<i>Base count</i>	<i>Base weight</i>	<i>Handle count</i>	<i>Handle weight</i>	<i>Sherd count</i>	<i>Sherd weight</i>
Mortarium/ <i>dolium</i>	1	450						
Basin or amphora	1	155						
Amphora or jug, imported	1	5					1	5
Amphora/table ware	1	130						
Table ware or cooking ware, trefoil jug	1	15						
Miscellanea: plain or transport amphora	1	90						
Mortared or abraded sherds							1001	7875
Miscellaneous scraps							48	165
Unknown			1	670			1	10
TOTAL	6	845	1	670			1051	8055

Campanian and African tiles), corresponding to 2.54% of the total. The weight amounted to 12.060 kg (Table 6). The group of varia consisted of 7 diagnostic examples (0.23%), rising to 1058 (6.09%) when body sherds are included. The corresponding figures by weight were 1.515 (2.05%) and 9.570 kg (3.62%) fragments of building materials (Tables 1 and 7).

Chronology (J.L)

Fine wares can usually be assigned a relatively precise use-date, which is why they generally constitute the most precise ceramic dating evidence.⁷³ In the present case, the bulk of the African Red Slip Ware in the deposit is datable to the 2nd-3rd c., peaking between c.180 and 250. However, the finds also comprise a substantial amount of forms current in the second half of the 3rd c., in some cases (Forms 42, 45A, 48, 49, 50B and 52B) continuing into the 4th c. One of the latest finds (no. 42) was a fragment probably from a large relief-decorated dish of Hayes Form 42, which may be dated between c.275 and 325.⁷⁴ This need not necessarily imply that the deposit was closed at such a date, but an end-date at the start of the 4th c. cannot be excluded either.

73 For some theoretical issues associated with dating, see J. Lund, "Methodological constraints affecting the precise dating of African Red Slip Ware," in J. H. Humphrey (ed.), *Studies on Roman pottery of the provinces of Africa Proconsularis and Byzacena (Tunisia)* (JRA Suppl. 76; 2010) 65-72, and Lund 2015, 34-36.

74 Two rim fragments (one of which was identified as a bowl) found in loci 4818 and 4819 were described as "flanged rims, rouletted", which might suggest that they might come from flanged bowls of Hayes Form 91: cf. Hayes 1972, 140-44, and J. Lund with E. Poulsen, "A pottery deposit of c.A.D. 425-460 from the Danish excavations at the north edge of the city of Carthage," in J. H. Humphrey (ed.), *For the love of Carthage* (JRA Suppl. 109; 2020) 213. But Tomber did not identify these fragments thus, and the feather rouletting on bowls of Hayes Form 91 is located on the floor of the bowl. It seems likely, therefore, that these rim fragments come from bowls of Hayes Form 45 A, which may be rouletted (cf. nos. 43-45). This also applies to a rouletted ARS body sherd found in locus 4363.

The dates of the plain wares, cooking wares and transport amphoras in the deposit align well with the supposition that the bulk of the deposit was formed in the 3rd c. and closed around 300 or slightly later. It also accords well with J. J. Rossiter's chronological conclusion based on the dates of the lamps in the deposit: "All the lamps belong broadly within the period from the mid-2nd to the end of the 3rd c., but Bussière's dates, both of types and of lamp-makers, would place most in a period from the last quarter of the 2nd to the mid-3rd c." According to the latest pieces and coins found in the relevant loci (see Houghtalin and Sidebotham, above), the deposit should originally have been formed in the latest part of the 3rd or early 4th c., c.290/320.

This conclusion is also supported by the relatively few published early deposits from Carthage and Tunisia at large, such as the pottery found in Tank 2A near the circular harbour at Carthage,⁷⁵ for which Tomber suggested a mid-3rd c. date. It presented many similarities to the current deposit with regard to fine wares (ARS Forms 8A-B, 9A, 10A, 16, 23A-B, 27, 31, 50A, 184, and African Black top Hayes 193, 195, 196, 197). Nonetheless, the context published here also comprised examples of Hayes Forms 32, 42, 45A, 48, 49 and 52B which are suggestive of a slightly later date, as the Kapitän 2 amphoras also suggest.

Deposit 4.16(a) found by the British excavators on the N side of the Circular Harbour contained "considerable quantities of early-to-mid 2nd century A.D. ARS", but its composition was markedly different from the one published here due to the presence of "a large assemblage of thin-walled ware". Reference may also be made to the "Kellereinfüllung; unterer Teil" at the German excavations in Carthage,⁷⁶ a fill dated to the 2nd c., which offers parallels to our deposit (ARS Forms 8 A and 23 B, cooking pots of Hayes Form 197, the rim of a Basin of the Type ER C). The absence of later African Red Slip Forms, however, suggests that this context predates the one published here.

A fill referred to as "Einfüllung zwischen zwei Laufniveaus" was also unearthed at the same German site.⁷⁷ It held parallels with our deposit (ARS forms 6, 8A, 9A and 23B, cooking pots of Hayes Form 194 and 197), but the absence of later ARS forms indicates that it is to be dated to the second half of the 2nd c.

The ceramic contexts in Carthage from the second quarter of the 4th c. onwards present a sort of *terminus ante quem*.⁷⁸ See, for instance, the "Keramikinventar. Insula E. 118, Raum R 71 B, Schicht r 4" from the German excavations is interpreted as fill dated to the middle and the third quarter of the 4th c.⁷⁹ It held some parallels to our deposit (ARS Form 10A, African cooking wares Hayes Forms 196 and 197), as well as examples of the later ARS Forms 45C, 59 and 62.

Outside Carthage, the ceramic finds from *Simitthus*/Chemtou, which functioned between c.175 and 280/300,⁸⁰ are in many respects similar to the present context, both with regard to the fine ware spectrum⁸¹ and that of the coarse ware. The ARS comprised a few examples of "sigillée claire à relief d'applique" like cat. no. 42 below.⁸²

The composition of our deposit is also in many respects similar to Contexts 1 and 2 in the East Bath at Lepcis Magna, dated to c.250-260 and 290-310, respectively.⁸³ But the closest parallel is now

75 Tomber 1986, 35-37, 42-45 nos. 1-143, figs. 1-5.

76 M. Vegas, "B. Keramikinventar. Keller Raum R 5," in F. Rakob (ed.), *Karthago I: Die Deutschen Ausgrabungen in Karthago* (Mainz 1991) 120-23.

77 Ibid. 116-18.

78 Lund and Poulsen (supra n.74) 201-4.

79 M. Mackensen in Rakob (supra n.76) 85-88.

80 Vegas 1994, 175. See also the partly-coin-dated stratified deposits, dated between c.230/240 and c.280/300, in M. Mackensen, *Simitthus III. Militärlager oder Marmorwerkstätten* (Mainz 2005) 111-14 and 123-38.

81 Ibid. 184-92.

82 Ibid. 149-51 and 187, nos. 49-57.

83 M. Bonifay, C. Capelli *et al.*, "Les thermes du Levant à Leptis Magna: quatre contextes céramiques des IIIe et IV siècles," *AntAfr* 49 (2013) 67-150.

provided by the ceramic finds related to Period 1 in the vexillation fort of Gheriat el-Garbia, 280 km south of Tripoli, which are dated between c.199/201 and 275/280.⁸⁴

Concluding comments (J.L.)

The deposit published here is the largest collection of ceramics from the (2nd and) 3rd c. found in a single deposit at Carthage, and it stands a fair chance of being representative of the ceramic spectrum of the city in that century. Since the deposit contained relatively few finds predating the second half of the 1st c. A.D., it does not contribute to our knowledge of the city's ceramic spectrum in the Early Imperial period, when imported Italian-type sigillata and, to a lesser degree, Gaulish sigillata predominated among fine wares.⁸⁵ Terracotta lamps imported from Italy likewise predominated in the late 1st c. B.C. and the 1st c. A.D. until they were ousted by locally and regionally produced products,⁸⁶ just as the Italian fine wares were driven from the Carthaginian market by the emerging ARS industry in the second half of the 1st c. A.D.⁸⁷ From then onwards, the largest part of the pottery originated in kilns that were probably located in N Tunisia, in the wider periphery of Carthage, but a shift towards production centres in central Tunisia can be detected in the ARS in the 3rd c.⁸⁸ (It is possible that something similar may also have been the case with the cooking wares and plain wares, but the production centres of these categories are currently less well known.) This process has been well documented by Hayes, Mackensen, Bonifay, Hasenzagl and others,⁸⁹ but the underlying reasons for the shift are less clear. According to Bonifay, the development was mainly caused by economic factors connected with the increased production of agricultural products for an external market.⁹⁰ This makes sense, but one wonders if other factors might not also have been at work. The present contribution cannot contribute to this question, other than by giving us a glimpse of the pattern of ceramic consumption of Carthage in the 3rd c.

84 M. Mackensen, F. Schimmer, S. Schmid and M. Weber, "Keramik-Survey," in M. Mackensen *et al.*, *Das severische Vexillationskastell Myd(---)/ Gheriat el-Garbia am limes tripolitanus (Libyen)*, vol I: *Forschungsgeschichte, Vermessung, Prospektionen und Funde 2009-2010* (Münchner Beiträge zur Provinzialrömischen Archäologie 10; Wiesbaden 2021) 155-214.

85 Schmidt (supra n.65) 384-412. Cf. S. Altekamp, *Karthago. Archäologische Stadtbiographie* (Berlin 2024) 185.

86 Cf. J. Lund, "Terracotta lamps from the Swedish excavations at Carthage," in id., R. Larje and H. Nilsson, *Carthage II. The Swedish Mission to Carthage* (ActInstRomRegSuec, ser in 4°, 54.2; 2017) 18-19, fig. 7.

87 For a similar situation, albeit with imported mass-produced fine wares replacing those made at the local or regional level, see J. Lund, "The possible impact of a globalised Hellenistic economy on local fine ware production in the eastern Mediterranean," in I. Kamenjarin and M. Ugarković (edd.), *Exploring the neighborhood. The role of ceramics in understanding place in the Hellenistic world* (Vienna 2020) 13-20.

88 Cf. Bonifay 2004, 478-79.

89 See nn. 24-27 above.

90 Bonifay 2004, 477-79 and 486-88. See M. Hobson, *The North African boom* (JRA Suppl. 100; 2015) 140-42, and Hasenzagl 2019, 14, for more references.