



EXCAVATIONS AT SABRATHA 1948-1951

Volume II
THE FINDS
Part 1

**THE AMPHORAE,
COARSE POTTERY
AND BUILDING
MATERIALS**

John Dore and Nina Key,
Edited by Michael Fulford
and Melanie Hall

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1948-1951

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Part 1

THE AMPHORAE, COARSE POTTERY AND
BUILDING MATERIALS

by

John Dore and Nina Keay,

with contributions by H. Dodge, D.P.S. Peacock and
R.H. Seager Smith

edited by

Michael Fulford and Melanie Hall

Published on behalf of the
Department of Antiquities, Tripoli, S.P.L.A.J.
by the Society for Libyan Studies
Monograph No.1
1989

Society for Libyan Studies Monograph No. 1

Published on behalf of
The Department of Antiquities, Tripoli,
Socialist People's Libyan Arab Jamahiria,
by the Society for Libyan Studies,
31-34 Gordon Square, London WC1H 0PY

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ISBN 0-9508363-5-4

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PREFACE

Following completion of the report on the structural and stratigraphic aspects of the excavations conducted at Sabratha between 1948 and 1951 by K.M. Kenyon and J.B. Ward-Perkins by Dr Philip Kenrick in 1985 (Kenrick 1986), attention turned towards publication of the finds. This was necessarily limited to only those finds which were brought back to England after the end of the excavations. This material consists very largely of pottery. Resources were not available to devote equal effort towards all aspects of the material and so a policy was made to concentrate on the coarse pottery (cooking or kitchen wares). It was anticipated that research on the Sabratha coarse pottery would enlarge our understanding of the dating and sources of the comparable material which was being recovered from the Tripolitanian hinterland by the UNESCO Libyan Valleys Survey. To this end the Council of the Society for Libyan Studies provided a grant for two years to fund the appointment of John Dore as Research Fellow within the Department of Archaeology of the University of Newcastle upon Tyne during 1986–7. A small Sabratha sub-committee was established by the Council of the Society to oversee this research programme under my chairmanship.

While the largest single component of those finds that had been brought back to England was thus taken care of, it was also the responsibility of the Sabratha committee to see to the publication of the remaining finds with limited funds. The opportunity for Mrs Nina Keay to commence work on a report on the amphorae presented itself at an early stage and this helped to shape the composition of this volume. Hazel Dodge speedily provided a report on the building materials which included an important group of ceramic vaulting tubes. It is anticipated that a second volume of pottery finds which will include the fine wares and lamps will be completed shortly. Other categories of (non-ceramic) finds will be published in *Libyan Studies*.

In the preparation of this volume individual contributors and I are grateful to a number of individuals and institutions for their assistance. I am grateful to my colleagues on the Sabratha committee, John Dore, Dr Philip Kenrick, Dr John Lloyd, Dr David Peacock, Dr John Riley and Shirley Strong for their ideas and help. On their behalf and that of the Society I should particularly like to record our thanks to the University of Newcastle upon Tyne and its Department of Archaeology under the headship of Professor P.J. Fowler for their generous provision of space and facilities for John Dore during the tenure of his research fellowship in 1986–7. For the preparation of the amphora report we are grateful to the Department of Archaeology of the University of Southampton for its provision of space and facilities. In particular I should like to thank Dr S. Keay and Dr D.P.S. Peacock of that university for all their help in the execution of this part of the report.

The drawings of the amphorae were carried out under the supervision of K. Kenyon; those of the coarse pottery and building material have been prepared by John Dore. I am grateful to Melanie Hall for her assistance in assembling and editing the various elements of this report and for achieving a much greater measure of consistency among them than I had ever thought possible.

Michael Fulford
Chairman Sabratha Committee
Department of Archaeology
University of Reading

January 1989

INTRODUCTION

To set the contents of this volume in context a brief resumé of the conclusions of the structural report is included here. For the details the reader is referred to Kenrick 1986.

The coins and fineware indicate occupation of the site from roughly the late fifth century B.C. to the sixth century A.D. The earliest occupation, found in the area between the later forum-complex and the sea, was probably seasonal in character. The first permanent buildings of stone were probably established around the middle of the fourth century B.C. Traces of these have been found in the area north of the Forum, below the East Forum Temple and in the area of the Casa Brogan.

The next phase of significant change occurred in the second half of the second century B.C. and it has been suggested that this can be explained in terms of the reverses and eventual destruction which Carthage suffered at the hands of Rome at this time (Kenrick 1986, 313). There is evidence of extensive rebuilding in Regio II Insula 6 and also in the Casa Brogan where a regular street frontage seems to have been established. Fragments of a possible city wall to the east of the Casa Brogan indicate the gradual development of the city southwards from the sea and evidence of the laying out of a new insula on the south side of the Antonine Temple suggest that this expansion continued in the first century B.C.

The core of the Roman town gradually took shape in the first century A.D. with the East Forum Temple being established around the middle of the century. The occurrence of an earthquake in the Flavian period, one of a series which played a major part in Sabratha's history, necessitated rebuilding, substantial in the case of the East Forum Temple and apparently almost complete in the case of the Forum.

The second half of the second century A.D. was a period of enormous expansion and renewal. At this time a whole new eastern quarter was built, the Forum was remodelled, the Antonine and South Forum temples were built, the Capitolium was either built or acquired its final form and the Basilica was extended to the west. This period, it would seem, marked the apogee of the city's fortunes. There appears to have been no new building work in the Severan period and there is some evidence for the abandonment of a building project in the East Forum Temple later in the century.

Another major earthquake is thought to have taken place in A.D. 365 when all the public buildings were extensively damaged. Following this, although the outlying areas seem to have been abandoned, the Forum, Curia and Basilica were rebuilt and the Casa Brogan even seems to have entered a phase of modest expansion. At the turn of the fourth and fifth centuries two new churches were built and the rebuilt basilica on the south side of the Forum was converted into a church.

The Vandal period appears to have been one of decline but there was a revival after A.D. 533 when the area was recovered by Belisarius. A new defensive wall was built around the reduced city and a new residential block was built facing church 2. The Casa Brogan still seems to have been occupied at this late period though most of the area of the Forum was covered by a burial ground. Continuity of occupation up to and beyond the date of the Arab conquest is uncertain.

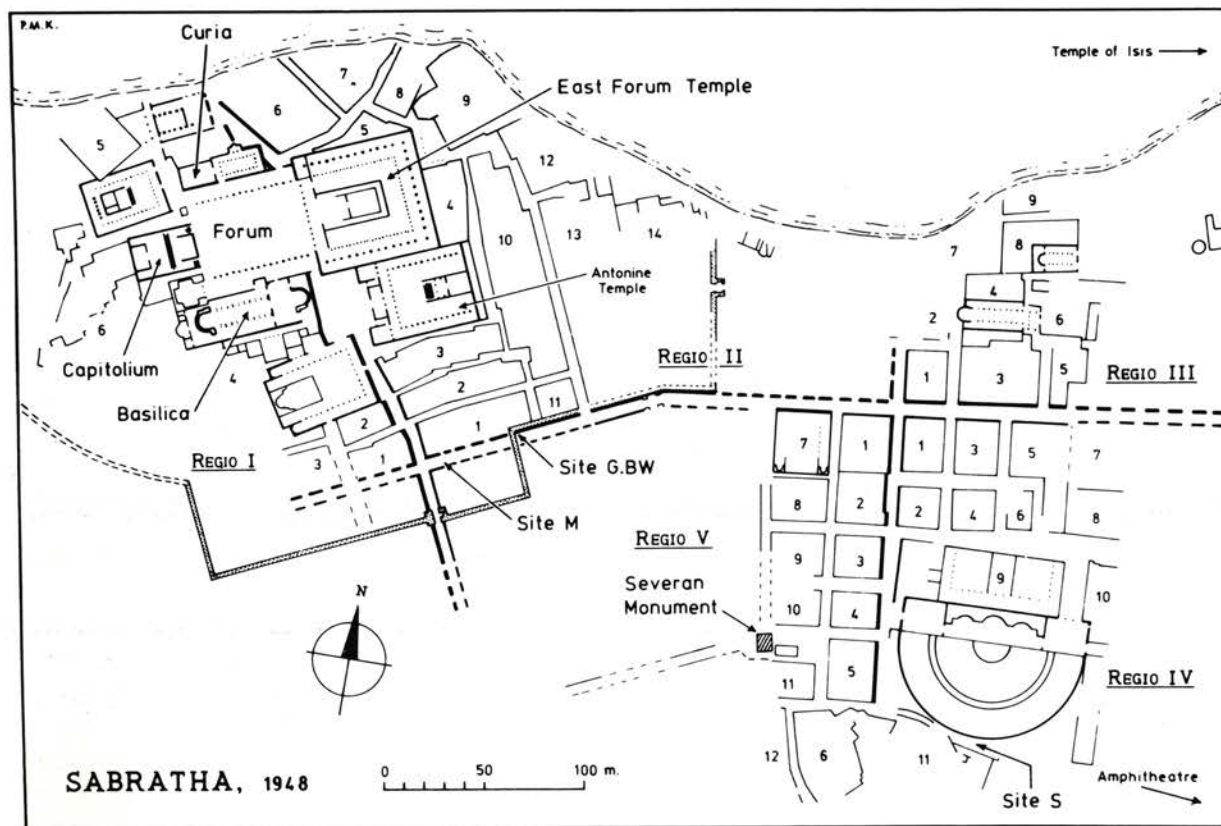


FIG. 1 Plan of Sabratha

THE STRATIFIED CONTEXTS

The main areas in which excavation took place comprised the following: the Forum and East Forum Temple complex; Regio II Insulae 5, 6 and 7 which lie to the north of the forum-complex; a portion of Regio II Insula 10, the insula lying to the east of the East Forum Temple, which became known as the *Casa Brogan* from the name of its initial supervisor Olwen Brogan. In addition, smaller scale work was carried out around the Antonine Temple and the Severan Monument, to the south of the Theatre, and in the area close to the re-entrant angle of the Byzantine wall to the south-east of the forum-complex (FIG. 1).

The work of Kathleen Kenyon and John Ward-Perkins resulted in the construction of a chronological framework for the site, based on the evidence of the coins and the fineware. For subsequent researchers, one of the main problems in using this chronology lay in the fact that it was extremely difficult, if not at times impossible, to trace material (particularly pottery) back to its original stratified context. The reason for this has to do with the way in which Kathleen Kenyon related her interpretative framework to the excavation. The layers of each trench as recorded in the site notebooks were given an identifier consisting for the most part of a trench code and a layer number. Kathleen Kenyon then wrote interpretative notes on each trench, either in the trench notebook, or in a separate notebook of her own, in which she grouped layers into phases or periods with a set of identifiers partially related to the original layer codes. Finally, the completed and rationalised sequence of phases was given a new set of identifiers on a more universal system. Most of the pottery (and certainly all the significant material) was re-marked with the identifiers of this final system, in many cases obscuring the original layer codes. This has meant that the pottery, in particular, is now indissolubly linked to the Kenyon interpretative scheme. In most cases this is of no consequence since her scheme has stood the test of time remarkably well (as can be judged from Kenrick 1986) but there are areas of doubt and uncertainty which it is now impossible to resolve. There are, for example, sequences, particularly

in the deep, early layers, which have been amalgamated under a single code; judging the earliest date of such a sequence in such circumstances is now impossible.

The identifiers of the final Kenyon system consist of a Roman numeral which denotes an area of the site, or in certain cases a chronological period within an area, and an Arabic numeral which denotes an excavated context or group of contexts within an area. These numbers are preceded by the characters “Y1” which identified the site (1 = Sabratha) and the geographical area (Y = North Africa). The full designation for a context or group of contexts was thus:

“Y1”, Roman numeral, Arabic numeral

eg “Y1 xiv 84”

The catalogue numbers of the pottery from the context(s) of a particular “Y1” number were appended, after a “/”, to the Arabic numeral. These catalogue numbers do not, however, uniquely identify individual vessels since groups of vessels were often catalogued under one number. For this reason they have not been used in the present report.

The stratified contexts (Y1 numbers) are listed in PART IV. The contexts included are essentially the same as those on pages 319 & 320 of Kenrick 1986. For ease of reference FIG. 72 displays the contextual information in graphical form, although it must be realised that the generalisation necessary to produce the chart has resulted in a certain loss of precision. FIG. 72 is designed to be used in conjunction with the full list of contexts not instead of it. A “right-angle” symbol, placed above and to the left of the context to which it refers, has been used to identify a context with a *terminus post quem* (TPQ) and to pinpoint the position of this. In some cases a TPQ has a certain amount of drift depending on how much of the latest datable fineware is regarded as intrusive. This has been indicated by placing right-angle symbols at the limits of the drift and linking them with a dashed line.

To the Memory of John Dore, a pioneer in the study of North African
Ceramics

PART I: THE AMPHORAE

1. THE TYPE SERIES by NINA KEAY

INTRODUCTION

This report is based upon the examination of 1716 amphora rims and 59 bases, the majority of which derived from stratified contexts at Sabratha (Part IV). Handles and body sherds were excluded as only a small sample of them was available. The volume and the range of amphorae necessitated a typological approach and the main body of the report is a type-series spanning the late fifth/early fourth centuries B.C. through to the late sixth/early seventh centuries A.D. The amphora assemblage includes one of the largest collections of Punic and Hellenistic amphorae (1290 rims) from a North African site and demonstrates the range and variety of indigenous production. The number of later Roman, Vandal and Byzantine amphorae is comparatively small (59 rims) and is probably not representative of the full range.

Part IV lists the stratified contexts and the amphora sherds recorded from them. In the type series the number of contexts listed for each sub-type may not be equal to the total number of sherds for that sub-type, this is due to the fact that some sherds had not been assigned a context. In this case, the context of an amphora is described as "unknown". Similarly, where a fabric is labelled as "unknown", the amphorae themselves were unavailable for study and were only recorded as drawings.

Chronological Distribution

The date range of the Sabratha amphorae types was divided into broad 'periods' as follows:

Early/Mid-Punic Mid/late fifth century B.C. – Late third/early second century B.C.

Late Punic Late third/early second century B.C. – Late first century B.C.

Early Imperial Late first century B.C. – End third century A.D.

Late Imperial Early fourth century A.D. – Mid fifth century A.D.

Vandal/Byzantine Fifth century A.D. – Early seventh century A.D.

Fabrics

Descriptions of the local/regional Tripolitanian/Tunisian fabrics (Nos 1–6) are presented separately below as 'North African Fabrics' in I.4. All other fabric descriptions have been included under their appropriate Type headings.

CATALOGUE

TYPE 1 CORINTHIAN B

This form was produced between the end of the sixth century B.C. and the late third or early second century B.C. For a detailed study of Corinthian amphorae see Koehler (1981b) and Koehler (in press). Examples of Corinthian B amphorae from the Punic tombs at Mellita (Sabratha) are provided by Bisi (1969-1970).

The Corinthian B amphorae of Sabratha are largely preserved as rim fragments and are dated stylistically according to Koehler's outline of morphological evolution (Koehler 1981b). The earliest form, dating to the late fifth/early fourth century B.C. has a flaring rim, a distinctive figure-of-eight mouth in plan, a tall neck and handles pressing against the mouth. A trend towards a taller, more elongated shape is attested, with handles arching to the height of the sharply flaring rim, by the early third century B.C. The rim further develops in the first quarter of the third century B.C., thickening and becoming triangular in section. The latest rim present was rolled, slightly angular and the handles arched above it, slanting in towards the neck by the second quarter or middle of the third century B.C.

Corinthian B Fabrics

Fabric A: A fine medium-hard clay with infrequent elongated pores and a smooth fracture, well-sorted rounded white inclusions (0.1-0.9 mm).

Colour: Reddish yellow (7.5 YR 7/6) to pink (8/2) and pinkish white (5 YR 7/4).

Fabric A1: As Fabric A, but with frequent glistening flakes of mica.

Colour: Very pale brown (10 YR 8/3)

Fabric A2: Moderately common white inclusions (0.2-0.7 mm) and occasional mica.

Colour: Reddish brown (5 YR 7/6)

Fabric B: A moderately hard fabric with a rough fracture. Frequent ill-sorted irregular quartz grains (0.5-1.5 mm) and a scatter of fine grey, red or white grains. The clay texture ranges from smooth to laminated with frequent voids.

Colour: Red (2.5 YR 5/8) to light red (6/6, 6/8, 5/4); pink (5 YR 7/4) to reddish yellow (6/6, 6/8); pinkish grey (7.5 YR 6/2) to pinkish white (8/2)

Fabric B1: Laminated clay with common to rare grey inclusions.

Fabric B2: Large (1.5 mm), ill-sorted quartz and black gritty inclusions.

Fabric B3: Similar to B2 except that the clay matrix is finer.

Fabric B4: Sparse large quartz grains (1.0-1.5 mm) and moderate fine grey and red inclusions (0.2 mm).

Fabric B5: Fine clay with abundant fine white inclusions (0.01 mm) and rare black and red inclusions (0.5-1.0 mm). Occasionally small white inclusions (0.02 mm) are present.

TYPE 1*Sub-type 1a* (FIG. 2, Nos 1-4)

Form: Low flaring rim with a slightly convex profile. At the centre of the rim there is a ridge or groove and the handles are squeezed against this point.

Fabric: A(37%), A2(5%), B(26%), B1(11%), B5(21%)

Total: 19

Context:	i	43/21	64/7	149/5
	ia	11/45		
	v	2/152	10/10	
	viii	3/32		

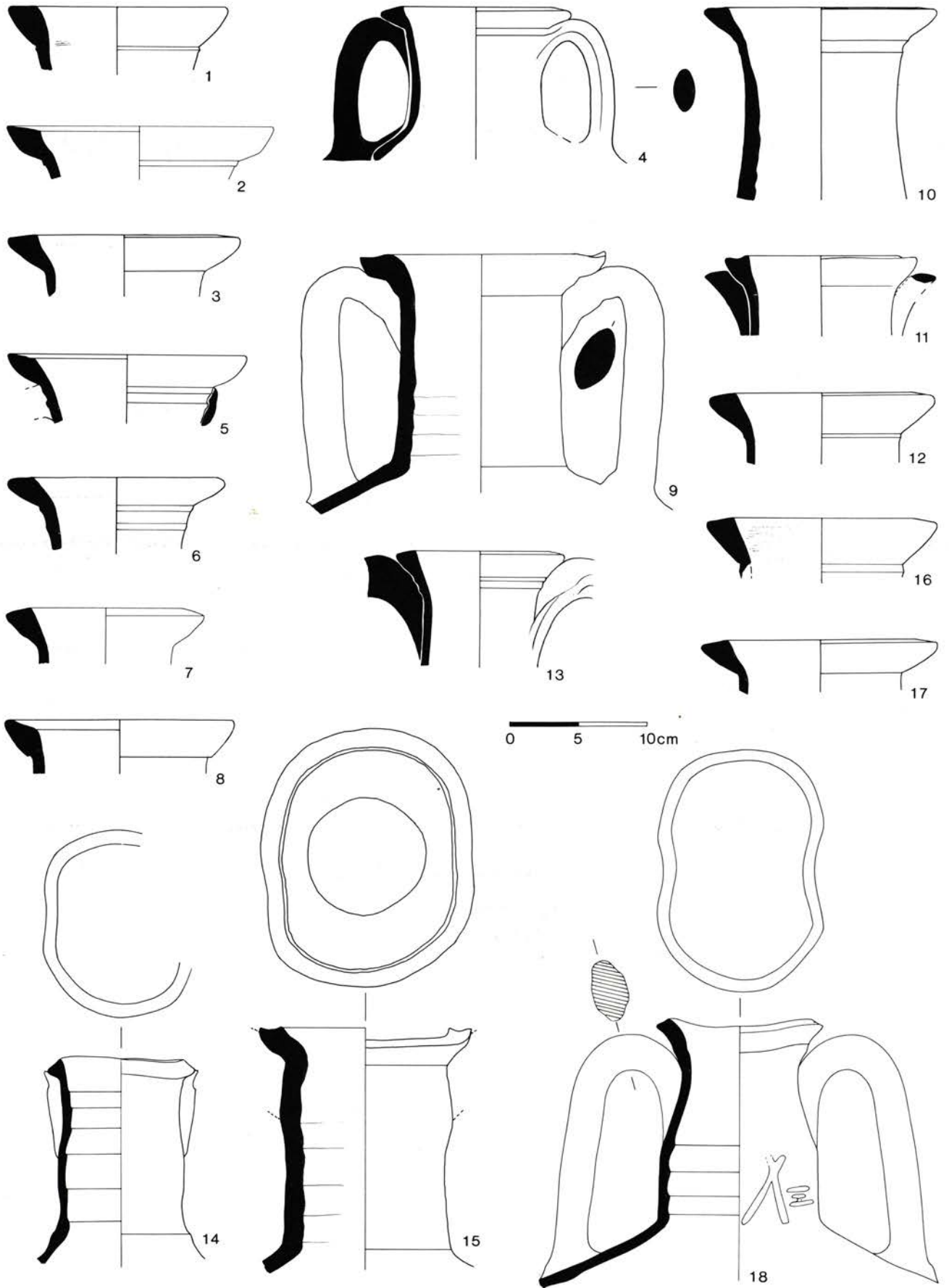


FIG. 2 The Amphorae: Type 1 (Scale 1:4)

xiv	55/3	56/?
xxi	47/3	
xxii	41/9	
xxiii	21/221	
SpB	1.4	
SpH	32.W.8	
SpJ	7.F.11	
SpT	41.20	
SpW	8.17	
SpX	3.7	

Sub-type 1b (FIG. 2, Nos 5 & 6)

Form: Flaring rim with a convex profile and an almost horizontal top. There is a band of grooving or ridging at the base of the rim.

Fabric: A(42%), A1(8%), B1(8%), B2(33%), B5(8%)

Total: 13

Context:	i	9/33	13/18	43/22
	vic	4/6		
	xxiii	40/101		

Sub-type 1c (FIG. 2 No. 7)

Form: Similar to 6, but without groove at base of rim.

Fabric: A(13%), A2(13%), B(19%), B1(6%), B2(31%), B5(19%)

Total: 16

Context:	i	51/3	
	iiic	2/42	
	v	1/53	2/162
	vi	1/55	
	viii	3/27	
	xiv	25/11	110/27
	xix	1/10	
	SpA	18.7	
	SpJ	3b.9	
	SpY	4.14	

Sub-type 1d (FIG. 2. No. 8)

Form: Small undercut at the base of the rim.

Fabric: A(53%), A2(18%), B(12%), B1(12%), B5(6%)

Total: 17

Context:	i	65/7	104/9		
	iii	1/2			
	v	1/56	5/7		
	vid	1/49			
	xiv	60/44	61/4	79/21	148/4
	xxiii	29/12	32/13		
	xxvi	1/2			
	SpV	59b			

Sub-type 1e (FIG. 2, No. 9)

Form: The flaring convex rim has a concave top and forms a figure-of-eight mouth with the handles pressing in against the base of the rim. The arching handles are oval in section.

Fabric: A and A2 were present

Total: 29

Context:	i	34/7	42/3	136/1	164/6
	iii	15/4			
	iiib	1/36			
	iv	1/41			
	v	1/43	2/149	2/161	9/19
	via	2/74	4/31		
	vid	1/48			
	xiv	79/22			
	xxi	19/21			
	xxiii	20/8			
	xxv	5/120			
	SpA	18.5			
	SpB	1.4	21.2		
	SpC	9.4a	13.2		
	SpD	2.iii			
	SpJ	3.69	6c.8		
	SpX	3.7			

Sub-type 1f (FIG. 2, Nos 10 & 11: the latter a similar but smaller example)

Form: There is a wide groove at the top of the flaring rim. The outer edge of the horizontal top is gently rounded and there is a raised inner edge.

Fabric: A(9%), A2(77%), B(14%)

Total: 22 and 1 similar, but smaller, example

Context:	i	15/32	93/3(2)	122/3	158/5	164/6
	ia	4/31				
	iiib	1/36	4/12			
	iv	20/1				
	v	1/54				
	vib	7/105				
	xiv	67/37				
	xxiii	35/28				
	xxiv	8/1	69/20			
	SpB	4.15				
	SpC	9.4B	20.5			
	SpE	28.7				
	SpJ	3.a.9	7h			

Sub-type 1g (FIG. 2, Nos 12 & 13)

Form: The tall rim flares out from a ridge and offset band at the top of the neck. The rim has a concave upper surface with sharp, well-defined edges. The handles are squeezed against the rim, arching above it. The mouth forms a figure-of-eight shape. The handles are flattened oval in section.

Fabric: A(48%), A1(2%), A2(33%), B(8%), B2(5%), B4(2%), B5(2%)

Total: 56 and 2 similar, but smaller, examples

Context:	i	5/17	8/10	8/110	13/17	15/31
		18/37	20/11	23/12	52/3	110/4
		115/3	155/8	175/3		
	ia	4/31				
	iii	1/2	3/66	5/43	14/2	
	iiib	1/36				
	iiic	2/41				
	iv	7/5	12/11			
	v	2/150				
	via	2/72				
	vib	7/104				
	vid	1/50				
	xiv	67/10				

xix	6/113			
xxii	25/4			
xxiii	29/?	35/28	40/101	79/15
xxiv	6/16	77/1		
xxv	16/90			
SpB	4.3	14.10		
SpC	1.3a	9.5b	20.5	
SpE	33.4			
SpF	92.b			
SpG	2.4a	6.10		
SpJ	6c.7 & 8	6c.8		
SpN	5c			
SpX	3.6			
Sp?	96.7a			

Sub-type 1h (FIG. 2, No. 14)

Form: The flaring rolled rim is slightly triangular in section with a sharp, raised inner edge. The handles arch above the rim, and the mouth of the amphora forms a figure-of-eight.

Fabric: A(50%), B(17%), B2(17%), B5(17%)

Total: 6

Context:	i	36	
	iv	4/35	
	xxiii	29/13	
	xxiv	2/14	63/3

Sub-type 1i (FIG. 2, No. 15)

Form: Small vertical rim, gently flaring with either a horizontal top surface or, more frequently, concave. The handles arch above the top of the rim.

Fabric: A(13%), A1(8%), A2(53%), B(13%), B4(13%)

Total: 15, and 1 similar, but smaller, example

Context:	i	13/18	18/3
	iv	1/38	
	v	6/5	
	viii	3/45	
	xiv	17/7	
	xxii	25/5	
	xxiii	38/49	39/126
	xxiv	131/1	155/8
	xxvi	19/6	
	SpD	2 iii	

Sub-type 1j (FIG. 2, Nos 16 & 17)

Form: Flaring rim, offset at the top of the neck. Example No.17 has a vertical gently flaring rim with narrow groove on upper surface.

Fabric: A1(6%), A2(18%), B1(12%), B3(47%), B4(6%), B5(12%)

Total: 22

Context:	i	29/8	155/9
	iii	12/8	
	iiib	1/33	5/36
	v	1/53	
	viiia	2/7	
	xiv	55/3	69/19
	xxiii	29/14	
	xxv	16/81	
	xxvi	16/80	42/207

SpH	4/3	13a	34.8
SpJ	9.5d		
SpW	2.17		
SpX	1.15		

Sub-type 1k (FIG. 2, No. 18)

Form: Groove at base of a flaring, rolled, rim. Mouth forms a figure-of-eight in plan. The vertical handles are oval in section, thickening in the centre with pinched edges. There is a red dipinto on the centre of the neck.

Fabric: A

Total: 1

Context: SpA 2.9

Dating for the Corinthian B amphora series at Sabratha

The earliest contexts in which Corinthian B amphorae occur at Sabratha date to between the late fifth and early fourth centuries B.C. They comprise 11% of the total number of datable sherds. The remaining sherds occurred in contexts of the late fourth-early third centuries B.C. (19%) and early second-late first centuries B.C. (10%). The majority of rims occurred in residual contexts of the Imperial period (60%).

Dating for the Corinthian B amphora series outside Sabratha

Examples of Sub-type 1B have been discovered in contexts of the last quarter of the fourth to third centuries B.C. (Koehler 1981b, no.248, pls.1, 32 and 40); Sub-types 1E and 1F were found in contexts of the late fourth to early third centuries B.C. (Koehler *ibid.*, 192, no.255, pls 33, 40, 43; 192, no.253, pls 32 and 40); Sub-type 1G occurred in an early third century B.C. context (Koehler *ibid.*, 196, no.261, pl.34; 194, no.258, pls 42 and 43); Sub-type 1H was discovered in a context of the second half of the third century B.C. (Koehler *ibid.*, 204, no.282, pls 37 and 40). Other sub-types have not so far been recorded from independently-dated contexts.

TYPE 2 MASSALIOTE AMPHORAE (FIG. 3, Nos 19–27)

Form: Thickened convex rims.

Massaliote Fabrics

Fabric A: This is a hard, moderately rough fabric, with a hackly fracture. There are frequent white, glassy, rounded and sub-rounded grains (0.5 mm), sparse dull white and sub-rectangular inclusions (up to 0.5 mm) and sparse, fine micaceous flakes.

Colour: Pink (5 YR 7/4) to light beige.

Fabric B: This is finer than fabric A, with common fine white sub- rounded inclusions (less than 0.5 mm) and sparse fine mica.

Colour: From red (2.5 YR 5/6) to pink (5 YR 8/4)

Fabric C: This is a hard, moderately rough, fabric with a rough fracture. Micaceous inclusions are common (up to 0.5 mm). Sub-rounded grey inclusions (1.0 mm) are moderately common, as are sub-rounded glassy grains (average of 1.0 mm)

Colour: Pink (5 YR 7/3) to beige.

Fabric D: This is a hard fabric with a rough fracture. It contains common micaceous flecks (0.2 mm), common ill-sorted white glassy grains (up to 1 mm), together with sparse dark grey and red inclusions (average of 0.4 mm).

Colour: Pink (5 YR 7/4)

Fabric: A(48%), B(19%), C(24%), D(10%)

Total: 25

Context:	i	17/10	39/6			
	iv	4/34	6/14			
	v	1/52				
	xiv	17/10	55/?	79/27	88/7	147/4
	xxiv	2/15				
	SpC	10.4b	13.1			
	SpH	25.12p				
	SpJ	9.3				
	SpT	1.13	4.25			
	SpV	4.15				
	SpX	1.21	1.22a	2.15b	2.3	
	SpY	9.66				

Dating of Type 2 amphorae at Sabratha

About two thirds of Massaliote amphorae occurred in contexts dated to between the mid/late fifth and the mid/late fourth centuries B.C. Later occurrences, representing about one third of all sherds, were clearly residual.

Dating of Type 2 amphorae at other sites

On the basis of excavations at sites in Languedoc, similar sherds have been dated to between the late sixth and mid fifth centuries B.C. (Py 1978, fig.3, nos 9 & 10; fig.4, no.27; fig.5, nos 13, 18 & 19).

TYPES 3, 4 AND 5 HOLE-MOUTHED AMPHORAE

During the fourth and third centuries B.C. Carthage was probably the major centre of production for these cylindrical hole-mouthed amphorae (Peacock 1986; Hayes 1976, 109-112). Production probably continued up to the middle of the second century B.C. (Riley 1979, 136). For the distribution of Tunisian hole-mouthed amphorae in North Africa and the Western Mediterranean, see Peacock (1986) fig.2. At Sabratha, two main types of Tunisian hole-mouthed amphorae have been recognised, classed here as Types 3 and 4.

TYPE 3 BERENICE HELLENISTIC AMPHORA 10/CARTHAGE EARLY ROMAN AMPHORA 1/CINTAS TYPE 315/MAÑÁ D

This form is characterised by a rounded shoulder and the simple inturned rim curves upwards gently from the wall of the amphora. Type 3 is attested at Sabratha in the Augustan pottery group from pit 2 (Fulford 1986a, fig.86, no.77). Type 3 covers a large number of variants, classed here as Sub-types 3a to 3h. For fabric descriptions see below the section "North African Fabrics" (p. 80).

Sub-type 3a (FIG. 3, No. 28)

Form: The rim is oval in section with a pronounced overhang. On the external surface there is a rough horizontal groove at the shoulder and regular shallow horizontal grooves where the handles join the shoulder. The small vertical looped handles have a convex internal surface and two deep concave grooves on the external surface.

North African Fabrics: 1a(2%), 1c(17%), 2a(37%), 2c(2%), 3g(1%), 4a(10%), 4b(2%), 4c(26%), 5a(1%), 5c(1%), 5d(1%)

Total: 120

Context:	i	2/5(2)	5/7(2)	9/16	13/21	13/22(3)
		13/28(2)	13/30	13/32	13/33(2)	14/24(4)

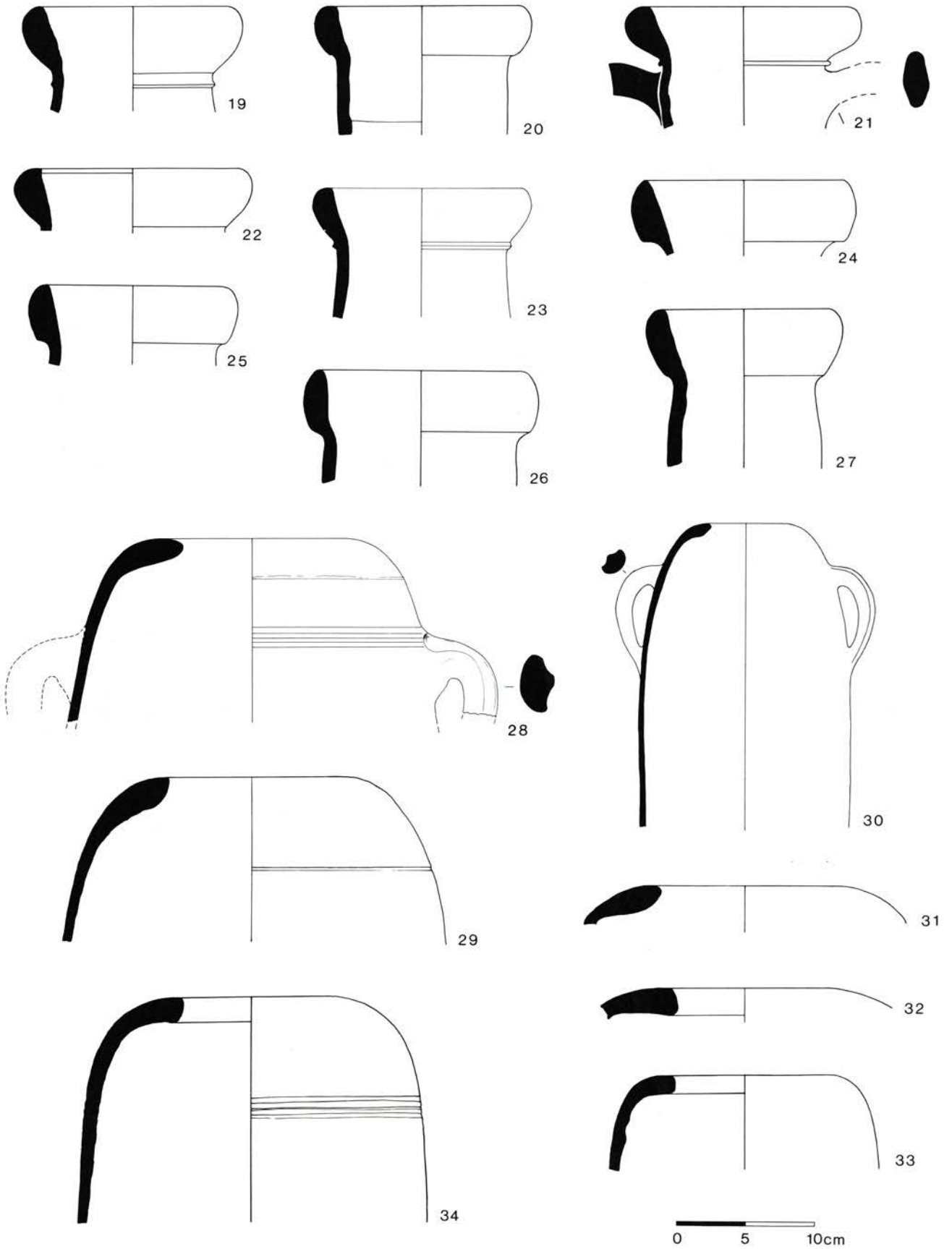


FIG.3 The Amphorae: Types 2 & 3 (Scale 1:4 except No.30 at 1:32)

	18/36	20/13(3)	21/2	22/5	24/12
	27/2	34/2(2)	36/21(2)	36/24(2)	36/?(2)
	44/4	44/5(2)	50/7(2)	51/4	52/4
	62/4(2)	94/5(2)	95/23	97/5	98/10
	110/6(2)	115/5	115/6(3)	115/9(2)	124/6(2)
	124/7	135/7	180/1		
ia	11/3	11/5			
iii	4/129				
ix	2/1	4/18			
xiv	22/12	54/17	60/41	66/5	67/33
	67/36	71/55	89/1	106/7	109/10
	124a/3	153/3	153/4	153/12	154/15
	155/7	R4/18			
xv	5/11	6/4	11/7	11/8	
xix	4/14	6/96	79/30	154/12	
xxiii	39				
xxiv	52/17	57/18	60/21		
xxviii	2/2				
SpA	401.4A				
SpC	9.2AA	9.3b	9.4a	9.4B	13A.4
SpE	28				
SpF	6.11	6.12			
SpH	103.5	103.9			
SpJ	1.1ed	7.5	8.4		
SpK	66.4				
SpW	7.15a				
SpX	3.7	3.7a	3.9	5.19	
SpY	2.2.b.a				
SpZ	1.22b				

Sub-types 3b and 3c (FIG. 3, Nos 29, 30 & 31)

Form: Sub-type 3b – a tapering rim gently up-turned in section. The shoulder has shallow horizontal grooves on the external surface. Sub-type 3c is similar, except that it has a down-turned rim.

North African Fabric: 2a

Total: 5

Context: i 9/19 18/11 36/15 95 95/24

Sub-type 3d (FIG. 3, Nos 32, 33 & 34)

Form: Rim with a blunt, squared, section and a long horizontal overturn.

North African Fabrics: 2a and 2c were present

Total: 6

Context: i 5/8 9/8 18/7 180/1
 xiv 17/12
 SpX 3.7

Sub-type 3e (FIG. 4, Nos 35, 36 & 37)

Form: The thickened rim is upright and oval in section with a short overturn. There are well defined internal wheel-turns on the body.

North African Fabrics: 5a and 5c were present

Total: 4

Context: i 4/13
 xiv 3/14
 SpX 3.6 4.11a

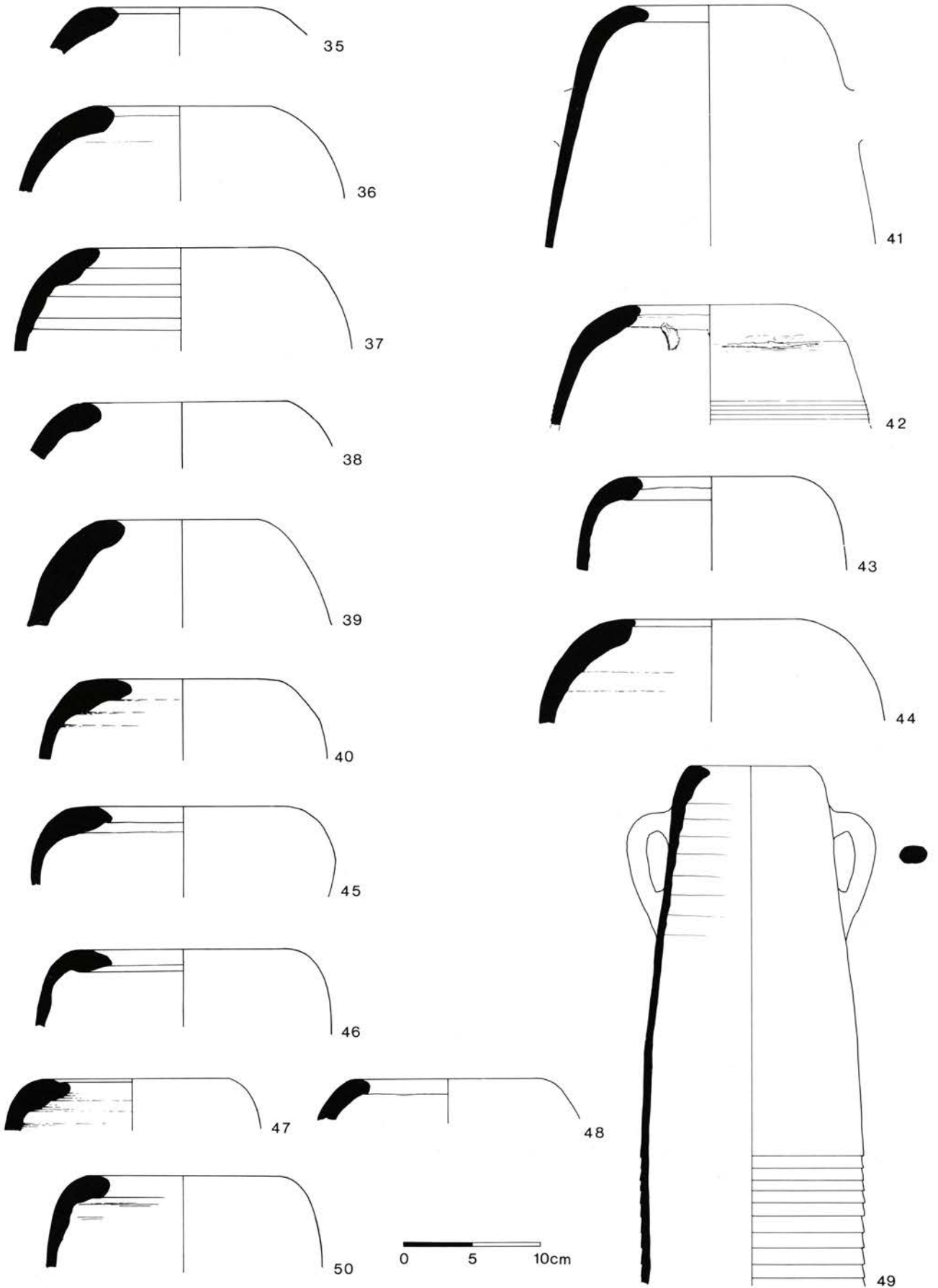


FIG.4 The Amphorae: Type 3 (Scale 1:4 except No.49 at 1:8)

Sub-type 3f (FIG. 4, Nos 38, 39 & 40)

Form: Thickened rim, ovoid in section, with a slightly down-turned internal edge.

North African Fabric: 2d

Total: 5

Context:	i	8/3	24/9	36/21	50/8
	xv	11/6			

Sub-type 3g (FIG. 4, Nos 41-48)

Form: Rim tapered in section with internal ridge and shallow horizontal grooves on the exterior of the shoulder.

North African Fabrics: 1a(4%), 1c(4%), 2a(14%), 2c(14%), 3e(4%), 4a(61%)

Total: 38

Context:	i	9/11	13/30	18/9	18/10	19/4
		36/22	46/9	49/4	94/5	95(2)
		95/10	109/4	123/2		
	ia	4/17	11/4			
	iii	40/33				
	xiv	17/13	67/35	154/12	154/13(2)	156/3
		156/17				
	xv	10/4				
	xviii	2/3				
	xxiii	3/19				
	SpC	9.2AA	9.3B			
	SpF	6.12				
	SpG	2.7				
	SpJ	3C.2A				
	SpX	3.6	3.8	3.9	3.19.5	
	SpZ	1.21h				

Sub-type 3h (FIG. 4, Nos 49 & 50)

Form: Down-turned rim with an internal ledge.

North African Fabrics: 2a(40%), 4a (60%)

Total: 6

Context:	i	115/8	121/10
	xiv	68/35	
	xxiii	38/82	
	SpJ	4.4	
	SpX	3.1b	

TYPE 4 BERENICE HELLENISTIC AMPHORA 10

Sub-types 4a to 4e show a development from the plain rounded shoulder of type 3 to a more defined horizontal angle at the shoulder. This characteristic is further accentuated through sub-types 4f and 4p developing into a horizontal flange with multiple grooves surrounding the mouth of the amphora (av. internal rim diameter: 10 cm).

Examples of type 4 were found *in situ* in a pit section in pre-forum levels at Sabratha (section AF-AG; Kenrick 1986, fig.9 Reg.454, pls 12c & 13c).

Sub-type 4a (FIG. 5, No. 51)

Form: Flat horizontal rim.

North African Fabrics: 2c(7%), 2d(7%), 3c(13%), 3d(27%), 3e(7%), 3g(7%), 4a(33%)

Total: 18

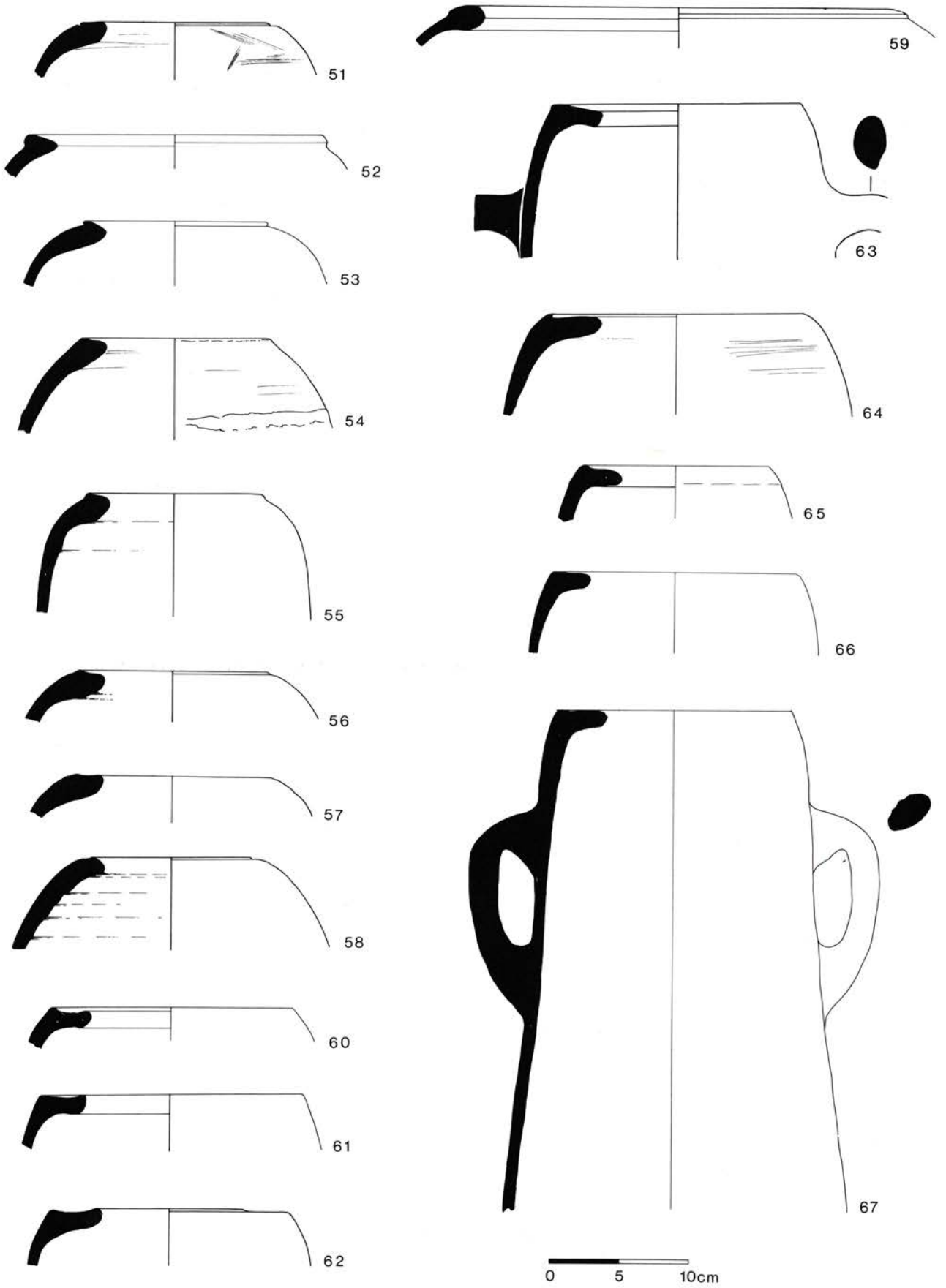


FIG.5 The Amphorae: Type 4 (Scale 1:4)

Context:	i	15/34	55/15	175/5
	iv	6/30		
	xiv	60/42	66/6	103/11
	xxiv	52/16	57/15	
	SpC	13A.8		
	SpD	12		
	SpT	4.19		
	SpW	7.20	9.17a	
	SpX	1.20		

Sub-type 4b (FIG. 5, Nos 52 & 53)

Form: Sharply sloping rims.

North African Fabrics: 2a(57%), 3a(29%), 3d(14%)

Total: 11

Context:	i	13/29	62/3	63/2	65/4	86/2
		175/1				
	xiv	88/10	103/6	109/11		
	SpH	21.12a				
	SpZ	2.7				

Sub-type 4c (FIG. 5, No. 54)

Form: Ill-defined beaded rim with concave surface.

North African Fabrics: 1a(5%), 1c(53%), 2a(14%), 3d(5%), 4a(9%), 5a(14%)

Total: 23

Context:	i	13/23	31/1	105/11	149/6	164/10
		164/11				
	xiv	17/12	17/15	54/19	79/24	103/4
	xxii	50/7				
	SpC	13A	13.A.8	9.4B	9.5	
	SpJ	7.8				
	SpT	3.24	4.21			
	SpW	7.15b	7.17b			
	SpX	5.17a				

Sub-type 4d (FIG. 5, Nos 55-58)

Form: Thickened beaded rim with a flat horizontal surface.

North African Fabrics: 1c(21%), 2a(21%), 4a(50%), 4b(7%)

Total: 17

Context:	i	13/27	65/2	77/3	95	105/12
	xiv	33/21	60/41	65/4	79/29	
	SpH	25A/45	103.5			
	SpK	66.1				
	SpS	10.1a-5a				
	SpX	1.21a	1.23			

Sub-type 4e (FIG. 5, No. 59)

Form: Well defined beaded rim with fully-rounded internal edge. The abnormally wide mouth of this form suggests that it might be identified as a storage-jar.

North African Fabrics: 2a and 4c were present

Total: 3

Context:	i	12/13	13/26
	SpT	1.4db	

Sub-type 4f (FIG. 5, Nos 60–62)

Form: The rim joins the wall of the amphora almost at a horizontal angle.

North African Fabrics: 1a(3%), 1c(3%), 2a(32%), 2b(1%), 2d(2%), 2e(2%), 3b(1%), 3e(3%), 3g(2%), 4a(11%), 4b(4%), 4c(1%), 4d(21%), 5a(13%), 5d(1%)

Total: 164

Context: i	1/1	3/18	9/15	11/1	12/14
	12/15(2)	13/20	13/24(2)	14/20(2)	14/22
	17/6	18/8	18/12	19/5	20/14
	21/4	37/1	37/2	46/6(2)	46/7
	48/5	55/16	55/19(2)	68/3(2)	
	68/4	76/1	76/2(2)	83	95/21(2)
	97/4	98/8	102/17	109/3	109/5(2)
	149/6	154/8	173/1	175/4	183/1(2)
ia	2/15	4/15	4/16	4/20	6/5
	11/1	11/2			
iii	2/26	4/130			
via	1/48				
xiv	12/165	17/?	33/19	40/19	57/3
	60/40	64/3(2)	64/4	69/25	69/29
	69/30	69/32	82/12	89/2	103/5
	103/7	103/8	103/9	103/10	106/6
	153/15	154/16	154/17		
xv	28/5				
xviii	5/25				
xix	1/1	1/17	4/15		
xxi	18/168				
xxii	3	26/5	35/161		
xxiii	1/12	35/37	38/81	38/83	38/84
	38/85	38/86	39/217		
xxiv	52/21				
xxv	11/13	16/43	23/63		
xxvi	4	9/18	9/19		
xxviii	37/9				
SpA	10.4	12	401.4a		
SpB	1.3				
SpC	3A7	9.2AA(2)	9.3a	9.3B	9.3ca
	9.4a	9.4B	13.3	13.A4	13A.8
	27.A.5				
SpD	12.24				
SpF	6.11	6.12(5)	20.2		
SpG	6.10				
SpH	21.8	21.11a	15.16a	103.2a	
SpJ	2.5b	3b.9	7.6	8	9F.16
	95c				
SpK	66.4				
SpT	4.9b				
SpV	5.2ab(2)				
SpW	7.2 00	7.8c	7.17	7.20	8.5e
	9.13	9.13b	9.18		
SpX	3.7	4.12c			
SpZ.	1.22				

Sub-type 4g (FIG. 5, Nos 63–67)

Form: Pronounced external ridge at the junction of the rim with the body. The rim slopes gently down towards the internal rim edge.

North African Fabrics: 1c(25%), 4d(50%), 5a(25%)

Total: 7

Context:	i	9/12	22/3	54/12	95
	xiv	17/14			
	SpT	4.14F			
	SpW	9.17			

Sub-type 4h (FIG. 6, Nos 68 & 69)

Form: The flange of the rim is triangular, or sub-triangular, in section with a grooved upper surface.

North African Fabric: 4d

Total: 4

Context:	v	2
	SpF	6.11

Sub-type 4i (FIG. 6, No. 70)

Form: There is a slight ridge at the junction of the rim and body wall. The flange has a blunt internal edge and slopes gently inwards towards the internal rim. The lower surface of the rim is concave.

North African Fabric: 4d

Total: 1

Context:	xiv	69/35
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Sub-type 4j (FIG. 6, Nos 71-73)

Form: Short flange, beaded with a concave upper surface.

North African Fabric: 3e

Total: 4

Context:	v	2
	SpZ	2.22

Sub-type 4k (FIG. 6, No. 74)

Form: Flat, grooved flange.

North African Fabric: 4b

Total: 1

Context:	i	22/4
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Sub-type 4l (FIG. 6, Nos 75-77)

Form: Horizontal flange with multiple grooves and irregular rim surface. A ridge at the junction of rim and wall.

Fabric: Unknown

Total: 3

Context:	i	24/10	36/20	89/4
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Sub-type 4m (FIG. 6, No. 78)

Form: Ridge at the junction of wall and rim, and a stepped internal rim profile.

Fabric: Unknown

Total: 1

Context:	i	36/19
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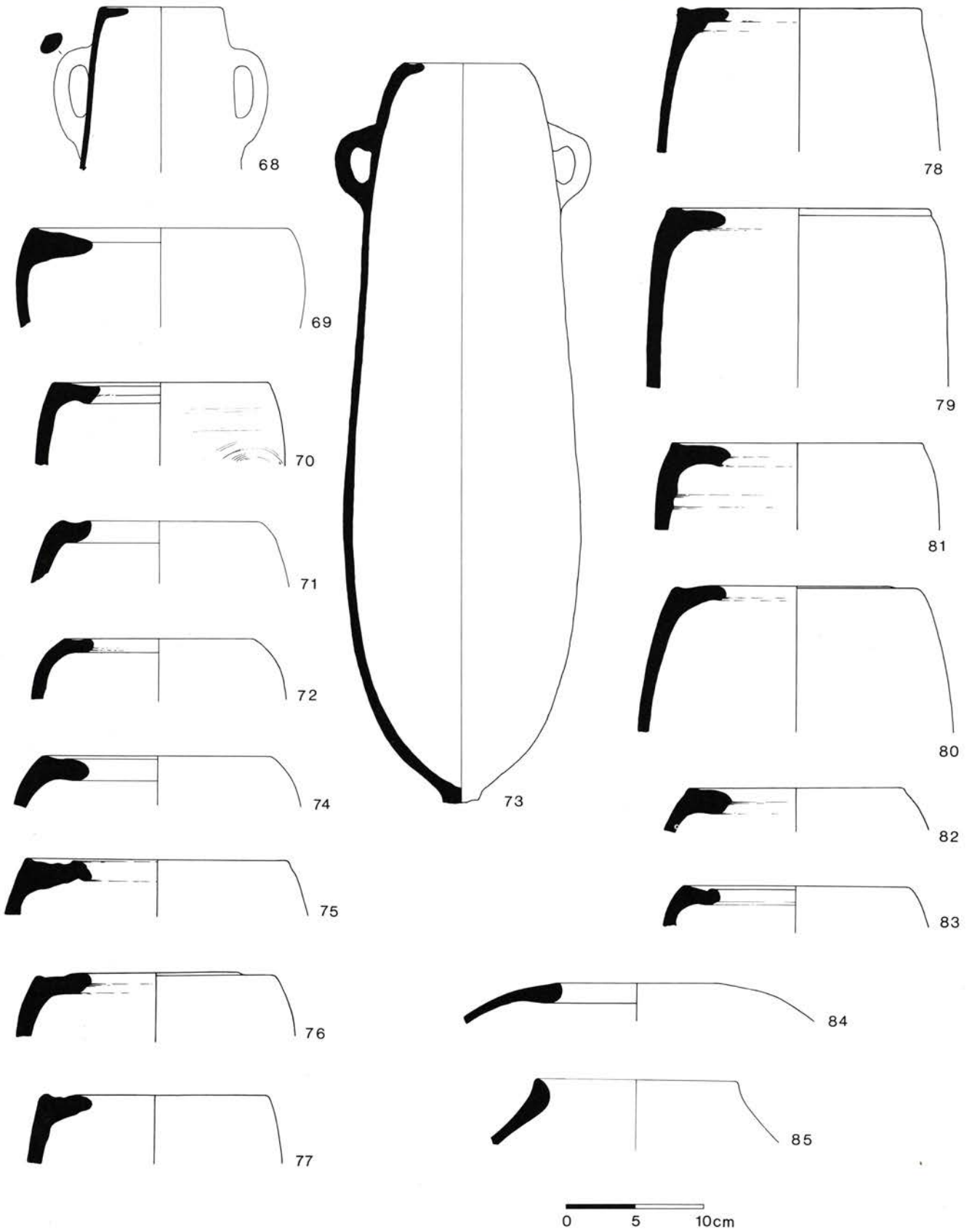


FIG.6 The Amphorae: Types 4 & 5 (Scale 1:4 except No.68 at 1:32 and No.73 at 1:8)

Sub-type 4n (FIG. 6, Nos 79-81)

Form: The long flange has an internal grooved beaded profile.

Fabric: Unknown

Total: 2

Context: i 25/4 36

Sub-type 4o (FIG. 6, No. 82)

Form: Rim with a short and blunt thickened flange.

North African Fabrics: 2a(67%), 4a(33%)

Total: 4

Context: i 50/9
 xiv 88/11 153/12
 xxiv 6/19

Sub-type 4p (FIG. 6, No. 83)

Form: Flange slopes down towards internal beaded rim.

Fabric: Unknown

Total: 1

Context: xiv 3/15

TYPE 5 IBERIAN HOLE-MOUTHED AMPHORAE/MAÑÁ B3 (FIG. 6, Nos 84 & 85)

This is a tall piriform vessel with a tapering base, simple rolled rim and lug handles on the shoulder. These were manufactured at kiln sites along the north-eastern coast of Iberia between the Pyrenees and modern Alicante (Mañá 1951).

Form: This thin-walled amphora has a gently curved shoulder and a rolled rim which is lozenge-shaped in section (no.84). An example with a more upright rim was also present (no.85). This small typological difference reflects the very wide variety of rims exhibited by this form (amply discussed by Ribera 1982; see also Oliva 1962, fig.33, nos 16-22; fig.34, nos 22-24, 27 & 28).

Two fabrics were present:

Fabric A – This is a hard, compact, quite smooth fabric, with a sparse scatter of white sub-angular and sub-rounded limestone inclusions (av. size 0.1 mm) and limestone reaction rims.

Colour: Light red (2.5 YR 6/8)

Fabric B – This is a rougher fabric than A, with sparse, larger irregular limestone lumps (av. size 1.0 mm) and sparse red clay pellets (0.8 mm).

Total: 4

Context: xi 60/43
 xiv 120/59
 SpV 2.10bb 2.12c

Dating for Types 3, 4 and 5 at Sabratha

The chronological distribution of types 3, 4 and 5 at Sabratha clearly shows a peak in the fourth century B.C., at the time when production begins. The high volume of the amphorae is maintained between the early fourth and beginning of the third centuries B.C. (51% of hole-mouthed amphorae in datable deposits). The volume falls slightly, but remains fairly

constant, between the beginning of the third to the beginning of the first century B.C. (39%). By the first century B.C. the volume has decreased to 6%. A total of 4% of hole-mouthed amphorae occurred in contexts dated to between the beginning of the first century A.D. and the third century A.D. This undoubtedly represents residual material and contrasts with the high volume of amphorae derived from the Punic levels.

Dating for Types 3, 4 and 5 outside Sabratha

Types 3 and 4 occur commonly in contexts of the fourth and third centuries B.C. in Tunisian contexts (Hayes 1976, 109). Production probably continued until the middle of the second century B.C. (Riley 1979). The Iberian Type 5 has been discovered in various contexts in eastern Spain dating to between the fifth and first centuries B.C. (Mañá 1951; Almagro 1955; Ribera 1982).

TYPE 6 GRECO-ITALIC/PEACOCK & WILLIAMS CLASS 2 (FIG. 7, Nos 86–98)

Form: The type is characterised by a piriform body, carinated shoulder and cylindrical neck. The low rim is triangular and flares outwards. Variations in rim detail are the basis of a number of variants (Lyding-Will 1982).

Greco-Italic Fabrics

Fabric A: This is quite a hard granular fabric. The clay is moderately micaceous and breaks with a fairly smooth fracture. There are abundant minute glassy grits (0.1 mm to 0.4 mm) and frequent white grits (0.1 mm).

Colour: Light red (2.5 YR 6/8) to pinkish white (5 YR 8/2)

Fabric B: A less granular hard fabric, with a smooth fracture. There are abundant white grits (0.1 mm to 0.5 mm), as well as sparse black glassy grits and rare mica.

Colour: Light red (2.5 YR 6/8) to red (2.5 YR 5/5), fired to a strong brown colour (7.5 YR 5/8)

Fabric C: Similar inclusions to B, but the clay matrix is more compacted, producing a finer fabric. Mica is rare.

Colour: Reddish yellow (5 YR 7/8), with a red core (5 YR 6/8)

Fabric D: This is a coarser fabric with ill-sorted inclusions, and a hackly fracture. There are frequent sub-rounded quartz grains (up to 0.6 mm), rare-frequent black grits (0.4 mm). Mica, however, is rare.

Colour: Light pink (7.5 YR 8/2) to reddish yellow (5 YR 6/6)

Fabric: A(57%), B(15%), C(8%), D(20%)

Total: 106, in addition 3 complete examples in Sabratha Museum

Context:	i	4/23 44/16 111/9 137/2	9/37 47/14 111/10 139/1	20/2 53/8 115/4 149/5	36/67 55/20 124/5 153/10	43/21 104/8 135/10
	ia	2/18	6/6			
	ii	35/93				
	iii	5/38				
	iiib	1/30	1/31	3/8		
	iv	2/43	6/6			
	v	1/41(2) 11/10	3/10	4/31	4/32	5/4
	va	2/75				
	vb	2/78				
	via	1/44				
	vib	2/77				
	viii	2/51	2/53	3/29	3/30	
	xiv	55/5(2)	67/36(2)	68/27	69/20(2)	70/30(2)

	72/6	106/11(2)	109/4(2)	110/30(2)	118/30(2)
	153/23(2)	154/19			
xv	5/5(2)	10/3			
xvii	6/36				
xix	4/8				
xxii	31/13				
xxiii	35/29				
xxv	16/79	23/47	23/53	23/60	23/61
xxvii	4/19	D3 iii			
SpB	3.2				
SpH	27.6a	104.4			

Dating for Type 6 at Sabratha

The volume of Greco-Italic amphorae at Sabratha remained fairly constant between the later fourth/early third and the late second centuries B.C. (26%). However, the chronological distribution demonstrates intrusive finds (early-later fourth centuries B.C.; 8%) and a high proportion of residual amphorae (55%).

Dating for Type 6 outside Sabratha

The examples from Sabratha fall chiefly into Lyding-Will's categories a1 and a2 (1982, 341ff, pls 85a & b). Form a2 is a taller amphora with a larger, narrower, neck and a more pronounced and flared rim. These forms date to between the later fourth/early third and the second century B.C. A chronological overlap between a1 and a2 is suggested by their occurrence together in tombs at Mellita, near Sabratha (Bisi 1969-1970, 189ff).

TYPES 7-9 VAN DER WERFF 1-3

The amphorae in this group relate to the Punic amphora forms originally distinguished by Cintas (1950) and Mañá (1951), and further studied by Van der Werff (1978, figs 8, 10 & 12). The amphorae are seen as being of Tunisian manufacture and dating to between the late third and the first century B.C. These vertical rimmed vessels are cylindrical and range between 0.8m and 1.1m in length. The three forms defined by Van der Werff were present at Sabratha, together with a wide range of variants. Fulford (1986a, 185) discusses the origins and dating of these. The types date mainly to between the late third century B.C. and the first century A.D.

TYPE 7 VAN DER WERFF 3/BERENICE HELLENISTIC AMPHORA 13

Sub-type 7a (FIG. 8, Nos 99-101)

Form: Overhanging rim with pronounced undercut and thickening (cf. also Bisi 1971, Tav.1 nos 2 & 4).

North African Fabrics: 2c(6%), 3b(6%), 3e(6%), 3g(18%), 4a(28%), 4b(6%), 5a(30%)

Total: 19

Context:	i	17/25	46/55	119/7	178/1
	ia	1/19			
	iii	8/13			
	iv	71/10			
	xiv	70/28	71/9	83/20	
	xxii	12/29	13/117		
	SpA	11.6.3	18.7		
	SpB	13.5a			
	SpF	21.3a			

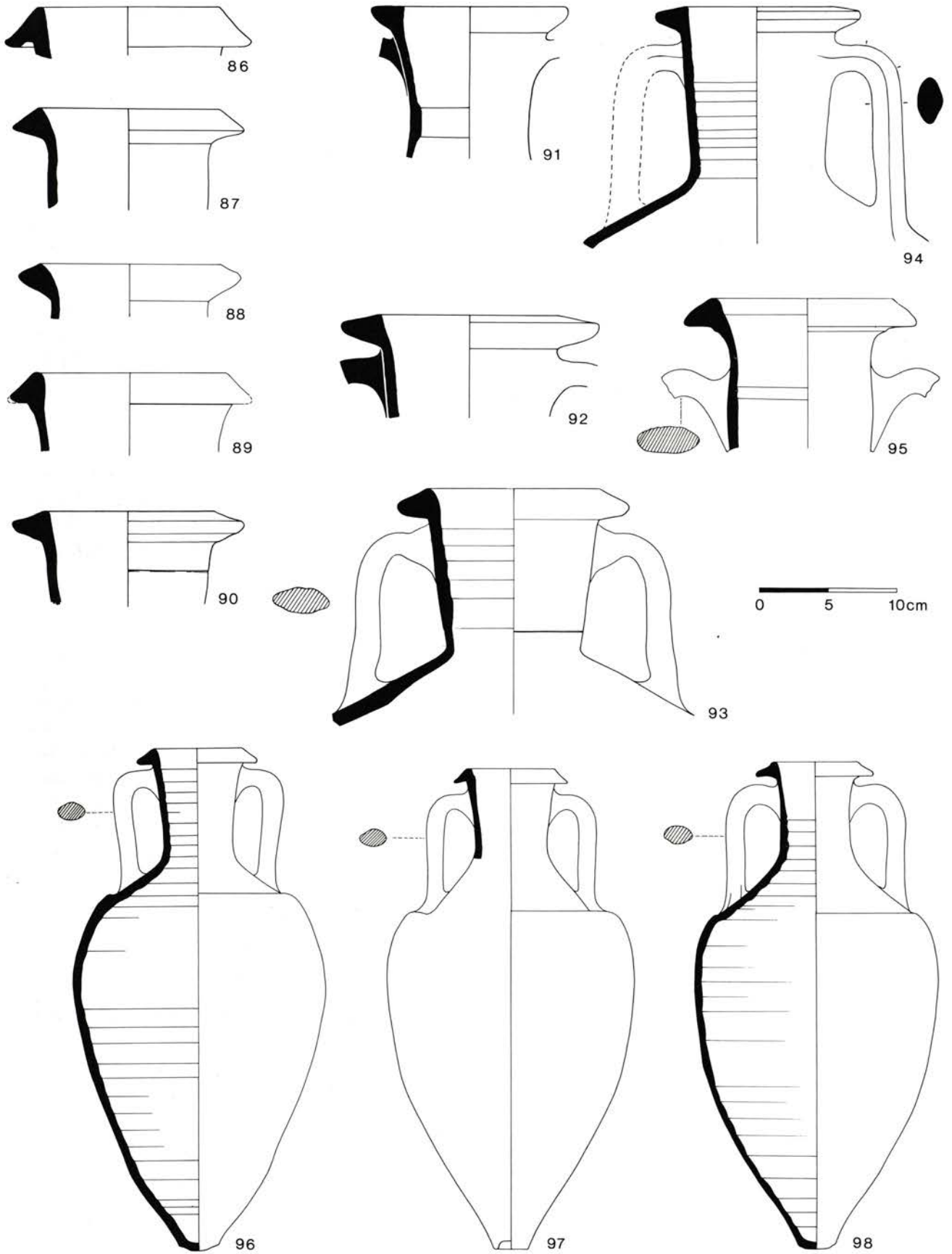


FIG.7 The Amphorae: Type 6 (Scale 1:4 except Nos 96-8 at 1:8)

Sub-type 7b (FIG. 8, Nos 102-104)

Form: Double-lipped rim with deep well-defined groove. One example exhibited an ill-defined groove (No.102).

North African Fabrics: 4a(57%), 5a(43%)

Total: 7

Context:	i	46/56		
	vi	?/12		
	xxi	14/96		
	xxii	12/28	35/10	

Sub-type 7c (FIG. 8, Nos 105-108)

Form: Short square rim with vertical external face and short neck.

North African Fabrics: 1a(4%), 3a(8%), 3b(9%), 3c(31%), 3e(9%), 4a(13%), 4b(13%), 4c(13%)

Total: 26

Context:	i	46/52	76/4	90/9	102/16
	iib,c	5/43			
	iii	1/23			
	v	2/187			
	via	2/78			
	vib	1/7	2/105		
	viii	2/62			
	xiv	35/40	70/38		
	xxv	8/28			
	SpW	2.10	7.15	7.20a(2)	

Sub-type 7d (FIG. 8, No. 109)

Form: Rim is slightly triangular in section with rounded edges.

North African Fabrics: 2e(13%), 3a(13%), 3e(13%), 4a(61%)

Total: 8

Context:	i	9/34	17/24	46/63	48/9
	SpW	7.20d			

Sub-type 7e (FIG. 8, Nos 110 & 111)

Form: Squarish rim with ridges running along the top of the rim.

North African Fabrics: 3a(27%), 3c(9%), 3e(28%), 4a(18%), 4b(18%)

Total: 12

Context:	iii	11/32		
	iiib	3/11		
	iiic	2/39		
	via	2/76		
	xiv	68/26	70/36	110/27
	SpZ	2.7		

Sub-type 7f (FIG. 8, Nos 112-115)

Form: Squarish rim, often with a groove running along the horizontal face of the rim and slightly concave outer face and undercut.

North African Fabrics: 1b(3%), 3a(25%), 3b(3%), 3c(40%), 3e(15%), 3f(3%), 4b(3%), 4c(3%), 4d(5%)

Total: 40

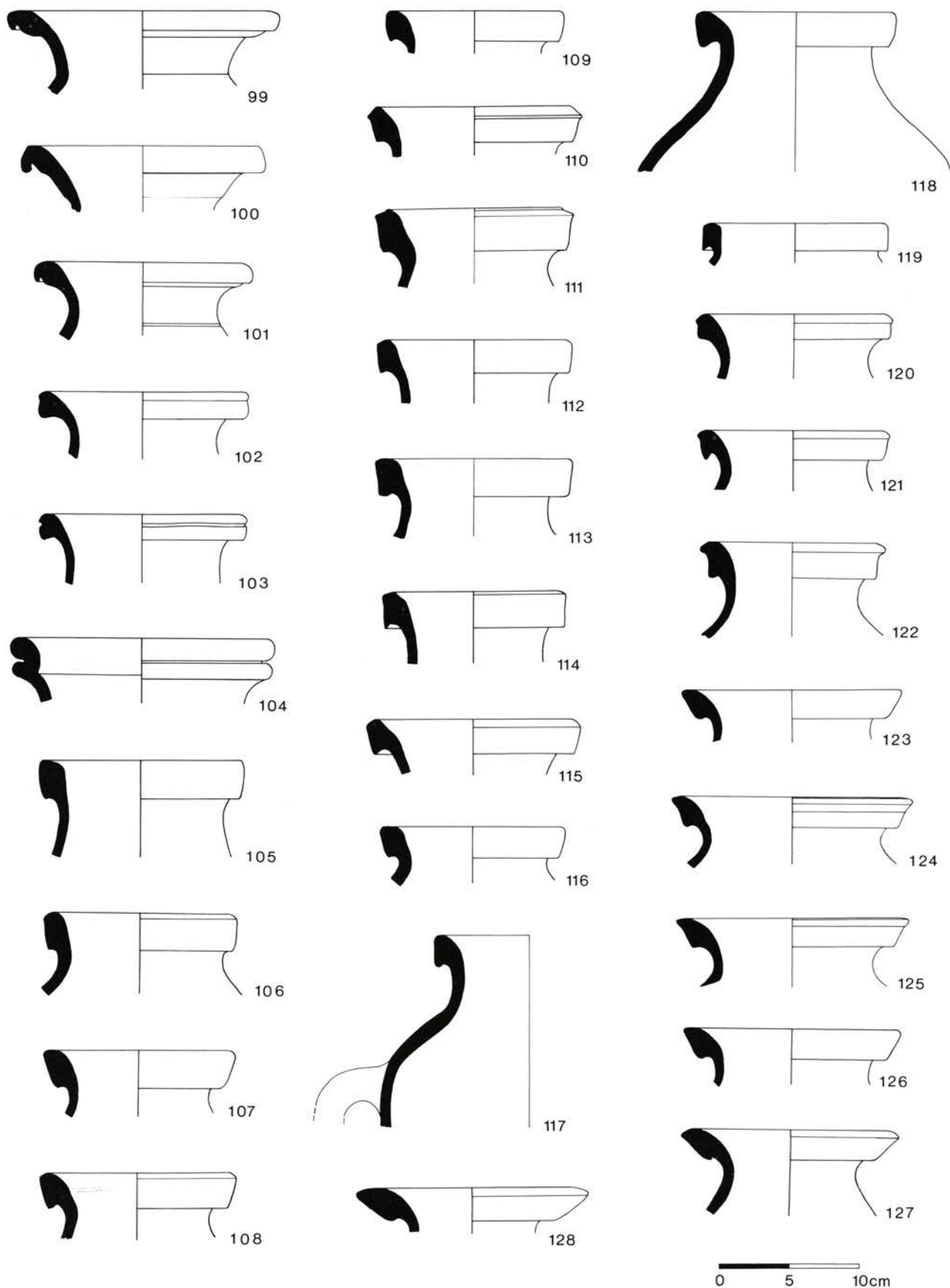


FIG.8 The Amphorae: Type 7 (Scale 1:4)

Context:	i	5/19	42/4	67/8	72/3	76/7
		104/10	120/2			
	ia	9/15	11/50			
	iv	1/52	19/2			
	v	1/58				
	viii	3/27				
	xiv	54/20	67/31	92/1	103/17	
	xix	1/9	4/9			
	SpV	2.8				

Sub-type 7g (FIG. 8, Nos 116-118)

Form: Squarish rim with a well-defined undercut.

North African Fabrics: 3a and 3c were present

Total: 7

Context: Unknown

Sub-type 7h (FIG. 8, No. 119)

Form: Squarish, squat rim with pronounced undercut.

North African Fabric: 3a

Total: 3

Context: Unknown

Sub-type 7i (FIG. 8, Nos 120-122)

Form: Squarish rim with well-defined upper ridge, concave outer face and undercut.

North African Fabric: 4a

Total: 3

Context:	SpT	1.6
	SpW	6.2
	SpZ	2.10

Sub-type 7j (FIGS. 8 & 9, Nos 123-129)

Form: Upright, elongated triangular rim with single or double upper ridges.

North African Fabrics: 2b(8%), 3c(23%), 3e(15%), 3g(8%), 4a(27%), 4b(8%), 4c(4%), 4d(8%)

Total: 30

Context:	ia	6/8	36/70		
	iv	4/37			
	v	1/60			
	?vv	5/9			
	vid	1/64			
	xiv	10/33	69/21	98/23	101/2
	xv	5/6			
	xix	70/32	98/23		
	xxi	17/116	21/92	cii	
	xxv	23/50	23/55		
	SpT	1.5	3.10c		
	SpY	1.9			
	SpW	2.18			
	SpZ	2.2			

Sub-type 7k (FIG. 9, Nos 130 & 131)

Form: Sharply everted rim, well-defined undercut.

North African Fabrics: 3c(37%), 3e(13%), 4b(38%), 5b(13%)

Total: 8

Context:	iiib	5/42
	xiv	70/38
	xxvi	ci

Sub-type 7l (FIG. 9, Nos 132–137)

Form: Slightly everted rim with a distinct upper ridge.

North African Fabrics: 1a(2%), 2b(6%), 3(16%), 3a(11%), 3b(8%), 3c(29%), 3g(2%), 4a(12%), 4b(6%), 4d(4%), 5b(4%)

Total: 52

Context:	i	46/59 110/37	62/10 141/2	63/1	77/13	97/44(2)
	iii	5/137	41/32			
	iiib	3/12	5/41			
	iv	1/48	4/36	14/10		
	v	4/3	5/8	7/?	9/12	
	vid	1/67	5/4			
	viii	2/?				
	xi	79/35				
	xiv	34/15 98/23	68/28 100/13	68/38	70/30	81/176
	xxi	14/97	17/116	18/135	19/21	21/92
	xxvi	32/11	35/39			
	SpT	1.4d(2)				
	SpZ	1.3.b,d				

Sub-type 7m (FIG. 9, Nos 138–142)

Form: Everted rim with distinct overhang.

North African Fabrics: 3c(43%), 4b(29%), 4c(29%)

Total: 9

Context:	iiib	5/40	
	xxic	2ii	
	SpG	18.2	
	SpT	1.7a	3.8a
	SpV	2.3	
	SpY	5.18a	

TYPE 8 VAN DER WERFF 1/BERENICE HELLENISTIC AMPHORA 12/CINTAS 312

This variant is characterised by a high concave neck with a multiple-lipped, wide-flaring rim profile (d.21–30cm). The variant dates broadly to between the first half of the second century B.C. and the end of the first century B.C./first century A.D.

Sub-type 8a (FIG. 9, Nos 143–149)

Form: Multiple-lipped, flanged rim with narrow tapering mouth.

North African Fabrics: 2a(4%), 3a(4%), 3c(4%), 3e(9%), 4a(33%), 4b(22%), 4c(2%), 5a(18%), 5b(4%)

Total: 49

Context:	i	16/15	17/25			
	ia	11/44				
	iii	3/65				
	iv	6/15	6/16	50/9		
	v	2/188	3/63			
	vib	2/104				
	vii	3/26				
	viii	2/66	3/34			
	xiv	3/8	33/22	34/15	35/42	50/9
		50/10	61	71/10	71/42	81/46
		81/164	81/166(2)	81/168	81/179	115/10
		115.10a	115.10b			
	xxi	17/130	21/93			
	xxv	2/59	7/25	16/116	21/93	
	SpC	3.5b				
	SpT	1.4c	1.7a	1.8		
	SpV	6				

Sub-type 8b (FIG. 9, Nos 150 & 151)

Form: Single or multiple-lipped horizontal rim with heavy overhang.

North African Fabrics: 2a(6%), 2b(6%), 3c(13%), 3g(19%), 4a(44%), 4b(6%), 5a(6%)

Total: 16

Context:	iii	3/64	7/20		
	iiib	5/37			
	iv	1/40			
	v	2/189			
	xiv	50/9	50/10	52/4	71/11
	xxi	14/80	17/122	17/131	
	xxvi	35/36			
	SpY	2.12			

Sub-type 8c (FIG. 9, Nos 152-155)

Form: Similar to 8b, but more upright profile.

North African Fabrics: 1a(4%), 3c(24%), 3e(12%), 3g(12%), 4a(20%), 4b(4%), 4c(4%), 5a(12%), 5b(8%)

Total: 25

Context:	i	46/57	139/2		
	iv	1/54			
	v	10/9			
	viiia	1/2	2/77		
	viii	1/7	2/63		
	xiv	35/43	47/22	50/1	52/6
		128/94			100/14
	xv	13/22			
	xx	1/196			
	xxi	4/18			
	xxiii	40/104			
	xxiv	42/189			
	SpC	9.3			
	SpT	1.8			
	SpY	1.38	2.21		

TYPE 9 VAN DER WERFF 2

This variant has a shorter, concave, neck and is a smaller version of Type 7, with a similar everted rim profile (cf. Van der Werff 1978, fig.10, nos 6 and 9). An example was recovered from pit 2

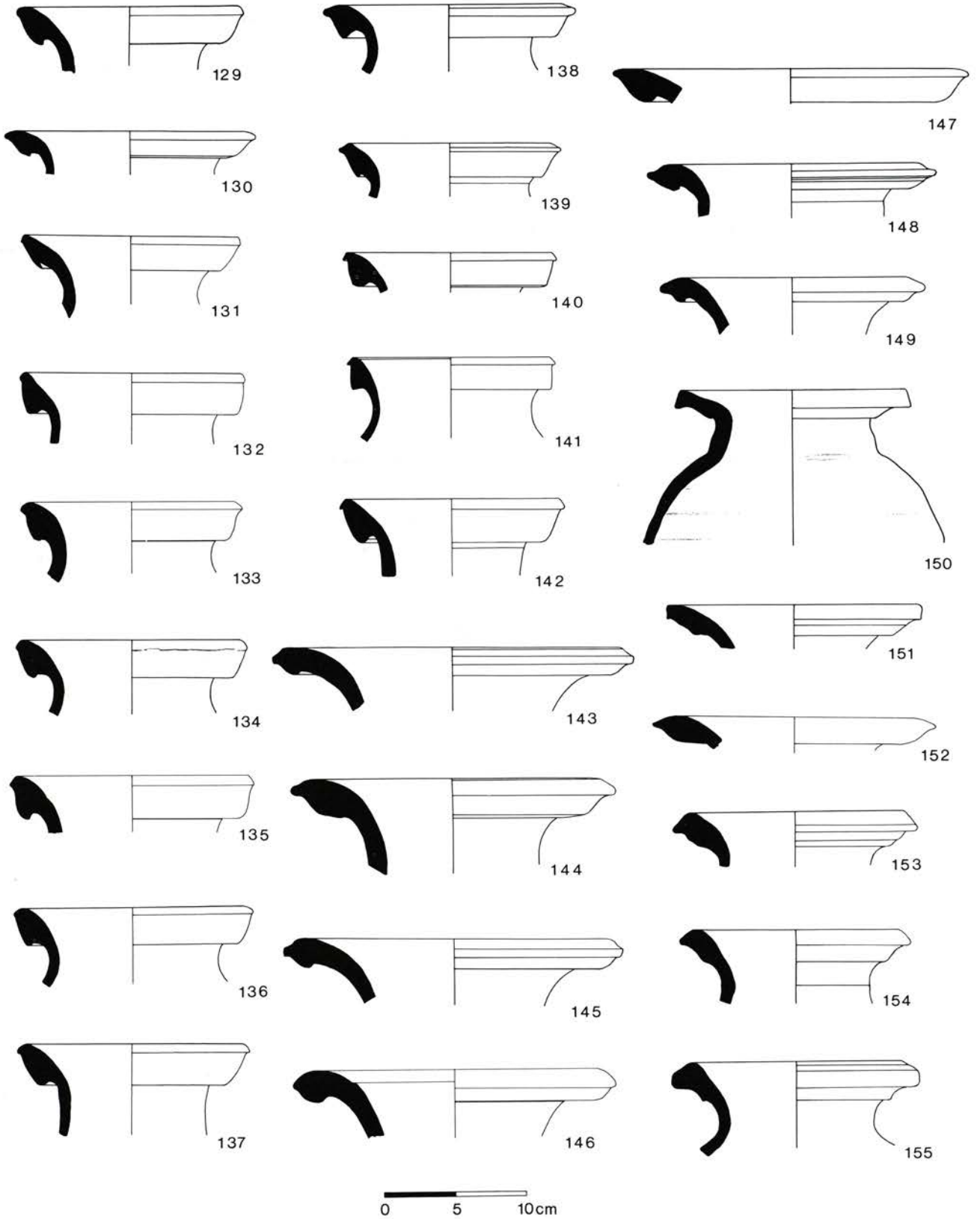


FIG.9 The Amphorae: Types 7 & 8 (Scale 1:4)

(trench Y3-4) at Sabratha (Fulford 1986a, 183, fig. 86, nos 80 & 81). The variant dates mainly to between the second century B.C. and the Augustan period.

Sub-type 9a (FIG. 10, Nos 156 & 157)

Form: Squarish rim tending towards a convex outer face with an undercut and a long neck.

North African Fabrics: 2b(20%), 3a(20%), 3c(40%), 3g(20%)

Total: 7

Context: SpV 4.27
SpX 3.8

Sub-type 9b (FIG. 10, No. 158)

Form: Small overhanging rim.

Fabric: Unknown

Total: 1

Context: SpV 1.14a

Sub-type 9c (FIG. 10, No. 159)

Form: Simple small overhanging rim

Fabric: Unknown

Total: 1

Context: SpV 1.1b?

Sub-type 9d (FIG. 10, Nos 160-162)

Form: Rolled-over rim sometimes with narrow undercut.

North African Fabrics: 3g(75%), 4b(25%)

Total: 7

Context: xiv 117
SpH 12.15
SpW 9.8

Sub-type 9e (FIG. 10, No. 163)

Form: Rolled-over rim with pronounced overhang.

Fabric: Unknown

Total: 2

Context: SpW 7.21a

Sub-type 9f (FIG. 10, Nos 164-168)

Form: Well-defined, rounded, rim with a tall neck.

North African Fabrics: 1a(4%), 1b(4%), 2b(4%), 3a(11%), 3b(4%), 3c(36%), 4a(30%), 5a(7%)

Total: 28

Context: i 43/23
iii 12/10
iiib 1/37 5/46
iv 14/11 66/1
v 2/187
vii 2/30
xiv 11/98 128/105

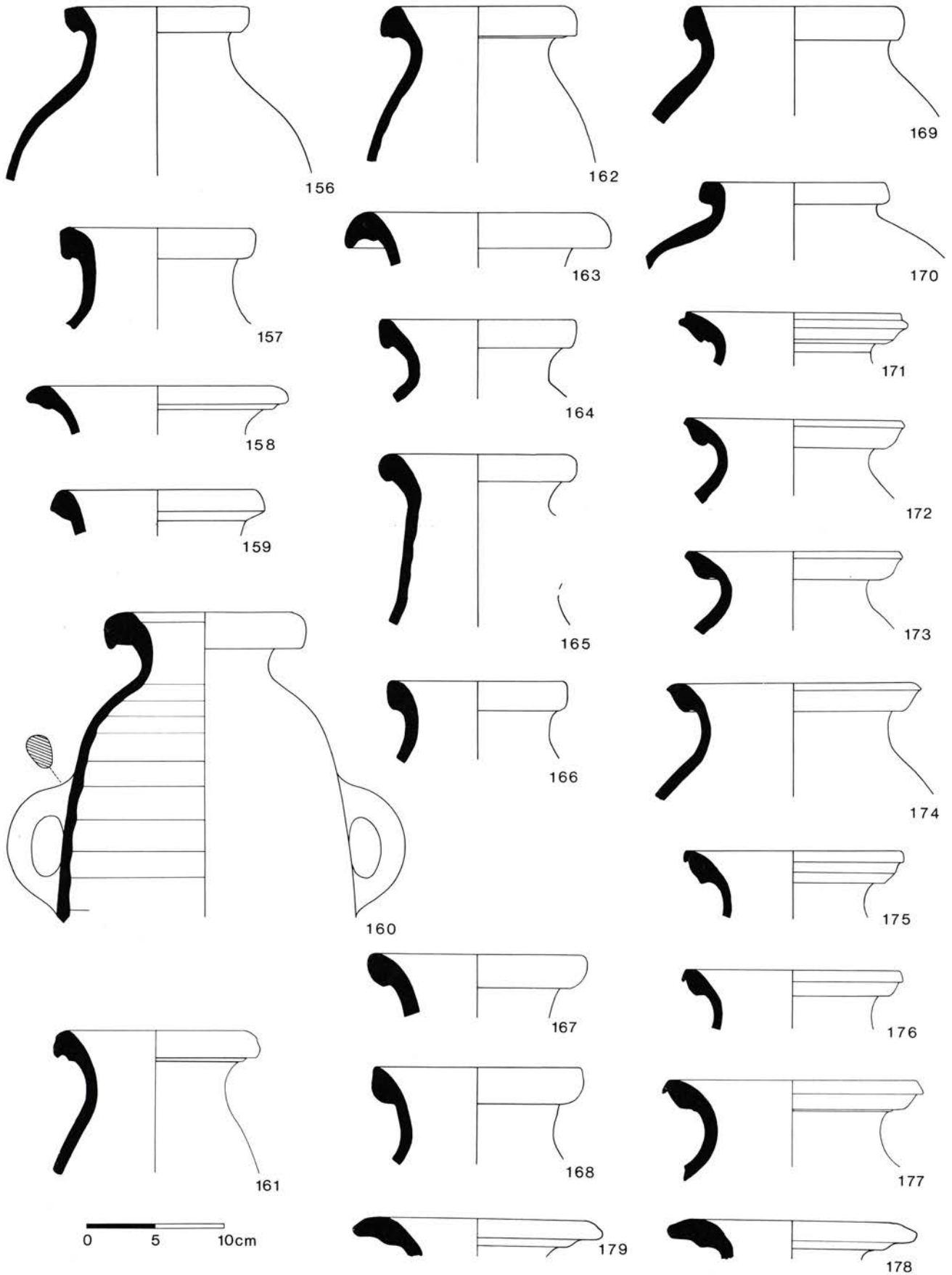


FIG.10 The Amphorae: Type 9 (Scale 1:4)

xix	5/13		
xx	12/18		
SpG	18.2		
SpT	1.7a	1.9c	
SpV	1.9	4.9a	
SpY	3.3	3.4a	
SpZ	2.3.7a		

Sub-type 9g (FIG. 10, No. 169)

Form: Simple rolled rim.

North African Fabrics: 2a(6%), 2d(13%), 3c(6%), 3f(6%), 3g(13%), 4a(44%), 4b(6%), 5a(6%)

Total: 18

Context: SpV 7.17a

Sub-type 9h (FIG. 10, No. 170)

Form: Very squat, squarish rim with short neck.

Fabric: Unknown

Total: 1

Context: SpX 1.23

Sub-type 9i (FIG. 10, No. 171)

Form: Multiple-lipped rim without pronounced overhang.

North African Fabrics: 4a(33%), 5a(67%)

Total: 5

Context: SpT 1.8

Sub-type 9j (FIG. 10, Nos 172-174)

Form: Rounded everted rim with upper ridge.

North African Fabrics: 3a(5%), 3b(9%), 3c(27%), 3e(41%), 3g(9%), 4a(9%)

Total: 12

Context: i	97/46		
iiib	5/56		
via	2/107		
xiv	11/98	22/15	70/39
xxi	18/95	18/134	
SpT	1.5		

Sub-type 9k (FIG. 10, Nos 175-177)

Form: Everted rim with distinct overhang and often with multiple lips.

North African Fabric: 4c

Total: 4

Context: vii	2/?		
SpG	18.2		
SpT	1.7a	1.9c	

Sub-type 9l (FIG. 10, Nos 178 & 179)

Form: Smaller rims with pronounced overhang and thickened convex profile.

North African Fabric: 5a

Total: 5

Context	xiv	115/10	115/10a	115/10b
	SpC	3.5b		
	SpT	1.8		

Dating for Types 7–9 at Sabratha

Types 7–9 represent the principal Tripolitanian and North African amphorae of the later Punic period at Sabratha. Type 7 was very probably produced in Tripolitania (Van der Werff 1978, 180). Among dated groups the highest proportion of these forms is registered in the first half of the second century B.C. Thereafter until the first century A.D. these forms account for the majority of the amphorae found at Sabratha (see p.00).

Dating for Types 7–9 at other sites

This is drawn entirely from Van der Werff's classification (1978).

Sub-type 7a: Late third century B.C. to first century A.D. (Van der Werff *ibid.*, fig.12, no.9)

Sub-type 7b: From the late third century B.C. (Van der Werff *ibid.* fig.12, no.8; Riley 1979, D.98)

Sub-type 7h: Late third century B.C. to first century A.D. (Van der Werff *ibid.*, fig.12, no.3)

Type 8: First half of the second century B.C. until the end of the first century B.C./beginning of the first century A.D. (Van der Werff *ibid.*, fig.8, no.2)

Type 9: Broadly dates to between the second century B.C. and the Augustan period (Sub-type 9a: Van der Werff *ibid.*, fig.5, sherds 034–215; 9c: *ibid.*, fig.5, sherds 034–220; 9d: *ibid.*, fig.10, no.6; 9e: *ibid.*, fig.6, sherds 033–81; 9f: *ibid.*, fig.10, no.5, fig.3, sherds 23–17, fig.4, no.2, fig.5, sherds 40–74; 9g: *ibid.*, fig.3, sherds 23–17; 9h: *ibid.*, fig.10, no.3; 9i: *ibid.*, fig.5, sherds 35–357).

TYPE 10 BERENICE D.91/CINTAS 314/ALMAGRO 398–9 (FIG. 11, Nos 180–183)

Form: This amphora exhibits an erect vertical rim, sharply-angled at the neck. Variants may be differentiated by the thickness of the rim, the angle of the rim and the angle between the rim and the neck. Other parallels from Carthage (Hayes 1976, 60, nos 24–25) and Mellicha Bay (Frost 1969, fig.8, no.9).

Type 10 Fabrics

Fabric A: This is a hard granular clay with abundant limestone specks (up to 1.0 mm) and moderate quartz inclusions (average of 0.5 mm).

Colour: Reddish brown (2.5 YR 5/4) to light red (2.5 YR 6/6)

Fabric B: This is a hard, granular fabric, with abundant limestone reaction rims and irregular lumps of lime (up to 1.0 mm).

Colour: Light reddish brown (5 YR 6/4)

Fabric C: This is a hard, quite rough clay, with moderate sub-rounded quartz grains (average of 0.2 mm) and moderate limestone inclusions.

Colour: Reddish yellow (7.5 YR 7/6) to pink (7.5 YR 8/4)

Fabric: A(82%), B(7%), C(12%)

Total: 51

Context:	i	12/18	26/7	36/68	43/24	44/29
		46/60	53/5	53/6	95/?	97/48
	ia	5/8	6/9			
	iii	4/82	5/40	15/3		
	iv	1/53				
	vi	14/21	62/106			
	via	2/102				
	vib,c	7/96				
	vid	1/63				

viii	2/67		
xiv	25/41	70/33	106/10
xxi	47/4		
xxiii	20/9	32/14	
xxiv	59/29		
xxv	16/117	23/59	
xxvi	42/24		
SpB	4.5		
SpC	11.4B		

Dating of Type 10 at Sabratha

At Sabratha, some 25% of Type 10 occurred in contexts of the fourth and third centuries B.C., 21% in second and first century B.C. contexts, 29% in late first to mid second century A.D. contexts and 25% residually in third and fourth century A.D. contexts.

Dating of Type 10 at other sites

Earliest examples dated to between the late fifth and third centuries B.C. (Cintas 1950, no. 314; Almagro 1955, 398–9). A later, Hellenistic to early Roman date-range, is proposed by Riley (1979, 143, D.91).

TYPE 11 DRESSEL I/OSTIA XX/PEACOCK & WILLIAMS CLASS 3–4 (FIG. 11, Nos 184–7)

This is perhaps the most common amphora of the Roman Republican period in the Western Mediterranean. The type was manufactured at a number of kiln sites in central and southern Italy and is widely distributed throughout western Europe. Finds in the eastern Mediterranean are rarer (Riley 1979, 135). On the basis of variations in rim form, the class is usually sub-divided into the forms Dressel IA, IB and IC.

Dressel 1 Fabrics

Fabric A: A hard, rough, fabric with frequent small black grits (average size of 0.2 mm), white inclusions (0.4 mm) and occasional red clay pellets.

Colour: Reddish yellow (5 YR 7/6) to red (2.5 YR 5/8)

Fabric B: A finer, sandier, more compact clay matrix with a scatter of very fine black and white inclusions.

Colour: Pink (5 YR 8/4)

Fabric C: A rough, granular, fabric with hackly fracture. There are frequent, sub-rounded, quartz grains (average of 1.0 mm), and moderately common red and grey grits (average of 0.9 mm).

Colour: Pink (7.5 YR 7/4)

Sub-type 11a/Dressel Ia (FIG. 11, Nos 184–187)

Form: Pronounced triangular rim.

Fabric: A(71%), B(12%), C(18%)

Total: 21

Context:	i	97/58			
	v	1/45	5/6		
	xiv	2/17	21/13	25/8	31/173
		49/8			49/7
	xxi	52/5			
	xxiv	15/163			
	xxv	23/48			
	SpF	6.12			
	SpV	1.14	6.12		
	SpX	1.4a			

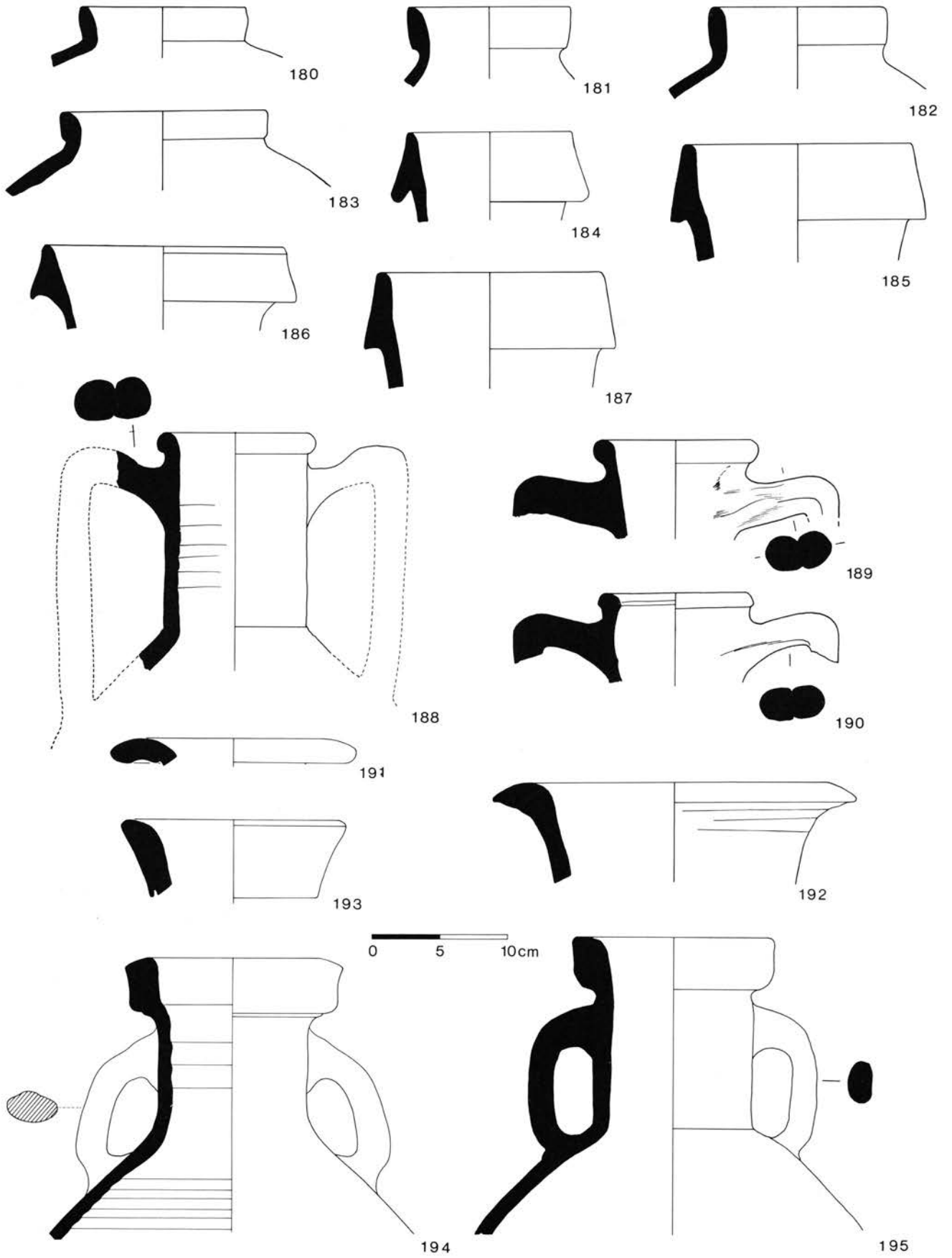


FIG.11 The Amphorae: Types 10, 11, 13, 14 & 16 (Scale 1:4)

Sub-type 11b/Dressel Ib

Form: Taller, less pronounced, triangular rim.

Fabric: Unknown

Total: 1

Context: Unknown

Dating of Type 11 at Sabratha

83% of Dressel IA amphorae occurred in first century B.C. contexts, and 17% residually in contexts of the late second century A.D.

Dating of Type 11 at other sites

Dressel IA dates from around 130 B.C. until the middle of the first century B.C. There was probably some overlap between the Dressel IA and IB, the latter dating from the first half of the first century B.C.

TYPE 12 DRESSEL 6/BERENICE EARLY ROMAN AMPHORA 5/PEACOCK & WILLIAMS CLASS 8

Form: A tall amphora with a rounded piriform body, tall neck, strip handles and a heavily-finished curved rim. The type appears to have been made in the Istrian peninsula of Yugoslavia (Riley 1979, 153) and probably carried wine.

Fabric: This is a fine, well levigated clay containing quite frequent mica and dark red and white grits. There is no surface treatment. The fabric is similar to that described by Riley (1979, 153).

Colour: Reddish yellow (7.5 YR 7/6)

Total: 4

Context:	xiv	12/22	81/170
	xxi	21/91	
	SpB	4.15	

Dating of Type 12 at Sabratha

Type 12 occurred in early first and second century A.D. contexts at Sabratha. In addition an example was found in an Augustan context at Sabratha (Fulford 1986a, fig.86 no. 100, pit 2, Tr. Y3-4).

Dating of Type 12 at other sites

This form dates to the first century A.D. (see Riley 1979, 155, fig. 18, for distribution of Dressel 6 amphorae).

TYPE 13 DRESSEL 2-4/PEACOCK & WILLIAMS CLASS 10 (FIG. 11, Nos 188-190)

Form: This amphora consists of a tall piriform body with gently everted neck, simple ring-profile rim and long bifid handles.

Fabric: The Campanian fabric described by Peacock & Williams (1986, 87) was represented. However, one example (context XIV.119/5) was in a fabric produced in the Barcelona region of north-eastern Spain (Keay & Jones 1982).

Total: 26

Context:	iii	2/15	4/77			
	v	9/18				
	via	2/110				
	xiv	9/12	12/15	14/24	81/46	81/101
		81/169	92/108	119/5		
	xxiii	30/211				
	SpB	60.1c				
	SpD	1.7a	4.3			
	SpE	43.1				
	SpG	2.7				
	SpH	0.15				
	SpV	3.8	2.4			
	SpW	10.0				
	SpX	1.13				
	SpY	3.7				

Dating of Type 13 at Sabratha

46% of Type 13 amphorae occurred in first century A.D. contexts, including one example in a fabric characteristic of north-east Spain. 31% are dated to the first half of the second century A.D. and 23% occurred residually in third and fourth century A.D. contexts. In addition, Fulford identified Dressel 2–4 amphorae in the following contexts: Y1xxv.24 (1986a, fig.86, 90–98) and Tr.N1 ph.v (1986b, fig.91, 24).

Dating of Type 13 at other sites

This type of wine amphora was manufactured at kiln sites in Italy, Spain, Southern France and Britain. Production began at the very end of the first century B.C. and continued into the second century A.D. (Panella 1973; Tchernia & Zevi 1972; Pascual 1977; Beltrán 1977; Tchernia & Villa 1977). The type also seems to be quite common in North Africa (Riley 1979, 151).

TYPE 14 SOUTHERN SPANISH GARUM AMPHORAE/PEACOCK & WILLIAMS CLASS 18–19 (FIG. 11, Nos 191–3)

Sub-type 14a/Beltrán IIB/Ostia LVIII (FIG. 11, Nos 191 & 192)

Form: Constricted neck and pronounced, thick, horizontal rim.

Fabric: See Peacock & Williams 1986, 112.

Total: 2

Context:	i	22/13
	SpY	1.10b

Sub-type 14b/Beltrán I Dressel 7–11 (FIG. 11, No. 193)

Form: Collar rim, slightly convex outer face with undercut.

Fabric: Peacock & Williams 1986, 119.

Total: 1

Context:	xv	17/14
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Dating of Type 14 at Sabratha

Examples were either intrusive (14a) or residual (14b).

Dating of Type 14 at other sites

These have been dated on sites in Germany, Spain and Italy to between the late first century B.C. and the mid second century A.D. (Beltrán 1977).

TYPE 15 DRESSEL 20/BELTRÁN V/PEACOCK & WILLIAMS CLASS 25

Form: The basic form consists of a globular body with button foot, squat neck, rounded handles and a pronounced rim (Tchernia 1967; Callender 1965; Ponsich 1974; 1979). Morphological variation in rim shape permits the definition of different phases of production (Martin-Kilcher 1983).

Fabric: A hard, compacted clay with smooth to irregular fracture, typical to fabrics of the Guadalquivir valley. There were frequent opaque quartz inclusions together with moderately common specks of lime and dark grits.

Colour: Buff to grey (7.5 YR 7/4)

Total: 1

Context: SpJ ii(?)

Dating of Type 15 at Sabratha

Undated context.

Dating of Type 15 at other sites

These amphorae were produced on kiln sites in southern Spain between the early first century A.D. and later third and possibly early fourth centuries A.D. They carried olive oil and are common throughout the western Empire as well as, to a lesser extent, in the Eastern Mediterranean (Riley 1979, 162).

TYPE 16 TRIPOLITANIAN I-III/OSTIA LXIV/OSTIA II/OSTIA XXIV/BERENICE EARLY ROMAN AMPHORA 11A-B/PEACOCK & WILLIAMS CLASS 36-7 (FIGS 11 & 12, Nos 194-218)

This type comprises tall cylindrical amphorae manufactured between the first and fourth centuries A.D., at several kiln sites in Tripolitania. For example, at Gargaresh near Oea (Panella 1973, 564), Sidi Assid and Ain Scersciara (Arthur 1982). It has been suggested that this type may be a later development of Type 7 (Van der Werff 3; cf. Riley 1979, 138). It was subdivided by Panella (1972) into the sub categories; Tripolitana I, II and III.

Sub-type 16a/Tripolitana I/Ostia LXIV/Berenice Early Roman Amphora 11a (FIGS 11 & 12, Nos 194-207)

Form: The slightly conical neck is quite high with a heavy, thickened, rim characterised by a concave outer face. The strap handles spring from the top of the neck and are attached at the shoulders.

North African Fabrics: 2a(5%), 3a(43%), 3b(1%), 3c(45%), 4a(7%)

Total: 92

Context:	i	45/11				
	ia	1/18				
	iii	3/62	4/78	5/34	12/9	
	iiib	5/38				
	v	2/152				
	vi	2.1/7				
	vib	2/74	2/103			
	vid.i	1/21				
	viii	3/25				
	xiv	11/97	25/9	50/8	70/29(2)	71/8
		80/48	81/160	81/161	81/162	81/163
		81/173	81/177	81/178	92/103	

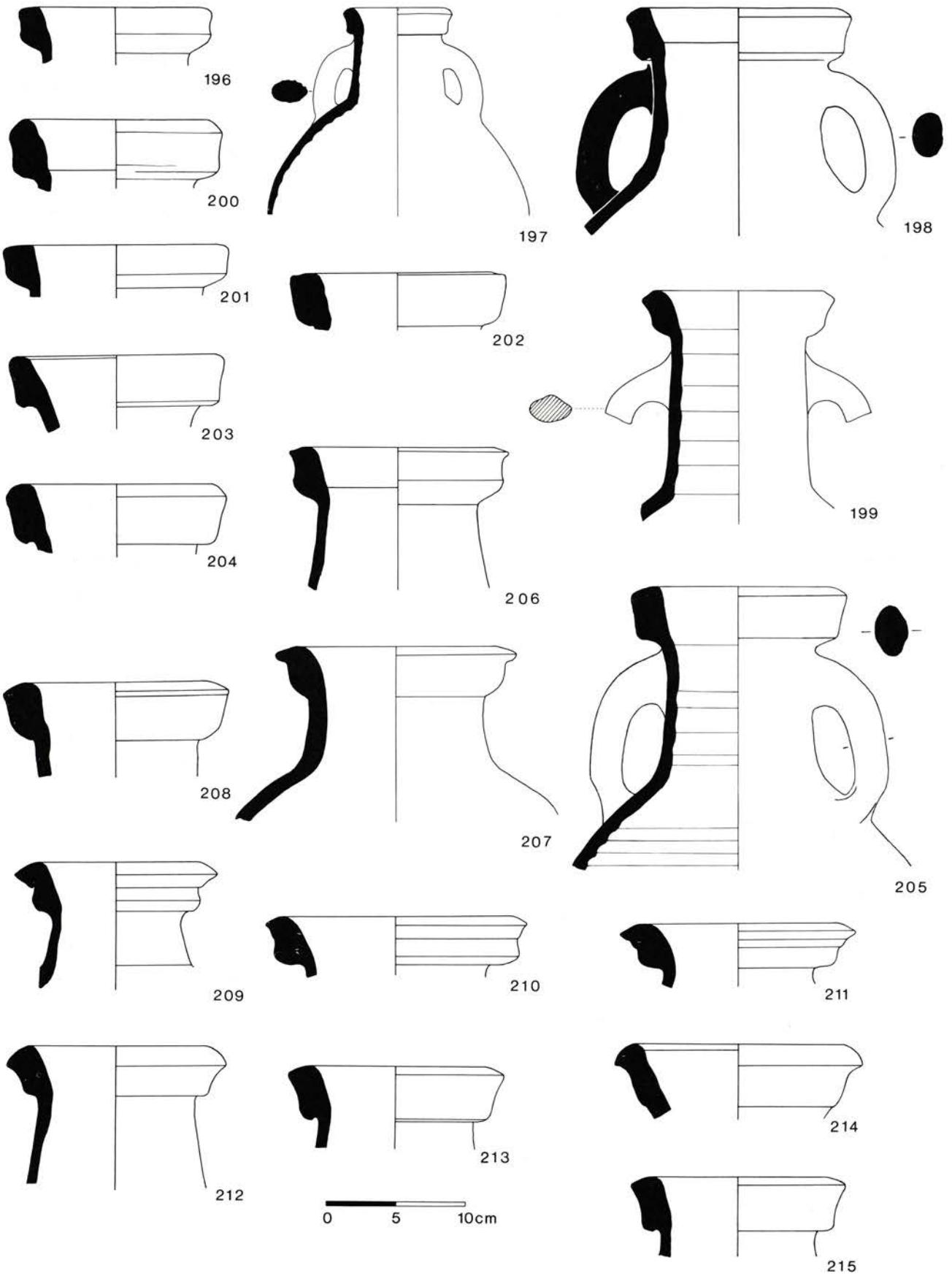


FIG.12 The Amphorae: Type 16 (Scale 1:4 except No.197 at 1:32)

xxii	35/81			
xxiii	23/134	40/99		
SpH	27.5a	32.6		
SpT	3.2a			
SpV	1.12			
SpW	1.6	7.8	8.12	
SpY	1.17	1.5	1.8b	3.3(2)

Sub-type 16b/Riley Early Roman Amphora 11B (FIG. 13, Nos 219-225)

Form: Heavy everted rim with a convex outer face and a groove below the lip (cf. Bisi 1971, Tav.1, 4 for this type).

North African Fabrics: 3a and 3e were present.

Total: 9

Context:	xiv	35/39 (2)		
	SpT	1.7		
	SpV	1.3	4.11	
	SpY	2.22c		
	SpZ	1.8		

Sub-type 16c/Tripolitana II/Ostia XXIV (FIG. 12, Nos 208-211)

Form: The thickened, slightly flared, rim has a sharply concave, grooved outer face.

North African Fabrics: 1a(4%), 3b(10%), 3c(5%), 3e(57%), 3f(5%), 4a(5%), 5a(10%), 5b(5%)

Total: 21

Context:	iii	5/35		
	iiib	1/134		
	iv	69/11		
	v	2/156		
	via	1/45		
	vid	3/17		
	vii	2/24		
	xiii	21/28		
	xiv	92/167		
	xix	84/78		
	SpT	3.22		
	SpW	1.3b	2.5a	8.5b

Sub-type 16d/Tripolitana III/Ostia II (FIGS 12 & 13, Nos 212-218)

Form: Comprises an everted collar rim.

North African Fabrics: 2a(4%), 3a(22%), 3c(4%), 3e(44%), 4a(22%), 5b(4%)

Total: 35

Context:	i	46/54	97/43		
	ia	9/16			
	iii	3/63			
	iiic	2/43	2/44		
	vi	3/16			
	vib	2/75	2/76		
	vid	6/1			
	xiv	9/120	11/96	119/6	127/2
	xv	12/17			128/91
	xix	6/119			
	xxii	17/53			
	xxiii	25/172			
	xxvi	42/184			
	SpT	3.22			
	SpW	2.6(2)			
	SpY	3.14	3.7b		
	SpZ	3.7a & b	3.7b		

Dating of Type 16 at Sabratha

At Sabratha the chronological distribution of Type 16 amphorae is fairly constant between the first half of the first century A.D. and the first half of the third century A.D. There is a peak in incidence during the second half of the first century A.D., possibly attributable to the beginning of Sub-type 16d production. The incidence of Type 16 amphorae decreases by the end of the third century A.D. and peters out by the late fourth century A.D.

Dating of Type 16 at other sites

Variants occur in first to fourth century A.D. contexts at Italian and North African sites (Panella 1973; Carandini & Panella 1981; De Vita 1975; Arthur 1982).

TYPE 17 AFRICANA I/BELTRÁN 57/OSTIA IV/KEYAY IIIA & IIIB/PEACOCK & WILLIAMS CLASS 33 (FIG. 13, No. 226)

Form: This is a narrow cylindrical amphora of Tunisian origin (Peacock & Williams 1986, 153). The variant Keay IIIa has an everted rim with a bulbous outer face. IIIb has a higher rim and sharply convex face.

Fabric: A hard fabric with frequent limestone inclusions. A white salt skin is common on the outer surface.

Colour: Brick red (2.5 YR 6/6)

Total: Keay IIIa: 11; Keay IIIb: 5

Context:	Keay IIIa:		
	iv	12/18	
	v	2/165	8/22
	viii	3/46	
	xiv	22/16	
	xxiii	25/173	
	SpC	13.A.B	
	SpG	1.2a	
	SpJ	7F.16	
	SpX	1.25	
	?a	4/32	
	Keay IIIb:		
	i	1/7	
	v	2/166	
	xiv	147/5	
	SpB	16.A	

Dating of Type 17 at Sabratha

Keay IIIa occurs in contexts of the mid second to late third/early fourth centuries A.D. Keay IIIb occurs in contexts dating to between the second and mid third centuries A.D. An example of Type 17 was also recorded by Fulford in an Antonine context (1986b), 206, fig.91, 31).

Dating of Type 17 at other sites

Dating evidence summarised by Keay (1984), suggests that IIIa dates to between the later second and early fourth centuries A.D., and that IIIb dates to between c. 225 and the fourth century A.D.

TYPE 18 AFRICANA II A-D/BELTRÁN 56/KEAY IV/PEACOCK & WILLIAMS CLASS 34 (FIG. 13, No. 227)

Form: The amphora consists of a wide cylindrical body with an annular flat rim.

Fabric: See Type 17 for fabric description.

Total: 1

Context: via 2/106

Dating of Type 18 at Sabratha

The sherd in question was found in a context dating to between the mid third and mid fourth centuries A.D.

Dating of Type 18 at other sites

The evidence summarised by Keay (1984) suggests a date range of the late second/early third and early fourth centuries A.D.

TYPE 19 MAURETANIAN DRESSEL 30/OSTIA V/KEAY 1B/PEACOCK & WILLIAMS CLASS 38 (FIG. 13, Nos 228 & 229)

This type was manufactured in Mauretania (Algeria) and probably carried olive oil (Panella 1973; Manacorda 1977; Keay 1984).

Form: The amphora is characterised by a constricted neck with an annular rim.

Fabric: This hard fabric has quite frequent limestone and calcite inclusions, as well as opaque quartz crystals. There was a cream wash on the outside.

Colour: Buff (10 YR 6/2)

Total: 3

Context: vi 66/71
xiv 84/15
xxi 42/203

Dating of Type 19 at Sabratha

This occurs in contexts possibly datable to the fourth century A.D. (Y1.xiv.84).

Dating of Type 19 at other sites

The dating evidence collected by Keay (1984) suggests a date between the later second/early third and the later third/early fourth centuries A.D.

TYPE 20 OSTIA VI/KAPITÄN II/KEAY XII

Form: This amphora is characterised by a long neck, piriform body and a tubular foot.

Fabric: This is a hard fabric with moderately frequent quartz and white quartzite inclusions.

Colour: Bright orange (2.5 YR 5/8)

Total: 1

Context: xxvi 42/205

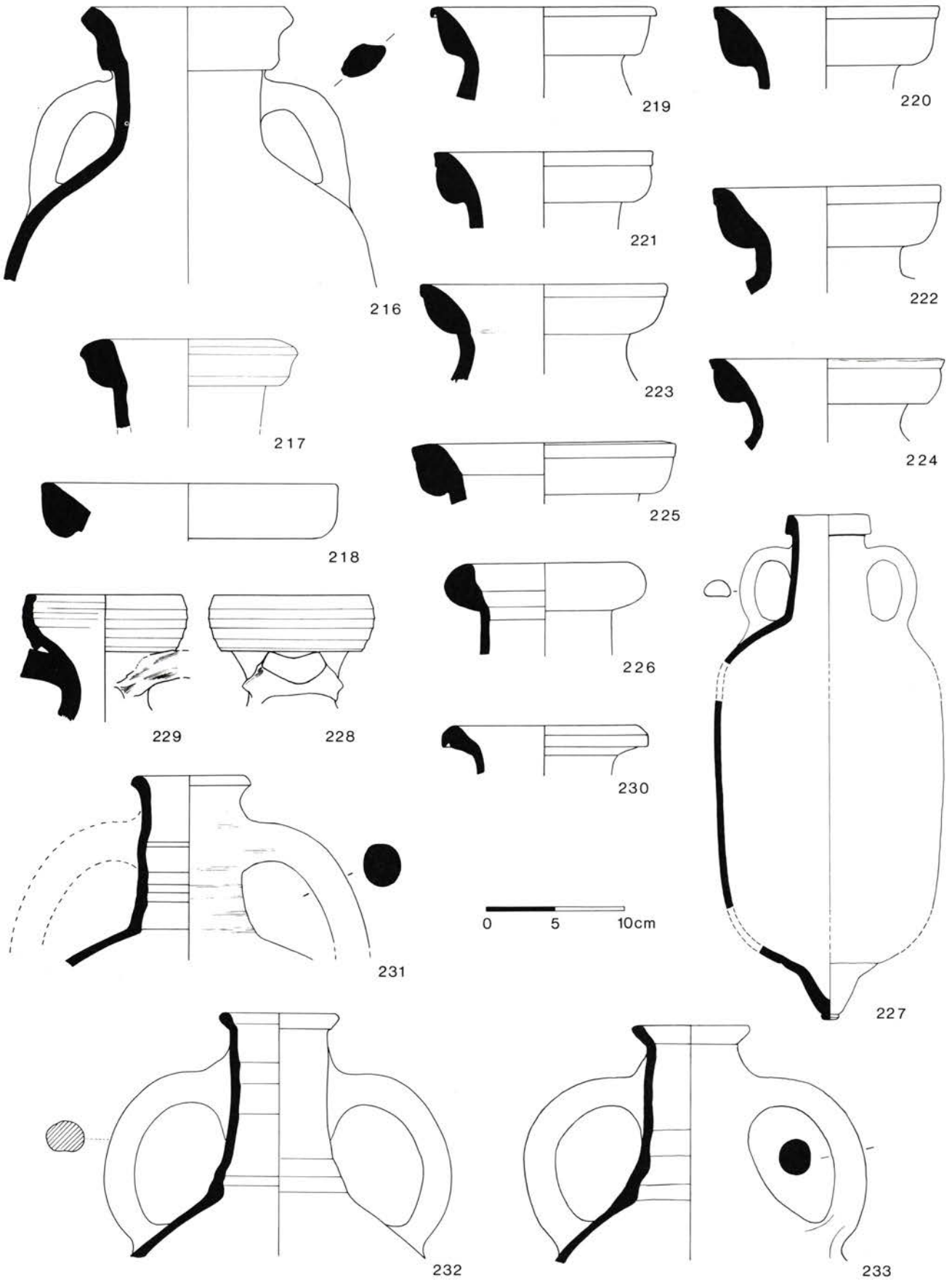


FIG.13 The Amphorae: Types 16-19, 21 & 22 (Scale 1:4 except No. 227 at 1:32)

Dating of Type 20 at Sabratha

This form occurred in a context dating to between the third and fifth centuries A.D. This form was also recognised at Mausoleum B at Sabratha in a context post-dating its destruction in A.D.365 (Panella 1973, 597).

Dating of Type 20 at other sites

This amphora is generally considered to have an East Mediterranean origin and dates to between the beginning of the third and the middle of the fourth century A.D.

TYPE 21 BELTRÁN 64/65a/KEAY XXV/VEGAS 53(FIG. 13, No. 230)

Form: A tall, narrow, cylindrical amphora with a pronounced everted rim and a tall gently inverted neck. At Sabratha, the variants Keay XXVb, XXVn and XXVp were present.

North African Fabric: 4a

Total: 3

Context:	xv	16/41	26/78
	SpY	1.17	

Dating of Type 21 at Sabratha

No evidence as the sherds came from residual contexts.

Dating of Type 21 at other sites

This amphora of Tunisian origin, dates from the last quarter of the third century to the mid fifth century A.D.

TYPE 22 (FIG. 13, Nos 231–233)

Form: A small amphora with short stubby neck, gently flared rim and handles with an elliptical profile (*Ostia i*, 485, Tav. XXVI, no.455); the body was probably ovoid with a ring foot (*Ostia iii*, 632, fig.47).

North African Fabric: 4b

Total: 3

Context:	xiv	84/21
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Dating of Type 22 at Sabratha

Previous work at Sabratha suggests that the form occurred in contexts of the fourth to fifth centuries A.D. (*Ostia i*, 487).

Dating of Type 22 at other sites

Dating evidence from Ostia (*Ostia iii*, 487) suggests that the form dated to between the beginning of the third and the fourth to fifth centuries A.D.

TYPE 23 BELTRÁN 60/KEAY LXIA (FIG. 14, Nos 234 & 235)

Form: Cylindrical amphora with a sharply curved shoulder, a tall conical neck with an everted rim and undercut.

North African Fabric: 4a

Total: 4

Context:	v	1/44
	xiv	98/24
	xix	5/12
	SpZ	1.1.a,b

Dating of Type 23 at Sabratha

The examples discussed came from disturbed contexts.

Dating of Type 23 at other sites

The evidence corroborated by Keay (1984), and collected at Carthage (Fulford & Peacock 1984), suggests that this amphora, of Tunisian origin, was manufactured in the later fifth and sixth centuries A.D.

TYPE 24 BELTRÁN 59/BERENICE MID ROMAN AMPHORA 17A/KEAY LXIIA (FIG. 14, Nos 236 & 237)

Form: This is a wide-bodied cylindrical amphora with a button base. The rim has a well defined convex lower section with a pronounced overhanging lip.

North African Fabric: 4a

Total: 3

Context:	SpW	7.8
	SpX	2.6a

Dating of Type 24 at Sabratha

Not established.

Dating of Type 24 at other sites

The evidence from Carthage (Fulford & Peacock 1984) suggests that production began *c.* A.D. 450–475, and the evidence collected by Keay (1984, 349), suggests production and export continued until at least the mid sixth century A.D.

TYPE 25 BELTRÁN 71–77/BRITISH Bi/KEAY LXV/CARTHAGE LATE ROMAN AMPHORA 2/PEACOCK & WILLIAMS CLASS 43

Form: Spherical amphora with a pronounced rim, inclined handles, and wavy line decoration.

Fabric: A hard fabric, well elutriated, with lime inclusions and occasional mica.

Colour: Light buff (10 YR 8/4)

Total: 4

Context:	xiv	2/157
	xvi	16
	SpK	20.3 & 4
	SpM	z.4(?)

Dating of Type 25 at Sabratha

The examples came from a context (Y1.xvi.16) which yielded African Red Slip Ware of the sixth century A.D. (Kenrick 1986, 123).

Dating of Type 25 at other sites

Data collected (cf. Peacock and Williams 1986, 182), suggests that this amphora is of east Mediterranean origin and dates to between the later fourth and early seventh centuries A.D.

TYPE 26 KEAY LIX (FIG. 14, No. 238)

Form: A cylindrical amphora with a rounded shoulder and a flanged rim with a square section.

North African Fabric: 4a

Total: 4

Context: SpZ 3.9

Dating of Type 26 at Sabratha

Not established.

Dating of Type 26 at other sites

Data collected by Keay (1984) suggests a date between the fourth and sixth centuries A.D.

TYPE 27 BRITISH Bii/CARTHAGE LATE ROMAN AMPHORA 1/KEAY LIII/PEACOCK & WILLIAMS CLASS 44

Form: A globular, ribbed, body with a narrow neck and gently everted rim.

Fabric: A hard sandy fabric with pink inclusions.

Colour: Creamy pink (7.5 YR 8/2)

Total: 14

Context:	xiv	84/82	
	xv	15/70	25/1
	xxiv	43/87	44/1
	SpG	1.2a	22a
	SpJ	1.1.J	
	SpM	2.7	

Dating of Type 27 at Sabratha

The form occurs in contexts of the fifth and sixth centuries A.D.

Dating of Type 27 at other sites

Data collected (cf. Peacock and Williams 1986, 187) suggests that the type was produced between the early fifth and mid seventh centuries A.D.

TYPE 28 OSTIA V/KEAY 1A/BERENICE MID ROMAN AMPHORA 12 (FIG. 14, Nos 239 & 240)

Form: Plain upright rim and a narrow neck.

Fabric: This was a hard fabric containing frequent black and white angular grits in a groundmass of sub-rounded quartz grains.

Colour: Reddish yellow (5 YR 7/6)

Total: 2

Context:	SpV	1.9
	SpZ	3.7a

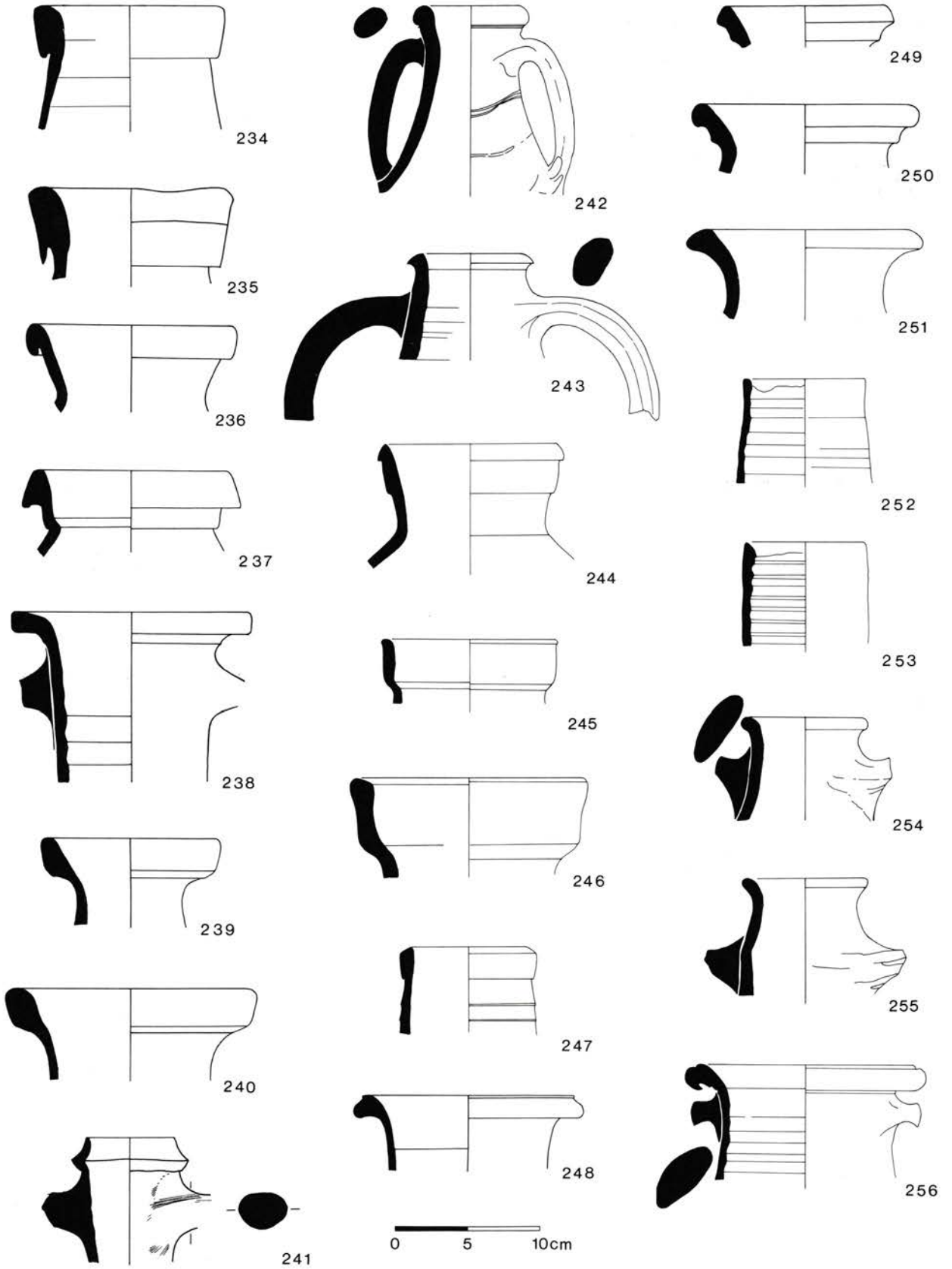


FIG.14 The Amphorae: Types 23, 24, 26, 28-34 (Scale 1:4)

Dating of Type 28 at Sabratha

Not established.

Dating of Type 28 at other sites

Data collected by Panella (*Ostia iii*, 630) Riley (1979, 196) and Keay (1984) suggests an Algerian origin and a first occurrence of the form towards the end of the second century A.D., persisting until the third or fourth centuries A.D.

TYPE 29 BERENICE MID ROMAN AMPHORA 1A (FIG. 14, No. 241)

Form: Biconical rim, a narrow neck and plain rounded handles (cf. *Ostia i*, no.453).

North African Fabrics: 4b(17%), 4d(17%), 5a(67%)

Total: 7

Context:	vib	2/132	6/74	7/152
	xiv	84/84		
	xv	26/27		
	?b	6.6/73		

Dating of Type 29 at Sabratha

The sherds occur in contexts of the third to fourth centuries A.D.

Dating of Type 29 at other sites

Data collected by Panella (1973) and Riley (1979) suggests a North African origin and dating of between the first and fourth centuries A.D.

TYPE 30 SPATHEION/BERENICE LATE ROMAN AMPHORA 8A/PEACOCK & WILLIAMS CLASS 51 (FIG. 14, Nos 242 & 243)

Form: A thickened rim with fine grooves at the base of the rim, two handles applied to the neck.

North African Fabrics: 3g and 5a were present

Total: 2

Context:	xv	17/6
	xvii	6/37

Dating of Type 30 at Sabratha

The sherds occurred in contexts of between the first half of the fifth and the sixth centuries A.D.

Dating of Type 30 at other sites

Riley (1979) identifies examples in levels of the sixth century A.D. at Berenice.

TYPE 31 (FIG. 14, No. 244)

Form: High everted rim (*Ostia ii*, no.569).

Fabric: This was a hard fabric with frequent black and white grits (0.3 mm).

Colour: Light reddish brown (2.5 YR 6/4)

Total: 1

Context	xiv	120/9
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Dating of Type 31 at Sabratha

Occurred in a context of the early second century A.D.

Dating of Type 31 at other sites

Discovered in a mid first century A.D. context at Ostia (*Ostia ii*, Tav.XXXIX, no.569).

TYPE 32 DRESSEL 43 (FIG. 14, Nos 245 & 246)

Form: Simple everted collar rim with an internal concavity (*Ostia ii*, no.527).

Fabric: This was a fine hard clay with sparse black and white inclusions (0.2 mm).

Colour: Pink (5 YR 5/4)

Total: 2

Context:	xiv	70/44
	xxiii	17/95

Dating of Type 32 at Sabratha

Occurred in contexts of between the late first and early second centuries A.D.

Dating of Type 32 at other sites

Occurred in a context of the mid first century at Ostia (*Ostia ii*, Tav.XXX, no.527).

TYPE 33 (FIG. 14, No. 247)

Form: Simple vertical neck with horizontal ridges, capped by a plain rim with sub-rectangular section (*Ostia ii*, no.522).

Fabric: This was a hard compacted clay with moderately common black grits and subrounded quartz grains up to 0.3 mm, and rare mica flecks.

Colour: Pinkish white (5 YR 8/2)

Total: 1

Context:	xxiii	4/4
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Dating of Type 33 at Sabratha

Occurred in a context dating to between the end of the first century B.C. and the first half of the first century A.D.

Dating of Type 33 at other sites

Discovered in contexts at Ostia of the early to late first century A.D. (*Ostia ii*, fig.522). Other undated examples reported from Leptis Magna and Tripoli (*Ostia iii*, 467ff).

TYPE 34 AND TYPE 35 MISCELLANEOUS TRIPOLITANIAN AMPHORAE*Sub-type 34a* (FIG. 14, No. 248)

Form: The small beaded rim has a pronounced upper ridge. The neck is elongated.

North African Fabrics: 1c(7%), 3a(21%), 3c(36%), 3d(7%), 3f(7%), 3g(7%), 4a(14%)

Total: 14

Context:	ia?	11/46			
	iv	16/16			
	vib	7/127			
	xiv	41/1	50/12	79/25	128/92
	xxii	7/84	7/85	8/67(2)	35/101
	xxxiii	40/103			
	SpX	1.13c			

Dating of Sub-type 34a at Sabratha

This form occurs in contexts dating from the late first century B.C. to the third century A.D.

Sub-type 34b

Form: A variant of Sub-type 34a, with a squarer profile and a deep groove running along the top of the rim which has a sharply defined undercut. The very short neck has handle-stubs immediately below the rim.

North African Fabrics: 2a(14%), 2c(7%), 3a(21%), 3c(22%), 3g(14%), 4a(21%)

Total: 14

Context:	i	8/9	77/11	77/12
	iiib	5/57	7/19	
	iv	1/49		
	v	2/186		
	xiv	92/107		
	xv	16/118		
	xxiii	40/106		
	SpH	27.6a	101.6	

Dating of Sub-type 34b at Sabratha

This form occurs in contexts dating from the end of the first century A.D. to the early or mid third century A.D.

Sub-type 34c (FIG. 14, Nos 249 & 250)

Form: The flanged rim is triangular in section, with a small overhang and a well-defined undercut.

North African Fabrics: 2a(66%), 4a(33%)

Total: 3

Context:	xxiii	27/73
	SpC	9.3b
	SpH	123.15a

Dating of Sub-type 34c at Sabratha

Undated context (Y1.xxiii.27).

Sub-type 34d

Form: A development from the flanged profile of Sub-type 34c to a rolled over rim with a curved overhang and a groove where the rim meets the neck.

North African Fabrics: 3g(22%), 4a(44%), 4b(22%), 5a(11%)

Total: 9

Context:	iii	1/24	3/61	
	xiv	6/101	81/180	92/102
	SpC	22.8		
	SpE	39.4a		
	SpH	101.6		
	SpJ	7T.1a		

Dating of Sub-type 34d at Sabratha

This form occurs in contexts dating from the early/mid first century A.D. to the mid second century A.D.

Sub-type 34e

Form: This form has a very small beaded rim with a rounded ridge running along its top surface and a well defined undercut (similar to FIG. 13, No. 248)

North African Fabrics: 2a(29%), 3a(14%), 4a(7%), 4b(14%), 5a(36%)

Total: 20

Context:	i	76/8	76/9	
	iiib	5/55	5/57	
	v	3/78		
	via	2/111		
	vib	2/104	2/105	
	xiv	14/19	81/303	
	xxiii	25/243		
	SpA	22		
	SpD	12.5		
	SpG	3.4		
	SpH	30.4	30.5	30.6a
	SpJ	95c		

Dating of Sub-type 34e at Sabratha

This form occurs in contexts ranging from the late first century A.D. to the fourth century A.D.

Sub-type 34f

Form: A simple beaded rim with an upright profile and a ridge running along the base of the rim.

North African Fabrics: 2a(9%), 3c(9%), 3e(9%), 4a(45%), 4b(9%), 5a(18%)

Total: 11

Context:	iv	6/18		
	xiv	12/161	88/4	88/14
	SpH	27.25		

Dating of Sub-type 34f at Sabratha

The majority of rims occur in contexts dating between the early first century A.D. to the end of the second century A.D. However, two sherds occurred in contexts dating from the late fourth century B.C. to the early second century B.C. (intrusive?).

Sub-type 34g

Form: This form is similar to Sub-type 34f but is a smaller and more beaded version with a deep undercut.

North African Fabrics: 2a(9%), 3c(9%), 3e(9%), 3g(55%), 5a(9%), 5d(9%)

Total: 11

Context:	i	24/23		
	v	6/9		
	vib	2/10g		
	vid	1/65	1/66	
	xxi	88/13		
	xxiii	2/100	17/99	25/200
	SpE	28.7		

Dating of Sub-type 34g at Sabratha

This form occurs in late first century A.D. to late fourth century A.D. contexts. However, two examples occur in Punic contexts of the fourth and third centuries B.C. (intrusive?).

Sub-type 34h

Form: This rim has a simple squarish profile with a curved horizontal surface (similar to FIG. 14, No. 264).

North African Fabrics: 1b(20%), 3e(10%), 4a(40%), 5a(30%)

Total: 10

Context:	xiv	147/8			
	xxi	4/11			
	xxiii	25/251	25/257		
	SpE	30.3			
	SpW	10.4			

Dating of Sub-type 34h at Sabratha

This form occurred in contexts dating from the first century A.D. to the third century A.D.

Sub-type 34i

Form: A large, simple, rounded rim with a slightly concave outer face (similar to FIG. 14, No. 275).

North African Fabrics: 3c(22%), 4a(33%), 4b(11%), 5a(22%), 5c(11%)

Total: 9

Context:	i	2/8			
	ia	4/33			
	xiv	14/28	68/20	96/166	
	xvii	6/4			
	xxi	22/131			
	xxiii	35/?			

Dating of Sub-type 34i at Sabratha

From contexts ranging widely in date from the late fourth century B.C. to the late fourth century A.D. It is difficult to distinguish between residual and intrusive contexts and so establish date-range.

Sub-type 34j (FIG. 14, No. 251)

Form: A simple, rolled-over rim, triangular in section.

North African Fabrics: 3a(9%), 3d(9%), 3e(9%), 4a(45%), 4b(9%), 5a(9%), 5d(9%)

Total: 12

Context:	ivb	7				
	via	2/112				
	vib	1/8				
	xiv	9/121	50/33	70/37	81/176	81/222
	xxiii	35/37				
	xxvi	9/17	36?			
	SpE	39.5a				

Dating of Sub-type 34j at Sabratha

This form occurred in contexts dating from the first century A.D. to the end of the fourth century A.D.

Sub-type 34k

Form: The rim has a wide horizontal top surface and a square section with a sharp undercut. There is a thin groove where the rim meets the neck.

North African Fabrics: 3c and 4a were present

Total: 2

Context: xiv 11/94 81/174

Dating of Sub-type 34k at Sabratha

This form occurred in contexts dating to the first and second centuries A.D.

Sub-type 34l

Form: A small, triangular rim with an internal ridge (similar to FIG. 14, No. 278).

North African Fabric: 3c

Total: 1

Context: iii 8/18

Dating of Sub-type 34l at Sabratha

This form occurred in a context dating to the mid first century A.D.

Sub-type 34m (FIG. 14, Nos 252 & 253)

North African Fabrics: 3d(25%), 3e(25%), 4a(50%)

Total: 4

Context: vib 6/101 6/104
 xiv 6/101

Dating of Sub-type 34m at Sabratha

This form occurred in contexts dating between the first and fourth centuries A.D.

Sub-type 34n (FIG. 14, Nos 254 & 255)

North African Fabrics: 3g(75%), 4a(25%)

Total: 4

Context: i 4/26
 via 2/105
 viii 2/52
 xxvi 42/190

Dating of Sub-type 34n at Sabratha

This form occurred in contexts dating between the late third to late fourth centuries A.D.

Sub-type 34o (FIG. 14, No. 256)

North African Fabrics: 3a and 5b were present

Total: 2

Context: i 22/14
 xiv 81/165

Dating of Sub-type 34o at Sabratha

This form occurred in contexts ranging from the Punic period (context Y1.i.22/14), to the first century A.D. (context Y1.i.81/165).

Sub-type 34p (FIG. 15, No. 257)

North African Fabrics: 5a

Total: 1

Context: xv 14/42

Dating of Sub-type 34p at Sabratha

Not established.

Sub-type 34q (FIG. 15, No. 258)

North African Fabric: 4a

Total: 1

Context: i 59/1

Dating of Sub-type 34q at Sabratha

This form occurred in an un-dated context, in a sequence spanning from the fourth century B.C. to the first century A.D.

Sub-type 34r (FIG. 15, No. 259)

North African Fabric: 4a

Total: 1

Context: xix 8/31

Dating of Sub-type 34r at Sabratha

This form occurred in a context dating between the early third and early fourth centuries A.D.

Sub-type 34s (FIG. 15, No. 260)

North African Fabric: 4a

Total: 1

Context: xiv 84/101

Dating of Sub-type 34s at Sabratha

This form occurred in a fourth century A.D. context, which, however, contained residual material.

Sub-type 34t (FIG. 15, No. 261)

North African Fabric: 3a

Total: 1

Context: xxiv 59/28

Dating of Sub-type 34t at Sabratha

This form occurred in an un-dated context (context Y1.xxv.5/211).

Sub-type 34u (FIG. 15, Nos 262 & 263)

North African Fabrics: 2a and 3e were present

Total: 2

Context:	v	2/159
	vib	7/8

Dating of Sub-type 34u at Sabratha

This form occurred in contexts dating from the mid second to late fourth century A.D.

Sub-type 34v (FIG. 15, No. 264)

North African Fabric: 4b

Total: 1

Context:	xiv	120/11
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Dating of Sub-type 34v at Sabratha

This form occurred in a context dating to the first half of the second century A.D.

Sub-type 34w (FIG. 15, No. 265)

North African Fabric: 4a

Total: 1

Context:	xiv	71/11
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Dating of Sub-type 34w at Sabratha

This form occurred in a context dating to the first century A.D.

Sub-type 34x (FIG. 15, No. 266)

North African Fabric: 2a and 2e were present

Total: 2

Context:	i	36/104
	viii	2/68

Dating of Sub-type 34x at Sabratha

This form occurred in contexts dating from the first half of the second century B.C. to the early first century B.C.

Sub-type 34y (FIG. 15, No. 267)

North African Fabric: 5a

Total: 1

Context:	xxiv	73/?
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Dating of Sub-type 34y at Sabratha

This form occurred in a context dating from the early first century B.C. to the early first century A.D.

Sub-type 34z (FIG. 15, No. 268)

North African Fabric: 5a

Total: 1

Context: iv 4/38

Dating of Sub-type 34z at Sabratha

This form occurred in a context dating between the late first century A.D. to the mid second century A.D.

Sub-type 35a (FIG. 15, No. 269)

North African Fabric: 5a

Total: 1

Context: xiv 70/43

Dating of Sub-type 35a at Sabratha

This form occurred in a first century A.D. context.

Sub-type 35b (FIG. 15, No. 270)

North African Fabric: 1a

Total: 1

Context: i 18/2

Dating of Sub-type 35b at Sabratha

This form occurred in a context dating to the mid first century A.D.

Sub-type 35c (FIG. 15, No. 271)

North African Fabrics: 3g and 1a were present

Total: 2

Context: i 98/6
SpE 1.2B*Dating of Sub-type 35c at Sabratha*

This form occurred in contexts dating to the first century B.C.

Sub-type 35d (FIG. 15, No. 272)

North African Fabric: 2a

Total: 1

Context: xiv 61/55

Dating of Sub-type 35d at Sabratha

This form occurred in a first century B.C. context.

Sub-type 35e (FIG. 15, No. 273)

North African Fabric: 2e

Total: 1

Context: i 135/11

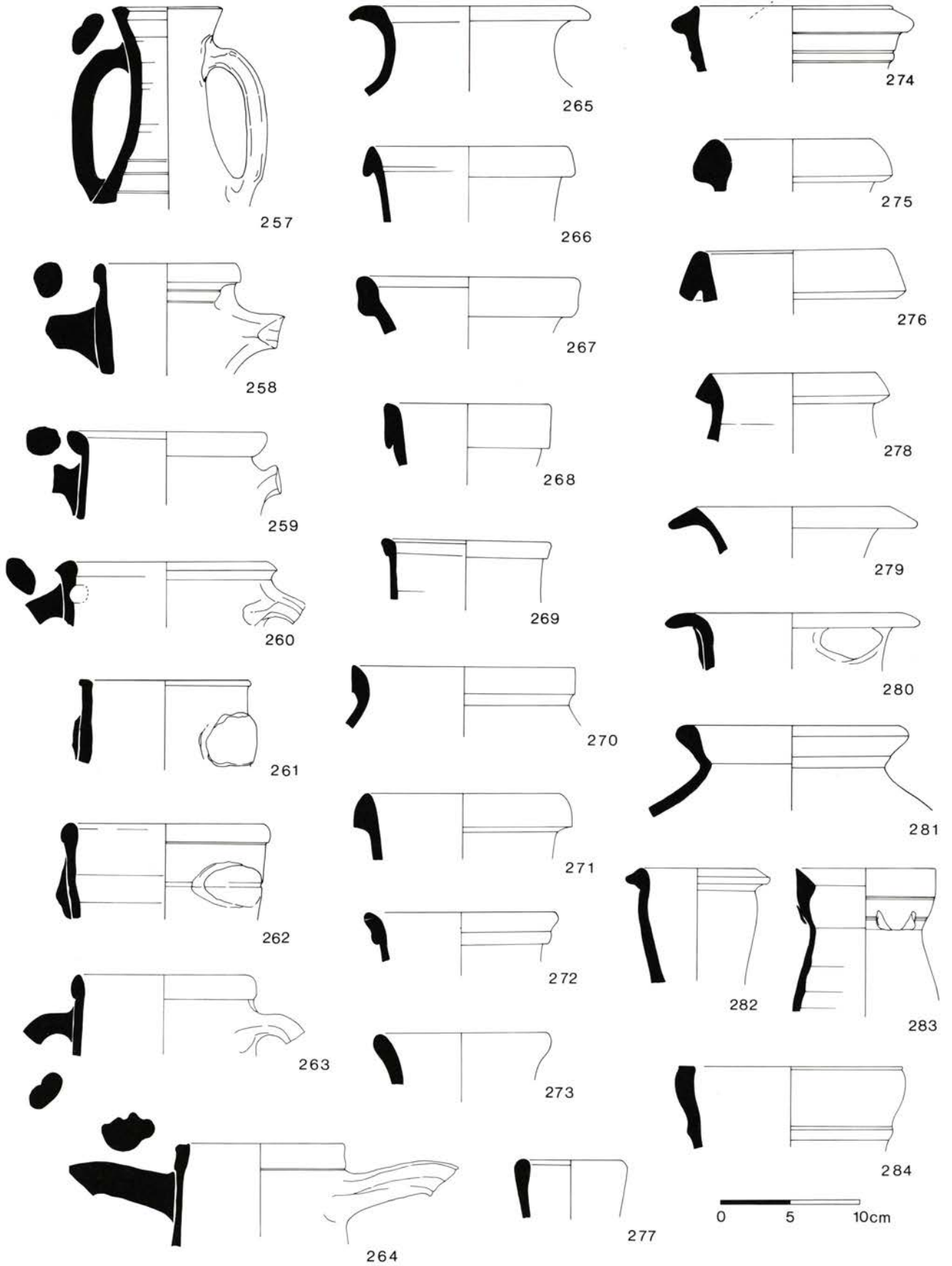


FIG.15 The Amphorae: Types 34-36 (Scale 1:4)

Dating of Sub-type 35e at Sabratha

This form occurred in an un-dated context in a sequence spanning from the early third century B.C. to the first century A.D.

Sub-type 35f (cf. Kenrick 1986, fig.91, no.32) (FIG. 15, No. 274)

North African Fabric: 4a

Total: 1

Context: vib 7/126

Dating of Sub-type 35f at Sabratha

This form occurred in a context dating between the third and late fourth centuries A.D.

Sub-type 35g (FIG. 15, No. 275)

North African Fabric: 3g

Total: 1

Context: xv 17/2

Dating of Sub-type 35g at Sabratha

This form occurred in a context dating between the early third and late fourth centuries A.D.

Sub-type 35h (FIG. 15, No. 276)

North African Fabric: 3g

Total: 1

Context: i 36/69

Dating of Sub-type 35h at Sabratha

This form occurred in a context dating between the first half of the second and the early first century B.C.

Sub-type 35i (FIG. 15, No. 277)

North African Fabric: 1a

Total: 1

Context: xxiii 39/205

Dating of Sub-type 35i at Sabratha

This form occurred in a late first century A.D. context.

Sub-type 35j (FIG. 15, No. 278)

North African Fabric: 3c

Total: 1

Context: i 9/35

Dating of Sub-type 35j at Sabratha

This form occurred in an undated context.

Sub-type 35k (FIG. 15, No. 279)

North African Fabric: 5a

Total: 3

Context:	i	4/25
	v	1/59
	SpB	4.69

Dating of Sub-type 35k at Sabratha

This form occurred in an undated context.

Sub-type 35l (FIG. 15, No. 280)

North African Fabric: 2d

Total: 1

Context: i 122/4

Dating of Sub-type 35l at Sabratha

This form occurred in an undated context.

Sub-type 35m (FIG. 15, No. 281)

North African Fabric: 3e

Total: 1

Context: SpV 3.2

Dating of Sub-type 35m at Sabratha

This form occurred in a second century B.C. context.

TYPE 36 MISCELLANEOUS IMPORTED AMPHORAE*Sub-type 36a*

Form: Similar to Sub-type 34i.

Fabric: Greco-Italic fabric B (see p.23)

Total: 1

Context: xxiii 40/108

Dating of Sub-type 36a at Sabratha

This form occurred in a context dating between the late first and fourth centuries A.D.

Sub-type 36b

Form: A plainer variant of FIG. 15, No. 264, without an internal ridge.

Fabric: Catalan fabric (cf. Pascual 1977, 47–96). A brick red fabric (2.5YR 5/8), hard and rough with a hackly fracture. There are frequent large irregular quartz inclusions and large grey-white grits.

Total: 1

Context: v 1/57

Dating of Sub-type 36b at Sabratha

This form occurred in an undated context.

Sub-type 36c (FIG. 15, No. 282)

Fabric: A red fabric (2.5YR 5/6) which is well-elutriated and hard. There is a scatter of fine limestone flecks with occasional micaceous inclusions.

Total: 1

Context: i 5/21

Dating of Sub-type 36c at Sabratha

This form occurred in an undated context.

Sub-type 36d (FIG. 15, No. 283)

Fabric: Similar to Dressel 1 fabric B (p.36), pink in colour (5YR 8/4).

Total: 1

Context: xiv 127/44

Dating of Sub-type 36d at Sabratha

This form occurred in a third century A.D. context.

Sub-type 36e (FIG. 15, No. 284)

Fabric: A buff fabric (5YR.7/4), with frequent irregular quartz and limestone inclusions and occasional micaceous flecks.

Total: 1

Context: SpC 6.5

Dating of Sub-type 36e at Sabratha

This form occurred in an undated context, (cf. Taylor 1964, 98, fig.13.6).

TYPE 37 MISCELLANEOUS BASES*Sub-type 37a* (FIG. 16, No. 285)

Form: Solid, ridged and pointed base of a Cnidian amphora/Berenice Hellenistic Amphora 4 (Riley 1979, 36, fig.69).

Fabric: Fairly coarse with occasional grey grits.

Colour: Reddish yellow (5 YR 7/6)

Total: 1

Context: SpY 3.100

Sub-type 37b (FIG. 16, No. 286)

Form: Fragment of a solid spike of a Corinthian B base (Type 1).

Fabric: Corinthian B, fabric A (p.6).

Total: 1

Context: SpW 7.8c

Sub-type 37c (FIG. 16, Nos 287 & 288)

Form: Small, hollow, knob base of Massaliote amphora (Type 2: cf. Py 1978, fig.1a).

Fabric: Massaliote fabric A and B (p.11).

Total: 2

Context: i 15/12 166/1

Sub-type 37d (FIG. 16, Nos 289 & 290)

Form: Hollow knob base of hole-mouthed amphorae (Types 3 & 4).

North African Fabrics: 2a, 3e, 4a, 5c.

Total: 7

Context: i 22/6 26/3
 SpA 2.11 401.3
 SpF 6.11
 SpH 103.2
 SpJ 3c.4

Sub-type 37e (FIG. 16, Nos 291–293)

Form: Hollow and solid bases of Types 7 and 9 (Van der Werff Types 3 and 2).

North African Fabrics: 4a, 4d, 5a and 5b.

Total: 8

Context: i 102/25
 vid 1/53 1/54
 xiv 92/97
 SpH 101.4f 101.5g
 SpJ 1.1eb
 SpY 2.27

Sub-type 37f (FIG. 16, Nos 294–296)

Form: Short, solid spike of Dressel I amphora (Type 11).

Fabric: Dressel I fabric A (p.36).

Total: 6

Context: xiv 9/131 9/132 81/184
 SpB 21.2
 SpW 7.8
 SpY 3.1

Sub-type 37g (FIG. 16, Nos 297 & 298)

Form: Stumpy, solid, spike of Dressel 2–4 amphora (Type 13).

Fabric: Dressel 2–4 Campanian fabric (Peacock 1971a, Fabric 2).

Total: 3

Context: iii 4/119
 x 1/4
 SpY 3.1a

Sub-type 37h (FIG. 16, Nos 299 & 300)

Form: Hollow conical spike of Tripolitanian amphora (Type 16).

North African Fabrics: 1c, 3c, 3d and 4a.

Total: 9

Context:	i	43/40	
	xiv	71/13	127/4
	xvii	10/14	
	xix	6/108	
	SpG	6.7	29.8c
	SpX	2.7e	
	SpZ	3.5	

Sub-type 37i (FIG. 16, No. 301)

Form: Hollow knob foot of Type 19 (Mauretanian Dressel 30/Ostia V/Keay I (Keay 1984, fig.36, no.11)).

Fabric: See fabric description for Type 19 (p.44).

Total: 3

Context:	ia	4/19
	SpE	28.7
	SpV	1.20

Sub-type 37j (FIG. 16, No. 302)

Form: Solid conical spike of Type 21 amphora (Keay XXV; Keay 1984, fig.82, Type XXV, Var.2).

North African Fabric: 4a

Total: 1

Context:	SpX	2.5
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Sub-type 37k

Form: Cone-shaped bevelled foot (Type 23/Keay LXI/Beltrán 60; Keay 1984, fig.134, nos 8, 9 & 10).

North African Fabrics: 4d and 5a.

Total: 2

Context:	xv	26/62
	SpH	11.26

Sub-type 37l

Form: Cylindrical foot with hollowed bottom and internal stubby spike (Type 29/Mid Roman Amphora 1a; Riley 1979, 177).

North African Fabric: 5a

Total: 1

Context:	xv	16/58
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Sub-type 37m

Form: Short cylindrical foot of Keay LVII/Beltrán 61 (Keay 1984, fig.130, no.6).

North African Fabric: 5a

Total: 1

Context:	SpJ	1.1e
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Sub-type 37n (FIG. 16, No. 303)

Form: Hollow knobbed base.

North African Fabric: 5a

Total: 1

Context:	SpW	7.15
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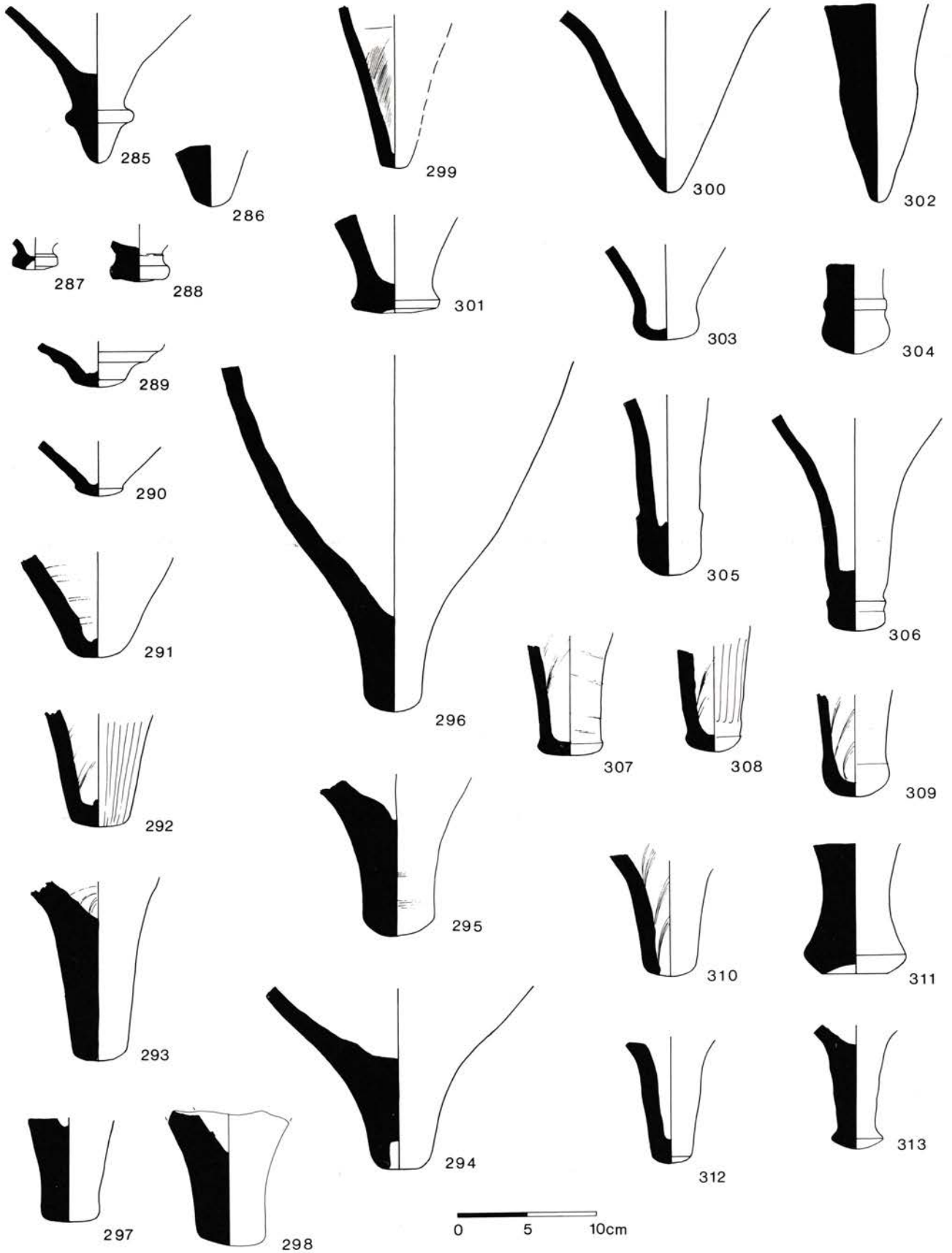


FIG.16 The Amphorae: Type 37 (Scale 1:4)

Sub-type 37o

Form: Knobbed base (Riley 1979, D.90, fig.72, for similar profile).

Fabric: Very micaceous fabric with occasional limestone inclusions.

Colour: 2.5 YR 6/6

Total: 1

Context: SpJ 7f.6a

Sub-type 37p (FIG. 16, Nos 304-309)

Form: Bases with a ridge on the spike.

North African Fabrics: 3d, 4a, 4b and 5a.

Total: 7

Context:	iiib	5/51
	xiv	127/3
	SpH	125.18
	SpJ	3.6B
	SpV	2.4
	SpW	7.8
	SpY	1.13

Sub-type 37q (FIG. 16, No. 310)

Form: Hollow base.

Fabric: Fairly coarse hard fabric, with rare quartz grains and black grits.

Colour: Light reddish/brown (2.5 YR 6/4)

Total: 1

Context: xiv 54/16

Sub-type 37r (FIG. 16, No. 311)

Form: Solid base with curving walls and hollowed underside (cf. Riley 1979, fig.90, D.331).

Fabric: Fairly hard, with rare white and grey grits and sparse mica.

Colour: Red (2.5 YR 5/6)

Total: 1

Context: SpZ 1.23b

Sub-type 37s (FIG. 16, No. 312)

Form: Hollow narrow spike.

Fabric: Very hard with frequent black and red irregular grits.

Colour: Pink (7.5 YR 8/14)

Total: 1

Context: i 18/12

Sub-type 37t (FIG. 16, No. 313)

Form: Solid short spike with flared convex toe.

Fabric: Hard, frequently rounded quartz sand inclusions and occasional red glassy grits. Cream surface treatment.

Colour: Pink (7.5 YR 8/4)

Total: 2

Context:	SpG	2f.7w
	SpW	5.9

2. DISCUSSION

by NINA KEAY

In order to gain an impression of the changing representation of the principal sources of the amphorae through time, the datable types were grouped into five periods and calculations were based on the total number of rim sherds for each type, irrespective of context. It was felt that there were insufficient well-dated contexts of adequate size to allow these to be used as a guide to the changing representation of types. However, reference has been made to dated groups within the larger periods where it serves to illuminate the behaviour of a particular type. The date-ranges of the types present at Sabratha do not fit tightly into these five main period groups; the aim has been to assign a type to that period where it is most commonly represented, either at Sabratha or elsewhere. What follows is intended to give a guide to the general trends in the representation of the principal types of amphora found at Sabratha.

1) The Early/Mid Punic Period (*c.* 450 B.C. – *c.* 200 B.C.)

TABLE 1: SUMMARY OF THE EARLY/MID PUNIC PERIOD

Type No.	Name	No. of Rim Sherds	% of Total
1	Corinthian B	220	26
2	Massaliote	25	3
3	Hole-mouthed	184	21
4	Hole-mouthed	264	31
5	Iberian hole-mouthed	4	1
6	Greco-Italic	106	12
10	Berenice D.91	51	6
	TOTAL NO. OF SHERDS	854	100

For this period, which includes half of all the amphora rims, nearly one half (48%) consisted of imports, while regional Tripolitanian/Tunisian production accounted for 52%. The earliest imports to the site were Corinthian B amphorae from southern Greece (for evidence of the sources of Corinthian B amphorae see Jones 1986, 712, and Koehler 1981b, 452), and Massaliote amphorae from southern Gaul, dating from the late fifth century B.C. The main period of importation of Corinthian B amphorae occurred between the late fourth and early third centuries B.C. From the later fourth/early third century B.C. to the later second century B.C. wine-carrying Greco-Italic amphorae, generally considered to be of Italian and Sicilian origin (Lyding-Will, 1982) were exported to Sabratha. During this period, eastern Mediterranean imports significantly outnumber those from the western Mediterranean. Local production of Tripolitanian/Tunisian hole-mouthed amphorae (52%) is well represented in this period.

2) Late Punic Period (*c.* 200 B.C. – *c.* 25 B.C.)

TABLE 2: SUMMARY OF THE LATE PUNIC PERIOD

Type No.	Name	No. of Rim Sherds	% of Total
7	Van der Werff type 3	224	51
8	Van der Werff type 1	90	21
9	Van der Werff type 2	91	21
11	Dressel 1	22	5
34 & 35	Misc. Tripolitanian/Tunisian	9	2
	TOTAL NO. OF SHERDS	436	100

Although a relatively small sample, a striking aspect of the amphora assemblage from the later third century B.C. at Sabratha is the rise in locally/regionally produced amphorae (types 7-9 (Van der Werff 1-3)). Imports (Italian Dressel 1) account for only 5% of the total number of rim-sherds.

To summarise the evidence for the Punic period, from the late fifth century B.C. there were limited imports from the eastern and western Mediterranean (the scanty evidence may be a reflection of the limited number of early contexts excavated). By the late fourth/early third century B.C. imports were probably dominated by Corinthian B amphorae from the Aegean, but local/regional production accounted for more than a half of the total (52%). From the late third century B.C. imports continued to decrease in importance with the growth of Tripolitanian and Tunisian production, reaching a peak by the beginning of the second century B.C.

The amphorae assemblage from Sabratha during the Punic period may be compared to the Hellenistic amphorae types found at Berenice. Although Berenice was founded in 247 B.C. the majority of Hellenistic deposits date between the late second to early first centuries B.C.

The evidence for Aegean imports to Cyrenaica from the early sixth century B.C. is discussed by Riley (1979, 404 ff). At Berenice, early contact with the Aegean is attested by a fourth century Corinthian A sherd, (Riley 1979, 130). However, on the basis of the low incidence of such types as Koan, Chian, Rhodian and Knidian amphorae at Benghazi, Riley described Cyrenaica as a 'backwater' in the Aegean trade network until the mid first century B.C. (1979, 113). The influx of Corinthian B amphorae at Sabratha (from the later fourth/early third centuries B.C.) attest to Sabratha's involvement in Aegean trade from an early date.

At Berenice, like later Punic Sabratha, the later Hellenistic period saw a relative scarcity of imports and a high level of local and regional production. In general, during the Hellenistic period there is more evidence of imports of a western Mediterranean origin at Sabratha than at Berenice. For example, more Greco-Italic and Berenice D.91 amphorae are recorded at Sabratha.

The high level of local/regional production at Berenice during the later Hellenistic period, was also evident at Sabratha as represented by the hole-mouthed amphorae and the later Van der Werff types. The regional character of Tripolitanian/Tunisian production is emphasized by the rarity of hole-mouthed amphorae and Van der Werff types in Berenice where different local forms predominated.

3) The Early Imperial Period (c. 25 B.C. - c. A.D. 300)

The range of amphorae types which occurred in the early Imperial levels at Sabratha may be summarised thus:

TABLE 3: SUMMARY OF THE EARLY IMPERIAL PERIOD

Type No.	Name & Source Area	No. of Rim Sherds	% of Total
12	Dressel 6	4	1
13	Dr.2-4, Italy & E.Spain	26	8
14	Dr.7-11, S. Spain	3	1
15	Dr.20. S. Spain	1	0.3
16	Tripolitania series I-III & Berenice ERA 11b, N. Africa	157	47
17	Africana I, N. Africa	16	5
18	Keay IV, N. Africa	1	0.3
19	Keay Ib, Mauretania	3	1
20	Keay XII, E. Mediterranean	1	0.3
28	Keay Ia, Mauretania	2	0.6
29	Berenice MRA Ia, N. Africa	7	2
31	<i>Ostia ii</i> , Tav.XXXIX, 569, N. Africa	1	0.3
32	Dr.43, N. Africa	2	0.6
33	<i>Ostia ii</i> fig.522, N. Africa	1	0.3
34 & 35	Misc. Tripolitanian/Tunisian types, N. Africa	111	33
36d	Misc. imports	1	0.3
	TOTAL NO. OF SHERDS	337	101

During this period 88% of the amphorae were regionally produced Tripolitanian/Tunisian types with 47% of them belonging to the Tripolitanian series (Panella 1972), which are generally considered to have contained olive oil. Imported amphorae comprised 12% of the total number of amphorae and originated from a variety of Mediterranean sources. From the late first century B.C. until the late second century A.D. western Mediterranean imports continue to be attested, e.g. from Italy and Spain, Dressel 2–4 wine amphorae and Dressel 7–11 which contained fish sauces. Spanish imports, as represented by Dressel 20 olive-oil amphorae, may have continued up to the end of the third century A.D. The period between the late second century and the end of the fourth century A.D. saw the importation of Mauretanian amphorae (Keay Ia and Keay Ib types).

It should be stressed that the emphasis on local/regional production for this period is due to the high volume of the Tripolitanian amphorae (47% of all amphorae from early Imperial levels). The frequency of these types remained steady between the first half of the first century and the first half of the third century A.D.

When comparing the Sabratha amphora assemblage with the evidence from Berenice for the early Imperial period (late first century B.C. to the end of the third century A.D.), a difference is the presence of eastern Mediterranean and particularly Aegean imports at Berenice (e.g. Early Roman Amphora 1 & 2). Only one eastern Mediterranean amphora was present at Sabratha in these levels (type 20). The emphasis on western Mediterranean imports at Sabratha is further suggested by the presence of Italian Dressel 2–4 amphorae at the site. At Berenice Dressel 2–4 amphorae first appeared in the Augustan period and began to decline by the second half of the first century A.D. At Sabratha, however, the supply of Dressel 2–4 amphorae was more sustained, comprising 46% of the total number of amphora sherds in first century A.D. contexts, and 31% in second century A.D. contexts. This again may suggest that Sabratha was more integrated in the western Mediterranean trading network. This is supported by the frequency of Tripolitanian amphorae at Ostia (Riley 1979, figs 21 & 22).

The frequency of locally/regionally produced Tripolitanian amphorae at Sabratha accords well with the Berenice evidence. There is a peak in volume of these types at Sabratha between the second half of the first century A.D. and the early second century A.D. This coincides with the steady supply of Tripolitanian amphorae at Ostia and Berenice in the second century and the drop in imported Italian and Spanish amphorae at the site (Riley *ibid.*, 114).

4) The Late Imperial Period (c. A.D. 300 – c. A.D. 450)

At Sabratha, the sample of late Imperial material only comprised 32 amphora rim sherds, of which the following types were present:

TABLE 4: SUMMARY OF THE LATE IMPERIAL PERIOD

Type No.	Name	No. of Rim Sherds	% of Total
21	Keay XXV	3	9
22	<i>Ostia i</i> , Tav. XXVI, No.455	3	9
26	Keay LIX	4	13
34 & 35	Misc. Tripolitanian/Tunisian	21	66
36a	Misc. Italian amphora	1	3
	TOTAL NO. OF SHERDS	32	100

Thus, during the late Imperial period, Tripolitanian/Tunisian amphorae predominated.

5) The Vandal/Byzantine Period (c. A.D.450 – c. A.D.600)

TABLE 5: SUMMARY OF THE VANDAL/BYZANTINE PERIOD

Type No.	Name	No. of Rim Sherds	% of Total
23	Keay LXIa	4	15
24	Keay LXIIa	3	11
25	Carthage LRA 2	4	15
27	Carthage LRA 1	14	52
30	Berenice LRA 8a	2	7
	TOTAL NO. OF SHERDS	27	100

These levels yielded a very small number of amphorae rims (27 sherds), of which 10 sherds derived from the Byzantine Wall excavation. However, despite the size of the sample, eastern Mediterranean imports were well represented (67% of total number of sherds). These include Carthage LRA 2 amphorae (type 25) from the Aegean and Carthage LRA 1 amphorae (type 27) which probably originated in the Antioch region of northern Syria. The high frequency of type 27 in sixth century levels at Sabratha is also attested among imported amphorae at Carthage and at Berenice. At Sabratha, type 27 (LRA 1), comprised 52% of the total number of sherds for this period.

For the late Roman period at Berenice, Riley found a predominance of eastern Mediterranean amphorae (Riley 1979, 115). This is also attested among the *non-African* imports at Carthage during the sixth century A.D. (Hayes 1976; Fulford & Peacock 1984, ch.5, fig.33). The imported amphorae at Sabratha also demonstrate this trend, with the predominance of Tripolitanian/Tunisian types up to the early fourth to mid fifth century A.D., giving way to eastern Mediterranean imports for the period after c. A.D.450. Then Tripolitanian/Tunisian amphorae comprised 26% of the assemblage, compared to 67% for eastern Mediterranean imports and 7% for Type 30, Berenice LRA 8a, of unknown origin. Thus the range of amphorae at Sabratha is quite comparable with the range reported from other sites in North Africa in the Byzantine period.

Summary

- 1) Although poorly represented in the earliest dated groups, among material dated as a whole to the period between c. 450 and c. 200 B.C., Tripolitanian/Tunisian amphorae at Sabratha account for over a half of all the amphorae represented. Their share rose further during the later Punic and early Imperial periods, peaking during the late Imperial period (early fourth to mid fifth century A.D). By the late fifth to early seventh century A.D. Tripolitanian/Tunisian amphorae had fallen to about a quarter of the total amphorae assemblage.
- 2) The relatively high level of imports during the early/mid Punic period (between one-third and one-half of the amphorae), at Sabratha, (predominantly from the eastern Mediterranean), had declined by the late Punic period. The level of imports remained low throughout the late Imperial period, rising again during the Vandal/Byzantine period (late fifth – early seventh century A.D.)
- 3) For the early/mid Punic period at Sabratha eastern Mediterranean imports were in the ascendant. However, between about the late third and the mid first century B.C., corresponding with the rise of Rome, imported amphorae were exclusively from the western Mediterranean. This western Mediterranean predominance among imported amphorae was sustained throughout the early and late Imperial periods. However, with the decline of Rome in the fifth century and thereafter to the early seventh century A.D., the trend was reversed, with the majority of imports deriving from the eastern Mediterranean (67%).
- 4) This pattern at Sabratha bears some comparison with the evidence for imported amphorae at Berenice, where western Mediterranean imports were present in the Hellenistic period, increased in the first century A.D. and continued into the third century A.D. (Riley 1979, 113-115). The general difference between the Roman amphorae assemblages at Sabratha and Berenice, appears to be the marked Aegean/eastern Mediterranean contact and influence at Berenice, compared to the western Mediterranean emphasis at Sabratha. By the Vandal/Byzantine period, both sites show a predominance of eastern Mediterranean imports (*ibid.*, 115), as is also attested at Carthage.

3. PUNIC AMPHORA STAMPS

by D.P.S. PEACOCK and R.H. SEAGER SMITH

Punic amphora stamps have received little attention in comparison with their Roman and Greek counterparts. Thirty-one examples were found in the Sabratha excavation, all, with two exceptions, on handle fragments. In view of the dearth of information on this subject, it was felt to be useful to draw and describe these, but the opportunity has been taken to present a list of stamps from other sites known to the writers. The latter is patently incomplete but is offered as a first step towards the compilation of a much-needed corpus of these interesting marks. The majority of the stamps cannot be attributed to N. Keay's types as they occur on small, undiagnostic handle fragments, but they are likely to be of types 3-5 and 7-10.

The stamps have been transliterated into Roman equivalents. Most appear to be simple one or two letter stamps, perhaps analogous to those commonly encountered on Roman Dressel 1 amphorae (cf. Manacorda 1978, for discussion of Roman counterparts). At present we are unsure whether the stamps represent the marks of estate owners or of potters. There is, however, a remarkable diversity of marks which implies many hands at work.

We have also studied the fabrics in an attempt to assess origins. The material lacks distinctive minerals, but most sherds comprise a textural homogenous group, perhaps pointing to a common origin in the Sabratha area. Two sherds (numbered 30 and 31) are texturally different and may come from elsewhere.

THE FABRICS

Sherds were classified on the basis of hand specimen and binocular microscope study, followed by thin-section examination of samples from each group.

Fabric 1 (= Fabric 3a, below, p.81)

This ware is characterised by a white 'salt' skin on the outer surface, the colour of which varies from pale pinkish cream to greenish grey. (Munsell 7.5 YR 7/4 to 7.5 Y 8/2). The body of the fabric is bright orange-red or brick-red (Munsell 10 R 5/8 to 2.5 YR 4/8). Abundant, well-sorted inclusions of quartz and limestone are present, up to about 0.1 mm across. This ware corresponds to the 'Coarser Tripolitanian' fabric recognised at Carthage (Fulford and Peacock 1984, 18).

Sherd numbers: 1-25 below.

Fabric 2 (= Fabric 1a, below, p. 80)

This ware is similar to Fabric 1, but the body ranges in colour from pale reddish-yellow to pale pink (Munsell 7.5 YR 7/6 to 5 YR 8/4). Under the microscope it is similar to Fabric 1 with well-sorted sub-rounded quartz and limestone grains, the latter sometimes represented by a void with characteristic reaction rims.

These sherds are probably a variant of Fabric 1 and could originate in the same general region. Sherd numbers: 26-29 below.

Fabric 3 (= Fabric 2a, below, p.80)

This fabric is reddish grey or grey (Munsell 7.5 YR 5/0 to 5 YR 5/2) in colour. Under the microscope it differs from the first two fabrics in having a groundmass with abundant grains of quartz and limestone, around 0.1 mm across, in which are set larger quartz grains, up to 0.3 mm, and white reaction rims around voids indicate where limestone grains have been lost.

These sherds are texturally distinctive and could be imports to the site, although they do fall within the general range of North African ware (Fulford and Peacock 1984, 14).

Sherd numbers: 30, 31 below.

THE STAMPS

Fabric 1 (FIGS 17–19)

1. On top part of handle. Incomplete stamp in square field with a retrograde letter 's' in relief (FIG. 17, No. 1).
Context: Y1 i 39/2
2. On handle near angle with body. Double letter 'b' or, less probably, 'd' in relief (FIG. 17, No. 2).
Context: SPA 17.8 763
3. Handle fragment bearing oval impression but no visible letters (FIG. 17, No. 3).
Context: SPB 1.2 H5 Y1 iv 4/5
4. On top part of handle with sub-rectangular impression, bearing double letter 't' in relief (FIG. 17, No. 4).
Context: SPB H/6 AC Y1 i 24/6 Hib
5. Handle fragment with oval impression bearing letter 'n' in relief (FIG. 17, No. 5).
Context: SPD 2.18 822
6. Handle fragment with square impression bearing a retrograde 'q' (FIG. 17, No. 6).
Context: SPA 120 4/+5 Y1 i 36/3
7. On upper surface of handle fragment. Sub-rounded impression bearing double letter 'h' in relief (FIG. 17, No. 7).
Context: SPE 44.4a 876
8. On upper surface of handle fragment. Sub-rectangular field containing double letter 'h' in relief (FIG. 17, No. 8).
9. On upper surface of handle, near angle with body. Incompletely impressed oval field enclosing a single letter 't' in relief (FIG. 18, No. 9).
Context: SPB 4.7b 758
10. On top of handle. Rectilinear impression bearing the letter 'n' in relief (FIG. 18, No. 10).
Context: SPA 6.5 e 761
11. Handle fragment with a small, deep, diamond-shaped impression but no visible letters (FIG. 18, No. 11).
Context: SPB 3.5 Y1 i 18/4 H5
12. On top of handle. Rectilinear impression bearing single letter 'h' in relief (FIG. 18, No. 12).
Context: SPB 4.10 ab + 757
13. On top of handle. Rectilinear impression bearing single letter 'h' in relief (FIG. 18, No. 13).
Context: SPD 4.9a Y1 iii 1/2 H5a
14. On upper surface of handle. Roughly circular impression with letter 'm' in relief. Immediately left of stamp is a deep red, painted line, running vertically down handle (FIG. 18, No. 14).
15. On top of handle. Rectilinear impression with letter 'z' in relief (FIG. 18, No. 15).
Context: SPB 60f 756
16. On handle near angle with body. Rectilinear impression with a retrograde letter 'z' in relief (FIG. 18, No. 16).
Context: SPC 7.2 d Y1 iv 1/5 H10a 891
17. On handle near angle with body. Rectilinear impression bearing at least one, possibly two, letter 'b's. Stamp impressed several times in same place (FIG. 18, No. 17).
Context: SPD 2.3 b 820
18. Undiagnostic body sherd. Stamp composed of three elements – from right to left – the letters 'a' and 'y' – possibly the word 'out' (Segert 1976, 283). Reading of the third element is unknown (FIG. 19, No. 18).
Context: SPC 13.2
19. On upper surface of handle. Rectilinear field enclosing letter 'k' in relief (FIG. 19, No. 19).
Context: SPH 25.12a Y1 xiv 17/3 H5
20. On upper surface. Oval field with letter 'w' in relief (FIG. 19, No. 20).
Context: SPB 1360

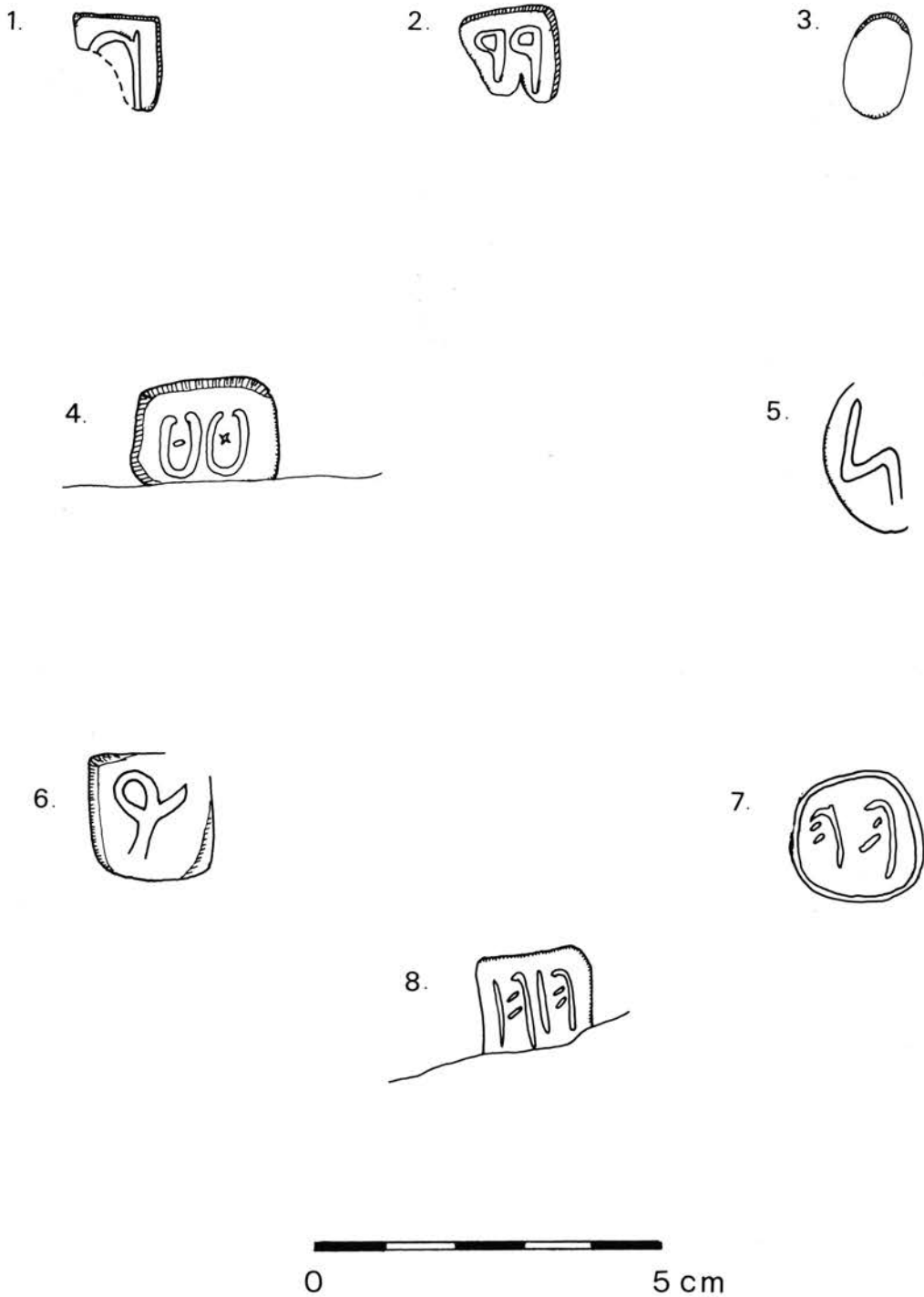


FIG.17 Punic Amphora Stamps (Scale 1:1)

21. On upper surface of handle fragment. Heart-shaped impression bearing the letters 'a' and 's' in relief (FIG. 19, No. 21).
Context: SPH 12.5 g Y1 xiv 3/6 H5
22. On top of handle fragment. Rectilinear impression containing the letter 'a' in relief (FIG. 19, No. 22).
Context: SPX 3.8 116
23. On handle, close to angle with body. Oval impression containing the letter 't' in relief (FIG. 19, No. 23).
Context: SPV 2.10 a 1119

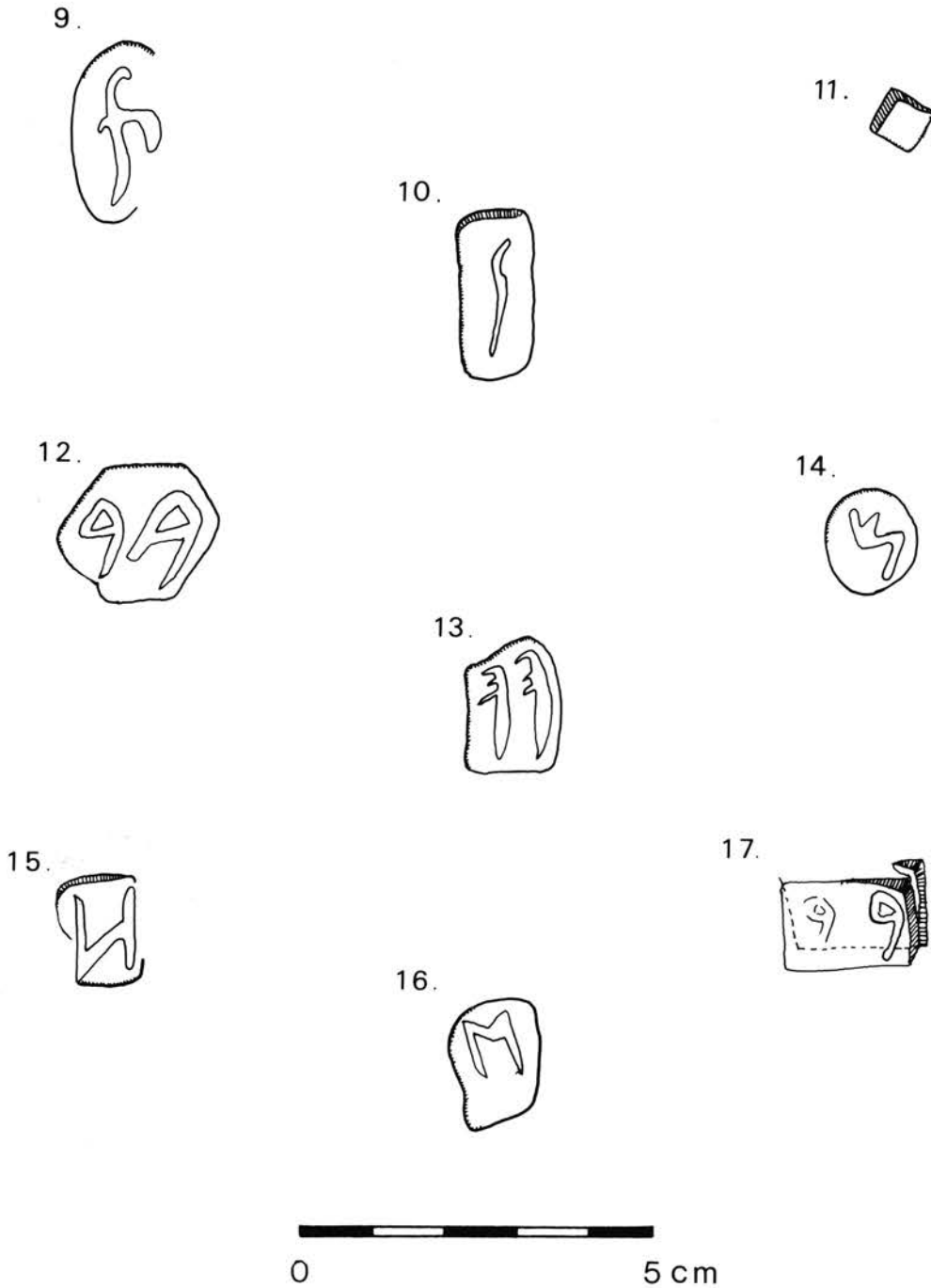


FIG.18 Punic Amphora Stamps (Scale 1:1)

24. On top surface of handle fragment. Rectilinear impression containing the letter 'a' in relief (FIG. 19, No. 24).
Context: SPB 12.4 g 853
25. On upper surface of handle fragment. Stamp extensively worn – irregular hexagon-shaped impression with double letters 'b' in relief (FIG. 19, No. 25).
Context: SPD 5.3 Y1 vi 61/2 H5 892

Fabric 2 (FIG. 20)

26. On upper surface of handle fragment. Sub-rectangular impression bearing what is probably a retrograde letter 'y' in relief (FIG. 20, No. 26).
Context: SPF 11.4 887

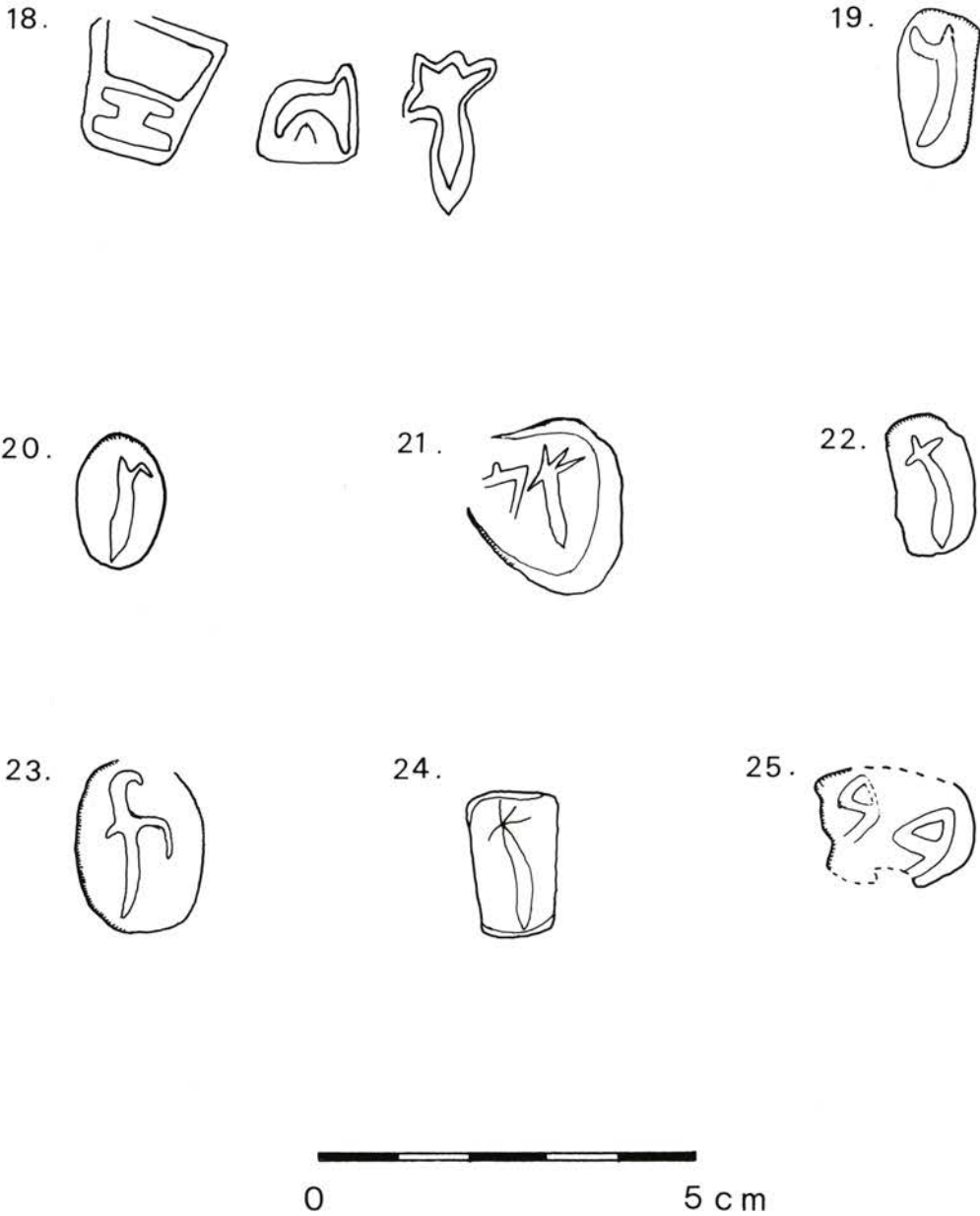


FIG.19 Punic Amphora Stamps (Scale 1:1)

27. Maña D type jar (N. Keay type 3–4). On upper surface of handle – squarish impression bearing the letter ‘n’ in relief (FIG. 20, No. 27).
Context: SPB 14.9a 886
28. Rim fragment with one handle of Maña D Type jar (N. Keay type 3–4). On upper surface of handle: oval field enclosing what is probably the letter ‘t’ in relief (FIG. 20, No. 28).
Context: SPB 11.13 b 885
29. On upper surface of handle fragment. Rectilinear field enclosing the letter ‘a’ in relief (FIG. 20, No. 29).
Context: SPB 4.4 a 759

Fabric 3 (FIGS 20–21)

30. Undiagnostic body sherd. Stamp incomplete and blurred – apparently a wheel-like pictogram set with a circular field (FIG. 20, No. 30).
Context: SPW 7.19 c 1150

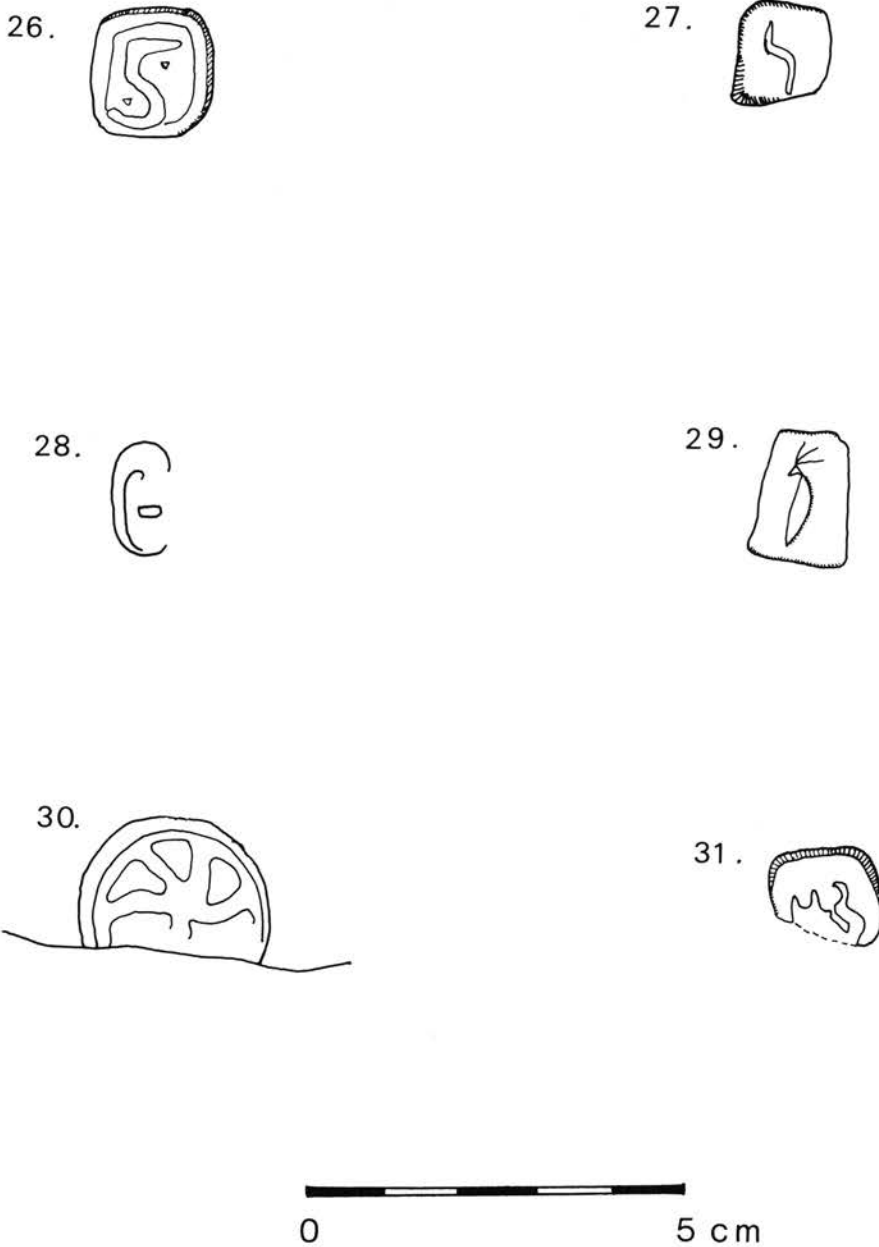


FIG.20 Punic Amphora Stamps (Scale 1:1)

31. On upper surface of handle fragment. Stamp incompletely impressed – squarish impression, internal features illegible (FIG. 20, No. 31).
Context: SPA 24.6 b 888
32. Maña D type jar (N. Keay type 3-4). Stamp on upper surface of handle – squarish impression containing the double letter 'a'. Jar drawn (by K. Kenyon) at 1:8; stamp at a different scale – possibly 1:2 or 1:3 (FIG. 21).

PUNIC STAMPS FROM OTHER SITES (FIG. 22)

1. On external surface of rim of amphora of type Cintas 312/313. No scale or further details given.
Context: Carthage, Byrsa, layer 6, Sondage H 11, 13 (*Byrsa i*, 69)

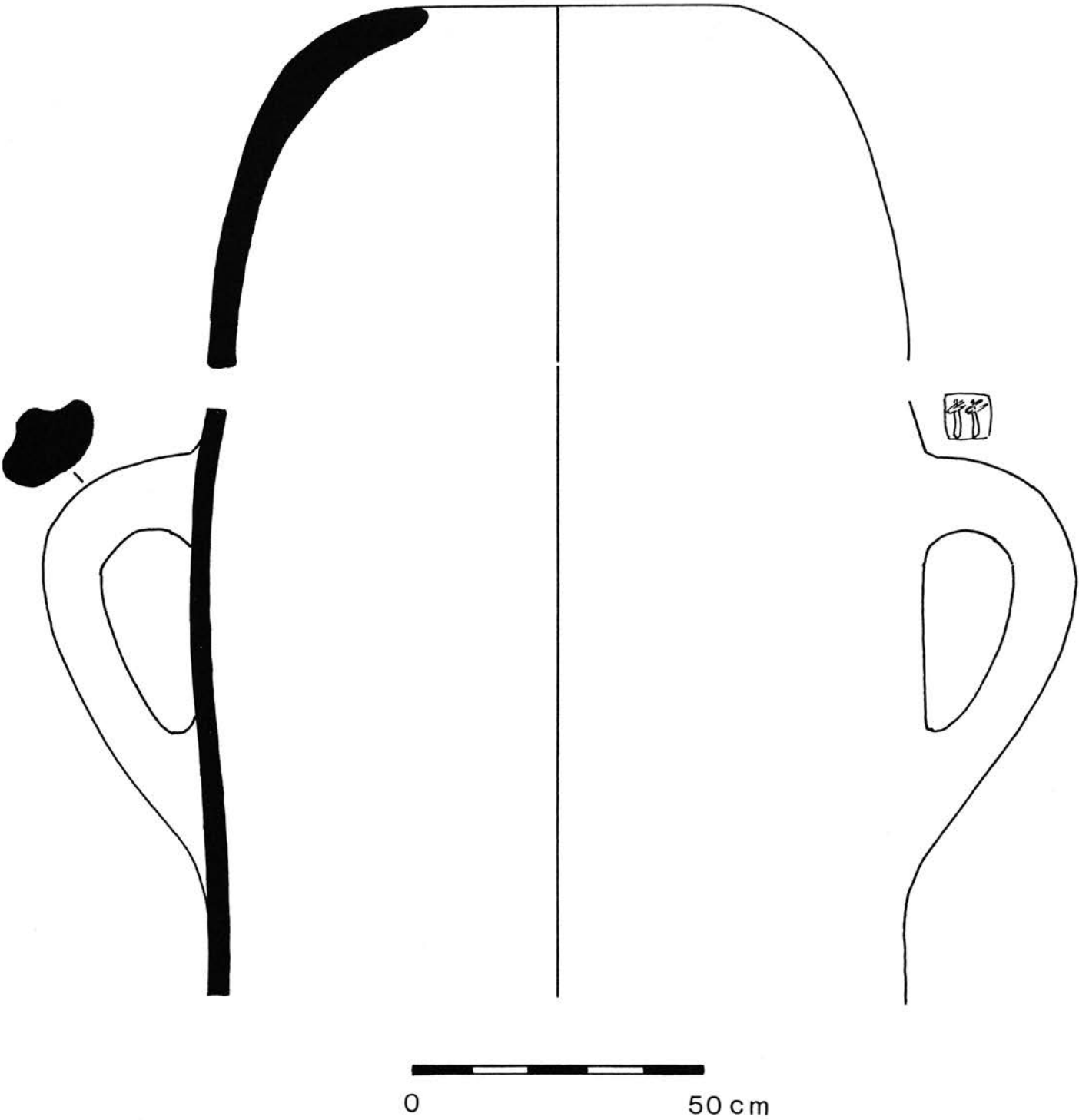


FIG.21 Hole-mouthed jar (Scale 1:8) with Punic stamp (Scale 1:2 or 1:3)

2. On body sherd of Punic amphora, close to one handle attachment. Deep, roughly circular impression: sign of 'Tanit' is clear but other signs or characters are enigmatic – M. Sznycar suggests a retrograde letter 's' (*Byrsa i*, 108).
Context: Carthage, Byrsa – ilôt E (*Byrsa i*, 108, fig.129 A172.46)
3. On handle fragment of amphora. Squarish impression with Greek form of letter 'A' in relief – significance obscure.
Context: Carthage, Byrsa – ilôt E (*Byrsa i*, 128, fig.63 A175–26)

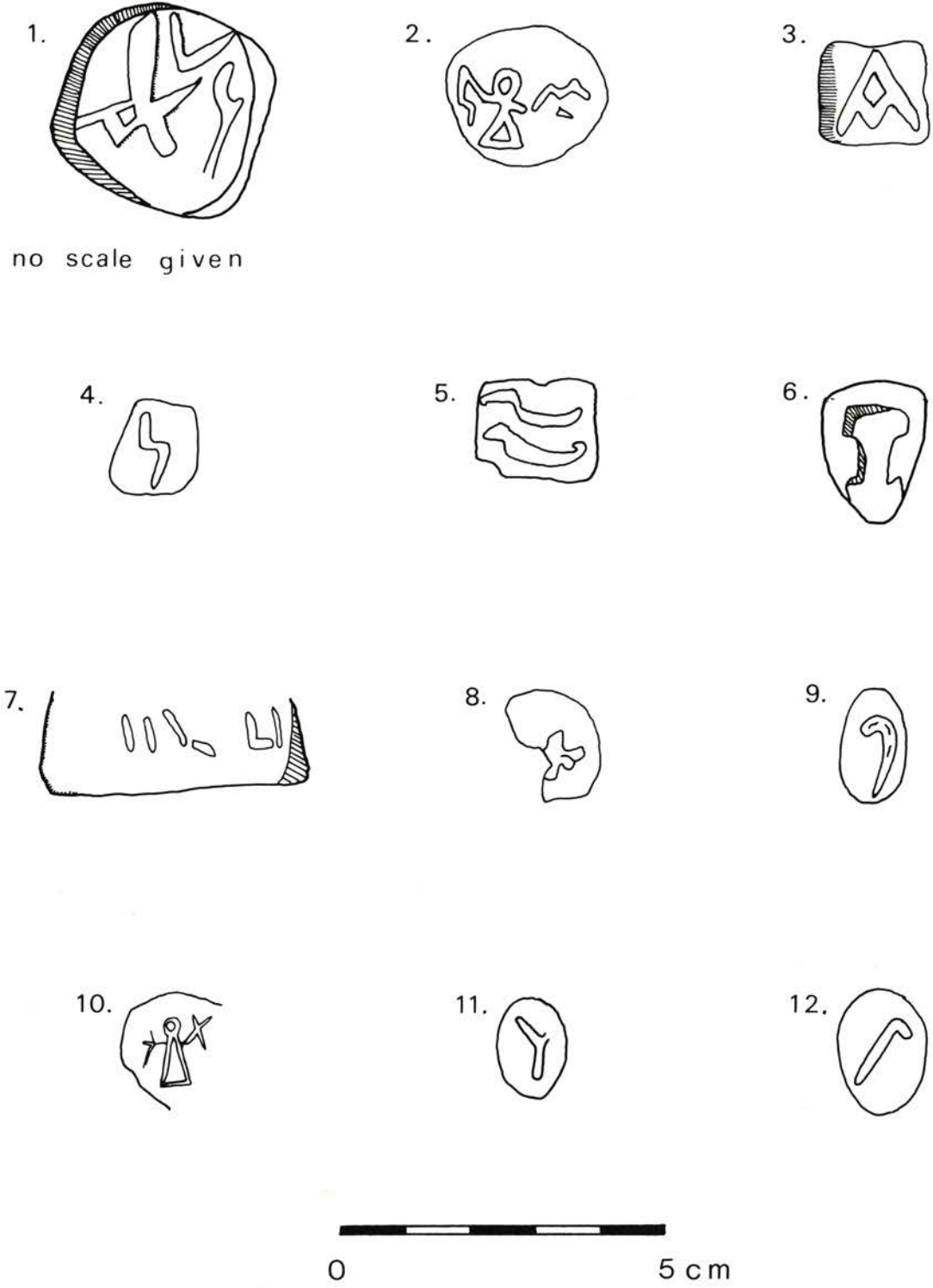


FIG.22 Punic Amphora stamps from sites other than Sabratha (Scale 1:1)

4. On handle fragment. Deeply impressed rectilinear field with letter 'n' in relief (cf. Sabratha, FIG. 20, No. 27).
Context: Carthage, Byrsa, Sector B (*Byrsa i*, 209, fig.262 B701.104)
5. One on top surface of each handle of Maña D type jar. Rectilinear field containing double letters 'n' in relief.
Context: Necropolis of Ses Torres (Ibiza) (Ramon 1981, 38, fig.4 no.5)
6. On upper part of body of Maña C1 or C1/2 jar. Stamp described as 'a Punic motif within a triangular field with rounded corners' – significance unknown.
Context: Ibiza – exact location unknown (Ramon 1981, 39, no.30, fig.5, no.5)
7. On upper part of body. Rectangular impression: 'marks' are illegible.
Context: Coast of Ibiza (Ramon 1981, 39, no.33, fig.6, no.3)
8. On upper surface of handle, near angle with body. Rounded or sub-rectangular impression but lower left-hand corner smudged – stamp illegible.
Context: Carthage B phase 7:1 (Fulford and Peacock 1984, 152)
9. Oval impression with single letter 'p' in the centre.
Context: Carthage (Fulford and Peacock 1984, 152)
10. On body, slightly to right and below handle. Rounded impression carrying sign of 'Tanit'.
Context: Carthage (Fulford and Peacock 1984, 152)
11. On upper surface of handle. Roughly circular or oval impression containing the single letter 'w'.
Context: Ullastret – secondary deposition in fill of a Hellenistic cistern, dated later than the ruin of the Medieval palace (Oliva 1962, fig.34, no.15).
12. On Maña B type jar. Roughly oval impression with the single retrograde letter 'g'.
Context: Ullastret – secondary deposition in fill of Hellenistic cistern beneath museum entrance (Oliva 1959, fig.23)

4. NORTH AFRICAN FABRICS by NINA KEAY

The following fabric groups were identified by macroscopic examination ($\times 10$ hand-lens). The Munsell colour chart (Munsell 1973) was used to describe the range of colours of the clays examined.

The wide variety of Tripolitanian/Tunisian fabrics present at Sabratha fall within the North African range of fabrics defined at Carthage (Fulford & Peacock 1984). Petrologically it is difficult to distinguish between the products of Tripolitanian, central Tunisian and northern Tunisian fabrics (*ibid.*, 14-18). However, visually a number of fabrics in the Sabratha amphora assemblage could be differentiated consistently on the basis of size and frequency of inclusions and the hardness and fracturing characteristics of the clay. The degree of variation within the North African range of fabrics suggests a large number of local and regional sources for the Sabratha amphorae.

Fabric 1a

Colour: Reddish yellow (7.5 YR 7/6)

Description: Hard, rough, fabric with laminated fracture, abundant, well-sorted, well-rounded inclusions (quartz), with an average size of 0.3 mm. Moderately common limestone reaction rims and moderately frequent limestone grains, with an average size of 0.1 mm. Red clay pellets are sparse. Yellowish-cream surface treatment. This is Fabric 2 in Peacock's section on Punic amphora stamps (above, p.71).

Fabric 1b

Colour: Light brown (7.5 YR 6/4)

Description: Similar to fabric 1a, but less coarse and laminated. Abundant presence of well-sorted inclusions, together with moderately frequent, irregular, limestone inclusions, with an average size of 0.4 mm. Creamy surface treatment.

Fabric 1c

Colour: Light red (2.5 YR 6/6)

Description: Very coarse, hard, laminated fabric similar to fabric 1a. However, the abundant sub-rounded quartz inclusions are larger (average size of 0.5 mm), with sparse red grains (average size of 1.0 mm) and limestone grains (average size of 0.2 mm). No limestone reaction rims were present. Yellowish-cream surface treatment.

Fabric 2a

Colour: Ranges from pinkish white (7.5 YR 8/2) to reddish grey (5 YR 5/2)

Description: Hard, moderately rough, and can be laminated; hackly fracture. There are three fabric sub-groups according to colour and inclusions:

- 1) Pink (7.5 YR 8/4); this is the finest clay in the fabric series, with moderately common, rounded, quartz inclusions (up to 0.3 mm) and sparse, sub-angular, grey inclusions (up to 0.5 mm).
- 2) Grey (5 YR 5/2); similar to above, but with more abundant quartz (av. 0.2 mm) and limestone (av. 0.1 mm) inclusions. Also reaction rims are common (average of 0.3 mm). This is Fabric 3 in Peacock's section on Punic amphora stamps (above p.00).
- 3) Reddish yellow core (5 YR 7/6); this is the roughest fabric and is laminated, with abundant large quartz inclusions (average size of 0.8 mm). White (7.5 YR 8) surface treatment. This is Fabric 3 in Peacock's section on Punic amphora stamps (see above, p.71).

Fabric 2b

Colour: Grey (5 YR 5/1)

Description: Hard, moderately rough clay with a rough fracture. There are abundant grey-green limestone reaction rims and large white irregular limestone inclusions (up to 2 mm). There are also moderately common well-sorted, sub-rounded, quartz grains (average size of 0.1 mm).

Fabric 2c

Colour: Pinkish grey (7.5 YR 7/2)

Description: Very similar to fabric 2b, but the abundant, clear, glassy inclusions are larger and more irregular (average size of 0.5 mm), with sparse black grits (0.2 mm) in a laminated clay matrix.

Fabric 2d

Colour: Pink (5 YR 7/4)

Description: Compact clay, quite smooth and hard, with a smooth fracture. Moderately common, angular and sub-rounded inclusions, well-sorted (average size of 0.2 mm). In addition, there were sparse dark grey grits (average size of 0.2 mm) and very sparse specks of mica.

Fabric 2e

Colour: Reddish yellow (5 YR 6/6) with a light, reddish brown, core (5 YR 6/3)

Description: Hard, very rough fabric with a hackly fracture. There are common, clear, well-rounded quartz inclusions (average size of 0.7 mm), sparse dark grey grits (average size of 0.8 mm), sparse sub-rounded limestone inclusions and reaction rims (0.4 mm).

Fabric 3a Carthage 'Coarser Tripolitanian Fabric'

Colour: Reddish brown (2.5 YR 5/4) and dark grey (2.5 YR 4) when reduced.

Description: A very hard, rough, clay with a hackly fracture. Abundant, well-sorted limestone inclusions, together with abundant quartz grains (average size of 0.5 mm). Fabric is covered with a creamy-greenish grey salt surface treatment. This is Fabric 1 in Peacock's section on Punic amphora stamps (above. p.71).

Fabric 3b

Colour: Banded clay, alternating between reddish brown (2.5 YR 5/4) and a dark grey (2.5 YR 4/0) core.

Description: Similar to Fabric 3a in hardness and feel, but with sparse, ill-sorted lime inclusions (average size of 1.0 mm) and moderately common mica flakes (0.1 mm).

Fabric 3c

Colour: Reddish brown clay with red core (2.5 YR 5/6), and creamy white surface treatment.

Description: Similar to 3a.

Fabric 3d

Colour: Red (2.5 YR 5/8), with dark grey core (2.5 YR 4/0).

Description: Very rough, hard, laminated fabric with a hackly fracture. Abundant irregular white limestone inclusions and limestone reaction rims (0.2–2.0 mm). Also, there are very common sub-rounded clear quartz grains, well sorted (0.5 mm). There is a white surface treatment.

Fabric 3e

Colour: Light red (2.5 YR 6/6)

Description: This is a hard, rough, clay, with abundant white, well-sorted rounded limestone inclusions (0.4 mm), and abundant irregular voids (0.4 mm). Quartz grains are moderately common (0.5 mm). There is a creamy white surface treatment.

Fabric 3f

Colour: Light red (2.5 YR 6/6)

Description: This is a hard, rough, fabric with a hackly fracture. There are abundant, well-sorted, rounded quartz inclusions (average size of 0.5 mm), common rounded limestone inclusions (average size of 0.2 mm) and sparse limestone reaction rims. There is a whitish surface treatment.

Fabric 3g

Colour: Reddish yellow (5 YR 6/6) with a reddish core (2.5 YR 5/8)

Description: This is a hard clay, finer than 3e, with a scattering of ill-sorted white inclusions (up to 1.0 mm) and a moderate scatter of mica. The surface treatment is similar to 3f.

Fabric 4a

Colour: Light red (2.5 YR 6/8), sometimes with light reddish colour towards the surface (2.5 YR 6/4)

Description: This is a hard, fairly rough, clay. There are common white limestone inclusions and limestone reaction rims (0.2–1.0 mm), dull quartz grains and sparse mica scatter. There is a white surface treatment.

Fabric 4b

Colour: Grey (5 YR 6/1)

Description: This is a hard, moderately rough, fabric with a rough fracture. There are moderately common sub-rounded dull quartz grains (average size of 0.3 mm), as well as sparse, white, glassy grains (0.4 mm).

Fabric 4c

Colour: Grey (5 YR 6/1)

Description: This is a reduced version of 4a.

Fabric 4d

Colour: Light red (2.5 YR 6/8) to reddish yellow (5 YR 7/6)

Description: This fabric has a fairly rough surface and rough fracture. There are frequent, sub-rounded, dull glassy grains (up to 0.9 mm), sparse, white, irregular grains of lime (average size of 0.4 mm), as well as rare angular orange inclusions (up to 1.3 mm).

Fabric 5a

Colour: Light red (2.5 YR 6/6)

Description: This is a hard, moderately rough fabric with rough/smooth fracture, well-compacted clay. There are moderate, dull glassy quartz inclusions (average of 0.2 mm), rare grey grits (average of 0.3 mm) and sparse mica flecks. There is a creamy surface treatment.

Fabric 5b

Colour: Reduced grey (2.5 YR 6/0) core.

Description: This is similar to 5a, but is finer and has a more compact clay matrix. There are occasional, dull, glassy inclusions (0.1 mm) and well-sorted moderately common flecks of lime. Mica is rare.

Fabric 5c

Colour: As 5b

Description: This is a hard, compact, smooth fractured clay. There are moderately common red and black grits, well-sorted (0.1–0.2 mm), together with sparse white flecks (average size of 0.1 mm) and rare sub-rounded quartz grains (0.1 mm).

Fabric 5d

Colour: Light, reddish brown (2.5 YR 6/4)

Description: This is a hard, quite smooth, clay, with a smooth fracture. There are abundant limestone flecks and limestone reaction rims, sparse dark brown clay pellets (average size of 0.8 mm).

Fabric 5e

Colour: Light red (2.5 YR 6/6)

Description: This is similar to fabric 5a, but has a rougher clay. The same inclusions are present, but are common. In addition, there are common red grits present (0.2 mm).

Fabric 6a

Colour: Yellowish beige (7.5 YR 7/4)

Description: This is a very hard, coarse fabric with a hackly fracture. The average size of inclusions is 1.0 mm. Dark grey shiny pellets are common, whilst there are moderate quantities of white, glassy, sub-rectangular inclusions (up to 1.5 mm). There is a yellowish/cream surface treatment.

Fabric 6b

Colour: Reddish yellow (5 YR 6/6), with light red core (10 YR 6/6)

Description: This is a hard, rough, laminated fabric. Light grey and white limestone inclusions are common (average size of 0.3 mm), although ill-sorted, as are sub-rounded quartz inclusions (average size of 0.3 mm).

5. CONCORDANCE

COMMON NAMES AND OTHER SYSTEMS OF CLASSIFICATION

Numbers in [brackets] refer to the Sabratha type series in Part I.

Africana I (Panella 1972)		[17]
Africana II (Panella 1972)		[18]
Almagro (1955)	398-9	[10]
Beltrán (1970)	V	[15]
	56	[18]
	57	[17]
	59	[24]
	60	[23,37k]
	61	[37m]
	64/65a	[21]
	71-77	[25]
Berenice (Benghazi) (Riley 1979)	HA 4	[37a]
	HA 10	[3-4, 37d]
	HA 12	[8]
	HA 13	[7]
	ERA 5	[12]
	ERA 11a-b	[16]
	MRA 1a	[29, 37l]
	MRA 12	[28]
	MRA 17a	[24]
	LRA 8a	[30]
	D 91	[10]
British (Thomas 1959)	Bi	[25]
	Bii	[27]
Corinthian B		[1,37b]
Carthage (Hayes 1976)	ERA 1	[3,37d]
Carthage (Riley 1981)	LRA 1	[27]
	LRA 2	[25]
Cintas (1950)	312	[8]
	314	[10]
	315	[3,37d]

Dressel (1899)	1	[11,37f]
	2–4	[13,37g]
	6	[12]
	20	[15]
	30	[19,37i]
	43	[32]
Garum amphorae		[14]
Greco-Italic		[6]
Hole-mouthed amphorae		[3,4,5, 37d]
Kapitän (1972)	II	[20]
Keay (1984)	Ia, b	[19,28,37i]
	IIIa, b	[17]
	IV	[18]
	XII	[20]
	XXV	[21,37j]
	LIII	[27]
	LIX	[26]
	LVII	[37m]
	LXIa	[23,37k]
	LXIIa	[24]
	LXV	[25]
Maña (1951)	B3	[5]
	D	[3,37d]
Massaliote		[2,37c]
Ostia (Ostia iii)	II	[16d]
	IV	[17]
	V	[19,28,37i]
	VI	[20]
	XX	[11]
	XXIV	[16c]
	LXIV	[16a]
Peacock and Williams (1986)	2	[6]
	3–4	[11]
	8	[12]
	10	[13]
	18–19	[14]
	25	[15]
	33	[17]
	34	[18]

	36–37	[16]
	38	[19]
	43	[25]
	44	[27]
	47	[20]
	51	[30]
Spatheion		[30]
Tripolitana (Panella 1972)		
	I-III	[16,37h]
Van der Werff (1978)		
	1	[8]
	2	[9,37e]
	3	[7,37e]
Vegas (1973)		
	53	[21]

PART II: THE COARSE POTTERY

by JOHN DORE

1. INTRODUCTION

At the outset we did not consider that the coarseware could contribute in a major way to the refinement of the dating of the site and thus our main concern has been to make a typological analysis of the assemblage against an established chronological framework. It must be stressed, however, that while the coins and fineware indicate occupation of the site from roughly the late fifth century B.C. to the sixth century A.D. the dependability of the chronology within these limits is variable. For the earliest occupation the amount of pottery and the number of contexts are too small, and for the latest the stratigraphy is too equivocal and fragmentary to yield useful information. When the most useful information from the areas which were excavated is amalgamated it provides a reliable band of data which extends from about the third century B.C. to the fourth century A.D.

The coarseware catalogue includes some 4000 vessels. It does not explicitly include the material from the Antonine Temple which was published in Kenrick 1986 though this evidence has been taken into account in the dating of certain types and in the charts of occurrence (FIG 24, *passim*). The reader should be aware of the selective process which has taken place since excavation and which has influenced the composition of the catalogue. Only part of the excavated assemblage was transported to Britain; the remainder is housed in the site museum at Sabratha. The basis on which the division was made is not known in detail but most of the large complete vessels, such as amphorae, remained in Libya because of transportation difficulties. The British assemblage is very largely composed of rim sherds. The discarding of most of the wall and base sherds probably took place very soon after the material came out of the ground though additional screening may have been done before transport to Britain. The material in this report was selected only from the British assemblage and then only from contexts whose provenance and place in the site's chronological sequence could be reasonably well established (though a very few vessels from unreliable contexts have been included; they were mistakenly catalogued but it seemed pointless to exclude them later). From this it should be clear that any conclusions based on the relative proportions of different wares and types should be treated with caution.

2. THE ARRANGEMENT OF THE CATALOGUE

The vessels included in the report have been arranged, in the first instance, according to shape. Similarities in shape have been used to group vessels into a number of types and these, in turn, can be grouped into the following major sub-divisions:

Types 1-29	Shallow casseroles/pans
Types 30-70	Deep casseroles/pans

Types 71-73	Large narrow-mouthed jars
Types 74-76	Handled jars
Types 77-79	Miscellaneous small jars and beakers
Types 80-90	Miscellaneous jars and casseroles
Types 91-94	Braziers
Types 95-109	Large lids
Types 110-130	Small lids
Types 131-206	Small and medium bowls and dishes
Types 207-222	Medium and large bowls
Types 223-285	Large bowls/basins
Types 286-327	Hand-made vessels
Types 328-419	Unguentaria, jugs, flasks and flagons

In the case of a type that is well represented a catalogue entry begins with a discussion of any formal attributes upon which the definition of the type (and any sub-types within the type) is based. Some types are described as better defined than others. The degree of definition has been judged from the extent to which the attributes which define the type are consistently replicated from vessel to vessel.

The descriptive terminology is mixed in its referential scheme: body shape tends to be described in terms of geometry whereas elements of vessel rims are described in terms of supposed function, since, in the case of domestic pottery, function plays such a large part in determining form. There are two terms which are used extensively and which therefore deserve further comment:

Lid-locator: a very large proportion of the vessels from the site were intended to be used in conjunction with a lid and incorporate in their design some mechanism for locating one. This explicit provision for lids is a fundamental cultural marker which differentiates Roman pottery assemblages of the Mediterranean seaboard from, in particular, those of Britain, and as such is very important.

Lifting-flange: arrangements for lifting a vessel are, obviously, extremely important and although handles are often provided at specific locations, the provision of a flange at or near the mouth, particularly in open vessels, makes the vessel more manoeuvrable and manageable.

Sometimes these two functional elements are separately articulated in a vessel (eg in form 16), sometimes they are combined (eg in 33-35). Their precise arrangement and interaction represents an important indicator of typological change.

The description of the fabric follows any discussion of form. Where there are a number of fabrics common to many examples of the type, descriptions are itemised and presented at the head of the entry. Miscellaneous fabrics are described with their vessels. The arrangement of fabric descriptions has been standardised and the information is presented in the following order: colour; inclusion texture (see below under fabric); inclusion type.

At the heart of the catalogue entry for each type is a list of the vessels included in the type. A typical example of an item in a vessel-list might be:

xxi 14: 384 Dia.: 16

and this would convey the following information:

xxi 14: the context code (the "Y1" number, see pp. 4 & 255-94).

384: the catalogue number; this is marked in waterproof black ink on the vessel to which it refers; it is *not* the number of Kathleen Kenyon's original catalogue which often refers to more than one vessel and thus cannot be used to uniquely identify a vessel.

Dia.: 16: vessel diameter in centimetres; for the casseroles and pans – Types 1–70 – this was measured at the *inside* lip of the rim; for all the other types it was measured at the outside.

Immediately following the list of vessels is a list of the earliest context(s) in which an example of the type was found. A full list of Stratified Contexts can be found on pp. 255–94. The use of “possibly” and strategically placed question marks gives some indication of the date range and reliability of a context. The type-entry is concluded with information on any similar dated types either from the two groups already published in Kenrick 1986, or from other sites. If insufficient information is available to date a type, no comment is made.

3. FABRIC

Vessel fabric was examined in the hand and using a binocular microscope ($\times 20$ magnification) equipped with an eyepiece graticule graduated in mm. The following details were recorded:

Colour: body colour across the vessel-wall supplemented where necessary with core and surface colours; precise Munsell values were not recorded but a set of Munsell Soil Colour Charts (1975 ed.), removed from its binder and mounted on a neutral grey card, was always within sight during pottery processing, in order to provide some degree of visual calibration and ensure some standardisation of descriptive terms throughout the report. The following list gives an approximate correspondence between the descriptive terms used here and Munsell codes:

Orange/brown
and dark brown : Hue 5 YR; orange/brown: 5/6 & 5/8 – 6/6 & 6/8; dark brown: Value < 5,
Chroma > 2
Orange/red : 2.5 YR 5/8 – 10R 5/8
Red/brown : Hue 2.5 YR – 10 R, Value < 5, Chroma > 4
Maroon and
maroon/brown : Hue 10 R, Value < 4
Orange : around 5 YR 7/8
Orange/yellow : around 7.5 YR 7/8
Yellow : Hues 10 YR and 2.5 Y, Value > 6, Chroma > 4

Inclusions: Information on the size of the inclusions was recorded as a single estimation of overall texture, i.e. as an estimation of the average diameter of grains comprising the main fraction of the inclusion suite. Five categories were used:

Texture 1 (T1) : not > 0.1 mm
Texture 2 (T2) : not > 0.2 mm
Texture 3 (T3) : not > 0.5 mm
Texture 4 (T4) : not > 1 mm
Texture 5 (T5) : not > 2 mm

The density of inclusions was categorised as either sparse or common. It was judged to be sparse when the area of vessel fabric falling under one or more of the eyepiece graticule cells did not appear to contain any grains. As the majority of fabrics fell in the Common category, only sparseness was noted. A generalised description of inclusion type (eg quartz, limestone, black vitreous grains) in descending order of frequency, was recorded.

Within vessel-types vessels were grouped into fabric-types on the basis of the combined similarities of the recorded data, with distinctions initially being made on the basis of inclusion type. The dominant fabric type among the hand-made vessels is that associated with angular grains of microcline felspar (identified as such in thin section). This is the fabric of Pantellerian

ware (see Peacock 1984a). For the wheel-made assemblage a broad tripartite subdivision is possible on the basis of inclusion type. The three groupings are as follows:

- 1) Vessels whose fabrics contain quartz, red iron ore and limestone (with limestone often only in small quantities).
- 2) Vessels whose fabrics contain significant amounts of grains of volcanically derived material (most recognisable as black and red vitreous grains).
- 3) Vessels whose fabrics contain mainly if not exclusively quartz and limestone.

Category 1

This most clearly defines a "ware" as it stands. It comprises *c.* 9% of the vessels included in this report (excluding hand-made fabrics, closed vessels and all miscellaneous vessels). It is associated with a distinctive orange or orange yellow body-colour often with a dark grey or black outer surface, (or in the lids a deep black strip on the outer face of the rim), and inclusion textures which are confined to T3 or T4. The forms with which it is associated are the following: 7, 15, 16, 21, 37, 38-41, 53-57, 96, 98, 99, 101, 102, 103, 116, 117, 153. Occurrences at Carthage, where it is known as Early Roman Cooking Ware 1 and African Black Top Ware (see Hayes 1976, 87 & 93) would suggest that the ware was made in northern Tunisia.

Category 2

There are comparatively few vessels which fall into this category which makes the definition of "wares" difficult. The category comprises less than 3% of the vessels contained in this report (excluding hand-made fabrics, closed vessels and all miscellaneous vessels). The most distinctive associations are with Types 37 and 152, which could well be Campanian in origin. Certain other vessels (Types 17, 22, 37, 96 and 147) are distinguished by the presence of large (1-2 mm dia.) flakes of golden mica in their fabric.

Category 3

The majority of the vessels in the assemblage fall into this category and consequently this is the most diffuse and poorly defined as it stands. Without further subdivision and refinement this group offers little key to origin beyond being generally North African (in this context see Peacock 1984, 14: "Quartz-limestone Fabrics of Africa").

In order to try and establish sub-divisions, vessels of this inclusion type were further categorised according to the proportion of quartz to limestone. There were four categories: entirely quartz (or limestone only marginally present), quartz in excess of limestone, equal proportions of quartz and limestone, and limestone in excess of quartz. The combination of inclusion proportion and inclusion texture defined a two dimensional classificatory space containing a total of twenty discrete categories into which a vessel could be classified. An inclusion profile for each vessel type was produced by using the distribution of its member vessels within this classificatory space. Profiles for a number of common vessel-types are presented below in the form of a contingency table for each vessel type. Inclusion texture is shown on the vertical axis of each table, inclusion type on the horizontal. Figures refer to the number of vessels occurring in each category.

The significance of the variation between the profiles for different vessel-types was established by fitting linear models of varying complexity to the data using a statistical programme package (the GLIM package) on the computer system at Newcastle University. This estimated the degree of likelihood that the variation was the result of non-random factors (on the analysis of

contingency table data such as this see Everitt 1977 and Wrigley 1985). The lowest threshold at which variation has been deemed significant is 1 in 20 (0.05).

From this it can be seen that the inclusion profiles simply provide another tool for measuring the difference between vessel-types. The principal assumption underlying the attempts made in various places throughout the report to interpret these differences, is that whatever other factors may be involved (geological, chemical etc), the characteristics of a vessel-type have been influenced to a significant degree by what one might term a "techno-cultural" factor relating to the group which produced the vessel-type, and that a significant variation between comparable vessel-types implies a separation (temporal, spatial or cultural) between the respective producing groups. This assumption accepted, the task of interpretation resolves itself into calibrating the correlation between the variation in vessel-types (expressed as variation in shape, colour and fabric) and the implied separation between the producing groups.

In two instances (forms 161–162 and 213–218) the number of examples of a vessel type was sufficiently large to permit a detailed analysis of the inclusion profiles. These analyses will be found under the respective type-headings in the catalogue.

For the casseroles the general consistency of this fabric category in a range of types which cover a considerable period of time, suggests that a continuous potting tradition was associated with the site from at least the third century B.C. to at least the second century A.D. Certain forms, however, show distinguishable fluctuations which could be indications of sub-groupings within the general pattern. The variation is most marked for forms 33–35 with that between the inclusion profiles for forms 34 and 35 attaining significance (at the 0.01 level). Significant variation (at the 0.01 level) exists between the jar forms 42, 44, 46, 48 and 50 on the one hand, and their smaller counterparts, forms 43, 45, 47, 49 and 51, on the other, though this variation seems to be associated entirely with size, the inclusion texture of the smaller vessels being generally finer. The profiles for the deep casserole forms 58, 59, 60 and 62 are extremely consistent.

Among the lids form 104 is particularly interesting. The form as defined here includes considerable variation in detail (though as yet no very clear pattern has emerged) and its inclusion profile shows a wide dispersion and a tendency towards bi-modality (Texture 2 and 3, $Q > L$) which might suggest that it is actually composed of the superimposition of more than one discrete profile. It may well be that in the future, formal sub-divisions will emerge which can be associated with different profiles.

The small lid forms 110, 112 & 113, 114 & 115 and 117, show a consistent tendency towards the limestone end of the inclusion proportion range.

Within the medium and large bowl class significant differences exist between the inclusion profiles for forms 207–212 and those associated with both fabrics of forms 213–218.

Fabric Category 3 Inclusion Profiles

FORM: 9

FORM: 16 fabric a

FORM: 9					FORM: 16 fabric a				
Proportion	q	q > 1	q = 1	1 > q	Proportion	q	q > 1	q = 1	1 > q
Texture 1					Texture 1				
2		1			2		1	1	
3	1	2			3		12	5	
4	1	2	1		4		3		
5					5				

FORM: 18

Proportion	q	q >1	q =1	1 >q
Texture 1				
2	1	1	1	
3	1	4	2	
4	2	1		
5				

FORM: 42

Proportion	q	q >1	q =1	1 >q
Texture 1				
2		2	1	1
3	5	8	2	1
4	1			
5				

FORM: 33

Proportion	q	q >1	q =1	1 >q
Texture 1				
2	6	5		
3	10	3		
4				
5				

FORM: 43

Proportion	q	q >1	q =1	1 >q
Texture 1				1
2				1
3	1	1	3	1
4				
5				

FORM: 34

Proportion	q	q >1	q =1	1 >q
Texture 1				
2	12	3	1	
3	3	3	2	
4				1
5				

FORM: 44

Proportion	q	q >1	q =1	1 >q
Texture 1				
2	2	5	1	2
3	5	9	1	1
4	6	1		
5				

FORM: 35

Proportion	q	q >1	q =1	1 >q
Texture 1	1			
2	1	4		2
3	4	11	5	
4		1		
5				

FORM: 45

Proportion	q	q >1	q =1	1 >q
Texture 1		1		
2		2		
3				
4				
5				

FORM: 46

Proportion	q	q >1	q =1	1 >q
Texture 1				
2		3	2	1
3		5		1
4				
5				

FORM: 50

Proportion	q	q >1	q =1	1 >q
Texture 1				
2				
3	3	1		
4	1			
5				

FORM: 47

Proportion	q	q >1	q =1	1 >q
Texture 1				
2	1	1	1	
3		1		1
4				
5				

FORM: 51

Proportion	q	q >1	q =1	1 >q
Texture 1		2	1	
2		2	2	
3			2	2
4				
5				

FORM: 48

Proportion	q	q >1	q =1	1 >q
Texture 1				
2			1	1
3	3	5	1	
4	2	3		
5				

FORMS: 42, 44, 46, 48, 50

Proportion	q	q >1	q =1	1 >q
Texture 1				
2	2	10	5	5
3	16	28	4	3
4	10	4		
5				

FORM: 49

Proportion	q	q >1	q =1	1 >q
Texture 1		1		
2			1	
3	1	1		
4				
5				

FORMS: 43, 45, 47, 49, 51

Proportion	q	q >1	q =1	1 >q
Texture 1		4	1	1
2	1	5	4	1
3	2	3	5	4
4				
5				

FORM: 58

Proportion	q	q >1	q =1	1 >q
Texture 1		1		
2	1	5	2	
3	4	12	3	1
4	1	3		1
5				

FORM: 95 fabric a

Proportion	q	q >1	q =1	1 >q
Texture 1		2		
2	8	8	5	4
3	5	14	8	9
4		2		4
5				

FORM: 59

Proportion	q	q >1	q =1	1 >q
Texture 1				
2	3	3	1	
3	4	8	1	3
4				
5				

FORM: 97 fabric a

Proportion	q	q >1	q =1	1 >q
Texture 1			1	
2		9	2	
3	1	2		1
4				
5				

FORM: 60

Proportion	q	q >1	q =1	1 >q
Texture 1				1
2		3		
3	2	5		1
4	1	2		
5				

FORM: 98 fabric a

Proportion	q	q >1	q =1	1 >q
Texture 1		2		
2	8	11		
3	1	5		1
4				
5				

FORM: 62

Proportion	q	q >1	q =1	1 >q
Texture 1				
2		4		1
3	4	25	7	8
4	1	1	1	1
5				

FORM: 99 fabric a

Proportion	q	q >1	q =1	1 >q
Texture 1		2	2	
2	1	5	2	2
3	5	11	2	3
4	1	3		
5				

FORM: 100

Proportion	q	q > 1	q = 1	1 > q
Texture 1				
2	1	2	1	1
3	9	14	8	3
4	3			
5				

FORMS: 112 & 113

Proportion	q	q > 1	q = 1	1 > q
Texture 1				
2				3
3	2	1	1	23
4		1	2	12
5				

FORM: 101 fabric a

Proportion	q	q > 1	q = 1	1 > q
Texture 1		1		
2	1	6		
3	1	4	3	
4				
5				

FORMS: 114 & 115

Proportion	q	q > 1	q = 1	1 > q
Texture 1			1	
2				
3				6
4				
5				

FORM: 104

Proportion	q	q > 1	q = 1	1 > q
Texture 1	8	2	1	2
2	7	45	7	5
3	18	38	10	16
4	1	1	1	
5				

FORM: 117

Proportion	q	q > 1	q = 1	1 > q
Texture 1	1	2	1	
2	4	4		2
3	1	12	8	13
4		1		6
5				

FORM: 110

Proportion	q	q > 1	q = 1	1 > q
Texture 1				
2		1	1	
3		2	3	4
4				1
5				

FORM: 131 fabric a

Proportion	q	q > 1	q = 1	1 > q
Texture 1		1	2	
2		1	2	2
3	1	2	1	
4				1
5				

FORM: 133

Proportion	q	q > 1	q = 1	1 > q
Texture 1		6	1	
2		3	1	1
3			1	1
4				
5				

FORM: 141 fabric a

Proportion	q	q > 1	q = 1	1 > q
Texture 1	1			
2	1	4	3	1
3	1	1	3	2
4				
5				

FORM: 135 fabric a

Proportion	q	q > 1	q = 1	1 > q
Texture 1	1	1		
2	1	4	2	
3	1	3	2	3
4			1	
5				

FORM: 147

Proportion	q	q > 1	q = 1	1 > q
Texture 1		3	1	1
2		3		2
3		4	3	
4				
5				

FORM: 137

Proportion	q	q > 1	q = 1	1 > q
Texture 1		4	4	
2		2	1	2
3				
4		1		
5				

FORM: 150

Proportion	q	q > 1	q = 1	1 > q
Texture 1		5	1	1
2	1	3	1	1
3	1			
4				
5				

FORMS: 138-140

Proportion	q	q > 1	q = 1	1 > q
Texture 1		5	1	
2		1		
3				1
4				
5				

FORM: 151

Proportion	q	q > 1	q = 1	1 > q
Texture 1		8		
2	1	9	2	
3	1	1		
4				
5				

FORMS: 155 & 156

Proportion	q	q >1	q =1	1 >q
Texture 1	1	2		
2	1	8	1	3
3		7	2	3
4				
5				

FORM: 162 fabric b

Proportion	q	q >1	q =1	1 >q
Texture 1	3	2		
2		4	1	
3			3	7
4				3
5				

FORMS: 158–160 fabric a

Proportion	q	q >1	q =1	1 >q
Texture 1				
2	1	3		2
3		1	1	
4				
5				

FORMS: 207–212

Proportion	q	q >1	q =1	1 >q
Texture 1				
2	1	9	14	2
3	2	6	3	12
4			1	
5				

FORM: 161 fabric a

Proportion	q	q >1	q =1	1 >q
Texture 1		2	4	
2	12	31	20	9
3	3	12	6	9
4				
5				

FORMS: 213–218 fabric a

Proportion	q	q >1	q =1	1 >q
Texture 1		3	5	
2		16	32	10
3		13	19	3
4			1	5
5				

FORM: 162 fabric a

Proportion	q	q >1	q =1	1 >q
Texture 1		14	3	
2	11	59	19	3
3	3	15	10	3
4				
5				

FORMS: 213–218 fabric b

Proportion	q	q >1	q =1	1 >q
Texture 1				1
2	1	3	3	
3	1	10	12	7
4		1	2	
5				

FORM: 346 fabric a

FORM: 350 fabric a

FORM: 346 fabric a					FORM: 350 fabric a				
Proportion	q	q >1	q =1	1 >q	Proportion	q	q >1	q =1	1 >q
Texture 1		1		1	Texture 1		4	2	
2		4	1	1	2		7	1	2
3		2		1	3	2	2		8
4				1	4				
5					5				

FORM: 349

Proportion	q	q >1	q =1	1 >q
Texture 1		3		
2		1	1	
3		5	1	1
4				
5				

4. DRAWINGS

The drawings are numbered according to the following system: the part of the number preceding the decimal point refers to the vessel-type; the part which follows the decimal point identifies, by means of its catalogue number, a specific vessel. In certain cases features from different vessels have been shown on the same drawing. In these cases the catalogue numbers of the vessels from which these features were taken are listed in "post-decimal-point" form.

5. THE OCCURRENCE OF TYPES IN THE SITE STRATIGRAPHY

The distribution of some of the more frequently encountered types in the stratified contexts is illustrated by a series of diagrams in the catalogue (FIG. 24, *passim*). The positions of the symbols denoting occurrence of a type are based on the position of contexts in FIG. 72. The totals for the Antonine Temple include the groups already published in Kenrick 1986 (from pit 2 in trenches Y3-4 and from phase 5 in trench N1).

6. DISCUSSION AND CONCLUSIONS

The catalogue of coarseware types sets out in detail the characteristics of each type and lists the occurrence of its examples in the site's stratigraphy. Here we would like to discuss some of the commonly occurring types period by period, and attempt some interpretative comment of a broader historical nature, within the limitations imposed by the composition of the assemblage (see p.87) and the nature of the stratigraphic record (see pp.3-4).

The period headings used are as follows:

- 1) The Early Punic Period (Fifth–fourth centuries B.C.)
- 2) The Later Punic Period (Third–first centuries B.C.)
- 3) The Early Imperial Period (First century B.C. – First century A.D.)
- 4) The Later Imperial Period (Second–fourth centuries A.D.)
- 5) The Latest Roman Period (Fifth–seventh centuries A.D.)

The figures of proportion have been derived only from the material in this catalogue and are presented rounded to one place of decimals. “All casseroles” means the total of wheel-made and hand-made casseroles.

The Early Punic Period (5th–4th Centuries B.C.)

The equivocal nature of the evidence from the earliest part of the site stratigraphy (where most of the contexts have a wide date span associated with them) makes it difficult to say a great deal about the development of the coarseware types at this period.

On typological grounds the earliest casseroles are types 1–3 (shallow) and 30–32 (deep) which form 1.7% of all casseroles. Examples occur in contexts which could date as early as the fifth century B.C.

The best defined and most frequently encountered types of which examples occur in this period are 8 and 9 (shallow) and 33–5 (deep) which together make up 18.7% of all casseroles. Similarities in rim form suggest that types 9 and 34–5 (12.7%) were associated and possibly formed the shallower and deeper members of a “set”. The same may have been true of types 8 and 33 (6.0%), though this is less certain. The contextual evidence offers a suggestion that type 33 is earlier than types 34 & 35 (see FIG. 28). Several occurrences of type 33 could fall within the fifth century, though on typological grounds one might not expect it to be quite as early as types 1–3 and 30–32. Overall, the similarities between types 34 and 35 (5.9% and 5.3% respectively, of all casseroles) suggest that they were broadly contemporary while variation in the details of rim shape combined with variation in inclusion profiles (see p.92) suggest that they originated from separate producing groups. All of these types occur in greater numbers in the next period.

The only other casseroles which occur in contexts which could date to this period are types 18 and 21 (2.7% and 0.9% respectively) of which 18 is identified by consistency of both form and fabric as the more tightly defined grouping.

Among the small and medium bowls examples of types 134, 142 and 143 occur in this period (0.4%, 1.2% and 0.7% respectively of class total).

Of the large “Punic” bowl types 234–242 (26.3% of all large bowls and basins) only one example (of type 242) occurred in a context at all likely to date to this period.

Two well defined types whose occurrence falls within this period are the painted “Punic” flagon types 396 and 397 (3.0% and 5.5% respectively, of all jugs and flagons).

The Later Punic Period (3rd–1st Centuries B.C.)

The evidence in at least three areas (Regio II Insulae 6 and 7, and the Casa Brogan) of abandonment during the third century B.C. makes it impossible to give any indication of the development of coarseware types at the beginning of this period. Following this, the quantity of pottery and range of types datable within the period would seem to indicate substantial and sustained occupation.

Of the casserole types whose initial occurrence may be placed in the second century B.C. the most frequently encountered is type 16 (5.6% of all casseroles) which stands at the head of a typological sequence, elements of whose development can be traced through to the second century A.D.

While the initial occurrence of casserole types 8 and 9, and 33–5 falls within the previous

period, the distribution of 9, 34 and 35 (see FIG. 29) suggests that their main period of use fell in this period and continued into the next.

Most of the occurrences of the series of "Punic" bowls, types 234-243, fall within this period, though, as indicated above and on p.201, some of them (234, 235 and 241 at least) may begin in the fourth century B.C. and one at least (type 243) may be confined to the first century B.C.

Early Imperial Period (1st Century BC – 1st Century A.D.)

In comparing the pottery datable to this period with that of the previous two periods one is immediately struck by the great increase in both quantity and variety. Not all of this increase may be associated with economic expansion, however; some at least must be related to the fact that a greater proportion of the excavated stratigraphy relates to this period than to the preceding two. Nevertheless, having taken this into account, the large quantity and variety of pottery datable to this period must, I think, be indicative of Sabratha's active participation in the expanding Mediterranean economy of the time.

The quantity involved is probably reflected best in the bowl and basin types where those datable to this period account for a massive 78.1% of the total for all bowls and basins.

The influence of contemporary fineware upon some of the small bowl types is quite clear, particularly in forms 131, 135, 155 and 156. Variation in formal details together with variety of fabric suggests a diversity of producers and the development of increasingly complex inter-relationships, a situation which parallels that of the fineware industries of this period.

Deposits which are datable to the very end of the first century B.C. and the beginning of the first century A.D. are particularly characterised by three well defined classes of vessel. The first two are the bowl types 207-12 and 213-8 (see FIGS 51 and 53 for occurrence in the stratigraphy; p.97 for inclusion profiles). Between them they account for 27.9% of all the bowl and basin types. For types 213-18 two inclusion profiles were distinguished and these were associated with colour differences. The two fabrics so defined were partially correlated with formal variation and suggested two separate but closely related producing groups. Types 207-12 presented a much more homogenous fabric which did not permit any subdivision of inclusion profile. There is, however, significant variation between the profile for 207-12 and those for both fabrics of 213-18 suggesting that another, distinct producer was responsible for types 207-12. When we come to consider the occurrence of the two classes of vessel on sites other than Sabratha the distribution of types 213-18 is widespread and general throughout both the eastern and western Mediterranean, whereas the occurrence of types 207-12 is altogether more restricted to a western north-African ambit. The distribution of types 213-18, almost more than any other coarseware type, could be said to represent the widespread extension and integration of Mediterranean trading networks which the Augustan period seems to have ushered in.

The third class of vessel is Pantellerian ware (see Hand-Made Vessels, types 286-327) and its appearance in deposits of the very end of the first century B.C. is one of the most striking aspects of this period. Vessels in Pantellerian ware constitute 9.1% of *all* the vessels here catalogued; 63.3% of Pantellerian ware vessels are casseroles (ie types 286, 290, 303-7). All the casseroles which can be dated to this period (ie both hand-made and wheel-made) make up 26.6% of the total casserole assemblage and Pantellerian ware accounts for 76% of this fraction. It has to be said that such a sudden and sweeping entry by a ware into a coarseware repertoire (the picture is exemplified in FIG. 60 for type 286) must denote economic expansion of some magnitude.

The development of wheel-made casseroles during this period is also interesting, particularly when viewed in conjunction with evidence from Carthage and Ostia (Tav XLI-XLII of *Ostia iii* provide a convenient pictorial summary of some of the types in question). It has been known for some time that a broad division may be drawn in the coarseware of Roman Tunisia and Tripolitania between a northern Tunisian tradition and a Central/Southern Tunisian/Tripolitanian tradition. By the end of the second century A.D. the distinction is clear-cut and each is defined by a different range of forms. On the one hand there is the series centred on Hayes form 197 whose frequent occurrence at Carthage points to a northern Tunisian origin, and on the

other there is the series, of which typical examples are Sabratha types 58 & 59, which occurs on sites in Central and Southern Tunisia (eg Uzita and Raqqada, see Van der Werff 1982 and Mahjoubi *et al*, 1970) and in Tripolitania (eg Sabratha and sites in the pre-desert, see Dore 1988).

These two traditions tend to be associated with different fabrics. That of the northern Tunisian tradition includes the fabric of the wares known at Carthage as African Black Top Ware and Early Roman Cooking Ware 1 (Hayes 1976, 87 & 93) and is equivalent to Fabric Category 1 discussed above. That of the central/southern Tunisian/Tripolitanian tradition forms part of Fabric Category 3 discussed above. It is equivalent to Van der Werff's Rood Byzaceens Gebruiksaardewerk (Red Byzacenian Domestic Ware) at Uzita (Van der Werff 1982, *passim*).

The parallel course of Fabric Categories 1 and 3 can be traced back as far as Type 16 at Sabratha where a single example (catalogue 2670) occurs in Category 1. Type 16 almost certainly continued to be produced in the first century B.C. If, within the context of Fabric Category 1, one regards types 16 and 56 as the end members of a tradition which developed in a reasonably linear fashion then one can easily visualise the formal development by which type 16 ultimately became type 56. The relationship between types 16 and 37 is both close and obvious. In the interval between types 37 and 56 both lifting-flange and lid-locator were gradually compressed to become a convex moulding with a beaded "stop" on the outer edge of the rim top. Transitional forms are represented by types 39, 40 and 53 and, from Ostia, by the types which are figured in *Ostia iii* Tav. XLII, particularly nos. 324–327.

At Sabratha examples of type 37 (1.7% of all casseroles) occur around the turn of the era (see FIG. 30) and at this point it is evident that the two traditions are still quite closely related since the type is produced in both Fabric Categories 1 and 3. It is also produced in Category 2 (which contains a high proportion of volcanically derived inclusions and may have originated outside north Africa, possibly in Italy). Examples of type 37 are, in fact, almost equally divided between those in Categories 1 and 2 with only two examples occurring in Fabric Category 3 which would seem to suggest a bias in imports towards less locally produced wares at this time.

The contextual evidence at Sabratha suggests that types 38–41 (1.4% of all casseroles) are later than type 37 (though the sample size is not really large enough for certainty; see FIG. 30) and there is evidence from Carthage to support this. Types 38–41 only occur in Fabric Category 1 which would suggest that by the time these types were being produced the traditions represented by Fabric Categories 1 and 3 were already much less closely associated. Each tradition was tending to develop an independent range of forms with different distributions. By the end of the second century A.D. the northern Tunisian tradition (Fabric Category 1) is producing types 53–57 whereas the central/southern Tunisian/Tripolitanian tradition (Fabric Category 3) is producing types 42–52 (some of which almost certainly started being produced before the end of the first century A.D.) and types 58–62, which become the principal western Tripolitanian casserole form until probably the fourth century A.D. The separation of the two traditions is exemplified by comparing types 53–57 and types 58–62 which should be broadly contemporary. Their occurrence at Carthage and Sabratha is almost mutually exclusive. The respective proportions at Sabratha are 30:142, while at Carthage the occurrence of types 58–62 in the published record is negligible.

To summarise, the evidence from Sabratha suggests a situation towards the end of the first century B.C. in which there was considerable market interpenetration by a number of pottery traditions. One could tentatively identify three of these as North Tunisian (ie "Local" to Carthage), central/southern Tunisian/Tripolitanian (ie "Local" to Sabratha), and Italian. One could also tentatively suggest that this situation resulted from opportunity provided by an expanding general economic context. As the first century progressed the north Tunisian and central/southern Tunisian/Tripolitanian markets began to delineate themselves on a mutually respectful basis and one could regard this as a natural homeostatic process transforming a vibrant but basically volatile and unstable economic situation into one of greater stability. At the same time, formal development and consistency of fabric type both argue for the continuity of the central/southern Tunisian/Tripolitanian tradition from at least the second century B.C. to the end of the early imperial period and we would suggest that this ought to reflect a corresponding underlying continuity in socio-economic organisation.

The Later Imperial Period (2nd-4th Centuries A.D.)

There are three principal classes of casserole which can be dated to this period. These are types 42-52, 53-57 and 58-62 which together constitute 30.5% of all casseroles (see FIGS 32, 33 & 35). This figure exceeds that for the previous period (even with the massive influx of Pantellerian casseroles) and must in part be a reflection of the expansion and renewal which the town underwent in the second half of the second century A.D.

These casserole types continue a line of development whose early part was discussed in the previous section. Types 53-57 (3.2% of all casseroles) are part of a north Tunisian tradition probably centred on Carthage and their presence at Sabratha is slight in comparison with types 42-52 and 58-62 which are part of a central/south Tunisian/Tripolitanian tradition. The pattern of occurrence of types 42-52 at Sabratha (13.9% of all casseroles) suggests that some at least may have been produced in the first century A.D., though most are likely to have been produced in the second century. Type 46 is particularly distinctive. It occurs on sites in the Tripolitanian pre-desert (Dore 1988) and could conceivably have a Tripolitanian rather than a Tunisian origin. Within types 58-62 (15.7% of all casseroles), types 58 and 59 are particularly distinctive and well defined and may represent the products of definable sub-groups within the general tradition.

The developments in the articulation of the rim of these various casserole types are particularly interesting. Overall there seems to have been a tendency to amalgamate functional elements which in earlier types were separately articulated. In type 37, and its formal antecedent type 16, the functions of lifting-flange and lid-locator are articulated as distinct and separate elements. For the north Tunisian tradition types 39 and 40 represent the process of amalgamation which resulted in type 56. Types 42-52 and 58-62 represent a different realisation of the same basic concept within the central/southern Tunisian/Tripolitanian tradition. But while one can make a good case for type 37 as the formal antecedent of types 42-52, it is somewhat more difficult to find a convincing antecedent for types 58-62. They seem to appear fully developed in the archaeological record and as such represent something of a formal discontinuity within the central/southern Tunisian/Tripolitanian tradition. This is worth bearing in mind since discontinuity in an item of material culture like coarseware where function is likely to be the main determinant of form could very well be associated with accelerated socio-economic change. One does not have to look far for other correlates of socio-economic change at this time: "After the middle of the (second) century (Sabratha) entered on a new period of both expansion and renewal which is staggering in its extent" (Kenrick 1986, 314), and evidence has been emerging recently (for references see Dore 1988) that a large area of the Tripolitanian pre-desert underwent a major change in social organisation which manifested itself in the development of a class of building known as the *gasr* and which appears (from the fineware evidence) to have started during the second half of the second century A.D.

The subsequent development of types 58-62 is difficult to trace. At Uzita (Van der Werff 1982, 123) there is some evidence to suggest that form 59 is slightly later than form 58 and this, together with form 64 (0.5% of all casseroles; earliest occurrence in contexts of third century date) may indicate that there was a tendency for the rims of later types to be taller and more out-splayed.

The best candidates for types which emerged late in this period are types 67, 68 and 70 (0.6%, 0.4% and 0.5% respectively of all casseroles) whose earliest occurrences are in contexts of fourth century date. Type 70 occurs frequently in the Tripolitanian pre-desert (Dore 1988, 71, type 53) where it is almost exclusively associated with fineware of third century or later date. The evidence of these types suggests that harder, darker and finer fabrics, which could well be associated with new producing groups, were emerging from the third century on. The fabrics of types 68 and 70 suggest affinities with a fineware industry and it is possible that there is an association with Tripolitanian Red Slip Ware (Hayes 1972, 304) whose production was probably beginning about now.

Outside the casseroles there are few other types whose frequency allows them to be firmly dated. Among the Large Bowls and Basins there is a set of related types, 259-262 (3.1% of all

bowls and basins), whose earliest occurrence at Sabratha can be placed in the second half of the second century A.D., and in the closed vessels, types 349 and 350 can be similarly dated.

Owing to the nature of the stratigraphy one must become increasingly cautious about interpreting the coarseware evidence towards the end of the period. Nevertheless, there would appear to be nothing subsequently to match the expansion begun in the second half of the second century. The general impression of the later period is of a time characterised by slow decline and increasing insularity, a situation which can be paralleled in the evidence from the pre-desert area. The precise timing and pace of this decline are unclear. Many of the coarseware types which began in the second century almost certainly continued well into the third century and possibly beyond. On balance it is likely that the prosperity of the later second century was maintained throughout the third century and probably into the fourth and it is only after this that any decline begins to accelerate.

The Latest Roman Period (5th–7th Centuries A.D.)

While the catalogue records the occurrence of various types in contexts of this period, the amount of stratigraphy and of pottery are both so small that there are really no types which, on the basis of the evidence from Sabratha alone, can be confidently assigned to this period. The best that one can do is to suggest certain types as likely candidates.

Among the casseroles it is likely that the series of which type 64 is a member continued after the fourth century, and some examples of type 70 could well date to the fifth century.

All the contexts in which the bowl type 222 occurs are of sixth century date and the earliest contexts in which type 265 occurs are of fifth century date.

Among the closed vessels one example of type 375 occurred in a possible late context in the forum.

7. CATALOGUE

SHALLOW CASSEROLES/PANS (FIGS 23–27)

Certain features of the forms of these vessels may be chronologically related. In types 1–3 (and particularly in type 1) the upper wall of the vessel is markedly inturned and the lid-locator forms what might be termed an upright collar; the lid would have rested on the vessel wall and rim while the lid-locator performed only the function of location. In the later types (and particularly 8 and 9) the vessel wall is much more upright and the lid-locator forms a flange projecting at roughly 45°; in this case the lid would have rested mostly on the lid-locator and its upper face is tooled and rebated to facilitate this. This could also apply to the deeper vessels; see particularly types 30, 31, 34 and 35. Evidence from Corinth tends to support these conclusions (see Edwards 1975, Casseroles I and II).

- 1** Smooth grey/brown; inclusions: T3, quartz, limestone and black vitreous grains.

xxi

5 : 300

Dia.: 24

xxi 5: possibly as early as fifth century B.C.

See also Edwards, 1975, Casserole II, particularly no. 676 (second half of fifth century B.C.)

2

Fabric:

- a) Orange/brown (with grey core in two cases); surface: orange – dark red; inclusions: T3, black vitreous grains, quartz, limestone and red grains.

b) (2524) pale orange/brown, grey core, orange/brown surface; inclusions: sparse, T1, quartz.

i	7 : 2521	Dia.: 16	iii	3 : 2522	Dia.: 20
i	124 : 2520	Dia.: 11	iiic	2 : 2524	Dia.: 15.5
i	155 : 2523	Dia.: 19	xxiii	29 : 303	Dia.: 17

i 124 and xxiii 29: possibly as early as the fourth century B.C. See also Edwards, 1975, Casseroles I and II, particularly no. 679 (fourth century B.C.).

3 Dark red/brown, orange/brown surface; inclusions: T2, quartz and limestone.

iiic	1 : 2525	Dia.: 19
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See Edwards 1975, Casseroles I and II, particularly no. 666 (fourth century B.C.).

4 Orange/brown; inclusions: T3, limestone, quartz and black grains.

xxiii	38 : 392	Dia.: 17
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xxiii 38 : possibly as early as third century B.C.

5 Dark grey, thin orange sub-surface margin, dark grey surface; inclusions: T3, quartz and limestone.

iiib	1 : 2533	Dia.: 25
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iiib 1 : first century A.D.

6

Fabric:

- Orange/brown, usually with black outer surface; inclusions: T2, 3, 4 (3,3,1 examples), quartz and limestone.
- (2528) Dark brown, black outer surface; T3, quartz and iron.
- (2534) Dark red/brown, black outer surface; T4, quartz, black vitreous grains and flakes of golden mica on surface.

A 13 7	: 2534		iii	2 : 2535	Dia.: 18
i	60 : 2694	Dia.: 18	iii	2 : 2536	
i	62 : 2696	Dia.: 14	iv	4 : 2528	Dia.: 20
i	164 : 2697	Dia.: 16	v	1 : 2698	
ia	4 : 2695	Dia.: 18			

i 60: possibly as early as second century B.C.

ia 4: late first century B.C.

See also *Byrsa i*, fig. 112, no. 7 (group 312: TPQ in late third century B.C. from Campana A).

7

Fabric:

- Orange/brown through mid brown to dark grey, outer surface often a darker shade; inclusions: T2, 3 (1, 6 examples), quartz and limestone.
- (2532) Orange brown; T3, quartz, red iron and limestone.
- (2537) Pale brown with black outer surface; T3 quartz, black vitreous grains and limestone (with occasional black vitreous grains 2 mm dia. and more).

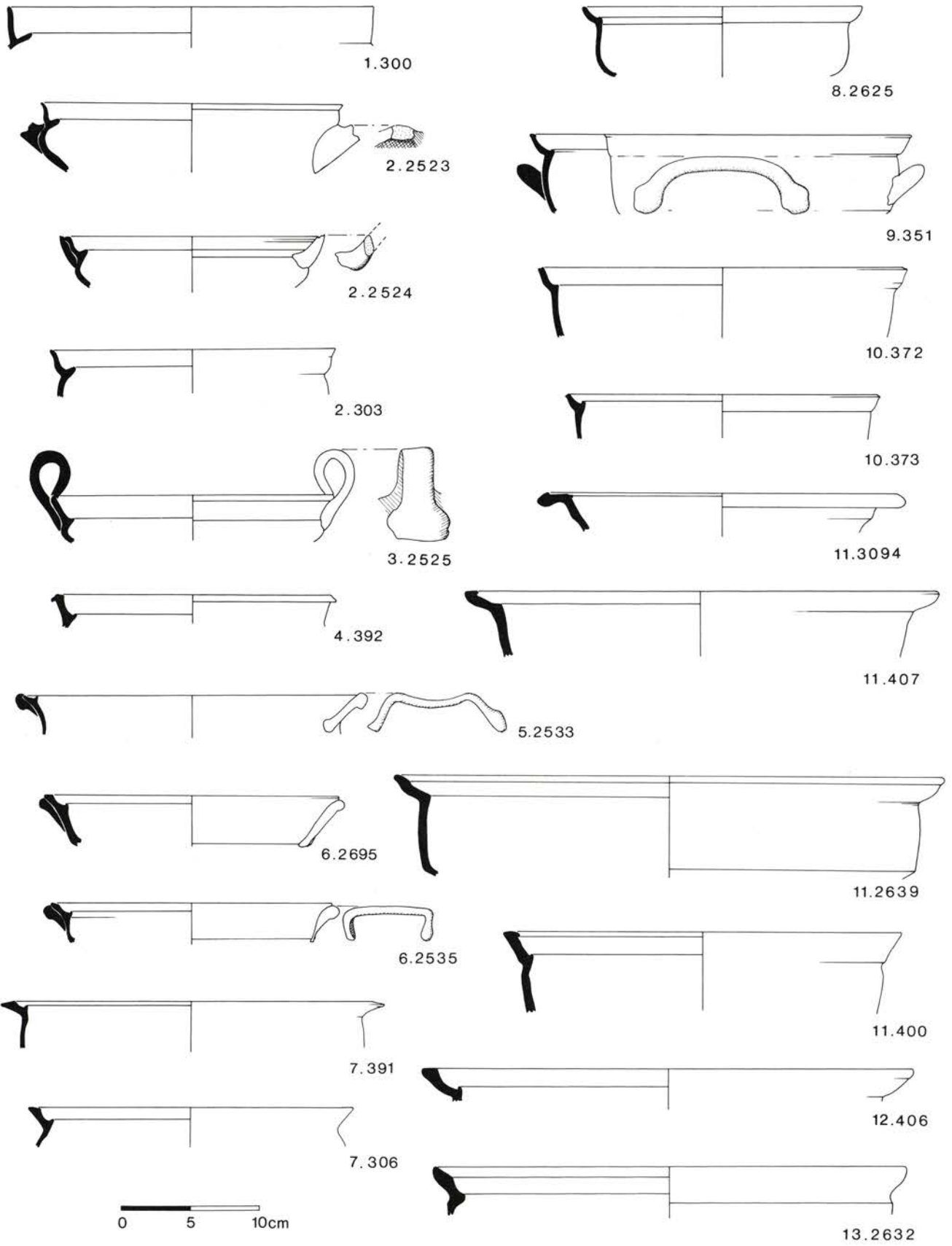


FIG.23 Coarse Pottery Types 1-13 (Scale 1:4)

i	20 : 2537	Dia.: 19	v	4 : 2528	
i	36 : 2532	Dia.: 20	xiv	71 : 391	Dia.: 24
i	115 : 2531	Dia.: 20	xix	1 : 2527	Dia.: 18
iiib	5 : 2529	Dia.: 19	xxiv	73 : 306	Dia.: 23
iv	16 : 2530				

i 36: possibly as early as early second century B.C.

xxiv 73 : first century B.C.

See also Robinson 1959 F76 (Athenian Agora; deposit TPQ c. 76 B.C.).

8 Fabric as 33.

i	47 : 2624	Dia.: 14			
iiib	2 : 2625	Dia.: 16			

iiib 2: late first century A.D. + (? residual).

9 Orange/brown, dark grey surface; inclusions: see profiles, p.91. For equivalent types in deeper casseroles see 33 and 34.

i	62 : 2629	Dia.: 20.5	xxi	17 : 352	Dia.: 20
iiib	1 : 2627	Dia.: 17	xxi	17 : 353	Dia.: 11.5
iiic	1 : 2628		xxi	21 : 354	Dia.: 21
via	2 : 2626		xxi	21 : 356	Dia.: 17
xiv	71 : 355	Dia.: 23	xxi	21 : 357	Dia.: 17
xxi	14 : 351	Dia.: 24	xxii	8 : 3914	Dia.: 17

xxi 14 and 17: second half of second century B.C.; see FIG. 29.

Types 8 and 9 were present in many deposits of the second century B.C. at Carthage; see particularly *Byrsa ii*, 25 ff. (group 171 from a cinder deposit immediately preceding the destruction of 146 B.C.); they were also still present in deposits of the first century A.D. – see for example Hayes, 1976 Group XI no.16.

10 Orange/brown, dark grey outer surface; T1, quartz (372); T3, quartz and limestone.

xiv	35 : 372	Dia.: 28			
xxi	14 : 373	Dia.: 21			

xxi 14: second half of second century B.C.

11-14 These may be slight variations of the same basic type.

11 Orange/brown to grey/brown, dark grey outer surface; T2 (3 examples), T3 (2 examples), T4 (2 examples), quartz and limestone.

i	9 : 3094	Dia.: 27	xiv	70 : 407	Dia.: 29
i	97 : 2640	Dia.: 29	xv	12 : 2639	Dia.: 30
xiv	47 : 2644	Dia.: 21	xxii	10 : 400	Dia.: 29
xiv	70 : 404	Dia.: 28	xxii	35 : 403	Dia.: 23

All except xv 12: late first century B.C.

See also: Fulford, 1986a, fig.88, 130 from pit 2 in trench Y3-4 (xxv 24 – latest first century B.C.);

Riley 1979, 629 (Hellenistic Plain Ware form 10 – Hellenistic and ? later).

12 Orange/brown, dark surface; T3, quartz and limestone in equal proportions.

i	56 : 2638	
xiv	53 : 406	Dia.: 32
xiv	70 : 405	Dia.: 24

i 56: c. 200 B.C. (? intrusive).

13 Orange/brown to red/brown, dark grey surface; T3, quartz and limestone.

iv	5 : 2634	
ivb	1 : 2633	Dia.: 31
vib	6 : 2632	Dia.: 24

iv 5: late first – late second century A.D.

See also: Fulford, 1986a, fig. 88, nos. 131–132 from pit 2 in trench Y3–4 (xxv 24 – latest first century B.C.).

14 Orange/brown, black outer surface; T2 and 3, quartz, limestone.

i	13 : 2635	Dia.: 24	iii	4 : 2637	
i	97 : 2636	Dia.: 28	v	1 : 3093	Dia.: 32
i	99 : 2636	Dia.: 28			

i 97 and 99: first half of first century A.D.

See Edwards 1975, 684 & 5 (Deposits 102 & 104 – associated with the Mummian destruction of 146 B.C.).

15 Orange/yellow (occasionally orange/brown or pale orange), black outer surface; T3 (7 examples), T4 (2 examples), quartz, red iron and limestone; equivalent to Carthage Early Roman Cooking Ware 1 (Hayes 1976, 93); see also types 37–40 fabric b and 53–7 fabric a.

iii	1 : 2643		xxii	17 : 475	Dia.: 20
xiv	128 : 396	Dia.: 23	xxiii	21 : 477	Dia.: 14
xix	8 : 2642	Dia.: 21	xxiii	26 : 476	Dia.: 21
xxi	2 : 399	Dia.: 14	xxiii	40 : 397	Dia.: 23
xxii	13 : 398	Dia.: 21.5			

iii 1 and xxii 13: second half of first century A.D.; presence in xxi 2 must be intrusive or a mistake (ie sherd wrongly marked).

See also: Hayes 1976, Group XI, no. 13 (from Carthage – first century deposit);

Dyson 1976, Deposit 22 II, no. 49 (from Cosa, TPQ of A.D. 34).

Ostia iii Tav. XVIII 303–4 (present in levels VB and VC which predate the construction of the baths c. 80–90 A.D.).

16

Fabrics:

- Orange/brown, dark grey outer surface; inclusions: see profiles, p.91.
- (2670) Grey/brown, medium brown surface; T3, quartz and red iron.
- (420) Pinkish/orange, dark grey outer surface, T3, black vitreous grains and quartz.

i	17 : 2646	Dia.: 35	iii	7 : 2651	
i	17 : 2648		iiib	2 : 2652	Dia.: 27
i	97 : 2647		iiib	2 : 2670	Dia.: 16
i	97 : 2649		iv	5 : 2653	
iii	4 : 408	Dia.: 20	iv	5 : 2654	Dia.: 17
iii	4 : 2650	Dia.: 25	iv	5 : 2655	

v	2 : 2656		xxi	14 : 417	Dia.: 24
via	2 : 2657	Dia.: 24	xxi	14 : 418	Dia.: 25
via	2 : 2658		xxi	14 : 420	Dia.: 22
vid	1 : 2659	Dia.: 24	xxi	17 : 419	Dia.: 20
x	1 : 2666	Dia.: 20	xxi	17 : 4096	Dia.: 18
xiv	6 : 409	Dia.: 24	xxi	18 : 422	Dia.: 25
xiv	6 : 2660	Dia.: 24	xxi	18 : 423	Dia.: 27
xiv	6 : 2662	Dia.: 24	xxi	18 : 424	Dia.: 22
xiv	35 : 410	Dia.: 20	xxi	18 : 425	Dia.: 20
xiv	37 : 2665		xxi	18 : 427	Dia.: 21
xiv	47 : 412	Dia.: 25	xxi	18 : 428	Dia.: 20
xiv	47 : 411	Dia.: 22	xxi	18 : 430	Dia.: 21
xiv	47 : 2663		xxi	18 : 480	Dia.: 26
xiv	49 : 413	Dia.: 17	xxi	19 : 429	Dia.: 19
xiv	50 : 414	Dia.: 26	xxi	20 : 433	Dia.: 20
xiv	62 : 416	Dia.: 23	xxi	21 : 430	Dia.: 21
xiv	70 : 2661	Dia.: 29	xxi	22 : 431	Dia.: 17
xiv	70 : 2664	Dia.: 16	xxi	52 : 432	Dia.: 27
xix	4 : 2667	Dia.: 34	xxiv	21 : 426	Dia.: 27

xxi 14 and 17: second half of second century B.C. see FIG. 24.

Occurs frequently in deposits of the second century B.C. at Carthage (see particularly *Byrsa ii*, Group A, 171 from a cinder level immediately preceding the destruction of 146 B.C.).

Still present in deposits of the first century A.D. (see Hayes 1976, Group XI, no.11)

See also: Van der Werff 1982, Rood Byzaceens Gebruiksardewerk, Form 4 (from Uzita); Dyson 1976, Forum Gate Deposit nos 9-12, though they are not precisely similar (TPQ 215 B.C.).

In view of the above, the absence of this type (one of the more frequently encountered at Sabratha) from levels earlier than period IIIb in the Casa Brogan, and earlier than first century B.C. in Forum/EFT period 0 is puzzling.

17

Fabric:

- a) (2671 & 2675) As 16 fabric a.
- b) Brown to grey/brown, medium brown to red/brown surface; T2 and 3, quartz, black vitreous grains and golden mica flakes on surface.

i	17 : 2675	Dia.: 22	xxi	17 : 421	Dia.: 22
iii	4 : 2669	Dia.: 19	xxv	11 : 2671	Dia.: 20

xxi 17 : second half of second century B.C.

18 Orange/brown, dark grey outer surface; inclusions see profiles, p.92

i	15 : 2683		xiv	47 : 438	Dia.: 14
i	36 : 2678	Dia.: 17	xiv	60 : 439	Dia.: 11
i	36 : 2680	Dia.: 11	xiv	69 : 460	Dia.: 19
i	47 : 2686	Dia.: 16	xiv	79 : 461	Dia.: 20
i	129 : 2679	Dia.: 20	xiv	80 : 462	Dia.: 17
i	129 : 2685		xiv	98 : 463	Dia.: 11
iii	4 : 2681	Dia.: 10.5	xiv	98 : 464	Dia.: 16
iiib	21 : 2684	Dia.: 16	xiv	109 : 465	Dia.: 17
xiv	34 : 434	Dia.: 17	xv	12 : 2682	Dia.: 18
xiv	34 : 435	Dia.: 15	xxi	7 : 4095	Dia.: 20
xiv	39 : 436	Dia.: 14	xxi	21 : 467	Dia.: 14
xiv	47 : 437	Dia.: 20	xxii	31 : 4061	Dia.: 17

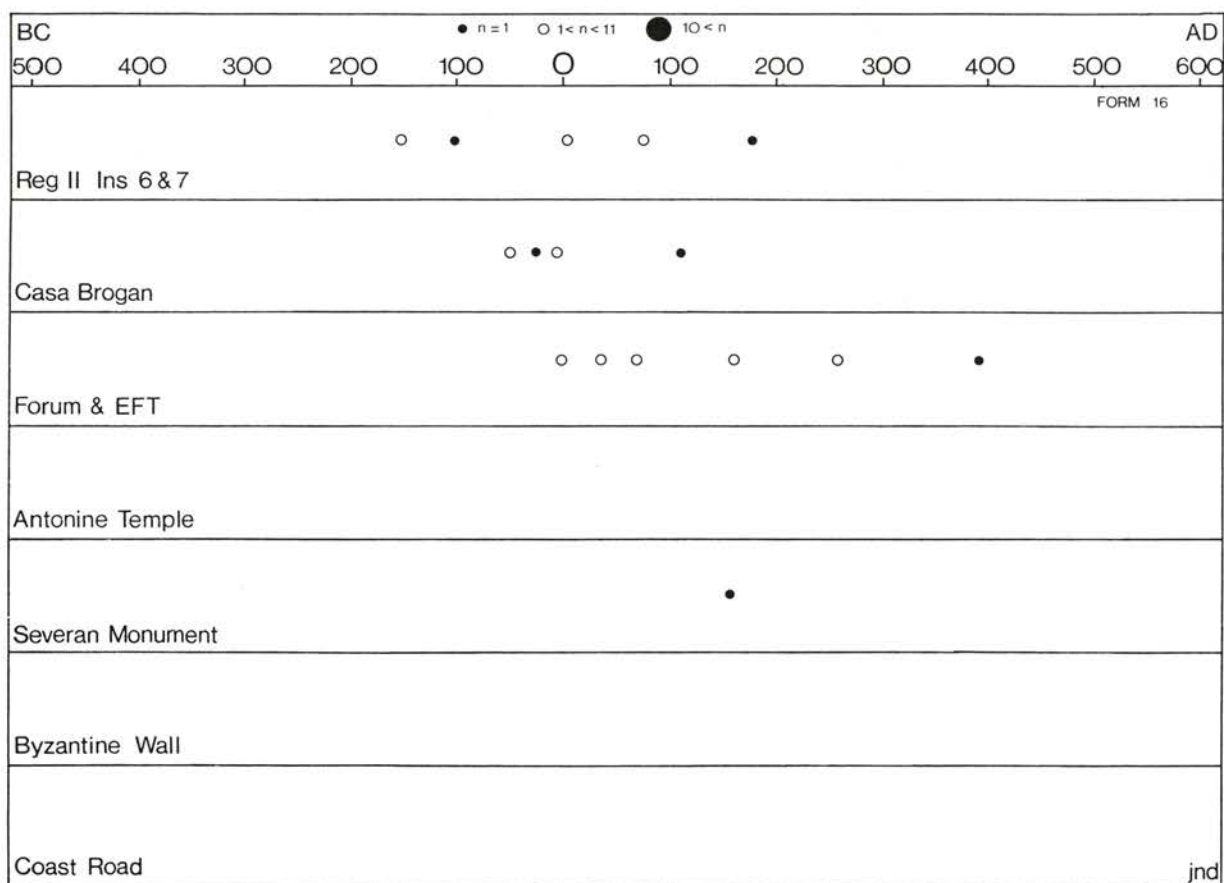


FIG.24 The Occurrence of Type 16 in the Site Stratigraphy

xxi 7 : possibly as early as fourth century B.C.

i 129: possibly as early third century B.C.; see FIG.24.

See also *Byrsa i*, 92, Group A.122, no.2 (deposit TPQ in second half of third century B.C.);

Van der Werff 1982, Rood Byzaceens Gebruiksardewerk, Form 1 (from Uzita);

Riley 1979, 424 (Hellenistic Cooking Ware 4).

19

Fabrics:

- (466) Orange brown, dark grey outer surface; T4, quartz, dark grey grains and flakes of golden mica on surface.
- Red/brown, dark grey surface; T3, quartz, limestone and black vitreous grains.

i 24 : 2688 Dia.: 24

via 2 : 2687 Dia.: 25

xiv 110 : 466 Dia.: 24

i 24 : no firm date beyond being pre Forum/EFT 1 (mid first century A.D.).

- ## 20
- Grey/brown to dark maroon/brown, 3 examples with cream outer surface; T1, 2 & 3 (5, 2, 1 examples), quartz and limestone (1720 also contains much red iron).

xiv 71 : 1723 Dia.: 33

xiv 81 : 1721 Dia.: 29

xiv 83 : 1717 Dia.: 25

xiv 84 : 1719 Dia.: 22

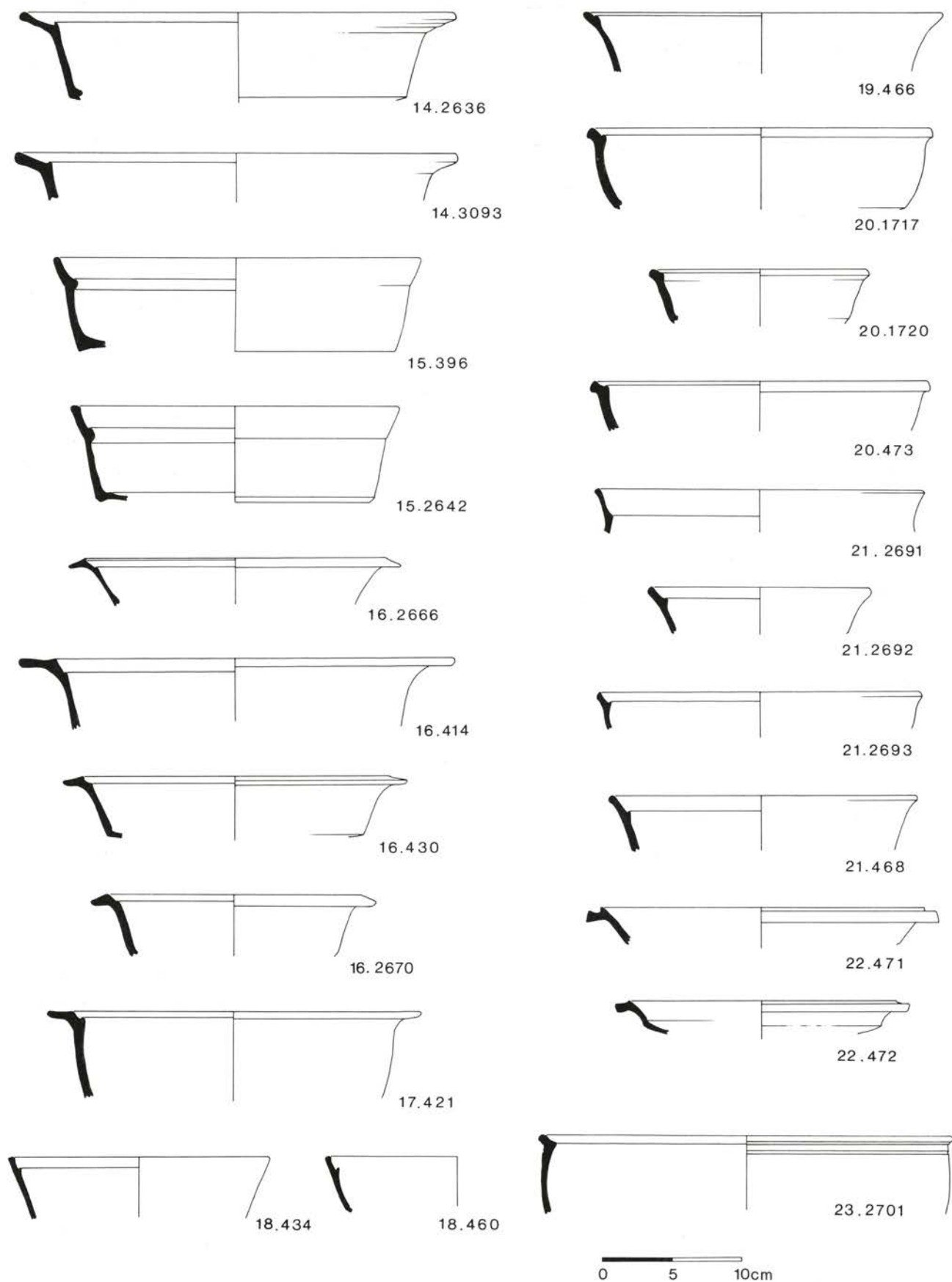


FIG.25 Coarse Pottery Types 14-23 (Scale 1:4)

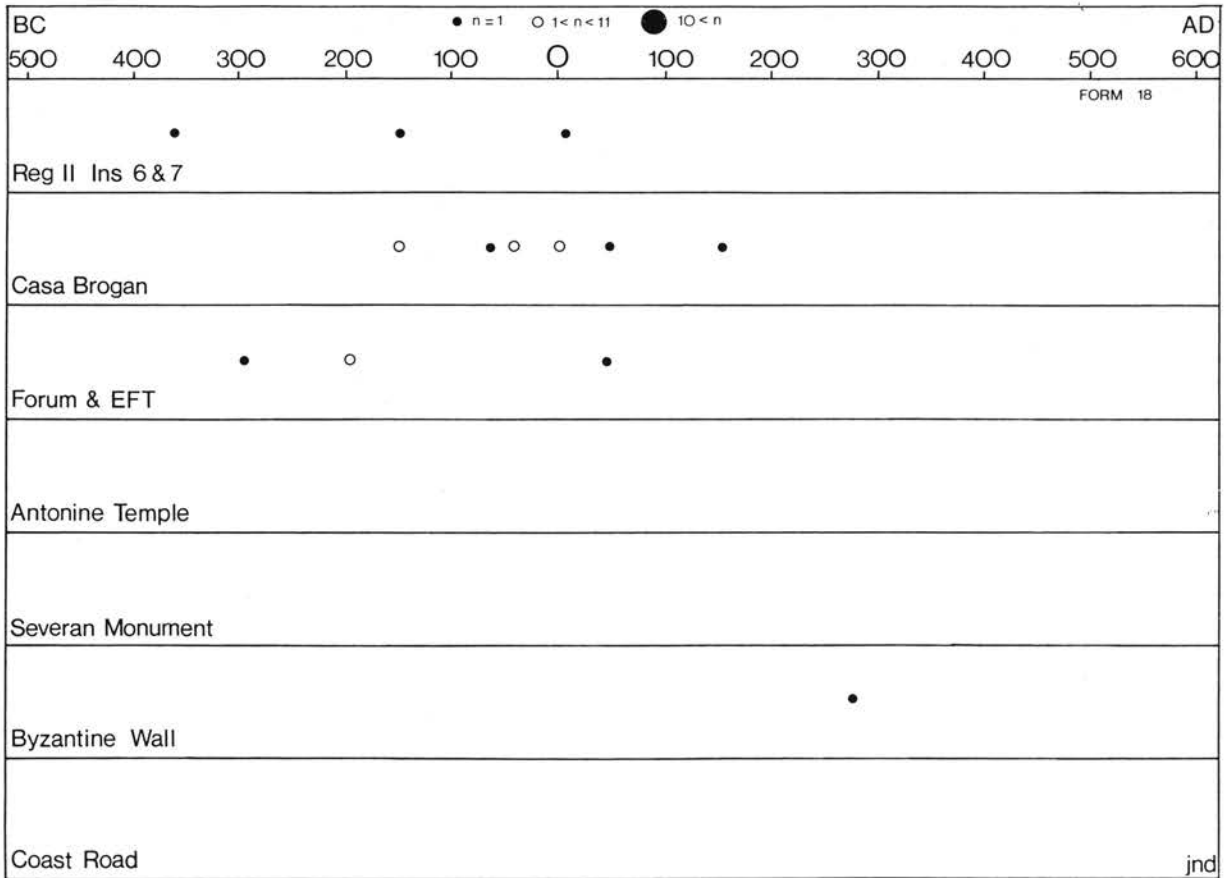


FIG.26 The Occurrence of Type 18 in the Site Stratigraphy

xiv	128 : 1718	Dia.: 32	xxii	13 : 1722	Dia.: 17
xiv	132 : 1720	Dia.: 16	xxiii	40 : 473	Dia.: 22
xxii	13 : 4169	Dia.: 24			

xiv 71: late first century B.C.

21

Fabrics:

- a) Dark grey/brown, dark grey outer surface; T2, 3 & 4 (2,1,2 examples) quartz and limestone.
 b) (2691, 2693) Orange/yellow, dark grey outer surface; T2 & 3, quartz, red iron and limestone.

i	55 : 2691	Dia.: 21	vie	2 : 2689	
i	60 : 2690		xxiii	35 : 468	Dia.: 19
ia	3 : 2692	Dia.: 13	xxiii	35 : 469	Dia.: 20
via	2 : 2693	Dia.: 21	xxiii	38 : 4098	Dia.: 20

xxiii 35: possibly as early as fourth century B.C.

See also: Edwards 1975, nos. 670 & 671, both from deposits associated with the Mummian destruction of 146 B.C.;

Riley 1979, D425-7;

Dyson 1976, CF12 (likely to be first quarter of second century B.C., but possibly earlier) & FG7 (Deposit TPQ of c. 215 B.C.).

- 22 Dark brown – black, dark red inner surface, black outer surface; T3, quartz, black grains, flakes of golden mica on surface.

xxi 18 : 471 Dia.: 23

Orange/brown, dark grey outer surface; T3, quartz.

xxii 35 : 472 Dia.: 19

Both contexts: early 1st century A.D.

See also: Riley 1979, D465 (Early Roman Cooking Ware 5; from Benghazi where it does not occur before the mid second century A.D.).

Miscellaneous

- 23 Orange/yellow, black outer surface; T1, 3, quartz and limestone.

i 46 : 2700

v 4 : 2701 Dia.: 27

i 46: early first century A.D.

- 24 Orange/yellow, dark grey outer surface; T3, quartz and limestone.

i 47 : 2703 Dia.: 25

- 25 Orange/brown, grey/brown core; T3, limestone and quartz.

xiv 81 : 470 Dia.: 31

xiv 81: mid first century A.D.

- 26 Orange/brown, dark grey surface, cream/white surface over; T2, quartz and limestone.

xiv 138 : 671 Dia.: 21

Third century A.D.

- 27 Orange/brown, dark grey surface, cream/white surface over; T2 & 3, limestone and quartz.

xxii 17 : 673 Dia.: 19

xxiii 21 : 672 Dia.: 22

xxiii 21: late second century A.D.

- 28 Black, dark brown-black surface; T4, rounded quartz and flint (?).

xiv 21 : 474

xiv 21: second half of first century B.C.

- 29 Orange/brown, grey core, black outer surface; T2, quartz and limestone

xxiv 9 : 2526 Dia.: 13.5

DEEP CASSEROLES/PANS (FIGS 27–36)

Comments on the typological development of the early types of shallow casserole/pan are likely to apply to the deeper vessels as well.

30 Very pale yellow/brown; T4, quartz, limestone and rock fragments.

i 36 : 2540 Dia.: 13

Orange/brown, black outer surface; T3, quartz and limestone.

i 96 : 2539 Dia.: 12

i 96: early first century A.D. (? residual).

Orange, black surface; sparse T3, quartz and limestone.

iii 5 : 2541

iii 5: mid first century A.D. (? residual).

Smooth orange/brown, dark grey core; T3, quartz and ?limestone (or ?calcite).

xxiv 70 : 301 Dia.: 13.5

xxiv 70: possibly as early as fourth century B.C.

31 Smooth dark grey to brown, T2 & 3, quartz, limestone and black vitreous grains.

i 124 : 2519 Dia.: 11.5

xiv 67 : 302 Dia.: 10.5

Both contexts: possibly as early as late fourth century B.C.

32 Orange/brown, dark grey surface, T3, limestone and quartz

xiv 61 : 304 Dia.: 18.5

xxi 14 : 389 Dia.: 15

xxi 14: second half of second century B.C.

Vessels of generally similar form to 30, 31 and 32 occur at Corinth (Edwards 1975, 648–658) though their earliest date cannot be placed before third century B.C. with any certainty.

Types 33–35 (FIGS 27–29)

The criteria used to distinguish types 33, 34 and 35 are as follows: 33 is broader in the girth than 34 and 35, the upper wall leans in more and the general profile of the vessel wall forms an almost continuous curve; in 34 and 35 the upper wall is hardly curved at all and it is likely, as a result, that the relationship between wall and base was more highly articulated than in 33, although there are no extant examples showing this. In 33 the lid-locator is un-modified, whereas in 34 and 35 it is tooled and re-cut with mouldings and lips; it is curved in 34 and more angular in 35. 33 is a particularly tightly defined formal grouping showing little individual variation and this is reflected in the small dispersion of the overall fabric texture and composition of the group (see profiles p. 92), 34 and 35, on the other hand, represent extremes in the shape of the lid-locator (34: curved, 35: angular) and, as such, are the end members of a formal continuum which includes vessels which possess the attributes of one or the other to a varying degree. There

appears to be some association between types 34 and 35 and different compositional groupings for fabric (see profiles p. 92), with 34 tending overall towards an inclusion suite which is both finer and contains a higher proportion of quartz than 35; 34 and 35 are the equivalents in this deeper form of the shallow casserole 9.

The contextual evidence could be taken to suggest that 33 preceded 34 and 35, but since the contexts in question are among the earliest on the site and the amount of pottery is small this should not be regarded as certain (see FIGS 28-29). In the Punic levels of the late third and second century B.C. at Carthage only 34 and 35 seem to be encountered (see *Byrsa i* and *ii*) and they continue to occur in levels of the first century A.D. (see Hayes 1976, Groups X and XIII). See also Van der Werff 1982, Rood Byzaceens Gebruiksardewerk, Form 2.

33 Orange/brown, occasionally with grey core, dark grey outer surface; inclusions: see profiles p. 92.

i	13 : 2618	Dia.: 20	v	3 : 2595	Dia.: 18.5
i	18 : 2603	Dia.: 19.5	via	2 : 2611	
i	18 : 2604		vib	1 : 2594	Dia.: 15
i	24 : 2600		xiv	13 : 309	Dia.: 19
i	26 : 2622		xiv	43 : 322	Dia.: 14
i	36 : 2598	Dia.: 15	xiv	60 : 318	Dia.: 15
i	46 : 2602	Dia.: 16	xiv	61 : 315	Dia.: 15
i	56 : 2610	Dia.: 16	xiv	67 : 316	Dia.: 16
i	76 : 2612		xiv	68 : 319	Dia.: 17
i	76 : 2616	Dia.: 21	xiv	69 : 317	Dia.: 19
i	148 : 2619	Dia.: 10	xiv	70 : 321	Dia.: 13
i	158 : 2614	Dia.: 13	xiv	70 : 323	Dia.: 19
i	164 : 2617	Dia.: 18	xiv	98 : 326	Dia.: 16
ia	2 : 2597		xiv	103 : 320	Dia.: 19
ia	4 : 2599	Dia.: 14	xiv	155 : 2592	Dia.: 17
ia	4 : 2613	Dia.: 15	xv	10 : 2615	Dia.: 19
ia	11 : 2596		xv	28 : 4058	Dia.: 19
ia	11 : 2606		xxi	6 : 310	Dia.: 14
ia	11 : 2620		xxi	7 : 314	Dia.: 15
iii	5 : 2605	Dia.: 16	xxii	35 : 311	Dia.: 19
iiib	1 : 2608		xxii	35 : 313	Dia.: 16
iiib	2 : 2593	Dia.: 17	xxiii	20 : 325	Dia.: 22
iiib	2 : 2601	Dia.: 20	xxiii	40 : 312	
v	2 : 2607		xxiv	69 : 307	Dia.: 21
v	2 : 2609		xxiv	69 : 308	Dia.: 14
v	2 : 2630	Dia.: 28	xxiv	70 : 324	Dia.: 16.5

xiv 43 and xxi 6: possibly as early as late fifth century B.C.

34 Orange/brown, dark grey outer surface; inclusions: see profiles p. 92.

i	7 : 2544	Dia.: 17	iii	2 : 2559	Dia.: 24
i	18 : 2549	Dia.: 15	iii	3 : 2558	
i	23 : 2545		iii	4 : 2563	Dia.: 16.5
i	36 : 2543	Dia.: 33	iii	5 : 2557	
i	83 : 2550	Dia.: 18	iii	5 : 2560	Dia.: 18
i	96 : 2583	Dia.: 16.5	iii	5 : 2562	Dia.: 19.5
i	98 : 2551	Dia.: 21	iiib	1 : 2564	
i	102 : 2547		iiib	2 : 2565	Dia.: 15
i	147 : 2546	Dia.: 14.5	iiib	2 : 2566	
ia	2 : 2555		v	1 : 2567	Dia.: 15
ia	11 : 2552		v	2 : 2568	
ia	11 : 2553	Dia.: 14	v	2 : 2569	
ia	11 : 2554		xiv	21 : 343	Dia.: 17
iii	1 : 2561	Dia.: 17	xiv	62 : 347	Dia.: 19

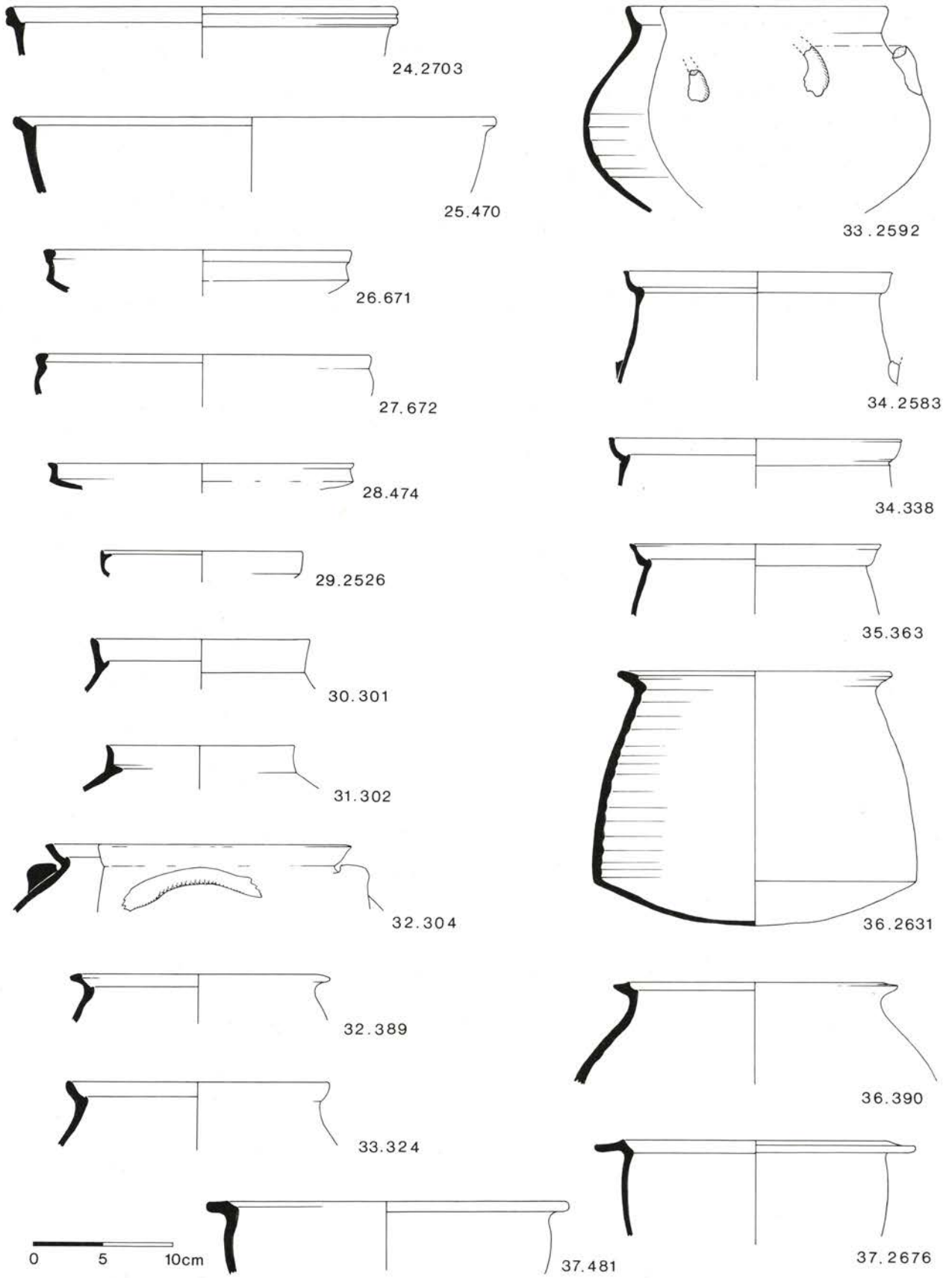


FIG.27 Coarse Pottery Types 24-37 (Scale 1:4)

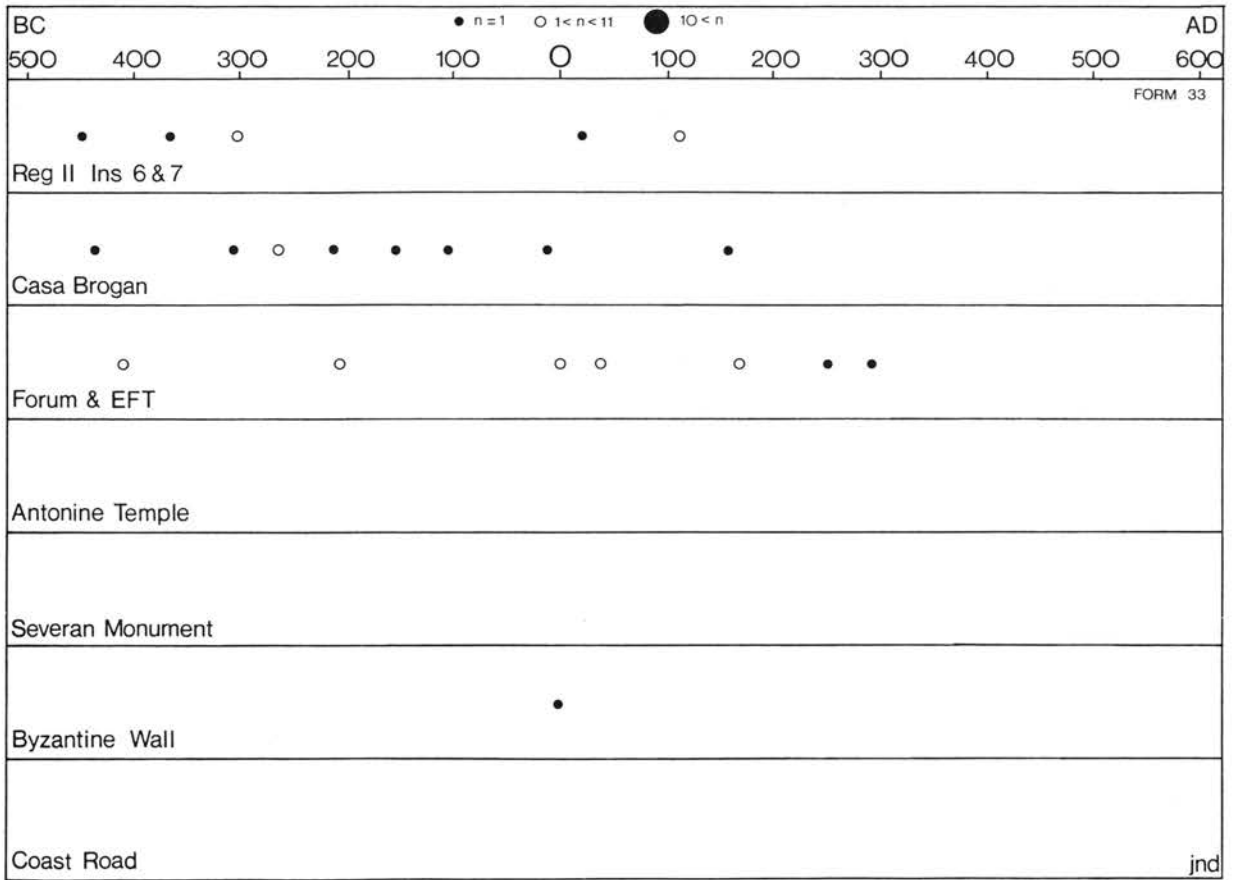


FIG.28 The Occurrence of Type 33 in the Site Stratigraphy

xiv	67 : 336	Dia.: 20	xiv	98 : 349	Dia.: 18
xiv	68 : 334	Dia.: 19	xiv	98 : 350	Dia.: 25
xiv	68 : 335	Dia.: 20	xiv	109 : 337	Dia.: 17
xiv	68 : 344	Dia.: 19	xiv	110 : 330	Dia.: 18
xiv	68 : 478	Dia.: 17	xiv	110 : 333	Dia.: 19
xiv	70 : 328	Dia.: 19	xiv	110 : 341	Dia.: 14
xiv	70 : 338	Dia.: 19	xix	2 : 2570	Dia.: 18
xiv	70 : 339	Dia.: 17	xix	6 : 2571	
xiv	70 : 340	Dia.: 19	xxi	14 : 345	Dia.: 22
xiv	70 : 342	Dia.: 16	xxi	18 : 346	Dia.: 17
xiv	71 : 329	Dia.: 16	xxiii	3 : 331	Dia.: 17
xiv	84 : 348	Dia.: 12	xxiv	69 : 327	Dia.: 18
xiv	98 : 332	Dia.: 20			

i 23 and xxiv 69: possibly as early as fourth century B.C.

35 Orange/brown, dark grey outer surface; inclusions, see profiles, p. 92.

i	44 : 2589		v	2 : 2581	
i	46 : 2585		via	2 : 2580	Dia.: 16
i	71 : 2584	Dia.: 21	vib	6 : 2577	
i	97 : 2579	Dia.: 18	vid	1 : 2575	
i	102 : 2582	Dia.: 22	viiia	1 : 2586	
ia	3 : 2578	Dia.: 21	viii	2 : 2573	
iii	5 : 2574	Dia.: 22	xiv	8a : 369	Dia.: 16
iii	5 : 2587		xiv	35 : 367	Dia.: 19
iii	5 : 2590	Dia.: 31	xiv	35 : 370	Dia.: 22
iiib	1 : 2576		xiv	64 : 379	Dia.: 19

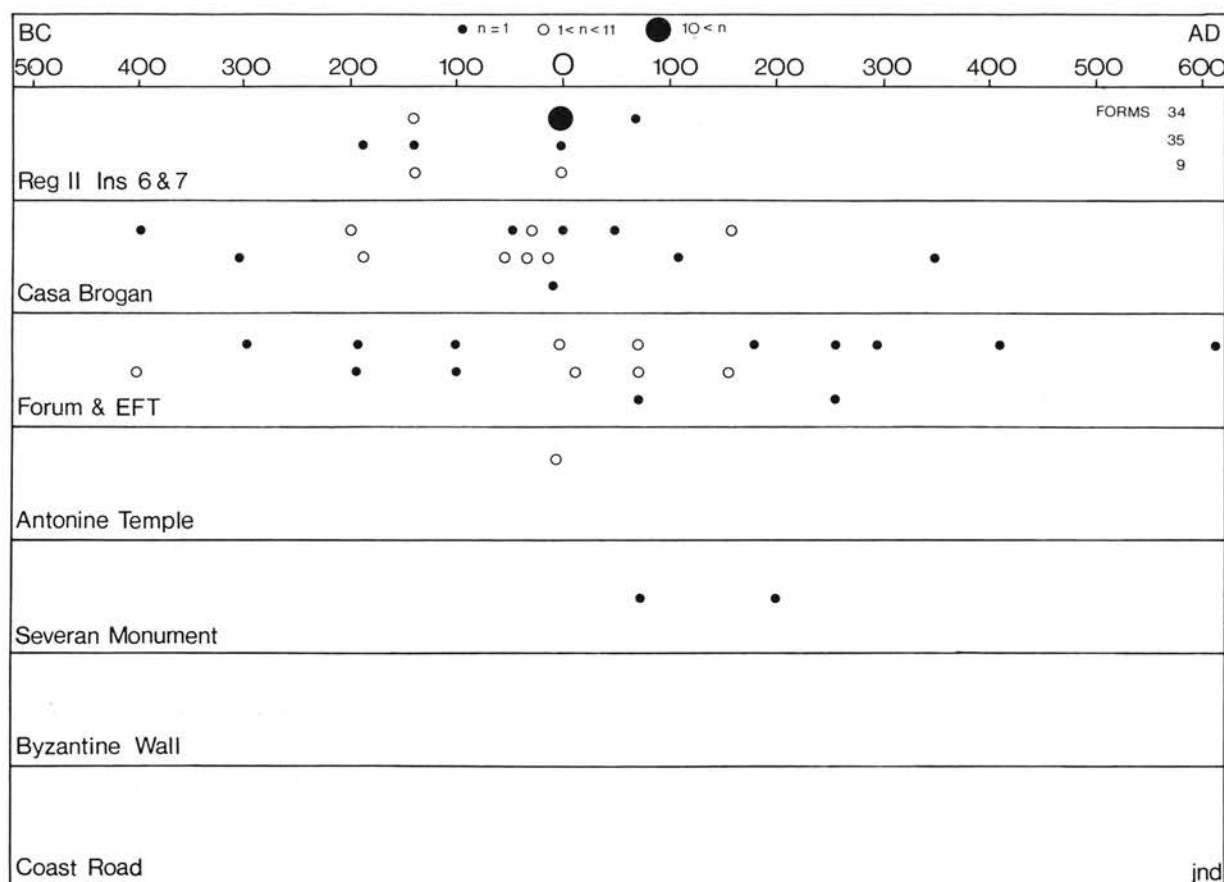


FIG. 29 The Occurrence of Types 9, 34 & 35 in the Site Stratigraphy

xiv	70 : 360	Dia.: 16	xxi	18 : 365	Dia.: 15
xiv	100 : 361	Dia.: 22	xxi	18 : 368	Dia.: 17
xiv	109 : 359	Dia.: 17	xxi	18 : 376	Dia.: 22
xiv	110 : 366	Dia.: 18	xxi	18 : 380	Dia.: 16
xiv	110 : 377	Dia.: 20	xxi	18 : 387	Dia.: 18
xiv	110 : 382	Dia.: 15	xxi	18 : 388	Dia.: 15
xiv	127 : 378	Dia.: 15	xxi	20 : 386	Dia.: 17
xiv	128 : 374	Dia.: 10	xxi	21 : 362	Dia.: 16
xiv	128 : 384	Dia.: 16	xxi	21 : 363	Dia.: 15
xxi	14 : 381	Dia.: 23	xxi	21 : 364	Dia.: 16
xxi	17 : 371	Dia.: 12	xxi	21 : 375	Dia.: 27
xxi	17 : 383	Dia.: 16	xxi	114 : 4100	Dia.: 16
xxi	17 : 385	Dia.: 17	xxii	31 : 4059	
xxi	18 : 358	Dia.: 13.5	xxv	23 : 4101	Dia.: 23.5

xiv 64: possibly as early as fourth century B.C.

36 Orange/brown; T3, black grains and quartz.

xiv 119 : 305 Dia.: 10

Orange/brown, pale dull pink to grey surface; T4, quartz and limestone.

xiv 120 : 2631 Dia.: 16

Banded orange/brown and grey, dark grey surface; T5, quartz, limestone and what appears to be pink grog.

xxi 17 : 390 Dia.: 16.5

xxi 17: second half second century B.C.

Types 37-40 (FIGS 27, 30-31)

The criteria used to distinguish types 37-40 are concerned with the relationship between the lid-locator and the lifting flange. In the first group (37 & 38) the lid-locator and lifting flange are articulated as reasonably distinct elements and the lid-locator is outplayed, while in the second group (39 & 40) the lid-locator is indistinguishable from the upper wall of the vessel, the lid resting on a moulded stop on the inside of the wall. Further subdivisions are as follows: 37 and 39 have plain lifting flanges tapering in section towards the outer edge, whereas in 38 and 40 the outer edge of the lifting flange is thickened (presumably to aid gripping). The earliest contexts in which 37 occurs (both fabrics a and b) are late first century B.C. Fabric a is almost certainly the same as 17 fabric c (and *may* be the same as the fabric of Benghazi Early Roman Cooking Ware 4: see Riley 1979). Fabric b would seem to be the same as Carthage Early Roman Cooking Ware 1 which appears to be a precursor of African Black Top Ware (see Hayes 1976, 93) and its date at Sabratha is in keeping with that suggested by Hayes. Types 38-40 do not occur in such early contexts and it is possible that they are genuinely later than 37 but the sample size is not nearly large enough to be certain on this point (see FIG. 30).

Fabrics:

- Red/brown, black outer surface; T3 & 4 (5, 1 examples), quartz, black vitreous grains, golden mica on surface.
- Pale orange to orange/yellow, black outer surface; T2, 3, 4 (2, 7, 7 examples), quartz, red iron and limestone.
- Orange/brown or red/brown, greyish/cream outer surface; T3, quartz and limestone.

37**Fabric a:**

B 18 10	: 2676	Dia.: 17	xiv	49 : 2673	Dia.: 20
iii	2 : 2677	Dia.: 23	xiv	53 : 483	Dia.: 23
xiv	24 : 481	Dia.: 21	xxii	10 : 2674	Dia.: 33

Fabric b:

i	46 : 2704	Dia.: 17	xiv	70 : 484	Dia.: 24
iv	5 : 2709	Dia.: 18	xiv	81 : 487	Dia.: 22
v	2 : 2705	Dia.: 22	xv	5 : 2706	Dia.: 21
viii	1 : 2672	Dia.: 22			

Fabric c:

xiv	35 : 482	Dia.: 18
xiv	81 : 488	Dia.: 17

xiv 35, 49, 70; late first century B.C.

See also: Robinson 1959, F80 (Deposit TPQ *c.* 75 B.C.);

Van der Werff 1982, Rood Byzaceens Gebruiksaardewerk, Form 8 (from Uzita).

38**Fabric b:**

vic	2 : 2708	Dia.: 19	xxi	22 : 493	Dia.: 22
vii	2 : 2707	Dia.: 19	xxiii	17 : 496	Dia.: 21
xiv	81 : 490	Dia.: 22	xxiii	39 : 497	Dia.: 22
xiv	81 : 491	Dia.: 18.5	xxiii	39 : 4111	Dia.: 26
xiv	127 : 489	Dia.: 25			

Probably all residual in context.

See also: Hayes 1976, Group XI, no. 12 (first century A.D.);

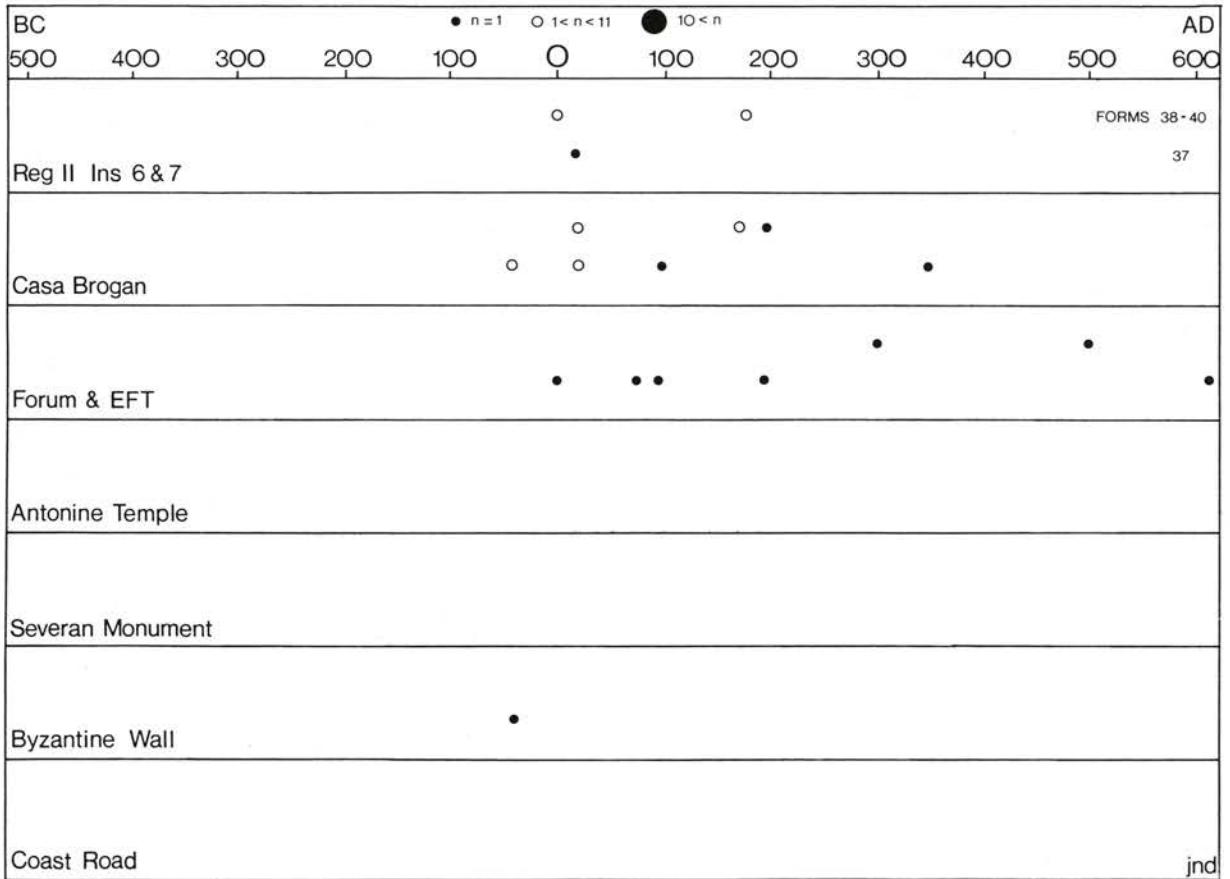


FIG.30 The Occurrence of Types 37-40 in the Site Stratigraphy

Tomber 1986, no.89 (Tank 2a – terminal date of filling *c.* mid third century A.D. but contains residual first century material).

39**Fabric b:**

xiv 81 : 486 Dia.: 18

xiv 81: mid first century A.D.

40**Fabric b:**

xxii 17 : 494 Dia.: 21

xxiii 19 : 548 Dia.: 18.5

Probably residual in context.

41 Variant:**Fabric b:**

xiv 81 : 485 Dia.: 17

xiv 81: mid first century A.D.

Types 42-52 (FIGS 31-32)

In these vessels the functional requirements of lid-locator and lifting flange are combined in one formal element: the rim is simply everted or projecting and is tilted slightly upwards with its inner surface slightly relieved in order to provide a seating for the lid. The heel of the rim (the inside, where it joins the upper wall) is also thickened, possibly to provide an additional purchase for the fingers when lifting an empty vessel. The different types are distinguished by the precise arrangements of the rim; 42 is the simplest: the inner face of the rim is barely relieved at all and the lip is plain; 44 has the lip of the rim thickened to facilitate gripping; 46 is quite similar to 44 except that the projection of the rim beyond the vessel wall is much reduced and gives the impression that the rim has been "squashed" into the vessel wall; in 48 and even more in 50 the inner face of the rim is rebated to produce a "stop" for the lid at the outer edge of the face.

42, 44, 46 and 48 all seem to have had equivalent smaller jars or beakers with similar rim forms (43, 45, 47 and 49).

The earliest context for each individual type has been noted (see also FIG.32). Given that equivalent types in casserole and smaller jar are likely to be similar in date, it is *possible* that all these types begin in the late first century A.D. Some of them occur in the deposit associated with the building of the Antonine Temple (dedicated *c.* A.D. 166-9). They occur at Uzita (Rood Byzaceens Gebruiksaardewerk, form 9) where their association with the level of the House of the Peristyle Mosaic suggests a predominantly second century date (Van der Werff 1982 119 and Afb. 6), and at Ostia (eg *Ostia iii* Tav. XLI). They are rare in the pottery assemblage from the UNESCO Libyan Valleys Survey (unpublished), whose initial date is thought to be in the second half of the first century A.D.

42 Orange/brown, occasionally with grey core, often with grey surface; inclusions see profiles, p. 92.

v	1 : 2730	Dia.: 19	xxiii	21 : 504	Dia.: 20
vic	3 : 2728	Dia.: 18	xxiii	21 : 505	Dia.: 21
vidi	1 : 2729	Dia.: 22	xxiii	21 : 511	Dia.: 16
xiv	119 : 508	Dia.: 21	xxiii	21 : 512	Dia.: 24
xiv	128 : 498	Dia.: 20	xxiii	21 : 515	Dia.: 17
xiv	128 : 506	Dia.: 20	xxiii	22 : 514	Dia.: 21
xxiii	9 : 499	Dia.: 24	xxiii	23 : 503	Dia.: 15
xxiii	14 : 502	Dia.: 20	xxiii	25 : 501	Dia.: 16
xxiii	17 : 500	Dia.: 21	xxiii	25 : 507	Dia.: 19
xxiii	17 : 510	Dia.: 25	xxiii	25 : 509	Dia.: 22
xxiii	17 : 513	Dia.: 21			

xiv 119: first half second century A.D.

43 Mostly orange/brown, with dark brown, grey or black surface (occasionally cream outer surface), inclusions: see profiles, p. 92.

v	2 : 2766	Dia.: 13	xxiii	21 : 594	Dia.: 16
xiv	12 : 593	Dia.: 12	xxiii	21 : 595	Dia.: 13
xiv	128 : 596	Dia.: 12	xxiii	23 : 591	Dia.: 11
xix	6 : 2767	Dia.: 13	xxiii	40 : 592	Dia.: 11
xix	8 : 2765	Dia.: 13			

v 2: late first century A.D.

See also Fulford 1986b, fig 92, nos, 50 & 53 (associated with construction of Antonine Temple, dedicated *c.* A.D. 166-9).

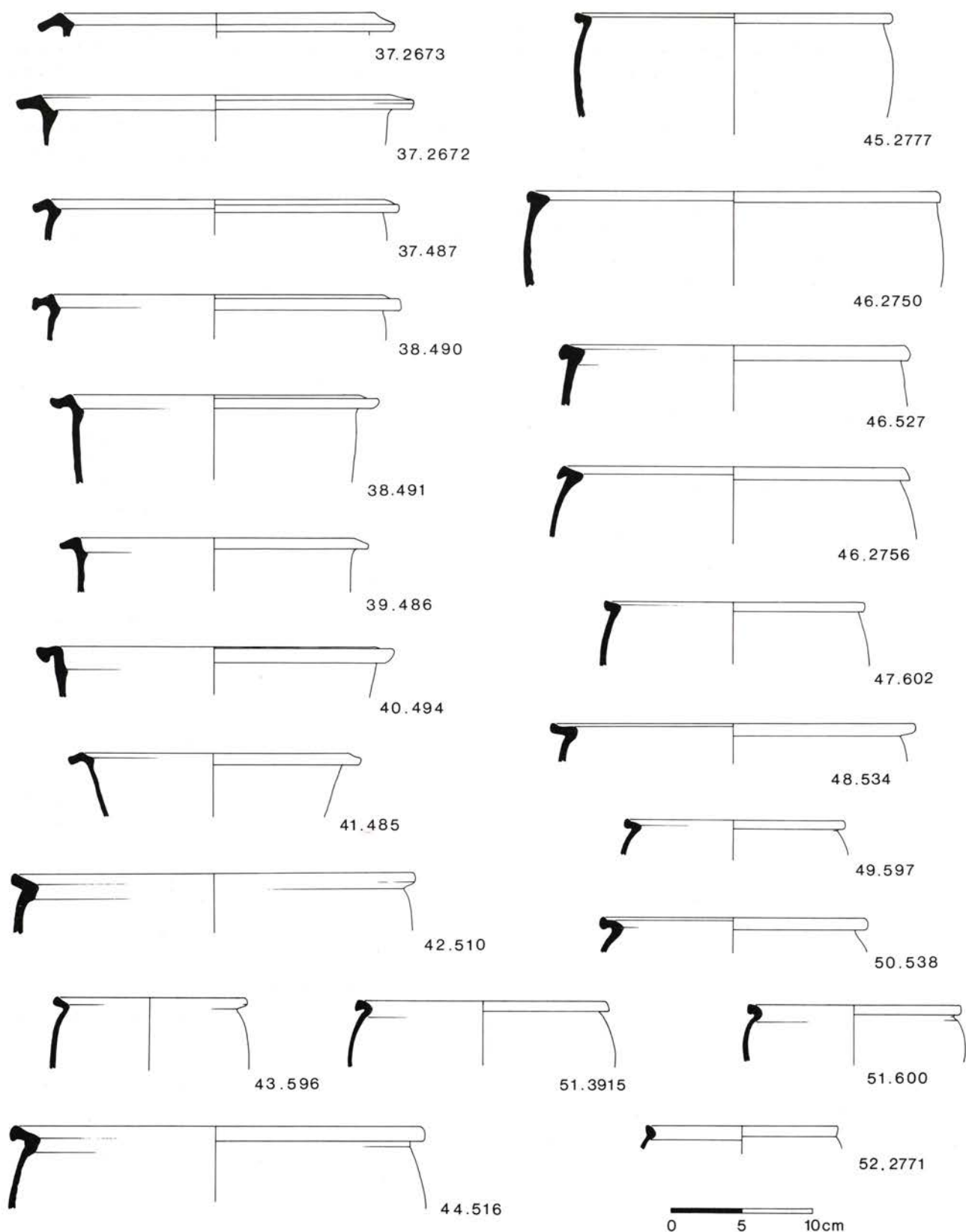


FIG.31 Coarse Pottery Types 37-52 (Scale 1:4)

- 44** Orange/brown or red/brown, occasionally mid brown, very occasionally dark grey, dark grey (occasionally cream/yellow) outer surface; inclusions; see profiles p. 92.

iv	8 : 2783		xvii	10 : 2737	Dia.: 23
v	2 : 2731	Dia.: 20	xix	1 : 2734	Dia.: 18
v	2 : 2736		xix	6 : 2747	Dia.: 21
v	2 : 2744	Dia.: 24	xxii	13 : 530	Dia.: 21
v	4 : 2742		xxiii	21 : 516	Dia.: 25
v	4 : 2745	Dia.: 19	xxiii	21 : 518	Dia.: 22
vic	1 : 2740		xxiii	21 : 521	Dia.: 21
vic	3 : 2738	Dia.: 16	xxiii	21 : 526	Dia.: 27
vid	1 : 2743	Dia.: 24	xxiii	21 : 528	Dia.: 20
vid	6 : 2735	Dia.: 18	xxiii	21 : 529	Dia.: 21
vii	1 : 2732		xxiii	21 : 531	Dia.: 22
vii	2 : 2746	Dia.: 24.5	xxiii	21 : 547	Dia.: 16
viiia	1 : 2739	Dia.: 22	xxiii	21 : 4112	Dia.: 24
viii	1 : 2741	Dia.: 15.5	xxiii	25 : 522	Dia.: 14
xiv	11 : 517	Dia.: 21	xxiii	25 : 524	Dia.: 14
xiv	11 : 523	Dia.: 21	xxiii	25 : 4115	Dia.: 24
xiv	70 : 520	Dia.: 15	xxv	5 : 2733	Dia.: 19
xv	15 : 2748				

xiv 70: late first century B.C. (?intrusive).

v 2, xxii 13: late first century A.D.

See Riley 1979, D454 (Deposit 75, early second century A.D.).

See also Fulford 1986b, fig.92, no.49 (associated with construction of Antonine Temple, dedicated c. A.D. 166-9).

- 45** Red/brown, outer surface burnished in narrow strips; T2, quartz and limestone.

xix	6 : 2777	Dia.: 20
xix	6 : 2778	

Grey, cream outer surface; T1, quartz and limestone.

xix	8 : 2777	Dia.: 20
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Probably residual in context.

- 46** Orange/brown, surface either pale (brown, orange/brown or cream/yellow - in 6 examples) or dark (grey or maroon); surface burnished in narrow strips in 3 examples; inclusions, see profiles p. 93.

S 14 lb	: 2755	Dia.: 21	vib	7 : 2749	Dia.: 22
via	1 : 2752	Dia.: 25	xiv	11 : 525	Dia.: 23
via	2 : 2758		xiv	11 : 527	Dia.: 21
vib	6 : 2750	Dia.: 26	xiv	84 : 519	Dia.: 21
vib	6 : 2751	Dia.: 27	xix	6 : 2756	Dia.: 21
vib	6 : 2753	Dia.: 22	xxv	5 : 4114	Dia.: 25
vib	6 : 2757	Dia.: 23			

xiv 11: second half of second century.

See also Fulford 1986b, fig.92, no.48 (associated with construction of Antonine Temple, dedicated c. A.D. 166-9).

47 Brown through red/brown to orange/brown; inclusions, see profiles p. 93.

iii	3 : 2780	Dia.: 19	xiv	13 : 602	Dia.: 16
iv	4 : 2782		xvii	10 : 2779	Dia.: 19
vib	7 : 2781	Dia.: 19			

iv 4: late first – late second century A.D.

48 Orange/brown, dark grey surface; occasionally yellow/cream or pale orange outer surface burnished in narrow strips; inclusions, see profiles p. 93.

iv	20 : 2762		xxiii	18 : 541	Dia.: 21
vic	2 : 2760		xxiii	21 : 534	Dia.: 22
vid	1 : 2761	Dia.: 21	xxiii	21 : 535	Dia.: 25
xiv	49 : 532	Dia.: 21	xxiii	21 : 537	Dia.: 22
xxiii	10 : 539	Dia.: 21	xxiii	21 : 542	Dia.: 22
xxiii	11 : 495	Dia.: 23	xxiii	21 : 3916	Dia.: 21
xxiii	17 : 540	Dia.: 21	xxiii	25 : 533	Dia.: 20
xxiii	17 : 543	Dia.: 21	xxv	2 : 2759	Dia.: 20

xiv 49: late first century B.C. (?intrusive).

iv 20, xxiii 10: late first century A.D.

49 Orange/brown, outer surface grey (1 examples) or white (2 examples), inclusions: see profiles, p. 93.

xiv	10 : 597	Dia.: 14	xxiii	21 : 598	Dia.: 17
xix	6 : 2763		xxiii	25 : 599	Dia.: 16

xiv 10: second half of second century A.D.

50 Medium brown through red/brown to dark red; inclusions see profiles p. 93.

v	2 : 2764	Dia.: 16	xxiii	21 : 546	Dia.: 24
xxiii	21 : 538	Dia.: 15.5	xxiii	25 : 544	Dia.: 20
xxiii	21 : 545	Dia.: 17			

All contexts: second half of second century A.D.

51 Mostly orange/brown, occasionally brown or grey; outer surface almost always cream or white; inclusions: see profiles p. 93.

S 14 1b	: 2775	Dia.: 12	xix	8 : 2754	Dia.: 17.5
i	76 : 2773		xix	8 : 2769	Dia.: 12
iiib	4 : 2774	Dia.: 15	xix	8 : 2776	Dia.: 11
iv	4 : 2770	Dia.: 12	xxiii	21 : 601	Dia.: 11.5
iv	8 : 2897	Dia.: 14	xxiii	21 : 3915	Dia.: 18
xiv	11 : 600	Dia.: 13	xxiii	25 : 604	Dia.: 15
xiv	13 : 603	Dia.: 11.5			

iiib 4, iv 4 & 8: late first century.

See also Fulford 1986b, fig.92, no.52 (associated with construction of Antonine Temple, dedicated c. A.D. 166–9).

52 Orange, greenish/cream outer surface; T2, quartz and limestone.

vib	6 : 2771	Dia.: 13			
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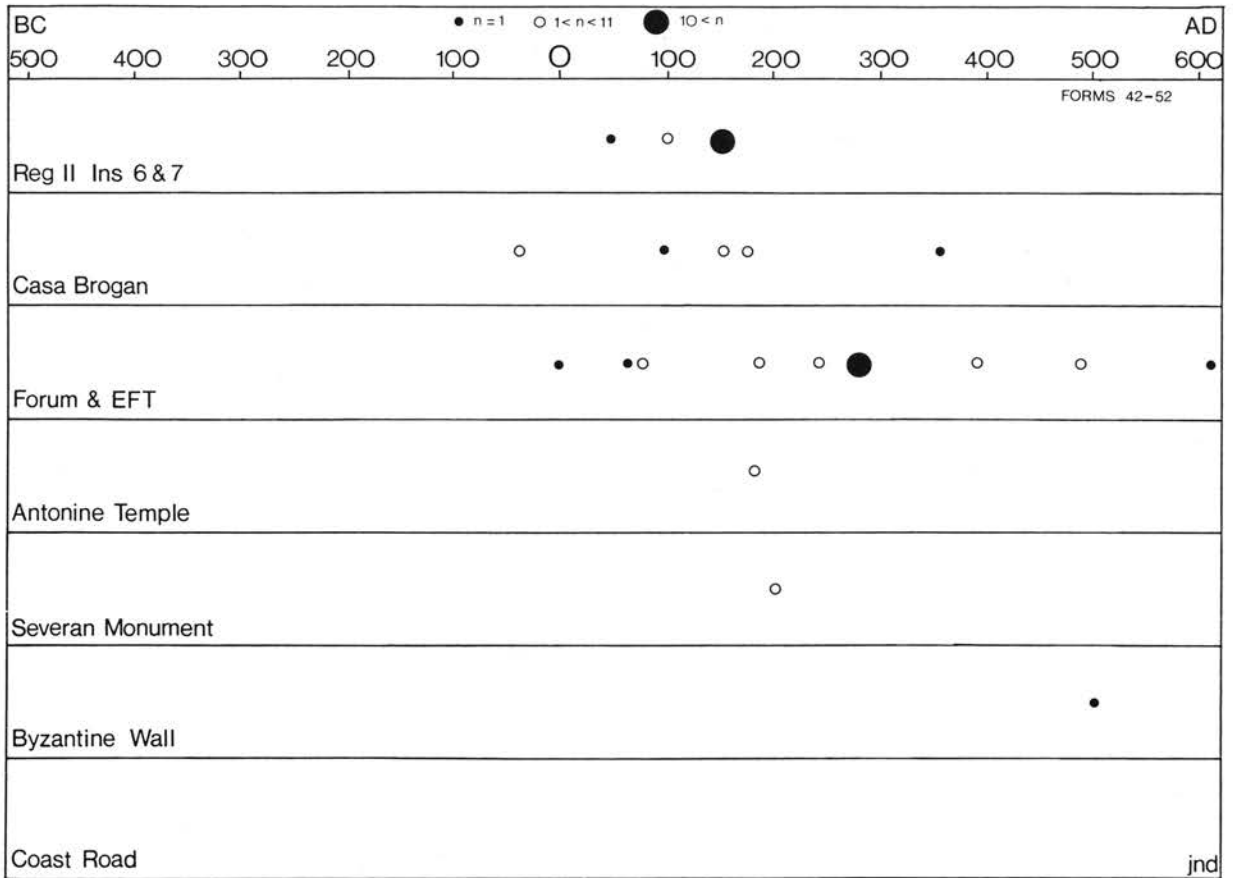


FIG.32 The Occurrence of Types 42-52 in the Site Stratigraphy

Probably residual in context.

See also Fulford 1986b, fig.92, no.51 (associated with construction of Antonine Temple, dedicated *c.* A.D, 166-9).

Types 53-57 (FIGS 33-34)

Mostly orange/yellow, sometimes pale orange, occasionally orange/brown, dark grey or black outer surface, sometimes banded; T2, 3, 4 (3, 19, 2 examples), quartz, red iron and limestone. This fabric is particularly distinctive in colour (consistently orange or orange/yellow rather than the browner shades of most of the other casserole types), in composition (containing noticeably more red iron than limestone) and in texture (being much less dispersed, with most examples falling in texture category 3). It is the fabric of the ware referred to by Hayes as African Black Top (ABT) ware (Hayes 1976). Type 56 is equivalent to Hayes 197, the classic type in ABT ware (Hayes 1972).

53

xxiii 21 : 550 Dia.: 20
 xxiii 25 : 549 Dia.: 19

Both contexts: second half of second century A.D.

See also Tomber 1986, no.88 (from Tank 2a - terminal date of filling *c.* mid third century).

54

xxiii 26 : 2710 Dia.: 23

xxiii 26: early third century A.D.

55

xxvii	3 : 2727	Dia.: 16			
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56

S 14 1b	: 2721		xxii	13 : 553	Dia.: 34
vib	1 : 2712		xxii	13 : 555	Dia.: 24
vib	6 : 2713	Dia.: 22	xxii	17 : 554	Dia.: 20
vib	6 : 2714	Dia.: 25	xxii	17 : 556	
vib	6 : 2715	Dia.: 24	xxii	17 : 557	Dia.: 19
vib	6 : 2719	Dia.: 20	xxiii	25 : 552	Dia.: 35
vii	1 : 2722		xxiii	25 : 4090	Dia.: 26
viii	1 : 2716	Dia.: 20	xxiv	43 : 4093	Dia.: 22.5
xiv	26 : 558	Dia.: 18	xxv	5 : 2711	Dia.: 22
xv	19 : 2718		xxvi	42 : 2717	Dia.: 26
xvii	6 : 2720	Dia.: 20			

xxii 13: late first century A.D. (possibly intrusive).
 xxi 17, xxiii 25: second half of second century A.D.

57

vib	7 : 2725	Dia.: 18	xix	6 : 2723	Dia.: 14
xvii	9 : 2726		xxv	5 : 2724	Dia.: 14

xix 6: early third century.

Types 58–63 (FIGS 34–35)

The features which define type 58 are particularly distinctive and consistent and are almost always present in all examples. The lid-locator is formed by a broad groove in the back of the

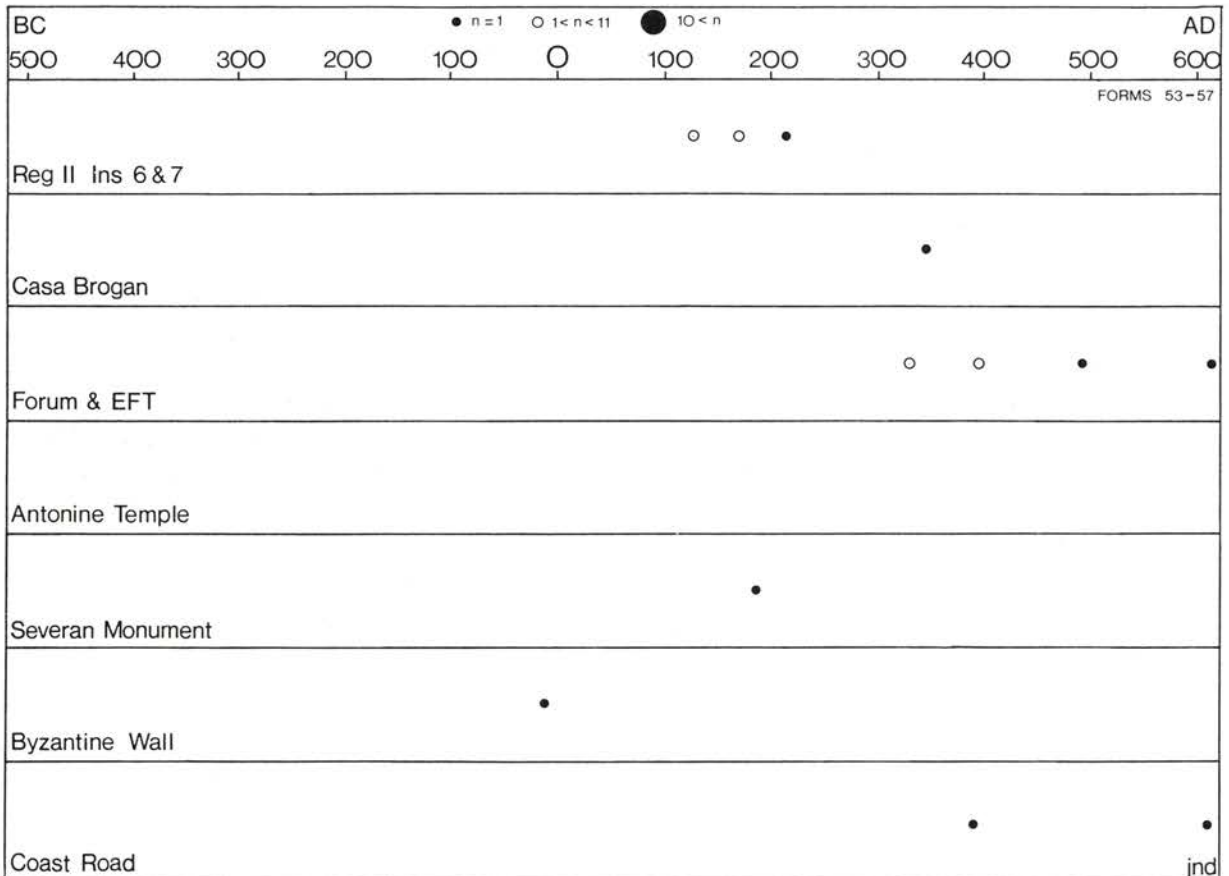


FIG.33 The Occurrence of Types 53–57 in the Site Stratigraphy

rim, the lower edge of the groove usually projecting slightly more than the upper to provide a "stop" for the lid. From a point just below its top the outside face of the rim had a slightly concave chamfer cut into it, with the tool cutting a slight ledge at the top of the wall. There is usually a small ridge of clay drawn up at the edge of this ledge showing that the outside face of the wall was burnished after the chamfer was cut and that the burnishing started at the bottom of the wall. Form 59 is generally similar though the rim is usually more upright and taller than 58, the angle of the chamfer on the outer face is not so acute and the lid-locating groove tends not to be so deeply cut, to the point where it is flat in some examples. Type 60 is similar to 58 but the shape of the rim is generally more amorphous. The tooling on the outside face of the rim is much more irregular, often leaving a projecting flange. The lid-locating groove is often wider at the bottom than the top. The rim shape of type 62 is even more amorphous, having become almost a simple bead of round section on top of the vessel wall.

The fabric of the four types is similar. Only 59 exhibits slight differences: in colour it tends towards red rather than brown and it has a narrower dispersion in inclusion texture (see profiles, p. 94), though the difference is not statistically significant.

The initial date for these types is certainly to be placed in the second century A.D., and probably the second half of the century. Their distribution in the stratified contexts does not reveal any chronological distinctions between them (see FIG. 35). They are scarcely known at Carthage but they do occur at Uzita further down the Tunisian coast (Van der Werff 1982, Rood Byzaceens Gebruiksraadewerk, Forms 10 and 12) where the stratigraphy suggests that type 59 may more properly belong to the third century A.D., and at Benghazi (Riley 1979, 941 & 942).

58 Mostly orange/brown, sometimes red/brown, occasionally grey, outer surface: mostly yellow/cream, sometimes grey or dark brown; inclusions: see profiles, p. 94.

S 14 1a	: 2454	Dia.: 28	xix	6 : 2446	Dia.: 23
S 14 1a	: 2462	Dia.: 24	xix	6 : 2447	Dia.: 18
i	1 : 2459	Dia.: 23	xix	6 : 2448	Dia.: 24
ia	1 : 3650	Dia.: 30	xix	6 : 2449	Dia.: 23
v	2 : 2455		xix	6 : 2451	Dia.: 19
via	1 : 2460	Dia.: 27	xix	6 : 2452	Dia.: 21
via	2 : 2458	Dia.: 23	xix	6 : 2453	Dia.: 22
vib	7 : 2461		xix	6 : 2457	
xiv	11 : 567	Dia.: 25	xix	6 : 4045	Dia.: 21
xiv	11 : 569	Dia.: 21	xix	8 : 2456	Dia.: 21
xiv	11 : 570	Dia.: 25	xix	8 : 3918	Dia.: 23
xiv	11 : 574	Dia.: 23	xxii	13 : 577	Dia.: 21
xiv	13 : 573	Dia.: 25	xxiii	4 : 565	Dia.: 22
xiv	26 : 578	Dia.: 18	xxiii	17 : 564	Dia.: 22
xiv	60 : 566	Dia.: 24	xxiii	21 : 559	Dia.: 24
xiv	128 : 568	Dia.: 23	xxiii	21 : 4116	Dia.: 24
xiv	138 : 575	Dia.: 22	xxiii	25 : 560	Dia.: 21
xvii	9 : 2450		xxiii	25 : 571	Dia.: 32
xviii	8 : 3917	Dia.: 25	xxiii	25 : 576	Dia.: 22
xix	6 : 2445	Dia.: 25	xxv	2 : 4106	Dia.: 21.5

xiv 60: second century B.C. (intrusive).

xxiii 4: late first century B.C. (intrusive).

xxii 13: late first century A.D. (possibly intrusive – see type 56).

v 2, xiv 11, 13, xviii 8, xxiii 17, 21, 23, 25: second half of second century A.D.

See also Fulford 1986b, fig.92, no.42 (associated with construction of Antonine Temple, dedicated c. A.D. 166-9).

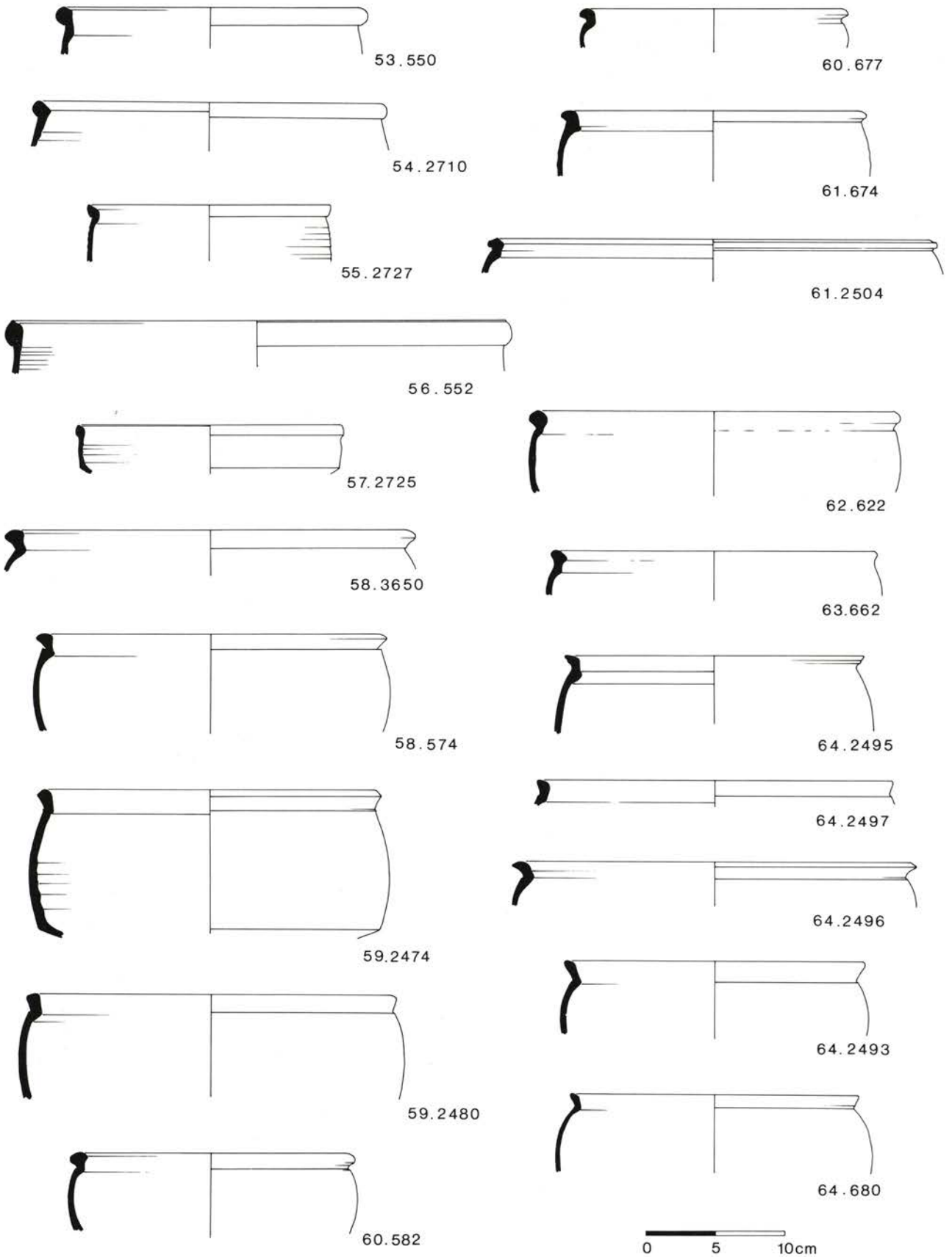


FIG.34 Coarse Pottery Types 53-64 (Scale 1:4)

- 59** Mostly red or reddish/brown, sometimes orange/brown, outer surface mostly yellowish/cream over dark grey; inclusions: see profiles, p. 94.

S 14 1b	: 2481	Dia.: 23	vib	6 : 2474	Dia.: 23
S 14 1b	: 2482	Dia.: 24	vib	6 : 2477	Dia.: 23
iii	15 : 2468	Dia.: 24	vib	6 : 4201	Dia.: 28
iv	4 : 2470	Dia.: 22	vib	7 : 2464	Dia.: 22
iv	4 : 2475		vib	7 : 2478	Dia.: 22
vi	2 : 2473		vib	7 : 2479	Dia.: 22
via	2 : 2469		vib	7 : 2480	Dia.: 26
vib	2 : 2466	Dia.: 27	vii	1 : 2465	
vib	2 : 2471	Dia.: 21	xiv	6 : 2483	
vib	2 : 2472	Dia.: 24	xiv	11 : 572	Dia.: 25
vib	2 : 2485		xix	6 : 2484	
vib	4 : 2476	Dia.: 28	xix	6 : 3920	Dia.: 22
vib	6 : 2467				

xiv 6; early first century A.D. (intrusive).

iii 15, iv 4: late first century A.D. (probably intrusive).

xiv 11: second half of second century A.D.

See also: Fulford 1986b, fig.92, no.44 (associated with construction of Antonine Temple, dedicated *c.* A.D. 166-9);

Dyson 1976, LS11 (Deposit TPQ mid second century A.D., fourth century coin regarded as intrusive).

- 60** Orange/brown, outer surface: anything from pale yellow through pale brown to dark grey; inclusions: see profiles, p. 94.

v	2 : 2514	Dia.: 18	xxiii	23 : 584	Dia.: 24
v	11 : 2509	Dia.: 19	xxiii	25 : 582	Dia.: 18
xiv	25 : 580	Dia.: 24	xxiii	25 : 586	Dia.: 21
xiv	26 : 579	Dia.: 29	xxiii	25 : 590	Dia.: 23
xiv	128 : 588	Dia.: 21	xxiii	25 : 677	Dia.: 17
xxiii	20 : 587	Dia.: 22	xxiii	40 : 585	Dia.: 16
xxiii	21 : 581	Dia.: 24	xxv	2 : 4103	Dia.: 21.5
xxiii	21 : 583	Dia.: 20	xxv	4 : 4104	Dia.: 26
xxiii	21 : 589	Dia.: 22	xxv	5 : 4099	Dia.: 21
xxiii	21 : 3919	Dia.: 23			

xxiii 20: early second century A.D.

xxiii 21, 23, 25: second half of second century A.D.

See also: Fulford 1986b, fig.92, no.43 (associated with construction of Antonine Temple, dedicated *c.* AD 166-9);

Riley 1979, D941-2 (earliest context: deposit 81, second half of second century A.D.).

61 (Variant)

Orange/brown, dark grey outer surface; T2 & 3, quartz and limestone.

xiv	84 : 674	Dia.: 19			
xvii	10 : 2504	Dia.: 24			

xiv 84: fourth century A.D. (?residual).

- 62** Mostly orange/brown, sometimes red/brown, occasionally grey, surface mostly dark grey, sometimes pale cream/brown; inclusions: see profiles, p. 94.

S 14 1b	: 2492	Dia.: 17	iv	16 : 4041	Dia.: 28
iiib	1 : 2487		vid	4 : 2490	Dia.: 20
iv	2 : 2488		xiv	11 : 614	Dia.: 20

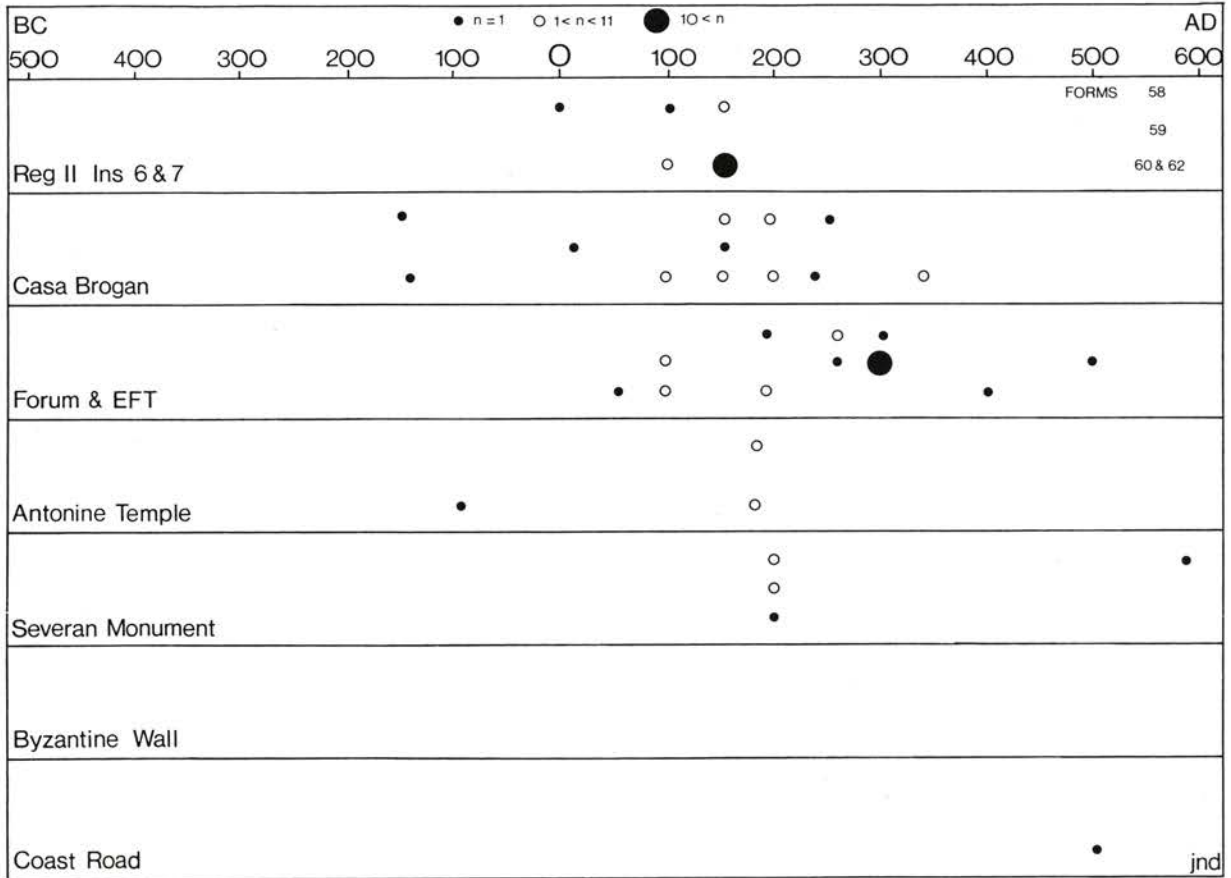


FIG.35 The Occurrence of Types 58–60 & 62 in the Site Stratigraphy

xiv	13 : 615	Dia.: 20	xxiii	21 : 647	Dia.: 19
xiv	26 : 616	Dia.: 27	xxiii	21 : 648	Dia.: 23
xiv	60 : 617	Dia.: 23	xxiii	21 : 649	Dia.: 22
xiv	119 : 618	Dia.: 20.5	xxiii	21 : 650	Dia.: 28
xiv	119 : 619	Dia.: 21	xxiii	21 : 651	Dia.: 18
xiv	120 : 620	Dia.: 23	xxiii	21 : 652	Dia.: 22
xiv	127 : 621	Dia.: 16	xxiii	21 : 653	Dia.: 26
xiv	128 : 622	Dia.: 24	xxiii	21 : 654	Dia.: 25
xiv	128 : 623	Dia.: 21	xxiii	21 : 655	Dia.: 20
xiv	138 : 625	Dia.: 20	xxiii	21 : 656	Dia.: 20
xiv	143 : 624	Dia.: 21	xxiii	21 : 657	Dia.: 18
xv	25 : 2489	Dia.: 18	xxiii	21 : 658	Dia.: 19
xix	5 : 2491	Dia.: 20	xxiii	21 : 4044	Dia.: 25
xix	8 : 2486	Dia.: 17	xxiii	21 : 4110	Dia.: 23
xxiii	11 : 626	Dia.: 18	xxiii	22 : 632	Dia.: 18
xxiii	15 : 659	Dia.: 22	xxiii	23 : 633	Dia.: 19
xxiii	17 : 627	Dia.: 26	xxiii	23 : 634	Dia.: 18
xxiii	17 : 628	Dia.: 19	xxiii	25 : 635	Dia.: 25
xxiii	17 : 629	Dia.: 19	xxiii	25 : 636	Dia.: 26
xxiii	17 : 630	Dia.: 24	xxiii	25 : 637	Dia.: 19
xxiii	20 : 631	Dia.: 22	xxiii	25 : 638	
xxiii	21 : 643	Dia.: 21	xxiii	25 : 639	Dia.: 17
xxiii	21 : 644	Dia.: 23	xxiii	25 : 640	
xxiii	21 : 645	Dia.: 17	xxiii	25 : 641	Dia.: 30
xxiii	21 : 646	Dia.: 24	xxv	23 : 4097	Dia.: 20

xiv 60: late second century B.C. (intrusive).

xxv 23: possibly as early as first century B.C. (intrusive).

iiib 1: late first century A.D. (?intrusive).

iv 2, 16: late first – late second century A.D.

xiv 119, 120, xxiii 11, 20: first half second century A.D.

63 (Variants)

Orange/brown, dark grey outer surface with (in 1 example) cream surface over; T3, quartz and limestone.

xxiii	23 : 661				
xxiii	25 : 662	Dia.: 21			
xxiii	26 : 660	Dia.: 28			

xxiii 23, 25: second half of second century A.D.

64 A possible development of 58 and 59. The rim is taller and thinner and tends to be more outplayed; the lid-locating rear face of the rim tends to be quite broad and often has a ridged lower stop. The similarity to 58 is mainly in the faceted treatment of the outer face of the rim.

Red/brown or grey/brown, sometimes with a grey core, surface: grey or banded red/brown or orange and grey; T2, quartz and limestone; the fabric is somewhat similar to that of 58.

vib	2 : 2495	Dia.: 21	xix	6 : 2493	Dia.: 21
vib	2 : 2497	Dia.: 25	xxvi	42 : 680	Dia.: 19
xv	15 : 2496	Dia.: 23			

xix 6: early third century.

65 A possible further development of 58; the rim is even taller, the outer face is tooled quarter-round, and the lid-locator is broad and shallow.

Grey with thin orange sub-surface margins, banded orange and grey surface; T2, quartz and limestone.

xv	16 : 2513	Dia.: 19			
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xv 16: sixth century A.D.

See also Hayes 1984, fig.72, no.19 (Midden 3, possibly fifth century A.D. +).

66 Distinctive; the rim is upright with a projecting, tapered flange, flat top and deeply cut lid-locating groove.

Mostly orange/yellow, sometimes with a grey or maroon core, dark grey or black outer surface; T2, 3, 4 (1,2,3 examples), scarce in 3 examples, quartz and limestone.

v	2 : 2499	Dia.: 19	xxii	9 : 685	Dia.: 37
via	2 : 2498		xxiii	79 : 4118	Dia.: 26
xiv	11: 688	Dia.: 29			

v 2, xiv 11: late second century A.D.

See also: Fulford 1986a fig.88 no.137 (Pit 2, trench Y3-4; latest first century B.C.); *Ostia ii*, Tav.XVIII, 314 (level VB2 which pre-dates the construction of the baths c. 80-90 A.D.).

67 The rim tends to be an everted flange rather than an upright tooled moulding as in types 58-63. The lid-locator tends to be less well articulated than in types 58 etc. probably because the everted flange provides a resting surface on its inner face. The outer surface is burnished in narrow horizontal strips or corrugated with horizontal grooves more or less deeply cut and more or less sharply tooled or delineated.

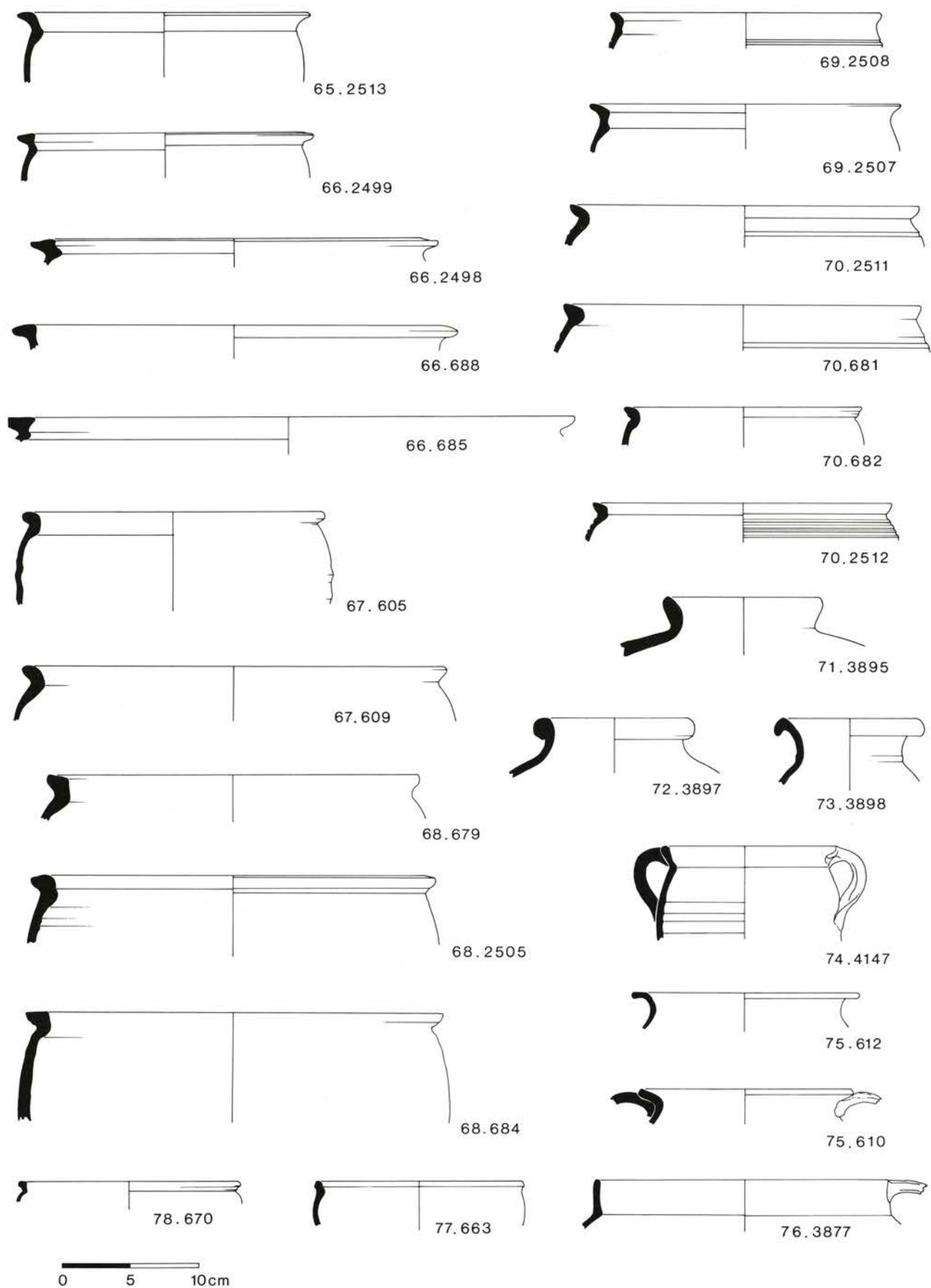


FIG.36 Coarse Pottery Types 65-78 (Scale 1:4)

Orange/brown to dark red/brown, dark grey outer surface T2, 3, & 4 (1,1,2 examples) mostly quartz; similar to ARS.

vib	6 : 2506		xiv	84 : 607	Dia.: 22
xiv	84 : 605	Dia.: 19.5	xiv	84 : 609	Dia.: 28
xiv	84 : 606	Dia.: 23			

vib 6: fourth century A.D.

- 68** Anything from pale brown through orange/yellow to red/brown, dark grey or black outer surface; T2 & 4 (2,2 examples), quartz, limestone and red iron (in 2 examples)

xiv	84 : 608	Dia.: 24	xv	15 : 2505	Dia.: 24
xiv	84 : 679	Dia.: 24	xxii	6 : 684	Dia.: 27

xxii 6: first century B.C.

xiv 84: second half of fourth century A.D.

- 69** Probably related to 67. The rim is everted in a smooth curve; the lid-locating groove is well articulated on the inner face of the rim; the fabric is quite fine and the execution is good.

Orange yellow; T2 (2 examples) & 3, quartz only.

xv	24 : 2510				
xv	26 : 2508	Dia.: 21			
xvii	9 : 2507	Dia.: 22			

xv 24: sixth century A.D.

- 70** The execution is particularly distinctive. The vessels are finely made and finished; the surfaces are finely tooled and the rim is tooled on the outside to a fine edge; the outer surfaces have crisply delineated horizontal grooves.

Orange, orange/brown or yellow/brown; T2 (3 examples) & 3, quartz and limestone.

xv	24 : 2511	Dia.: 22	xix	1 : 2512	Dia.: 19
xv	26 : 681	Dia.: 23	xxiv	43 : 4117	Dia.: 25
xv	26 : 682	Dia.: 15			

xiv 43: fourth-fifth century A.D. (?).

See also Hayes 1984, fig.72, no.12 (Midden 1, possibly not earlier than c. A.D. 350).

LARGE NARROW-MOUTHED JARS (FIG. 36)

- 71** Pale brown, grey core; T4, iron and quartz.

i	13 : 3895	Dia.: 11.5			
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Pale orange; T2, sparse, quartz

vii	1 : 3894	Dia.: 11			
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vii 1: fourth century A.D.

72 Red/brown core, grey margins, yellow/cream surface; T4, quartz and limestone.

i	57 : 3897	Dia.: 12
iiib	5 : 3896	Dia.: 14

i 57: possibly as early as second century B.C.

73 Dark red core, red/brown margins, yellow/cream surface; T3, quartz and limestone.

xiv	8a : 3898	Dia.: 11.5
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xiv 8a: mid first century A.D.

HANDLED JARS (FIG. 36)

74 Gritty red/brown, buff surface.

xxii	15 : 4147	Dia.: 13
xxv	24 : 4148	Dia.: 12

xxv 24: late first century B.C.

75 Orange/brown to mid brown, grey/brown surface, T3 (2 examples) and 4, black vitreous grains, red iron (in 1 examples), quartz and limestone.

xiv	83 : 612	Dia.: 13
xxi	18 : 610	Dia.: 12
xxiii	39 : 611	Dia.: 11

xxi 18, xxiii 39: early first century A.D.

76 Possibly double-handled.
Orange/brown; T3, quartz, black iron and limestone.

i	4 : 3877	Dia.: 25
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MISCELLANEOUS SMALL JARS OR BEAKERS (FIGS. 36-37)

77 Orange/brown, smooth red/brown surface; T2, limestone, quartz and red iron.

xiv	26 : 663	Dia.: 14
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xiv 26: second half of fourth century A.D.

78 Smooth mid-brown; T3, quartz only.

xxiii	40 : 670	Dia.: 15
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xxiii 40: second century A.D. +

79 Orange, dark red paint; T1, limestone and black vitreous grains.

xiv	88 : 4077	Dia.: 7.5
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xiv 88: possibly as early as fifth century B.C.

MISCELLANEOUS JARS AND CASSEROLES (FIG. 49)

- 80** Orange/brown, dark grey outer surface; T3, quartz, limestone and red iron
 xxiii 39 : 395 Dia.: 15
 xxiii 39: latest first century B.C.
 See also: Hayes 1976 Group X no.14 (early first century A.D.);
Ostia ii, Tav.XX, 356 (level VA1: TPQ of level = construction of baths c. 80-90 A.D.).
- 81** Grey/brown core, orange margins, grey outer surface; T2, limestone and quartz.
 xxi 22 : 613 Dia.: 13
 xxi 22: second half of second century.
- 82** Orange/brown, grey core, dark grey outer surface; T1, quartz and limestone.
 i 62 : 2784 Dia.: 13
- 83** Reddish/brown to dark grey, brownish/grey surface; T3 quartz and limestone.
 xiv 84 : 675 Dia.: 15
 xiv 84: second half fourth century A.D.
- 84** Pale orange, grey/brown outer surface; T2, quartz, limestone and red iron.
 xvii 10 : 2516 Dia.: 17
- 85** Orange/brown, dark grey outer surface; T3, quartz and limestone.
 i 98 : 2785 Dia.: 32
 i 98: early first century A.D.
- 86** Red/brown, dark brownish/grey surface; T3, limestone and quartz.
 xiv 11 : 694 Dia.: 27
 xiv 11: second half second century A.D.
- 87** Orange/yellow to orange red, smooth patchy dark grey surface; T4, quartz, limestone and red iron.
 xiv 128 : 693 Dia.: 25
 xiv 128: late second century A.D.
 See also: Riley 1979, 259 ff. (mid-Roman Cooking Ware 1).
- 88** Orange brown to dark grey; T2, quartz and limestone.
 xxii 35 : 691 Dia.: 30
 xxii 35: early first century A.D.

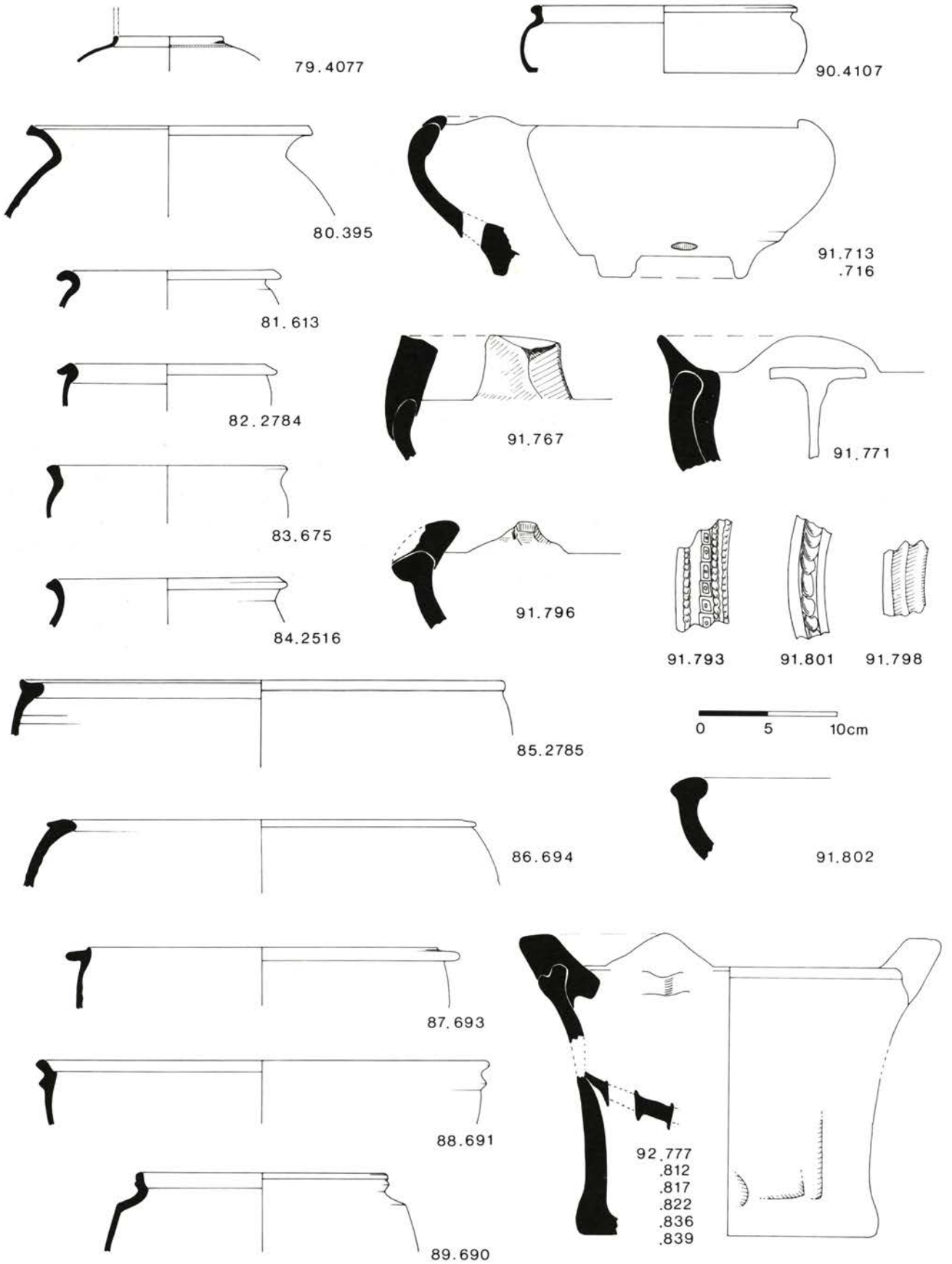


FIG.37 Coarse Pottery Types 79-92 (Scale 1:4)

89 Orange red to orange yellow, dark grey outer surface; T3, red and black iron.

xxiii 3 : 690 Dia.: 17

xxiii 3: early second century B.C.

90 Hard, gritty red/brown, buff outer surface.

xxv 17 : 4107 Dia.: 19

BRAZIERS (FIGS 37-39)

Since the braziers from the site survived for the most part only as small, non-joining fragments, the types detailed below have had to be reconstructed, in large part, by inference. FIG. 38 offers a diagrammatic summary of this generative process. It represents what is evident or can be reasonably inferred from the extant fragments. The direction of generation is from left to right and the different elements which make up a particular type become associated by proceeding through the diagram on a particular path. Solid lines represent relationships between different elements which actually exist, dotted lines represent relationships which can be inferred, eg, there is only one solid pathway for type 91 because there is only one extant fragment large enough to show the relationship between the particular rim, lug, fire-basket and free-standing foot. Other associations within the type are inferred on the basis of similarity of form, presence of certain common attributes or the sharing of a common fabric. The smallness of some of the fragments has necessitated the provision of certain pathways through the diagram which might not represent "real" vessels, eg, a pathway representing no lug at all is provided for type 91 since many of the extant rim fragments do not contain any part of a lug. However, it is extremely unlikely that a lugless vessel ever actually existed.

The two essential functional elements of these braziers are:

- 1) A pan-stand
- 2) A fire-basket

With regard to these two elements the gross morphology of a brazier is fairly invariant though the particular arrangement of constituent components such as rims, lugs and handles may vary. Arrangements for the disposal of the ash, however, provided the maker with greater scope for design variation. Out of the three types detailed below only one incorporated any specific arrangements for this by having an integral ash-box below the fire-basket.

Fabrics:

a) Mostly medium brown or red/brown often with a darker core; the surface is usually cream or white and wet-hand slipped over the grits; inclusions: T2, 3, 4, 5 (4,8,5,70 examples), quartz, red iron, limestone, grog, clay pellets, angular rock fragments and some black vitreous grains; some at least of the rock fragments are of volcanic origin and the grog on occasion includes fragments of rendering (probably wall plaster); the fabric is quite soft and friable.

b) Hard, pale brown, medium brown or orange/brown; inclusions: T3, 4 (2,3 examples), rounded quartz, black vitreous grains, limestone, rock fragments and grog; the proportion of rock fragments and grog is much smaller than in fabric a and altogether fabric b is cleaner, harder and better finished than fabric a.

c) The colour of the clay and the composition of the inclusions are highly similar to fabric a but c is harder and better finished than a. It is entirely possible that a and c represent slightly different treatments of the same basic raw material.

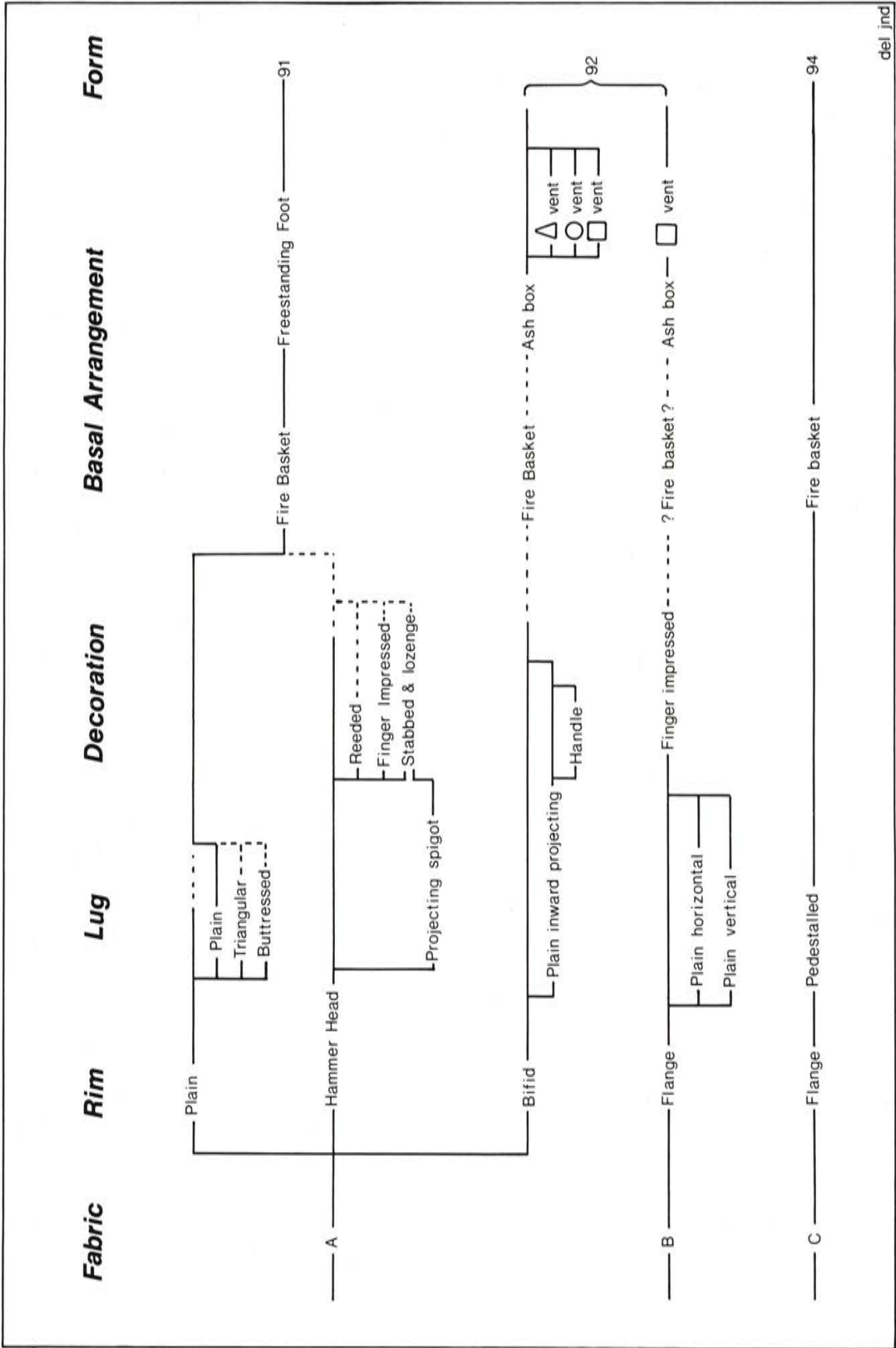


FIG.38 Anatomy of Braziers: A Classificatory Scheme

91 (Fabric a only):

The simplest and most frequent type. A freestanding, lugged fire-basket resting on small projecting feet.

Almost complete profile:

Plain rim, plain lug, fire-basket and freestanding foot.

xxii 8 : 716 Dia.: 29

Rim fragments only:

Plain with plain lug.

i	46 : 3939		xiv	12 : 700	
i	57 : 3951	Dia.: 28	xiv	62 : 701	
i	119 : 3937	Dia.: 26	xiv	70 : 702	Dia.: 24
ia	9 : 3945		xiv	81 : 703	Dia.: 30
iiia	1 : 3952		xiv	81 : 704	Dia.: 28
iiib	4 : 3953		xiv	81 : 705	Dia.: 27
iiib	5 : 3943	Dia.: 22	xiv	81 : 706	
iv	5 : 3947		xiv	81 : 707	Dia.: 28
iv	18 : 3942		xiv	81 : 708	
v	8 : 3948	Dia.: 25	xiv	81 : 709	Dia.: 30
via	2 : 3940		xiv	81 : 710	
vib	2 : 3955		xiv	81 : 4199	Dia.: 40
vid	1 : 3941		xiv	92 : 711	Dia.: 30
vii	1 : 3946		xiv	119 : 712	
viii	1 : 3944		xiv	119 : 713	Dia.: 18
viii	1 : 3938		xiv	128 : 714	Dia.: 25
viii	2 : 3949		xxii	7 : 715	
xiv	6 : 695	Dia.: 22	xxiii	10 : 717	
xiv	8a : 696	Dia.: 27	xxiii	11 : 718	
xiv	8a : 697	Dia.: 24	xxiii	14 : 719	
xiv	8a : 698		xxiii	25 : 720	
xiv	9 : 699	Dia.: 27	xxiii	40 : 721	

See also: Fulford 1986a, fig. 89, nos. 184-88 (Pit 2, trench Y3-4: latest first century B.C.).

Plain, lugless rims.

i	59 : 3928	Dia.: 26	xiv	61 : 730	
ia	130 : 3926	Dia.: 29	xiv	70 : 731	Dia.: 23
iii	9 : 3975		xiv	70 : 732	
iiib	3 : 3927		xiv	70 : 733	
iiib	5 : 3932		xiv	81 : 735	Dia.: 25
via	2 : 3936	Dia.: 29	xiv	81 : 736	
vib	2 : 3930	Dia.: 26	xiv	81 : 737	
vid	1 : 3933		xiv	81 : 738	Dia.: 28
viii	1 : 3931		xiv	81 : 739	
viii	2 : 3934		xiv	81 : 740	
xiv	6 : 722	Dia.: 22	xiv	81 : 741	
xiv	8a : 723		xiv	92 : 742	
xiv	8a : 724	Dia.: 27	xiv	92 : 743	Dia.: 20
xiv	10 : 726		xiv	92 : 744	Dia.: 30
xiv	11 : 725	Dia.: 30	xiv	92 : 745	Dia.: 30
xiv	11 : 727	Dia.: 28	xiv	92 : 746	Dia.: 30
xiv	14 : 728	Dia.: 17	xiv	118 : 760	
xiv	61 : 729	Dia.: 24	xiv	119 : 761	Dia.: 30

xiv	119 : 762	Dia.: 30	xxii	35 : 752	Dia.: 32
xiv	119 : 763	Dia.: 20	xxii	35 : 753	
xiv	128 : 764	Dia.: 30	xxiii	10 : 754	Dia.: 17
xiv	128 : 765		xxiii	10 : 755	Dia.: 25
xxii	7 : 747		xxiii	11 : 756	Dia.: 28
xxii	8 : 748		xxiii	23 : 757	
xxii	8 : 749		xxiii	39 : 758	
xxii	35 : 750	Dia.: 27	xxiii	39 : 759	Dia.: 33
xxii	35 : 751	Dia.: 26	xxv	24 : 3903	Dia.: 25

Plain rim with triangular lug.

ia	11 : 3957		xxiv	66 : 768	
xiv	81 : 766		xiv	70 : 769	
xiv	92 : 767		xiv	128 : 770	Dia.: 24

See also Fulford 1986a, fig.89, no.183 (Pit 2, trench Y3-4; latest first century B.C.).

Plain rim with buttressed lug.

xiv	11 : 771	
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Hammer-headed rim with projecting spigot lug and stabbed and lozenge decoration.

via	2 : 3974	
xiv	9 : 796	Dia.: 26

Hammer-headed rim with stabbed and lozenge decoration.

xiv	8a : 793	Dia.: 40
xiv	9 : 794	Dia.: 30
xiv	9 : 795	Dia.: 30

Hammer-headed rim with finger impressed decoration.

W 4 3	: 3973		xxii	8 : 801	Dia.: 21
xiv	70 : 3972	Dia.: 31	xxiii	21 : 800	

Hammer-headed rim with reeded decoration.

S 14 2a	: 3960	Dia.: 24	vib	6 : 3967	
E 9 6c	: 3971	Dia.: 25	vib	7 : 3965	
ia	2 : 3959	Dia.: 28	vib	7 : 3970	Dia.: 25
ia	11 : 3958		xiv	11 : 3963	Dia.: 22
vib	1 : 3969		xiv	11 : 797	Dia.: 24
vib	2 : 3964	Dia.: 24	xiv	84 : 798	Dia.: 17
vib	2 : 3966		xix	6 : 3962	
vib	2 : 3968		xxiii	17 : 799	Dia.: 21
vib	6 : 3961				

Plain hammer-headed rim.

xiv	81 : 802	Dia.: 30
xxiii	40 : 803	Dia.: 27

The hammer-headed rims have been included in this type because: a) the angle of the upper wall suggests a comparatively shallow form; b) there are vent-holes in the walls of some of the fragments; c) none of the fragments show any evidence of having been joined to an integral ash-box.

92 (Fabrics a and b)

A lugged fire-basket with integral ash-box forming a base. While there are no joining fragments of fire-baskets and ash-boxes, there are a number of ash-box wall fragments which clearly show on their inner faces evidence of where the fire-basket was luted in place. The choice of rims for this type was made on the basis of the slope of the wall and the lack of vent or ash holes, both of which made it unlikely that they belonged to type 91.

Fabric a:

Bifid rim with lug and handle.

S 14 2a	: 3995		vib	7 : 783	
vib	2 : 3994		xiv	11 : 777	Dia.: 25
vib	6 : 3997		xiv	81 : 773	
vib	7 : 3996		xxiii	21 : 789	
via	1 : 782	Dia.: 30	xxiii	21 : 790	

Bifid rim with lug.

S 14 1b	: 3990		vib	7 : 3991	Dia.: 27
vib	6 : 3988	Dia.: 25	vib	7 : 3993	
vib	6 : 3992		xiv	14 : 778	
vib	7 : 3989	Dia.: 27	xxiii	21 : 788	Dia.: 20

Bifid rim (no lug or handles surviving).

S 14 1b	: 3983		xiv	14 : 779	Dia.: 25
via	2 : 3981	Dia.: 17	xiv	92 : 780	Dia.: 25
vib	2 : 3984		xiv	127 : 781	Dia.: 35
vib	2 : 3987		xxiii	17 : 784	
vib	6 : 3985		xxiii	21 : 785	
vib	7 : 3986		xxiii	21 : 786	Dia.: 35
xiv	1 : 3982		xxiii	21 : 787	Dia.: 20
xiv	9 : 772		xxiii	21 : 790	
xiv	11 : 774	Dia.: 23	xxiii	25 : 791	
xiv	11 : 775	Dia.: 20	xxiii	25 : 792	Dia.: 23
xiv	11 : 776	Dia.: 25			

Fragments of fire-basket:

iii	2 : 3976		xiv	81 : 829	
iii	4 : 3980		xiv	81 : 830	
iiib	1 : 3978		xiv	81 : 831	
v	1 : 3979		xiv	81 : 832	
vib	3 : 3977		xiv	81 : 833	
xiv	9 : 824		xiv	81 : 834	
xiv	10 : 825		xiv	81 : 838	
xiv	11 : 826		xiv	92 : 835	
xiv	81 : 827		xiv	92 : 836	
xiv	81 : 828		xxiii	39 : 837	

Fragments of ash-box:

with no vent surviving.

iiib	5 : 4000		xiv	11 : 817	Dia.: 24
vib	6 : 3999		xiv	81 : 818	Dia.: 18
xiv	8a : 821	Dia.: 17	xiv	81 : 819	Dia.: 12
xiv	9 : 820	Dia.: 22			

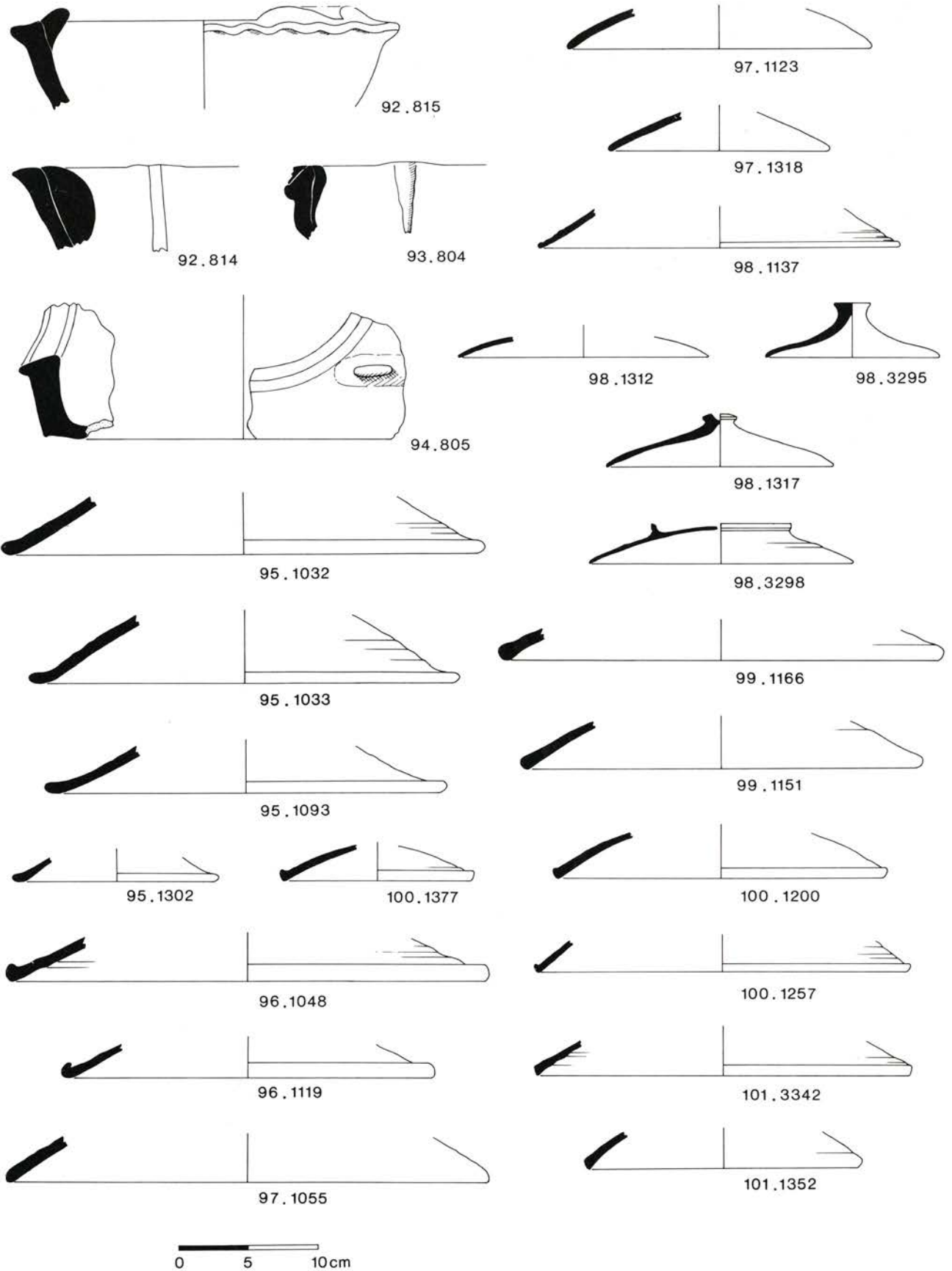


FIG.39 Coarse Pottery Types 92-101 (Scale 1:4)

with triangular vent.

xxiii 3 : 839 Dia.: 18

with circular vent.

xiv 92 : 822 Dia.: 17

with square vent.

xiv 92 : 841 Dia.: 18

Fabric b:

Bifid rim with lug and handle.

vib 7 : 3998

Flanged rim, finger impressed decoration:

with plain horizontal lug.

xiv 35 : 815 Dia.: 25

with plain vertical lug.

xiv 49 : 814 Dia.: 27

with no lug surviving.

xxii 8 : 813 Dia.: 25

xxii 11 : 816 Dia.: 26

Fragment of ash-box with square vent:

xiv 47 : 812 Dia.: 19

93 (Fabric a)

Lugged fire-basket with integral ash-box. Single example only, in which the fire-basket and pan-stand were fabricated together and then joined to a separately fabricated ash-box. The luted junction between the two can clearly be seen on the under side of the outer edge. No identifiable fragments of ash-box found.

xiv 81 : 804 Dia.: 25

94 (Fabric c)

Combined fire-basket/ash-box with high, pedestalled lug. There was no evidence of vent/ash holes in the walls, of feet, or of any separately fabricated but associated ash box.

Flanged rim, pedestalled lug and fire-basket.

viii 1 : 4001

xxii 8 : 805 Dia.: 29

Fragments of flanged rim only.

v	2 : 4004	xiv	81 : 806	
v	3 : 4010	xiv	81 : 807	
vid	1 : 4005	xiv	100 : 809	Dia.: 22
viii	1 : 4003	xxii	8 : 810	
viii	1 : 4006	xxii	35 : 811	
viii	1 : 4007	xxii	35 : 4008	
xiv	49 : 808	xxv	2 : 4002	

Date of braziers (types 91–94):

Apart from two sherds (both type 92, one in period I of the Casa Brogan, the other in Regio II Insula 7 (xxiii 3)) none of the above examples of brazier occur in contexts earlier than the first century B.C. If one discounts these two sherds as anomalies, the distribution of types in the stratified contexts suggest that 91 and 94 began in the first century B.C., whereas 92 began slightly later, towards the end of the first century A.D.

LARGE LIDS (FIGS 39–42)

95 A conical lid with plain, slightly outsplayed lip; no details of handle; see FIGS 39–40; see also type 309 (hand-made vessels).

Fabrics:

- Mostly orange/brown or orange/red, often with cream or greenish cream surface; inclusions: see profiles, p.94.
- Orange/brown with sooted rim; inclusions T3, black and red vitreous grains, limestone, quartz and occasionally other rock fragments.
- Orange/brown; inclusions T2 & 3 (4,1 examples), black and red vitreous grains, quartz, limestone and flakes of golden mica on surface.
- Mostly orange/brown, 1 examples (3250) orange/yellow with knife trimmed outer surface; inclusions T1, 2 & 3 (1,1,3 examples), quartz, red iron and limestone.

Fabric a:

Large – 30–40 cms diameter

iii	3 : 3247	Dia.: 34	xiv	92 : 1027	Dia.: 35
iii	7 : 3225	Dia.: 32	xiv	92 : 1028	Dia.: 31
iv	12 : 3227	Dia.: 32	xiv	120 : 1041	Dia.: 40
xiv	9 : 1035	Dia.: 32	xiv	128 : 1034	Dia.: 35
xiv	11 : 1042	Dia.: 31	xxii	11 : 1040	Dia.: 41
xiv	81 : 1031	Dia.: 31	xxii	35 : 1046	Dia.: 35
xiv	81 : 1032	Dia.: 35	xxiii	39 : 1039	Dia.: 37
xiv	81 : 1033	Dia.: 31	xxiii	40 : 1038	Dia.: 36
xiv	81 : 1043	Dia.: 32	xxiv	67 : 1037	Dia.: 32
xiv	92 : 1026	Dia.: 32			

Medium – 20–30 cms diameter

ia	1 : 3244		vib	7 : 3235	Dia.: 28
iii	1 : 3705	Dia.: 26	vid	1 : 3231	Dia.: 28
iii	3 : 3226	Dia.: 28	viii	1 : 3228	Dia.: 28
iiib	5 : 3237		xiv	8a : 1065	Dia.: 29
v	2 : 3229		xiv	8a : 1066	Dia.: 30
v	8 : 3246	Dia.: 26	xiv	9 : 1077	Dia.: 29
vib	6 : 3232	Dia.: 27	xiv	9 : 1079	Dia.: 30
vib	7 : 3224	Dia.: 29	xiv	9 : 1080	Dia.: 27

xiv	9 : 1082	Dia.: 30	xiv	128 : 1091	Dia.: 25
xiv	9 : 1083	Dia.: 28	xv	11 : 3223	Dia.: 29
xiv	9 : 1090	Dia.: 30	xv	19 : 3236	
xiv	70 : 1089	Dia.: 25	xv	24 : 3238	Dia.: 26
xiv	81 : 1069	Dia.: 29	xxi	14 : 1093	Dia.: 29
xiv	81 : 1070	Dia.: 28	xxi	22 : 1097	Dia.: 27
xiv	81 : 1071	Dia.: 29	xxi	22 : 1098	Dia.: 24
xiv	81 : 1073	Dia.: 30	xxi	22 : 1236	Dia.: 25
xiv	81 : 1074	Dia.: 30	xxii	12 : 1102	Dia.: 25
xiv	92 : 1085	Dia.: 30	xxii	17 : 1103	Dia.: 23
xiv	92 : 1086	Dia.: 30	xxii	35 : 1094	Dia.: 29
xiv	92 : 1087	Dia.: 30	xxiii	9 : 1105	Dia.: 23
xiv	92 : 1226	Dia.: 26	xxiii	14 : 1104	Dia.: 28
xiv	119 : 1068	Dia.: 24	xxiii	39 : 1100	Dia.: 28
xiv	120 : 1075	Dia.: 27	xxiii	39 : 1101	Dia.: 29
xiv	120 : 1076	Dia.: 30			

Small – 10–20 cms diameter

xiv	9 : 1305	Dia.: 12	xxii	13 : 1299	Dia.: 16
xxi	14 : 1303	Dia.: 18	xxiii	11 : 1297	Dia.: 18
xxi	18 : 1302	Dia.: 15	xxiii	11 : 1301	Dia.: 16
xxi	20 : 1306	Dia.: 18			

xxi 14: second century B.C.

xiv 70: late second century B.C.

Fabric b:

iii	4 : 3239		xiv	70 : 1047	Dia.: 40
xiv	8a : 1064	Dia.: 30	xiv	81 : 1072	Dia.: 30
xiv	9 : 1078	Dia.: 29	xiv	92 : 1084	Dia.: 28
xiv	9 : 1081	Dia.: 30	xviii	6 : 3248	Dia.: 47
xiv	11 : 1067	Dia.: 29	xxiii	34 : 1096	Dia.: 28
xiv	50 : 1044	Dia.: 37	xxiii	40 : 1095	Dia.: 30

xiv 50, 70: late first century B.C.

Fabric c:

iv	16 : 3249	Dia.: 30	xiv	81 : 1030	Dia.: 38
xiv	50 : 1036	Dia.: 41	xxii	11 : 1040	Dia.: 41
xiv	81 : 1029	Dia.: 37			

xiv 50: late first century B.C.

Fabric d:

i	114 : 3243	Dia.: 21	xxii	7 : 1106	Dia.: 25
vib	7 : 3250	Dia.: 15	xxiii	17 : 1133	Dia.: 28

xxii 7: late first century B.C./early first century A.D.

96 – as 95 but lip more developed – ie thickened and moulded on outside.

Fabrics as 95

Fabric a:

xv	12 : 3233				
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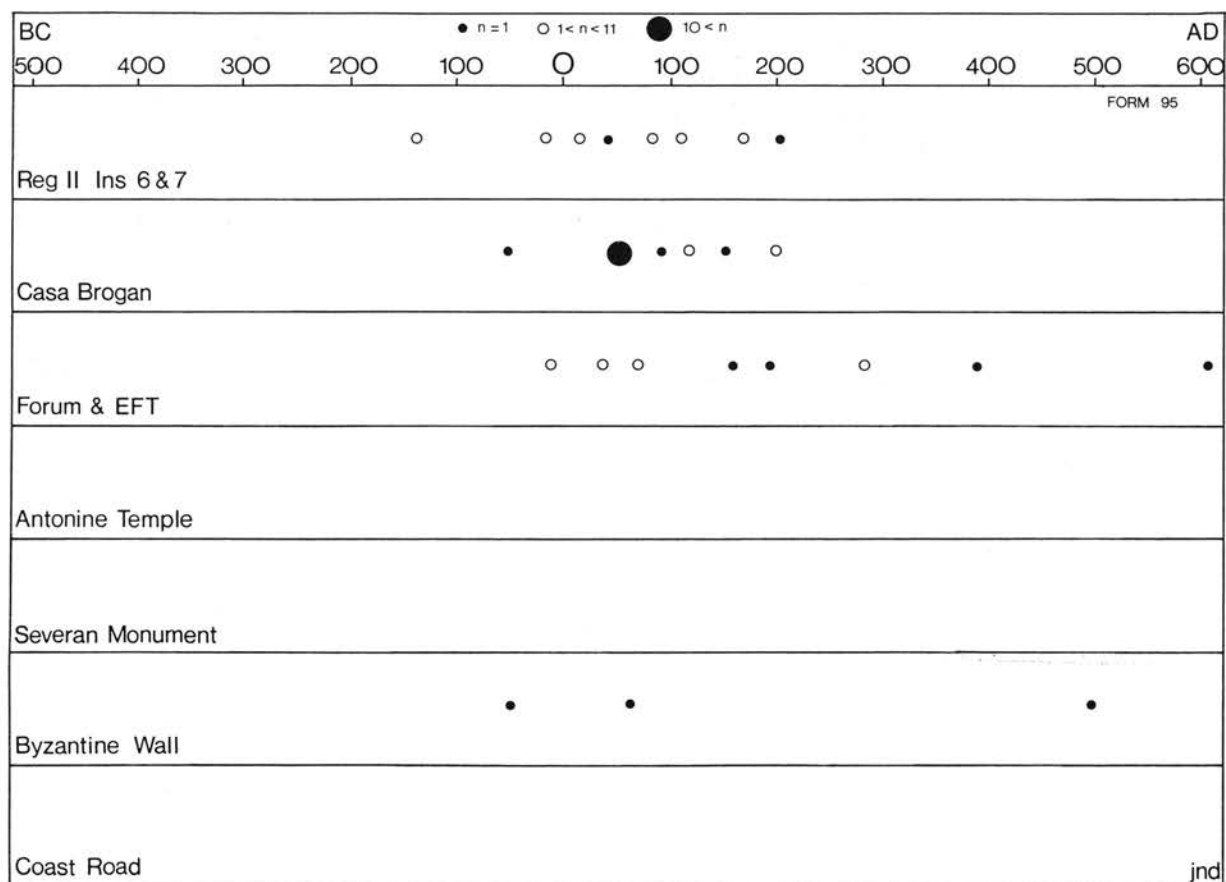


FIG.40 The Occurrence of Type 95 in the Site Stratigraphy

Large – 30–40 cms

xiv	9 : 1049	Dia.: 32	xiv	92 : 1054	Dia.: 34
xiv	11 : 1053	Dia.: 38	xxi	21 : 1051	Dia.: 39
xiv	81 : 1048	Dia.: 35	xxi	22 : 1052	Dia.: 38

Medium – 20–30 cms

xiv	8a : 1114	Dia.: 30	xxiii	25 : 1110	Dia.: 21
xiv	11 : 1115	Dia.: 30	xxiii	25 : 1119	Dia.: 27
xiv	128 : 1118	Dia.: 29	xxiii	30 : 1111	Dia.: 30
xxi	21 : 1113	Dia.: 28	xxiii	39 : 1112	Dia.: 29
xxi	22 : 1117	Dia.: 30	xxiv	67 : 1116	Dia.: 28
xxii	13 : 4105	Dia.: 25			

xxiii 39: late first century B.C./early first century A.D.

Fabric b:

via	2 : 3245	
xiv	92 : 1050	Dia.: 40

xiv 92: early second century A.D.

97 Conical lid with slight tendency to dome-shaped; plain, unthickened rim.

Fabrics:

- a) Orange/brown, sometimes with maroon/brown core, sometimes with yellow/cream surface; inclusions: see profiles, p.94.
 b) Orange/brown or medium brown, sooted rim; T2 & 3, black and red vitreous grains, quartz and mica.

Fabric a:

i	23 : 3287
vid	1 : 3262
viii	2 : 3290

Large – 30–40 cms

i	63 : 3311	Dia.: 32	xiv	120 : 1055	Dia.: 35
iii	4 : 3300	Dia.: 31	xxiii	39 : 1166	Dia.: 32

Medium – 20–30 cms

i	16 : 3313	Dia.: 26	xiv	92 : 1127	Dia.: 29
i	61 : 3252	Dia.: 22	xiv	100 : 1122	Dia.: 24
i	80 : 3285	Dia.: 25	xiv	115 : 1132	Dia.: 26
iii	4 : 3282	Dia.: 25	xxi	21 : 1125	Dia.: 30
iv	6 : 3251	Dia.: 26	xxi	21 : 3317	Dia.: 25
vib	7 : 3291	Dia.: 24	xxi	22 : 1128	Dia.: 29
xiv	50 : 1131	Dia.: 28	xxii	8 : 1124	Dia.: 28
xiv	61 : 1123	Dia.: 22	xxiv	15 : 3318	Dia.: 26

Small – 10–20 cms

i	9 : 3276	Dia.: 20	xxi	17 : 1325	Dia.: 19
xiv	8a : 1400	Dia.: 12	xxiii	39 : 1346	Dia.: 12
xiv	25 : 1308	Dia.: 12	xxiii	40 : 1349	Dia.: 11
xiv	128 : 1318	Dia.: 16	xxiv	70 : 1350	Dia.: 19
xix	6 : 3305	Dia.: 12			

xxiv 70: possibly as early as first half of fourth century B.C.

xxi 17: second half of second century B.C.

Fabric b:

xiv	50 : 1120	Dia.: 25	xiv	128 : 1130	Dia.: 22
xiv	50 : 1130	Dia.: 22	xxii	10 : 1126	Dia.: 21

xiv 50: second half of first century B.C.

Other fabrics:

Hand made, black, medium brown surface; T3, limestone, quartz and felspar (?).

i	23 : 3287
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i 23: possibly as early as fourth century B.C.

Medium brown; T3, quartz, red iron, limestone, golden mica on surface.

i	102 : 3303	Dia.: 25
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i 102: late second century B.C.

Orange/brown, black rim; T3, quartz, red iron and limestone.

xxi 17 : 1129 Dia.: 28

xxi 17: late second century B.C.

Orange/yellow, knife trimmed outer surface; T3, quartz, red iron and limestone.

xix 2 : 3319 Dia.: 21

xix 2: late first century A.D.

Grey, burnished outer surface; T2, scarce, quartz and red iron.

xxii 35 : 1121 Dia.: 21

First half of first century A.D.

98 Conical lid with slight tendency to dome-shaped; plain, unthickened rim; generally more finely made, with thinner walls than 97. Most of the examples of this form were represented only by rim fragments and it is thus quite possible that a number of different types which would have been distinguishable if the complete shape were known, have been placed together under the one heading. The examples where the complete profile is known exhibit a number of different types of handle. These have all been illustrated.

Fabrics:

- a) Mostly orange/brown, occasionally red/brown, quite often with blackened (sooted ?) rim; inclusions: see profiles p.94.
- b) Anything from orange/yellow through orange/pink to orange/brown, occasionally with black lip to rim; T2 & 3 (2,5 examples), mostly quartz and red iron, occasionally a little limestone.

Fabric a:

D 1 8	: 3272	iii	5 : 3280
i	46 : 3257	iiib	1 : 3256
i	46 : 3269	iiib	5 : 4031
i	46 : 3286	v	2 : 3277
i	96 : 3271	v	2 : 3294
i	114 : 3265	v	2 : 3296
i	147 : 3270	vii	1 : 3284
i	147 : 3279	xv	26 : 3258
i	179 : 3312	xxii	31 : 4028
iii	3 : 3297		

Medium: 30–20 cms dia.

i	46 : 3261	Dia.: 25	xix	1 : 3292	Dia.: 21
i	97 : 3259	Dia.: 23	xxi	14 : 1137	Dia.: 26
i	97 : 3301	Dia.: 22	xxi	17 : 1138	Dia.: 22
i	97 : 3281	Dia.: 21	xxi	17 : 1139	Dia.: 22
i	101 : 3275	Dia.: 21	xxi	17 : 1141	Dia.: 24
i	148 : 3299	Dia.: 24	xxi	18 : 1135	Dia.: 29
i	167 : 3283	Dia.: 22	xxi	18 : 1136	Dia.: 24
iiib	2 : 3255	Dia.: 23	xxi	21 : 1142	Dia.: 28
iv	12 : 3274	Dia.: 22			

xxi 14 & 17: second half of second century B.C.

Small: 10-20 cms dia. Many of the fragments in this group may be from the distinctive type which is represented by the illustrated example 3298 (xxv 24). From the unfinished condition of the inside surface it is quite clear that the vessel was intended primarily as a lid but its shape (as with many lids whose handles could also serve as a stable base) would have made it quite suitable for the dual function of lid and shallow dish.

i	35 : 3260	Dia.: 19	xiv	60 : 1309	Dia.: 19
i	46 : 3266	Dia.: 18	xiv	62 : 1310	Dia.: 19
i	50 : 3293	Dia.: 19	xiv	68 : 1311	Dia.: 14
i	94 : 3263	Dia.: 20	xiv	70 : 1312	Dia.: 18
ia	3 : 3320	Dia.: 17	xiv	70 : 1313	Dia.: 20
ia	7 : 3309	Dia.: 16	xiv	98 : 1317	Dia.: 17
ia	11 : 3264	Dia.: 19	xv	28 : 3295	Dia.: 11.5
ia	11 : 3268	Dia.: 19	xix	6 : 3314	Dia.: 12
ia	11 : 3289	Dia.: 17	xxi	14 : 1320	Dia.: 19
iii	1 : 3267	Dia.: 16	xxi	14 : 1321	Dia.: 18
iii	2 : 3278	Dia.: 14	xxi	14 : 1323	Dia.: 20
iii	5 : 3254	Dia.: 20	xxi	17 : 1324	Dia.: 20
iii	5 : 3306	Dia.: 16	xxi	17 : 1326	Dia.: 20
iii	6 : 3273	Dia.: 19	xxi	17 : 1328	Dia.: 19
iiib	1 : 3253	Dia.: 15	xxi	18 : 1327	Dia.: 17
iiib	5 : 4026	Dia.: 20	xxi	18 : 1329	Dia.: 17
iiib	5 : 4030	Dia.: 16	xxi	18 : 1330	Dia.: 20
iiib	5 : 4032	Dia.: 15	xxi	21 : 1332	Dia.: 15
v	2 : 3288	Dia.: 16	xxii	10 : 1334	Dia.: 19
v	2 : 3315	Dia.: 16	xxii	17 : 1338	Dia.: 19
viii	3 : 3308	Dia.: 16	xxii	32 : 1337	Dia.: 20
xiv	22 : 1307	Dia.: 20	xxiii	40 : 1347	Dia.: 14
xiv	28 : 4029	Dia.: 17	xxv	24 : 3298	Dia.: 18

xiv 28: possibly as early as fifth century B.C.

viii 3: possibly as early as the fourth century B.C.

xxi 14 & 17, xxii 32: second half of second century B.C.

i 94, xiv 22, 60, 68: first century B.C.

Fabric b:

xiv	76 : 1314	Dia.: 15	xxi	17 : 1140	Dia.: 21
xiv	81 : 1315	Dia.: 15	xxi	21 : 1331	Dia.: 18
xiv	92 : 1316	Dia.: 14	xxii	13 : 1322	Dia.: 15
xxi	7 : 1319	Dia.: 17			

xiv 76, xxi 7: possibly as early as fourth century B.C.

xxi 17: second half of second century B.C.

99 Shallow, slightly domed lid, with wall thickening towards the rim; plain rim.

Fabrics:

- Orange/brown or red/brown often with darker surface and sooted rim; inclusions: see profiles, p.94.
- Mostly orange/yellow, occasionally orange/brown; about 15% of examples have a knife trimmed outer surface except for a reserved strip near the rim, while the rest have a deep black rim edge; T2, 3 & 4 (3,18,2 examples), quartz, red iron and limestone.

Fabric a:

iii	3 : 3354		v	2 : 3353	
iiib	5 : 3345		via	2 : 3343	
iiib	5 : 3351		via	2 : 3347	

Large: 30–40 cms dia.

i	102 : 3334	Dia.: 33	xiv	48 : 1057	Dia.: 33
ia	1 : 3355	Dia.: 32	xxi	22 : 1056	Dia.: 36
xiv	47 : 1167	Dia.: 32	xxiii	39 : 1166	Dia.: 32

xiv 47 & 48; second half of first century B.C.

Medium: 20–30 cms dia.

i	16 : 3350	Dia.: 24	xiv	76 : 1217	Dia.: 30
ia	1 : 3331	Dia.: 30	xiv	81 : 1156	Dia.: 25
iiib	1 : 3344	Dia.: 22	xiv	81 : 1175	Dia.: 22
iv	5 : 3230	Dia.: 25	xiv	119 : 1180	Dia.: 26
iv	5 : 3346	Dia.: 24	xiv	120 : 1182	Dia.: 30
v	1 : 3321	Dia.: 28	xiv	128 : 1184	Dia.: 29
via	1 : 3333	Dia.: 24	xix	8 : 3338	Dia.: 21
vib	6 : 3329	Dia.: 23	xxii	8 : 1186	Dia.: 28
vib	7 : 3336	Dia.: 27	xxii	13 : 1239	Dia.: 27
xiv	6 : 1160	Dia.: 30	xxii	17 : 1189	Dia.: 25
xiv	11 : 1162	Dia.: 24	xxii	35 : 1150	Dia.: 27
xiv	12 : 1164	Dia.: 29	xxiii	11 : 1191	Dia.: 24
xiv	25 : 1165	Dia.: 30	xxiii	17 : 1194	Dia.: 29
xiv	50 : 1168	Dia.: 29	xxiii	21 : 1145	Dia.: 24
xiv	53 : 1169	Dia.: 26	xxiii	21 : 1146	Dia.: 28
xiv	70 : 1159	Dia.: 30	xxiii	39 : 1195	Dia.: 29
xiv	70 : 1170	Dia.: 28	xxiii	39 : 1196	Dia.: 30
xiv	70 : 1171	Dia.: 28	xxiii	39 : 1282	Dia.: 26
xiv	70 : 1172	Dia.: 28	xxv	7 : 3339	Dia.: 21

xiv 50 & 70: second half first century B.C.

xiv 76: possibly as early as fourth century B.C.

Small: 10–20 cms dia.

iiib	5 : 3327	Dia.: 19	xxii	13 : 1335	Dia.: 15
viii	2 : 3340	Dia.: 17	xxiii	10 : 1340	Dia.: 16
xiv	25 : 1355	Dia.: 20	xxiii	21 : 1342	Dia.: 18
xiv	26 : 1353	Dia.: 20	xxiii	21 : 1344	Dia.: 20
xiv	60 : 1357	Dia.: 19	xxiii	25 : 1358	Dia.: 18
xiv	67 : 1354	Dia.: 17	xxiii	39 : 1361	Dia.: 17
xxv	5 : 3348	Dia.: 19			

xiv 67: ? fourth/third century B.C.

xxiii 39: late first century B.C.

Fabric b:

vic	1 : 3349				
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Large: 30–40 cms dia.

xiv	92 : 1177	Dia.: 33			
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Medium: 20–30 cms dia.

iii	9 : 3325	Dia.: 23	xiv	10 : 1163	Dia.: 22
vib	7 : 3323	Dia.: 27	xiv	11 : 1153	Dia.: 27
xiv	9 : 1151	Dia.: 29	xiv	12 : 1208	Dia.: 27
xiv	9 : 1161	Dia.: 25	xiv	14 : 1179	Dia.: 25

xiv	25 : 1154	Dia.: 23	xxii	11 : 1144	Dia.: 25
xiv	26 : 1158	Dia.: 24	xxii	13 : 1188	Dia.: 22
xiv	81 : 1173	Dia.: 27	xxiii	10 : 1192	Dia.: 22
xiv	81 : 1174	Dia.: 26	xxiii	17 : 1193	Dia.: 30
xiv	84 : 1176	Dia.: 26	xxiii	23 : 1261	Dia.: 27
xiv	128 : 1183	Dia.: 24	xxiii	25 : 1147	Dia.: 27
xix	6 : 3330	Dia.: 24	xxiii	25 : 1148	Dia.: 26
xxi	22 : 1185	Dia.: 28	xxiii	25 : 1149	Dia.: 26
xxi	32 : 1143	Dia.: 26			

Small: 10-20 cms dia.

xiv	9 : 1401	Dia.: 12	xxiii	10 : 1339	Dia.: 17
xiv	11 : 1351	Dia.: 16	xxiii	14 : 1341	Dia.: 20
xiv	119 : 1356	Dia.: 18	xxiii	23 : 1359	Dia.: 15
xxii	8 : 1333	Dia.: 19	xxiii	39 : 1360	Dia.: 19

xxii 33 & xxiii 39: latest first century B.C. (possibly intrusive in xxiii 39).
xiv 9, 81, xxii 11, 13, xxiii 10: second half first century A.D.

Other fabrics

Grey core with orange/yellow margins, black surface; T1, quartz and limestone, also occasional grains of grog 1 mm +.

xiv 92 : 1178 Dia.: 29

Red/brown, grey core, black rim; T3, quartz, mica and limestone; micaceous surface.

xxii 13 : 1240 Dia.: 27

Grey/brown (burnt?); T3, quartz and black vitreous grains.

xxii 33 : 1190 Dia.: 27

Dark grey core, dull brown margins, black rim; T3, quartz, black vitreous grains and grog, flakes of golden mica on surface.

xxiii 39 : 1197 Dia.: 27

100 Mostly small fragments; small out-turned lip.

Fabric:

Orange/brown or red/brown; 2 examples with cream outer surface; 4 examples have a knife trimmed outer surface except for a strip near the rim; 8 examples have a cream edge to the rim; inclusions: see profiles, p.95.

v	2 : 3356		vid	1 : 3358
vib	3 : 3357		vid	1 : 3364
vic	1 : 3362		xxviii	5 : 3363

Large: 30-40 cms dia.

xiv 128 : 1060 Dia.: 38

Medium: 20-30 cms dia.

via	1 : 3359	Dia.: 27	xiv	11 : 1200	Dia.: 24
vic	1 : 3361	Dia.: 25	xiv	11 : 1201	Dia.: 25

xiv	81 : 1218	Dia.: 22	xxiii	21 : 1255	Dia.: 28
xiv	84 : 1225	Dia.: 21	xxiii	21 : 1257	Dia.: 27
xiv	119 : 1227	Dia.: 24	xxiii	23 : 1220	Dia.: 24
xiv	120 : 1228	Dia.: 22	xxiii	25 : 1221	Dia.: 30
xiv	128 : 1230	Dia.: 25	xxiii	25 : 1264	Dia.: 30
xxii	8 : 1237	Dia.: 26	xxiii	25 : 1267	Dia.: 26
xxii	14 : 1242	Dia.: 30	xxiii	25 : 1268	Dia.: 29
xxii	17 : 1248	Dia.: 22	xxiii	25 : 1272	Dia.: 30
xxiii	17 : 1246	Dia.: 24	xxiii	25 : 1273	Dia.: 26
xxiii	21 : 1254	Dia.: 24	xxiii	40 : 1270	Dia.: 29

Small 10–20 cms dia.

xiv	127 : 1369	Dia.: 19	xxiii	21 : 1375	Dia.: 20
xxi	22 : 1370	Dia.: 15	xxiii	21 : 1376	Dia.: 19
xxiii	17 : 1372	Dia.: 18	xxiii	21 : 1377	Dia.: 14
xxiii	19 : 1374	Dia.: 18	xxiii	21 : 1380	Dia.: 19
xxiii	21 : 1343	Dia.: 19	xxiii	23 : 1381	Dia.: 20
xxiii	21 : 1345	Dia.: 16	xxiii	26 : 1383	Dia.: 17

xxii 8: latest first century B.C.

xiv 81: second half first century A.D.

101 Slightly domed lid with rim slightly thickened and lightly moulded on outer face.**Fabrics:**

- Mostly orange/brown, sometimes red/brown; occasionally cream outer surface; rim often blackened; sometimes cream lip to rim; inclusions: see profiles, p.95.
- Mostly orange/yellow; often with deep black lip to rim; 3 examples have a knife trimmed outer surface except for strip near rim; inclusions: T3, quartz and red iron, occasionally limestone.

Fabric a:

iii	2 : 3367	via	2 : 3377
iii	12 : 3396	via	2 : 3379
iiia	1 : 3397	vib	7 : 3375
v	2 : 3366	vic	1 : 3412
v	2 : 3368	vic	2 : 3409
v	2 : 3373	xix	6 : 3378
v	2 : 3385	xix	8 : 3376
v	2 : 3408	xix	8 : 3388
v	11 : 3410		

Large: 30–40 cms dia.

xiv	128 : 1058	Dia.: 38
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Medium: 20–30 cms dia.

iii	6 : 3332	Dia.: 22	xv	16 : 3403	Dia.: 29
iv	8 : 3389	Dia.: 25	xvii	10 : 3386	Dia.: 21
vid	1 : 3372	Dia.: 24	xix	6 : 3342	Dia.: 25
viii	1 : 3405	Dia.: 27	xix	6 : 3390	Dia.: 25
xiv	61 : 1157	Dia.: 28	xix	8 : 3411	Dia.: 24
xiv	119 : 1181	Dia.: 28			

Small: 10-20 cms dia.

iv	21 : 3328	Dia.: 19	xv	12 : 4192	Dia.: 19
vib	7 : 3425	Dia.: 19	xix	2 : 3418	Dia.: 19
xiv	11 : 1352	Dia.: 20	xix	6 : 3304	Dia.: 14

xiv 61: first century B.C. (? intrusive).
 iii 2, 6, 12: second half first century A.D.
 iiiia, 1, 6: second half first century A.D.
 iv 8, 21: second half first century A.D.

Fabric b:

i	46 : 3430		via	2 : 3416	
i	168 : 3365		vib	2 : 3419	
v	2 : 3380		xix	6 : 3406	

Large 30-40 cms dia.

ia	2 : 3395	Dia.: 34
xxiii	17 : 1059	Dia.: 35

Medium: 20-30 cms dia.

S 14 1b	: 3374	Dia.: 23	xiv	122 : 3324	Dia.: 22
iiib	5 : 3341	Dia.: 26	xix	6 : 3400	Dia.: 26
iv	4 : 3394	Dia.: 23	xix	6 : 3401	Dia.: 24
v	2 : 3326	Dia.: 20	xix	6 : 3414	Dia.: 25
vib	6 : 3392	Dia.: 26	xix	8 : 3415	Dia.: 25
vid	1 : 3371	Dia.: 25	xix	8 : 3417	Dia.: 26
xiv	10 : 1155	Dia.: 30	xxii	8 : 1187	Dia.: 23
xiv	11 : 1152	Dia.: 22	xxiii	25 : 1263	Dia.: 30

Small: 10-20 cms dia.

xv	15 : 3420	Dia.: 17
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xxii 8: latest first century B.C.
 i 46: first half first century A.D.
 iiib 5, iv 4: second half first century A.D.

102 Large domed lids with wall much thickened towards rim.

Fabrics:

- a) (3402, 4091) Orange/brown, darker surface; T3, quartz and limestone.
 b) Orange/yellow or orange/red, deep black edge to rim; T3, quartz, red iron and occasional limestone.

vib	6 : 3391	Dia.: 34	xix	6 : 3399	
xv	19 : 3402	Dia.: 31	xxiii	25 : 4091	Dia.: 35
xix	6 : 3398	Dia.: 26	xxvi	42 : 3384	Dia.: 34

xv 19: possibly as early as first century B.C.
 xxiii 25: late second century A.D.
 xix 6: third century A.D.
 xxvi 42: ? third/fourth century A.D.
 vib 6: fourth century A.D.

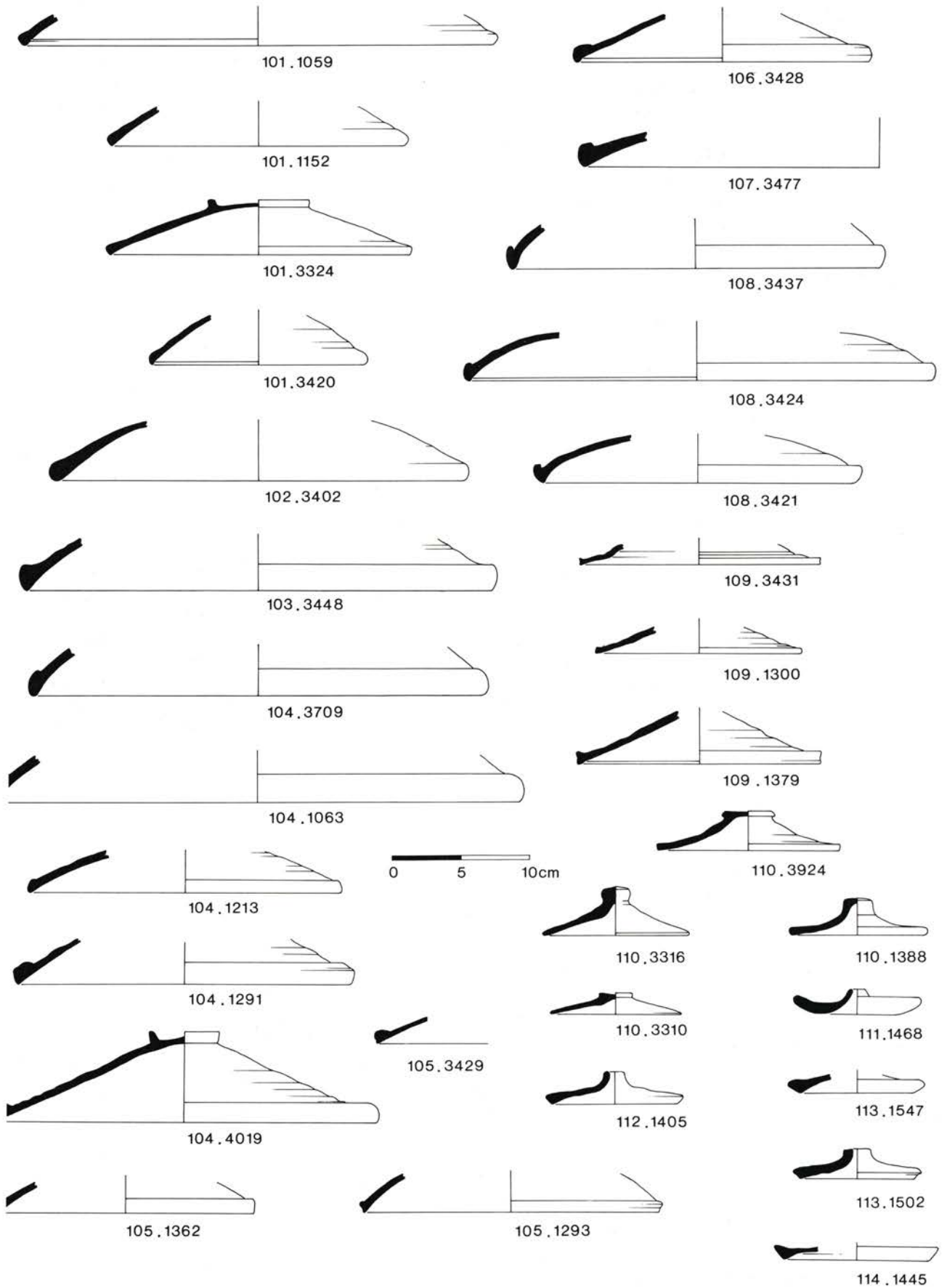


FIG.41 Coarse Pottery Types 101-114 (Scale 1:4)

103 Domed lid, thickened and moulded rim with vertical outer face.**Fabrics:**

- a) (3393, 3516) Orange/brown, cream edge to rim; T2, mostly rounded quartz.
 b) Orange/yellow, burnished rim; T3, quartz, red iron and occasional limestone.

via	1 : 3369		xv	15 : 3516	Dia.: 29
via	2 : 3404		xv	26 : 3393	Dia.: 30
vib	6 : 3387		xxiv	43 : 3448	Dia.: 35
vib	6 : 3413	Dia.: 29			

via 1: late third century A.D.

vib 6: fourth century A.D.

xxiv 43: third/fourth century A.D.

104 Slightly domed lid with moulding of semi-circular section at rim.

Orange/brown or red/brown, less often mid brown or grey; surface sometimes banded orange/brown and dark grey; outer surface often burnished up to a narrow reserved strip near the rim; outer face of rim often cream; inclusions: see profiles, p.95.

S 14 2a	: 3453		vib	7 : 3463	
S 14 1b	: 3470		vib	7 : 3476	
D 21 6	: 3471		vib	7 : 3501	
S 14 2a	: 3494		vid	1 : 3481	
S 14 2a	: 3514		vid	5 : 3500	
i	1 : 3536		vid	6 : 3465	
i	168 : 3468		vii	3 : 3435	
iii	5 : 3542		xv	15 : 3482	
iii	14 : 3488		xv	16 : 3528	
iv	4 : 3458		xv	24 : 3444	
iv	4 : 3485		xv	24 : 3464	
iv	4 : 3538		xv	24 : 3511	
v	2 : 3443		xv	26 : 3459	
v	2 : 3486		xvii	6 : 3442	
vib	2 : 3451		xvii	9 : 3530	
vib	2 : 3466		xvii	11 : 3541	
vib	2 : 3484		xix	6 : 3436	
vib	2 : 3489		xix	6 : 3467	
vib	6 : 3472		xix	6 : 3526	
vib	6 : 3487		xix	6 : 3531	
vib	6 : 3529		xix	8 : 3480	
vib	7 : 3454				

Large: 30-40 cms dia.

S 14 2a	: 3426	Dia.: 31	xv	16 : 3519	Dia.: 35
ia	2 : 3523	Dia.: 31	xv	16 : 3524	Dia.: 33
via	1 : 3709	Dia.: 34	xv	17 : 3496	Dia.: 33
xiv	6 : 1061	Dia.: 39	xv	26 : 3517	Dia.: 32
xiv	84 : 1062	Dia.: 32	xxiii	26 : 1063	Dia.: 39
xv	12 : 3510	Dia.: 31	xxvii	5 : 3498	Dia.: 32

Medium: 20-30 cms dia.

S 14 1a	: 3491	Dia.: 24	via	1 : 3515	Dia.: 25
S 14 1b	: 3525	Dia.: 25	via	2 : 3440	Dia.: 21
S 14 1a	: 3532	Dia.: 24	vib	2 : 3479	Dia.: 25
i	1 : 3535	Dia.: 25	vib	2 : 3490	Dia.: 24
iv	4 : 3449	Dia.: 25	vib	2 : 3503	Dia.: 30

vib	4 : 4022	Dia.: 23	xix	6 : 3455	Dia.: 28
vib	6 : 3473	Dia.: 26	xix	6 : 3499	Dia.: 22
vib	7 : 3438	Dia.: 25	xix	6 : 3521	Dia.: 30
vib	7 : 3460	Dia.: 27	xix	6 : 4020	Dia.: 21
vib	7 : 3461	Dia.: 28	xix	8 : 3469	Dia.: 21
vib	7 : 3478	Dia.: 26	xix	8 : 3495	Dia.: 25
vib	7 : 3492	Dia.: 29	xix	8 : 3504	Dia.: 20
vib	7 : 3502	Dia.: 23	xix	8 : 3518	Dia.: 30
vib	7 : 3508	Dia.: 24	xix	8 : 3527	Dia.: 28
vib	7 : 3513	Dia.: 24	xxi	14 : 1232	Dia.: 25
xiv	6 : 3445	Dia.: 24	xxi	21 : 1233	Dia.: 22
xiv	11 : 1198	Dia.: 22	xxi	21 : 1234	Dia.: 26
xiv	11 : 1199	Dia.: 27	xxi	22 : 1235	Dia.: 24
xiv	11 : 1202	Dia.: 28	xxi	22 : 1285	Dia.: 25
xiv	11 : 1203	Dia.: 29	xxii	8 : 1238	Dia.: 28
xiv	11 : 1204	Dia.: 25	xxii	14 : 1241	Dia.: 27
xiv	11 : 1205	Dia.: 28	xxii	36 : 1269	Dia.: 21
xiv	11 : 1206	Dia.: 23	xxiii	10 : 1243	Dia.: 28
xiv	11 : 1207	Dia.: 27	xxiii	10 : 1244	Dia.: 26
xiv	11 : 1209	Dia.: 25	xxiii	17 : 1245	Dia.: 23
xiv	12 : 1287	Dia.: 22	xxiii	17 : 1247	Dia.: 29
xiv	14 : 1210	Dia.: 29	xxiii	21 : 1249	Dia.: 24
xiv	25 : 1211	Dia.: 24	xxiii	21 : 1250	Dia.: 23
xiv	25 : 1212	Dia.: 29	xxiii	21 : 1251	Dia.: 29
xiv	26 : 1213	Dia.: 23	xxiii	21 : 1252	Dia.: 30
xiv	26 : 1214	Dia.: 28	xxiii	21 : 1253	Dia.: 24
xiv	70 : 1215	Dia.: 30	xxiii	21 : 1256	Dia.: 22
xiv	71 : 1216	Dia.: 21	xxiii	22 : 1258	Dia.: 26
xiv	84 : 1219	Dia.: 30	xxiii	22 : 1259	Dia.: 28
xiv	84 : 1222	Dia.: 27	xxiii	23 : 1260	Dia.: 23
xiv	84 : 1223	Dia.: 29	xxiii	23 : 1262	Dia.: 26
xiv	84 : 1224	Dia.: 24	xxiii	25 : 1265	Dia.: 28
xiv	84 : 1286	Dia.: 22	xxiii	25 : 1266	Dia.: 25
xiv	84 : 1290	Dia.: 29	xxiii	25 : 1274	Dia.: 27
xiv	84 : 1291	Dia.: 25	xxiii	25 : 1275	Dia.: 29
xiv	84 : 1292	Dia.: 24	xxiii	25 : 1276	Dia.: 30
xiv	121 : 4019	Dia.: 27.5	xxiii	25 : 1278	Dia.: 31
xiv	127 : 1229	Dia.: 25	xxiii	25 : 1280	Dia.: 30
xiv	138 : 1231	Dia.: 26	xxiii	25 : 1281	Dia.: 30
xv	12 : 3505	Dia.: 28	xxiii	25 : 1284	Dia.: 29
xv	15 : 3506	Dia.: 21	xxiii	26 : 1277	Dia.: 29
xv	16 : 3441	Dia.: 26	xxiii	40 : 1279	Dia.: 25
xv	16 : 3457	Dia.: 28	xxiii	40 : 1283	Dia.: 21
xv	16 : 3507	Dia.: 27	xxiv	67a : 1288	Dia.: 28
xv	16 : 3534	Dia.: 24	xxv	2 : 4102	Dia.: 25
xv	26 : 3522	Dia.: 26	xxv	5 : 3462	Dia.: 23
xv	26 : 3540	Dia.: 26	xxv	5 : 3493	Dia.: 24
xv	30 : 3537	Dia.: 27	xxv	5 : 3509	Dia.: 26
xvii	10 : 3512	Dia.: 29	xxvi	42 : 3450	Dia.: 25
xix	6 : 3452	Dia.: 22	xxvii	5 : 3497	Dia.: 27

Small: 10–20 cms dia.

xiv	11: 1363	Dia.: 20	xxiii	17 : 1373	Dia.: 16
xiv	11 : 1364	Dia.: 20	xxiii	21 : 1378	Dia.: 19
xiv	14 : 1365	Dia.: 20	xxiii	25 : 1382	Dia.: 17
xiv	62 : 1366	Dia.: 18			

xxi 14: second half second century B.C. (intrusive).

xiv 70, 71; late first century B.C. (intrusive).

xxii 8: latest first century B.C. (intrusive).

xiv 6, xxi 21: first half first century A.D. (? intrusive).

ia 2, iii 5, iv 4, vii 6, xxii 14, 36, xxiii 10: second half of first century A.D.
 S 14, xv 12, xiv 11, 12, xxi 22, xxiii 21, 22, 23, 25: second half of second century A.D.
 xix 6, xxiii 26: early third century A.D.
 See FIG. 42.

105 Variant of 104.

Orange/yellow (1 example) orange/brown or red/brown (1 example), sometimes with burnished (1 example) or knife trimmed (1 example) outer surface up to a reserved strip next to the rim; T1, 2 & 3 (1,3,2 examples), quartz and limestone.

xiv	11 : 1362	Dia.: 19	xiv	120 : 1293	Dia.: 22
xiv	84 : 1367	Dia.: 15	xv	16 : 3429	
xiv	84 : 1368	Dia.: 16	xv	26 : 3533	Dia.: 26

xiv 11: second half second century A.D.

106 Variant of 104.

Orange/brown; T2, limestone and quartz.

xv	16 : 3428	Dia.: 22
xxiii	10 : 1371	Dia.: 15

xxiii 10: second half first century A.D.

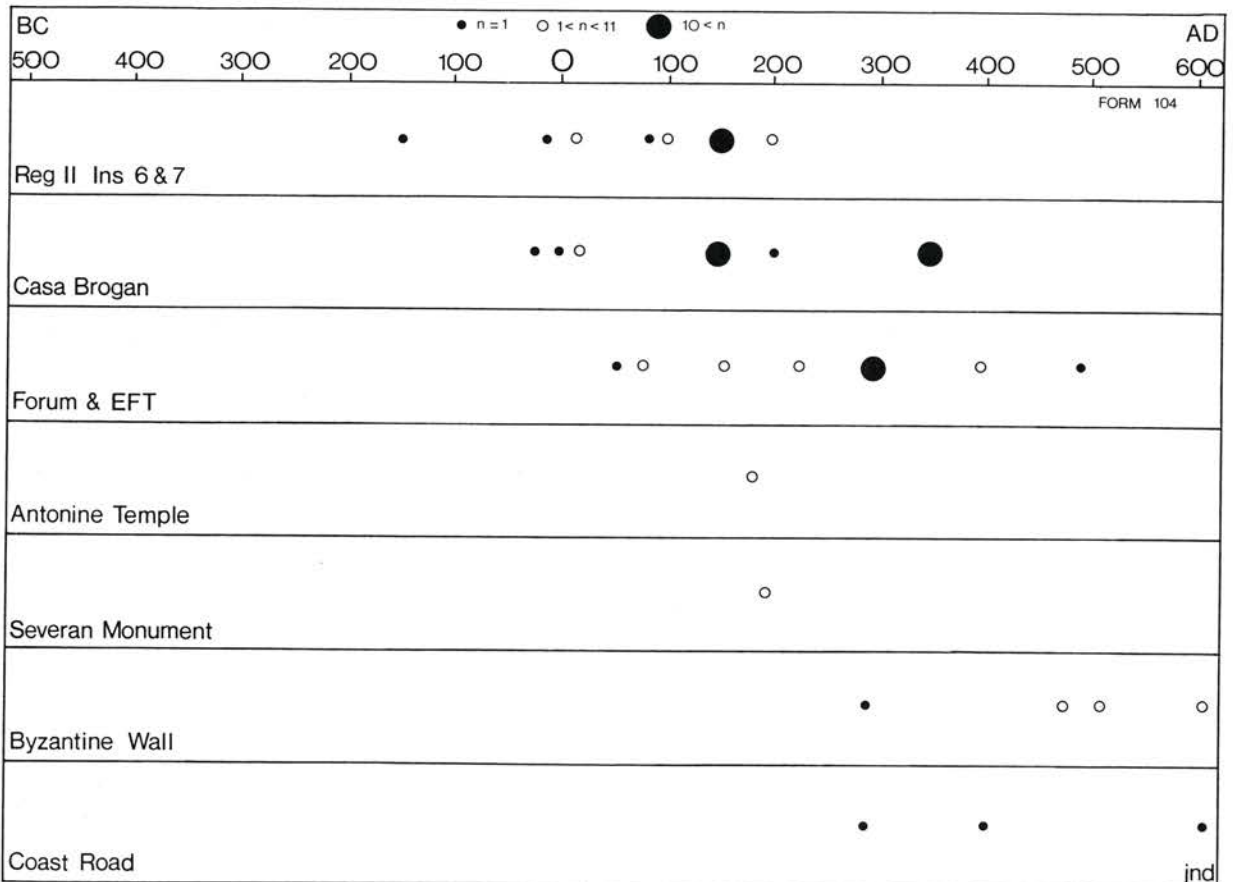


FIG.42 The Occurrence of Type 104 in the Site Stratigraphy

107 Variant of 104.

Orange/yellow, burnished outer surface; T3, quartz, red iron and limestone.

ivb 7 : 3477 Dia.: 44

108 Domed lid, moulded rim with vertical outer face.

Mostly orange/brown, sometimes red/brown, often with dark maroon/brown or grey core; surface sometimes banded orange/brown and grey, sometimes knife trimmed up to reserved strip near rim; outer face of rim sometimes cream; T1 2, 3 (1,10,1 examples), quartz and limestone.

S 14 1b	: 3423	Dia.: 25	xv	16 : 3428	Dia.: 22
iiib	1 : 3437	Dia.: 28	xix	6 : 3421	Dia.: 24
iiib	1 : 3447	Dia.: 32	xix	6 : 3427	
xv	15 : 3422	Dia.: 32	xix	6 : 4023	Dia.: 27
xv	15 : 3543	Dia.: 26	xix	6 : 4024	Dia.: 23
xv	16 : 3424	Dia.: 34	xxv	5 : 3439	Dia.: 26

iiib 1: late first century A.D.

S 14; late second century A.D.

xix 6: early third century A.D.

109 Variant.

Orange/brown; T2, 3 (4,2 examples), mostly quartz, some limestone.

xv	15 : 3431	Dia.: 18	xxi	22 : 1304	Dia.: 13
xxi	18 : 1300	Dia.: 15	xxii	17 : 1336	Dia.: 15
xxi	22 : 4033	Dia.: 14	xxiii	21 : 1379	Dia.: 18
xxi	22 : 4035		xxiii	40 : 1348	Dia.: 15

xxi 18: early first century A.D.

xxi 22, xxiii 21: second half second century A.D.

SMALL LIDS (FIGS 41, 43)

It is probable that most of these were used as lids or stoppers for amphorae. They have been divided into different types on the basis of rim shape, although their general shape is very similar. Types 114 and 115 are particularly distinctive in having the centre of the vessel recessed below the horizontal plane of the upper edge of the rim, which gives the impression that the whole lid has been vertically impressed. If one accepts that it is likely that lids were not intended to project above the level of the rims of their amphorae, then the shape of 114 and 115 could imply that the type into which they fitted had quite a short mouth, or at any rate had a lid-locator which was restricted in some way in vertical extent.

The criterion for distinguishing between types 114 and 115, as well as between 112 and 113, is the presence of a locating lip on the underside of the rim. This is not absolutely clear-cut and it is, in fact, difficult to decide the point at which the feature actually becomes significant. Thus, these types represent end-members of a continuous series rather than typical examples of two discrete groups.

Fabric descriptions have been given for each type. From these and from the inclusion profiles on p.95, it can be seen that the fabrics are all quite similar. The type of inclusions in the fabric certainly suggests a regional (ie north African) origin, and a local (ie Tripolitanian/Tunisian) origin seems likely from general considerations. The main point of note is the high limestone content compared with most of the rest of the coarseware from the site.

The earliest contexts in which each type occurs have been noted. Apart from types 120 and 121

(which may not have been connected with amphorae) and 122-130 (miscellaneous) the initial date for all these lids is in the first century B.C. or earlier, although they are also found in later contexts all over the site. From the distribution of types in the contexts (particularly in the early ones) it is not possible to detail the chronological development of individual types beyond this, though the occurrence of examples of 117 in early levels in Regio II Insula 6 may be significant.

The early emergence of these types is interesting, though the implications depend very much on the degree of residual occurrence in the later levels. On the one hand, continuing production of these lids well into the Roman period would add another element to the growing body of evidence for the continuity of the Tripolitanian olive oil industry from a point considerably prior to the development of the area as a province of the Roman empire. On the other hand, regarding all the later occurrences as residual would imply a fundamental change in storage technology (ie that some other methods of stopping amphorae were being used in the later period).

110 Plain, more or less horizontal rim.

Orange/brown, grey/brown or mid brown, sometimes with darker core, several examples with cream surface; inclusions: see profiles, p.95; in the 8 examples where handles survived, ratio of solid to pierced was 5:3.

iii	5 : 3548
iii	13 : 3544
v	2 : 3546

Small: 10-20 cms dia.

i	77 : 3555	Dia.: 11.5	xiv	61 : 1384	Dia.: 11
i	99 : 4039	Dia.: 11	xiv	62 : 1385	Dia.: 12
i	102 : 3554	Dia.: 11	xiv	81 : 1393	Dia.: 11
i	119 : 3557	Dia.: 11.5	xix	6 : 3924	Dia.: 12
iii	3 : 3549	Dia.: 11.5	xix	8 : 3552	Dia.: 11
v	2 : 3550	Dia.: 10.5	xxii	7 : 4038	Dia.: 11
xiv	9 : 1394	Dia.: 11	xxiii	40 : 1455	Dia.: 10
xiv	50 : 1386	Dia.: 11	xxvii	2 : 3316	Dia.: 10.5

Very small: up to 10 cms dia.

i	35 : 3553	Dia.: 10	xxi	18 : 1460	Dia.: 10
i	160 : 3545	Dia.: 9.5	xxi	19 : 1462	Dia.: 9
iiib	5 : 3547	Dia.: 9.5	xxii	17 : 1457	Dia.: 9
v	2 : 3556	Dia.: 9.5	xxii	17 : 1458	Dia.: 10
xiv	47 : 1461	Dia.: 9	xxiii	17 : 1459	Dia.: 9
xiv	81 : 1463	Dia.: 10	xxiii	39 : 1388	Dia.: 9
xiv	81 : 1464	Dia.: 9	xxiv	67 : 1456	Dia.: 8
xix	6 : 3551	Dia.: 9.5	xxvi	11 : 3310	Dia.: 9.5

i 102, xiv 47, 50, 61, xxii 7: first century B.C.

111 Plain, slightly upturned rim.

Orange/brown or grey/brown, greenish/cream surface; T3 & 4, quartz and limestone.

iv	16 : 3560		xviii	6 : 3558	Dia.: 10
viii	1 : 3559		xxii	33 : 1390	Dia.: 11
xiv	35 : 1468	Dia.: 9, pierced handle			

xiv 35, xxii 33: first century B.C.

112 Short flange with angled face.

Dark grey or grey/brown, dirty cream or greenish cream surface; inclusions: see profiles, p.95. In the 5 examples where handles survived, all were pierced.

iiib 5 : 3565

Small: 10–20 cms dia.

xiv	34 : 1440	Dia.: 11	xiv	128 : 1402	Dia.: 11
xiv	70 : 1403	Dia.: 11	xxi	17 : 1396	Dia.: 10
xiv	71 : 1419	Dia.: 11	xxi	17 : 1421	Dia.: 12
xiv	109 : 1405	Dia.: 10	xxi	21 : 1389	Dia.: 11

Very small: up to 10 cms dia.

i	3 : 3561	Dia.: 9.5	xiv	70 : 1483	Dia.: 10
i	36 : 3563	Dia.: 9.5	xiv	100 : 1469	Dia.: 9
i	36 : 3566	Dia.: 9.5	xiv	127 : 1404	Dia.: 10
i	46 : 3569	Dia.: 9.5	xxi	14 : 1485	Dia.: 10
i	56 : 3567	Dia.: 8.5	xxi	17 : 1488	Dia.: 10
xiv	22 : 1470	Dia.: 10	xxi	18 : 1387	Dia.: 9
xiv	25 : 1471	Dia.: 10	xxi	18 : 1491	Dia.: 9
xiv	30 : 1472	Dia.: 9	xxi	18 : 1493	Dia.: 10
xiv	34 : 1473	Dia.: 10	xxi	20 : 1497	Dia.: 10
xiv	34 : 1474	Dia.: 9	xxi	20 : 1498	Dia.: 9
xiv	40 : 1475	Dia.: 10	xxi	52 : 1501	Dia.: 9
xiv	60 : 1480	Dia.: 9			

i 56: early second century B.C.

xiv 30: second half of second century B.C.

113 Short flange with angled face, small locating lip on underside

Mostly dark grey, sometimes orange/brown or red/brown, often with brown or red/brown core, surface mostly cream; inclusions: see profiles, p.95. In the four examples where handles survived, all were pierced.

i 46 : 3570
i 66 : 3571

Small: 10–20 cms dia.

iv	10 : 3572	Dia.: 10.5	xxi	17 : 1397	Dia.: 11
xiv	70 : 1434	Dia.: 11	xxi	17 : 1413	Dia.: 11
xxi	14 : 1398	Dia.: 11	xxi	21 : 1446	Dia.: 11

Very small: up to 10 cms dia.

xiv	6 : 1438	Dia.: 10	xxi	18 : 4144	Dia.: 10
xiv	110 : 1484	Dia.: 9	xxi	20 : 1546	Dia.: 9
xxi	17 : 1490	Dia.: 10	xxi	21 : 1547	Dia.: 10
xxi	18 : 1429	Dia.: 10	xxi	22 : 1449	Dia.: 10
xxi	18 : 1431	Dia.: 10	xxi	22 : 1499	Dia.: 10
xxi	18 : 1444	Dia.: 10	xxi	22 : 1500	Dia.: 9
xxi	18 : 1489	Dia.: 9	xxii	8 : 1502	Dia.: 9
xxi	18 : 1494	Dia.: 9	xxiii	11 : 1504	Dia.: 10
xxi	18 : 1495	Dia.: 9			

xiv 110; possibly as early as early second century B.C.

xxi 14, 17; second half of second century B.C.

114 Lid with recessed centre, short flange with angled face.

Red/brown to grey, mostly with cream surface; inclusions: see profiles, p.95.

Small: 10-20 cms dia.

i	36 : 3562	Dia.: 11
xxi	18 : 1395	Dia.: 11
xxi	18 : 1445	Dia.: 12

Very small: up to 10 cms dia.

i	96 : 3564	Dia.: 9.5	xxi	14 : 1486	Dia.: 10, pierced handle
ivb	9 : 3568	Dia.: 10	xxi	17 : 1487	Dia.: 10
xiv	70 : 1482	Dia.: 9	xxi	18 : 1496	Dia.: 10

i 36: possibly as early as early second century B.C.

xxi 14, 17: second half of second century B.C.

115 Lid with recessed centre; short flange, angled face, locating lip on underside.

Grey, orange/brown or red/brown, with cream surface; inclusions: see profiles, p.95.

vic	4 : 3576
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Small: 10-20 cms dia.

i	36 : 3573	Dia.: 12
xxi	18 : 1492	Dia.: 10
xxi	21 : 1547	Dia.: 10

Very small: up to 10 cms dia.

i	35 : 3575	Dia.: 9.5	ivb	6 : 3574	Dia.: 9.5
ia	2 : 3577	Dia.: 9	xxii	5 : 1520	Dia.: 9

i 36: possibly as early as second century B.C.

xxii 5: second century B.C.

116 Short flange with angled face, rebated at rear to form locating lip.**Fabric:**

a) Orange/brown to dark grey; T2, 3, 4 (2,2,1 examples), quartz and limestone.

b) Pale brown or pale orange; T1, quartz and red iron.

Fabric a:

i	36 : 3615		xiv	22 : 1507	Dia.: 10
i	36 : 3616		xxi	17 : 1530	Dia.: 10
i	44 : 3620		xxi	17 : 1532	Dia.: 9
i	56 : 3617		xxi	22 : 1548	Dia.: 10
ia	3 : 3618		xxii	35 : 1503	Dia.: 10
ivb	9 : 3619	Dia.: 11			

Fabric b:

xiv	21 : 1505	Dia.: 10
xiv	22 : 1506	Dia.: 10
xiv	47 : 1477	Dia.: 9

i 44: possibly as early as third century B.C.

xxi 17: second half of second century B.C.

117 Horizontal flange with locating lip on underside; in the 17 examples where handles survived, the ratio of pierced to solid was 16:1.

Fabrics:

- Pale brown through pinkish/brown, red/brown and orange/brown to dark brown and dark grey; the paler shades often have a darker core; surface usually cream or greenish cream; inclusions: see profiles, p.95.
- Pale grey/brown with cream surface; T1 & 2 (1,3 examples), quartz, mica and occasional red iron.
- Pale brown, orange/brown or dark grey; T1 & 3 (1,3 examples), quartz, red iron and occasional limestone.

Fabric a:

i	96 : 3612		iiib	5 : 3584
i	97 : 3591		iiib	5 : 3614
i	97 : 3607		ivb	1 : 3581
i	99 : 3582		v	2 : 3602
i	111 : 3603		vib	1 : 3610
iii	5 : 3613			

Small: 10–20 cms dia.

i	54 : 3580	Dia.: 11	xxi	9 : 1399	Dia.: 11
i	54 : 3588	Dia.: 10.5	xxi	14 : 1408	Dia.: 12
i	66 : 3592	Dia.: 11	xxi	14 : 1409	Dia.: 11
i	90 : 3585	Dia.: 10.5	xxi	14 : 1410	Dia.: 11
i	90 : 3593	Dia.: 10.5	xxi	14 : 1411	Dia.: 11
i	97 : 3594	Dia.: 11	xxi	17 : 1417	Dia.: 12
i	97 : 3600	Dia.: 10.5	xxi	17 : 1418	Dia.: 12
xiv	22 : 1441	Dia.: 11	xxi	17 : 1420	Dia.: 12
xiv	23 : 1433	Dia.: 11	xxi	17 : 1424	Dia.: 11
xiv	70 : 1436	Dia.: 12	xxi	18 : 1443	Dia.: 11
xv	11 : 3586	Dia.: 12	xxi	21 : 1432	Dia.: 11
xxi	4 : 1406	Dia.: 11			

Very small: up to 10 cms dia.

S 14 2c	: 3605	Dia.: 9.5	iv	4 : 3597	Dia.: 8.5
i	36 : 3598	Dia.: 9.5	vib	7 : 3599	Dia.: 9.5
i	54 : 3579	Dia.: 9	xiv	22 : 1508	Dia.: 9
i	56 : 3589	Dia.: 10	xiv	23 : 1509	Dia.: 10
i	90 : 3609	Dia.: 9.5	xiv	23 : 1510	Dia.: 10
i	97 : 3587	Dia.: 10	xiv	53 : 1513	Dia.: 9
i	97 : 3590	Dia.: 10	xiv	61 : 1514	Dia.: 9
i	102 : 3595	Dia.: 10	xiv	69 : 1515	Dia.: 9
i	102 : 3596	Dia.: 9	xiv	70 : 1439	Dia.: 10
ia	11 : 3578	Dia.: 10	xiv	70 : 1516	Dia.: 10
iii	2 : 3583	Dia.: 10.5	xiv	70 : 1517	Dia.: 9
iiic	2 : 3606	Dia.: 10	xix	2 : 3604	Dia.: 10

xxi	14 : 1412	Dia.: 10	xxi	18 : 1442	Dia.: 10
xxi	14 : 1521	Dia.: 9	xxi	18 : 1536	Dia.: 10
xxi	14 : 1523	Dia.: 9	xxi	18 : 1537	Dia.: 9
xxi	14 : 1525	Dia.: 10	xxi	18 : 1538	Dia.: 8
xxi	14 : 1526	Dia.: 10	xxi	18 : 1539	Dia.: 10
xxi	14 : 1527	Dia.: 9	xxi	18 : 1540	Dia.: 10
xxi	14 : 1528	Dia.: 10	xxi	18 : 1541	Dia.: 9
xxi	14 : 1529	Dia.: 10	xxi	18 : 1542	Dia.: 10
xxi	14 : 1552	Dia.: 10	xxi	18 : 1544	Dia.: 9
xxi	14 : 1553	Dia.: 9	xxi	18 : 1545	Dia.: 10
xxi	17 : 1415	Dia.: 10	xxi	18 : 1559	Dia.: 8
xxi	17 : 1533	Dia.: 10	xxi	18 : 1562	Dia.: 9
xxi	17 : 1534	Dia.: 9	xxi	18 : 1563	Dia.: 10
xxi	17 : 1554	Dia.: 9	xxi	18 : 1564	Dia.: 9
xxi	17 : 1555	Dia.: 9	xxi	21 : 1447	Dia.: 10
xxi	17 : 1557	Dia.: 10	xxi	21 : 1565	Dia.: 10
xxi	18 : 1426	Dia.: 10	xxii	33 : 1451	Dia.: 9
xxi	18 : 1427	Dia.: 10	xxii	35 : 1453	Dia.: 10
xxi	18 : 1428	Dia.: 10			

Fabric b:

xxi	17 : 1556	Dia.: 10	xxi	18 : 1430	Dia.: 9
xxi	17 : 1558	Dia.: 10	xxi	18 : 1535	Dia.: 9

Fabric c:

xiv	21 : 1437	Dia.: 9	xxi	17 : 1422	Dia.: 11
xxi	17 : 1414	Dia.: 11	xxi	18 : 1560	Dia.: 10

xxi 4: possibly as early as late fifth century B.C.

i 56: possibly as early as early second century B.C.

xxi 9: early second century B.C.

118 Plain, upturned flange with locating lip on under side.

Mostly grey or grey/brown, occasionally orange/brown, surface mostly cream; inclusions: see profiles, p.95. In the four examples where handles survived, all were pierced.

Small: 10-20 cms dia.

i	54 : 3601	Dia.: 10.5	xxi	17 : 1425	Dia.: 11
xiv	70 : 1435	Dia.: 11	xxii	8 : 1450	Dia.: 11
xxi	17 : 1416	Dia.: 11	xxii	35 : 1452	Dia.: 11
xxi	17 : 1423	Dia.: 11			

Very small: up to 10 cms dia.

xiv	47 : 1512	Dia.: 9	xxi	17 : 4159	Dia.: 10
xiv	62 : 1481	Dia.: 9	xxi	18 : 1543	Dia.: 9
xiv	117 : 1518	Dia.: 9	xxi	18 : 1561	Dia.: 10
xxi	14 : 1522	Dia.: 9	xxi	18 : 4143	Dia.: 10
xxi	14 : 1524	Dia.: 10	xxii	10 : 1550	Dia.: 10
xxi	17 : 1531	Dia.: 9	xxiii	39 : 1549	Dia.: 10

xxi 17: second half of second century B.C.

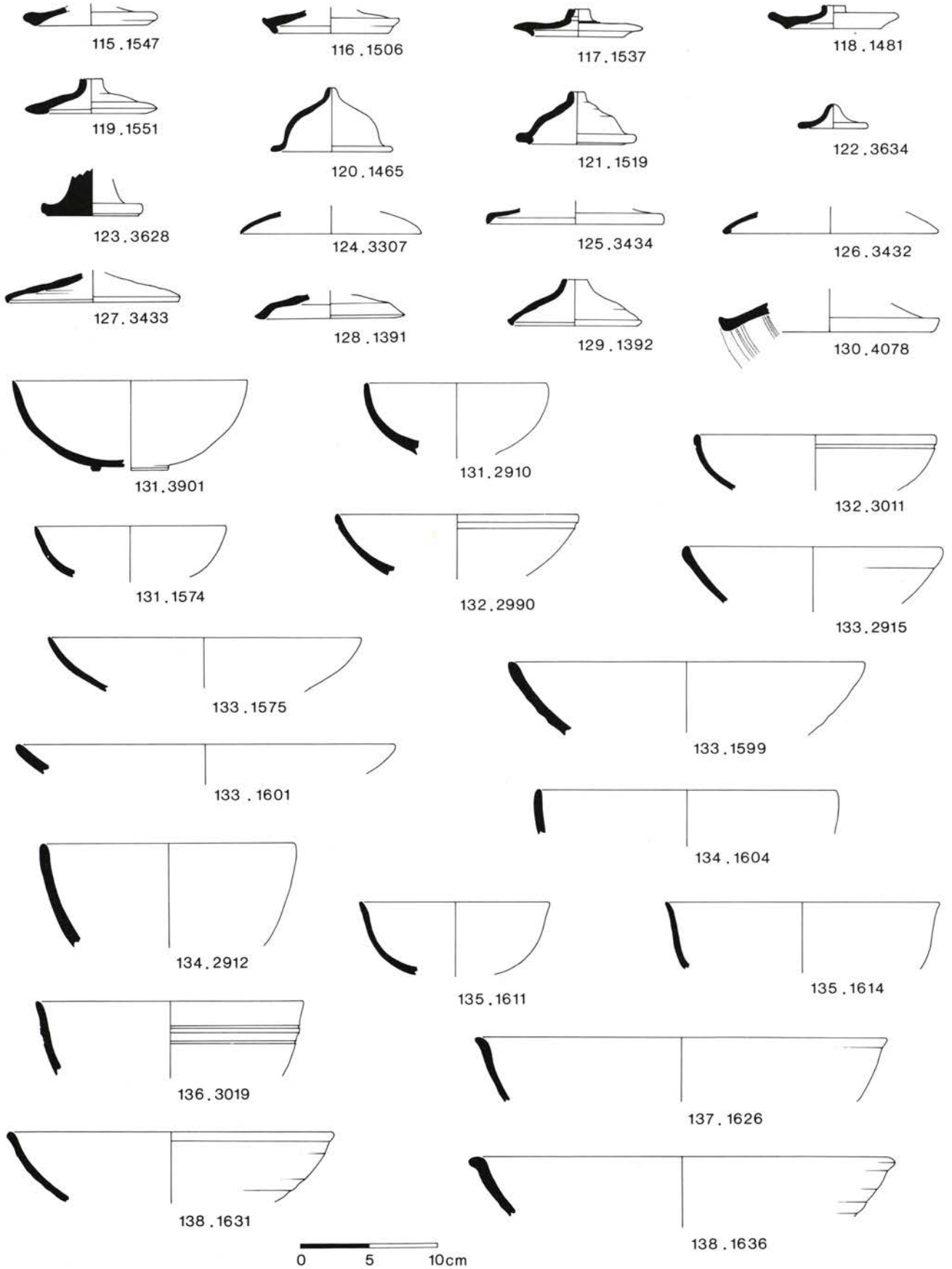


FIG.43 Coarse Pottery Types 115-138 (Scale 1:4)

119 Thick, horizontal flange with rebated inside edge on underside.

Pale yellow to mid brown, cream or pale yellow surface; T1, 2 & 3 (1,3,1 examples), quartz and limestone.

Small: 10-20 cms dia.

i	77 : 3622	Dia.: 10.5
xxi	22 : 1448	Dia.: 15
xxi	22 : 1448	Dia.: 15

Very small: up to 10 cms dia.

i	97 : 3624	Dia.: 9.5	xiv	35 : 1551	Dia.: 10, pierced handle
iii	3 : 3621	Dia.: 8.5	xxi	14 : 1407	Dia.: 10
iiib	5 : 3623	Dia.: 10	xxiii	3 : 1566	Dia.: 9
vib	8 : 3625	Dia.: 9.5			

xxiii 3: possibly as early as early second century B.C.

120 Tall, domed lid with plain horizontal flange.

Orange/brown, grey or brown surface, greenish/cream surface in 1 example; T2 & 3 (3,1 examples) quartz and limestone.

i	54 : 3626	Dia.: 9.5	xiv	9 : 1465	Dia.: 9
xiv	6 : 1467	Dia.: 9	xxi	22 : 1466	Dia.: 9

i 54: second half of first century B.C.

Pale orange; T2, quartz and rock fragments up to 1 mm dia.

iv	5 : 3627	Dia.: 8.5
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iv 5: late first century A.D.

121 Tall domed lid; plain flange rim with locating lip on underside.

Orange/brown; T3, limestone and quartz.

v	2 : 3632	Dia.: 9
xiv	120 : 1519	Dia.: 9
xiv	126 : 1454	Dia.: 10

xiv 120: first half of second century A.D.

Miscellaneous:

122 Orange/brown, cream surface; T2, quartz and limestone.

viii	2 : 3634	Dia.: 5
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viii 2: possibly as late as late sixth century.

123 Medium brown, greenish cream surface; T3, quartz, limestone and red iron.

i	54 : 3628	Dia.: 7.5
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i 54: first century B.C.

- 124** Orange/brown inner fabric, pale yellow outer fabric, pale brown surface; T1, quartz and limestone.
v 2 : 3307 Dia.: 13.5
v 2: late second century A.D.
- 125** Orange/brown, grey core, banded orange/brown – grey surface; T3, quartz and limestone.
i 47 : 3434 Dia.: 13
- 126** Pinkish/brown, dark grey core, brown surface; T3, angular quartz.
i 104 : 3432 Dia.: 16
i 104: possibly as early as late third century B.C.
- 127** Orange; T3, angular quartz.
i 157 : 3433 Dia.: 13
- 128** Pale yellow, grey core; T1, quartz.
xxi 5 : 1391 Dia.: 11
xxi 5: possibly as early as late fifth century B.C.
- 129** Grey, T3, limestone and quartz
xxi 5 : 1392
xxi 5: possibly as early as late fifth century B.C.
- 130** Pale orange, yellow/cream surface, dark red paint; T3, quartz, limestone and red iron.
xxvi 40 : 4078 Dia.: 16

SMALL AND MEDIUM BOWLS AND DISHES (FIGS 43–50)

- 131** Small Bowls with plain rim. There are similar forms in a number of Campana (Black Glaze) Wares, the most obvious parallel being Lamboglia form 31 in Campana A (Lamboglia 1952)

Fabrics:

- a) Mostly grey or grey brown, sometimes orange/brown or mid brown, often with a cream strip on the outside of the rim, occasionally whole outer surface cream; inclusions: see profiles, p.95.
- b) Pale orange, through orange/brown and mid brown to dark grey; almost always cream strip on outer rim; on dark grey examples there is often an orange/brown strip underlying the cream; T1 & 2 (9,2 examples), quartz and an assortment of other fine grains: red iron, black grains and mica.
- c) Pink, burnished pale orange surface, greenish/cream strip at outer rim; T3, quartz, limestone and red iron (1 example only).

Fabric a:

E 43 1	: 3901	Dia.: 17.5	xiv	62 : 1588	Dia.: 15
iii	3 : 2905	Dia.: 16	xiv	117 : 4194	Dia.: 15.5
iiib	5 : 2901		xix	8 : 2906	Dia.: 22
iiib	5 : 2903	Dia.: 17	xxi	21 : 1591	Dia.: 17
v	2 : 2900	Dia.: 16	xxii	7 : 1587	
v	3 : 2907	Dia.: 17	xxii	13 : 1583	Dia.: 14
v	8 : 2904		xxii	13 : 1586	
via	2 : 2899	Dia.: 18	xxii	33 : 1576	Dia.: 20
vib	2 : 2898	Dia.: 15	xxii	35 : 1594	
viii	2 : 2909		xxiii	17 : 1590	Dia.: 18
xiv	35 : 1577	Dia.: 16	xxiii	39 : 1592	Dia.: 17
xiv	49 : 1572	Dia.: 15	xxiii	39 : 1595	Dia.: 14
xiv	53 : 1573	Dia.: 15	xxv	24 : 4141	

Fabric b:

iii	9 : 2902	Dia.: 14	xiv	71 : 1585	Dia.: 15
vib	4 : 4047	Dia.: 13	xiv	81 : 1574	Dia.: 14
xiv	8a : 1582	Dia.: 21	xxi	21 : 1589	Dia.: 16
xiv	8a : 1584	Dia.: 18	xxi	21 : 1593	Dia.: 23
xiv	9 : 1581	Dia.: 14	xxii	7 : 1578	Dia.: 18
xiv	71 : 1579	Dia.: 15			

Fabric c:

i 95 : 2910 Dia.: 13.5

i 95: first century B.C.

xiv 35, 49, xxii 7, 33, xxv 24: second half of first century B.C.

See FIG. 44.

See also Fulford 1986a, fig.87, no. 110-111 (Pit 2, trench Y3-4, latest first century B.C.).

132 Similar to 131 but with single groove immediately below rim.

Pinkish/brown, pink to dark maroon surface; T2, quartz, limestone and black vitreous grains.

xix	6 : 2990	Dia.: 18
xix	6 : 3011	Dia.: 18

xix 6: third century A.D. (?residual).

133 Bowls with plain rim.

Grey or grey/brown, occasionally red/brown, most with cream strip at outer rim, some with cream or greenish/cream outer surface; inclusions: see profiles, p.96.

i	62 : 2915	Dia.: 19	xiv	9 : 1606	Dia.: 27
iii	9 : 2911	Dia.: 22	xiv	83 : 1575	Dia.: 23
iiib	5 : 2914	Dia.: 25	xxii	6 : 1600	
iiic	2 : 2916	Dia.: 26	xxii	8 : 1602	Dia.: 30
v	3 : 2913	Dia.: 19	xxii	35 : 1599	Dia.: 26
v	4 : 2917	Dia.: 27	xxii	35 : 1603	Dia.: 18
xiv	9 : 1605	Dia.: 30	xxiii	25 : 1601	Dia.: 28

xxii 6, 8: second half of first century B.C.

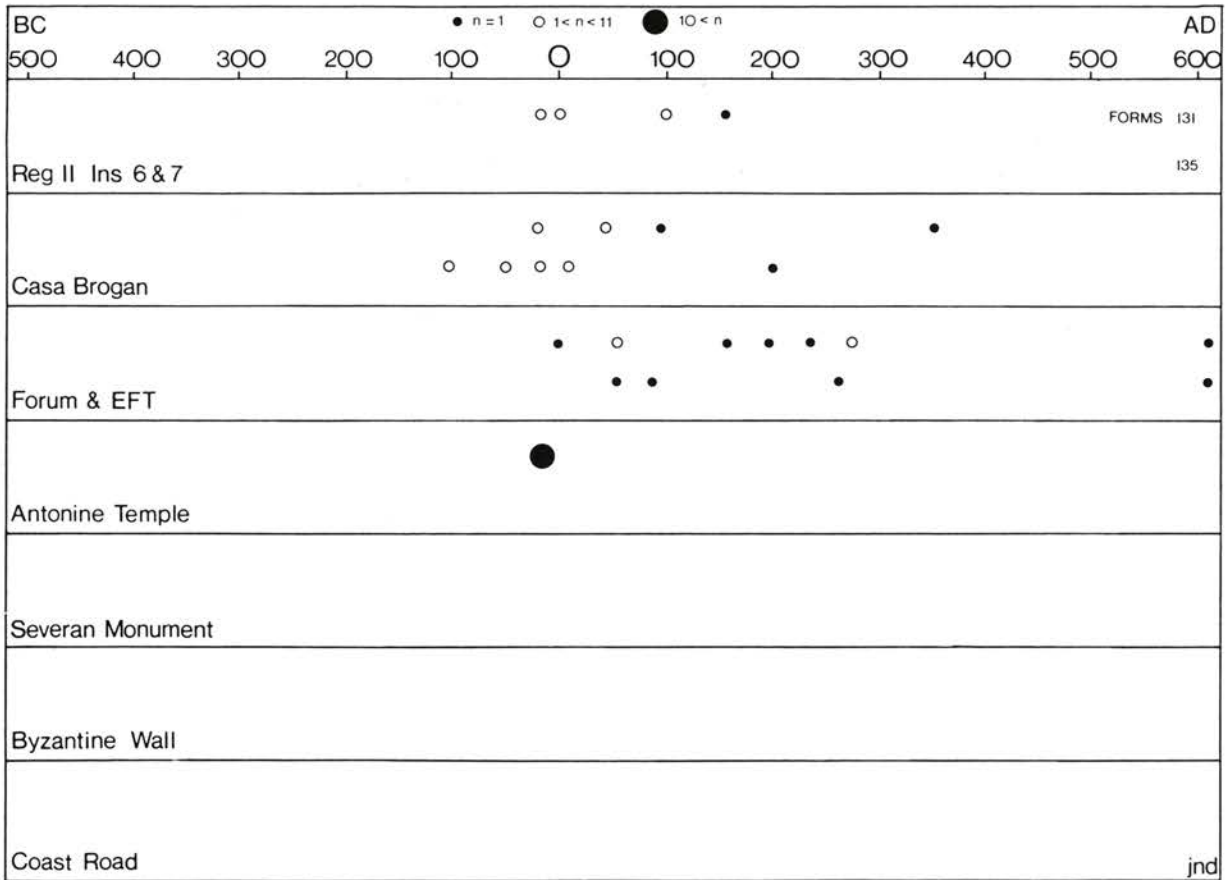


FIG.44 The Occurrence of Types 131 & 135 in the Site Stratigraphy

134 Bowls with plain rim.

Pale orange; T2, quartz, limestone and black grains.

xxiii 25 : 1604 Dia.: 22

Pink, burnished orange surface, cream strip at outer rim; T3, quartz and limestone.

i 95 : 2912 Dia.: 19

xxiii 35 : 4140 Dia.: 18

xxiii 35: possibly as early as fourth century B.C.

See also: Bourgeois 1982, fig.7, nos. 321-2 ("Céramique Mactaroise" associated with niveau 2 at Mactar, second-first century B.C.).

135 Small bowls, similar to 131 but with slightly outsplayed rim.**Fabrics:**

a) Mostly orange/brown, some red/brown and grey, cream strip on outer rim, some cream outer surface; inclusions: see profiles, p.96. This fabric corresponds to fabric a in 131.

i	15 : 2923	Dia.: 16	vic	4 : 2921	
i	39 : 2924	Dia.: 14	viii	22 : 2925	Dia.: 21
ia	1 : 2922		xiv	6 : 1611	Dia.: 14
iii	4 : 2918	Dia.: 17	xiv	35 : 1615	Dia.: 22
iv	5 : 2920	Dia.: 17	xiv	50 : 1612	Dia.: 14

xiv	61 : 1616	Dia.: 20	xxii	18 : 1619	Dia.: 26
xiv	61 : 1617	Dia.: 16	xxii	35 : 1609	Dia.: 26
xiv	70 : 1618	Dia.: 26	xxiii	39 : 1610	Dia.: 16
xiv	117 : 1614	Dia.: 20	xxiii	39 : 1620	
xiv	128 : 1608	Dia.: 21			

Other fabrics:

Grey, cream strip on outer rim; T3, quartz, limestone and red iron.

xiv 6 : 1613 Dia.: 16

Mid brown, cream strip on outer rim, narrow cream bands on inner surface; T1, quartz, red iron, black vitreous grains and limestone.

xxv 2 : 4048 Dia.: 11

xiv 35, 61, 50, 117: first century B.C.; see also FIG.44.

136 As 135 but with shallow moulding between narrow grooves on upper wall.

Orange/brown, cream surface; T1, quartz and limestone.

iv 10 : 3019 Dia.: 20

iv 10: late first century A.D. (?residual).

137 Bowl with outsplayed rim; as 135 but larger and with thicker walls.

Mostly grey or grey/brown, occasionally orange/brown, cream or white strip on outer rim; inclusions: see profiles, p.96.

iii	1 : 2928		xiv	128 : 1626	Dia.: 30
iii	4 : 2930	Dia.: 26	xxii	7 : 1624	Dia.: 30
v	3 : 2927	Dia.: 26	xxii	7 : 1625	Dia.: 25
v	9 : 2989	Dia.: 27	xxii	8 : 1627	Dia.: 28
vib	7 : 2931	Dia.: 27	xxii	15 : 1629	
xiv	70 : 1621	Dia.: 25	xxiii	39 : 1622	Dia.: 29
xiv	81 : 1623	Dia.: 29	xxiii	39 : 1628	Dia.: 30

xxii 7 & 8: latest first century B.C.

138 Bowl with outsplayed rim; as 137 but rim is more articulated as flange.**Fabrics:**

- Mostly grey/brown or dark grey, cream strip at outer rim; inclusions: see profiles, p.96.
- Pale brown, red/brown surface, cream strip on outer rim; T1, quartz, red iron and black grains.

Fabric a:

xiv	9 : 1635	Dia.: 30	xxii	8 : 4136	Dia.: 18
xiv	81 : 1632	Dia.: 25	xxii	15 : 1631	Dia.: 24
xiv	81 : 1636	Dia.: 31	xxii	17 : 1637	Dia.: 25
xiv	81 : 1638	Dia.: 30			

Fabric b:

xiv 8a : 1634 Dia.: 29

xxii 8: late first century B.C.

139 Deeper variant of 138.

Fabric as 138 fabric a.

xiv 8a : 1633 Dia.: 26

xiv 8a: mid first century A.D.

140 Bowl with short, flanged rim.

Fabric as 138 fabric a.

xxi 22 : 1639 Dia.: 32

xxi 22: second half of second century A.D. (? residual).

141 Distinctive bowl or dish with outplayed lower body, carination, inturned and thickened rim.**Fabrics:**

- a) Mostly orange/brown, some pale orange, pale or mid brown, cream outer surface; inclusions: see profiles, p.96.
- b) Orange/brown or pale grey; T3 & 4, quartz, limestone, black vitreous grains and a little red iron.

Fabric a:

iiib	4 : 2948		xxiii	20 : 1641	Dia.: 30
xiv	120 : 1648	Dia.: 30	xxiii	21 : 1643	Dia.: 28
xiv	128 : 1644	Dia.: 26	xxiii	21 : 1647	Dia.: 32
xiv	143 : 1646	Dia.: 28	xxiii	21 : 1649	Dia.: 30
xix	6 : 2947	Dia.: 27	xxiii	22 : 1653	Dia.: 29
xix	8 : 2946	Dia.: 24	xxiii	23 : 1640	Dia.: 26
xxi	21 : 1651	Dia.: 31	xxiii	25 : 1642	Dia.: 31
xxiii	11 : 1645	Dia.: 29	xxiii	25 : 1650	Dia.: 31
xxiii	11 : 1652	Dia.: 30	xxiii	27 : 1654	Dia.: 26

Fabric b:

iv	16 : 2949	
ivb	9 : 2950	Dia.: 24

iiib 4, iv 16: second half of first century A.D.

142 Small carinated bowls with outplayed upper wall and, in some examples, a moulding on the inside face. These (particularly no. 2937) bear a passing resemblance to Black Glaze Castulo Cups (see Gill 1986, no.29 and Sparkes and Talcott 1970, no.471 : late fifth – early fourth century B.C.); for a coarse ware example see *Byrsa ii*, fig.159, no.43 (Group A175, ?third century B.C.).

Red/brown, cream surface; T3, limestone, quartz and red iron.

i 77 : 2955 Dia.: 21

Mid grey, off-white surface; T3, limestone and quartz.

iiib 1 : 2954 Dia.: 19

Grey, dull brown core; T3 quartz and limestone.

xxiii 32 : 1661 Dia.: 22

Orange; T3, quartz and limestone.

i 4 : 2939 Dia.: 14

Pale orange, buff surface; T3, quartz, red iron and limestone.

i 56 : 2936

Orange/brown, cream surface; T3, quartz, limestone and red iron.

v 1 : 2937 Dia.: 19

Gritty red/brown, wet-smoothed buff surface.

xxiii 1 : 4158 Dia.: 18

Orange, smooth surface; T2, black and red grains, limestone and quartz.

iv 4 : 2938 Dia.: 23

xxiii 1: possibly as early as late fifth century B.C.

xxiii 32: possibly as early as fourth century B.C.

i 56: possibly as early as second century B.C.

- 143** Small carinated bowls, possibly lids (see the many examples from the funerary levels at Carthage: eg *Byrsa ii* 263 ff.).

Mid grey, orange/cream surface; T2, quartz and pale orange grains (? limestone).

xxiii 39 : 1659 Dia.: 15

Pale orange, dark orange strip on inside rim (? slip, paint); T2, quartz.

xxiv 69 : 1660 Dia.: 15

Orange/brown, pale grey core, burnished strips below carination; T2, quartz and red iron.

xxiv 70 : 1658 Dia.: 18

Red/brown, orange/brown core, cream strip on outside rim; T3, quartz, limestone and red iron.

xv 5 : 2957 Dia.: 22

Orange/brown; T3, quartz and limestone.

xv 24 : 2956 Dia.: 23

xxiv 69, 70: possibly as early as fourth century B.C.

- 144** Small, finely made carinated bowls. It is difficult to know whether these three examples should be associated as a "type" since the contexts in which they were found are widely

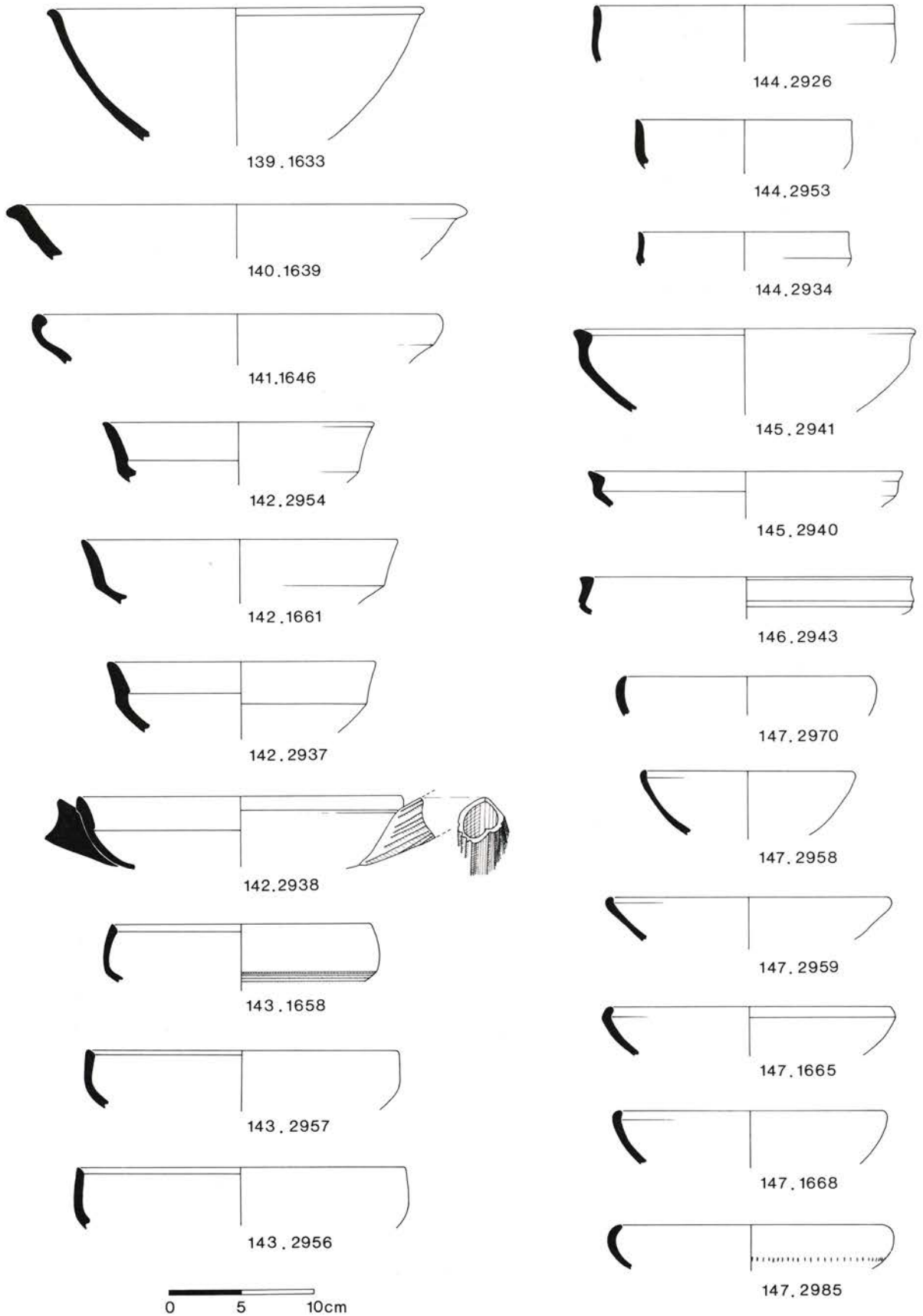


FIG.45 Coarse Pottery Types 139-147 (Scale 1:4)

separated in date. Of the three the resemblance is greatest between 2934 and 2953. 2934 most closely resembles a class of small bowls which are quite common within the area of the UNESCO Libyan Valleys Survey where they have been found in association with fineware no earlier than the second century A.D. (Dore 1988, 71, type 127); at Ghirza they occur in contexts which may be of the fourth century A.D. and later (Hayes 1984, fig.72, nos. 14-16).

Dark red, grey outer surface; T3, quartz and limestone.

i 97 : 2926 Dia.: 21

i 97: early first century A.D.

Orange/brown, dark grey core, cream surface; T4, sparse, limestone, quartz and red iron.

iv 1 : 2953 Dia.: 15

iv 1: late first century A.D.

Orange, burnished surface; T1, sparse, quartz and limestone.

xv 25 : 2934 Dia.: 15

xv 25: sixth century A.D.

145 Carinated bowl, inturned upper wall, flanged rim.

Pale brown, cream/brown surface; T1, quartz and red iron.

v 3 : 2941 Dia.: 24

Orange; T4, quartz, limestone and red iron.

iiib 1 : 2940 Dia.: 22

iiib 1: second half of first century A.D.

146 Carinated bowl, inturned upper wall, flanged rim.

Grey/brown or dark brown, cream or greenish cream outer surface; T2 & 3 (2,1 examples), limestone and quartz.

i 8 : 2943 Dia.: 23

ii 4 : 2942 Dia.: 22

vib 1 : 2944 Dia.: 19

vib 1: fourth century A.D.

147 Small bowl, wall angled at about 45°, slightly curved, terminating in inturned rim.

Fabrics:

- a) Mostly grey or grey/brown, sometimes orange or orange/brown, mostly with cream strip on outer rim, sometimes whole of outer surface cream; inclusions: see profiles, p.96.
- b) Smooth pale orange, pale yellow/cream surface; T1, quartz, mica and black vitreous grains.

Fabric a:

F 6 7	: 2963		v	3 : 2959	Dia.: 20
i	46 : 2961	Dia.: 21	xiv	71 : 1669	Dia.: 16
i	46 : 2977		xiv	81 : 1665	Dia.: 20
i	54 : 2975	Dia.: 13.5	xiv	120 : 1670	Dia.: 19
i	83 : 2970	Dia.: 18	xix	6 : 2962	
i	102 : 2958	Dia.: 15	xxii	35 : 1666	Dia.: 15
iii	1 : 2986		xxiii	23 : 1671	Dia.: 21
iii	9 : 2960		xxiii	39 : 1668	Dia.: 19
v	2 : 2987	Dia.: 19			

Fabric b:

i	13 : 2985	Dia.: 20			
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i 54, 102: first century B.C.

- 148** Bowl, wall almost vertical, slightly curved, terminating in inturned rim.

Grey/brown, cream strip on outer rim; T1,2,3, quartz and limestone.

xix	6 : 2969	Dia.: 22	xxiii	22 : 1667	Dia.: 27
xxii	37 : 1688	Dia.: 25	xxiii	25 : 1667	Dia.: 27

All contexts second century A.D. or later.

- 149** Fine, thin walled bowl; wall angled at about 45°, slightly curved, terminating with inturned rim.

Orange/brown or grey/brown, cream strip on outer rim; T1, 2 (sparse in 2 examples) quartz and limestone.

S 14 1a	: 2965	Dia.: 21	xiv	70 : 1672	Dia.: 13
iiib	4 : 2966	Dia.: 17	xix	6 : 2967	Dia.: 22
xiv	30 : 1673	Dia.: 17	xix	8 : 2964	Dia.: 22

xiv 30: second half of second century B.C.

xiv 70: second half first century B.C.

- 150** Small bowl or dish; slightly curved wall with moulding or bead on inner face of rim.

Mostly grey or grey/brown, sometimes orange/brown, cream strip on outside rim; inclusions: see profiles, p.96.

xiv	6 : 1681	Dia.: 16	xxii	13 : 1686	Dia.: 23
xiv	9 : 1685		xxii	17 : 1679	Dia.: 14
xiv	70 : 1687		xxii	35 : 1684	Dia.: 14
xiv	81 : 1683	Dia.: 19	xxiii	39 : 1678	Dia.: 23
xix	5 : 2972		xxiii	39 : 1690	
xxi	22 : 1689	Dia.: 14	xxiii	39 : 4135	Dia.: 20
xxii	8 : 1682	Dia.: 16	xxiii	40 : 1677	Dia.: 25
xxii	10 : 1680	Dia.: 21			

xxiii 8, xxiii 39: latest first century B.C.

xiv 6, xxii 10, 35: first half of first century A.D.

xiv 9, 81: mid first century A.D.

xiv 70: second half of first century A.D.

See also Fulford 1986a, fig.87, no.109 (Pit 2, trench Y3-4: latest first century B.C.).

151 Larger version of 150.

Mostly dark grey or dark red/brown, occasionally mid brown or orange/brown, cream strip on outer rim, occasionally with wider strip of orange/brown under; inclusions: see profiles, p.96.

	: 1693	Dia.: 18	xiv	14 : 1704	Dia.: 23
i	47 : 2982	Dia.: 26	xiv	70 : 1692	Dia.: 27
ia	11 : 2984		xiv	81 : 1691	Dia.: 22
iiib	2 : 2976	Dia.: 20	xiv	81 : 1701	Dia.: 24
iiic	2 : 2983	Dia.: 23	xiv	120 : 1700	Dia.: 23
iv	5 : 2978		xiv	120 : 1703	Dia.: 24
v	2 : 2974		xiv	127 : 1702	Dia.: 22
vib	6 : 2980	Dia.: 21	xix	6 : 2981	Dia.: 23
vic	2 : 2979	Dia.: 27	xxi	22 : 1695	Dia.: 22
xiv	: 1697	Dia.: 21	xxii	13 : 1696	Dia.: 20
xiv	9 : 1699	Dia.: 24	xxii	35 : 1694	Dia.: 21

xiv 70: second half of first century B.C.

xxii 35: first half first century A.D.

xiv 9, 81: mid first century A.D.

152 Bowls and dishes with gently curved wall; rim slightly inturned with single groove on top (“orlo bifido” rim).**Fabrics:**

- Anything from orange through orange/yellow to orange/brown, outer surface usually black (burnt), occasionally (1 example) cream strip on outer rim; T3, 4 (5,3 eggs), black vitreous grains, red grains and quartz; ? Campanian – see Riley 1979, 248 for discussion.
- Red, maroon/brown core; T3, quartz and limestone.

Fabric a:

iii	4 : 2999	Dia.: 26	xiv	61 : 1710	Dia.: 32
v	3 : 2991	Dia.: 24	xiv	81 : 1707	Dia.: 37
xiv	11 : 1706	Dia.: 43	xiv	127 : 1705	Dia.: 22
xiv	37 : 2992	Dia.: 33	xxi	18 : 1712	Dia.: 20

Fabric b:

xxiii 23 : 1711 Dia.: 19

xiv 61: first century B.C.

xxi 18: first half of first century A.D.

xiv 81: mid first century A.D.

iii 4: second half of first century A.D.

See also:

Riley 1979, D446–451 (Early Roman Cooking Ware 3: latest first century B.C. and first century A.D.);

Dyson 1976, Deposit 22 II, nos. 22–25 (suggested date range at Cosa: *c.* 100 B.C. – *c.* 50 A.D.).

153 Bowls and dishes; similar to 152 but wall straighter, rim less inturned; the groove on top of the rim is accompanied by a slight flange.**Fabric:**

- Anything from orange/brown to dark maroon/brown and dark grey, black outer surface burnished or grooved in narrow strips; T1, 2, 3 (3,2,3 examples) quartz and limestone.

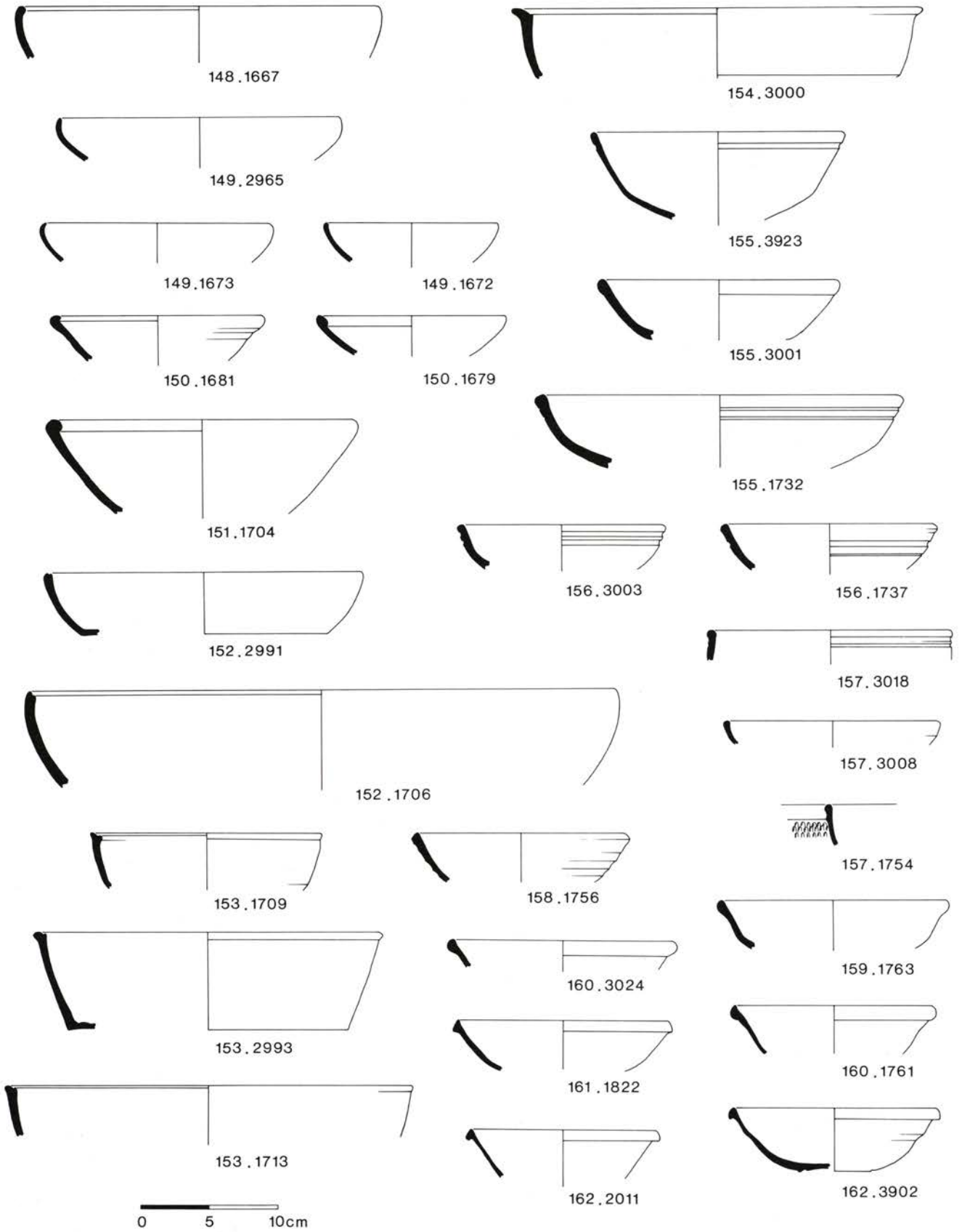


FIG.46 Coarse Pottery Types 148-162 (Scale 1:4)

- b) Anything from pale pink to orange, deep black surface; T3, quartz, red iron and limestone; compare with the fabric of types 15, 53-57 and type 37 fabric b.

Fabric a:

iii	9 : 2995	Dia.: 21	xxi	22 : 2994	Dia.: 24
viii	3 : 2998	Dia.: 18	xxii	35 : 1709	Dia.: 17
xiv	10 : 2997	Dia.: 25	xxii	37 : 1715	Dia.: 30
xiv	119 : 1716	Dia.: 17	xxiii	25 : 1708	Dia.: 30

Fabric b:

iii	4 : 2996	Dia.: 22	xxii	11 : 1713	Dia.: 30
xiv	9 : 1724	Dia.: 25	xxiii	11 : 1714	Dia.: 27
xxi	2 : 2993	Dia.: 26			

xiv 9: mid first century A.D.

xxii 35: first half of first century A.D.

iii 4, 9: second half of first century A.D.

- 154** Similar to 153, but flange rim more pronounced

Red/brown, pale brown surface; T1, quartz, limestone and black vitreous grains (?).

xxiv	15 : 3000	Dia.: 30			
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- 155** Bowl with slight carination in profile, outplayed upper wall, slightly thickened rim, and two grooves (occasionally one) immediately below rim. Similar to Lamboglia (1952) Form 1 in Campana B and C wares.

Mostly orange/brown or darker, sometimes dark grey, cream strip on outer rim and sometimes upper wall; 1736 and 3002 particularly distinctive; red/brown to dark maroon/red, burnished inner surface, black slip or paint on upper rim, and, in places, running in trickles down outer wall; inclusions: see profiles, p.97.

H 25 4	: 3923	Dia.: 19	xiv	81 : 1734	Dia.: 25
iii	4 : 3002	Dia.: 30	xiv	81 : 1735	Dia.: 20
v	3 : 3001	Dia.: 18	xiv	81 : 1736	Dia.: 17
xiv	9 : 1732	Dia.: 27	xxv	24 : 4157	Dia.: 15
xiv	81 : 1733	Dia.: 30			

xxv 24: TPQ *c.* 10 B.C.; see FIG.47.

- 156** As 155, but smaller.

Anything from pale yellow/brown, though orange/red, orange/brown and brown, to dark grey/brown and grey, often with core in contrasting colour; mostly cream strip on outer rim, sometimes brown or black slip or paint (see 155); sometimes burnished inner surface; inclusions: see profiles, p.97.

i	46 : 3007	Dia.: 16	v	3 : 3003	Dia.: 15.5
i	46 : 3013		v	3 : 3010	Dia.: 16
i	46 : 3014		viii	2 : 3015	
iii	4 : 3009	Dia.: 18	xiv	11 : 1748	Dia.: 16
iii	8 : 3005		xiv	81 : 1739	Dia.: 17
iii	12 : 3006		xv	12 : 3012	

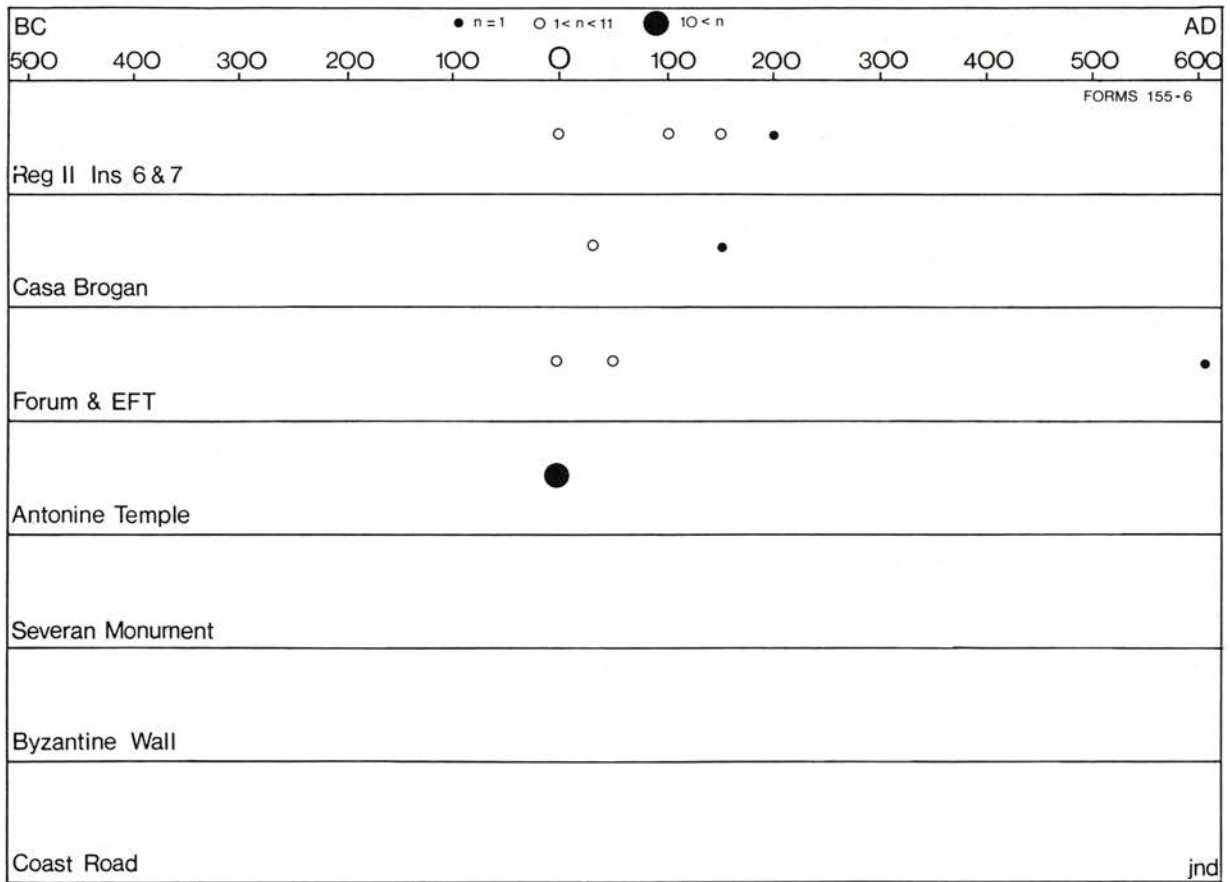


FIG.47 The Occurrence of Types 155-6 in the Site Stratigraphy

xix	1 : 3004		xxiii	25 : 1740	Dia.: 16
xxii	12 : 1743	Dia.: 17	xxiii	25 : 1750	Dia.: 20
xxii	13 : 1737	Dia.: 16	xxiii	39 : 1744	
xxii	13 : 1752	Dia.: 16	xxiii	39 : 4127	Dia.: 16
xxii	17 : 1741	Dia.: 15	xxv	24 : 4119	Dia.: 14
xxiii	21 : 1738	Dia.: 19			

xxiii 39, xxv 24: latest first century B.C.

1 46: early first century A.D.; see FIG.47.

See also Fulford 1986a, fig.84, no.4, fig.87, nos. 106-7.

157 Small, approximately hemispherical bowl, with two grooves or cordons below rim.

Mostly orange/brown with black outer surface; 1 example has black on the rim only; 1 example has cream strip on outer rim; 2 examples have a rouletted outer surface; T2, 3 (7, 1 examples), quartz and limestone.

v	2 : 3018	Dia.: 18	xxiii	17 : 1751	
v	3 : 3008	Dia.: 16	xxiii	23 : 1754	
xiv	26 : 1749	Dia.: 17	xxiii	39 : 1746	Dia.: 16
xiv	62 : 1753	Dia.: 18	xxv	5 : 4120	Dia.: 17
xxiii	17 : 1745	Dia.: 16			

xxiii 39: possibly as early as late first century B.C.

xiv 62, xxiii 17, 23: first half of second century A.D.

See also Fulford 1986b, fig.92, nos.33-4 (associated with building of Antonine Temple - dedicated c. A.D. 166-9).

158-163 Small bowls with vestigial footring and cut-away base. The wall is outplayed at about 45° and only ever slightly curved (except in the case of 159). The types are distinguished mainly on the basis of rim shape. In 158 the rim is barely articulated beyond a thickening of the wall. In 159 it is a moulding of semi-circular section with a slight lip on the inner face. In 161 and 162 it is a small projecting flange with angled face, approximately triangular in section in 161 and distinctly undercut in 162. 159 is a variant having a distinct carination in the wall.

Fabrics:

- a) Mostly orange/brown or red/brown, sometimes dark grey, almost always with a cream strip on outside of rim; inclusions: see profiles, p.97.
- b) Pale pink or pinkish brown, maroon or maroon/brown surface (probably a slip); inclusions: see profiles, p.97.

The colour of fabric b was very consistent and the division into fabrics was made initially solely on the basis of colour. The large number of examples of 161 and 162 (they were among the most numerous types on the site) made possible a more detailed examination of the fabric profiles of the two types.

The data for texture and proportion of inclusions for 161 and 162 (fabric a) and for 162 (fabric b) are shown on p.97 in the form of contingency tables (the sample for 161, fabric b, was insufficiently large). Possible associations between vessel form, fabric colour and texture and proportion of inclusions were tested by fitting linear models of varying complexity to the data, using the GLIM package on Newcastle University's computer system (see also section on fabric in Introduction). The results were as follows:

1) 161 fabric a, 162 fabric a

The inclusion profiles represented by the two contingency tables for fabric a are quite similar: there are no categories of occurrence which are exclusive to either type, peak values occur in the same category in both tables, and the relative proportions of the different categories in each table are roughly the same. However, fitting of linear models suggests that there are statistically significant differences between the fabric profiles of the two forms. At the 5% significance level the most parsimonious fitted model is one of conditional independence; in this, inclusion texture and vessel form are independent in each level of inclusion proportion, but proportion is associated with both texture and form. At the 1% significance level the fitted model changes to one of partial independence, in which inclusion proportion remains associated with form but texture becomes independent of both. This would seem to suggest that the association of inclusion proportion and vessel form is "stronger" than that of inclusion texture and form.

2) 162 fabric a, 162 fabric b

A simple visual examination of the two contingency tables shows that the distribution of occurrences in each is completely different and the fitting of linear models confirms that there are significant differences between the two fabrics. At the 5% significance level the most parsimonious fitted model was the saturated one implying a complex relationship between texture and proportion of inclusions and fabric in which each pair of variables is associated and this association varies in each level of the third. At the 1% level the model changes to one of pairwise association in which each pair of variables is associated but each two variable effect is unaffected by the level of the third.

The conclusion to be drawn from the above is that groupings of vessels made with reference to one set of criteria (vessel form in the case of 1, fabric colour in the case of 2) can be significantly associated with groupings made with reference to another set of independently measured criteria (texture and proportion of inclusions). This might suggest that rather than being the result of

random variability within a single unit of ceramic production, the groupings defined by the different forms and fabrics originated from different production units of production (ignoring, in this context, the precise definition of these units of production). Finally, the fact that the differences in fabric colour and inclusion texture and proportion are greater between fabrics a and b than within fabric a might suggest a greater degree of physical separation between the units responsible for the different fabrics than between those responsible for the different forms within fabric a.

158

Fabric a:

	: 1755	Dia.: 19
xiv	81 : 1756	Dia.: 16

159

Fabric a:

xiv	6 : 1763	Dia.: 17
xxi	22 : 1759	Dia.: 16
xxiii	21 : 1758	Dia.: 22

160

Fabric a:

vib	2 : 3026	Dia.: 13	xxi	22 : 1760	Dia.: 15
xiv	12 : 1762	Dia.: 16	xxii	13 : 4137	Dia.: 14
xix	6 : 3024	Dia.: 17	xxiii	10 : 1761	Dia.: 15

161

Fabric a:

ia	2 : 3025	Dia.: 16	xxii	13 : 1793	Dia.: 15
iiib	4 : 3021		xxii	35 : 1794	Dia.: 13
iiib	5 : 3020	Dia.: 18	xxiii	9 : 1796	Dia.: 15
iiic	2 : 3022	Dia.: 17	xxiii	10 : 1797	Dia.: 14
v	2 : 3028	Dia.: 14.5	xxiii	10 : 1800	Dia.: 15
v	2 : 3030		xxiii	10 : 1801	Dia.: 15
v	2 : 3031		xxiii	10 : 1802	Dia.: 16
v	2 : 3032	Dia.: 17	xxiii	10 : 1803	Dia.: 15
v	4 : 3033		xxiii	10 : 1805	Dia.: 16
vib	3 : 3027		xxiii	10 : 1806	Dia.: 16
vic	2 : 3029	Dia.: 17	xxiii	10 : 1807	Dia.: 18
vii	1 : 3034		xxiii	10 : 1808	Dia.: 15
viii	2 : 3035	Dia.: 18	xxiii	10 : 1809	Dia.: 15
xiv	9 : 1783	Dia.: 17	xxiii	10 : 1810	Dia.: 16
xiv	9 : 1784		xxiii	10 : 1811	Dia.: 15
xiv	81 : 1785	Dia.: 20	xxiii	10 : 1812	Dia.: 15
xiv	81 : 1786	Dia.: 20	xxiii	10 : 1813	Dia.: 15
xiv	81 : 1787	Dia.: 18	xxiii	10 : 1814	Dia.: 16
xiv	92 : 1788	Dia.: 16	xxiii	10 : 1815	Dia.: 16
xiv	92 : 1789	Dia.: 16	xxiii	10 : 1816	
xix	6 : 3023	Dia.: 15	xxiii	10 : 1817	Dia.: 15
xxi	22 : 1792	Dia.: 15	xxiii	10 : 1818	Dia.: 16
xxii	5 : 4050	Dia.: 15	xxiii	10 : 1819	

xxiii	10 : 1820	Dia.: 16	xxiii	23 : 1856	Dia.: 15
xxiii	10 : 4094	Dia.: 15	xxiii	23 : 1857	Dia.: 15
xxiii	10 : 4121	Dia.: 15	xxiii	23 : 1858	Dia.: 16
xxiii	11 : 1821	Dia.: 16	xxiii	23 : 1859	Dia.: 15
xxiii	11 : 1822	Dia.: 16	xxiii	23 : 1860	Dia.: 15
xxiii	11 : 1823	Dia.: 14	xxiii	23 : 1861	Dia.: 14
xxiii	11 : 1824	Dia.: 15	xxiii	23 : 1862	Dia.: 14
xxiii	11 : 1825	Dia.: 14	xxiii	23 : 1865	Dia.: 16
xxiii	14 : 1826	Dia.: 18	xxiii	23 : 1866	Dia.: 16
xxiii	15 : 1864	Dia.: 15	xxiii	23 : 1867	Dia.: 14
xxiii	17 : 1827	Dia.: 17	xxiii	23 : 1868	Dia.: 17
xxiii	17 : 1828	Dia.: 16	xxiii	23 : 1869	Dia.: 15
xxiii	17 : 1829	Dia.: 16	xxiii	23 : 1870	
xxiii	17 : 1830	Dia.: 15	xxiii	23 : 1871	Dia.: 14
xxiii	17 : 1831	Dia.: 16	xxiii	23 : 1872	Dia.: 14
xxiii	17 : 1834		xxiii	23 : 1874	
xxiii	17 : 1911		xxiii	23 : 1875	
xxiii	17 : 1912		xxiii	23 : 1876	Dia.: 16
xxiii	18 : 1832	Dia.: 15	xxiii	23 : 1877	Dia.: 16
xxiii	18 : 1835	Dia.: 22	xxiii	23 : 1878	Dia.: 16
xxiii	19 : 1833	Dia.: 16	xxiii	25 : 1852	Dia.: 15
xxiii	21 : 1836	Dia.: 15	xxiii	25 : 1863	Dia.: 15
xxiii	21 : 1837	Dia.: 15	xxiii	25 : 1879	Dia.: 15
xxiii	21 : 1838	Dia.: 16	xxiii	25 : 1880	Dia.: 15
xxiii	21 : 1839		xxiii	25 : 1881	Dia.: 15
xxiii	21 : 1840		xxiii	25 : 1882	Dia.: 16
xxiii	21 : 1841	Dia.: 16	xxiii	25 : 1883	Dia.: 14
xxiii	21 : 1842	Dia.: 15	xxiii	25 : 1884	Dia.: 14
xxiii	21 : 1843	Dia.: 15	xxiii	25 : 1885	Dia.: 15
xxiii	21 : 1844	Dia.: 15	xxiii	25 : 1887	Dia.: 16
xxiii	21 : 1846	Dia.: 16	xxiii	25 : 1888	Dia.: 15
xxiii	21 : 1847		xxiii	25 : 1889	Dia.: 15
xxiii	21 : 1848	Dia.: 16	xxiii	25 : 1890	Dia.: 15
xxiii	21 : 1850		xxiii	25 : 1891	Dia.: 15
xxiii	21 : 2005	Dia.: 16	xxiii	25 : 1892	Dia.: 15
xxiii	22 : 1845	Dia.: 15	xxiii	25 : 1893	Dia.: 15
xxiii	22 : 1851	Dia.: 15	xxiii	25 : 1894	
xxiii	23 : 1853	Dia.: 15	xxiii	26 : 4053	Dia.: 17
xxiii	23 : 1854	Dia.: 16	xxiii	81 : 1886	Dia.: 15
xxiii	23 : 1855	Dia.: 16			

Fabric b:

xxiii	10 : 1798	Dia.: 14	xxiii	21 : 1849	Dia.: 17
xxiii	10 : 1799		xxiii	23 : 1873	
xxiii	10 : 1804	Dia.: 16			

162**Fabric a:**

S 14 1a	: 3036	Dia.: 14	iv	11 : 3046	
C 5 4	: 3902	Dia.: 15.5	v	2 : 3051	Dia.: 16
i	64 : 4056		v	2 : 3052	
ia	2 : 3057	Dia.: 14	v	3 : 3044	
iiib	4 : 3037	Dia.: 15	v	4 : 3043	Dia.: 14.5
iiib	4 : 3053	Dia.: 17	via	2 : 3041	Dia.: 17
iiib	4 : 3054	Dia.: 17	vib	4 : 4051	Dia.: 14
iiib	5 : 3040		vib	7 : 3059	Dia.: 13
iv	8 : 3047	Dia.: 16	vic	1 : 3058	Dia.: 15
iv	11 : 3045	Dia.: 16	vid	1 : 3048	Dia.: 15

vid	1 : 3049		xxiii	17 : 1966	Dia.: 15
vid	1 : 3050		xxiii	17 : 1968	Dia.: 15
vid	2 : 3042	Dia.: 17	xxiii	17 : 1969	Dia.: 15
xiv	9 : 1895	Dia.: 16	xxiii	17 : 1970	Dia.: 15
xiv	39 : 1897	Dia.: 15	xxiii	17 : 1971	Dia.: 15
xiv	81 : 1898	Dia.: 16	xxiii	17 : 1972	Dia.: 16
xiv	81a : 1899	Dia.: 15	xxiii	17 : 1973	Dia.: 16
xiv	91 : 1901	Dia.: 15	xxiii	17 : 1975	Dia.: 15
xiv	92 : 1900	Dia.: 17	xxiii	17 : 1976	Dia.: 15
xiv	127 : 1791	Dia.: 15	xxiii	17 : 1978	Dia.: 16
xiv	127 : 1903	Dia.: 15	xxiii	17 : 1979	Dia.: 16
xiv	127 : 1904	Dia.: 16	xxiii	17 : 1980	
xiv	127 : 1905	Dia.: 15	xxiii	18 : 1983	Dia.: 15
xiv	143 : 1906	Dia.: 15	xxiii	19 : 1984	Dia.: 16
xv	12 : 3039	Dia.: 15	xxiii	19 : 1985	
xix	6 : 3038	Dia.: 17	xxiii	21 : 1982	
xix	6 : 3055	Dia.: 14	xxiii	21 : 1986	Dia.: 14
xix	6 : 3056		xxiii	21 : 1987	Dia.: 16
xxi	22 : 1907	Dia.: 16	xxiii	21 : 1988	Dia.: 15
xxii	13 : 1908	Dia.: 14	xxiii	21 : 1989	Dia.: 14
xxii	17 : 1974	Dia.: 16	xxiii	21 : 1990	Dia.: 15
xxii	35 : 1909	Dia.: 15	xxiii	21 : 1991	Dia.: 15
xxii	38 : 4049		xxiii	21 : 1992	Dia.: 15
xxiii	10 : 1914	Dia.: 15	xxiii	21 : 1993	Dia.: 16
xxiii	10 : 1916	Dia.: 16	xxiii	21 : 1994	Dia.: 16
xxiii	10 : 1918	Dia.: 15	xxiii	21 : 1996	Dia.: 15
xxiii	10 : 1921	Dia.: 14	xxiii	21 : 1997	Dia.: 16
xxiii	10 : 1922		xxiii	21 : 1998	
xxiii	10 : 1923	Dia.: 15	xxiii	21 : 1999	Dia.: 15
xxiii	10 : 1924	Dia.: 15	xxiii	21 : 2000	Dia.: 16
xxiii	10 : 1925		xxiii	21 : 2001	Dia.: 15
xxiii	10 : 1926		xxiii	21 : 2002	Dia.: 16
xxiii	10 : 1928		xxiii	21 : 2003	
xxiii	10 : 1929	Dia.: 15	xxiii	21 : 2004	
xxiii	10 : 1930	Dia.: 16	xxiii	21 : 2006	Dia.: 15
xxiii	10 : 1931	Dia.: 15	xxiii	21 : 2026	Dia.: 14
xxiii	10 : 1932	Dia.: 14	xxiii	22 : 1995	
xxiii	10 : 1934		xxiii	23 : 2007	Dia.: 15
xxiii	10 : 1935	Dia.: 14	xxiii	23 : 2008	Dia.: 15
xxiii	10 : 1936		xxiii	23 : 2009	Dia.: 15
xxiii	10 : 1937	Dia.: 15	xxiii	23 : 2010	Dia.: 14
xxiii	10 : 1940	Dia.: 16	xxiii	23 : 2011	Dia.: 14
xxiii	10 : 1941		xxiii	23 : 2012	Dia.: 14
xxiii	10 : 1943	Dia.: 15	xxiii	23 : 2013	Dia.: 15
xxiii	10 : 1945	Dia.: 16	xxiii	23 : 2014	
xxiii	10 : 1946		xxiii	23 : 2015	
xxiii	10 : 1948	Dia.: 16	xxiii	23 : 2017	Dia.: 15
xxiii	10 : 1949	Dia.: 15	xxiii	23 : 2018	
xxiii	10 : 1950	Dia.: 16	xxiii	23 : 2019	
xxiii	10 : 1951	Dia.: 16	xxiii	23 : 2021	Dia.: 16
xxiii	10 : 1953	Dia.: 15	xxiii	23 : 2022	Dia.: 15
xxiii	10 : 1954	Dia.: 16	xxiii	23 : 2023	Dia.: 15
xxiii	10 : 1955		xxiii	23 : 2024	Dia.: 15
xxiii	10 : 1957		xxiii	23 : 2025	
xxiii	10 : 1958	Dia.: 14	xxiii	23 : 2027	Dia.: 15
xxiii	11 : 1927		xxiii	23 : 2028	Dia.: 15
xxiii	11 : 1960	Dia.: 15	xxiii	23 : 2029	Dia.: 16
xxiii	11 : 1962	Dia.: 15	xxiii	23 : 2030	
xxiii	11 : 1963	Dia.: 16	xxiii	23 : 2031	
xxiii	11 : 1964	Dia.: 14	xxiii	25 : 2032	Dia.: 15
xxiii	14 : 1961		xxiii	25 : 2033	
xxiii	15 : 1967	Dia.: 15	xxiii	25 : 2034	Dia.: 14
xxiii	15 : 1981	Dia.: 15	xxiii	25 : 2035	Dia.: 14

xxiii	25 : 2036	Dia.: 15	xxiii	25 : 2050	Dia.: 15
xxiii	25 : 2037	Dia.: 15	xxiii	25 : 2051	Dia.: 14
xxiii	25 : 2038		xxiii	25 : 2052	Dia.: 15
xxiii	25 : 2039		xxiii	25 : 2053	Dia.: 15
xxiii	25 : 2040	Dia.: 15	xxiii	25 : 2054	Dia.: 16
xxiii	25 : 2042		xxiii	25 : 2055	Dia.: 14
xxiii	25 : 2043		xxiii	25 : 2056	Dia.: 14
xxiii	25 : 2044	Dia.: 15	xxiii	25 : 2057	Dia.: 15
xxiii	25 : 2045		xxiii	25 : 2058	Dia.: 15
xxiii	25 : 2047	Dia.: 15	xxiii	25 : 2059	
xxiii	25 : 2048	Dia.: 15	xxiii	25 : 2060	Dia.: 15
xxiii	25 : 2049	Dia.: 16	xxiii	25 : 4122	Dia.: 17

Fabric b:

iiib	5 : 4052	Dia.: 10	xxiii	10 : 1944	Dia.: 15
ivb	8 : 3539	Dia.: 20	xxiii	10 : 1947	Dia.: 15
vic	1 : 3060	Dia.: 16	xxiii	10 : 1952	Dia.: 14
xiv	84 : 1902	Dia.: 14	xxiii	10 : 1956	Dia.: 14
xxiii	10 : 1913	Dia.: 14	xxiii	10 : 1965	Dia.: 15
xxiii	10 : 1915	Dia.: 15	xxiii	11 : 1959	Dia.: 16
xxiii	10 : 1917		xxiii	22 : 1910	Dia.: 16
xxiii	10 : 1919		xxiii	23 : 2016	Dia.: 15
xxiii	10 : 1933	Dia.: 15	xxiii	23 : 2020	Dia.: 15
xxiii	10 : 1938	Dia.: 14	xxiii	25 : 2041	Dia.: 15
xxiii	10 : 1939	Dia.: 15	xxiii	25 : 2046	Dia.: 15
xxiii	10 : 1942				

163**Fabric a:**

xxi	10 : 2063	
xxi	22 : 2061	Dia.: 15
xxi	22 : 2062	Dia.: 15

Dating of types 158-163:

xxii 5: first century B.C. (almost certainly intrusive).

xxii 38: possibly as early as third century B.C. (but the level is only sealed in the latest first century B.C., at the earliest).

xiv 6, xxii 35: first half first century A.D.

Present in most levels of the second half of the first century A.D. and the second century A.D., and in particularly large quantities in Regio II Insulae 6 and 7; see FIG. 48.

- 164** Small bowl or cup with projecting flange just below lip of rim.
Orange/brown, often with grey core, cream strip on rim and flange; T1, 2, 3 (1,3,2 examples), quartz and limestone.

xxii	35 : 1730	Dia.: 18	xxiii	10 : 1728	Dia.: 16
xxiii	3 : 1729	Dia.: 16	xxiii	11 : 1729	Dia.: 16
xxiii	10 : 1726	Dia.: 17	xxiii	21 : 1731	

xxiii 3: possibly as early as second century B.C.

xxii 35: first half of first century A.D.

- 165 & 166** Small bowls, projecting flange rim with reeded or grooved upper face.

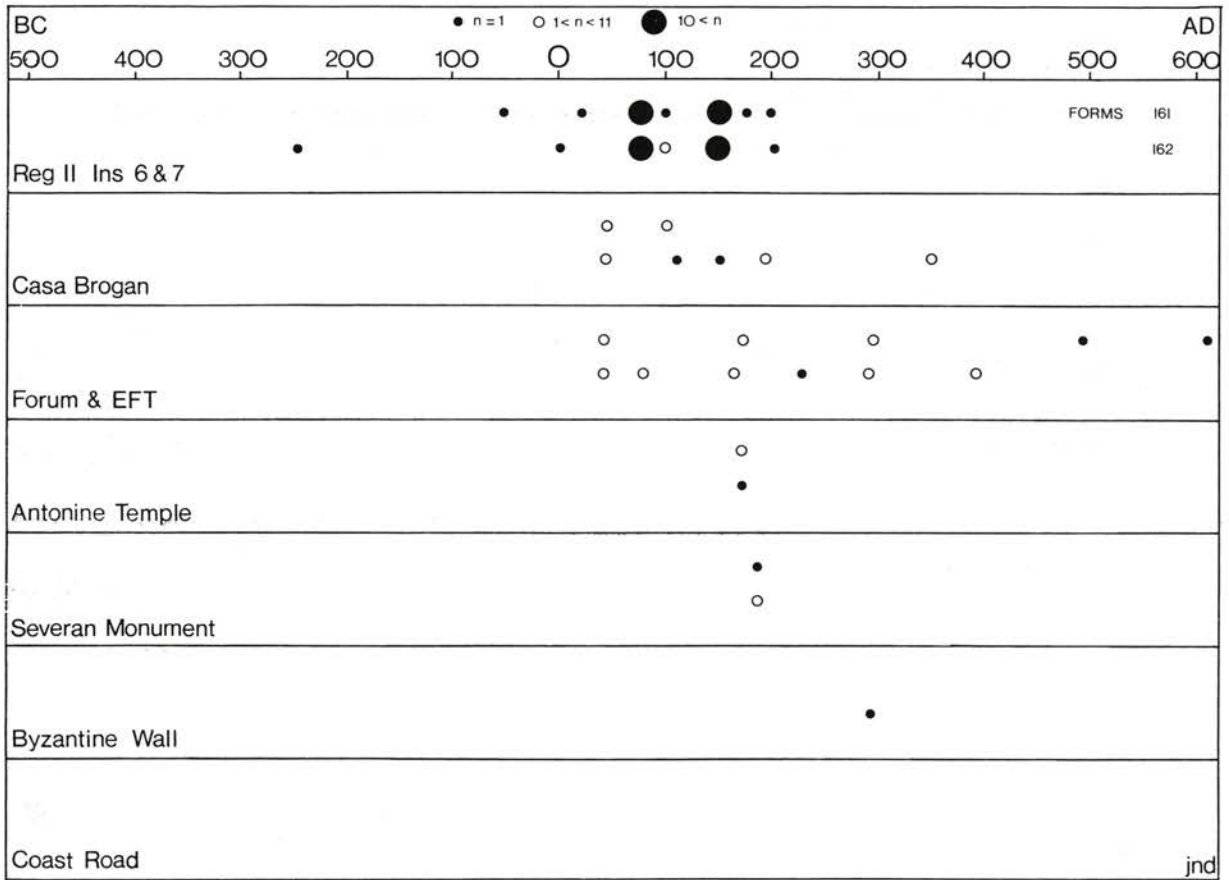


FIG.48 The Occurrence of Types 161–2 in the Site Stratigraphy

165 Orange/brown or red/brown; T2,3 (1,2 examples), quartz and limestone.

xiv	6 : 1768	Dia.: 12	xxiii	21 : 1769	Dia.: 11
xxiii	10 : 1764	Dia.: 12	xxiii	25 : 1767	Dia.: 12

xiv 6: first half of first century A.D.

166 Pale orange/yellow; T1, 2, quartz and limestone.

ia	1 : 3085	Dia.: 16
iiib	4 : 3084	Dia.: 19
xv	18 : 3086	Dia.: 14

ia 1: first half of first century A.D.

167 & 168 Small bowls with flange rim and handle.**167** Dark grey or orange/brown with grey core, greenish/cream surface; T2, quartz and limestone.

iii	1 : 3098	Dia.: 23	iii	9 : 3100	Dia.: 28
iii	7 : 3107		v	4 : 3101	Dia.: 20

iii 1, 9: second half of first century A.D.

- 168** Orange/yellow, cream surface, dark red paint; T3, quartz, limestone and black vitreous grains.

xiv 97 : 4074 Dia.: 11

xiv 97: latest first century B.C.

MISCELLANEOUS SMALL BOWLS AND DISHES

- 169** Mid brown, cream strip on outer rim; T2, quartz and limestone.

iii 4 : 2919 Dia.: 13

iii 4: mid first century A.D.

- 170** Orange/brown, cream slip at outer rim; T2, quartz and limestone.

xxii 17 : 1630 Dia.: 14

xxii 17: early third century.

- 171** Pale pink, orange/brown surface, cream strip on outer rim; T2, limestone and quartz.

v 4 : 2935 Dia.: 12

v 4: late first century A.D.

- 172** Dark grey core, orange/brown margins, cream outer surface; T1, limestone and quartz.

vib 2 : 3089 Dia.: 9.5

Late second century A.D.

- 173** Grey/brown, cream outer surface; T1, quartz and limestone.

xxvi 32 : 3088 Dia.: 18

- 174** Pale pinkish/brown; T2, quartz and limestone.

xxiii 23 : 1766 Dia.: 12

xxiii 23: second half of second century.

- 175** Orange/brown, pale cream surface; T1, quartz, limestone, black vitreous grains and red iron.

v 3 : 2945 Dia.: 15.5

- 176** Orange/brown, cream strip on outside rim; T2, quartz, limestone and black grains.

iv 5 : 2933

v 8 : 2932 Dia.: 15

iv 5: late first century A.D.

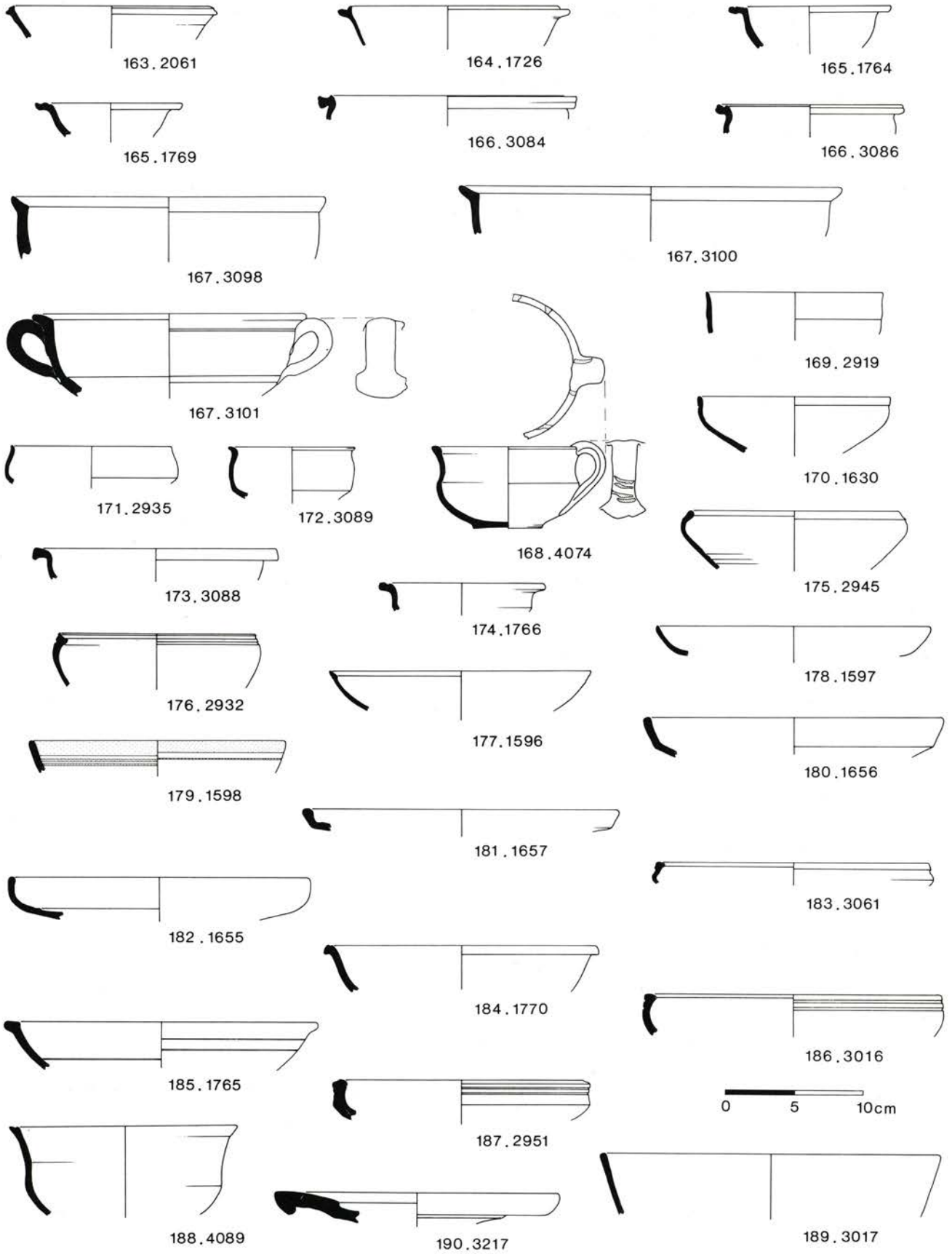


FIG.49 Coarse Pottery Types 163-190 (Scale 1:4)

- 177** Orange/brown, grey core, cream strip at outer rim; T2, quartz and limestone.
 xiv 8a : 1596 Dia.: 17
 xiv 8a: mid first century A.D.
- 178** Orange/brown, smooth surface; T2, quartz and limestone.
 xiv 128 : 1597 Dia.: 20
 xiv 128: late second century A.D. +
- 179** Pale orange/brown, dark red paint; T3, quartz, limestone and red iron.
 xxii 26 : 1598 Dia.: 19
 xxiv 80 : 4131
 xxii 26: possible as early as fourth century B.C.
- 180** Dark grey, quartz and limestone; T1, quartz and limestone.
 xiv 71 : 1656 Dia.: 22
 xiv 71: latest first century B.C.
- 181** Orange/brown; T1, quartz, limestone and black vitreous grains.
 xiv 81 : 1657 Dia.: 23
 xiv 81: mid first century A.D.
- 182** Red/brown, grey surface; T4, quartz and limestone.
 xxii 7 : 1655 Dia.: 22
 xxii 7: second half of first century B.C.
- 183** Dark red, cream outer surface; T1, quartz and limestone.
 xix 6 : 3061 Dia.: 20
 xix 6: third century A.D.
- 184** Dark red/brown, smooth surface; black outer surface; T2, quartz.
 xiv 70 : 1770 Dia.: 19
 xiv 70: second half of first century B.C.
- 185** Pale brown, cream outer surface; T1, quartz, red iron and limestone.
 xxii 7 : 1765 Dia.: 23
 xxii 7: latest first century B.C.

186 Black; T1, limestone and quartz.

v 2 : 3016 Dia.: 22

v 2: late second century A.D.

187 Orange/brown; T1, quartz and limestone (occasional limestone up to 1 mm dia.).

i 47 : 2951 Dia.: 19

188 Dark red/brown, dark grey/brown surface; T3, angular quartz and black vitreous grains.

i 58 : 4089 Dia.: 17

i 58: possibly as early as second century B.C.

189 Orange/brown, cream strip on outer rim; T2, quartz and limestone.

iv 5 : 3017 Dia.: 25

iv 5: late first century A.D.

190 Orange/brown, thick grey core; T4, limestone and red iron.

i 103 : 3217 Dia.: 21

i 103: possibly as early as second century B.C.

This is conceivably one of the earliest coarseware vessels from the site. The pattern of occurrence at Carthage of small paterae such as these suggests that they were associated with funerary practice. Similar vessels occur in the Punic tombs in the deepest levels on the south slope of the Byrsa Hill (eg see *Byrsa ii*, figs. 373, 470, 479) several of which contain material dating to the seventh century B.C. Another vessel occurs in a deposit which overlies the level of the tombs and which seems to mark a levelling prior to the establishment of the metal-working workshops in the area (TPQ from a fragment of Black Glaze: second quarter fifth century B.C. – first quarter fourth century B.C.; see *Byrsa ii*, fig.304, A328, no.2). It must be said, however, that the precise form of the Carthage examples does not match that of the Sabratha vessel which displays a stronger articulation of rim and wall and has a hanging bead at the lip of the rim.

191 Pale yellow/brown, pink core, greenish cream surface; T2, limestone and quartz.

ia 1 : 2952 Dia.: 34

ia 1: first century B.C.

192 Grey/brown, cream surface; T4, quartz and limestone.

xiv 70 : 2123 Dia.: 31

xiv 70: second half of first century B.C.

193 Dark reddish/brown, cream surface.

xxiv 59 : 4154 Dia.: 24

194 Dark grey (burnt); T3, sparse, inclusions unidentifiable.

iiib	5 : 3091	Dia.: 24
xxiii	9 : 4134	Dia.: 26

Both contexts: second half of first century A.D.

195 Red/brown core, dark grey margins, greenish/cream outer rim; T1, quartz and limestone.

viii	1 : 3087	Dia.: 28
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viii 1: late sixth century A.D. +

196 Pale orange, mid brown surface; T1, quartz and limestone.

via	2 : 3092	Dia.: 24
-----	----------	----------

via 2: late second century A.D.

197 Dark grey; T2, quartz.

xix	6 : 3095	Dia.: 27
-----	----------	----------

xix 6: early third century A.D.

198 Red, greenish/cream surface; T4, limestone and red grains.

ia	7 : 3096	Dia.: 28
----	----------	----------

199 Dull red, grey core; T1, quartz, limestone, black and red grains.

xxvii	2 : 3099	Dia.: 21
-------	----------	----------

200 Mid grey, greenish/cream surface; T2, limestone, quartz and black grains.

vid	2 : 3102	Dia.: 32
-----	----------	----------

vid 2: late third century A.D.

201 Red/brown, yellow/cream surface; T3, quartz and limestone.

v	1 : 3103	Dia.: 26
---	----------	----------

202 Pale yellow/brown; T4, quartz.

ivb	8 : 3104	Dia.: 20
-----	----------	----------

203 Orange/brown, mid brown outer surface with thin black strips; T2, limestone, quartz and black grains.

iv	5 : 3106	Dia.: 28
----	----------	----------

iv 5: late first century A.D.

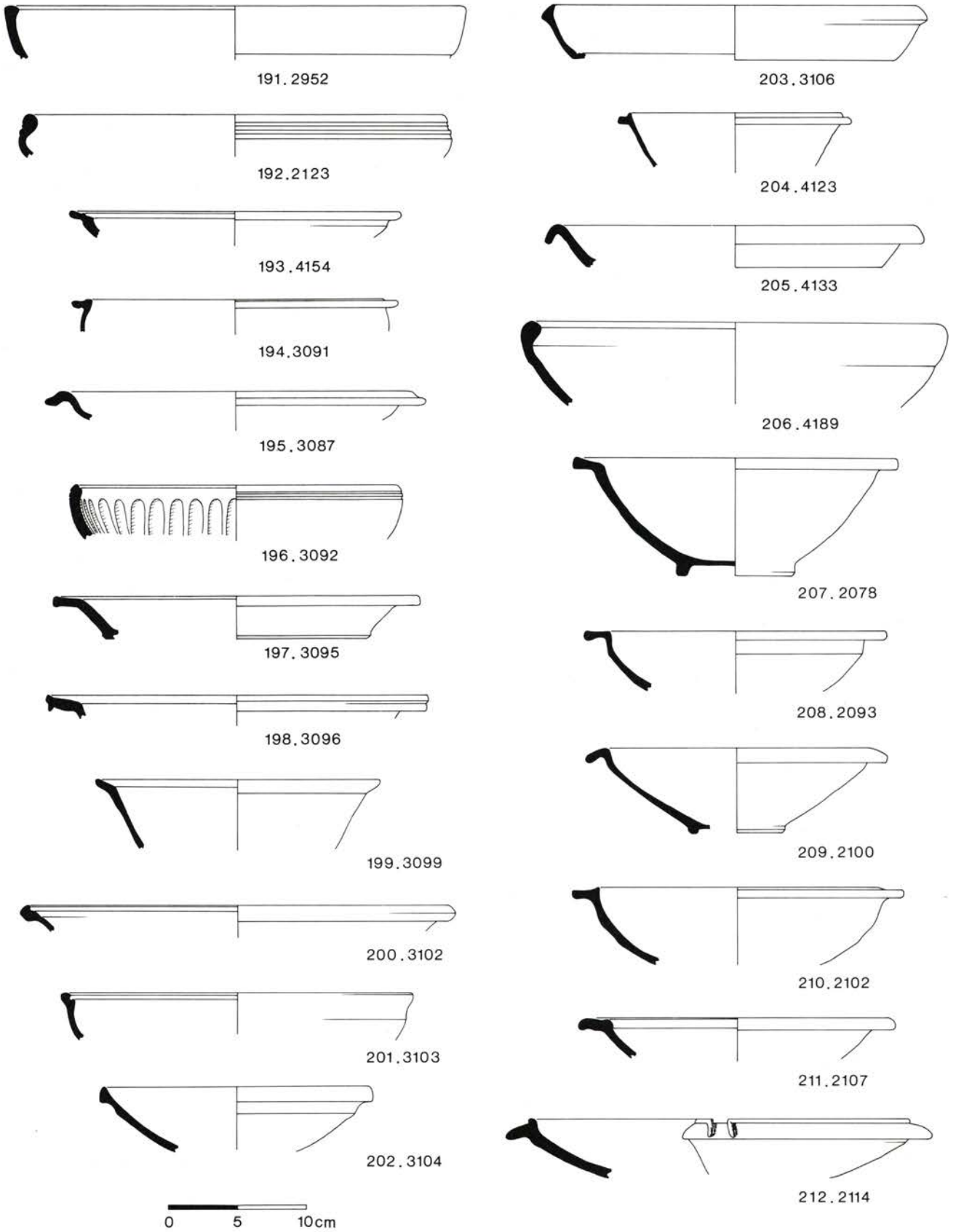


FIG.50 Coarse Pottery Types 191-212 (Scale 1:4)

204 Red.

xxiii	20 : 4123	Dia.: 17
xxiii	26 : 4130	Dia.: 15.5

xxiii 20: early second century A.D.

205 Light pinkish/red.

xxii	7 : 4133	Dia.: 28
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xxii 7: latest first century B.C.

206 Hard pinkish/buff, banded buff and red inner surface.

xxiii	10 : 4189	Dia.: 30
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xxiii 10: second half of first century A.D.

MEDIUM AND LARGE BOWLS (FIGS 50-54)

207-212 A consistent and easily recognisable bowl form; the lower wall is mostly conical in shape but sometimes approaches hemispherical; the upper wall is sometimes terminated by a short vertical section; the rim is formed of a flange, usually slightly thickened at the outer end, which projects at more or less right angles; there is a low foot-ring, tooled on the exterior. A division into types has been made on the basis of the precise arrangements of the flange: in 207 this is inclined slightly upwards and the upper face is often concave, in 208 it is approximately horizontal and in 209 it is downturned and the upper face is convex; 210 and 211 are distinguished by developments at the junction of the flange and the upper wall: in 210 a slight lip, in 211 a bead; in 212 the flange is slightly downturned and tapered and the bead projects well above it; several examples show evidence of a spout formed from the bead.

Fabric:

Mostly pinkish/brown or grey/brown, less often red/brown or orange/brown, almost always greenish/cream outer rim and upper wall and often whole of outer surface; inclusions: see profiles, p.97. This is an extremely consistent fabric particularly with regard to inclusion texture which, apart from a single example, is confined to categories 2 and 3.

207

i	121 : 3063	Dia.: 22	xiv	25 : 2078	Dia.: 24
ivb	1 : 3071	Dia.: 21	xiv	49 : 2073	Dia.: 19
v	3 : 3062	Dia.: 23	xiv	50 : 2077	Dia.: 24
v	3 : 3064	Dia.: 25	xiv	70 : 2074	Dia.: 24
vib	2 : 3065	Dia.: 24	xiv	70 : 2080	Dia.: 22
vib	7 : 3068	Dia.: 22	xiv	70 : 2084	Dia.: 20
vib	7 : 3070	Dia.: 24	xiv	70 : 2085	Dia.: 22
viii	1 : 3069	Dia.: 21	xiv	71 : 2086	Dia.: 22
xiv	6 : 2076	Dia.: 23	xiv	81 : 2079	Dia.: 20
xiv	8a : 2075	Dia.: 22	xix	2 : 3066	Dia.: 22
xiv	9 : 2082	Dia.: 23	xix	6 : 3067	Dia.: 24
xiv	9 : 2083	Dia.: 21	xxi	18 : 4152	Dia.: 23
xiv	11 : 2081	Dia.: 22	xxi	21 : 2071	Dia.: 19

xxii	7 : 2068	Dia.: 23	xxii	35 : 2072	Dia.: 28
xxii	7 : 3912	Dia.: 23	xxii	35 : 3913	Dia.: 23
xxii	10 : 2070	Dia.: 21	xxiii	39 : 2087	Dia.: 22
xxii	35 : 2069	Dia.: 22			

208

v	3 : 3072	Dia.: 24	xiv	81 : 2098	Dia.: 24
v	9 : 3075		xiv	83 : 2092	Dia.: 23
xiv	8a : 2091	Dia.: 23	xiv	92 : 2090	Dia.: 23
xiv	9 : 2094	Dia.: 23	xxii	7 : 2095	Dia.: 24
xiv	9 : 2099	Dia.: 22	xxii	8 : 2096	Dia.: 23
xiv	81 : 2089	Dia.: 22	xxii	12 : 2093	Dia.: 22
xiv	81 : 2097	Dia.: 25	xxv	16 : 3073	Dia.: 21

209

iii	9 : 3076	Dia.: 22	xiv	120 : 2103	Dia.: 22
xxiii	39 : 4153		xxiii	10 : 2104	Dia.: 22
xiv	119 : 2100	Dia.: 22			

210

xiv	6 : 2102	Dia.: 24	xiv	49 : 2106	
xiv	12 : 2101	Dia.: 25	xxi	17 : 2105	Dia.: 25

211

xiv	128 : 2107	Dia.: 23
xiv	128 : 2108	Dia.: 21
xxi	22 : 2109	Dia.: 22

212

xiv	9 : 2112		xxiii	39 : 2110	Dia.: 31
xiv	92 : 2118		xxiii	39 : 2113	Dia.: 26
xxi	22 : 2115	Dia.: 29	xxiii	39 : 2114	Dia.: 31
xxii	8 : 2111	Dia.: 40	xxiii	39 : 2116	Dia.: 25
xxiii	12 : 2117	Dia.: 38			

xxii 7, 8, xiv 49, 50: second half first century B.C.

See also Fulford 1986a, fig.87, nos.113–6 (from Pit 2, trench Y3–4: latest first century B.C.).

The distribution in the excavated contexts (see FIG.51) does not permit any chronological distinctions to be made between the different types.

213–218 Bowl with gently curving lower wall, outsplayed upper wall, and more or less projecting and overhanging rim. There are three main variations on the basic type (213–16) and a number of additional, less frequent, variations (217, 218).

The main form-related sub-divisions are as follows: In 213 the upper wall is outsplayed in a continuous curve which stops short of the horizontal; the rim forms an overhanging moulding with a curved or flat outer face; the lid-locator is a shallow notch cut on the inner face immediately below the lip. In 214 the shape of the upper wall is much the same as in 213 except that its upper end more nearly approaches the horizontal, the rim is less developed (being simply a slightly enlarged termination to the wall) and the lid-locator is broader. 215 is a shallower, more dish-like form in which the upper wall is approximately vertical and the rim is separately articulated as a horizontal flange; as the resting surface for the lid is now horizontal, the broad indentation of the

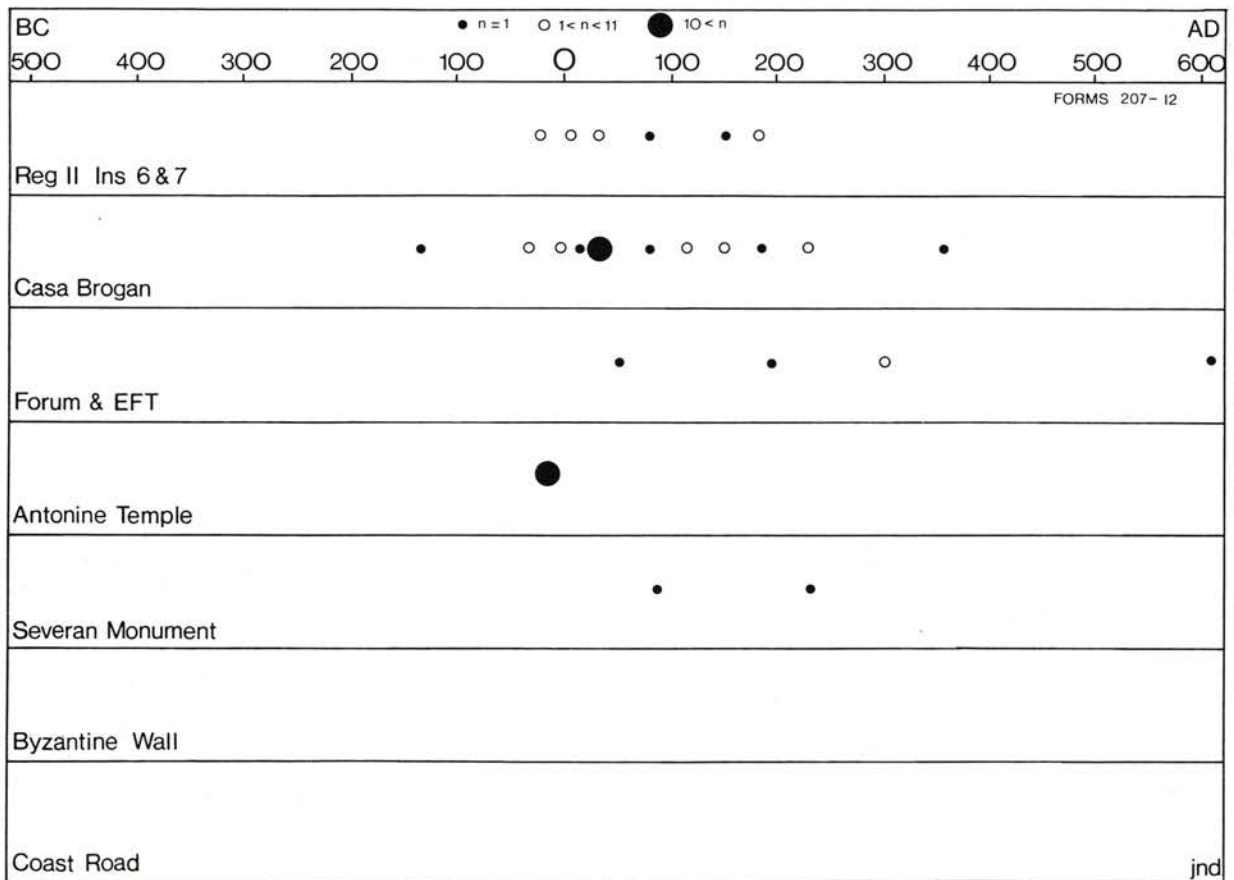


FIG.51 The Occurrence of Types 207-12 in the Site Stratigraphy

lid-locator occupies much of the upper face of the rim, 216 is much the same as 215 except that the lid-locating groove has been replaced by a moulded stop on the end of the rim.

Fabric:

A sample of 149 vessels was divided into two groups on the basis of colour. The association between these groupings and the texture and proportion of inclusions was tested by fitting a series of linear models of varying complexity (using the GLIM package on Newcastle University's computer system; see also section on fabric in Introduction). The model which provided an acceptable fit to the data was one of conditional independence. The proportion and texture of the inclusions, while being independent in each level of colour, were both associated with colour. In other words, the division of the sample into two groups on the basis of colour represented a difference which was also reflected in the texture and proportion of inclusions of the groups. These results would seem, therefore, to justify a division of the sample into two fabric groupings on the basis of colour:

a) The body colour is always wholly or partly dark grey, indicating a non-oxidising kiln atmosphere at some point during firing. The surface is mostly a patchy or banded dark brown and dark grey, very often with a dirty cream surface on the outside of the rim.

b) The body colour is always a single colour, orange or orange/brown. The outer surface is very often yellowish/cream and sometimes this extends to the inner surface as well.

For details of inclusions see profiles, p.97. Essentially, fabric a tends towards a slightly finer texture and a slightly higher proportion of limestone than fabric b. The proportion of the two

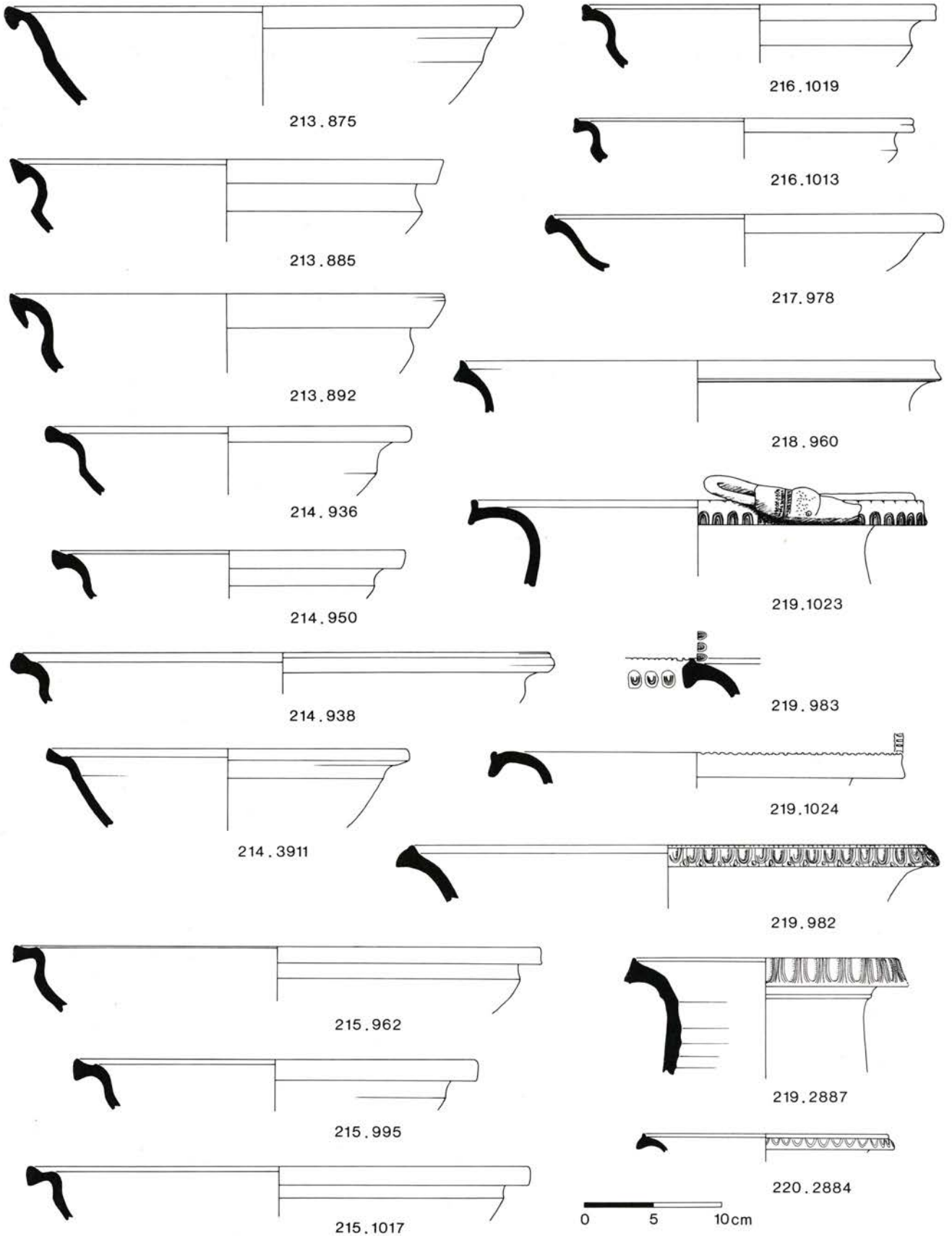


FIG.52 Coarse Pottery Types 213-220 (Scale 1:4)

fabrics occurring in each of the types is given below. Essentially, almost all of 213 is in fabric a, and more than half of both 214 and 215 are in fabric b. The fact that, on the one hand, there is a significant association between form and fabric, while on the other, the correlation is not perfect, coupled with the fact that the differences in inclusion composition are those of amount and proportion rather than of basic type would seem to suggest that the distance (both culturally and geographically) between the production groupings represented by these fabrics is small (given that it is unlikely that the two fabric groupings simply represent two single kiln loads and rather more likely that they represent tendencies of a somewhat longer time span).

213 (Fabric a: 98%, b: 2%);

i	36 : 2795	Dia.: 37	xiv	81 : 868	Dia.: 34
i	43 : 2894	Dia.: 26	xiv	81 : 869	Dia.: 36
i	46 : 2806		xiv	81 : 870	Dia.: 29
i	49 : 2803		xiv	81 : 871	Dia.: 30
i	99 : 2786	Dia.: 23	xiv	81 : 873	Dia.: 40
iii	4 : 2788	Dia.: 28	xiv	81 : 874	Dia.: 30
iii	7 : 2793	Dia.: 28	xiv	81 : 875	Dia.: 38
iii	9 : 2792	Dia.: 28	xiv	81 : 876	Dia.: 40
iii	9 : 2805		xiv	81 : 877	Dia.: 30
iiib	1 : 2804	Dia.: 25	xiv	81 : 878	Dia.: 28
iiib	1 : 2812		xiv	81 : 880	Dia.: 38
iiib	3 : 2807	Dia.: 24	xiv	81 : 3907	Dia.: 21
iiic	2 : 2789	Dia.: 31	xiv	81 : 3908	Dia.: 39
iiic	2 : 2797		xiv	81 : 4198	Dia.: 30
iiic	2 : 2809	Dia.: 27	xiv	83 : 879	Dia.: 40
iv	5 : 2811		xiv	83 : 881	Dia.: 30
v	2 : 2802	Dia.: 32	xiv	83 : 882	Dia.: 31
v	2 : 2810	Dia.: 35	xiv	83 : 883	Dia.: 41
v	3 : 2796	Dia.: 27	xiv	83 : 884	Dia.: 39
v	4 : 2801	Dia.: 22	xiv	92 : 885	Dia.: 32
v	12 : 2794	Dia.: 27	xiv	92 : 886	Dia.: 33
via	2 : 2798	Dia.: 33	xiv	92 : 887	Dia.: 26
vib	2 : 2800	Dia.: 29	xiv	92 : 977	Dia.: 33
vib	7 : 2790	Dia.: 36	xiv	120 : 888	Dia.: 22
vib	7 : 2791	Dia.: 37	xiv	120 : 889	Dia.: 27
vic	4 : 2808		xiv	127 : 890	Dia.: 34
xiv	6 : 846	Dia.: 30	xiv	127 : 891	Dia.: 31
xiv	6 : 847	Dia.: 38	xiv	128 : 892	Dia.: 32
xiv	6 : 848	Dia.: 30	xiv	128 : 893	Dia.: 35
xiv	7a : 863	Dia.: 40	xiv	128 : 894	Dia.: 28
xiv	8a : 849	Dia.: 30	xiv	128 : 895	Dia.: 40
xiv	9 : 850	Dia.: 32	xiv	128 : 896	Dia.: 32
xiv	9 : 851	Dia.: 31	xiv	128 : 897	Dia.: 31
xiv	9 : 852	Dia.: 35	xv	20 : 2787	Dia.: 27
xiv	9 : 853	Dia.: 34	xxi	18 : 898	Dia.: 30
xiv	9 : 854	Dia.: 21	xxi	22 : 899	Dia.: 27
xiv	9 : 855	Dia.: 26	xxi	22 : 900	Dia.: 32
xiv	9 : 856	Dia.: 31	xxii	7 : 901	Dia.: 39
xiv	9 : 857	Dia.: 40	xxii	7 : 902	Dia.: 25
xiv	9 : 961	Dia.: 30	xxii	8 : 903	Dia.: 27
xiv	10 : 858	Dia.: 29	xxii	8 : 904	Dia.: 40
xiv	11 : 859	Dia.: 35	xxii	11 : 905	
xiv	11 : 860	Dia.: 39	xxii	11 : 935	Dia.: 38
xiv	22 : 861		xxii	13 : 906	Dia.: 33
xiv	71 : 862	Dia.: 32	xxii	13 : 907	Dia.: 31
xiv	81 : 845	Dia.: 40	xxii	13 : 912	Dia.: 28
xiv	81 : 864	Dia.: 32	xxii	14 : 908	Dia.: 29
xiv	81 : 865	Dia.: 39	xxii	15 : 909	Dia.: 35
xiv	81 : 866	Dia.: 30	xxii	15 : 910	Dia.: 36
xiv	81 : 867	Dia.: 30	xxii	17 : 911	Dia.: 27

xxii	18 : 4181	Dia.: 30	xxiii	10 : 926	Dia.: 26
xxii	35 : 914	Dia.: 31	xxiii	11 : 4170	Dia.: 17
xxii	35 : 915	Dia.: 38	xxiii	17 : 927	Dia.: 35
xxii	35 : 916	Dia.: 41	xxiii	21 : 928	Dia.: 29
xxii	35 : 917	Dia.: 21	xxiii	23 : 4155	Dia.: 28
xxii	35 : 918	Dia.: 38	xxiii	29 : 4183	Dia.: 30
xxii	35 : 919	Dia.: 24	xxiii	38 : 929	Dia.: 35
xxii	35 : 920	Dia.: 29	xxiii	39 : 930	Dia.: 26
xxii	35 : 921	Dia.: 29	xxiii	39 : 931	Dia.: 31
xxii	35 : 922	Dia.: 20	xxiii	39 : 932	Dia.: 28
xxii	35 : 923		xxiii	39 : 933	Dia.: 19
xxiii	9 : 924	Dia.: 33	xxiii	40 : 956	Dia.: 28
xxiii	10 : 925	Dia.: 35	xxiv	67 : 934	Dia.: 40

214 (Fabric a: 36%, b: 64%)

i	45 : 2840	Dia.: 26	xiv	9 : 963	Dia.: 40
i	46 : 2828		xiv	70 : 943	Dia.: 38
i	46 : 2830		xiv	70 : 944	Dia.: 24
i	46 : 2831	Dia.: 34	xiv	70 : 945	Dia.: 22
i	46 : 2843		xiv	70 : 946	Dia.: 21
i	46 : 2892		xiv	70 : 965	Dia.: 38
i	46 : 2893	Dia.: 28	xiv	70 : 966	Dia.: 31
i	62 : 2871	Dia.: 39	xiv	70 : 967	Dia.: 28
i	64 : 2890	Dia.: 26	xiv	71 : 947	Dia.: 27
i	121 : 2844	Dia.: 32	xiv	71 : 948	Dia.: 27
iii	2 : 2833	Dia.: 27	xiv	71 : 964	Dia.: 35
iii	3 : 2820	Dia.: 28	xiv	71 : 968	Dia.: 26
iii	3 : 2821	Dia.: 36	xiv	79 : 938	Dia.: 40
iii	4 : 2837	Dia.: 34	xiv	81 : 949	Dia.: 29
iii	4 : 2875		xiv	81 : 950	Dia.: 26
iii	7 : 2832	Dia.: 38	xiv	81 : 951	Dia.: 39
iii	9 : 2834	Dia.: 27	xiv	81 : 958	Dia.: 29
iii	9 : 2838	Dia.: 30	xiv	81 : 4197	Dia.: 30
iiic	2 : 2835		xv	19 : 2824	Dia.: 26
iv	16 : 2822	Dia.: 38	xxii	7 : 952	Dia.: 32
iv	16 : 2841	Dia.: 32	xxii	7 : 969	Dia.: 22
iv	16 : 2891	Dia.: 32	xxii	7 : 970	Dia.: 27
ivb	1 : 2836		xxii	7 : 1568	Dia.: 25
v	2 : 2829		xxii	8 : 975	
v	3 : 2823	Dia.: 45	xxiii	8 : 972	
v	3 : 2825	Dia.: 39	xxii	13 : 953	Dia.: 40
v	3 : 2827	Dia.: 42	xxii	13 : 973	Dia.: 27
v	4 : 2895		xxii	14 : 908	Dia.: 29
vid	1 : 2889	Dia.: 35	xxii	35 : 954	Dia.: 30
viii	1 : 2826	Dia.: 28	xxii	35 : 971	Dia.: 25
viii	2 : 2839	Dia.: 29	xxiii	39 : 955	Dia.: 29
xiv	6 : 959	Dia.: 29	xxiii	39 : 974	Dia.: 38
xiv	9 : 936	Dia.: 27	xxiii	79 : 957	Dia.: 39
xiv	9 : 937	Dia.: 28	xxiv	80 : 4184	
xiv	9 : 938	Dia.: 40	xxv	24 : 3911	Dia.: 27
xiv	9 : 939	Dia.: 41	xxv	24 : 4188	Dia.: 28
xiv	9 : 941	Dia.: 39	xxv	26 : 4180	Dia.: 39

215 (Fabric a: 26%, b: 74%)

i	46 : 2847		ia	1 : 2850	Dia.: 26
i	46 : 2849		iii	4 : 2854	
i	46 : 2855		iii	4 : 2856	
i	46 : 2857		iii	4 : 2861	Dia.: 22
i	119 : 2864	Dia.: 27	iii	7 : 2853	Dia.: 27

iii	8 : 2862		xiv	81 : 994	Dia.: 40
iiib	5 : 2869		xiv	81 : 995	Dia.: 30
iiic	2 : 2848		xiv	81 : 996	Dia.: 30
iiic	2 : 2870		xiv	81 : 997	Dia.: 41
iv	16 : 2851		xiv	81 : 998	Dia.: 29
ivb	9 : 2867	Dia.: 41	xiv	81 : 999	Dia.: 40
v	3 : 2863	Dia.: 24	xiv	81 : 1000	Dia.: 26
v	6 : 2852		xiv	81 : 1001	Dia.: 29
v	9 : 2872	Dia.: 31	xiv	81 : 2066	Dia.: 24
via	1 : 2845		xiv	81 : 2067	Dia.: 40
vib	2 : 2846	Dia.: 27	xiv	81 : 3910	Dia.: 29
vib	2 : 2858	Dia.: 30	xiv	117 : 1002	Dia.: 31
vib	2 : 2859		xxii	7 : 1003	Dia.: 33
vib	2 : 2860	Dia.: 26.5	xxii	7 : 1004	Dia.: 28
vib	7 : 2868	Dia.: 37	xxii	8 : 1005	Dia.: 28
vid	1 : 2819	Dia.: 28	xxii	8 : 1007	
viii	1 : 2865	Dia.: 27	xxii	8 : 1006	Dia.: 35
viii	1 : 2866	Dia.: 40	xxii	8 : 1008	Dia.: 26
xiv	9 : 962	Dia.: 39	xxii	12 : 1009	Dia.: 40
xiv	9 : 985	Dia.: 30	xxii	17 : 1010	Dia.: 15
xiv	9 : 986	Dia.: 26	xxii	33 : 913	Dia.: 29
xiv	9 : 987	Dia.: 39	xxii	35 : 1011	Dia.: 28
xiv	9 : 4200	Dia.: 27	xxii	35 : 1012	Dia.: 37
xiv	70 : 988	Dia.: 27	xxii	35 : 1014	Dia.: 28
xiv	70 : 989	Dia.: 18	xxii	35 : 1015	Dia.: 41
xiv	70 : 990	Dia.: 40	xxiii	9 : 1016	
xiv	70 : 991	Dia.: 39	xxiii	39 : 1017	Dia.: 37
xiv	70 : 992		xxv	24 : 4166	Dia.: 27
xiv	71 : 993	Dia.: 26	xxv	25 : 3909	Dia.: 34

216 (Fabric a: 50% b: 50%)

i	46 : 2874	Dia.: 24	xiv	8a : 1020	Dia.: 14
ia	9 : 2880	Dia.: 40	xiv	71 : 976	Dia.: 28
iii	1 : 2879	Dia.: 26	xiv	81 : 981	Dia.: 29
iii	4 : 2877		xiv	81 : 1018	Dia.: 25
iiib	1 : 2873		xv	29 : 2881	
iv	5 : 2876		xxii	7 : 1021	Dia.: 25
vib	2 : 2878	Dia.: 30	xxii	35 : 1013	Dia.: 25
vic	6 : 2882	Dia.: 40	xxii	39 : 1022	Dia.: 15
xiv	4 : 1019	Dia.: 26			

217 (Fabric a: 50% b: 50%)

v	3 : 2883	Dia.: 30	xxiii	10 : 1569	Dia.: 28
vic	1 : 2896		xxiii	11 : 1570	
xiv	11 : 2064	Dia.: 38	xxiii	21 : 1567	Dia.: 30
xiv	12 : 979	Dia.: 32	xxiii	23 : 1571	Dia.: 34
xxiii	10 : 978	Dia.: 29			

218 Brownish/grey with grey surface; T4, quartz and limestone.

xiv	6 : 960	Dia.: 35			
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i 36: possibly as early as early second century B.C. (if Eastern Sigillata A and Pompeian Red regarded as intrusive).

i 43: possibly as early as early third century B.C.

xxiii 38: possibly as early as third century B.C.

See also Fulford 1986a, fig 87, nos.117-20 (Pit 2, trench Y3-4: latest 1st century B.C.).

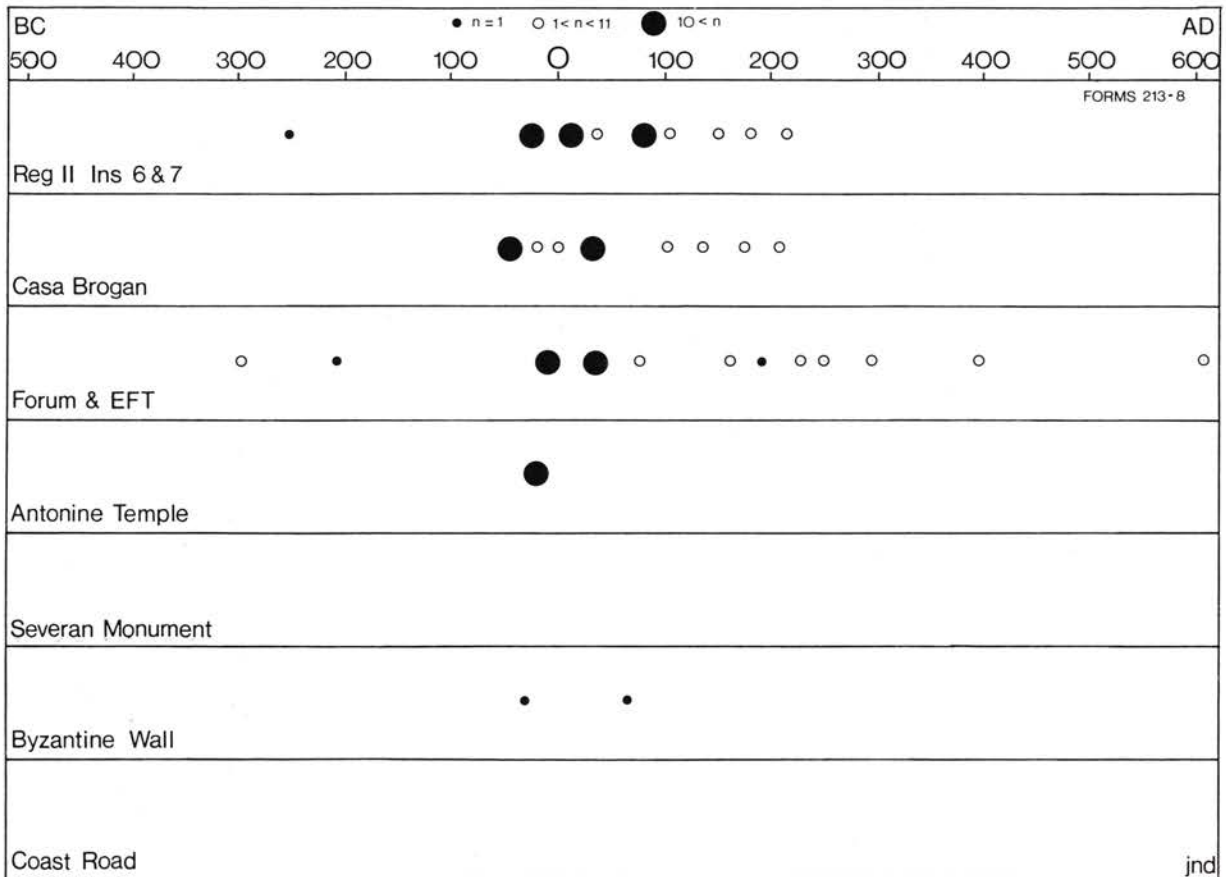


FIG.53 The Occurrence of Types 213–18 in the Site Stratigraphy

These types occur in contexts of the late first century B.C. in the Casa Brogan and in quantity in contexts of the first century B.C. in Regio II, Insula 6. Thereafter they occur in quantity in contexts of the first century A.D. in all parts of the site, and they continue to occur in varying degrees in later contexts (see FIG.53). An initial date for these types in the first century B.C. would seem reasonable. No chronological distinction between types 213–218 and between fabrics a and b can be made on the basis of their distribution in the site contexts; this does not mean that real differences may not exist, merely that they cannot be detected at Sabratha.

See also:

Dyson 1976, Deposit 22 II, nos. 78–81 (Deposit TPQ *c.* A.D. 34);

Riley 1979, D801–810 (Early Roman Plain Ware 1, possibly from second century B.C. – Deposits 14 & 35; common by early first century A.D.);

Hayes 1976, fig.17, nos.2–4 (Early Roman Buff Ware Basins, first century A.D. contexts)

Robinson 1959, G100 (level II: TPQ A.D. 26).

- 219** Large “situlate” vessels with outsplayed rims; they often have egg and dart decoration in relief on the outer face of the rim, and several of them have a poorly rendered goose head applied to the outer face of the rim with the neck extending along the rim top.

Fabrics:

- a) Anything from pale brown to orange/brown, sometimes with cream or cream yellow surface; T1, 2 & 3 (5,1,1 eggs) mainly quartz.

iv	6 : 2888	Dia.: 37	xxii	15 : 983	Dia.: 36
vib	2 : 2887	Dia.: 20	xxii	35 : 1025	Dia.: 40
xiv	9 : 984	Dia.: 40	xxiii	10 : 4167	Dia.: 30
xiv	92 : 1023	Dia.: 33	xxiii	39 : 982	Dia.: 38
xiv	92 : 1024	Dia.: 30	xxiv	15 : 4179	Dia.: 31.5

b) Very pale pinkish/brown, cream surface; T1, quartz, mica, red iron and black vitreous grains.

iii 4 : 2886 Dia.: 36

220 Smaller version of 219

Orange, cream surface; T1, quartz, limestone, red iron and black vitreous grains.

ivb 1 : 2884 Dia.: 19

xxii 35 & xxiii 39: late first century B.C./early first century A.D.

See also Riley 1979, D811-17 (Deposits 46 & 69: first half first century A.D.).

221 Quite similar to 213 in form except that the upper wall is not as outplayed, there is no lid-locator and the transition from lower to upper wall is not as sharply defined. The fabric is quite different.

Pale, slightly greenish cream; T1, quartz, red iron and mica.

i 127 : 4062 Dia.: 42
xv 15 : 2813 Dia.: 42

i 127: possibly as early as fourth century B.C.

222 Almost vertical upper wall, projecting flange rim with overhanging lip; the upper wall makes an almost continuous curve into the rim; there is no lid-locator.

Pale brown to pale orange brown; T1 & 2, quartz and limestone.

G 2 20	: 2818	Dia.: 33	xv	16 : 2814	Dia.: 34
xv	15 : 2815	Dia.: 40	xv	17 : 2816	Dia.: 40
xv	15 : 2817	Dia.: 40			

All contexts sixth century A.D.

LARGE BOWLS/BASINS (FIGS 54-59)

MORTARIA

223 Grey/brown, yellow/cream surface; T4, limestone and quartz.

i 120 : 3113 Dia.: 35

224 Pale orange, dark surface; T1, quartz, limestone and black vitreous grains.

iv 1 : 3109 Dia.: 42

iv 1: late first century A.D.

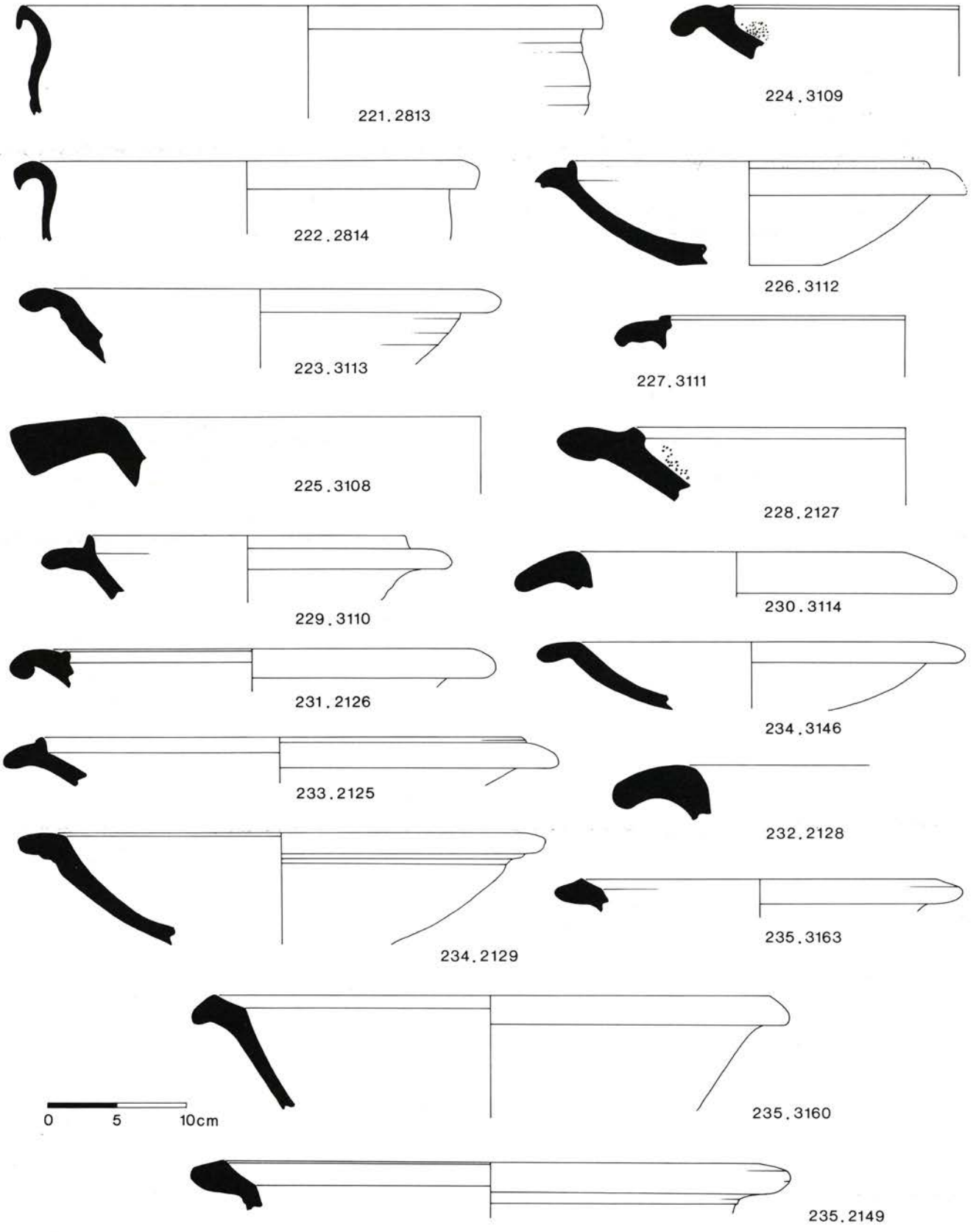


FIG.54 Coarse Pottery Types 221–235 (Scale 1:4)

- 225** Orange/brown, orange/cream surface; T2, quartz and limestone.
iv 12 : 3108 Dia.: 68
iv 12: late first century A.D.
- 226** Red/brown, yellow/cream surface; T4, quartz, limestone, red and black vitreous grains.
vib 7 : 3112 Dia.: 29
vib 7: third century A.D.
- 227** Red/brown, yellow/cream surface; T3, limestone and quartz.
vii 2 : 3111 Dia.: 42
vii 2: fifth century A.D.
- 228** Pale pinkish/brown, trituration grits: 2-3 mm, quartz, black vitreous grains and mica; T1, quartz, red iron, black grains.
xiv 8a : 2127 Dia.: 50
xiv 8a: mid first century A.D.
- 229** Pale brown, off-white surface; T2, limestone, quartz, red and black grains.
xv 26 : 3110 Dia.: 30
xv 26: seventh century A.D.
- 230** Pale orange, pinkish/yellow surface; T4, sparse, black vitreous grains, red grains and quartz.
xv 26 : 3114 Dia.: 32
xv 26: seventh century A.D.
- 231** Pale pinkish brown; T1, quartz, red iron and black grains.
xxii 33 : 2126 Dia.: 35
xxii 33: latest first century A.D.
- 232** Mid grey core with pale grey margins; T5, quartz.
xxiii 21 : 2128
xxiii 21: mid second century A.D.
- 233** Grey/brown; T1, quartz and limestone.
xxiii 39 : 2125 Dia.: 40
xxiii 39: latest first century A.D.

234–246 A group of related bowls, both deep and shallow, whose characteristics are generally thought to be “Punic”. A number of different types have been distinguished on the basis of the precise arrangements of the rim. Most are in one fabric:

a) Anything from very pale pink, through pale yellow/brown to pale or mid greenish/grey often with a slightly contrasting core; T2, 3, 4, rounded quartz, limestone and red iron.

234 Shallow bowl; gently curved wall, short, thick projecting flange rim with convex upper surface.

Fabric a:

i	9 : 3141	Dia.: 29	iii	2 : 3143	Dia.: 34
i	64 : 3142	Dia.: 35	v	6 : 3145	
i	93 : 3144	Dia.: 36	xxiii	38 : 2129	Dia.: 38
i	96 : 3146	Dia.: 31			

xxiii 38: possibly as early as third century B.C.

i 93: first century B.C.

235 Deep bowl, short thick projecting flange rim; a broad lid-locating plane has been cut into the upper rear face of the rim.

Fabric a:

i	20 : 3160	Dia.: 43	iv	16 : 3163	
i	46 : 3164	Dia.: 39	xiv	67 : 2149	Dia.: 43
iv	1 : 3161	Dia.: 41			

i 20, xiv 67: possibly as early as third century B.C.

236–240 A series of shallow bowls or dishes having a broad, gently curved flange rim of about the same thickness as the wall; in some cases the rim is hardly articulated from the wall and forms an almost uninterrupted continuation of the wall.

Types 236–242 are quite common in the levels associated with the residential insulae on the south slope of the Byrsa Hill at Carthage, which date from about the mid third century B.C. to the destruction of 146 B.C. 234 and 235 seem to be less common in these levels while 243 does not seem to occur at all; this, when taken with the fact that 243 does not occur at Sabratha in levels earlier than the first century B.C. may suggest that it is a type whose date is confined entirely to the first century B.C. (see in general *Byrsa i* and *Byrsa ii*).

236 As above description.

Fabric a:

v	2 : 3149			
xiv	98 : 2133	Dia.: 28		
xxiii	38 : 2130	Dia.: 42		

Other fabrics:

Orange/brown, yellow/cream surface; T3, quartz and limestone.

i 138 : 3147

Red/brown, greenish/cream surface; T2, quartz and limestone.

i 141 : 3222 Dia.: 34

Black (burnt).

vib 2 : 3150 Dia.: 38

Dark red, greenish/cream surface; T5, limestone and quartz.

xiv 70 : 2131 Dia.: 35

xxiii 38 : possibly as early as third century B.C.

- 237** As basic type (236) but with the development of a lid-locating face on the back of the rim and a lip at the inside edge of this.

Fabric a:

C 9 4a	: 3152		xiv	71 : 2138	
xiv	23 : 2132		xiv	100 : 2136	Dia.: 38
xiv	70 : 2135	Dia.: 41	xiv	100 : 2137	Dia.: 37

xiv 23, 70: second half of first century B.C.

- 238** The inner and outer elements are articulated separately. The lid-locating inner face is more developed than 237.

Fabric a:

via	2 : 3148	Dia.: 36	xiv	70 : 2139	Dia.: 38
via	2 : 3157		xiv	110 : 2134	Dia.: 39

Other fabrics:

Orange/red, cream surface; T2, quartz and limestone.

viii	2 : 3174	
xiv	100 : 2148	Dia.: 32

xiv 70: second half of first century B.C.

- 239** As basic type (236), but with a slight bead at the back of the upper rim face.

Red/brown, yellow/cream surface; T1, quartz and limestone.

i 4 : 3155

Red/brown, T3; rounded quartz and limestone.

i 36 : 3156 Dia.: 39

Orange/brown, cream outer surface; T3, quartz, limestone and red iron.

xiv 71 : 2142 Dia.: 38

i 36: possibly as early as second century B.C.

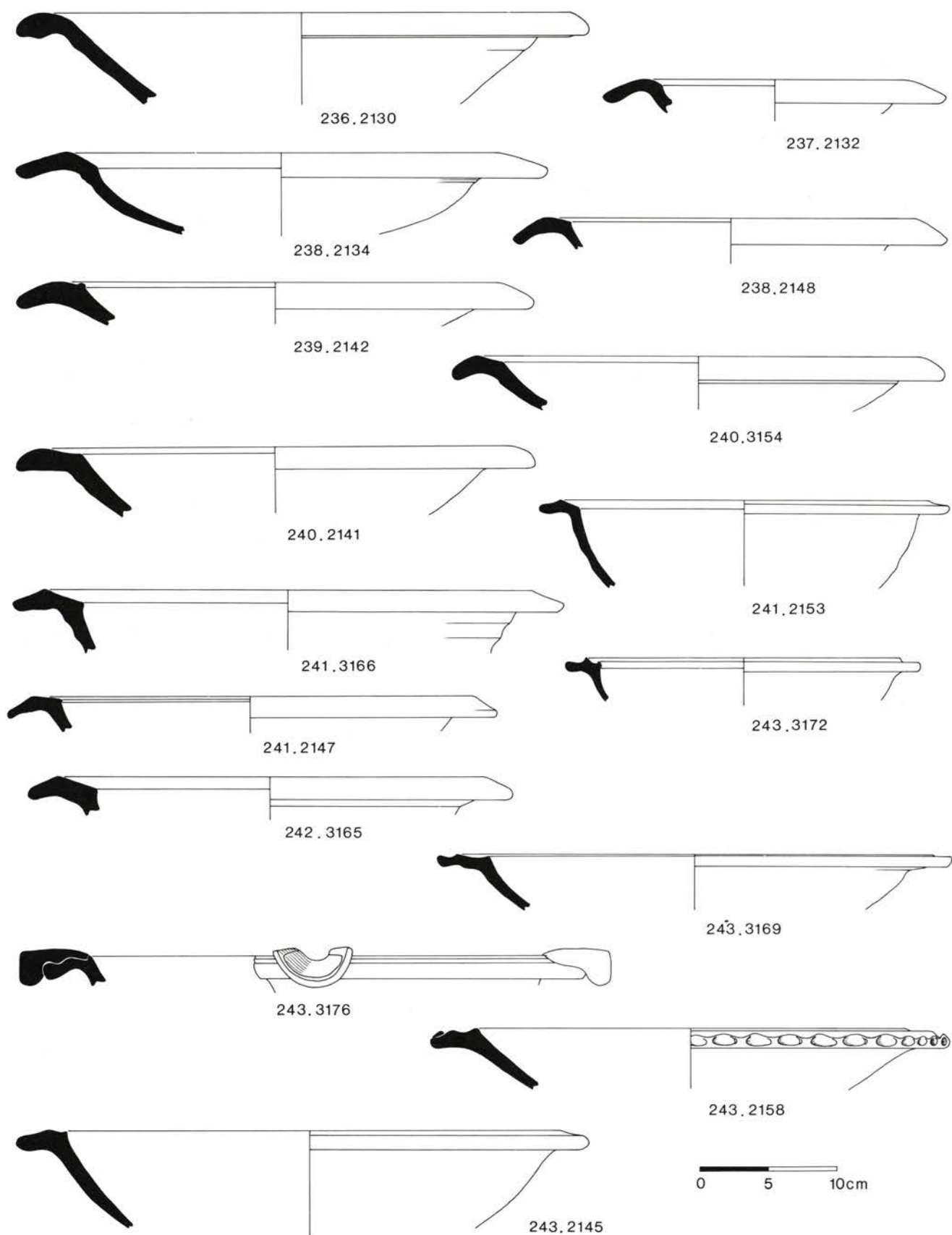


FIG.55 Coarse Pottery Types 236-243 (Scale 1:4)

240 Similar to 239 but with a more developed lid-locating face on the back of the rim.

Pale yellow core, pale pink margins, orange/yellow surface; T3, quartz and limestone.

i 19 : 3154 Dia.: 36

Orange/brown, pale yellow surface; T3, quartz and limestone.

xxiii 38 : 2141 Dia.: 38

xxiii 38: possibly as early as third century B.C.

241 The somewhat asymmetrical appearance of the rim profile of this type was the result of the back of the upper face of the rim being cut away, during manufacture, to form a broad lid-locator, in a similar way to 235.

Fabric a:

i 24 : 3166 Dia.: 41

xxi 18 : 2153 Dia.: 30

Other fabrics:

Orange/brown, dark brown core, cream surface; T4, limestone and quartz.

xiv 69 : 2154 Dia.: 32

Light yellowish/brown; brick red core.

xxi 18 : 4190

Dark red, dark orange/brown core; T4, quartz and limestone.

xxiii 21 : 2147 Dia.: 36

i 24: possibly as early as fourth century B.C.

xiv 69: second half of first century B.C.

242 Similar to 241 except that the underside of the flange has been tooled to match the profile of the cut-away upper side.

Fabric a:

i	46 : 3165		xiv	71 : 2140	Dia.: 37
xiv	70 : 2146	Dia.: 35	xxi	18 : 2144	

xiv 70: second half of first century B.C.

243 Bowl with horizontal flange rim; the upper face of the flange has two broad concentric grooves separated by a central bead; one example (3176) has a spout.

Fabric a:

i	96 : 3169	Dia.: 38	ia	3 : 3171	
i	102 : 3176	Dia.: 40	ia	8 : 3077	Dia.: 34
i	175 : 3175	Dia.: 32	iii	3 : 3079	

iii	3 : 3173	Dia.: 31	xiv	70 : 2145	Dia.: 43
v	2 : 3177		xxi	14 : 4182	Dia.: 29
vib	1 : 3170	Dia.: 31	xxi	19 : 2143	Dia.: 38
viii	1 : 3078				

Other fabrics:

Orange/brown, pale yellow surface; T3, quartz and limestone.

xiv 50 : 2158 Dia.: 38

Orange/brown, cream surface; T3, quartz and limestone.

xxi 18 : 2155

Orange/brown, yellow cream outer surface; T2, quartz and limestone.

xxiv 15 : 3172 Dia.: 26

i 102; first century B.C.

xiv 50, 70: second half first century B.C.

MISCELLANEOUS

244 Pinkish orange, greenish/cream surface; T3, quartz and limestone.

i 15 : 3162 Dia.: 40

Pale yellow, greenish orange surface; T1, quartz and black grains.

iv 15 : 3115 Dia.: 35

iv 15: late first century A.D. (residual).

245 Red/brown core, dark grey margins, greenish/cream surface; T2, quartz and limestone.

i 46 : 3151 Dia.: 31

i 46: early first century A.D.

246 Orange/brown (2152 with dark brown core and greenish cream surface); T3, quartz and limestone.

xiv 70 : 2151 Dia.: 31

xxi 21 : 2152 Dia.: 30

xiv 70: second half of first century B.C.

247 Deep bowl with projecting flange rim, very slightly tilted up; the inner, lid-locating face of the rim is gently in-sloped and slightly concave, while the outer face is sharply out-sloped and convex; one example (4016) has dark red paint on the upper face of the rim and inside.

Orange/brown, (grey core in 3159), cream surface; T2, quartz, limestone and red iron (probably = 234–246 fabric a).

i	9 : 4016	Dia.: 26.5
iiib	1 : 3158	Dia.: 33
xxvi	11 : 3159	

iiib 1: second half of first century A.D. (probably residual).

Similar vessels occur in the levels associated with the residential insulae on the Byrsa Hill at Carthage (c. mid third century B.C. – 146 B.C.; see eg *Byrsa ii*, fig.43, no.34).

- 248** Similar to 247 but with a slight bead between the two faces on the upper side of the rim; not illustrated.

Orange/brown; T3, limestone, quartz and red iron.

xiv	68 : 2156	Dia.: 33
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xiv 68: possibly as early as third century B.C.

- 249** Similar to 247 but rim thicker and slightly more ornate.

Orange/brown, pale cream surface; T3, quartz, limestone and red iron.

xiv	68 : 2157	Dia.: 45
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xiv 68: possibly as early as third century B.C.

- 250** Deep bowl, wall very slightly curved and almost upright; short, projecting, flange rim; inner face of rim slightly convex.

Pale pink to orange/brown, greenish/cream or yellow/cream surface; T1, 2, 3 (1,2,4 examples), round quartz, limestone and red iron (probably = 234-46 fabric a).

	: 3189	Dia.: 26	v	1 : 3180	Dia.: 32
iii	3 : 3179	Dia.: 35	v	6 : 3182	Dia.: 27
iiia	1 : 3183		vii	1 : 3178	Dia.: 33
iv	22 : 3181				

iii 3: first century A.D.

- 251** Similar to 250 except the vessel is deeper and the walls are thicker and more curved.

Mid brown, yellow/cream surface; T3, round quartz, limestone and red iron.

ia	4 : 3188	Dia.: 36
vib	2 : 3187	Dia.: 38

ia 4: early first century A.D.

- 252** Deep bowl, projecting, slightly upturned flange rim.

Fabrics:

- a) Orange/brown; T1, 2 (2,1 examples), quartz, limestone and red iron, also some limestone and clay pellets up to 1 mm.
 b) Red/brown, cream/brown surface; T1, 3, limestone and quartz.

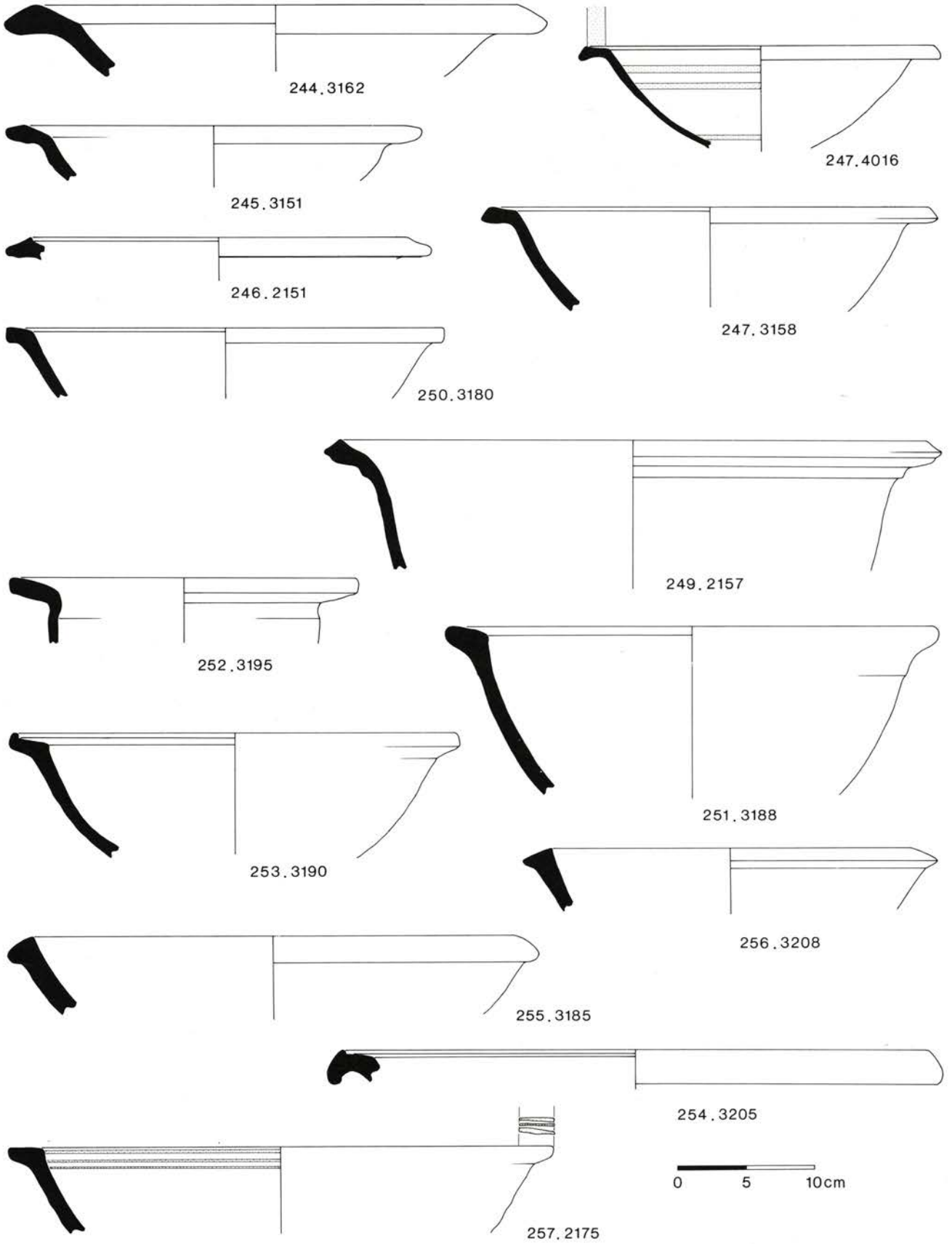


FIG.56 Coarse Pottery Types 244-257 (Scale 1:4)

Fabric a:

vib	6 : 3193	Dia.: 32
vib	6 : 3194	Dia.: 27
vib	6 : 3196	Dia.: 32

Fabric b:

xix	6 : 3195	Dia.: 26
xxiii	10 : 2172	Dia.: 30

xxiii 10: late first century A.D.

253 Deep bowl, curved wall, projecting upturned flange rim with lip at outer edge.

Orange/brown with dark brown core and greenish cream surface; T3, 4, quartz, limestone and red iron.

i	23 : 3201	Dia.: 35
i	145 : 3190	Dia.: 33

Red/brown, greenish/cream surface; T2, quartz, limestone and black vitreous grains.

i	71 : 3200	Dia.: 39
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i 23: possibly as early as fourth century B.C.

254 Horizontal flange rim considerably thickened at outer end.

Orange/brown (with dark brown core and cream surface in 2150); T3, quartz and limestone.

xiv	68 : 2150	Dia.: 39
xix	1 : 3206	Dia.: 45

Orange/brown, well rounded quartz and limestone.

i	64 : 3204	
i	175 : 3205	Dia.: 43

xiv 61: first century B.C.

255 Small projecting flange rim of round profile.

Yellow/brown to grey brown, greenish/cream surface; T3, 4 (1,2 examples), very prominent rounded quartz and limestone.

i	42 : 3185	Dia.: 39
i	57 : 3186	
v	1 : 3184	Dia.: 36

i 57: possibly as early as early second century B.C.

Similar vessels occur in the levels associated with the residential insulae on the Byrsa Hill at Carthage (see eg *Byrsa ii*, fig 22, no.17).

256 Similar to 255.

Pale yellow, red/brown core; T1, quartz.

G 2 8x : 3208 Dia.: 30

257 Deep bowl with horizontal flange rim; dark red paint on rim; no. 3198 has a handle.

Red/brown, dark red paint; T5, angular fossiliferous limestone and red iron.

X 3 19 : 3197 Dia.: 35

Orange/red, pale yellow outer surface; red paint, T3, limestone and red iron.

xiv 98 : 2175 Dia.: 40

Red/brown, thick greenish orange outer surface dark red paint; T4, limestone, rock fragments (or possibly clay pellets) and red iron.

xxviii 2 : 3198 Dia.: 46

xiv 98: late first century B.C. (residual).

258 Bowl with bead rim and small projecting flange immediately below.

Pale yellow, red/brown core and surface; T3, 4, limestone quartz and occasional red iron.

vic 1 : 3220 Dia.: 27

xiv 34 : 3219 Dia.: 28

xxiii 25 : 2167 Dia.: 32

xiv 34: second half of first century B.C.

259 & 60 Deep bowl with inturned and thickened rim; usually three or so grooves on exterior wall; in 260 the upper wall is sharply inturned and there is an offset in the exterior wall.

Mostly orange/brown, cream or yellow/cream surface; T1-4 (12,5,5,1 examples) quartz, limestone, and often black and red grains.

259

S 14 1a	: 3120		vid	5 : 3125	
vb	2 : 3124	Dia.: 47	xiv	11 : 2120	Dia.: 41
vb	7 : 3117	Dia.: 43	xiv	14 : 2121	Dia.: 45
vib	6 : 3122		xiv	84 : 2122	Dia.: 42
vib	7 : 3116	Dia.: 50	xix	6 : 3121	Dia.: 41
vib	7 : 3119	Dia.: 44	xxiii	26 : 2119	Dia.: 42
vib	7 : 3123	Dia.: 53	xxiii	26 : 2124	Dia.: 42

260

i	24 : 3133		xv	15 : 3130	Dia.: 41
iv	4 : 3127	Dia.: 39	xv	16 : 3130	Dia.: 41
vib	6 : 3126	Dia.: 42	xix	6 : 3131	Dia.: 31
vib	7 : 3132	Dia.: 39	xix	8 : 3129	
xv	15 : 3128	Dia.: 40			

i 24: possibly as early as fourth century B.C. (? intrusive).

iv 4: late first century A.D.

S 14, xiv 11: second half second century A.D.

- 261** Deep bowl; splayed wall, projecting flange rim with reeded upper surface.

Mostly pinkish/brown, occasionally red/brown, cream or yellow/cream surface; T1-3 (1,6,4 examples), limestone and quartz, and occasionally red and black grains.

	: 3135		xiv	11 : 2177	Dia.: 46
S 14 1b	: 3137	Dia.: 25	xix	6 : 3138	Dia.: 50
vib	6 : 3134	Dia.: 29	xix	6 : 3139	
vib	7 : 3136	Dia.: 30	xxiii	25 : 2178	Dia.: 28
vib	7 : 3140	Dia.: 29	xxiii	25 : 2179	Dia.: 43
xiv	11 : 2176	Dia.: 28	xxv	5 : 4187	Dia.: 50

xiv 11, xxiii 25: second half of second century.

- 262** Deep bowl with short more or less developed flange rim.

Orange/brown; T1, quartz and limestone.

xiv 92 : 2183 Dia.: 37

Pink, cream surface; T2, limestone and quartz.

xiv 119 : 2181 Dia.: 30

Orange/brown; quartz, red iron and limestone.

xxiii 25 : 2184 Dia.: 30

xiv 92, 119: first half of second century A.D.

- 263** Moulded flange rim; finger impressed decoration.

Dark red/brown, grey/brown or grey, cream rim and inner surface in 2163, rim and upper outer wall in 2165.

xiv	70 : 2164	Dia.: 37	xxii	35 : 2163	Dia.: 39
xiv	70 : 2166	Dia.: 40	xxiii	38 : 2165	Dia.: 34

xxiii 38: possibly as early as third century B.C. (?intrusive).

xiv 70: first century B.C. (?intrusive).

xxii 35: first century A.D.

See also Bourgeois 1982, fig 10 nos 499-500 (Mactar, niveau 1, fourth-seventh century A.D.).

- 264** Shallow bowl with downturned, undercut flange rim, moulded and decorated in stamped relief with rosettes.

Red/brown, thick yellow surface; T2, 5, limestone.

i	115 : 3212	Dia.: 37			
v	9 : 3716	Dia.: 32			

v 9: third century A.D.

- 265** Pale orange, with grey core in 1 example, dark maroon/brown to black surface; T1, 2 (2, 1 examples) quartz and limestone.

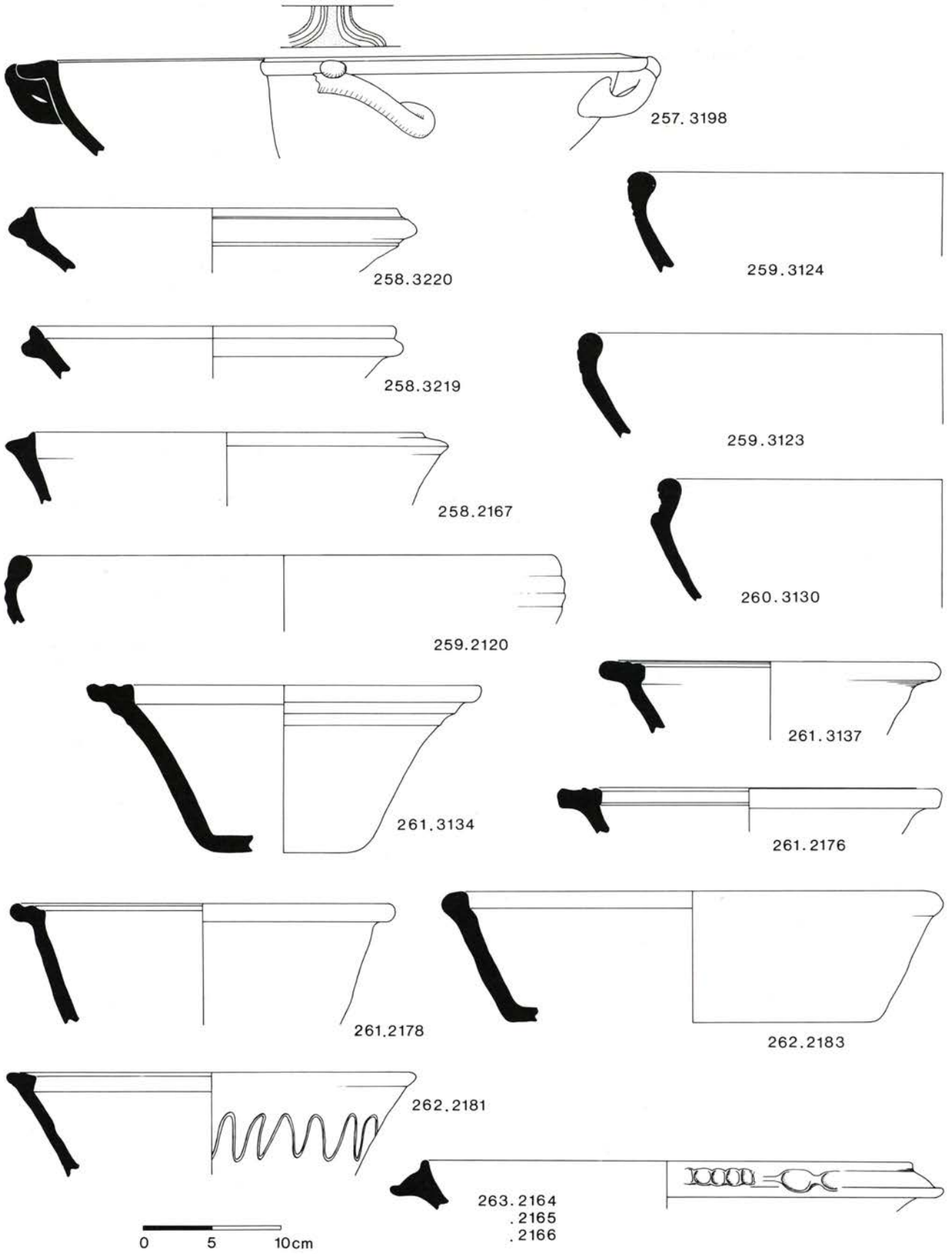


FIG. 57 Coarse Pottery Types 257-263 (Scale 1:4)

xv	26 : 3082	Dia.: 48
xvii	6 : 3080	Dia.: 42
xvii	10 : 3081	Dia.: 39

xvii 6: early fifth century A.D.

A similar type is known from the area of the UNESCO Libyan Valleys Survey (unpublished) where it is associated with fineware of a date no earlier than the second century A.D.

Generally similar bowls with inturned lips and flange rims are known at Berenice (Benghazi) where they are common from the second century A.D. and may continue into the late Roman period (Riley 1979, Mid Roman Plain Ware 3).

MISCELLANEOUS

266 Red/brown, pale yellow surface.

xiv	67 : 2161	Dia.: 38
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xiv 67: possibly as early as fourth century B.C.

267 Red/brown, dark grey margins, pale yellow surface; T3, limestone and quartz.

xiv	6 : 2160	Dia.: 40
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xiv 6: early first century A.D.

268 Dark red/brown core, dark grey margins, pale yellow/cream surface; T4, rounded quartz and limestone.

xxiii	14 : 2169	Dia.: 50
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xxiii 14: second century A.D.

269 Orange/brown, pinkish orange inner surface; black outer, T2, quartz and limestone.

viii	1 : 3658	Dia.: 34
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viii 1: late sixth century A.D.

270 Pale grey; T2, quartz.

i	22 : 3203	Dia.: 37
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i 22: possibly as early as fourth century B.C.

271 Very pale yellow/brown; T5, sparse, rock fragments and quartz.

via	1 : 3210	Dia.: 32
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via 1: second half of third century A.D.

272 Red/brown; T1, quartz and limestone.

vib	7 : 3215	Dia.: 27
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vib 7: fourth century A.D.

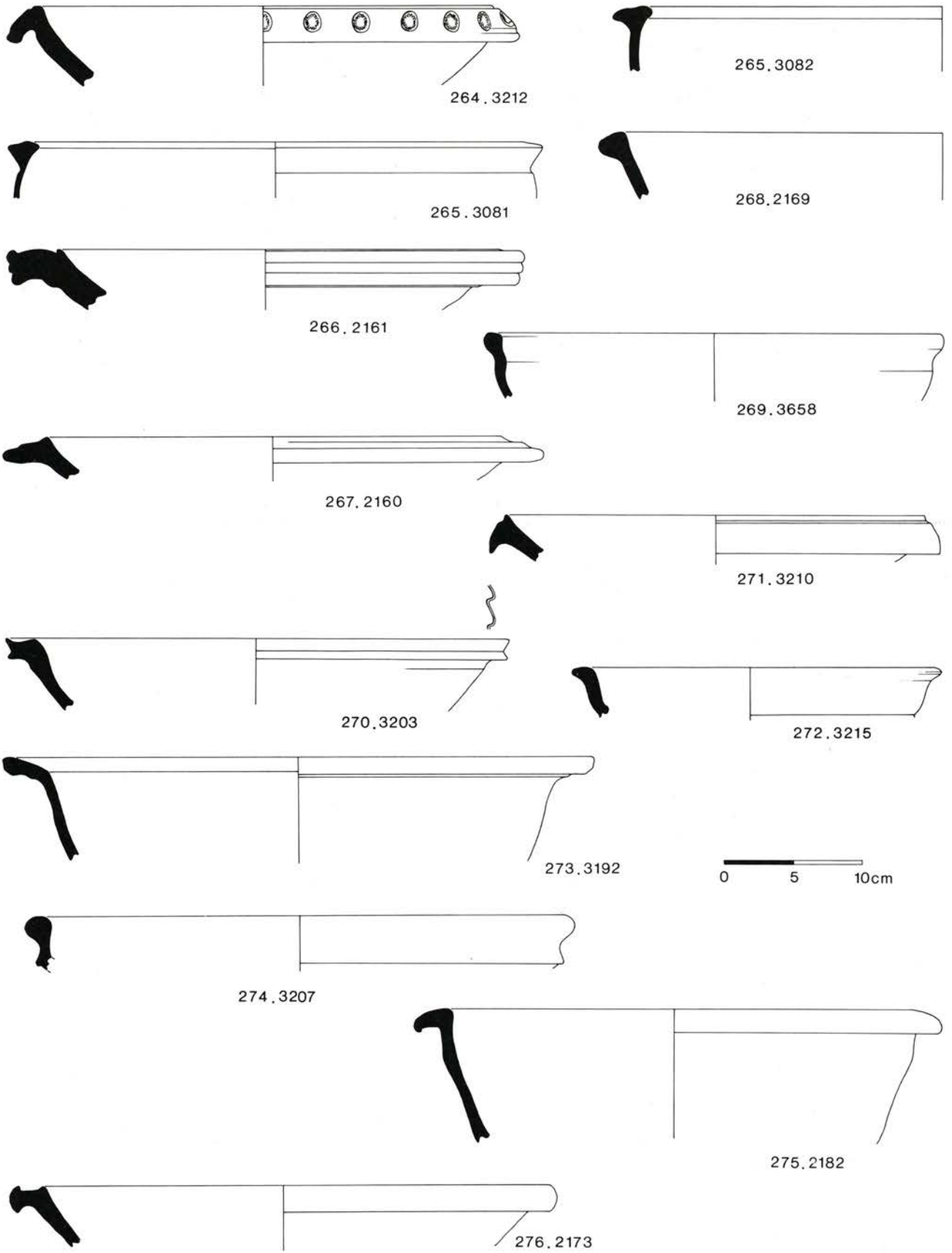


FIG.58 Coarse Pottery Types 264-276 (Scale 1:4)

- 273** Mid brown, burnished red/brown surface; T1, quartz, limestone, red and black grains.
vid 5 : 3192 Dia.: 43
vid 5: fourth century A.D.
- 274** Red/brown core, dark grey margins, yellow/cream surface; T1, quartz and limestone.
vii 1 : 3207
vii 1: fifth century A.D.
- 275** Pale grey/brown, pale pink core; T4, limestone and quartz.
xiv 9 : 2182 Dia.: 38
xiv 9: mid first century A.D.
- 276** Greenish cream, pale pink core; T3, quartz.
xiv 11 : 2173 Dia.: 40
xiv 11: second half of second century A.D.
- 277** Pale brown core, orange/pink margins, cream yellow surface; T3, quartz, black iron and limestone.
xiv 11 : 2174 Dia.: 40
xiv 11: second half of second century A.D.
- 278** Orange/brown, burnished surface; T1, quartz and red iron.
xiv 84 : 2186 Dia.: 46
xiv 84: second half of fourth century A.D.
- 279** Orange/brown, smooth surface; T1, sparse, very few inclusions visible.
xiv 128 : 2185 Dia.: 31
xiv 128 : late second century A.D.
- 280** Red/brown, orange/yellow surface; T2, quartz and limestone.
xv 15 : 3214 Dia.: 30
xv 15: sixth century A.D.
- 281** Yellow/cream, pale grey surface; T3, quartz.
xvii 9 : 3211 Dia.: 26
xvii 9: late sixth century A.D.

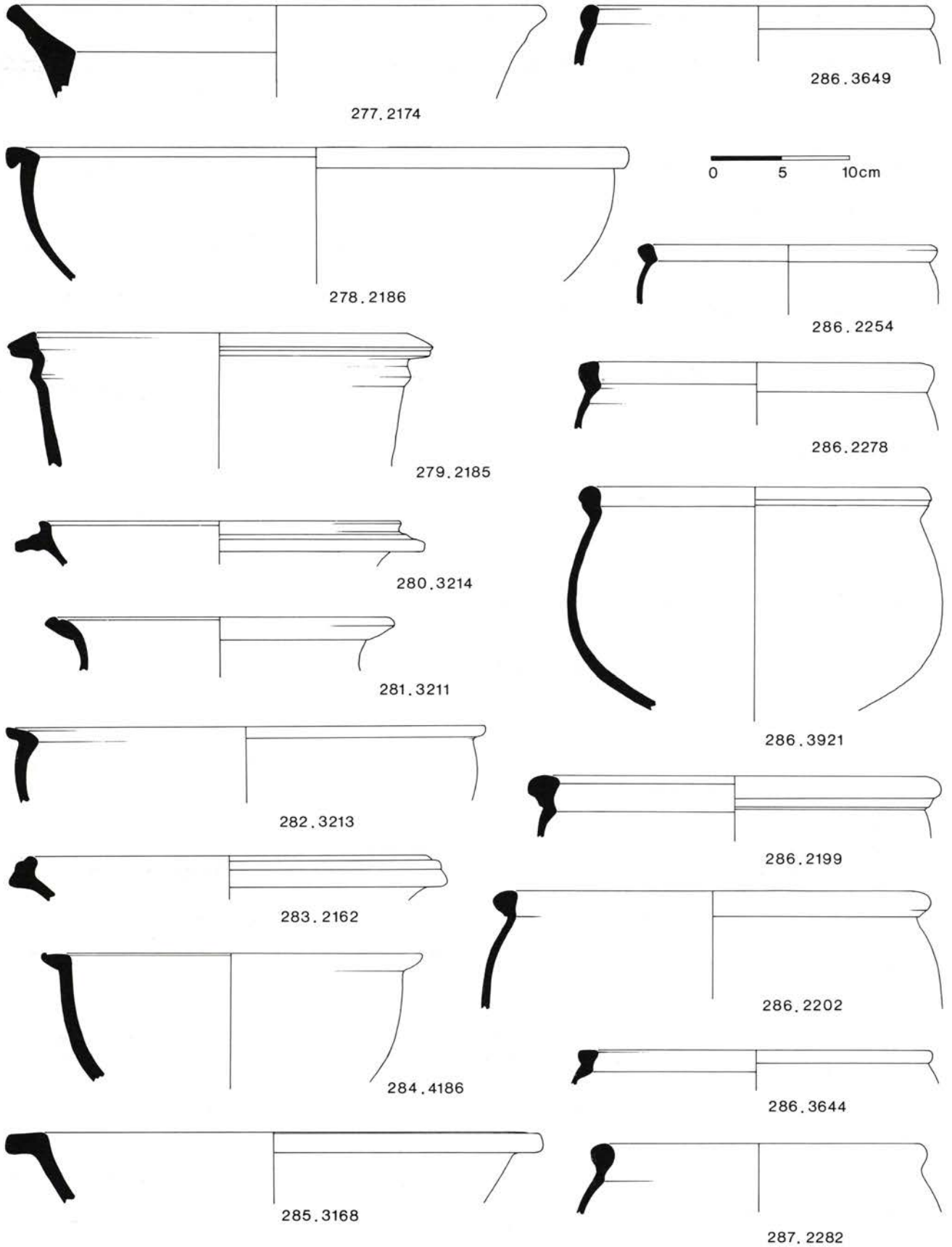


FIG.59 Coarse Pottery Types 277-287 (Scale 1:4)

282 Dull brownish grey, greenish cream outer surface; T3, limestone and quartz.

xvii 10 : 3213 Dia.: 35

283 Orange/yellow, cream surface; T1, quartz and limestone.

xxiii 21 : 2162 Dia.: 31

xxiii 21: second half of second century A.D.

284 Granular brick red, thick yellow cream surface.

xxiii 39 : 4186 Dia.: 28

xxiii 39: latest first century B.C.

285 Greenish yellow; T3, quartz, limestone and red iron.

xxv 21 : 3168 Dia.: 39

xxv 21: second half second century B.C.

HAND-MADE VESSELS (FIGS 59–66)

Fabrics:

- a) Mostly dull pink or pinkish brown, less often red/brown or dark red; outer surface usually burnished and burnt black; T3, 4, 5 (10,123,17 examples); much angular felspar.
- b) Other fabrics do not occur in sufficient quantities to be able to give a generalised description and are therefore individually noted.

Fabric a is equivalent to Carthage Hand-made Fabric 1 – Pantellerian Ware – (see Peacock 1984, 8 ff.).

The overwhelming majority of the hand-made vessels are in fabric a. The earliest occurrence of this fabric on the site is a single occurrence in a context of around the mid second century B.C. (Form 294, catalogue 2317, context xxi 14). It is present in larger quantities in contexts of the closing years of the first century B.C. and is common in contexts of the first century A.D. Although the context is reasonably secure it would seem unwise to place the initial date for the ware as early as the second century B.C. on the basis of a single occurrence. For the present, an emergence at the end of the first century B.C. can be supported with greater confidence. Comparison of the first occurrence of the main types within fabric a (in the cases where the sample was sufficiently large to make comparisons valid) did not reveal any significant differences, ie they all seemed to start around the end of the first century B.C. There is a suggestion, however, that the *floruit* of types 303–7 occurred slightly later than that of type 286 (see FIGS.60 & 65).

For a discussion of the date of Pantellerian Ware at Carthage see Fulford 1984, 157–8.

286 Deep casserole with curved wall and slightly constricted neck; the rim is upright with a slight flange of round profile on the outside, and a wide shallow lid-locating groove on the inside.

Fabric a:

i	17 : 2281	Dia.: 31	xiv	92 : 2261	Dia.: 41
i	119 : 3655		xiv	92 : 2271	Dia.: 28
ia	1 : 3652		xiv	92 : 2276	Dia.: 18
iii	1 : 3642	Dia.: 31	xiv	92 : 3921	Dia.: 26
iii	4 : 3641		xiv	115 : 2263	Dia.: 25
iii	4 : 3643	Dia.: 34	xiv	119 : 2247	
iii	4 : 3648		xiv	125 : 2308	Dia.: 28
iii	9 : 2280	Dia.: 26	xiv	127 : 2257	Dia.: 23
iiib	5 : 3645		xiv	128 : 2245	Dia.: 15
iiic	3 : 3639		xiv	128 : 2249	Dia.: 21
v	1 : 3640	Dia.: 17	xiv	128 : 2256	Dia.: 24
v	3 : 3657	Dia.: 26	xiv	128 : 2272	
via	1 : 3646	Dia.: 31	xv	5 : 2224	Dia.: 27
via	2 : 3656		xv	10 : 2222	Dia.: 29
vib	7 : 3647	Dia.: 33	xv	12 : 2235	
vid	2 : 3651		xv	30 : 2234	
viii	1 : 3649	Dia.: 26	xvii	13 : 2277	Dia.: 15
xiv	6 : 2244	Dia.: 27	xxi	11 : 2236	Dia.: 11
xiv	6 : 2251	Dia.: 26	xxi	21 : 2225	Dia.: 30
xiv	8a : 2268	Dia.: 28	xxi	22 : 2223	Dia.: 32
xiv	8a : 2269	Dia.: 27	xxi	2 : 2226	
xiv	9 : 2252	Dia.: 36	xxii	7 : 2219	Dia.: 28
xiv	9 : 2259	Dia.: 26	xxii	7 : 2220	Dia.: 23
xiv	9 : 2260	Dia.: 19	xxii	8 : 2217	Dia.: 27
xiv	9 : 2264	Dia.: 26	xxii	13 : 2211	Dia.: 26
xiv	9 : 2265	Dia.: 19	xxii	13 : 2216	Dia.: 29
xiv	9 : 2266	Dia.: 22	xxii	13 : 2246	Dia.: 28
xiv	9 : 2267		xxii	17 : 2206	Dia.: 28
xiv	9 : 2275		xxii	17 : 2213	Dia.: 22
xiv	9 : 2278	Dia.: 26	xxii	17 : 2218	Dia.: 23
xiv	9 : 2279	Dia.: 14	xxii	35 : 2207	Dia.: 26
xiv	9 : 2402	Dia.: 36	xxii	35 : 2208	Dia.: 26
xiv	9 : 4195	Dia.: 23.5	xxii	35 : 2209	Dia.: 24
xiv	10 : 2273	Dia.: 25	xxii	35 : 2210	Dia.: 22
xiv	10 : 2274	Dia.: 23	xxii	35 : 2214	Dia.: 28
xiv	11 : 2248		xxii	35 : 2221	
xiv	11 : 2250	Dia.: 21	xxii	113 : 2215	
xiv	11 : 2270	Dia.: 24	xxiii	7 : 2212	Dia.: 28
xiv	81 : 2227	Dia.: 24	xxiii	8 : 2195	
xiv	81 : 2228	Dia.: 24	xxiii	12 : 2205	Dia.: 32
xiv	81 : 2229	Dia.: 28	xxiii	13 : 2187	Dia.: 24
xiv	81 : 2230	Dia.: 26	xxiii	17 : 2193	Dia.: 23
xiv	81 : 2231	Dia.: 23	xxiii	21 : 2189	Dia.: 25
xiv	81 : 2232	Dia.: 24	xxiii	25 : 2191	Dia.: 20
xiv	81 : 2233	Dia.: 26	xxiii	25 : 2194	Dia.: 28
xiv	81 : 2237	Dia.: 45	xxiii	25 : 2197	Dia.: 30
xiv	81 : 2238	Dia.: 26	xxiii	38 : 2196	Dia.: 28
xiv	81 : 2239	Dia.: 19	xxiii	39 : 2190	Dia.: 15
xiv	81 : 2240		xxiii	39 : 2198	Dia.: 38
xiv	81 : 2241	Dia.: 28	xxiii	39 : 2199	Dia.: 35
xiv	81 : 2242	Dia.: 29	xxiii	39 : 2201	Dia.: 29
xiv	81 : 2243	Dia.: 28	xxiii	39 : 2202	Dia.: 29
xiv	81 : 2253	Dia.: 35	xxiii	39 : 2203	Dia.: 35
xiv	81 : 2254	Dia.: 23	xxiii	39 : 2204	Dia.: 33
xiv	81 : 2262	Dia.: 24	xxiii	39 : 2441	Dia.: 39
xiv	92 : 2255	Dia.: 26	xxiii	40 : 2192	Dia.: 32
xiv	92 : 2258	Dia.: 24	xxiii	40 : 2200	Dia.: 32

Other fabrics

Pink, patchy black surface; T4, black vitreous grains, quartz, felspar (?) and mica – ?Pantellerian.

i 121 : 3644 Dia.: 26

Orange/brown, black outer surface; T4, black vitreous grains, limestone, quartz and felspar – ?Pantellerian.

xxii 35 : 2209 Dia.: 24

Pale pinkish/brown; T2, quartz.

xxiii 21 : 2188 Dia.: 30

Pink, black surface; T4, black vitreous grains, quartz, limestone and red iron.

xxiii 39 : 2198 Dia.: 38

xxiii 38: possibly as early as third century B.C. (unreliable, sealed by level with Augustan TPQ).

xiv 115: second half of first century B.C.

xxii 7, 8, xv 5, 10: latest first century B.C.; see FIG.60

See also Fulford 1986a, nos.139-42 (Pit 2, trench Y3-4: latest first century B.C.).

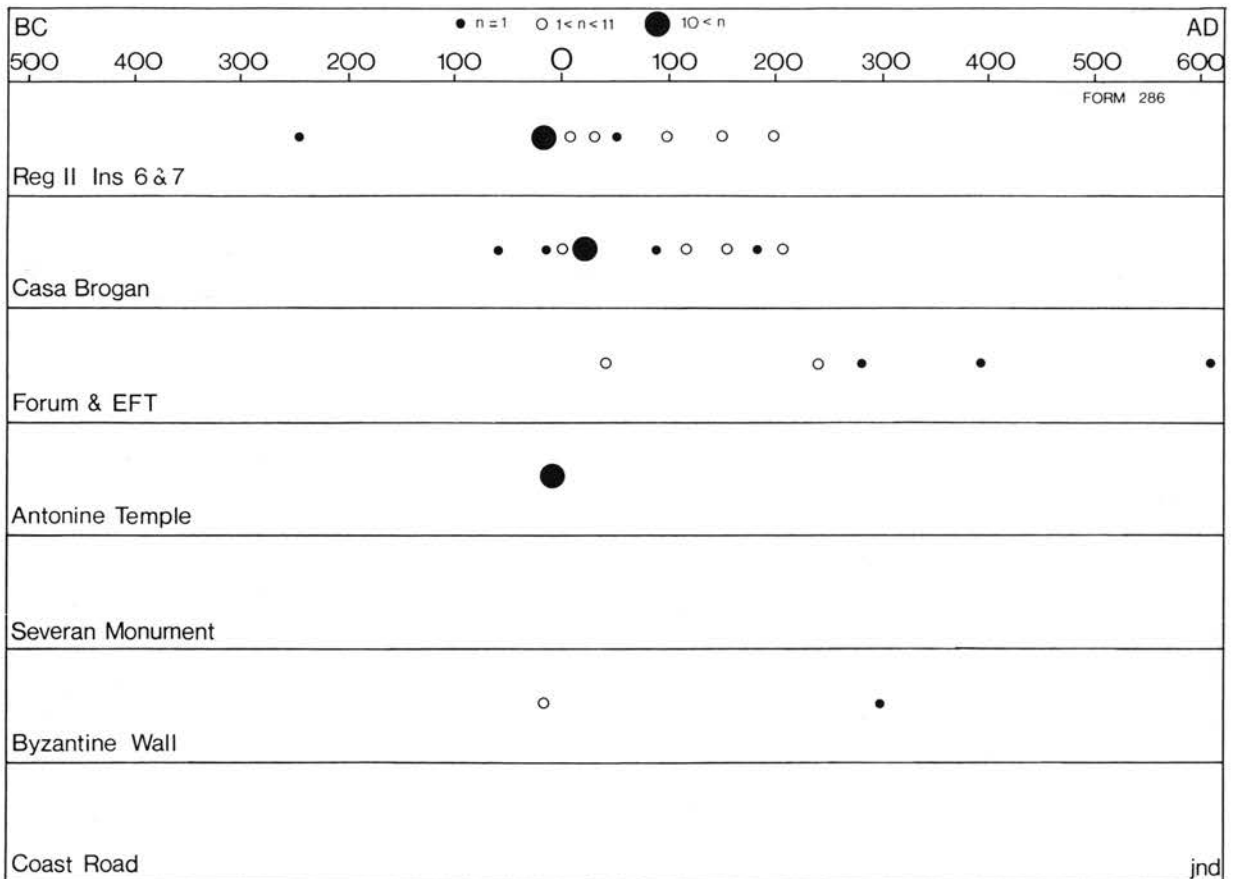


FIG.60 The Occurrence of Type 286 in the Site Stratigraphy

jnd

VARIANTS

287 Orange/brown; T2, quartz and limestone.

xiv 81 : 2282 Dia.: 26

Orange/brown; T3, quartz, mica and grog up to 2 mm dia.

xxv 16 : 3653 Dia.: 33

288 Orange/brown; T3, quartz, black vitreous grains and limestone.

xv 12 : 2283 Dia.: 32

289 Pinkish brown, dark maroon surface; T4, possibly Pantellerian.

xiv 71 : 2284 Dia.: 35

290 In 286 the lid-locator takes the form of a broad shallow groove at the back of the rim, whereas in 290 the edge of the lid rested on a bead or "stop" at the bottom of the vertical back face of the rim.

Fabric a:

xiv	10 : 2289	Dia.: 17	xxii	13 : 2287	Dia.: 22
xiv	81 : 2288	Dia.: 15	xxiii	10 : 2286	Dia.: 16
xxi	22 : 2285	Dia.: 26	xxiii	10 : 2290	Dia.: 22

Other fabric:

Orange/pink, black outer surface; T3, limestone and quartz.

xxiii 21 : 2291 Dia.: 22

Dull pinkish brown; T4, limestone, red iron, black vitreous grains and felspar.

xxiv 67a : 4015 Dia.: 18.5

291 Tall, thickened rim with curved outer profile.

Fabric a:

xiv	98 : 2294	Dia.: 25	xxiii	21 : 2293	Dia.: 17
xiv	127 : 2299	Dia.: 22	xxiii	21 : 2296	Dia.: 22
xix	6 : 3904	Dia.: 24	xxiii	21 : 2297	Dia.: 15
xxiii	17 : 2298	Dia.: 20	xxiii	23 : 2295	Dia.: 22
xxiii	19 : 2292	Dia.: 30	xxv	5 : 4161	Dia.: 21.5

See FIG.62.

- 292** Similar to 291 but with a slight step in the outer face of the rim and a broad, shallow lid-locator on the inner face.

Fabric a:

vib	6 : 3660	Dia.: 17	xix	6 : 2304	Dia.: 23
vib	7 : 3661	Dia.: 18	xix	6 : 2311	Dia.: 26
viii	1 : 3659	Dia.: 20	xxii	17 : 2303	Dia.: 19
xiv	11 : 2306	Dia.: 16	xxiii	21 : 2302	
xiv	11 : 2312	Dia.: 23	xxiii	21 : 2310	Dia.: 23
xiv	11 : 2437	Dia.: 27	xxiii	25 : 2305	Dia.: 20
xix	2 : 2301		xxiii	25 : 2307	Dia.: 17
xix	2 : 2309	Dia.: 24	xxiv	44 : 3662	
xix	2 : 2393	Dia.: 29	xxv	5 : 3663	Dia.: 24
xix	6 : 2300	Dia.: 32			

xiv 98: latest first century B.C.

xxiii 17, 19: first half second century A.D.; see FIG.62.

- 293** Dish; roughly straight but outspayed wall, slightly projecting flange rim of roughly semi-circular profile.

Fabric a:

iv	4 : 3667		xvii	10 : 2315	Dia.: 37
via	2 : 3666		xix	6 : 3668	Dia.: 32
vib	2 : 3665	Dia.: 33	xix	6 : 3905	Dia.: 31
vib	6 : 3669	Dia.: 33	xxii	17 : 2349	Dia.: 25
xv	19 : 2316	Dia.: 28	xxiii	21 : 2367	
xv	21 : 2313	Dia.: 22	xxiv	43 : 3906	Dia.: 26
xv	26 : 2314	Dia.: 36	xxiv	43 : 4092	Dia.: 26

See FIG.63.

- 294** As 293 but rim is upright if not slightly inturned.

Fabric a:

xiv	11 : 2352		xv	26 : 2392	Dia.: 23
xiv	11 : 2354	Dia.: 37	xxi	14 : 2317	Dia.: 35
xiv	84 : 2353	Dia.: 35	xxii	17 : 2362	Dia.: 30

xxi 14: second half of second century B.C.

xiv 11: second half of second century A.D.; see FIG.63.

- 295** Single example: bowl or dish, slightly projecting flange rim of roughly semi-circular profile, groove cut in top of rim.

Fabric a:

xvii	9 : 2318	Dia.: 30			
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xvii 9: late sixth century A.D.

- 296** Bowl or dish, projecting flange rim with thickened end.

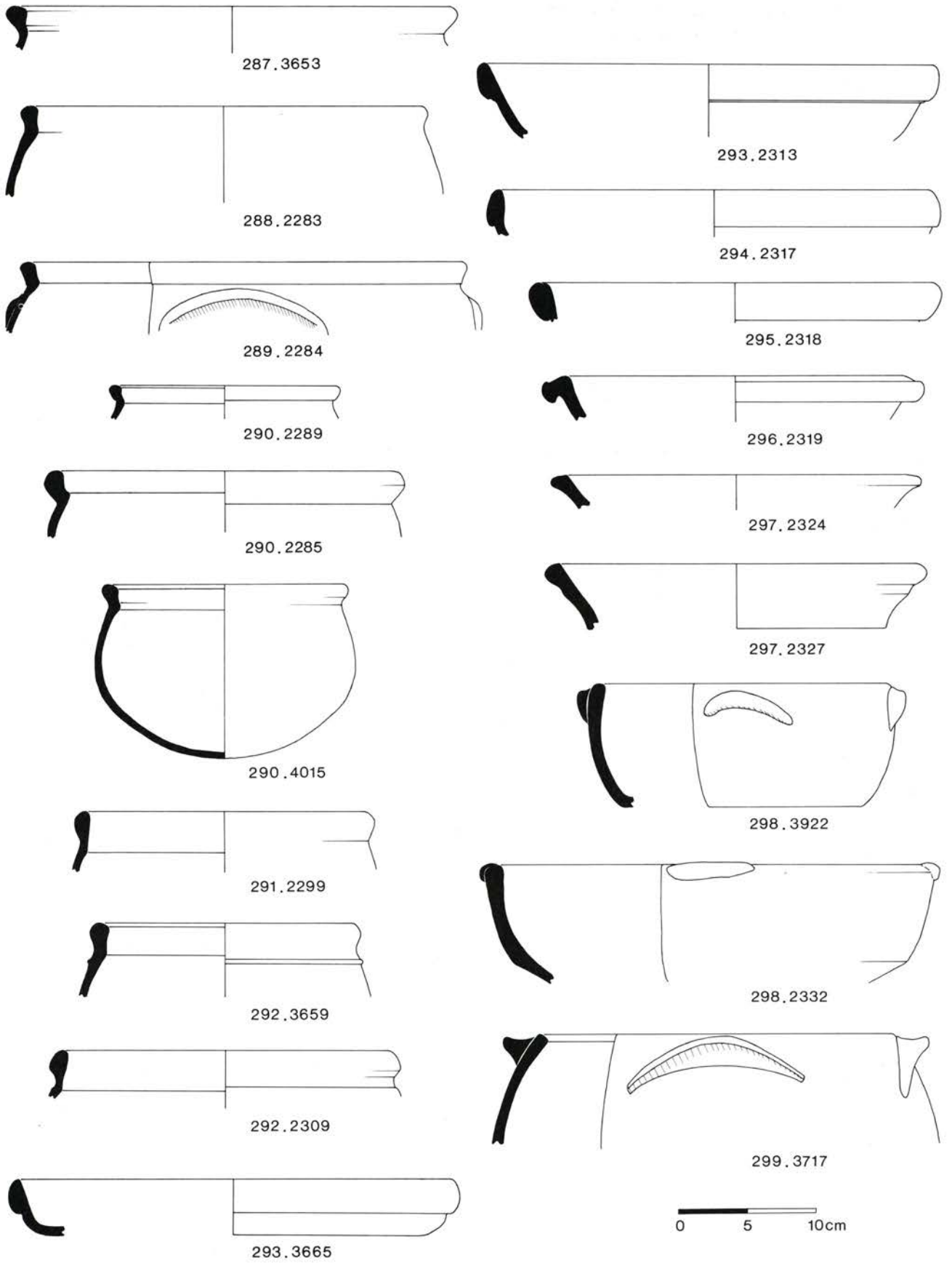


FIG.61 Coarse Pottery Types 287-299 (Scale 1:4)

Fabric a:

vib	6 : 3670	Dia.: 31	xv	24 : 2320	
vib	6 : 3671	Dia.: 36	xv	25 : 2322	Dia.: 33
xiv	84 : 2319	Dia.: 30	xix	6 : 2323	Dia.: 27
xv	16 : 2321	Dia.: 28			

xix 6: first half of third century A.D.

297 Dish with outsplayed wall and very slightly projecting flange rim.

Fabric a:

ia	9 : 3704	Dia.: 30
xxii	13 : 2324	Dia.: 27

Other fabrics:

Pale grey/brown, orange/red inner surface; T5, quartz, black and red iron and limestone.

xiv	8a : 4018	Dia.: 31
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Pale brown, black outer surface; T4, quartz, black and red grains.

xix	2 : 2327	Dia.: 28
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xix 2, xxii 13: late first century A.D.

See also Fulford 1986b, fig 92 no.56 (phase 5 trench N1, associated with the construction of the Antonine Temple, dedicated *c.* A.D. 166–9).

298 Bowl: slightly outsplayed wall, plain, slightly thickened rim, sagging base.

Fabric a:

v	1 : 3692	Dia.: 28	xv	15 : 2341	Dia.: 42
v	1 : 3696		xv	25 : 3689	Dia.: 27
vib	1 : 3691	Dia.: 29	xv	26 : 2334	Dia.: 23
vid	1 : 3694		xv	26 : 2335	Dia.: 22
vii	2 : 3688	Dia.: 32	xvii	6 : 2331	Dia.: 28
xiv	93 : 3922	Dia.: 23	xvii	8 : 2340	Dia.: 30
xv	15 : 2332	Dia.: 31	xvii	9 : 2338	
xxvi	44 : 3693	Dia.: 35			

Other fabrics:

Pale grey, mid grey core, black outer surface; T3, red iron, black vitreous grains, felspar, limestone and quartz.

iv	6 : 3695	Dia.: 39
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Black, grey core, black outer surface; T4, limestone, black grains and quartz.

xv	26 : 2333
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Black, dull dark red surface; T4, limestone.

xvii	6 : 2336	Dia.: 32
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xvii 6: fifth century A.D.

299 Deep vessel, inturned upper wall, plain slightly thickened rim.

Pink, dull grey core; T5, shell.

i 47 : 3717 Dia.: 26

Mid grey, black outer surface; T4, limestone.

xvii 10 : 2337 Dia.: 17

300 Single example; rim sherd possibly from carinated bowl with outsplayed upper wall.

Fabric a:

xiv 9 : 2339 Dia.: 37

301 & 302: Bowls with broad horizontal flange rims.

301 Square-cut flange, slightly overhung at outer edge.

Dark brown, grey/brown surfaced; T5, felspar and other grains, but probably not fabric a.

xiv 9 : 2343 Dia.: 37

xiv 13 : 2343 Dia.: 37

302 Flange of rounded profile, slightly thickened outer end.

Red/brown, maroon outer surface; T3 and 4, quartz, limestone and golden mica.

xiv 81 : 2344 Dia.: 36

xxii 13 : 2345 Dia.: 36

xiv 9, 81: mid first century A.D.

303-307 Casseroles with rounded profile and inturned upper wall; these have been divided into a number of types on the basis of rim form:

303: barely developed moulding of outer face.

304: similar to 303 but rim more turned in.

305 & 306: more pronounced moulding of outer face to the extent of an incipient flange in 306.

307: fully developed projecting flange.

No chronological distinction between these types is apparent from their distribution in the excavated contexts (see FIG.65).

303

Fabric a:

i	62 : 3677		v	2 : 3676	
iii	4 : 3674	Dia.: 38	xiv	9 : 2350	Dia.: 37
iii	4 : 3678	Dia.: 42	xiv	11 : 2351	
iiib	5 : 3675	Dia.: 36	xiv	70 : 2410	Dia.: 30
v	1 : 3673	Dia.: 37	xiv	71 : 2355	Dia.: 38

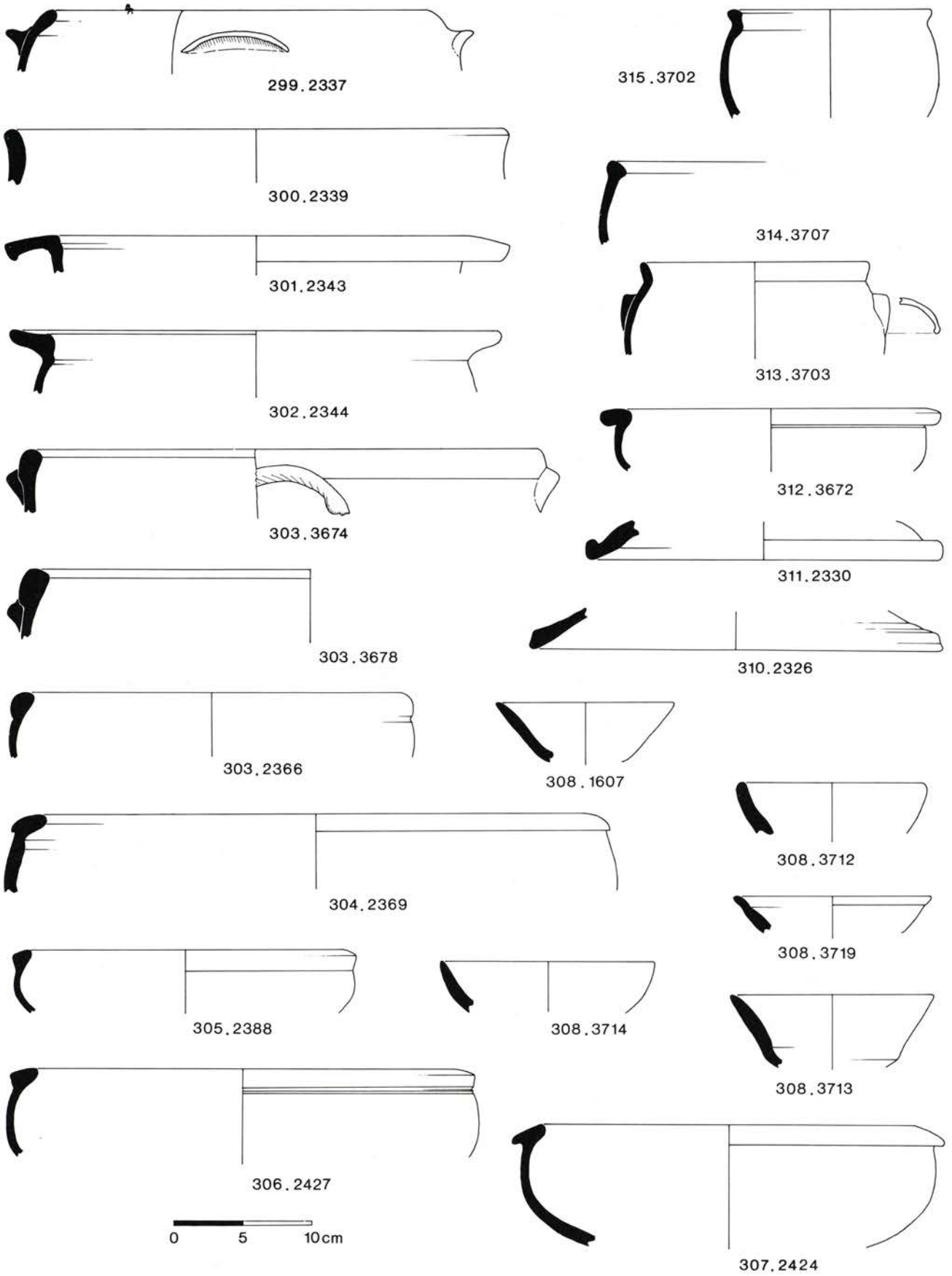


FIG.64 Coarse Pottery Types 299-315 (Scale 1:4)

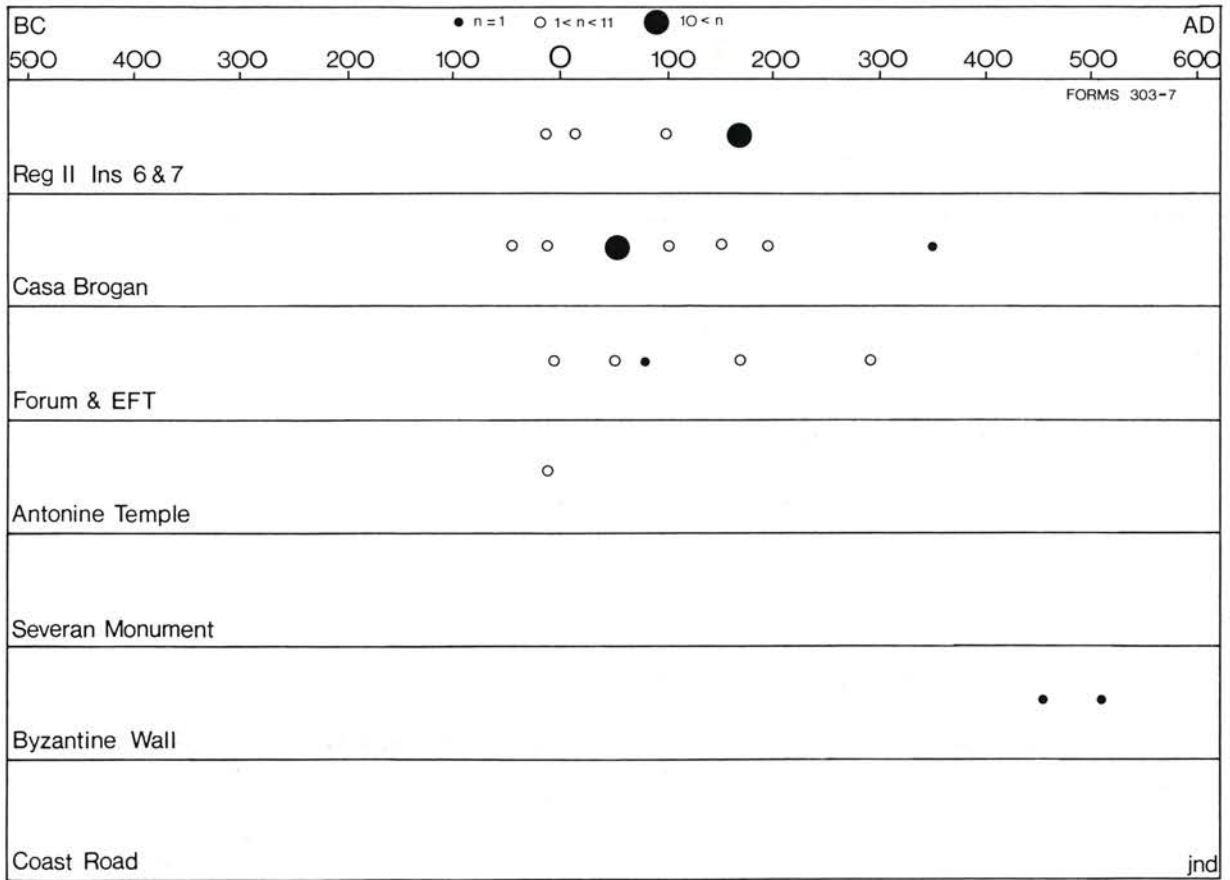


FIG.65 The Occurrence of Types 303-7 in the Site Stratigraphy

xiv	92 : 2412	Dia.: 31	xxii	14 : 2359	
xiv	119 : 2428		xxii	14 : 4162	Dia.: 25.5
xiv	119 : 2429		xxii	33 : 2361	Dia.: 28
xiv	127 : 2356	Dia.: 45	xxiii	7 : 2366	Dia.: 29
xv	25 : 2363	Dia.: 31	xxiii	25 : 2391	
xxi	22 : 2358	Dia.: 20	xxiii	39 : 2364	Dia.: 35
xxii	7 : 2360	Dia.: 33			

Other fabric:

Orange/brown; T3, quartz and limestone.

xxiii 26 : 2374 Dia.: 35

xxii 7, 33: latest first century B.C.

304

Fabric a:

xiv	13 : 2407	Dia.: 33
xxi	22 : 2369	Dia.: 40
xxiii	17 : 2381	Dia.: 28

305

Fabric a:

v	2 : 3683		xxiii	21 : 2388	Dia.: 25
xiv	143 : 2436	Dia.: 27	xxiii	25 : 2368	
xxiii	21 : 2365	Dia.: 22	xxiii	40 : 2384	Dia.: 25

306

Fabric a:

i	46 : 3681		xiv	92 : 2423	Dia.: 39
ia	9 : 3684	Dia.: 28	xiv	115 : 2426	
iii	4 : 3680		xiv	118 : 2427	Dia.: 34
v	2 : 3682		xiv	127 : 2433	Dia.: 35
vib	7 : 3679	Dia.: 32	xiv	127 : 2434	Dia.: 35
xiv	8a : 2396	Dia.: 33	xiv	128 : 2435	Dia.: 32
xiv	8a : 2397	Dia.: 28	xxiii	17 : 2390	Dia.: 26
xiv	9 : 2399		xxiii	21 : 2375	Dia.: 38
xiv	9 : 2400	Dia.: 27	xxiii	21 : 2376	
xiv	9 : 2403	Dia.: 29	xxiii	21 : 2378	Dia.: 25
xiv	9 : 2405	Dia.: 37	xxiii	25 : 2389	Dia.: 29
xiv	11 : 2409		xxiii	39 : 2380	Dia.: 30
xiv	77 : 2425	Dia.: 34	xxiii	39 : 2385	Dia.: 28
xiv	81 : 2416	Dia.: 33	xxiii	39 : 2386	Dia.: 32
xiv	81 : 2417	Dia.: 39	xxiii	40 : 2383	Dia.: 24
xiv	81 : 2419	Dia.: 35			

Other fabric:

Orange/brown; T3, quartz and limestone.

xv 11 : 2394 Dia.: 41

xiv 115, 118: second half first century B.C.

307

Fabric a:

iii	3 : 3685		xiv	81 : 2418	Dia.: 32
iv	12 : 3686	Dia.: 31	xiv	92 : 2420	Dia.: 31
vib	6 : 3687		xiv	92 : 2422	Dia.: 29
xiv	9 : 2398	Dia.: 27	xiv	92 : 2424	Dia.: 31
xiv	9 : 2404	Dia.: 26	xiv	119 : 2430	
xiv	9 : 2406	Dia.: 34	xiv	126 : 2431	Dia.: 32
xiv	11 : 2408	Dia.: 31	xiv	127 : 2432	Dia.: 38
xiv	71 : 2440	Dia.: 29	xv	24 : 2395	
xiv	81 : 2411		xxi	18 : 2371	Dia.: 29
xiv	81 : 2412	Dia.: 23	xxii	11 : 2373	Dia.: 31
xiv	81 : 2413		xxii	13 : 2370	Dia.: 27
xiv	81 : 2414	Dia.: 27	xxiii	39 : 2379	Dia.: 25
xiv	81 : 2415	Dia.: 25	xxiii	39 : 2387	Dia.: 25

xiv 71, xxiii 39: latest first century B.C.

308 Small bowls or cups.

Black, burnished dark red surface; T4, angular quartz.

i 13 : 3713 Dia.: 15

Black (burnt); T4, limestone + (?).

i 20 : 3714 Dia.: 16

i 20: possibly as early as fourth century B.C.

Black, pale brown surface; T4, angular quartz.

i 41 : 3712 Dia.: 14

Pale brown, burnished surface: red inner, orange/pink outer; T4, rock fragments and grog.

iv 7 : 3719

iv 7: late first century A.D.

Grey, burnished medium brown surface; T4, quartz and rock fragments.

xiv 35 : 1607 Dia.: 13

xiv 35: second half of first century B.C.

LIDS

309 Form as type 95; see illustration of type 95.**Fabric a:**

xiv	70 : 1108	Dia.: 30		xxi	21 : 1099	Dia.: 28
xiv	84 : 1088	Dia.: 26		xxii	33 : 1109	Dia.: 29
xiv	84 : 2443	Dia.: 25		xxii	35 : 1045	Dia.: 39
xvii	6 : 2442	Dia.: 23		xxiii	40 : 1107	Dia.: 28

xiv 70, xxii 33: latest first century B.C.

310**Fabric a:**

iiib	2 : 3697	Dia.: 31		xv	15 : 2326	Dia.: 27
ivb	9 : 3700			xvii	9 : 2329	
v	1 : 3701			xvii	9 : 2444	Dia.: 22
vii	2 : 3698	Dia.: 26		xvii	10 : 2328	Dia.: 22
xv	15 : 2325	Dia.: 27				

iiib 2: late first century A.D.

311

Fabric a:

xv 15 : 2330 Dia.: 25

MISCELLANEOUS**312 Fabric a:**

iii 9 : 3672 Dia.: 25

iii 9: mid first century A.D.

313 Fabric a:

ia 8 : 3703 Dia.: 17

314 Fabric a:

v 1 : 3707

315 Fabric a:

v 3 : 3702 Dia.: 15

316 Dark grey; T4, quartz, limestone, red iron and rock fragments.

i 54 : 2641

i 54: first century B.C.

317 Black, red burnished surface; T3, red iron.

i 95 : 3722

318 Pale brown; T2, quartz.

ia 1 : 3710 Dia.: 29

319 Pale yellow/brown; T2, quartz.

ia 1 : 3711

320 Black, pink surface; T4, angular limestone and red iron.

iii 1 : 3708 Dia.: 28

321 Red/brown to black; T5, angular rock fragments.

iii 4 : 3216

iii 4: second half of first century A.D.

- 322** Black; T4, limestone and quartz.
iv 21 : 3715 Dia.: 30
- 323** Black, red/brown surface; T3, quartz, limestone and rock fragments (or possibly grog).
via 1 : 3721 Dia.: 11.5
- 324** Orange/yellow, dull orange surface; T1, quartz and limestone.
xvii 9 : 2342 Dia.: 16
xvii 9: late sixth century A.D.
- 325** Hand made, pale brown, brownish black surface; T5, quartz, iron and black vitreous grains.
xix 8 : 2518 Dia.: 15
xix 4: second century A.D.
- 326** Dark red.
xxiii 20 : 4163 Dia.: 22
xxiii 20: late first century A.D.
- 327** Light grey.
xxiii 21 : 4164 Dia.: 21.5
xxiii 21: mid second century A.D.

UNGUENTARIA, JUGS, FLASKS AND FLAGONS (FIGS 66-70)

UNGUENTARIA

- 328** Red/brown; T1, quartz and limestone.
D 12 17 : 4080 Dia.: 2
- 329** Pale orange, dark red paint on inside rim; T1, quartz, black vitreous grains and red iron.
i 43 : 4075 Dia.: 3.5
i 43: possibly as early as third century B.C.
- 330** Orange; T1, quartz, limestone and black vitreous grains.
i 47 : 4083 Dia.: 2
- 331** Red/brown inner fabric, dark grey outer fabric, greenish cream outer surface; T3, limestone and quartz.
i 176 : 4076

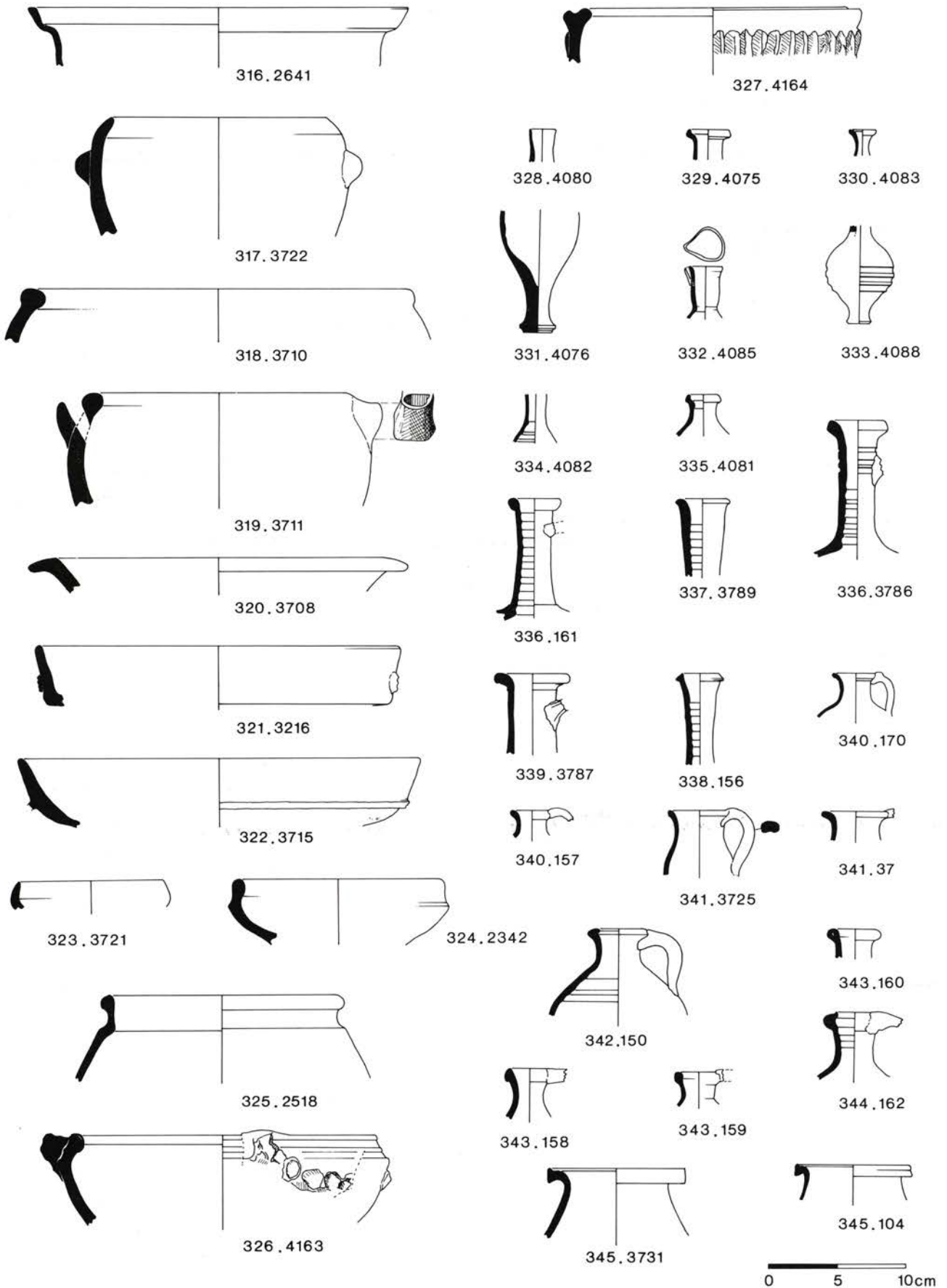


FIG.66 Coarse Pottery Types 316-345 (Scale 1:4)

332 Hand-made, pale brown; T2, quartz, limestone and red iron.

iii 3 : 4085 Dia.: 2.5

iii 3: possibly as early as early first century A.D.

333 Orange/brown; T2, quartz and limestone.

iii 4 : 4088

iii 4: second half of first century A.D.

334 Dark red, grey surface; T2, limestone and quartz.

vib 2 : 4082

vib 2: late third century A.D.

335 Pale orange, pale yellow surface; T1, sparse, quartz.

xiv 21 : 4081 Dia.: 3

xiv 21: second half of first century A.D.

Flasks or Unguentaria with tall constricted necks

336 Flange rim of round profile, handle springing from below rim.

Smooth pale brown or orange/brown; T1, 3 (2,1 examples) mostly quartz.

xiv 81 : 3786 Dia.: 4.5

xxii 8 : 39

xxii 12 : 161

xxii 8: latest first century B.C.

337 Orange, yellow-cream surface; T2, quartz, limestone and black vitreous grains.

iv 6 : 3789 Dia.: 4

iv 6: late first century A.D.

338 Orange/brown, cream surface; T3, quartz and limestone.

xiv 70 : 156

xiv 70: second half of first century B.C.

Light brown.

xxi 18 : 4151 Dia.: 2.5

xxi 18: early first century A.D.

See also Riley 1979, D684.

- 339** Similar to 336 but neck shorter.

Pale pinkish brown, yellow/cream surface; T1, quartz and limestone.

i 54 : 3788 Dia.: 4.5

Pale orange/brown, yellow/cream surface; T2, quartz, limestone, mica and red iron.

iii 3 : 3787 Dia.: 5.5

i 54: first century B.C.

SMALL JUGS OR FLASKS

- 340** Short, constricted neck, handle springing from rim.

Orange/brown, cream or grey surface; T2, 3 (1,4 examples), quartz and limestone.

i	97 : 3724	Dia.: 3	xxiii	21 : 170
xiv	81 : 3723	Dia.: 3.5	xxiii	25 : 157
xxiii	17 : 167			

i 97, xiv 81: first half of first century A.D.

- 341** Constricted neck, handle springing from rim, everted rim with slightly projecting flange.

Very pale yellow; T2, red iron and quartz.

i 96 : 3727

Orange/brown, pale grey core, yellow/cream surface; T3, quartz, limestone and black vitreous grains.

i	124 : 3726			
iii	4 : 3725	Dia.: 4.5		

Dull brown, grey/brown surface; T3, quartz.

xiv 35 : 37

i 124: possibly as early as fourth century B.C.

Other contexts: late first century B.C. – early first century A.D.

- 342** Short constricted neck, handle springing from rim, everted rim, small projecting flange and lid-locator.

Greyish brown, yellow/cream or greenish cream surface; T3, limestone and quartz.

xiv	9 : 150		xxi	18 : 3729	
xiv	14 : 150		xxii	35 : 3728	Dia.: 4

All contexts: first half of first century A.D.

- 343** Short, constricted neck, small flange rim with rounded profile.

Red, yellow/cream surface; T2, sparse, limestone and quartz.

G 101 3b1 : 3730

Orange/brown, grey or cream surface; T3, quartz and limestone.

xiv 14 : 160

xiv 84 : 158

xxiii 17 : 159

xxiii 17: second century A.D.

xiv 14, 84: fourth century A.D.

- 344** Short, constricted neck, handle springing from rim, projecting flange of round profile below lid-locating groove inside rim.

Orange/brown, dark grey core, grey surface; T3, quartz and limestone

xiv 11 : 162

xiv 11: second half of second century A.D.

MEDIUM SIZED JUGS OR FLAGONS

- 345-350:** Bag-shaped jugs (ie with maximum girth below mid height) with conical necks.

- 345** Projecting flange rim with tooled vertical outer face; lid-locating lip on upper face.

Orange/brown, cream surface; T2, 3 (5, 1 examples), quartz and limestone.

v 3 : 3731 Dia.: 10 xxii 13 : 104

vib 2 : 3733 Dia.: 8 xxiii 21 : 105

xiv 9 : 3734 xxiii 21 : 117

xiv 81 : 4196 Dia.: 9

Dark grey; T3, quartz, red iron, limestone and mica.

xiv 8a : 3732 Dia.: 7.5

xiv 8a, 9, 81: mid first century A.D.

- 346** Projecting, undercut flange rim with sloping outer face; lid-locating lip on upper face.

Fabrics:

- Orange/brown, sometimes with grey core, cream or yellow/cream surface, inclusions: see profiles, p.98.
- Pale brown to orange red, yellow/cream surface; T1 – 3 (3,1,1 examples), quartz, limestone, black vitreous grains and mica.

Fabric a:

ia	1 : 3744	Dia.: 9	xxiii	23 : 101	
v	3 : 3746	Dia.: 16.5	xxiii	23 : 124	
vid	1 : 3738		xxiii	23 : 125	
viii	1 : 3745	Dia.: 14.5	xxiii	29 : 4174	Dia.: 8.5
xiv	9 : 3737	Dia.: 11.5	xxiii	39 : 52	
xiv	9 : 3743	Dia.: 14	xxiii	39 : 54	
xiv	81 : 3742	Dia.: 12	xxv	24 : 4149	Dia.: 8
xxii	13 : 100				

Fabric b:

vib	2 : 3739	Dia.: 9	xxii	35 : 3741	Dia.: 8
xiv	81 : 3735	Dia.: 9.5	xxvii	5 : 3736	
xxii	35 : 3740	Dia.: 8.5			

xxiii 39: latest first century B.C.

347 As 346 but with egg and dart decoration on rim.

Pale pinkish/brown; T1, 2 (3,1 examples), quartz, limestone, mica and black vitreous grains.

xiv	8a : 3747	Dia.: 8.5	xiv	11 : 3748	Dia.: 8.5
xiv	9 : 3750	Dia.: 10.5	xiv	11 : 3749	Dia.: 10.5

xiv 8a, 9: mid first century A.D.

348 Variant.

Pale brown, grey outer surface; T2, quartz.

xiv	92 : 147				
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xiv 92: first half of second century A.D.

349 Tall, conical neck, projecting flange rim with tip upturned to form lid-locating "stop"; handle springing from rim.

Mainly dark grey, occasionally orange/brown or pinkish brown, usually with yellow/cream or greenish cream surface, occasionally with grey or dark maroon surface; inclusions: see profiles, p.98.

v	3 : 3759		xiv	81 : 3754	
vib	6 : 3758	Dia.: 6	xiv	81 : 3757	Dia.: 9.5
vic	3 : 3756		xiv	81 : 3761	Dia.: 5.5
xiv	8a : 3751	Dia.: 6.5	xiv	84 : 3752	
xiv	9 : 3753	Dia.: 9	xiv	117 : 53	
xiv	9 : 3755	Dia.: 5.5	xiv	127 : 4064	Dia.: 5.5
xiv	9 : 3760	Dia.: 11	xxiii	23 : 139	

xiv 117: second half of first century B.C.

350 Small flange rim with rounded profile, lid-locating groove on rim top; the rim gives the impression (confirmed in examination of the section) of having been "squashed" on to the body during the manufacturing process.

Fabrics:

- a) Mostly orange/brown, occasionally grey or grey/brown, usually with cream or cream/yellow surface, inclusions: see profiles, p.98.
- b) Mid brown or pinkish brown, pinkish brown surface; T1-3, (1,3,2 examples), quartz, limestone, black vitreous grains, red iron (in 1 example).

Fabric a:

A 2 2	: 3766		xiv	25 : 126	
A 200 3	: 3768	Dia.: 6.5	xiv	138 : 127	
A 2 2	: 3774		xxiii	21 : 116	
A 200 3	: 3775	Dia.: 7	xxiii	21 : 120	
ia	4 : 4063	Dia.: 6.5	xxiii	21 : 123	
iii	14 : 3763	Dia.: 6	xxiii	21 : 128	
iii	14 : 3767		xxiii	21 : 129	
iiib	4 : 3765		xxiii	21 : 131	
iiib	4 : 3892	Dia.: 6.5	xxiii	21 : 133	
v	1 : 3762	Dia.: 6.5	xxiii	21 : 136	
v	10 : 3770		xxiii	21 : 138	
xiv	11 : 118		xxiii	21 : 140	
xiv	11 : 119		xxiii	25 : 137	
xiv	11 : 122		xxiii	26 : 4172	Dia.: 6
xiv	11 : 132		xxiv	67 : 3771	Dia.: 6
xiv	11 : 141				

Fabric b:

iiia	1 : 3769	Dia.: 6.5	xxiii	21 : 121	
vib	2 : 3773		xxiii	21 : 135	
xv	16 : 3764	Dia.: 4.5	xxiii	25 : 130	

ia 4: first half of first century A.D.

iiia 1, iiib 4: mid - late first century A.D.; see FIG.68.

Equivalent to Early Roman Jug Type 2 at Carthage which tends to occur in deposits of the second half of the second century A.D.; see eg Hayes 1976, fig 17, D12 and Tomber 1986, nos.175-9.

- 351** Tall, constricted conical neck with flared mid section (? to aid pouring), from outside of which handle springs; small flange rim.

Orange/brown, cream outer surface; T2, 3, (1,3) quartz and limestone.

iiib	7 : 3780		xiv	11 : 165	
vib	6 : 3779	Dia.: 4.5	xix	6 : 3778	Dia.: 4.5

Dull pinkish brown, brownish maroon surface; T3, crushed shell, quartz and black vitreous grains.

xiv	84 : 3776	Dia.: 3.5			
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Pale pinkish brown, dark maroon surface; T2, limestone and quartz.

xiv	128 : 3777	Dia.: 4			
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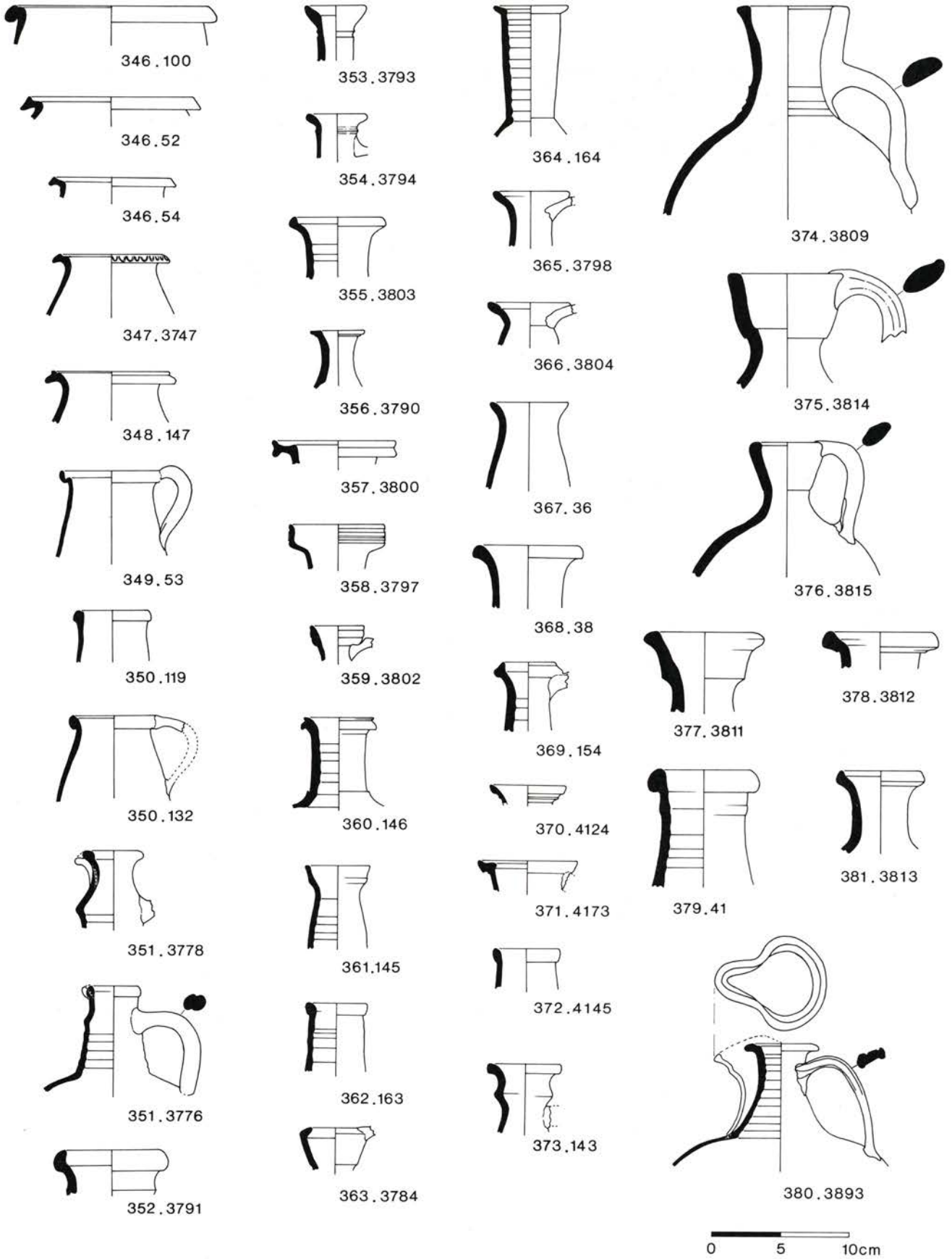


FIG.67 Coarse Pottery Types 346-381 (Scale 1:4)

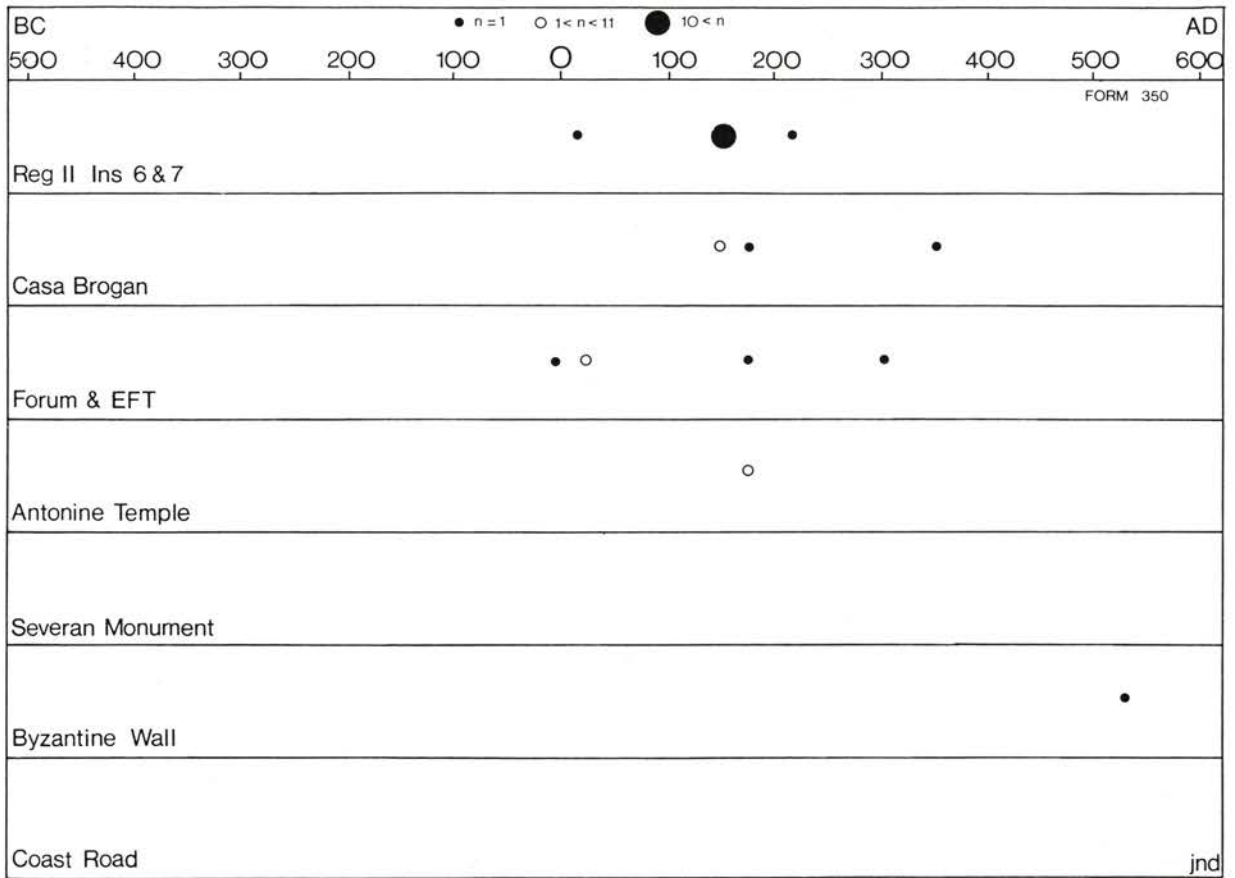


FIG.68 The Occurrence of Type 350 in the Site Stratigraphy

Pale orange; T2, quartz, red iron and black vitreous grains.

vib 7 : 3781

xiv 11: second half of second century A.D.

352 Flared neck, flange rim with round profile, lid-locating groove on inside.

Orange, mid brown core; T3, quartz, limestone and red iron.

i 26 : 3791 Dia.: 8.5

Very pale brown, yellow/cream surface; T1, very little visible.

iii 12 : 3792 Dia.: 8.5

i 26: possibly as early as fourth century B.C.

iii 12: possibly as early as first century A.D.

353 & 354

Pale brown or orange/brown, red/brown surface; T1, 2 (2 examples each), quartz and limestone.

353 Outsplayed flange rim.

iv 16 : 3793 Dia.: 5

354 Flange rim with squared lip.

A 24 5	: 3795	Dia.: 4.5
iii	3 : 3796	Dia.: 3.5
v	11 : 3794	Dia.: 4.5

iii 3: possibly as early as early first century A.D.

iv 16: late first century A.D.

355 Outsplayed flange, lip on upper face.

Pale brown or orange/pink, orange/yellow surface in 1 example; T1, quartz, limestone, black vitreous grains and red iron.

viii	2 : 3803	Dia.: 7.5
xv	19 : 3801	Dia.: 8.5
xv	26 : 3799	Dia.: 7.5

xv 19: latest first century B.C.

MISCELLANEOUS SMALL AND MEDIUM FLASKS AND FLAGONS

356 Mid brown, cream surface; T4, red/brown grog and quartz.

i	56 : 3790	Dia.: 4.5
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i 56: possibly as early as second century B.C.

357 Pale brown; T1, quartz, limestone, black vitreous grains and red iron.

viii	1 : 3800	Dia.: 8.5
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viii 1: late sixth century A.D.

358 Pale orange/yellow; T1, quartz, limestone and black vitreous grains.

xiv	8a : 3797	Dia.: 7.5
-----	-----------	-----------

xiv 8a: mid first century A.D.

359 Pale yellow/brown; T1, sparse, quartz.

xiv	9 : 3802	Dia.: 4.5
-----	----------	-----------

xiv 9: mid first century A.D.

360 Dark grey core, orange/brown margins, cream surface; T3, quartz and limestone.

xiv	77 : 146	
-----	----------	--

xiv 77: early first century A.D.

361 Orange/brown, black outer surface; T2, quartz.

xiv 84 : 145

xiv 84: fourth century A.D.

See also Robinson 1959, M156 (Layer V, ? mid third century – A.D. 267).

362 Orange/brown, grey surface; T2, limestone and quartz.

xiv 84 : 163

xiv 84: fourth century A.D.

363 Orange/brown, yellow core, orange/yellow surface; T3, quartz, red iron and limestone.

xiv 110 : 3784 Dia.: 5

xiv 110; possibly as early as second century B.C.

364 Mid brown, patchy dark grey surface; T2, limestone and black grains.

xiv 119 : 164

xiv 119: first half of second century A.D.

365 Orange/red; T3, quartz.

xv 21 : 3798 Dia.: 5

xv 21: second century A.D. (?).

366 Red; T1, quartz.

xix 6 : 3804 Dia.: 9

xix 6: late second century A.D.

367 Orange/brown, white outer surface; T3, quartz.

xxi 17 : 36

xxi 17: second half of second century B.C.

368 Very pale brownish cream, dirty cream surface; T1, quartz.

xxii 8 : 38

xxii 8: latest first century B.C.

369 Orange/brown, cream slip; T4, limestone.

xxiii 23 : 154

xxii 23: second century A.D.

370 Dark brick red.

xxiii 25 : 4124 Dia.: 5.5

xxiii 25: second century A.D.

371 Plain light yellowish brown.

xxiii 27 : 4173 Dia.: 7

372 Brick red with buff surface.

xxv 5 : 4145 Dia.: 5

373 Red/brown, yellow/cream surface; T2, quartz and limestone.

xiv 9 : 3808 Dia.: 5.5

xxiii 10 : 143

xiv 9: mid first century A.D.

xxiii 10: second half of first century A.D.

LARGE JUGS OR FLAGONS**374** Inverted conical mouth, small flange rim; extension to handle provides "thumb grip".

Greenish brown, off-white surface; T2, quartz, limestone and black vitreous grains.

viii 3 : 3810 Dia.: 7.5

xvii 10 : 3809 Dia.: 7.5

viii 3: late sixth century A.D. (but see notes on contexts p.270).

See also Riley 1979, D1194 (Deposit 157: lower filling of silt, Church cistern: fifth–sixth centuries A.D.).

MISCELLANEOUS LARGE FLAGONS**375** Grey/brown, yellow/cream surface; T3, quartz, limestone, red iron and black vitreous grains.

i 4 : 3814 Dia.: 8.5

376 Dull pinkish orange, greenish cream surface; T3, round quartz.

i 36 : 3815 Dia.: 5

i 36: possibly as early as early second century B.C.

377 Pale cream; T3, quartz, red iron and limestone.

i 49 : 3811 Dia.: 9

378 Pale brown; T1, quartz.

v 2 : 3812 Dia.: 9.5

v 2: late 2nd century A.D.

379 Orange/brown, dirty cream surface; T3, quartz and limestone.

xiv 66 : 41

xiv 66: possibly as early as fourth century B.C.

380 Orange/red, dark brown surface; T2, quartz and red iron.

xiv 122 : 3893

381 Very pale pinkish brown; T2, limestone and quartz.

xvii 9 : 3813 Dia.: 8.5

xvii 9: late sixth century A.D.

382 Smooth pale orange, orange/brown core, cream surface; T2, quartz.

xxiii 39 : 40

xxiii 39: latest 1st century B.C.

Similar type and fabric to 336

383 Pinkish red, yellow/grey outer surface, brownish inner.

xxv 5 : 4171

LARGE JUGS OR FLAGONS WITH WIDE NECKS

384 With flared neck and constricted rim, small flange to rim.

Brown to orange/brown, yellow/cream surface; T2, 3 (1, 4 examples), quartz and limestone.

v	3 : 3820	Dia.: 7	xiv	6 : 3821	Dia.: 7
vib	2 : 3883	Dia.: 8.5	xiv	81 : 3822	
xiv	6 : 3819	Dia.: 7.5			

xiv 6: first half of first century A.D.

385 Small flange rim.

Orange/brown to dark red, dark maroon/brown or grey surface; T1, 2, 3 quartz, limestone and red iron.

iiib	4 : 3871	
xiv	12 : 3879	Dia.: 9
xiv	128 : 3831	Dia.: 11

iiib 4: second half of first century A.D.

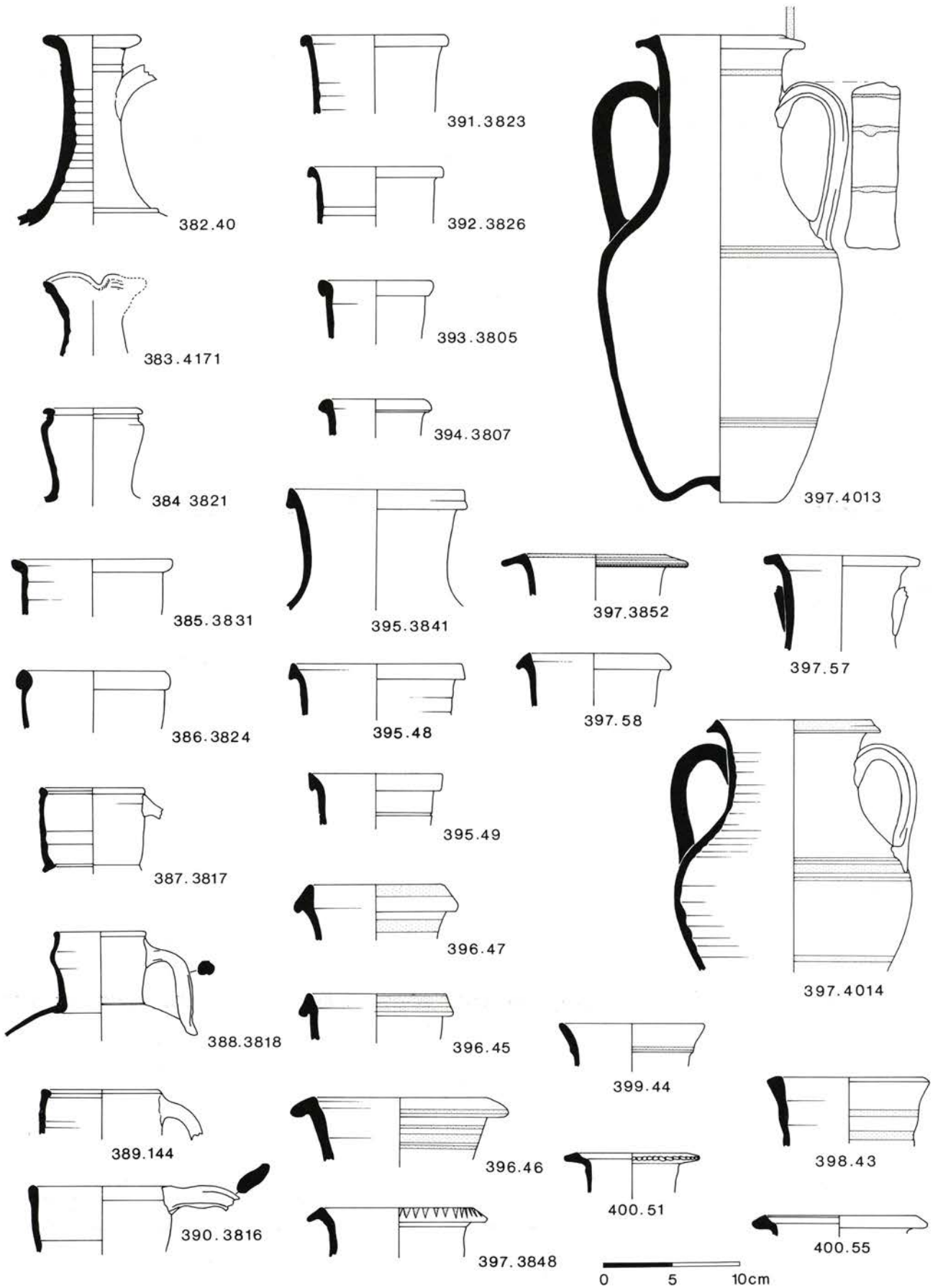


FIG. 69 Coarse Pottery Types 382-400 (Scale 1:4)

386 Thin walled, thickened rim of circular section.

Orange brown or grey with yellow/pink core, yellow/cream surface; T2, 3 (3,3 examples), limestone, quartz and red iron.

ia	11 : 3825	Dia.: 11.5	xix	6 : 3827	Dia.: 12.5
v	3 : 3833	Dia.: 14	xix	6 : 3834	Dia.: 12
vib	6 : 3828	Dia.: 15	xxii	10 : 3824	Dia.: 11.5

xxii 10: first century A.D.

MISCELLANEOUS FLAGONS WITH WIDE NECKS

387 Black, cream/yellow surface; T2, quartz and limestone.

vie 1 : 3817 Dia.: 8.5

388 Orange/brown, yellow/cream surface; T2, quartz, limestone and red iron.

xiv 81 : 3818 Dia.: 6.5

xiv 81: mid first century A.D.

389 Orange/brown, cream surface; T2, quartz and limestone.

xxiii 25 : 144

xxiii 25: second century A.D.

390 Very pale orange/pink, yellow/cream surface; T3, quartz, limestone and red iron.

xxiv 43 : 3816

xxiv 43: third/fourth century A.D. (?).

391 Orange/yellow; T1, limestone, quartz, red iron and black vitreous grains.

i 36 : 3823 Dia.: 10.5

i 36: possibly as early as early second century B.C.

392 Orange/red, grey/brown surface; T2, limestone.

iiib 5 : 3826 Dia.: 19

iiib 5: second half of first century A.D.

393 Dark red/brown, orange/brown surface; T3, quartz.

xiv 30 : 3805 Dia.: 8.5

xiv 30: second century B.C.

394 Pale pinkish orange; T2, quartz, limestone and red iron.

iiib 1 : 3807 Dia.: 8

iiib 1: second half of first century A.D.

JUGS OR FLAGONS WITH TALL, WIDE, FLARED NECKS

395 Small flange rim, slightly undercut and with vertical outer face.

Everything from dull pink to dark red, yellow/cream surface, T2, 3 (3,7 examples), quartz and limestone.

i	5 : 3845	Dia.: 13	i	164 : 3839	Dia.: 13
i	9 : 3838	Dia.: 12	iii	5 : 3836	Dia.: 13
i	36 : 3841	Dia.: 13	iiic	2 : 3837	Dia.: 12
i	97 : 3835	Dia.: 13	xxi	17 : 48	
i	111 : 3840	Dia.: 13	xxiii	38 : 49	

xxiii 38: possibly as early as third century B.C.

396 Neck slightly splayed, projecting flange rim with sloping outer face, slightly undercut.

Very pale orange or pink to orange/brown, yellow/cream surface, dark red or maroon paint; T3, quartz (well rounded in 3842), limestone and occasionally red iron.

i	9 : 3842	Dia.: 12	xiv	74 : 45	
iiic	1 : 3843	Dia.: 14	xxiii	32 : 46	
vid	1 : 3851		xxiii	39 : 4132	Dia.: 14
xiv	47 : 47				

xiv 74: possibly as early as late fifth century B.C.

397 Thin, projecting down-sloped flange rim.

Anything from pink to orange/red, yellow or yellow/cream surface, dark red paint; T2 – 4 (4,5,1 examples), quartz and limestone.

i	46 : 3844	Dia.: 11	xiv	67 : 57	
i	83 : 3849	Dia.: 10	xiv	110 : 58	
i	145 : 3850	Dia.: 10	xiv	155 : 4014	Dia.: 12.5
ia	8 : 3848	Dia.: 14	xxiv	80 : 4160	Dia.: 9.5
ia	11 : 4013	Dia.: 12.5	xxiv	80 : 4176	Dia.: 11.5
iv	6 : 3852	Dia.: 13.5	xxv	16 : 3847	Dia.: 12
v	5 : 3846	Dia.: 11.5			

xiv 67: possibly as early as fourth century B.C.

398 Neck slightly splayed, small flange rim.

Orange/brown, yellow/cream surface, red paint; T3, black grains and limestone.

xiv 50 : 43

xiv 50: second half of first century B.C.

- 399** Splayed, slightly thickened rim with wide moulding on outer face.

Smooth orange/brown, yellow/cream surface, red paint; T3, limestone and red grains.

xiv 21 : 44

xiv 21: mid first century B.C.

- 400** Wide, horizontal tapered flange rim with lid-locating step cut on inner face.

Mid brown or grey, yellow/cream surface; T3, quartz and limestone.

C 2 5	: 3863	Dia.: 15	xxi	17 : 51	
i	175 : 3859	Dia.: 11.5	xxi	17 : 55	
iii	1 : 3860	Dia.: 11	xxi	18 : 3861	Dia.: 10

xxi 17: second half of second century B.C.

- 401** Similar to type 400.

Orange/brown, orange/yellow core, yellow/cream surface; T2, quartz, limestone and black vitreous grains.

iii 9 : 3862 Dia.: 10.5

iii 9: second half first century A.D.

- 402** Neat projecting flange rim of roughly square section, slight lip on inner face; neatly tooled grooves on outer face of neck.

Pink or orange/brown, yellow/cream surface; T1-3, limestone, quartz and occasional red iron and black vitreous grains.

iii	2 : 3880	Dia.: 15.5		
vib	2 : 3878	Dia.: 10.5		
xiv	9 : 3856	Dia.: 11		

iii 2, xiv 9: mid first century A.D.

- 403** Projecting flange rim with sloping upper face and slight lip on inner face.

Red to orange/brown, yellow/cream surface; T1, 3 (1,3 examples), quartz and limestone and occasional red iron and black vitreous grains; similar fabric to 402.

v	9 : 3855	Dia.: 11	xiv	128 : 3854	Dia.: 10.5
xiv	81 : 3857	Dia.: 13	xv	12 : 3853	Dia.: 7

xiv 81: mid first century A.D.

MISCELLANEOUS

- 404** Orange/red inner fabric, dark grey outer fabric, banded grey and orange/brown surface, dark red paint; T2, quartz and limestone.

i 67 : 3867 Dia.: 11.5

i 67: possibly as early as second century B.C.

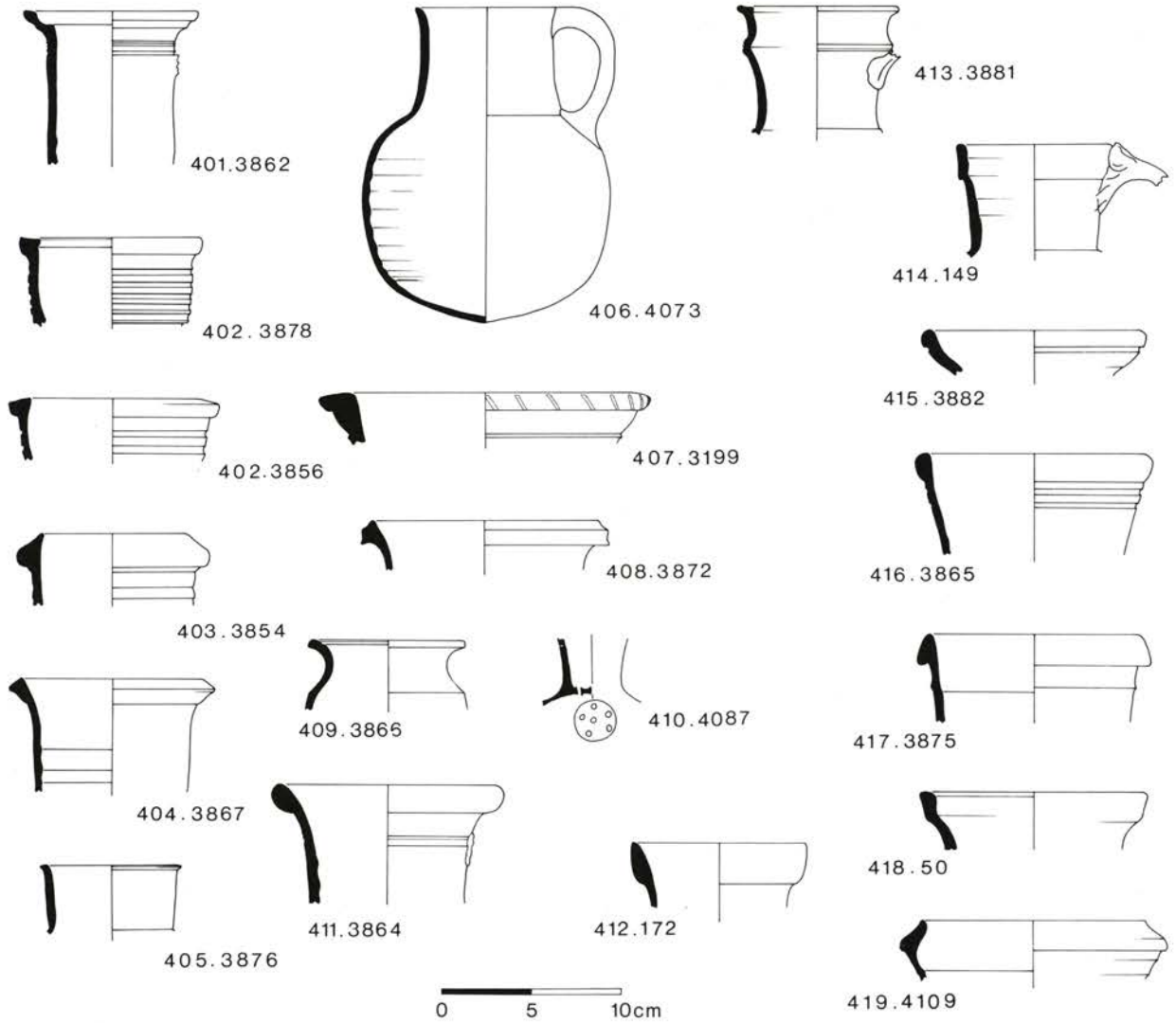


FIG.70 Coarse Pottery Types 401-419 (Scale 1:4)

405 Red/brown; T1, limestone, quartz and red iron.

iiic 1 : 3876 Dia.: 9

406 Red/brown; T3, limestone and red iron.

iiic 2 : 4073 Dia.: 8

407 Red/brown, dark red paint; T3, limestone, rock fragments and red iron.

v 1 : 3199 Dia.: 16

408 Dark red/brown; T2, limestone, quartz and black iron.

via 2 : 3872 Dia.: 14

via 2: second half of third century A.D.

409 Pink core, yellow/brown margins, yellow/cream surface; T2, limestone and quartz.

vib 7 : 3866 Dia.: 8

vib 7: early fourth century A.D.

- 410** Filter from flagon neck.
Very pale brown; T1, quartz.
- xiv 1 : 4087
- xiv 1: possibly as early as late fifth century B.C.
- 411** Orange/brown, greenish cream surface; T3, quartz and limestone.
- xiv 9 : 3864 Dia.: 13
- xiv 9: mid first century A.D.
- 412** Smooth orange/brown; T3, limestone and red iron.
- xiv 70 : 172
- xiv 70: second half of first century B.C.
- 413** Orange/brown, pale yellow surface; T1, quartz and limestone.
- xiv 81 : 3881 Dia.: 9.5
- xiv 81: mid first century A.D.
- 414** Mid brown, dark grey core, cream surface; T2, limestone, black and red grains.
- xiv 127 : 149
- xiv 127: late second century A.D.
- 415** Pale orange; T3, sparse, quartz, red iron and limestone.
- xv 15 : 3882 Dia.: 13.5
- xv 15: sixth century.
- 416** Orange/yellow, dark maroon/brown surface; T1, quartz and occasional red iron up to 1 mm dia.
- xv 16 : 3865 Dia.: 13.5
- xv 16: sixth century A.D.
- 417** Grey/brown, yellow/cream surface; T3, limestone, quartz and red iron.
- xix 1 : 3875 Dia.: 12.5
- 418** Orange/brown, greenish/cream surface; T4, limestone and quartz.
- xxiii 139 : 50
- xxiii 39: latest first century B.C.
- 419** Red/brown, greyish core, buff surface.
- xxiv 67a : 4109 Dia.: 15

PART III: BUILDING MATERIALS

by HAZEL DODGE

1. TERRACOTTA VAULTING TUBES (TUBI FITTILI) (FIG.71)

1. One almost complete tube with broken nozzle. Pinky yellow fabric and grooved exterior surface. Diameter 7.6 cm, overall length 12.8 cm, neck length 4.6 cm, thickness 0.8 cm at base of tube, 0.7 cm thick at neck. A good deal of mortar adheres to the tube on both inside and out. The imprint of the neck of the previous tube is clear in the mortar inside. The tube may be a rib tube to judge from the position of the mortar on the exterior. SPD 9.9, Y1 vi b. 6. (Forum Period IV).
2. Almost complete tube with nozzle entirely broken off. Similar fabric to 1, with grooved exterior surface. Much mortar adheres to the surface on one side. The nozzle of another tube is still in place in the mortar inside the body of the tube. Diameter 7.9 cm, length 11.2 cm, thickness 1 cm at base of tube. SPD 9.8, Y1 vi b. 6 (Forum period IV).
3. Broken neck of tube embedded in mortar which shows the traces of the grooved inner surface of the next tube (now gone). Length of neck 4.8 cm, thickness at base of neck 0.6 cm. SPD 9.8.
4. Fragments of three tubes still mortared together. Fabric of all three a bright red brick colour. Length at least 8.6 cm, thickness *c.*0.6 cm. These probably formed part of a rib for a groin vault. SPD 11.3, Y1 vi b. 6 (Forum period IV).
5. Lower part of the body of a tube with the neck of the preceding tube in place in the mortar. Fabric dark brick red. Diameter 7.7 cm, thickness at base 0.9 cm, thickness at broken top edge 0.6 cm. SPD ?.
6. Fragment of lower part of tube. Dark red/grey fabric. Diameter 7.6 cm, thickness 0.5 cm. SPD 9.9, Y1 vi b. 6 (Forum period IV).
7. Broken neck of tube surviving embedded in large lump of mortar. Fabric very red. Thickness 0.3 cm. SPD ?.
8. Fragment of upper part of tube. Fabric brick red with grooved interior and exterior surface. Thickness of upper body 0.65 cm, thickness of neck 0.4 cm. SPD 9.12, Y1 vi b. 6 (Forum period IV).
9. Fragment of body of tube. Fabric pale orange colour. Diameter 7.5 cm, thickness at base of body 1cm, thickness at upper broken edge 0.7 cm. Mortar adheres to one side. SPD 9.9, Y1 vi b. 6 (Forum period IV).
10. Fragment of body of tube. Fabric red with grooving on both interior and exterior surface. Diameter *c.*8 cm, thickness at base 0.8 cm. SPD ?.
11. Another similar but smaller fragment with grooving. Thickness 0.5 cm. SPD ?.
12. Fragment of part of lower body of tube. Fabric pale orange. Thickness at base 0.8 cm. Interior mortar lump with impression of previous tube. SPD ?.

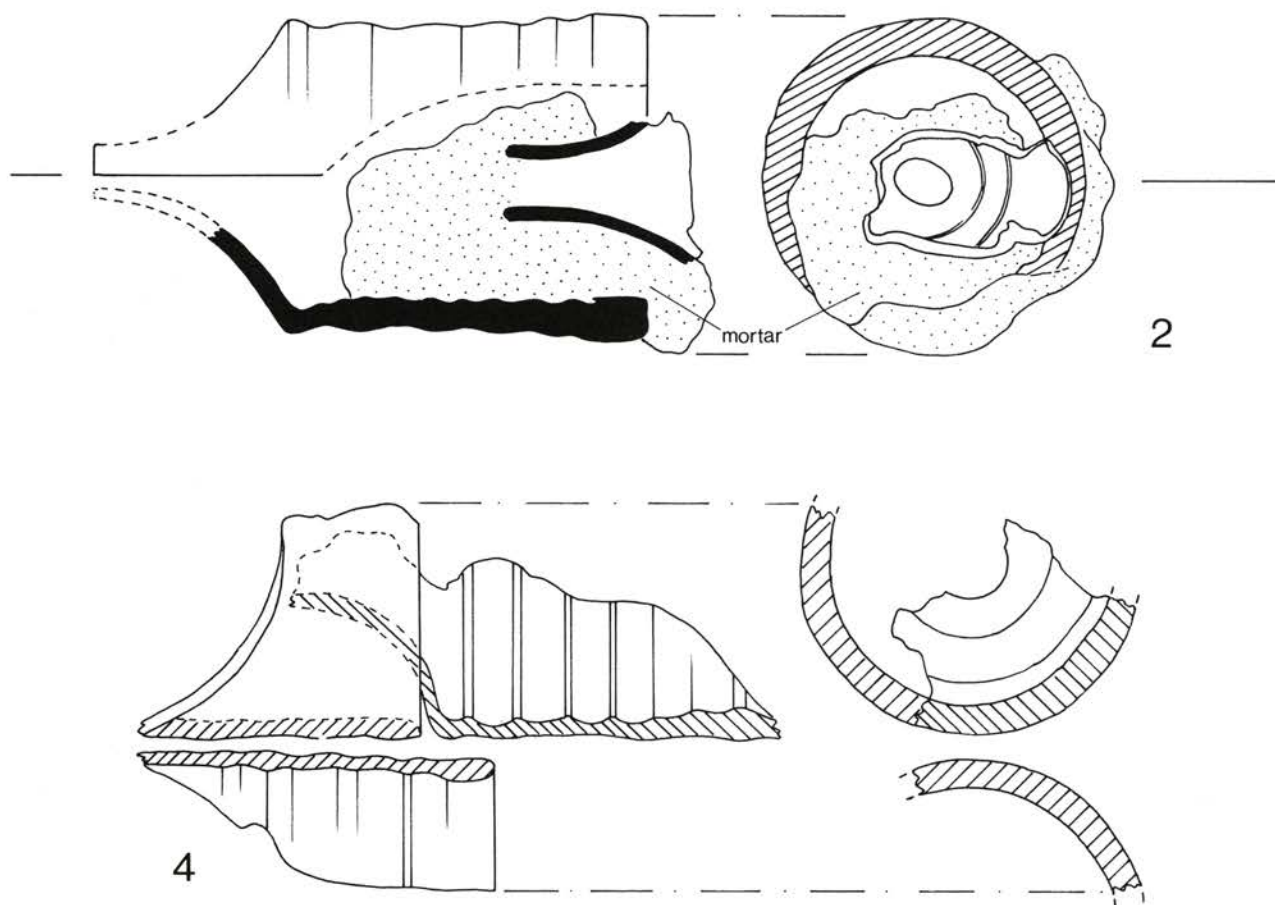


FIG.71 Terracotta Vaulting Tubes (Scale 1:2)

13. Neck of tube. Fabric red. Length 4.8 cm, thickness 0.4 cm. SPD 11.2, Y1 vi b. 6 (Forum period IV).

14. Neck of tube. Fabric orange. Badly made and fired with air bubbles quite visible. Length 4.6 cm, thickness variable *c.*0.7 cm. SPD ?.

15. Part of linking tube with grooved surface with internal mortar and necks of two tubes embedded. Fabric bright red. Length at least 9 cm. Thickness 0.7 cm. SPD ?.

The use of interlocking vaulting tubes was a common feature of Roman construction in central North Africa. Both barrel and groin vaults were constructed. The methods of application have been reconstructed recently by a French team working at Bulla Regia (Olivier and Storz 1982, 111-127), and it has been proved beyond doubt that the major advantage of this technique was that a vault of interlocking tubes could be constructed either totally without or only with the very minimum of wooden centring, an important consideration in pre-desert conditions. Indeed these ceramic tubes themselves formed a permanent centring for a vault of mortared rubble.

The origins of the technique are uncertain. Early examples in North Africa date from the third century B.C. at Tabarka and Tipasa (Bovini 1960, 93), but there are also early examples in the southern part of Sicily, for example at Morgantina (Allen 1974, 376-82; Wilson 1979, 32). The technique may therefore not have been specifically North African in origin. The suggestion that the technique was a development from the use of reeds as a permanent centring is one that deserves consideration (Cintas 1953, 258; Lézine 1954, 180; Poinssot 1958, 21; Allen 1974, 378-79). At the Punic site of Dar Essafi houses dating to the third century B.C. had vaults of mudbrick supported by a permanent centring of reeds (Cintas 1953, 258; Lézine 1954, 180). The imprint of the reeds was found on several of the fallen vault fragments. At Morgantina there is

evidence that both the reed and tube techniques were used in the same structure during the third century B.C. (Allen 1974, 378).

In the Roman period in North Africa the technique was used from the early second century A.D. (Lézine 1954, 168–81; De Angelis d'Ossat 1962, 137–38; Peacock 1984b, 245–6). One of the earliest uses in the imperial period is in the necropolis at Bou Krama near Utica (Lézine 1954, 179–80) which has been dated to no later than the beginning of the second century A.D.

Outside Sicily and North Africa there are no examples of the technique recorded, apart from two possible examples in Roman Britain (Cunliffe 1976, 28–32), and two early applications of the technique in an oven at Pompeii and in the baths F3 at Dura Europos (De Angelis d'Ossat 1962, 137; Rostovtzeff 1936, 61), which both used a form of interlocking amphora in their construction. Both are dated to the early first century A.D.

The technique was taken up in the late Roman and early Medieval period at Rome, Milan and especially Ravenna (De Angelis d'Ossat 1962, 138–9).

The date of the Sabratha tubes is uncertain. They were found in a relatively late context in the Forum (Kenrick 1986, 29), and may represent debris from some great disaster.

2. IMPORTED MARBLE

The fragments of marble, mainly veneer, are probably only a representative sample of the types occurring at Sabratha. The amounts in which each type occurs is not representative. Thus no statistical analysis is valid. However, it is of great importance to the general study of the use and transport of marble in the Roman Empire for such instances to be recorded. Several of the types here have not hitherto been reported at Sabratha. A number of general observations can be made about the presence of these marble types at Sabratha in the context of the Empire as a whole.

1. Fragment of veneer, Scyros marble, 1 cm thick. H. 11.1, Casa Brogan; cement floor of late (?Byzantine) house.
2. Fragment of veneer, Scyros marble, 0.8 cm thick. H. 11.2d, Casa Brogan.
3. Fragment of column?, Troad granite? H 21.2, Y1 xiv. 62 (Casa Brogan period V).
4. Circle of white (Docimium?) marble cut from a larger moulded piece, 1.1 cm thick. J. 3b.1, area north of East Forum Temple; surface rubble.
5. Circle of white (Docimium?) marble cut from a larger piece, 0.7 cm thick. J. 3c.2, area north of East Forum Temple.
6. Fragment of veneer, *cipollino*, 1.7 cm thick. K. 3.2, Basilica.
7. Fragment of veneer, purple porphyry, 0.4 cm thick. K. 20, Basilica.
8. Fragment of veneer, *rosso antico*, 0.9 cm thick. K. 20.3, Basilica.
9. Fragment of veneer, *portasanta?*, 1.2 cm thick. K. 25.2, Basilica.
10. Fragment of veneer, *verde antico*, 1.1 cm thick, rectangular with two edges. K. 25.3, Basilica.
11. Fragment of veneer, presumably beading, white Docimium, triangular in section, 0.7 cm wide. K. 25.3, Basilica.
12. Fragment of veneer, white/grey, possibly Proconnesian, 1.4 cm thick. K. 25.11, Basilica.
13. Fragment of moulded piece of wall veneer, *pavonazetto*, 5 cm x 7.6 cm. K. 26.8, Basilica.
14. Fragment of beading, *giallo antico*, 0.6 cm thick. Y1 v. 2 (Forum period III).
15. Two complete thin rectangular strips of veneer, *giallo antico*, 0.5 cm thick. Y1 vi b. 7 (Forum period IV).
16. Fragment of veneer, *pavonazetto*, 0.7 cm. Y1 vi b. 7.
17. Two fragments of veneer, Lacedaemonian, 0.9 cm thick and 0.6 cm thick. Two fragments of veneer, purple porphyry, 1.6 cm thick and 0.5 cm thick. Y1 vi b. 7 (Forum period IV).
18. Fragments of veneer, *cipollino*, all 1.2 cm thick. Y1 vi b. 7 (Forum period IV).
19. Two fragments veneer, *giallo antico*, 0.7 cm thick. Y1 vi b. 7.
20. Fragment of veneer with rounded edge, *rosso antico*, 1.5 cm thick. Y1 vi b. 7 (Forum period IV).

21. Fragment of veneer, *rosso antico*, 1.6 cm thick. Y1 vi b. 7 (Forum period IV).
22. Fragment of veneer, white grey marble with very large crystals, 2.4 cm thick. Y1 vi b. 7 (Forum period IV).

Notes on the marbles

1. *Scyros*. This type of marble was mostly exported to Rome for use as veneer and sometimes for columns. It has also been recorded at Herculaneum and Pompeii, but in North Africa, until now, only at Lepcis Magna (Gnoli 1971, 200, 294).

2. *Cipollino*, Carystos. A marble with a very wide distribution from London (Pritchard 1986, 172) to Palmyra (Dodge 1988a, 219) and used for both columns and veneer. At Sabratha it was also used in the theatre for columns of the *scaenae frons* (Caputo 1959, 14, 27).

3. *Purple Porphyry*, Djebel Dokhan. Though greatly used at Rome, this 'imperial stone' had a much wider distribution than hitherto thought (Dodge 1988a, 223; 1988b). However, in North Africa it has only been recorded at Carthage and at a villa 55 km east of Lepcis (Humphrey 1976, 32; 1978, 167-186; MacKendrick 1980, 157).

4. *White Docimium*, Phrygia. This marble is a very fine sculptor's stone and has recently been identified as having been used at Lepcis Magna for statuary (Walda and Walker 1984). As well as for sculpture it was also used for architectural decoration (Dodge 1988b).

5. *Rosso antico*, Cape Taenarum. This stone has rarely been recorded outside the Rome and Pompeii areas (Dodge 1988b). However, in North Africa it has been identified at Carthage (Humphrey 1978, 167-186) and at Lepcis Magna (Dodge 1986, 184), and thus this use at Sabratha indicates a possible wider use in the region.

6. *Portasanta*, Chios. This marble, though the identification is uncertain here, was definitely used in the theatre at Sabratha (Caputo 1959, 35), but so far Carthage is the only other North African site where its use has been recorded (Humphrey 1978, 167-186).

7. *Verde antico*, Thessaly. Despite the great use made of this marble in the Roman period from Hadrian and into the early Byzantine period, it has been little recorded in North Africa in comparison to the Eastern Provinces (Dodge 1988b). It was used for veneer in a small room associated with the theatre at Sabratha (Caputo 1959, 27), and it is also recorded in late *opus sectile* at Carthage (Humphrey 1978, 167-186).

8. *Pavonazzetto*, Phrygia. A marble widely used throughout the Empire (Dodge 1988b) and identified at Carthage (Röder 1971, 259), Lepcis Magna (Ward-Perkins 1951, 89) Sabratha (theatre) (Caputo 1959, 27), and Ptolemais (MacKendrick 1980, 137).

9. *Lacedaemonian*, Croceae near Sparta. Green porphyry, mostly used for *opus sectile*. Its distribution shows great use in the Rome and Naples areas, but it has been identified at both the eastern and the western fringes of the Empire (Palmyra, Dodge 1988a, 219; London, Pritchard 1986, 174).

10. *Proconnesian*, Proconnesos, Sea of Marmara. This marble established a virtual monopoly in the trade in white marble for architectural decoration in the Eastern Mediterranean (Ward-Perkins 1980, 31). In North Africa it shared the market with other white marbles.

11. *Troad Granite*, north-west Turkey. Columns of this granite were exported from the second century A.D. in large quantities all over the Mediterranean (Gnoli 1971, 126-8; Dodge 1988a,

223; 1988b). Columns of Troad granite were used in the Constantinian restoration of the basilica in the Forum Vetus at Lepcis Magna (*IRT* 467).

12. *Breccia Corallina*, Verzirken, Bithynia. This stone was widely used for columns at Rome, Split and sites on the Syrian coast. In North Africa it has been recorded at Lepcis Magna and at Sabratha where it was used for veneer in a small room associated with the theatre (Caputo 1959, 35; Gnoli 1971, 204–205; Ward-Perkins 1975, 40).

13. *Giallo antico*, Chemtou, Numidia. This fine compact stone was a favourite in Rome and Italy, but its distribution in the Empire is patchy. It has been recorded in Gaul, Asia Minor, Syria and at a number of North African sites (Dodge 1988a, 219).

3. CLAY AND OPUS SIGNINUM

1. Fragments of clay wall rendering, brick red in colour with very small stone inclusions. Grey wash on surface. H. 12. 8E, Y1 xiv 12 (Casa Brogan period VIa).
2. Fragment of *opus signinum* flooring, hard pink mortar (evidence of crushed brick in make-up) with inclusions of white, pink and grey fragments of stone. Y1 xxi. 18 (T. 1. 5).
3. Fragments of clay wall rendering. Very brittle, with pale pink wash. J. 3. 6b, area north of East Forum Temple. Layers pre-dating wall 5 and possibly early wall beneath.

4. PAINTED WALL PLASTER

1. Fragment of painted plaster with traces of green and red paint surviving. J. 6. 1b.
2. Fragment of painted wall plaster with graffito. C. 15.
3. Fragment of painted wall plaster with traces of green and red paint. K. 20 3 4, Basilica.
4. Fragment of painted plaster with traces of red paint. Y1 iii. 8, 9 (initial construction of East Forum Temple and Precinct).
5. Fragment of painted plaster, design in red and black. Y1 iii. 4 (initial construction of East Forum Temple and Precinct).
6. Fragments of painted wall plaster with traces of green paint. J. 1. 1f.
7. Fragments of painted plaster with red paint surviving. F. 20. 2.

5. PAINTED STUCCO

1. Fragments of painted stucco cornice with curvilinear design in red paint. Y1 vi. b7 (Forum period IV).
2. Fragment of stucco triglyph with red paint emphasising the division between each triglyph. Y1 xiv. 4, 6, 8a (Casa Brogan period IV; cellar).
3. Fragments of stucco egg and dart. Traces of red and green paint survive in the grooves. D. 7.
4. Fragment of stucco decoration with palmette leaf design. No paint survives. Y1 v. 4 (Forum period III).

6. MOSAIC FRAGMENTS

1. Three glass tesserae, two blue and one green. H. 13. 3, Casa Brogan.
2. Tesserae roughly 1 cm square of pure white and blue-grey marble with white plaster and *opus signinum* still adhering. H. 1.
3. Blue glass tessera. M. 3. 20.

4. Green glass tessera 1 cm square and ½ cm thick. J. 1. 1f, area north of East Forum Temple.
5. Fragment of tessera of green glass. K. 52. 4, Basilica.
6. Three tesserae of green coloured stone and one of blue. K. 20. 3f, Basilica.
7. Fragment of mosaic, tesserae of white/grey stone, roughly 1cm square. G. 1. 4B, Y1 xv 15 Byzantine wall.
8. Mosaic fragment with white and grey marble tesserae roughly 1 cm square. J. 7A, area north of East Forum Temple.
9. Mosaic fragment with white and grey marble tesserae roughly 1 cm square. R. 5. 2, Church 3, south-east angle of walls 3 and 4, grey sandy layer.
10. Two fragments of mosaic, large tesserae c.2 cm square of white/grey marble and Scyros? marble. R1, Church 3.
11. Two fragments of mosaic, large tesserae c.2 cm square, not all regular in shape, of white and grey marble, a yellow stone and *breccia corallina*. R. 1. 4, Church 3, trench 1; building debris.
12. Two fragments of mosaic: 1. Large tesserae at least 2 cm square, white, grey and *cipollino* marble; 2. Much smaller tesserae 1 cm square of white and grey marble, a dark red and a black stone, set in abundant mortar. R. 5. 1, Church 3.
13. Mosaic fragments. Tesserae 2 cm square of white, light and dark grey marble, *cipollino* and *breccia corallina*. R. 1 2h, Church 3.
14. Mosaic fragments, tesserae c.1 cm square of white marble, green glass, *cipollino* and a dark black/green stone. R. 1, Church 3.
15. Large fragment of mosaic with roughly shaped tesserae c.1 cm square of white marble, a red stone (*rosso antico?*), a yellow and a black stone. R. 1, Church 3.
16. Many fragments of painted wall plaster with yellow, red, green and black paint surviving. Many incorporate mosaic tesserae of green glass and a dark red stone into the design. Church 3 apse, upper part of R1 Foundation Trench.

PART IV: THE STRATIFIED CONTEXTS

The following is an ordered list of the stratified contexts which produced the material included in this volume (See also pp.3–4). It is largely the same as the list on pages 319 & 320 of Kenrick 1986. Each entry contains the following information: reference(s) to Kenrick 1986; details of location; an indication of likely *terminus post quem*; material (mostly fineware) upon which this date is based. The information has been taken, in the main, from Kenrick 1986 but in places it is supplemented with information taken from notes left by Philip Kenrick and Donald Bailey in the archive card-index of contexts.

For Period 0 of the Forum and East Forum Temple in particular, the fineware evidence has been listed quite fully since the dating of contexts in this long and undifferentiated phase is extremely problematic.

Each entry concludes with ordered lists of the amphora and coarseware types which each context produced.

For ease of reference a chronological chart of the contexts is shown in FIG.72. A “right-angle” symbol, placed above and to the left of the context to which it refers, has been used to identify a context with a *terminus post quem* and to pinpoint the position of this. In some cases a TPQ has a certain amount of drift depending on how much of the latest datable fineware is regarded as intrusive. This has been indicated by placing right-angle symbols at the limits of the drift and linking them with a dashed line.

Abbreviations used:

Ag. XII: Sparkes and Talcott 1970 (Agora Vol XII)

ARS: African Red Slip ware; form numbers prefixed by “Hayes”, refer to Hayes 1972

B: As prefix to form numbers, this refers to the Berenice (Benghazi) type series, see Kenrick 1985 and Riley 1979

Bailey: Bailey 1975 & 1980

BG: Black Glazed ware

Comfort: Comfort 1982

Gill: Gill 1986

Deneauve: Deneauve 1974

EFT: East Forum Temple

ESA: Eastern sigillata A

Hell. r.g.: Hellenistic Red Glazed ware

It. sig.: Italian sigillata

Lamboglia: Lamboglia 1952

Morel: Morel 1981

PMK: P M Kenrick

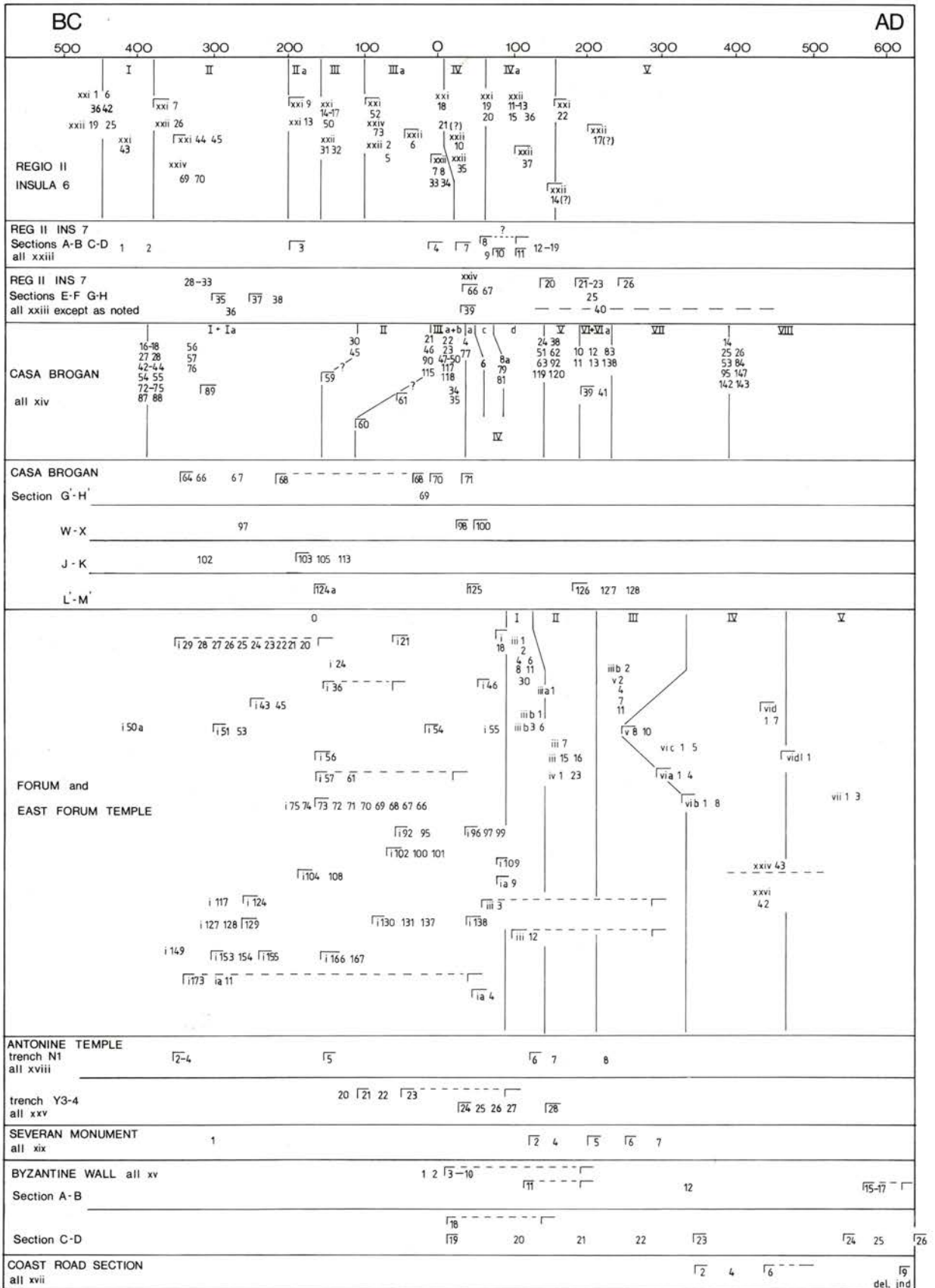


FIG. 72 Chronological Chart of the Stratified Contexts (See pages 3-4, 255-94) (Y1 numbers)

TPQ: *Terminus post quem*

Trip. sig.: Tripolitanian sigillata; see Kenrick 1985, 283 and, more recently, Soricelli 1987 (which suggests that the ware is Campanian rather than Tripolitanian)

Trip. R.S.: Tripolitanian Red Slip Ware

Trench S 14: Kenrick 1986, 223–4 and fig. 98; section between north wall of Regio IV, Insula 11 and the theatre; the finds were not catalogued by Kathleen Kenyon and thus have no Y1 nos; it is quite clear from the section (*op. cit.* fig. 98) that almost all of the contents of this trench post-date the establishment of the theatre wall and it seems likely that they should be regarded as a homogenous group deposited at the time the theatre was built.
Coarseware Types: 46 51 56 58 59 62 91 92 149 162 259

Y 1 No. Level

- | | | |
|----------|-----------|---|
| i | 18 | Kenrick 1986, 16; East Forum Temple, temenos and portico, south side; period 0; section Z-AA; immediately pre-Forum; TPQ c. A.D. 40 from Italian sigillata; ARS Hayes 8A regarded as intrusive.
Amphora Types: 1i 1g 3a 3d 4f
Coarseware Types: 33 34 |
| | 20 | Kenrick 1986, 41; sections Z-AA, BB-CC, East Forum Temple, temenos and portico, south side. This and levels 22–23 and 25–29 form a sequence of occupation levels associated with walls H, A and G. BG: Attic, pre-Campana and local but also some Campana A from i 29; if Campana A is intrusive then these levels may all date to the fourth or third century B.C.
Amphora Types: 1g 3a 4f 6
Coarseware Types: 7 235 308 |
| | 21 | Kenrick 1986, 41; section Z-AA, East Forum Temple, temenos and portico, south side. Associated with wall D which supercedes walls H, A and G (see levels 20, 22, 23, 25–29). BG: ?Campana A, Local (B 126. 3–4), ESA: B323; TPQ in first century B.C. from ESA.
Amphora Types: 3a |
| | 22 | See 20.
Amphora Types: 3a 4k 34o
Coarseware Types: 270 |
| | 23 | See 20.
Amphora Types: 1g
Coarseware Types: 34 97 253 |
| | 24 | Kenrick 1986, 41; section Z-AA, East Forum Temple temenos and portico, south side; pit; this is evidently earlier than the temple precinct wall and the period IV tabernae. BG: might be as early as fourth century B.C. Also contained bases of four amphorae.
Amphora Types: 3f 3a 34g
Coarseware Types: 19 33 241 260 |
| | 25 | See 20. |
| | 26 | See 20.
Amphora Types: 10
Coarseware Types: 33 352 |

- 27 See 20.
Amphora Types: 3a
- 28 See 20.
- 29 See 20.
Amphora Types: 1j
- 36 Kenrick 1986, 46; Forum south side, section AF-AG, "Pit with storage jars"; not related to other structures. BG: Pre-Campana, Campana A, Local; Hell. r.g.; ESA; Pompeian Red – or related; Amphorae (at least 21 vessels – Hole-mouthed type (Berenice Hellenistic Amphora 10) and Van der Werff 3; if the ESA and Pompeian Red are regarded as intrusive then deposition may have taken place in the second century B.C. rather than the first.
Amphora Types: 3a 3c 3f 3g
Coarseware Types: 7 18 30 33 34 112 114 115 116 117 213 239 376 391 395
- 43 Kenrick 1986, 48; East Forum Temple, temenos and portico, north side; with 44 and 45 forms early sequence in temenos; certainly earlier than wall D1.6, which appears to be Tiberian. BG (pre-Campana and Local) suggests starting date for sequence in third century B.C.
Amphora Types: 1 1b 1g 6 7f 9a 9f 10
Coarseware Types: 213 329
- 44 See 43.
Amphora Types: 3a 6 10
Coarseware Types: 35 116
- 45 See 43.
Amphora Types: 16a
Coarseware Types: 214
- 46 Kenrick 1986, 46; East Forum Temple, temenos, north side, section C-D. Foundation trench of wall D1.6 and under associated floor. BG: Campana A and C, Local; ESA: B319, 323, 333; It sig.: Gp B, B201, 210; ARS; Hayes 3 and 61; Coin of 18 B.C.; It. sig. (B210) = Tiberian date; ARS regarded as intrusive.
Amphora Types: 3g 4f 7a 7b 7c 7d 7l
Coarseware Types: 23 33 35 37 91 98 101 112 113 147 156 213 214 215 216
235 242 245 306 397
- 50a Kenrick 1986, 42; junction of Forum and East Forum Temple, south side, section HH-JJ-KK-LL-MM-NN-OO-PP-QQ-RR, east end; earliest occupation level. Fragment of fifth century B.C. Attic Red Figure; it would seem that all the earliest occupation levels from this section could go back to the fourth century B.C. at least.
See also 117, 149, 153-5.
- 51 Kenrick 1986, 38; East Forum Temple, portico and temenos, north side; Section E-F; Levels 51-55 and ia 1 form a sequence running up to the establishment of the East Forum Temple; Sequence is mostly isolated by piers and stylobate of late portico and so is not particularly meaningful but date range is fourth/third century B.C. – Augustan; 51 contains pre-Campana (1 sherd).
Amphora Types: 2a

- 52 See 51. Local BG fish-plate.
Amphora Types: 1g
- 53 See 51.
Amphora Types: 6 10
- 54 See 51. BG; Campana C; It. sig.: B201; ESA: B317: Pompeian Red related.
Coarseware Types: 117 118 120 123 147 316 339
- 55 See 51. BG: Pre-Campana, Local.
Amphora Types: 4a 4f 6
Coarseware Types: 21
- 56 Kenrick 1986, 38; East Forum Temple north portico. Section A–B. Levels associated with pre-Roman walls (D36–7) to south of Early Defensive Wall. BG: pre-Campana, Campana A (B4, 10), Local. Campana A should give TPQ of beginning of second century B.C.
Coarseware Types: 12 33 112 116 117 142 356
- 57 Kenrick 1986, 39; East Forum Temple, north-east corner, temenos and portico; levels 57–61 form early sequence; interpretation is very difficult; the only certainty is that the whole sequence pre-dates rebuilding of north portico since it is very difficult to separate the rebuilding from the original work. 57 contains: BG; Attic/pre-Campana (Ag XII 842), pre-Campana, guttus (Morel F8137 – fourth/third century B.C.), Local (B126, 3–4), Campana A (?); It. sig.: 1 sherd.
Amphora Types: 7d
Coarseware Types: 72 91 255
- 58 See 57. BG: Attic (Ag XII 835, Gill 127 – 375–325 B.C.), fragment of guttus in 57, Campana A.
Coarseware Types: 188
- 59 See 57.
Amphora Types: 34q
Coarseware Types: 91
- 60 See 57. BG: Attic/Pre-Campana (Ag XII 835, 947);
Coarseware Types: 6 21
- 61 See 57. BG – Attic/western (Morel F1127 – second half fourth century B.C.), pre-Campana, pre-Campana/Campana A.
Coarseware Types: 97
- 66 Kenrick 1986, 50; trench D 6, within podium of East Forum Temple; levels 66–75 are a sequence from below floor of pre-Roman building incorporated in podium. 66 contains: BG: Attic fish-plate (Gill 139, 375–325 B.C.), ?pre-Campana.
Coarseware Types: 113 117
- 67 See 66. BG: Local.
Amphora Types: 7f
Coarseware Types: 404

- 68 See 66.
Amphora Types: 4f
- 69 See 66. Attic skyphos (Gill 21, 450–400 B.C.).
- 70 See 66. BG: pre-Campana.
- 71 See 66. BG: Campana A, Local – B123.
Coarseware Types: 35 253
- 72 See 66. BG: pre-Campana – B25.2.
Amphora Types: 4d 7f
- 73 See 66. BG: Campana A.
- 74 See 66. BG: pre-Campana.
- 75 See 66. BG: Local.
- 92 Kenrick 1986, 46; north forum portico, section AK–AL; sequence of levels 92–96, continued by levels 97–99; all pre-Forum 1b. 92 contains: pre-Campana BG, and 1 sherd ESA.
- 93 See 92. Attic bolsal (?mid fourth century B.C.), bowl (pre-Campana or Campana A).
Amphora Types: 1f
Coarseware Types: 234
- 94 See 92. Pre-Campana, Campana A (B12).
Amphora Types: 3a 3g
Coarseware Types: 8
- 95 See 92. BG: Attic (cup – Gill 45, 380–350 B.C., skyphoi – Gill 11, 12, 450–400 B.C.), pre-Campana, Campana A, Campana C, Local.
Amphora Types: 3a 3b 3c 3g 4d 4f 10
Coarseware Types: 131 134 317
- 96 See 92. BG: pre-Campana (B14), Campana A, Local (incl. 1 early B128); It. sig.; Hell. r.g.
Coarseware Types: 30 34 98 114 117 234 243 341
- 97 Kenrick 1986, 47; north forum portico, section AK–AL; sequence of levels 97–99 continuing levels 92–96; all pre Forum 1b. 97 contains BG: pre-Campana, Campana A, Campana C, Local; It. or Trip. sig.; ESA.
Amphora Types: 3a 7l 9f 11a 16c
Coarseware Types: 11 14 16 35 98 117 119 144 340 395
- 98 See 97. BG: Attic.
Amphora Types: 3a 4f 35c
Coarseware Types: 34 85
- 99 See 97. BG: ?Attic, Campana A, Campana C, Local; ESA.
Coarseware Types: 14 110 117 213

- 100** Kenrick 1986, 49; junction of Forum and East Forum Temple, north side, section BE–BF; 100 and 101 are levels associated with walls F21.4, F21.5. 100 contains: ESA and possibly Hell, r.g. TPQ should be first century B.C.
- 101** See 100; Coarseware Types: 98
- 102** Kenrick 1986, 49; junction of Forum and East Forum Temple, north side, section BE–BF; pit at south end of section; pre-dates levels 100 and 101. BG: Campana A – B10, Campana C – incl. B63/Lamboglia 1; Pompeian Red related; TPQ should be first century B.C.
Amphora Types: 4f 7c
Coarseware Types: 34 35 97 99 110 117 147 243
- 103** Kenrick 1986, 49; junction of Forum and East Forum Temple, north side, sections BE–BF, BG–BH; pre-East Forum Temple, below fill (iii 3) running up to stylobate wall and west wall of north portico; contains Campana A (1 sherd) and ARS Hayes 33 (1 sherd – presumably intrusive – see iii 3 for similar problems).
- 104** Kenrick 1986, 49; junction of Forum and East Forum Temple, north side, section BG–BH; 104–108 are earliest levels in section and encompass construction and demolition of wall F22.2. 104 contains BG: pre-Campana/ ? Attic, Gnathia skyphos – B98.
Amphora Types: 1d
Coarseware Types: 126
- 105** See 104. BG: Attic – Gill 82, 375–350 B.C., ??Attic – Ag. XII 532, 430 B.C., pre-Campana, Local).
Amphora Types: 4c 4d
- 106** See 104. ARS: Hayes 182 (?).
- 107** See 104.
- 108** See 104.
- 109** Kenrick 1986, 50; junction of Forum and East Forum Temple, north side, section BN–BO/BO–BP; level immediately preceding first surface associated with the temple. BG: Attic; It. sig.; TPQ should be mid first century A.D.
Amphora Types: 1g 3g 4f
- 117** Kenrick 1986, 42; junction between Forum and East Forum Temple, south side, section HH–JJ–KK–LL–MM–NN–OO–PP–QQ–RR; earliest levels could go back to fourth century B.C. at least; see also 50a, 149, 153–5. BG: pre-Campana, Local.
- 124** Kenrick 1986, 44; Forum centre, east end, section AD–AE; earliest levels in centre of section; 2 coins (late fourth century–early third century B.C.).
BG: pre-Campana, ?Campana A.
Amphora Types: 3a 6
Coarseware Types: 2 31 341

- 127** Kenrick 1986, 12; Forum, west end against Capitolium, section AO–AP; levels 127–138 are sequence of surfaces in front of Capitolium. BG: Local. Coarseware Types: 221
- 128** See 127. BG: Local polychrome – large bowl as B126. 3–4.
- 129** See 127. BG: hemispherical bowl (Atelier des petites estampilles – first half of third century B.C.), Local – fish plate, broad footed bowl. Coarseware Types: 18
- 130** See 127. BG: Attic, Campana A (second half of second century B.C.), Local; ESA (B313/4). Amphora Types: 9f 16a
- 131** See 127. BG: ?Campana A; ?Local r.g., broad footed bowl.
- 132** See 127. BG: ?pre-Campana, Local polychrome (B123); Hell, r.g.
- 133** See 127. Hell. r.g.
- 134** See 127. BG: Local hemispherical bowl;
- 135** See 127. BG: Attic (Gill 98 – 375–325 B.C., Gill 159 – second quarter of fourth century B.C.), bowl base (Atelier des petites estampilles – first half of third century B.C.); Hell. r.g. Amphora Types: 3a 6 35c
- 136** See 127. BG. Local. Amphora Types: 1e
- 137** See 127. BG: Atelier des petites estampilles – first half of third century B.C.; Amphora Types: 6
- 138** See 127. BG: pre-Campana; It. sig. Coarseware Types: 236
- 141** Kenrick 1986, 12; Forum, west end against Capitolium, section AM–AN. BG: Local. Amphora Types: 7l Coarseware Types: 236
- 149** Kenrick 1986, 41; junction between Forum and East Forum Temple, south side, section HH–JJ–KK–LL–MM–NN–OO–PP–QQ–RR; earliest levels, could go back to fourth century B.C. at least; See also 50a, 117, 153–155. BG: Attic (Ag XII 537, *c.* 425 B.C.) Amphora Types: 1a 4c 4f 6
- 153** Kenrick 1986, 42; junction between Forum and East Forum Temple, south side, section HH–JJ–KK–LL–MM–NN–OO–PP–QQ–RR; sequence with 154, 155; earliest levels could go back to fourth century B.C. at least; see also 50a, 117, 149. BG: Attic (Gill 67, 170 second quarter of fourth century B.C.) Amphora Types: 6

- 154** See 153. BG: Attic (Gill 118 – second quarter of fourth century B.C.).
Amphora Types: 3g 4f
- 155** See 153. BG: pre-Campana (Morel F1511 – first half of third century B.C.),
Attic (Ag. XII 806–8 – from late fourth century B.C.).
Amphora Types: 1g
Coarseware Types: 2
- 166** Kenrick 1986, 42; East Forum Temple, south portico, west end, section
FF–GG; 166 and 167 are from below *opus signinum* floor which may
represent surface from latest pre-Temple buildings; some debris accumu-
lated on the floor before the foundation trenches for the portico were cut,
though the timescale of this accumulation is unknown. BG: Attic (bolsal,
?fourth century B.C.), Campana A.
- 167** See 166. BG: Campana A, Local.
Coarseware Types: 98
- 173** Kenrick 1986, 44; Forum centre, south-east corner; i 173 and ia 11 are
associated with massive structure at intersection of sections AD–AE and
HH–JJ; Coins: 5 × late fourth century–late third century B.C.;
Amphora Types: 4f.
- ia** **1** Kenrick 1986, 38; East Forum Temple, portico and temenos, north side;
section E–F; Levels i 51–55 and ia 1 form a sequence running up to the
establishment of the EFT; sequence is mostly isolated by piers and stylobate
of late portico and so is not particularly meaningful but date range is
fourth/third century B.C. – Augustan; It. sig.: Gp. A, B202, Comfort 3 & 4;
ESA: B313, 314.
Amphora Types: 7a 16a
Coarseware Types: 58 95 99 135 166 191 215 286 318 319 346
- 4** Kenrick 1986, 50; junction of Forum and East Forum Temple, north side,
section BN–BO; “Early pit”; it appears only to immediately pre-date the
cutting of the foundation trench for the west wall of the precinct; BG: Attic
(Gill 130, 131 – Ag. XII 1071 mid fourth century B.C., Gill 93 – 375–325
B.C., Gill 48 – 380–350 B.C., Gill 5 – 450–425 B.C.), pre-Campana; Guttus
– Morel 1981, F8173 – fourth/third century B.C.; ESA first century A.D.
Amphora Types: 1f 1g 1e 3g 4f 17 34i
Coarseware Types: 6 33 251 350
- 9** Kenrick 1986, 49; junction of Forum and East Forum Temple, north side,
sections BE–BF, BG–BH; level immediately preceding fill (iii 3) running up
to stylobate and west wall of temple portico; if fill dates to period of initial
construction of temple then ia 9 should be pre-temple, but there is a large
quantity of third century A.D. fineware in iii 3 and some sherds of a similar
date also in ia 9. BG: Attic. bolsal (Gill 33 – c.400 B.C.); pre-Campana (Ag.
XII 944), Local; It. sig.: Gp. B; Early ARS.
Amphora Types: 7g 16c
Coarseware Types: 91 216 297 306
- 11** Kenrick 1986, 44; Forum centre, south-east corner; i 173 and ia 11 are
associated with massive structure at intersection of sections AD–AE and
HH–JJ; Coins: 5 × late fourth century–late third century B.C.; Gnathia cup

(B98); Hell. r.g. (B117, 128); ESA (B318 – *c.* 50–25 B.C., B323); It. sig.; ARS Hayes 181 (or Hell. r.g.), and imitation Hayes 3A.
 Amphora Types: 3a 3g 4f 7f 7g 8a 34a
 Coarseware Types: 33 34 91 98 117 151 386 397

- iii**
- 1** Kenrick 1986, 15; East Forum Temple and precinct; levels 1, 2, 4–6, 8–11 and 30 are associated with initial construction; TPQ *c.* A.D. 50 from Italian sigillata.
 Coarseware Types: 15 34 95 98 137 147 167 216 286 320 400
 - 2** See iii 1.
 Amphora Types: 13
 Coarseware Types: 6 34 37 92 98 101 117 214 234 402
 - 3** Kenrick 1986, 49; junction of East Forum Temple and Forum, north side, sections BE–BF, BG–BH; fill running up to stylobate wall and west wall of north portico, ie deposition of fill post-dates both these. This fill contains large quantities of third century A.D. fineware suggesting that it has been confused with a higher fill associated with later rebuilding of the stylobate and portico walls; Augustan TPQ if ARS discounted.
 Amphora Types: 8a 8b 16a 16c 34d
 Coarseware Types: 2 34 47 95 98 99 110 119 131 214 243 250 307 332 339 354
 - 4** See iii 1.
 Amphora Types: 3a 6 10 13 16a
 Coarseware Types: 14 16 17 18 34 91 92 95 97 135 137 152 153 155 156 169 213 214 215 216 219 286 303 306 321 333 341
 - 5** See iii 1.
 Amphora Types: 1g 6 7L 10 16a 16b
 Coarseware Types: 30 33 34 35 91 98 104 110 117 395
 - 6** See iii 1.
 Amphora Types: 34b
 Coarseware Types: 98 101
 - 7** Kenrick 1986, 24; associated with period II alterations in EFT precinct, see also iii 15, 16 and iv 1–23; TPQ in second half of first century A.D. from early ARS; Hayes third century, 10A and sherds of a third century date as well as second century Italian lamps regarded as intrusive.
 Amphora Types: 7a 8b
 Coarseware Types: 16 95 167 213 214 215
 - 8** See iii 1.
 Amphora Types: 34L
 Coarseware Types: 156 215
 - 9** See iii 1.
 Coarseware Types: 91 99 131 133 147 153 167 209 213 214 286 312 401
 - 10** See iii 1.
 - 11** See iii 1.
 Amphora Types: 7c

- 12** Kenrick 1986, 38; East Forum Temple, north portico and temenos, west end; section A–B–C–D; fill on north side of stylobate wall; It is possible either that the whole of this fill belongs, with the re-building of the stylobate wall, to period IV, or that it belongs to period II and the occurrence of third century ARS is to be explained by the presence of an undetected foundation trench on the north side of the stylobate wall; TPQ in second half of first century A.D. if ARS discounted.
Amphora Types: 16a
Coarseware Types: 101 156 352
- 15** Kenrick 1986, 24; see iii 7.
Amphora Types: 10
- 16** Kenrick 1986, 24; see iii 7.
Coarseware Types: 59
- iiia** **1** Kenrick 1986, 16; outside north-west corner of Temple precinct; sections BJ–BK, BL–BM, BN–BO, BP–BN. Accumulation of sand which post-dates construction of temple precinct but pre-dates north wall of Forum 1b. BG: TPQ in second half of first century A.D..
Coarseware Types: 91 101 250 350
- iiib** **1** Kenrick 1986, 20; section AK–AL. iiib 1 and 3–6 are from period I levels in Forum area and outside the north wall of the Forum where it joins the precinct of the East Forum Temple and provide the dating evidence for the 1b Forum; TPQ in second half of first century A.D.; ARS Hayes 104 intrusive.
Amphora Types: 1f 1g 1e 1j 6 9f 16b
Coarseware Types: 5 9 33 34 35 62 92 98 99 108 142 145 213 216 247 394
- 2** Kenrick 1986, 27; iiib 2 and v 2, 4, 7, & 11 are from the foundation trenches and make-up levels of the “high level” (period III) Forum; ARS indicates start of period III in second half second century A.D.;
Coarseware Types: 8 16 17 33 34 98 151 310
- 3** See 1. Section AH–AJ, AQ–AR, AO–AP, AN–AM, AU–AV.
Amphora Types: 7e 7l
Coarseware Types: 91 213
- 4** See 1. Section BJ–BK.
Coarseware Types: 51 91 99 141 149 161 162 166 350 385
- 5** See 1. Section HH–JJ, YY–ZZ, AF–AG; some intrusive fifth–seventh century A.D. ARS.
Amphora Types: 1j 7k 7l 7m 8b 16a 34e
Coarseware Types: 7 72 91 92 95 98 99 101 110 112 117 119 131 133 161 162 194 215 286 303 392
- 6** See 1. Fill of post-holes in low-level Forum.
- iv** **1** Kenrick 1986, 24; see iii 7; iv 1–23 are truncation levels and yellow sand levels in the East Forum Temple (period II); ARS Hayes 3C (second century A.D.) is recorded from this level.
Amphora Types: 1e 1i
Coarseware Types: 144 224 235

- 2 See iv 1.
Amphora Types: 34b
Coarseware Types: 62
- 3 See iv 1.
- 4 See iv 1. Intrusive later second century and third century ARS, and a Corinthian Relief Ware bowl from this level.
Amphora Types: 1h 7j 7l 34z
Coarseware Types: 6 47 51 59 101 104 117 142 260 293
- 5 See iv 1. ARS Hayes 104C (A.D. 550–625) from this level.
Coarseware Types: 13 16 37 91 99 135 151 176 189 203 213 216
- 6 See iv 1. BG.
Amphora Types: 2 4a 6 8a 34f
Coarseware Types: 97 219 298 337 397
- 7 See iv 1.
Coarseware Types: 308
- 8 See iv 1.
Coarseware Types: 44 51 101 162
- 9 See iv 1.
ESA (B340 – mottled – A.D. 80+).
- 10 See iv 1.
Coarseware Types: 113 136
- 11 See iv 1.
Coarseware Types: 162
- 12 See iv 1.
Amphora Types: 1g 17
Coarseware Types: 95 98 225 307
- 13 See iv 1.
- 14 See iv 1.
Amphora Types: 7l
- 15 See iv 1.
Coarseware Types: 244
- 16 See iv 1.
Amphora Types: 16a
Coarseware Types: 7 62 95 111 141 214 215 235 353
- 17 See iv 1.
- 18 See iv 1.
Coarseware Types: 91

- 19 See iv 1.
Amphora Types: 7f
- 20 See iv 1.
Amphora Types: 1f 7f
Coarseware Types: 48
- 21 See iv 1.
Coarseware Types: 101 322
- 22 See iv 1.
Coarseware Types: 250
- 23 See iv 1.
- v 2 Kenrick 1986, 27; iiib 2 and v 2, 4, 7, & 11 are from the foundation trenches and make-up levels of the “high level” (period III) forum; TPQ in second half of second century A.D. from ARS; ARS Hayes 104, 105 intrusive.
Amphora Types: 1c 1g 1e 4j 8a 8b 16a 16b 34u 17
Coarseware Types: 16 33 34 35 37 43 44 50 58 60 66 94 95 98 99 100 101 104 110 117 121 124 131 147 151 157 161 162 186 213 214 236 243 303 305 306 378
- 4 See v 2.
Amphora Types: 6 7l
Coarseware Types: 7 23 44 133 161 162 167 171 213 214
- 7 See v 2.
- 8 Kenrick 1986, 31; East Forum Temple south portico, west end; section Z-AA; levels 8–10 are from the grey sand and upper levels (attributed to period IV); these groups almost certainly contain intrusions as the levels extended very close to the surface; see also vic 1–5 and vid 1–7; ARS: Hayes 9A, 31, 33, 93A.
Amphora Types: 17
Coarseware Types: 91 95 131 176
- 9 See v 8. Italian lamp: Loeschke VIII/Bailey P.
Amphora Types: 1e 7l 13
Coarseware Types: 137 208 215 264 403
- 10 See v 8. ARS: Hayes 3, 23A.
Amphora Types: 1a
Coarseware Types: 350
- 11 See v 2.
Amphora Types: 6 9a
Coarseware Types: 60 101 354
- via 1 Kenrick 1986, 31; East Forum Temple, south portico, section Z-AA, via 1–4 are from the foundation trenches of the tabernae (period IV); TPQ in first half of third century A.D. from ARS Hayes 45 and 50A, possibly slightly later from a Tunisian lamp (Deneauve type VIIB).
Amphora Types: 1f 6 16b
Coarseware Types: 46 58 92 99 100 103 104 215 271 286 323

- 2 See via 1.
Amphora Types: 1g 1e 7c 7e 8c 9f 10 13 18 34e 34j 34n
Coarseware Types: 9 16 19 21 33 35 46 58 59 66 91 92 96 99 101 103 104 131
162 196 213 238 286 293 408
- 3 See via 1.
- 4 See via 1. ARS: Hayes 182
- vib** 1 Kenrick 1986, 31; East Forum Temple, north portico, section A-B-C-D-E-F; vib 1-8 are from the foundation trenches of the rebuilt portico and the fill of the robber trench above the early wall (period IV). ARS: ?early.
Amphora Types: 7c 34j
Coarseware Types: 33 56 91 117 146 243 298
- 2 See vib 1. ARS: Hayes 9A, 10A, 14, 17, 27/31, 30, 31, 32, 33, 181, 182
Amphora Types: 1h 6 7c 8a 10 16a 16c 29 34e 34g
Coarseware Types: 59 64 91 92 101 104 131 160 172 207 213 215 216 236 251
293 334 345 346 350 384 402
- 3 See vib 1. ARS: Hayes 9A, 14.
Coarseware Types: 92 100 161
- 4 See vib 1. ARS: Hayes third century, 17, 23, 31, 32/33, 181, 182.
Coarseware Types: 59 104 131 162
- 5 See vib 1.
- 6 See vib 1. ARS: Hayes 23B, 26/181, 27/31, 31-33, 46, 58A, 181, 182, 184;
TPQ *c.* A.D. 290.
Amphora Types: 19 29 34m
Coarseware Types: 13 35 46 52 56 59 67 91 92 95 99 101 102 103 104 151 252
259 260 261 292 293 296 307 349 351 386
- 7 See vib 1; contains a large quantity of early third century ARS, mostly Hayes 181-2, and a few sixth century A.D. intrusions. The "Late A Ware" is represented by one sherd of Hayes form 48B; Tunisian lamp: Deneauve type XA (Late Antonine-Severan); TPQ *c.* A.D. 230/40.
Amphora Types: 1f 1g 16a 29 34a 34f 34u
Coarseware Types: 46 47 57 58 59 91 92 95 97 99 101 104 117 137 162 207 213
215 226 259 261 272 286 292 306 351 409
- 8 See vib 1.
Coarseware Types: 119
- vic** 1 Kenrick 1986, 31; East Forum Temple temenos, south side, west end; section Z-AA; period IV; grey sand level associated with the second rendering; almost certainly contains intrusions as it extended very close to the surface; see also v 8-10 and vid 1-7. ARS: Hayes 7A, 8A or 10A, 181. 1; Lamps: Italian: Loeschke VIII/Bailey P (Late Flavian-Antonine).
Coarseware Types: 44 99 100 101 162 217 258
- 2 Kenrick 1986, 31; East Forum Temple temenos, north side, east end, and east sides; sections G-H, J-K and R-S; middle temenos make-up; period IV

but with later intrusions. ARS: Hayes 91C, 105 (or possibly Pompeian Red).
Coarseware Types: 38 48 101 151 161

- 3 Kenrick 1986, 31; East Forum Temple, temenos, east side; section N–O, period IV.
Coarseware Types: 42 44 349
- 4 Kenrick 1986, 31; East Forum Temple, temenos, south side, west end; period IV; surface associated with third rendering.
Amphora Types: 1b
Coarseware Types: 115 135 213
- 5 Kenrick 1986, 31; East Forum Temple, temenos, south side; section X–Y; resurfacing; period IV (or later); ARS. Hayes 8A.
- vid** 1 Kenrick 1986, 31; East Forum Temple temenos, north side east end, and east side; sections G–H, N–O, P–Q; period IV; upper temenos make-up. ARS: Hayes 6, 8A, 31, 50, 26/181; African Lamp: Hayes Type II with cross monogram (A.D. 400–450).
Amphora Types: 1d 1g 1e 7j 7l 10 16a 34g
Coarseware Types: 16 35 44 48 91 94 95 97 100 101 104 117 162 214 215 298 346 396.
- 2 Kenrick 1986, 31; junction of East Forum Temple and Forum, south side; section OO–PP; period IV.
Coarseware Types: 162 200 286
- 3 Kenrick 1986, 31; East Forum Temple, temenos, south side, west end; section Z–AA; surface sand; period IV or later. ARS: Hayes 3B, 8A, 6A/B, 9A, 23, 183/4; Lamps: Loeschke VIII/Bailey P Italian.
Amphora Types: 16b
- 4 Kenrick 1986, 31; East Forum Temple, temenos, south side, west end; section QQ–RR; surface sand; period IV or later.
Coarseware Types: 62
- 5 Kenrick 1986, 31; East Forum Temple, temenos, north side; section E–F; surface sand; period IV or later.
Coarseware Types: 104 259 273
- 6 Kenrick 1986, 31; East Forum Temple, temenos, south side; section X–Y; surface sand; period IV or later.
Amphora Types: 16c
Coarseware Types: 44 104
- 7 Kenrick 1986, 31; junction of East Forum Temple and Forum, south side; section WW–XX.
- vid1** 1 Kenrick 1986, 33; junction of East Forum Temple and Forum, south side; section OO–PP; level pre-dating Transverse Portico but post-dating upper grey sand in temenos; period V. ARS: Hayes 76 (second-third quarter of fifth century A.D.).
Coarseware Types: 42

- vie** 1 Kenrick 1986, 32; Forum, north side, west end; section AH–AJ; associated with foundation trench of late monument; the foundation trench was treated in isolation in one excavation trench but not in others so the likelihood of contamination is high. ARS lamp, Hayes type II (fifth century A.D.). Coarseware Types: 387
- 2 Kenrick 1986, 32; Forum, east end; section AD–AE; associated with foundation trench of late monument; high degree of association with foundation trench or other levels pre-dating monument. Lamp: Loeschke III/Bailey D probably Italian. Coarseware Types: 21
- vii** 1 Kenrick 1986, 33; junction of East Forum Temple and Forum, south side; section MM–NN–OO–PP; vii 1–3 are associated with construction of Transverse Portico; period V; fineware is mostly residual; latest piece from vii 2; see also vid1 1. Amphora Types: 21 Coarseware Types: 44 56 59 71 91 98 161 250 274
- 2 Kenrick 1986, 33; junction of East Forum Temple and Forum; section UU–VV; period V; see vii 1. ARS: Hayes 23B, 58 (A.D. 290/300–375) or possibly Tripolitanian RS), 121, 181, 182. Coarseware Types: 38 44 227 298 310
- 3 Kenrick 1986, 33; junction of East Forum Temple and Forum; section C–D; period V; see vii 1. Amphora Types: 8a Coarseware Types: 104
- viii** 1 Kenrick 1986, 34; Forum; section AD–AE and graves in south Forum portico; backfill above and around graves; period VI. ARS: Hayes 23, 26/181, 74 (or similar – third quarter of fifth century A.D.), 105–6 (A.D. 580– 600+); Tripolitanian RS. Amphora Types: 8c Coarseware Types: 37 44 56 91 94 95 101 111 195 207 214 215 243 269 286 292 346 357
- 2 Kenrick 1986, 34; Forum; sections AJ–AH, AQ–AR, AS–AT; period VI; backfill above and around graves. BG; ARS: Hayes 9A, 23, 60, 91D, 93A (fifth century A.D.), 105 or 106 (A.D. 580/600–660+); Tripolitanian RS: B694; ARS lamp: Hayes type II (fifth century A.D.), ARS or local copy of Hayes type II. Amphora Types: 6 7c Coarseware Types: 35 91 97 99 122 131 135 156 161 214 238 355
- 3 Kenrick 1986, 34; Forum; probably as viii 1 and 2; *op. cit.*, 34 says associated with graves but PMK notes on index card says identity of viii 3 cannot be discovered.; ARS: Hayes 5, 8A, 23B, 33, 91D, 105 (A.D. 580/600– 660+), 182.; Trip. RS: B699. Amphora Types: 1a 1i 6 7f 8a 16a 17 Coarseware Types: 98 153 374
- xiv** 1 Kenrick 1986, 144; Casa Brogan, period I; see also 16–18, 27, 28, 42– 44, 54, 55, 72–75, 87 and 88; fineware from these levels suggests that the structures

of period I were erected towards the end of the fourth century B.C..
Coarseware Types: 92 410

- 4** Kenrick 1986, 151; Casa Brogan, period IVa (cellar); mortar floor between walls 48 and 19; see also xiv 77.
Coarseware Types: 216
- 6** Kenrick 1986, 151; Casa Brogan period IVc; robber trench of wall 45 and make-up level below floor of enlarged cellar. BG: Campana A & C; ESA: B314, 323, 334: It. sig.: B202, 205/9, 206, 211 (A.D. 5/10–35), 229 (A.D. 1–20); Pompeian Red Ware or related.
Amphora Types: 34d 34m
Coarseware Types: 16 59 91 99 104 113 120 135 150 159 165 207 210 213 218 267 286 384
- 8a** Kenrick 1986, 152; Casa Brogan period IVd; filling in of cellar; Italian sigillata (B237 – second half of first century A.D.) regarded as intrusive; see also xiv 9 and 81.
Coarseware Types: 35 73 91 92 95 96 97 131 138 139 177 207 208 213 216 228 286 297 306 345 347 349 358
- 9** Kenrick 1986, 152; Casa Brogan period IVd; filling in of cellar TPQ *c.* A.D. 30 from Italian sigillata (B214) and Eastern sigillata A (B330); see also xiv 8a and 81.
Amphora Types: 13 16c 34j
Coarseware Types: 91 92 95 96 99 110 120 131 133 138 150 151 153 155 161 162 207 208 212 213 214 215 219 275 286 300 301 303 306 307 342 345 346 347 349 359 373 402 411
- 10** Kenrick 1986, 156; Casa Brogan, period VI; occupation levels between walls 20 and 21 above filled-in cellar; second and third quarters of second century A.D.; see also xiv 11.
Amphora Types: 7j 16a
Coarseware Types: 49 91 92 99 101 153 213 286 290
- 11** Kenrick 1986, 156; Casa Brogan, period VI; occupation levels between walls 20 and 21 above filled-in cellar; second and third quarters of second century A.D.; see also xiv 10.
Amphora Types: 9f 16a 16c 34k
Coarseware Types: 44 46 51 58 59 62 66 86 91 92 95 96 99 100 101 104 105 152 156 207 213 217 259 261 276 277 286 292 294 303 306 307 344 347 350 351
- 12** Kenrick 1986, 156; Casa Brogan period VIa; fill of robber trench of walls 20 and 21 and make-up of subsequent floor; second half of second century, subsequent to VI; see also xiv 13.
Amphora Types: 4f 12 13 34f
Coarseware Types: 43 91 99 104 160 210 217 385
- 13** Kenrick 1986, 156; Casa Brogan period VIa; fill of robber trench of walls 20 and 21 and make-up of subsequent floor; second half of second century, subsequent to VI; see also xiv 12.
Coarseware Types: 33 47 51 58 62 301 304
- 14** Kenrick 1986, 162; Casa Brogan period VIII; filling in of vats and reversion

- of house to purely domestic occupation; section E-F; second half of fourth century A.D., see also xiv 25, 26, 53, 84, 95, 141, 142, 143.
Amphora Types: 34e 34i
Coarseware Types: 91 92 99 104 151 259 342 343
- 16** Kenrick 1986, 144; Casa Brogan, period I; see also 1, 17-18, 27, 28, 42-44, 54, 55, 72-75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C..
- 17** Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16, 18, 27, 28, 42-44, 54, 55, 72-75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
Amphora Types: 1i 2 3d 3g 4c 4f 4g
Coarseware Types: 162
- 18** Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16, 17, 27, 28, 42-44, 54, 55, 72-75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C..
- 21** Kenrick 1986, 147; Casa Brogan period IIIa; fill beneath mortar and *opus signinum* floors; see also xiv 46, 90 and 115; all sealed by levels of period IIIb; second half first century B.C. on the basis of Pompeian Red Ware.
Amphora Types: 11
Coarseware Types: 28 34 116 117 335 399
- 22** Kenrick 1986, 149; Casa Brogan period IIIb; fill sealing IIIa levels; sections E-F/J-K; see also xiv 23, 47-50, 117 and 118; late first century B.C. and certainly subsequent to period IIIa (on the possibility of an interval between IIIa and IIIb see Kenrick 1986, 148).
Amphora Types: 3a 9f 17
Coarseware Types: 98 112 116 117 213
- 23** Kenrick 1986, 149; Casa Brogan period IIIb; fill sealing IIIa levels; sections E-F/J-K; see also xiv 22, 47-50, 117 and 118; late first century B.C. and certainly subsequent to period IIIa (on the possibility of an interval between IIIa and IIIb see Kenrick 1986, 148).
Amphora Types: 16a
Coarseware Types: 117 237
- 24** Kenrick 1986, 155; Casa Brogan period V; associated with large scale rebuilding, in the early years of the second century A.D., of pre-existing walls, possibly following an earthquake in the Flavian period; section E-F/J-K; see also xiv 38, 51, 62, 63, 92, 119 and 120.
Coarseware Types: 37
- 25** Kenrick 1986, 162; Casa Brogan period VIII; filling in of vats and reversion of house to purely domestic occupation; sections E-F/J-K; second half of fourth century AD. see also xiv 14, 26, 53, 84, 95, 141, 142, 143.
Amphora Types: 1c 10 11 16a
Coarseware Types: 60 97 99 104 112 207 350

- 26 Kenrick 1986, 162; Casa Brogan period VIII; filling in of vats and reversion of house to purely domestic occupation; sections E–F/J–K; second half of fourth century A.D., see also xiv 14, 26, 53, 84, 95, 141, 142, 143.
Coarseware Types: 56 58 60 62 77 99 104 157
- 27 Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16–18, 28, 42–44, 54, 55, 72–75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
- 28 Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16–18, 27, 42–44, 54, 55, 72–75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
Coarseware Types: 98
- 30 Kenrick 1986, 146; Casa Brogan period II; expansion of building to west; fills sealing foundation trench of wall 27; see also xiv 45; second century B.C., possibly the second half (on the basis of a sherd of Campana A from xiv 45, see Kenrick 1986, 146).
Coarseware Types: 112 149 393
- 34 Kenrick 1986, 150; Casa Brogan period IIIb; beneath lower of two surfaces to west of building; both these surfaces should be broadly contemporary with period IIIb of the building and the evidence of the pottery and a single coin does not gainsay this; see also xiv 35.
Amphora Types: 7l 8a
Coarseware Types: 18 112 258
- 35 Kenrick 1986, 150; Casa Brogan period IIIb; beneath upper of two surfaces to west of building; both these surfaces should be broadly contemporary with period IIIb of the building; the presence of Campana C and possibly Eastern Sigillata A in 35 supports this; see also xiv 34.
Amphora Types: 7c 8a 16d
Coarseware Types: 10 16 35 37 92 111 119 131 135 308 341
- 38 Kenrick 1986, 155; Casa Brogan period V; associated with large scale rebuilding, in the early years of the second century A.D., of pre-existing walls, possibly following an earthquake in the Flavian period; section E–F/J–K; see also xiv 24, 51, 62, 63, 92, 119 and 120.
- 39 Kenrick 1986, 158; section A–B; see also xiv 40 and 41; these levels provide a TPQ for the paving of the street to the west of the Casa Brogan of c. A.D. 150.
Coarseware Types: 18 162
- 40 Kenrick 1986, 158; section A–B; see also xiv 39 and 41; these levels provide a TPQ for the paving of the street to the west of the Casa Brogan of c. A.D. 150.
Coarseware Types: 112
- 41 Kenrick 1986, 158; section A–B; see also xiv 39 and 40; these levels provide a TPQ for the paving of the street to the west of the Casa Brogan of c. A.D. 150.
Amphora Types: 34a

- 42 Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16-18, 27, 28, 43-44, 54, 55, 72-75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
- 43 Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16-18, 27, 28, 42, 44, 54, 55, 72-75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
Coarseware Types: 33
- 44 Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16-18, 27, 28, 42, 43, 54, 55, 72-75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
- 45 Kenrick 1986, 146; Casa Brogan period II; expansion of building to west; fills sealing foundation trench of wall 27; see also xiv 30; second century B.C., possibly the second half (on the basis of a sherd of Campana A from 45, see Kenrick 1986, 146).
- 46 Kenrick 1986, 147; Casa Brogan period IIIa; fill beneath mortar and *opus signinum* floors; see also xiv 21, 90 and 115; all sealed by levels of period IIIb; second half first century B.C. on the basis of Pompeian Red Ware.
- 47 Kenrick 1986, 149; Casa Brogan period IIIb; fill sealing IIIa levels; sections C-D/G-H; see also xiv 22, 23, 48-50, 117 and 118; late first century B.C. and certainly subsequent to period IIIa (on the possibility of an interval between IIIa and IIIb see Kenrick 1986, 148).
Amphora Types: 8c
Coarseware Types: 11 16 18 92 99 110 116 118 396
- 48 Kenrick 1986, 149; Casa Brogan period IIIb; fill sealing IIIa levels; sections C-D/G-H; see also xiv 22, 23, 47, 49, 50, 117 and 118; late first century B.C. and certainly subsequent to period IIIa (on the possibility of an interval between IIIa and IIIb see Kenrick 1986, 148).
Coarseware Types: 99
- 49 Kenrick 1986, 149; Casa Brogan period IIIb; fill sealing IIIa levels; sections C-D/G-H; see also xiv 22, 23, 47, 48, 50, 117 and 118; late first century B.C. and certainly subsequent to period IIIa (on the possibility of an interval between IIIa and IIIb see Kenrick 1986, 148).
Amphora Types: 11
Coarseware Types: 16 37 48 92 94 131 207 210
- 50 Kenrick 1986, 149; Casa Brogan period IIIb; fill sealing IIIa levels; sections C-D/G-H; see also xiv 22, 23, 47-49, 117 and 118; late first century B.C. and certainly subsequent to period IIIa (on the possibility of an interval between IIIa and IIIb see Kenrick 1986, 148).
Amphora Types: 8a 8b 8c 16a 34a 34j
Coarseware Types: 16 95 97 99 110 135 207 243 398
- 51 Kenrick 1986, 155; Casa Brogan period V; associated with large scale rebuilding, in the early years of the second century A.D., of pre-existing

walls, possibly following an earthquake in the Flavian period; section E–F/J–K; see also xiv 24, 38, 62, 63, 92, 119 and 120.

- 53 Kenrick 1986, 162; Casa Brogan period VIII; filling in of vats and reversion of house to purely domestic occupation; sections C–D/G–H; second half of fourth century A.D., see also xiv 14, 25, 26, 84, 95, 141, 142, 143.
Coarseware Types: 12 37 99 117 131
- 54 Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16–18, 27, 28, 42–44, 55, 72–75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
Amphora Types: 3a 4c 7f
- 55 Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16–18, 27, 28, 42–44, 54, 72–75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
Amphora Types: 1a 1j 2 3a 6
- 56 Kenrick 1986, 145; Casa Brogan period Ia; see also xiv 57; these levels were associated with wall 41; late fourth century B.C., at least, on the basis of relationship to period I structures (the fineware only provides a general fourth century date).
Amphora Types: 1a
- 57 Kenrick 1986, 145; Casa Brogan period Ia; see also xiv 56; these levels were associated with wall 41; late fourth century B.C. at least, on the basis of relationship to period I structures (the fineware only provides a general fourth century date).
Amphora Types: 4f
- 59 Kenrick 1986, 147; Casa Brogan period II (?); make-up level associated with wall 40; probably contemporary with period II developments to west of wall 19; a single sherd of Campana A provides a TPQ of *c.* 200 B.C.
- 60 Kenrick 1986, 148; Casa Brogan period IIIa (?); clay fill over wall 40; TPQ of *c.* 150 B.C. is provided by a sherd of Campana A.
Amphora Types: 1d 3a 4d 4f 7g
Coarseware Types: 18 33 58 62 98 99 112
- 61 Kenrick 1986, 149–50; Casa Brogan period IIIb (?); fill associated with wall 1 (construction ?); a TPQ somewhere around the turn of the second and first centuries B.C. is suggested by a sherd of Campana C.
Amphora Types: 1d 8a 35d
Coarseware Types: 32 33 91 97 101 110 117 135 152
- 62 Kenrick 1986, 155; Casa Brogan period V; associated with large scale rebuilding, in the early years of the second century A.D., of pre-existing walls, possibly following an earthquake in the Flavian period; section E–F/J–K; see also xiv 24, 38, 51, 63, 92, 119 and 120.
Coarseware Types: 16 34 91 98 104 110 118 131 157
- 63 Kenrick 1986, 155; Casa Brogan period V; associated with large scale rebuilding, in the early years of the second century A.D., of pre-existing walls, possibly following an earthquake of the Flavian period; section E–F/J–K; see also xiv 24, 38, 51, 62, 92, 119 and 120.

- 64 Kenrick 1986, 164 and fig.80; section G'-H' (disconnected section in eastern part of insula); early level cut by foundation trench of wall 1; see also xiv 65-71.
Amphora Types: 4f
Coarseware Types: 35
- 65 Kenrick 1986, 164 and fig.80; section G'-H' (disconnected section in eastern part of insula); early level cut by foundation trench of wall 1; TPQ of c. 380 B.C. is suggested by sherds of Attic BG; see also xiv 64, 66-71.
Amphora Types: 4d
- 66 Kenrick 1986, 164 and fig.80; section G'-H' (disconnected section in eastern part of insula); early level cut by foundation trench of wall 1; see also xiv 64, 65, 67-71; no fineware, so TPQ from xiv 65.
Amphora Types: 3a 4a 9f
Coarseware Types: 379
- 67 Kenrick 1986, 164 and fig.80; section G'-H' (disconnected section in eastern part of insula); fill of foundation trench of wall 1; there is nothing in the fineware which is necessarily later than the third century B.C.
Amphora Types: 1f 1g 3a 3g 6 7f
Coarseware Types: 31 33 34 99 235 266 397
- 68 Kenrick 1986, 164 and fig.80; sections G'-H' (disconnected section in eastern part of insula); wind-blown sand above xiv 67; the presence of Eastern Sigillata A and Pompeian Red Ware suggest a TPQ around the middle of the first century B.C., though these two wares may be intrusive; if so, a TPQ of somewhere in the second half of the third century B.C. is provided by sherds of Campana A.
Amphora Types: 3h 6 7e 7L 34i
Coarseware Types: 33 34 98 248 249 254
- 69 Kenrick 1986, 164 and fig.80; section G'-H' (disconnected section in eastern part of insula); xiv 69-71 are tip levels and pits above xiv 68; latest fineware is Campana A so TPQ is dependent on level 68.
Amphora Types: 1a 1j 4f 4i 6 7j
Coarseware Types: 18 33 117 241
- 70 Kenrick 1986, 164 and fig.80; section G'-H' (disconnected section in eastern part of insula); xiv 69-71 are tip levels and pits above xiv 68; Eastern Sigillata A present in quantity, also 2 sherds of Italian sigillata and 1 of ARS; TPQ in the second half of the first century B.C., if not later.
Amphora Types: 7a 7c 7e 7j 7k 7l 8a 9f 10 16 32 34j 35a
Coarseware Types: 11 12 16 33 34 35 37 44 91 95 98 99 104 112 113 114 117 118 135 137 149 150 151 184 192 207 214 215 236 237 238 242 243 246 263 303 309 338 412
- 71 Kenrick 1986, 164 and fig.80; section G'-H' (disconnected section in eastern part of insula); xiv 69-71 are tips levels and pits above xiv 68; presence of Italian sigillata provides TPQ at the very end of the first century B.C.
Amphora Types: 3a 7a 8a 8b 16a 34w
Coarseware Types: 7 9 20 34 104 112 131 147 180 207 213 214 215 216 237 239 242 289 303 307

- 72 Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16–18, 27, 28, 42–44, 54, 55, 73–75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
Amphora Types: 6 7h
- 73 Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16–18, 27, 28, 42–44, 54, 55, 72, 74, 75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
- 74 Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16–18, 27, 28, 42–44, 54, 55, 72, 73, 75, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
Coarseware Types: 396
- 75 Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16–18, 27, 28, 42–44, 54, 55, 72–74, 87 and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
- 76 Kenrick 1986, 145; Casa Brogan period Ia (?); clay floor and make-up level associated with wall 47; no fineware.
Coarseware Types: 98 99
- 77 Kenrick 1986, 151; Casa Brogan period IVa (cellar); from under mortar floor between walls 48 and 19; TPQ *c.* A.D. 1.
Coarseware Types: 306 360
- 79 Kenrick 1986, 152; Casa Brogan period IVd (cellar); from under clay floor to north of wall 20a; TPQ *c.* A.D. 9.
Amphora Types: 1d 1e 4d 4f 34a
Coarseware Types: 18 214
- 81 Kenrick 1986, 152; Casa Brogan period IVd; filling in of cellar; Tiberian TPQ from Loeschke type IB lamp; see also xiv 8a and 9.
Amphora Types: 7l 8a 13 16a 34d 34e 34j 34k 34o
Coarseware Types: 20 25 37 38 39 41 91 92 93 94 95 96 98 99 100 110 131 137 138 147 150 151 152 155 156 158 161 162 181 207 208 213 214 215 216 286 287 290 302 306 307 336 340 346 349 384 388 403 413
- 83 Kenrick 1986, 158; Casa Brogan period VII; matrix of vats 2–5; TPQ *c.* A.D. 150.
Coarseware Types: 20 75 131 133 208 213
- 84 Kenrick 1986, 162; Casa Brogan period VIII; filling in of vats and reversion of house to purely domestic occupation; sections A'–B'/C'–D'; second half of fourth century A.D., see also xiv 14, 25, 26, 53, 95, 141, 142, 143.
Amphora Types: 1g 19 22 27 29 34s
Coarseware Types: 20 34 46 61 67 68 83 91 95 99 100 104 105 162 259 278 294 296 309 343 349 351 361 362
- 87 Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16–18, 27, 28, 42–44,

- 54, 55, 72–75, and 88; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
- 88** Kenrick 1986, 144; Casa Brogan, period I; see also 1, 16–18, 27, 28, 42–44, 54, 55, 72–75, and 87; fineware from these levels suggests that the structures of period I were erected towards the end of the fourth century B.C.
Amphora Types: 2 4b 4o 34f
Coarseware Types: 79
- 89** Kenrick 1986, 145; Casa Brogan period Ia; beneath new floors in section N–O; 3 coins of late fourth – early third centuries B.C.; only fineware a sherd of Italian sigillata.
Amphora Types: 3a 4f
- 90** Kenrick 1986, 147; Casa Brogan period IIIa; fill beneath mortar and *opus signinum* floors; see also xiv 21, 46, and 115; all sealed by levels of period IIIb; second half first century B.C. on the basis of Pompeian Red Ware.
- 92** Kenrick 1986, 155; Casa Brogan period V; associated with large scale rebuilding, in the early years of the second century A.D., of pre-existing walls, possibly following an earthquake in the Flavian period; section E–F/J–K; see also xiv 24, 38, 51, 62, 63, 119 and 120.
Amphora Types: 7f 7g 13 16a 16b 34b 34d
Coarseware Types: 91 92 95 96 97 98 99 161 162 208 212 213 219 262 286 303 306 307 348
- 94** Kenrick 1986, 157; Casa Brogan period VII; matrix of vat 1.
- 95** Kenrick 1986, 162; Casa Brogan period VIII; filling in of vats and reversion of house to purely domestic occupation; section N–O; second half of fourth century A.D., see also xiv 14, 25, 26, 53, 84, 141, 142, 143.
- 97** Kenrick 1986, 164 and fig.79; section W–X (disconnected section in eastern part of insula, see *op.cit.* for summary of problems relating to this section); below floor sealing foundations of wall 1 (period IIIb); little fineware; TPQ of fourth/third century B.C. (?) from 3 sherds of pre-Campana ware.
Coarseware Types: 168
- 98** Kenrick 1986, 164 and fig.79; section W–X (disconnected section in eastern part of insula, see *op. cit.* for summary of problems relating to this section); above xiv 97. BG: Attic, pre-Campana, Campana A and Local; 1 sherd Tripolitanian sigillata (possibly) giving TPQ at end of first century B.C.
Amphora Types: 7f 7g 8c
Coarseware Types: 18 33 34 98 236 257 291
- 100** Kenrick 1986, 164 and fig.79; section W–X (disconnected section in eastern part of insula, see *op. cit.* for summary of problems relating to this section); above xiv 98 and wall 46. BG: Campana A and others; 1 sherd of Italian sigillata; TPQ in first half of first century A.D. (?).
Amphora Types: 7l 8c 23
Coarseware Types: 35 94 97 112 237 238
- 102** Kenrick 1986, 165 and fig.80; section J'–K' (disconnected section in eastern part of insula); below second earliest floor in section; sherd from Attic *lekythos* with painted net pattern (fourth century B.C.).

- 103** Kenrick 1986, 165 and fig.80; section J'–K' (disconnected section in eastern part of insula); above xiv 102, below third earliest floor in section; BG: Attic and Campana A (1 sherd); TPQ late third century B.C.
Amphora Types: 4a 4b 4c 4f 7j
Coarseware Types: 33
- 105** Kenrick 1986, 165 and fig.80; section J'–K' (disconnected section in eastern part of insula); xiv 105–113 are succession of levels above thick mortar floor and subsequent to construction of wall 56.
- 106** Kenrick 1986, 165 and fig.80; section J'–K' (disconnected section in eastern part of insula); xiv 105–113 are succession of levels above thick mortar floor and subsequent to construction of wall 56.
Amphora Types: 3a 4f 6 10
- 107** Kenrick 1986, 165 and fig.80; section J'–K' (disconnected section in eastern part of insula); xiv 105–113 are succession of levels above thick mortar floor and subsequent to construction of wall 56.
- 108** Kenrick 1986, 165 and fig.80; section J'–K' (disconnected section in eastern part of insula); xiv 105–113 are succession of levels above thick mortar floor and subsequent to construction of wall 56.
- 109** Kenrick 1986, 165 and fig.80; section J'–K' (disconnected section in eastern part of insula); xiv 105–113 are succession of levels above thick mortar floor and subsequent to construction of wall 56. BG: Attic, Local and Campana A (1 sherd).
Amphora Types: 3a 4b 6
Coarseware Types: 18 34 35 112
- 110** Kenrick 1986, 165 and fig.80; section J'–K' (disconnected section in eastern part of insula); xiv 105–113 are succession of levels above thick mortar floor and subsequent to construction of wall 56. BG: Local and much Campana A; TPQ late third century B.C.
Amphora Types: 4a 6 7e
Coarseware Types: 19 34 35 113 238 363 397
- 111** Kenrick 1986, 165 and fig.80; section J'–K' (disconnected section in eastern part of insula); xiv 105–113 are succession of levels above thick mortar floor and subsequent to construction of wall 56.
- 113** Kenrick 1986, 165 and fig.80; section J'–K' (disconnected section in eastern part of insula); xiv 105–113 are succession of levels above thick mortar floor and subsequent to construction of wall 56.
- 115** Kenrick 1986, 147; Casa Brogan period IIIa; fill beneath mortar and *opus signinum* floors; see also xiv 21, 46 and 90; all sealed by levels of period IIIb; second half first century B.C. on the basis of Pompeian Red Ware.
Amphora Types: 8a 9i
Coarseware Types: 97 286 306
- 117** Kenrick 1986, 149; Casa Brogan period IIIb; fill sealing IIIa levels; sections L–M/S–T; see also xiv 22, 23, 47–50, 118; late first century B.C. and

- certainly subsequent to period IIIa (on the possibility of an interval between IIIa and IIIb see Kenrick 1986, 148).
Amphora Types: 9d
Coarseware Types: 118 135 215 349
- 118** Kenrick 1986, 149; Casa Brogan period IIIb; fill sealing IIIa levels; sections L-M/S-T; see also xiv 22, 23, 47-50 and 117; late first century B.C. and certainly subsequent to period IIIa (on the possibility of an interval between IIIa and IIIb see Kenrick 1986, 148).
Amphora Types: 6
Coarseware Types: 91 306
- 119** Kenrick 1986, 155; Casa Brogan period V; associated with large scale rebuilding, in the early years of the second century A.D., of pre-existing walls, possibly following an earthquake in the Flavian period; section E-F/J-K; see also xiv 24, 38, 51, 62, 63, 92 and 120.
Amphora Types: 13 16c
Coarseware Types: 36 42 62 91 95 99 100 101 153 209 262 286 303 307 364
- 120** Kenrick 1986, 155; Casa Brogan period V; associated with large scale rebuilding, in the early years of the second century A.D., of pre-existing walls, possibly following an earthquake in the Flavian period; section E-F/J-K; see also xiv 24, 38, 51, 62, 63, 92 and 119.
Amphora Types: 31 34v
Coarseware Types: 36 62 95 97 99 100 105 121 141 147 151 209 213
- 124a** Kenrick 1986, 165 and fig.80; section L'-M' (disconnected section in eastern part of insula); earliest levels in section. BG: pre-Campana and Campana A (1 sherd); TPQ *c.* 200 B.C.
Amphora Types: 3a
- 125** Kenrick 1986, 166 and fig.80; section L'-M' (disconnected section in eastern part of insula); second clay floor subsequent to dismantling of wall 56, related to walls 50 and 55. Italian sigillata and Eastern Sigillata A; TPQ late Augustan (?).
Coarseware Types: 286
- 126** Kenrick 1986, 166 and fig.80; section L'-M' (disconnected section in eastern part of insula); burnt occupation level and mortar floor above xiv 125; coin of second century A.D. and sherds of ARS Hayes 181; TPQ *c.* 150 A.D.
Coarseware Types: 121 307
- 127** Kenrick 1986, 166 and fig.80; section L'-M' (disconnected section in eastern part of insula); tipped soil and rubble above xiv 126. Loeschke VIII Italian or African lamp provides a TPQ in the second century A.D.
Amphora Types: 16c 36d
Coarseware Types: 35 38 62 92 100 104 112 151 152 162 213 286 291 303 306 307 349 414
- 128** Kenrick 1986, 166 and fig.80; section L'-M' (disconnected section in eastern part of insula); tipped soil and rubble above xiv 127. ARS Hayes 181.1 and sherd of Cypriot sigillata provides TPQ in the second century A.D. (first half).
Amphora Types: 16a 16c 34a

Coarseware Types: 15 20 35 42 43 58 60 62 87 91 95 96 97 99 100 101 112 135
137 141 178 211 213 279 286 306 351 385 403

- 132** Kenrick 1986, 166 and fig. 80; section L'–M' (disconnected section in eastern part of insula); mortar level relating to dismantling of wall 56 and clay floor relating to wall 50; no fineware.
Coarseware Types: 20
- 138** Kenrick 1986, 158; Casa Brogan period VII; section O'–P'; sandy fill cut by foundation trench of vat 7, above cover slabs of cistern. ARS Hayes 181 and 182 provides TPQ of *c.* A.D. 150.
Coarseware Types: 26 58 62 104 350
- 141** Kenrick 1986, 162; Casa Brogan period VIII; filling in of vats and reversion of house to purely domestic occupation; section O'–P'; second half of fourth century A.D. see also xiv 14, 25, 26, 53, 84, 95, 142, 143.
- 142** Kenrick 1986, 162; Casa Brogan period VIII; filling in of vats and reversion of house to purely domestic occupation; section O'–P'; second half of fourth century A.D., see also xiv 14, 25, 26, 53, 84, 95, 141, 143.
- 143** Kenrick 1986, 162; Casa Brogan period VIII; filling in of vats and reversion of house to purely domestic occupation; section O'–P'; second half of fourth century A.D., see also xiv 14, 25, 26, 53, 84, 95, 141, 142.
Coarseware Types: 62 141 162 305

Note: The reader should be aware that there are problems of interpretation relating to certain levels in the sections across the Byzantine Wall (Y1 xv). See Kenrick 1986 for full details.

- xv** **1** Kenrick 1986, 227 and fig. 100; section A–B across Byzantine Defensive Wall; xv 1–10 are a succession of clay floors, burnt material and sandy make-up layers between natural ground surface and the construction of the Roman insula; contains Italian sigillata but also part of an African lamp of Loeschke form VIII (from xv 3); Augustan TPQ if the lamp fragment is regarded as intrusive, otherwise in second half of second century A.D.
- 2** See xv 1.
- 3** See xv 1.
- 4** See xv 1.
- 5** See xv 1.
Amphora Types: 3a 6 7j
Coarseware Types: 37 143 286
- 6** See xv 1.
Amphora Types: 3a 6
- 7** See xv 1.
- 8** See xv 1.
- 9** See xv 1.

- 10 See xv 1.
Amphora Types: 3g 6
Coarseware Types: 33 286
- 11 Kenrick 1986, 227 and fig.100; section A–B across Byzantine Defensive Wall; construction levels of building; TPQ of late first century A.D. from ARS Hayes 8A but see xv 1.
Coarseware Types: 95 117 306
- 12 Kenrick 1986, 287 and fig.100: section A–B across Byzantine Defensive Wall; accumulated debris representing occupation of building; TPQ of *c.* A.D. 290 from ARS Hayes 58A.
Amphora Types: 16c
Coarseware Types: 11 18 96 104 156 162 286 288 403
- 15 Kenrick 1986, 230 and fig.100; section A–B across Byzantine Defensive Wall; levels xv 15–17 and 24 are from the bank of material associated with the Byzantine Wall prior to its demolition/destruction; from 15: ARS Hayes 58A, 62A, 105 (latest piece – A.D. 580/600–660).
Amphora Types: 27
Coarseware Types: 44 64 68 101 103 104 108 109 221 222 260 280 298 310 415
- 16 Kenrick 1986, 230 and fig.100; section A–B across Byzantine Defensive Wall; levels xv 15–17 and 24 are from the bank of material associated with the Byzantine Wall prior to its demolition/destruction; from 16: ARS and TRS; latest pieces are a fourth–fifth century TRS dish, a Hayes type II lamp and an ARS form Hayes 101 (mid-late sixth century A.D.).
Amphora Types: 21 34b
Coarseware Types: 65 101 104 105 108 222 260 296 350 416
- 17 Kenrick 1986, 230 and fig.100; section A–B across Byzantine Defensive Wall; levels xv 15–17 and 24 are from the bank of material associated with the Byzantine Wall prior to its demolition/destruction; from 17: ARS and TRS (latest piece fourth–fifth century A.D.).
Amphora Types: 30 35g
Coarseware Types: 104 222
- 18 Kenrick 1986, 297 and fig.100; section C–D across Byzantine Defensive Wall; succession of levels preceding building (corresponding to xv 1–10 in section A–B); contains Italian sigillata and also a fragment of a lamp (“probably Italian, probably second century A.D.”: archive, context index); Augustan TPQ if lamp is regarded as intrusive, otherwise second century A.D.; see also xv 1–10.
Coarseware Types: 166
- 19 Kenrick 1986, 299 and fig.100; section C–D across Byzantine Defensive Wall; fill of foundation trench of front wall of insula and associated make-up; Eastern Sigillata A and Italian sigillata; also one sherd possible ARS Hayes 58 which is likely to be intrusive.
Coarseware Types: 56 95 102 214 293 355
- 20 Kenrick 1986, 299 and fig.100; section C–D across Byzantine Defensive Wall; mortar surface sealing (?) xv 19; one sherd ARS Hayes 68 (intrusive?).
Coarseware Types: 213

- 21 Kenrick 1986, 299 and fig.100; section C–D across Byzantine Defensive Wall; paving and underlying thin sandy make-up over xv 20; ARS and TRS third–sixth centuries A.D.
Coarseware Types: 293 365
- 22 Kenrick 1986, 299 and fig.100; section C–D across Byzantine Defensive Wall; first beaten surface over xv 21; no pottery recorded.
- 23 Kenrick 1986, 230 and fig.100; section C–D across Byzantine Defensive Wall; accumulation between two beaten surfaces over xv 21; one sherd of possible fourth century ARS.
- 24 Kenrick 1986, 230 and fig.100; section C–D across Byzantine Defensive Wall; levels xv 15–17 and 24 are from the bank of material associated with the Byzantine Wall prior to its demolition/destruction; from 24: ARS and TRS of the fourth and fifth century A.D. and also 1 possible Hayes 99 (ARS) – sixth century.
Coarseware Types: 69 70 95 104 143 296 307
- 25 Kenrick 1986, 231 and fig.100; section C–D across Byzantine Defensive Wall; above 24; third and fourth century ARS and fifth century (?+) TRS (Hayes form 7).
Amphora Types: 27
Coarseware Types: 62 144 296 298 303
- 26 Kenrick 1986, 231 and fig.100; section C–D across Byzantine Defensive Wall; level associated with Byzantine Wall in ruinous state; ARS Hayes 99B/C (*c.* A.D. 530–620), 103B, (*c.* A.D. 500–third quarter sixth century), 104B (*c.* A.D. 570–600+), 105/6 (A.D. 580/600–660+), 108 (early seventh century A.D.).
Amphora Types: 21
Coarseware Types: 69 70 98 103 104 105 229 230 265 293 294 298 355
- xvii** 2 Kenrick 1986, 235 and fig.103; Site M – section across Coast Road; level in place of missing paving blocks at north side of early Roman street (this street is undated); 4 sherds of pottery, probably TRS, probably fourth–fifth century A.D.
- 4 Kenrick 1986, 235 and fig.103; Site M – section across Coast Road; sand above paved road surface and below first beaten surface; 4 sherds of pottery, probably TRS, probably fourth–fifth century A.D.
- 6 Kenrick 1986, 235 and fig.103; Site M – section across Coast Road; rubble collapse below second beaten surface; coin of A.D. 335–41; certain TPQ in first half of fifth century A.D. (from ARS Hayes 70, 89/90, and TRS) and possibly later, *ie c.* 450 AD (from a lamp fragment of ARS form Hayes IIB).
Amphora Types: 6 30 34i
Coarseware Types: 56 95 104 265 298 309
- 9 Kenrick 1986, 235 and fig.103; Site M – section across Coast Road; rubble beneath fourth beaten surface and filling foundation trench of late building; TPQ of *c.* A.D. 580/600 from fragments of ARS form Hayes 105 or 106.
Coarseware Types: 57 58 69 104 281 295 298 310 324 381

- xviii** 2 Kenrick 1986, 200; Antonine Temple, trench N1; phase 1: xviii 2–4; early occupation levels; includes a sherd of Attic Black Glaze (possibly fourth–third century B.C.).
Amphora Types: 3a 3g
- 3 Kenrick 1986, 200; Antonine Temple, trench N1; phase 1: xviii 2–4; early occupation levels; includes a sherd of Attic Black Glaze (possibly fourth–third century B.C.).
- 4 Kenrick 1986, 200; Antonine Temple, trench N1; phase 1: xviii 2–4; early occupation levels; includes a sherd of Attic Black Glaze (possibly fourth–third century B.C.).
- 5 Kenrick 1986, 200; Antonine Temple, trench N1; phase 2: pit cut by foundation of walls N1 3 and 4; TPQ in second century B.C. from sherds of Campana A; lamp of first century A.D. regarded as intrusive.
Amphora Types: 4f
- 6 Kenrick 1986, 201; Antonine Temple, trench N1; phase 3: clay floor and occupation debris probably associated with structure represented by walls N1 3 and 4; TPQ around the end of the first century A.D. from sherds of early ARS.
Coarseware Types: 95 111
- 7 Kenrick 1986, 201; Antonine Temple, trench N1; phase 4: clay floors and occupation debris above xviii 6; TPQ as xviii 6 from sherd of early ARS.
- 8 Kenrick 1986, 201; Antonine Temple, trench N1; phase 5: associated with the construction of the Antonine temple (dedication dated A.D. 166–9).
Coarseware Types: 43, 46, 51, 58, 70, 92, 104, 105, 157, 161, 162, 261, 297, 350
- xix** 1 Kenrick 1986, 218/9; Severan Monument; earliest occupation; humus above natural sand; black glaze ware of third–first centuries B.C., and 1 sherd of Italian sigillata; sherd of third century A.D. ARS regarded as intrusive.
Amphora Types: 1c 4f 7e 7f
Coarseware Types: 7 44 70 98 156 254 417
- 2 Kenrick 1986, 219; Severan Monument, section A–A'; levels below *opus signinum* floor and pre-first road surface (ie antedating building associated with *opus signinum* floor); TPQ towards end of first century A.D. from early ARS.
Coarseware Types: 34 91 97 101 117 207 292 297
- 4 Kenrick 1986, 219; Severan Monument; level associated with first road surface; fineware all residual (Eastern Sigillata A and Italian sigillata);
Amphora Types: 7f
Coarseware Types: 16
- 5 Kenrick 1986, 219; Severan Monument; robber trenches of building associated with *opus signinum* floor (presumably preparation for building of Severan monument); TPQ around late second – early third century A.D. from ARS Hayes 18 and 182.
Amphora Types: 9f 23
Coarseware Types: 62 150

- 6 Kenrick 1986, 219; Severan Monument; from construction trench of Severan Monument and beneath the limestone paving of the street; TPQ in early third century A.D. from examples of ARS with thick bright slip said to be characteristic of the early–mid third century A.D. (Hayes 1972 289).
Amphora Types: 1g 3a 16c
Coarseware Types: 34 43 44 45 46 49 57 58 59 64 91 97 98 99 101 102 104 108 109 110 132 141 147 148 149 151 160 161 162 183 197 207 252 259 260 262 291 292 293 296 351 366 386
- 8 Kenrick 1986, 219; Severan Monument, section C–C'; associated with water channel in trench cut through limestone chips level; later than construction of monument, and possibly fourth century A.D.; TPQ in first half of third century A.D. (from ARS form Hayes 35).
Coarseware Types: 15 43 45 51 58 62 99 101 104 110 131 141 149 260 325
- xxi** 1 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; sections C–D, E–F, G–H, J–K, L–M; also contexts xxi 2–6, 36–42, xxii 19–25. The pottery from these levels (Attic Red Figure and Black Glaze) suggests that the period I occupation began in the second half of the fifth century B.C.
- 2 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
Coarseware Types: 15
- 3 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
- 4 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
Amphora Types: 8c 34h
Coarseware Types: 117
- 5 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
Coarseware Types: 1 128 129
- 6 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
Coarseware Types: 33
- 7 Kenrick 1986, 127; Regio II, Insula 6; Period II; fineware is either undated or regarded as intrusive; see also xxii 26.
Coarseware Types: 18 33 98
- 9 Kenrick 1986, 129; Regio II, Insula 6; period IIa; floor on which mud brick wall rests; TPQ *c.* 200 B.C. from rim of Campana A.
Coarseware Types: 117
- 13 Kenrick 1986, 129; Regio II, Insula 6; period IIa; wind-blown sand over clay floor associated with mud-brick wall; TPQ in late fourth–early third century B.C. (from lamp).
- 14 Kenrick 1986, 129–30; Regio II, Insula 6; period III; contexts xxi 14–17, 50 and xxii 31 and 32: from the structures of period III and the substantial fill above the structures of period II. The large quantities of Campana A present in these contexts suggests that the developments of period III took place during the first half of the second century B.C. probably after a period of decay and abandonment.
Amphora Types: 7b 7l
Coarseware Types: 9 10 16 32 34 35 95 98 104 112 113 114 117 118 119 243

- 15 Kenrick 1986, 129–30; Regio II, Insula 6; period III; see xxi 14.
- 16 Kenrick 1986, 129–30; Regio II, Insula 6; period III; see xxi 14.
- 17 Kenrick 1986, 129–30; Regio II, Insula 6; period III; see xxi 14.
Amphora Types: 7j 7l 8a 8b
Coarseware Types: 9 16 17 35 36 97 98 112 113 114 116 117 118 210 367 395
400
- 18 Kenrick 1986, 132; Regio II, Insula 6; period IV; from foundation trenches for walls T14/V29, T26, T7 and associated *opus signinum* floor and make-up; TPQ *c.* A.D. 5/10 from Italian sigillata.
Amphora Types: 4f 7l 9f
Coarseware Types: 16 22 34 35 75 95 98 109 110 112 113 114 115 117 118 152
207 213 241 242 243 307 338 342 400
- 19 Kenrick 1985, 133; Regio II, Insula 6; period IVa; activity secondary to period IV; section E–F; fill of oven; Flavian TPQ from lamp handle.
Amphora Types: 7l
Coarseware Types: 6 110 243
- 20 Kenrick 1986, 133; Regio II, Insula 6; period IVa; activity secondary to period IV; section E–F; mortar surface overlying xxi 19; TPQ derived from xxi 19 as no fineware later.
Coarseware Types: 6 35 95 112 113
- 21 Kenrick 1986, 132; Regio II, Insula 6; period IV; finds from levels of period IV in sections J–K and L–M (all catalogued together); contains fineware dating to the mid and late first century A.D. as well as material of the second century A.D.; extremely difficult to assess the degree of intrusion.
Amphora Types: 7j 7l 8a 12
Coarseware Types: 9 16 18 35 95 96 97 98 104 112 113 117 131 141 207 246
286 309
- 22 Kenrick 1986, 133; Regio II, Insula 6; period V; from foundation trench of wall T15, robber trench above wall T26 and beneath latest mortar floors in sections E–F, J–M. Start of period V placed in second half of second century on basis of ARS forms Hayes 6, 14, 17, 28, 181 and 182;
Amphora Types: 34i
Coarseware Types: 16 38 81 95 96 97 99 100 104 109 113 116 119 120 140 150
151 153 159 160 161 162 163 211 212 213 286 290 303 304
- 36 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
- 37 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
- 38 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
- 39 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
- 40 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
- 41 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.

- 42 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
- 43 Kenrick 1986, 128; Regio II, Insula 6; section C–D; Period I; occupation overlying latest floor of period I; coin of mid–late fourth century B.C.
- 44 Kenrick 1986, 128; Regio II, Insula 6; Period II; fill of mixed material over xxi 43; TPQ of *c.* A.D. 350 from Attic black glaze.
- 45 Kenrick 1986, 128; Regio II, Insula 6; Period II; clay floor above xxi 44; 3 sherds of pre-Campana black glaze.
- 50 Kenrick 1986, 129–30; Regio II, Insula 6; period III; see xxi 14.
- 52 Kenrick 1986, 130; Regio II, Insula 6; period IIIa (?); developments post period III and pre-period IV; xxi 52 and xxiv 73 are from the foundation trench of wall V28; TPQ in first century B.C. from possible sherd of Campana C.
Amphora Types: 11
Coarseware Types: 16 112
- xxii** 2 Kenrick 1986, 130; Regio II, Insula 6; period IIIa; developments post period III and pre period IV; level through which pits A and B are cut (see xxii 5 and 6); TPQ around end of second century B.C. from presence of Eastern Sigillata A.
- 5 Kenrick 1986, 130; Regio II, Insula 6; period IIIa; developments post period III and pre period IV; pit A; TPQ in first century B.C. from presence of Pompeian Red Ware.
Coarseware Types: 115 161
- 6 Kenrick 1986, 130; Regio II, Insula 6; period IIIa; developments post period III and pre period IV; pit B; TPQ in first century B.C. (possibly second half) from presence of Eastern Sigillata A (from B326).
Coarseware Types: 68 133;
- 7 Kenrick 1986, 130; Regio II, Insula 6; period IIIa; developments post period III and pre period IV; pit C; TPQ at end of first century B.C. from Italian sigillata; ARS and African lamps of second century A.D. regarded as intrusive.
Amphora Types: 34a
Coarseware Types: 91 95 110 131 137 182 185 205 207 208 213 214 215 216 286 303
- 8 Kenrick 1986, 130; Regio II, Insula 6; period IIIa; developments post period III and pre period IV; pit D; TPQ of *c.* 10 B.C. from Italian sigillata.
Amphora Types: 34a
Coarseware Types: 9 91 92 94 97 99 100 101 104 113 118 133 137 138 150 208 212 213 214 215 286 336 368
- 10 Kenrick 1986, 132; Regio II, Insula 6; period IV; from the foundation trench and first covering of the cistern in section N–O; TPQ in first century A.D. from Italian sigillata.
Coarseware Types: 11 37 97 98 118 150 207 386

- 11 Kenrick 1986, 133; Regio II, Insula 6; period IVa (?); new surface over blocked draw-hole for cistern; no surviving relationships between this and other surfaces in the rest of the trench; no fineware later than period IV.
Coarseware Types: 92 95 99 153 213 307
- 12 Kenrick 1986, 133; Regio II, Insula 6; period IVa; activity secondary to period IV; section N–O; xxii 12 and 13 are both from fill of cut by cistern; TPQ in second half of first century A.D. from South Gaulish Dr.27 and a sherd of early ARS; ARS forms Hayes 9A and 32 regarded as intrusive.
Amphora Types: 7b
Coarseware Types: 95 156 208 215 336
- 13 Kenrick 1986, 133; Regio II, Insula 6; period IVa; activity secondary to period IV; section N–O; see xxii 12.
Coarseware Types: 15 20 44 56 58 95 96 98 99 131 150 151 156 160 161 162 213 214 286 290 297 302 307 345 346
- 14 Kenrick 1986, 133; Regio II, Insula 6; period IVa (?); foundation trench of wall V38; relation of this wall to adjacent levels unclear; TPQ in second half of second century A.D. from sherd of early ARS.
Coarseware Types: 100 104 213 214 303
- 15 Kenrick 1986, 133; Regio II, Insula 6; period IVa; robber trench above “Pier” V37; fineware (Italian sigillata and Eastern sigillata A) almost certainly residual.
Coarseware Types: 74 137 138 213 219
- 17 Kenrick 1986, 134–5; Regio II, Insula 6; period V (?); robbing of wall V38; TPQ in first half of third century A.D. from ARS Hayes 30 and 33; 1 possible intrusive sherd of sixth–seventh century A.D. ARS.
Amphora Types: 16c
Coarseware Types: 15 27 40 56 95 98 99 100 109 110 138 150 156 162 170 213 215 286 292 293 294
- 19 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
- 20 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
- 21 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
Amphora Types: 1a 7e
- 22 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
- 23 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
- 24 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
- 25 Kenrick 1986, 125–127; Regio II, Insula 6; Period I; see xxi 1.
Amphora Types: 1g 1.i
- 26 Kenrick 1986, 127; Regio II, Insula 6; Period II; TPQ of c. 375 B.C. from Attic Black Glaze; see also xxi 7.
Amphora Types: 4f
Coarseware Types: 179

- 31 Kenrick 1986, 129–30; Regio II, Insula 6; period III; see xxi 14.
Amphora Types: 6
Coarseware Types: 18 35 98
- 32 Kenrick 1986, 129–30; Regio II, Insula 6; period III; see xxi 14.
Coarseware Types: 98
- 33 Kenrick 1986, 130; Regio II, Insula 6; period IIIa; developments post period III and pre period IV; xxii 33 and 34 are from a large pit in section G–H; Augustan TPQ from Italian sigillata.
Coarseware Types: 99 111 117 131 215 231 303 309
- 34 Kenrick 1986, 130; Regio II, Insula 6; period IIIa; developments post period III and pre period IV; xxii 33 and 34 are from a large pit in section G–H; Augustan TPQ from Italian sigillata.
- 35 Kenrick 1986, 132; Regio II, Insula 6; period IV; from the foundation trench for the cistern and the associated make-up level in section G–H; TPQ of A.D. 15–20 from Italian sigillata and Thin-walled ware.
Amphora Types: 7b 16a
Coarseware Types: 11 22 33 88 91 94 95 97 99 116 117 118 131 133 135 147 150 151 153 161 162 164 207 213 214 215 216 219 263 286 309 342 346
- 36 Kenrick 1986, 133; Regio II, Insula 6; period IVa; activity secondary to period IV; section G–H; mortar floor; no fineware later than period IV.
Coarseware Types: 104
- 37 Kenrick 1986, 133; Regio II, Insula 6; period IVa; activity secondary to period IV; section G–H; mortar floor over xxii 36; TPQ in second century A.D. from two African lamp bases.
Coarseware Types: 148 153
- xxiii** 1 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; earliest occupation levels; Attic Black Glaze of second quarter of fourth century B.C.
Amphora Types: 4f
Coarseware Types: 142
- 2 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; section A–B, C–D; foundations of walls W34, W35, W38 (which cut xxiii 1) and associated mortar floor; no fineware later than xxiii 1.
Amphora Types: 34g
- 3 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; make-up for four ovens (these may be contemporary with or later than the walls associated with xxiii 2); dating of the level depends on an assessment of the degree of intrusion; fineware includes material dating to the second and first centuries B.C. and to the second century A.D., some or all of which may be intrusive.
Amphora Types: 3g
Coarseware Types: 34 89 92 119 164
- 4 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; fill of

ovens associated with xxiii 3; TPQ *c.* 25 B.C. from Loeschke type VIII Italian or African lamp.

Amphora Types: 33

Coarseware Types: 58

- 7 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; grey pebbly sea-sand sealing ovens and remains of early walls; TPQ *c.* A.D. 15/20 from Italian sigillata and lamps.
Coarseware Types: 286 303
- 8 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; levels xxiii 8–19 form an alternating succession of mortar surfaces and occupation material above the sea-sand associated with xxiii 7. A sherd of Cypriot sigillata from xxiii 8 and possibly dating to the second century A.D., provides a TPQ in the second century A.D. for the whole sequence; if this is intrusive, however, then the sequence could be dated as follows:
xxiii 8: after *c.* A.D. 30; xxiii 10: after *c.* A.D. 60; xxiii 11: second century (second half if an ARS Hayes 181 is not intrusive); xxiii 12–19. no later fineware than 11.
Coarseware Types: 286
- 9 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; see xxiii 8.
Coarseware Types: 42 95 161 194 213 215
- 10 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; see xxiii 8.
Coarseware Types: 48 91 99 104 106 160 161 162 164 165 206 209 217 219 252 290 373
- 11 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; see xxiii 8.
Coarseware Types: 48 62 91 95 99 113 141 153 161 162 164 213 217
- 12 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; see xxiii 8.
Coarseware Types: 212 286
- 13 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; see xxiii 8.
Coarseware Types: 286
- 14 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; see xxiii 8.
Coarseware Types: 42 91 95 99 161 162 268
- 15 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; see xxiii 8.
Coarseware Types: 62 161 162
- 16 Kenrick 1986, 135 and fig.64; Regio II, Insula 7; sections A–B, C–D; see xxiii 8.

- 17 Kenrick 1986, 135 and fig. 64; Regio II, Insula 7; sections A–B, C–D; see xxiii 8.
Amphora Types: 1g 32 34g
Coarseware Types: 38 42 48 58 62 91 92 95 99 100 101 104 110 131 157 161 162 213 286 291 304 306 340 343
- 18 Kenrick 1986, 135 and fig. 64; Regio II, Insula 7; sections A–B, C–D; see xxiii 8.
Coarseware Types: 48 161 162
- 19 Kenrick 1986, 135 and fig. 64; Regio II, Insula 7; sections A–B, C–D; see xxiii 8.
Coarseware Types: 40 100 161 162 291
- 20 Kenrick 1986, 137 and fig. 64; Regio II, Insula 7; section C–D; fill of foundation trench of stone drain; TPQ in first half second century A.D. from Loeschke VIII lamp.
Coarseware Types: 33 60 62 141 204 326
- 21 Kenrick 1986, 137 and fig. 64; Regio II, Insula 7; section C–D; xxiii 21–23 and 25 are from the fill above the stone drain associated with xxiii 20, sealed by an overlying mortar surface; TPQ in second half of second century A.D. from ARS Hayes 23 and 181; Hayes 93 and 1 sixth–seventh century sherd regarded as intrusive.
Coarseware Types: 15 27 42 43 44 48 49 50 51 53 58 60 62 91 92 99 100 104 109 141 156 159 161 162 164 165 213 217 232 241 283 286 290 291 292 293 305 306 327 340 345 350
- 22 Kenrick 1986, 137 and fig. 64; Regio II, Insula 7; section C–D; see xxiii 21.
Coarseware Types: 42 62 104 141 148 161 162
- 23 Kenrick 1986, 137 and fig. 64; Regio II, Insula 7; section C–D; see xxiii 21.
Amphora Types: 16a
Coarseware Types: 42 43 60 62 63 91 99 100 104 141 147 152 157 161 162 174 213 217 291 346 349 369
- 25 Kenrick 1986, 137 and fig. 64; Regio II, Insula 7; section C–D; see xxiii 21.
Amphora Types: 16c 17 34e 34g 34h
Coarseware Types: 42 44 48 49 50 51 53 56 58 60 62 63 91 92 96 99 100 101 102 104 133 134 141 148 153 156 161 162 165 258 261 262 286 292 303 305 306 340 350 370 389
- 26 Kenrick 1986, 137 and fig. 64; Regio II, Insula 7; section C–D; orange clay, uppermost surviving layer; TPQ in early third century A.D. from ARS Hayes 33 and Berenice 623.
Coarseware Types: 15 54 63 100 104 161 204 259 303 350
- 28 Kenrick 1986, 137 and fig. 64; Regio II, Insula 7; sections E–F and G–H; xxiii 28–33 are from the earliest occupation in these sections; only three sherds of fineware, all from xxiii 29; one of these provides TPQ of *c.* 350 B.C.
- 29 Kenrick 1986, 137 and fig. 64; Regio II, Insula 7; sections E–F and G–H; see xxiii 28.
Amphora Types: 1d 1g 1h 1j 3a
Coarseware Types: 2 213 346

- 30 Kenrick 1986, 137 and fig.64; Regio II, Insula 7; sections E-F and G-H; see xxiii 28.
Coarseware Types: 96
- 31 Kenrick 1986, 137 and fig.64; Regio II, Insula 7; sections E-F and G-H; see xxiii 28.
- 32 Kenrick 1986, 137 and fig.64; Regio II, Insula 7; sections E-F and G-H; see xxiii 28.
Amphora Types: 1d
Coarseware Types: 142 396
- 33 Kenrick 1986, 137 and fig.64; Regio II, Insula 7; sections E-F and G-H; see xxiii 28.
- 35 Kenrick 1986, 137 and fig.64; Regio II, Insula 7; sections E-F and G-H; associated with first stone structure (wall W41); TPQ in second half of fourth century B.C.
Amphora Types: 1f 1g 4f 6 34i
Coarseware Types: 21 134
- 36 Kenrick 1986, 137 and fig.64; Regio II, Insula 7; sections E-F and G-H; clay and burnt material associated with wall W41; no fineware.
- 37 Kenrick 1986, 137 and fig.64; Regio II, Insula 7; sections E-F and G-H; wall W42, built over xxiii 36; TPQ in first half of third century B.C.
- 38 Kenrick 1986, 138 and fig.64; Regio II, Insula 7; sections E-F and G-H; fill and capping of orange clay sealing demolition of walls W41 and W42; TPQ in third century B.C. possible sherd of Campana A regarded as intrusive.
Amphora Types: 1i 3h 4f 6
Coarseware Types: 4 21 213 234 236 240 263 286 395
- 39 Kenrick 1986, 138 and fig.64; Regio II, Insula 7; sections E-F and G-H; fill and capping of hard orange clay over xxiii 38 and sealing foundation trench of wall W13; Augustan TPQ; 1 sherd of third century ARS regarded as intrusive.
Amphora Types: 1i 4f 35i
Coarseware Types: 38 75 80 91 92 95 96 97 99 110 118 131 135 137 143 147 150 156 157 207 209 212 213 214 215 219 233 284 286 303 306 307 346 382 396 418
- 40 Kenrick 1986, 139 and fig.64; Regio II, Insula 7; sections E-F and G-H; sequence of levels above xxiii 39, including the filling of the foundation trench of the cistern and the surfaces above it. The finds cover the period from the late first century to the early fifth century A.D.
Amphora Types: 1b 1g 1j 13 16a 34a 34b 36a
Coarseware Types: 15 20 33 43 60 78 91 95 97 98 100 104 109 150 213 286 305 306 309
- xxiv 43 Kenrick 1986, 31; East Forum Temple, north-east corner of precinct; should be period IV but contains much substantially later pottery (up to the fifth century A.D.); see also xxvi 42.
Amphora Types: 27
Coarseware Types: 56 70 103 293 390

- 66 Kenrick 1986, 139; Regio II, Insula 7; trench X4; xxiv 66 and 67 are associated with the construction of wall W14; Augustan TPQ; sherd of early ARS and two late first century lamps regarded as intrusive.
Coarseware Types: 91
- 67 Kenrick 1986, 139; Regio II, Insula 7; trench X4; see xxiv 66.
Coarseware Types: 95 96 98 213 350
- 69 Kenrick 1986, 128; Regio II, Insula 6; period II; level through which pit (xxiv 70) is cut; contains Campana A and a sherd of ARS, both of which are regarded as intrusive.
Amphora Types: 1f
Coarseware Types: 33 34 143
- 70 Kenrick 1986, 128; Regio II, Insula 6; period II; pit pre-dating wall X5.1; TPQ *c.* 380 B.C. from Attic Black Glaze.
Coarseware Types: 30 33 97 143
- 73 Kenrick 1986, 130; Regio II, Insula 6; period IIIa (?); developments post period III and pre period IV; xxi 52 and xxiv 73 are from the foundation trench of wall V28; TPQ in first century B.C. from possible sherd of Campana C.
Coarseware Types: 7
- xxv 20 Kenrick 1986, 170 and fig 82; Antonine Temple, trench Y3–4; phase 1; associated with wall Y4.1; no fineware.
- 21 Kenrick 1986, 170 and fig 82; Antonine Temple, trench Y3–4; phase 2; xxv 21 and 22 are occupation levels and floors above xxv 20 and probably also to be associated with wall Y4.1; TPQ around middle of second century B.C. from sherds of Campana A.
Amphora Types: 8
Coarseware Types: 285
- 22 Kenrick 1986, 170 and fig 82; Antonine Temple, trench Y3–4; phase 2; see xxv 21.
- 23 Kenrick 1986, 172–3 and fig 82; Antonine Temple, trench Y3–4; phase 4; fill of foundation trench for north wall of Regio II Insula 3 and overlying fill; xxv 23 also contains material from the north end of the trench, which was attributed to this phase merely by general similarity of level; this material may therefore not relate to the construction of the insula; fineware includes Campana A, Eastern sigillata A and Italian sigillata; TPQ in the first century B.C. if the Italian sigillata is regarded as intrusive, otherwise in the second half of the first century A.D.
Amphora Types: 4f 7j 10 11
Coarseware Types: 35 62
- 24 Kenrick 1986, 173, 175–199 and fig 82; Antonine Temple, trench Y3–4; phase 4; fill of pit 2; very homogenous group of fineware confined to the last decade of the first century B.C.; TPQ *c.* 10 B.C.
Coarseware Types: 74 91 98 131 155 156 214 215 346
- 25 Kenrick 1986, 173 and fig 82; Antonine Temple, trench Y3–4; phase 5;

mortar surface settling into pit 2; Augustan TPQ; ARS Hayes 181 or 182 regarded as intrusive.

Coarseware Types: 215

- 26** Kenrick 1986, 173 and fig 82; Antonine Temple, trench Y3-4; phase 5; mortar surface over xxv 25; Augustan TPQ.
Coarseware Types: 214
- 27** Kenrick 1986, 173 and fig 82; Antonine Temple, trench Y3-4; phase 5; mortar surface over xxv 26; TPQ in early first century A.D.
- 28** Kenrick 1986, 173-5 and fig 82; Antonine Temple, trench Y3-4; phase 6; from construction trench of south precinct wall of Antonine Temple and robber trench of wall Y4.1; TPQ *c.* 100 A.D. from ARS Hayes 9A.
- xxvi 42** Kenrick 1986, 31; East Forum Temple, north-east corner of precinct; should be period IV but contains much substantially later pottery (up to the fifth century A.D.); see also xxiv 43.
Amphora Types: 10 20 16c 34n
Coarseware Types: 56 64 102 104

BIBLIOGRAPHY

- Allen, H.L. 1974 Excavations at Morgantina 1970–2: Preliminary Report XI, *American Journal of Archaeology* 78, 361–82
- Almagro, M. 1955 *Las Necropolis de Ampurias, Volume II*. Barcelona
- Arthur, P. 1982 Amphora Production in the Tripolitanian Gebel, *Libyan Studies* 13, 61–72
- Bailey, D.M. 1975 *A Catalogue of the Lamps in the British Museum i, Greek, Hellenistic and Early Roman Pottery Lamps*. London
- Bailey, D.M. 1980 *A Catalogue of Lamps in the British Museum ii, Roman Lamps made in Italy*. London
- Baldacci, et al. 1972 *Recherches sur les Amphores Romaines*. Coll. de l'École Française de Rome 10
- Beltrán, A. (ed) 1951 *Cronica de VI Congresso Arqueol de Sudeste Alcoy 1950*. Cartagena
- Beltrán, Lloris M. 1970 *Las ánforas romanas en España*. Zaragoza
- Beltrán, Lloris M. 1977 Problemas de la morfología y del concepto 'historico-geographico' que recubre la nocion tipo, Coll. de L'École Française de Rome 32, 97–132
- Beschaouch, A. 1982 *Recherches Archéologiques Franco-Tunisiennes – Bulla Regia I Miscellanea I*.
- Bisi, A.M. 1969–70 Scoperta di due tombe puniche a Mellita (Sabratha), *Libya Antiqua* 6–7, 189–228
- Bisi, A.M. 1971 A proposito di alcune anfore puniche in Tripolitania, *Studi Magrebini* 4, 17–32
- Blazquez, J.M. and Remesal, J. (eds.) 1983 *Produccion y comercio del aceite en la Antiquedad II Congreso*. Madrid
- Bourgeois, A. 1982 La Céramique du Sanctuaire d'Hoter Miskar à Mactar, *Karthago* 20, 17–69. Paris
- Bovini, G. 1960 L'impegno dei tubi fittili nelle volte degli edifici ravennati, *Felix Ravenna*, 78–99
- Brogan, O. and Smith, D.J. 1984 *Ghirza A Libyan Settlement in the Roman Period*. Tripoli
- Byrsa i 1979 *Mission Archéologique Française à Carthage Byrsa I Rapports préliminaires des fouilles (1974–1976) sous la direction de Serge Lancel*. École Française de Rome
- Byrsa ii 1982 *Mission Archéologique Française à Carthage Byrsa II Rapports préliminaires sur les fouilles 1971–1978 niveaux et vestiges puniques sous la direction de Serge Lancel*. École Française de Rome
- Callender, M.H. 1965 *Roman Amphora*. London
- Caputo, G. 1959 *II Teatro di Sabratha*. Rome
- Carandini, A. and Panella, C. 1981 The trading connections of Rome and Central Italy in the late second and third centuries: the evidence of the Terme del Nuotatore excavations, Ostia. In King and Henig (eds) 1981, 487–503
- Cintas, P. 1950 *Céramique Punique*. Paris
- Cintas, P. 1953 Une Ville Punique au Cap Bon en Tunisie, *Comptes Rendus de l'Académie des Inscriptions et des Belles Lettres*, 256–60
- Comfort, H. 1982 Signatures and decoration on Italian and Gaulish Sigillata at Sabratha, *American Journal of Archaeology* 86, 483–507
- Cultrera, G. 1938 Rovine di un antico stabilimento idraulico in contrado Zappala, *Notizie degli Scavi*, 261–301
- Cunliffe, B. 1976 The Roman Baths at Bath: Excavations 1969–75, *Britannia* VII, 1–32
- De Angelis d'Ossat, G. 1962 *Studi Ravennati*

- Deneauve, J. 1974 *Lampes de Carthage*. Paris
- De Vita, A., Procaccini, P. and Pucci, G. 1974–75 Lo Scavo a nord del mausoleo di Sabratha, *Libya Antiqua* 11–12, 91–111
- Dodge, H. 1986 Museum Notes 1986: Decorative Marbles in the Museum of Antiquities, *Archaeologia Aeliana* 5th Series XIV, 182–86
- Dodge, H. 1988a Palmyra and the Marble Trade: Evidence from the Baths of Diocletian, *Levant* XX, 215–30
- Dodge, H. 1988b Decorative Stones for Architecture in the Roman Empire, *Oxford Journal of Archaeology* 7 (1), 65–80
- Dore, J.N. 1988 Pottery and the History of Roman Tripolitania: Evidence from Sabratha and the UNESCO Libyan Valleys Survey, *Libyan Studies* 19, 61–85
- Dressel, H. 1899 *Corpus Inscriptionum Latinarum XV (1)*. Berlin
- Dyson, S.L. 1976 *Cosa: The Utilitarian Pottery. Memoirs of the American Academy in Rome* Volume XXXIII. Rome
- Edwards, G.R. 1975 *Corinth Vol 7 Part 3 Corinthian Hellenistic Pottery*. Princeton
- Everitt, B.S. 1977 *The Analysis of Contingency Tables*. London
- Freestone, I., Johns, C. and Potter, T. 1982 *Current Research in ceramics: Thin-section studies British Museum Seminar 1980*. British Museum, London
- Frost, H. 1969 *The Mortar Wreck in Mellieha Bay*. London
- Fulford, M.G. 1984 Chapter 7 The Coarse (Kitchen and Domestic) and Painted Wares. In Fulford and Peacock 1984, 155–230
- Fulford, M.G. 1986a The pottery from pit 2 (Context Y.1. xxv v/24): Amphorae and The Other Coarse Wares. In Kenrick 1986, 183–198
- Fulford, M.G. 1986b Pottery Associated with the construction of the Antonine Temple: Amphorae and The Other Pottery, In Kenrick 1986, 205–213
- Fulford, M.G. and Peacock, D.P.S. 1984 *Excavations at Carthage, The British Mission vol I,2: The Avenue du President Bourgiba, Salammbô: the Pottery and other Ceramic Objects from the Site*. Sheffield
- Gill, D. 1986 Chapter IX Attic black-glazed pottery. In Kenrick 1986, 275–296
- Hayes, J.W. 1972 *Late Roman Pottery*. London
- Hayes, J.W. 1976 Pottery: Stratified Groups and Typology. In Humphrey 1976, 47–123
- Hayes, J.W. 1984 Appendix I Roman Pottery and Lamps. In Brogan and Smith 1984, 234–241
- Humphrey, J.H. (ed) 1976 *Excavations at Carthage 1975 conducted by the University of Michigan* Volume I. Tunis
- Humphrey, J.H. (ed) 1978 *Excavations at Carthage 1975 Conducted by the University of Michigan* Volume II Ann Arbor
- Humphrey, J.H. (ed) 1981 *Excavations at Carthage 1977 Conducted by the University of Michigan* Volume VI Ann Arbor
- Isserlin, B.S.J. et al 1964 Motya, a Phoenician-Punic site near Marsala, Sicily, *Annual of the Leeds University Oriental Society* 4
- Jesson, M. and Hill, D. (eds.) 1971 *The Iron Age and its Hillforts*. Southampton
- Jones, R.E. 1986 *Greek and Cypriot Pottery: A Review of Scientific Studies*. Fitch Laboratory Occasional Paper 1, British School at Athens
- Kapitän, G. 1972 Le anfore del relitto romano di Capo Ognina (Siracusa), *Coll. de l'École Française de Rome* 10, 243–52
- Keay, S.J. 1984 *Late Roman Amphorae in the Western Mediterranean: a Typology and Economic Study: the Catalan Evidence*. Oxford
- Keay, S. and Jones, L. 1982 Differentiation of early imperial amphora production in Hispania Tarraconensis. In Freestone, Johns & Potter 1982, 45–61
- Kenrick, P.M. 1985 *Excavations at Sidi Khrebish Benghazi (Berenice)* Volume III Part 1: *The Fine Pottery*. Tripoli
- Kenrick, P.M. 1986 *Excavations at Sabratha 1948–1951*. London
- King, A. and Henig, M. (eds) 1981 *The Roman West in the Third Century*. Oxford

- Koehler, C.G. 1981a Corinthian Developments in the study of trade in the fifth century, *Hesperia* 50, 449–458
- Koehler, C.G. 1981b *Corinthian A and B Transport Amphoras*, PhD Dissertation, Princeton University
- Koehler, C.G. in press *Corinth. Results of Excavations conducted by the American School of Classical Studies at Athens, Vol VII, Pt V, Corinthian A, A' and B container amphoras*. American School of Classical Studies at Athens. Princeton
- Lamboglia, N. 1952 Per una classificazione preliminare della Ceramica Campana, *Atti del I Congresso di Studi Liguri*, 139–206. Bordighera
- Lézine, A. 1954 Les Voûtes Romaines à Tubes emboîtés et les croisées d'Ogives de Bulla Regia *Karthago* 5, 168–181
- Lloyd, J.A. (ed.), 1979 *Excavations at Sidi Khrebish Benghazi (Berenice) Volume II*. Tripoli
- Lyding-Will, E. 1982 Greco-Italic Amphoras, *Hesperia* 51 (3), 338–356
- MacKendrick, R. 1980 *The North African Stones Speak*, London
- Mahjoubi A., Salomonson, J.W. and Ennabli, A. 1970 *La Nécropole Romaine de Raqqada Collection Notes et Documents Vol. VIII Fasc. 1*. Tunis
- Mañá, J.M. 1951 Sobre tipología de ánforas punicas. In Beltrán (ed) 1951, 203–10
- Manacorda, D. 1977 Testimonianze sulla produzione e il consumo dell'olio Tripolitano nell'III secolo, *Dialoghi di archeologia* 9–10, 542–600
- Manacorda, D. 1978 The Ager Cosanus and the Production of the Amphorae of Sestius – new evidence and reassessment, *Journal of Roman Studies* 68, 122–31
- Martin-Kilcher, S. 1983 Les Amphores romaines à huile de Bétique (Dressel 20 et 23) d'August (Colonia Augusta Rauricorum) et Kaiseraugst (Castrum Rauracense). Un rapport préliminaire. In Blazquez & Remesal (eds) 1983, 337–47
- McWhirr, A. (ed.) 1979 *Roman Brick and Tile*. Oxford
- Morel, J.-P. 1981 *Céramique campanienne: les formes*. Rome
- Munsell 1975 *Munsell Soil Color Charts*. Baltimore
- Oliva, P. M. 1962 Resultado de algunos cortes estratigráficos en Ullastret (Gerona), *An. Inst. Est. Gerundensis* 15, 331–76
- Oliva, M. 1959 Excavaciones arqueológicas en la ciudad ibérica de Ullastret, *An. Inst. Est. Gerundensis* 13, 365–89
- Olivier, A. and Storz, S. 1982 Analyse et Restitution d'un Procédé de Construction Antique: Réalisation d'une Voûte d'Arête sur Coffrage Perdu en Tubes de Terre Cuite. In Beschouch 1982, 111–127
- Ostia i 1968 *Le Terme del Nuotatore Scavo dell'ambiente IV (Studi Miscellanei 13)*. Rome
- Ostia ii 1970 *Le Terme del Nuotatore Scavo dell'ambiente I (Studi Miscellanei 16)*. Rome
- Ostia iii 1973 *Le Terme del Nuotatore Scavo degli ambienti III VI VII Scavo dell'ambiente V e di un saggio nell'area SO (Studi Miscellanei 21)*. Rome
- Ostia iv 1977 *Le Terme del Nuotatore Scavo dell'ambiente XVI e dell'area XXV (Studi Miscellanei 23)*. Rome
- Panella, C. 1972 Annotazione in Margine alle Stratigrafie delle Terme Ostiensi del Nuotatore. In Baldacci et al. 1972, 69–106
- Panella, C. 1973 Appunti su un gruppo di anfore della prima, media e tarda età Imperiale. In *Ostia iii*, 460–633
- Pascual Guasch, R. 1977 Las anforas de la Layetania *Coll. de l'École Française de Rome* 32, 47–96
- Peacock, D.P.S. 1971 Roman amphorae in pre-Roman Britain. In Jesson & Hill (eds) 1971, 169–188
- Peacock, D.P.S. 1984a Chapter 2 Petrology and Origins. In Fulford and Peacock 1984, 6–28
- Peacock, D.P.S. 1984b Chapter 9 Ceramic Building Materials. In Fulford and Peacock 1984, 242–246
- Peacock, D.P.S. 1986 Punic Carthage and Spain: The Evidence of the Amphorae, *Cahiers des Études Anciennes* XIV, 101–113
- Peacock, D.P.S. and Williams, D.F. 1986 *Amphorae and the Roman Economy: an introductory guide*. London

- Poinsot, C. 1958 *Les Ruines de Dougga*. Tunis
- Ponsich, M. 1974 *Implantation Rurale Antique sur le Bas-Guadalquivir*. Madrid
- Ponsich, M. 1979 *Implantation Rurale Antique sur le Bas-Guadalquivir*. Paris
- Pritchard, F.A. 1986 Ornamental Stonework from Roman London, *Britannia* XVII, 169-189
- Py, M. 1978 Quatre siècles d'amphore massaliète. Essai de classification des bords *Figlina* 3, 1-23
- Ramón, J. 1981 *Ibiza y la Circulación de Anforas Fenicias y Punicas en el Mediterraneo Occidental*. *Mus. Arq. de Ibiza*, 5
- Ribera Lacomba, A. 1982 *Las Anforas Preromanas Valencianas (Fenicias, Ibericas y Punicas)*. Valencia
- Riley, J.A. 1979 The Coarse Pottery from Berenice. In Lloyd 1979, 91-467
- Riley, J.A. 1981 The Pottery from Cisterns 1977.1, 1977.2 and 1977.3. In Humphrey (ed.) 1981, 85-124
- Robinson, H.S. 1959 *The Athenian Agora Volume V Pottery of the Roman Period Chronology*. Princeton
- Röder, J. 1971 Marmor Phrygium. Die antiken Marmorbrüche von Ischisar in Westanatolien, *Jahrbuch des Deutschen Archäologischen Instituts* 86, 253-312
- Rostovtzeff, M. et al 1936 *The Excavations at Dura-Europos: Preliminary Report of the Sixth Season 1932-33*. New Haven
- Segert, S. 1976 *A Grammar of Phoenician and Punic*. London
- Soricelli, G. 1987 'Tripolitanian Sigillata': North African or Campanian? *Libyan Studies* 18, 73-87.
- Sparkes, B.A. and Talcott, L. 1970 *The Athenian Agora xii, Black and Plain Pottery of the 6th, 5th and 4th centuries BC*. Princeton
- Taylor, J. du Plat 1964. In Isserlin et al. 1964, 84-131
- Tchernia, A. 1967 Les amphores romaines et l'histoire économique, *Journal des Savants*, Oct-Dec, 216-34
- Tchernia, A. and Villa, J.P. 1977 Note sur le matériel recueilli dans la fouille d'un atelier d'amphores à Velaux (Bouches-du-Rhône), *Coll. de l'École Française de Rome* 32, 231-39
- Tchernia, A. and Zévi, F. 1972 Amphores Vinaires de Campanie et de Tarraconaise à Ostie, *Coll. de l'École Française de Rome* 10, 35-67
- Thomas, A.C. 1959 Imported Pottery in Dark Age Britain, *Medieval Archaeology* 3, 89-111
- Tomber, R. 1986 Pottery from the South side of the circular harbour, *CEDAC Carthage Bulletin* 7, 34-58
- Van der Werff, J.H. 1978 Amphores de tradition punique à Uzita, *Bulletin Antieke Beschaving* 52-3, 171-200
- Van der Werff, J.H. 1982 *Uzita, Vondstenmateriaal uit een Antieke Nederzetting in Midden-Tunisië*. Utrecht
- Vegas Mercedes 1973 *Cerámica Común Romana del Mediterráneo Occidental*. Barcelona
- Ward-Perkins, J.B. 1951 Tripolitania and the Marble Trade, *Journal of Roman Studies* XLI, 89-109
- Ward-Perkins, J.B. 1975 Dalmatia and the Marble Trade *Miscellanea: Disputationes Salonitanae* 1970, 38-43. Split
- Ward-Perkins, J.B. 1980 Nicomedia and the Marble Trade, *Proceedings of the British School at Rome* XXXV, 23-69
- Whitbread, I. 1987 *The application of ceramic petrology to the study of ancient Greek transport amphorae with special reference to Corinthian B production*. Ph.d. thesis, University of Southampton
- Wilson, R.J. 1979 Brick and Tiles in Roman Sicily. In McWhirr (ed.) 1979, 11-43
- Wrigley, N. 1985 *Categorical data analysis for geographers and environmental scientists*. Harlow

ARABIC SUMMARY

الجزء الثالث: مواد البناء
بقلم هـ. دودج

اهتم هذا الفصل ببحث موضوع الانابيب الفخارية terracotta vaulting tubes (III.1) ، الرخام المستورد ، وعلى الأخص قطع من قشرة خارجية من خشب للزينة veneer (III.2) ، وبالإضافة إلى ذلك يتضمن هذا الجزء بحوثاً قصيرة عن الصلصال clay ، العلامات الفنية opus signium ، الجدران المطلية ، والجص stucco المطلي وكسر الفسيفساء (III.3-6).

الجزء الرابع: المحيط الطبقي

يلخص هذا الفصل جميع القرائن المتعلقة بالتراصف التتابقي stratified contexts والتي تتم الحصول عليها خلال الحفريات التي أجريت في صبراته خلال الفترة 1948 - 1951 وذلك بالإضافة إلى أعداد قوائم بالقوارير والفخار غير المصقول الذي عثر عليه.

ظهرت متأخرة خلال القرن الرابع هي 67, 68 والتي تشكل نسبة (0.6% 0.4%, 0.5% من جميع الأطباق الخزفية). وما عثر عليه من هذه الأنواع يدل على أن هناك أنماطاً جديدة أكثر صلابة وذات لون داكن ودقيقة الصنع يمكن ربطها بالمجموعات التي جرى إنتاجها خلال القرن الثالث. وإلى جانب الأطباق الخزفية هناك أنواع أخرى قليلة يمكن تاريخها بصورة محددة.

ومن بين الأواني والأحواض الكبيرة يوجد مجموعة تعود إلى نفس الفترة وتشبه الأنواع 259-262 (3.1% من جميع الأوعية والأحواض) التي ظهرت لأول مرة في صيراته في النصف الثاني من القرن الثاني الميلادي. وإلى نفس الفترة يعود تاريخ الأنواع التالية من الأواني المغلقة: 349, 350. وخلال الفترة اللاحقة لا يوجد ما يدل على حدوث توسع يضاهاى ذلك الذى بدأ في النصف الثاني من القرن الثاني الميلادي.

وتميزت الفترة المتأخرة بحدوث تدهور بطئ يصعب تحديد تاريخه أو سرعته. وأغلب الأطباق الخزفية التي ظهرت في أواخر القرن الثاني استمر إنتاجها خلال القرن الثالث وبعده. ومن المرجح أن فترة الرخاء التي عمت المنطقة خلال القرن الثاني قد استمرت خلال القرن الثالث وربما القرن الرابع وأن التدهور الملحوظ قد حدث بعد ذلك.

(5) الفترة الرومانية المتأخرة (القرن الخامس الميلادي - القرن السابع الميلادي)

إن ضالة الترافف الطبقي وحجم كمية الفخار المكتشف جعلت من الصعب العثور على الأنواع التي يمكن ارجاعها إلى هذه الفترة، وعليه يفضل انتخاب انواع معينة كمثلة لها.

ومن بين الأطباق الخزفية التي استمر إنتاجها بعد القرن الرابع النوع (64). ويوجد بعض الأمثلة من النوع (70) التي يعود تاريخها إلى القرن الخامس الميلادي.

وتدل جميع القرائن على أن النوع (222) قد جرى إنتاجه خلال القرن السادس وأن النوع (265) يعود إلى القرن الخامس. ومن بين الأواني المغلقة يتوفر عينة واحدة من النوع (375) الذى ظهر في فترة متأخرة في الميدان العام (FORUM) لمدينة صيراته.

(2) الفترة الفينيقية المتأخرة (3-1 ق.م).

إن ما عثر عليه من أواني فخارية غير مصقولة في ثلاثة مناطق، منطقة II ، الجزيرتان 6, 7 ومنزل بروقان) والتي كانت مهجورة خلال القرن الثالث ق.م لا تعطي أية دليل على تطور هذا النوع من الصناعة في بداية هذه الفترة، بينما في الفترة التي أعقبت ذلك نجد أن كمية الفخار وتنوع أشكاله تؤكد شغل هذه الأماكن. فمثلاً النوع 16 من الأطباق الخزفية يتوفر بكثرة وتصل نسبته 5.6% من مجموع الأطباق الخزفية. ويدل توزيع الأنواع 9, 34, 35 على استعمالها بصورة واسعة خلال هذه الفترة والتي تلتها. واغلب الأواني الفينيقية هي الأنواع 234-243 .

(3) فترة الامبراطورية المبكرة (القرن الاول ق.م - القرن الاول الميلادي).

بمقارنة الفخار العائد الى هذه الفترة بالفخار الذي يرجع تاريخه إلى الفترتين السابقتين، نلاحظ زيادة كبيرة في الكمية بالإضافة إلى تعدد أشكاله، وهذا يدعونا إلى الاعتقاد بأن صبراته قد شاركت في التطور الاقتصادي الذي حدث في حوض البحر المتوسط خلال هذه الفترة، حيث ظهرت انماط وأساليب جديدة في صناعة الفخار في نهاية القرن الأول قبل الميلاد.

والأواني الفخارية التي يرجع تاريخها إلى هذه الفترة يمكن تقسيمها إلى ثلاثة أنواع مميزة وهي: النوعان الأولان ويشملان أنواع الأواني من 207-212 و 213-218 وذلك بنسبة 27.9% . أما النوع الثالث فهي الأواني من نوع البنتليري (أنظر الأواني المصنوعة باليد، أنواع 286-327). ويدل ظهورها المفاجئ وانتشارها بصورة واسعة على تطور اقتصادي كبير.

ويبدو أن صناعة الأطباق الخزفية المعمولة بواسطة العجلة وهي الأنواع من 37 إلى 41 كانت تتم وفقاً للأساليب والطرق الثلاثة المتبعة في صناعة الفخار في كل من الجزيرة الإيطالية أو صقلية، وشمال تونس، ووسط وجنوب البلاد التونسية وإقليم طرابلس. إن التطور الثابت والمستمر لهذا النوع من الصناعة يدل على استمرارية الأساليب التقليدية المتبعة في صناعة الفخار في أواسط وجنوب البلاد التونسية والطرابلسية خلال الفترة من القرن الثاني قبل الميلاد إلى نهاية القرن الأول من فترة الامبراطورية وهو في نفس الوقت يدل على وجود نظام اجتماعي - اقتصادي في هذه المناطق. ومع تقدم القرن الأول الميلادي أخذت هذه الصناعة تتوطد على أسس تبادلية هامة في كل من شمال تونس وأواسط وجنوب تونس وطرابلس.

(4) فترة الامبراطورية المتأخرة (القرن الثاني الميلادي - القرن الرابع الميلادي)

يوجد ثلاثة أنواع من الأطباق الخزفية التي يعود تاريخها إلى هذه الفترة، وهي الأنواع 53-57 (شمال تونس) و 42-52 و 58-62 (وسط وجنوب تونس وطرابلس) وهي تشكل نسبة 30.5% من جميع الأطباق الخزفية. وهذه النسبة تتجاوز ما كان معروفاً خلال الفترة السابقة (حتى مع التوسع الهائل في إنتاج الأطباق الخزفية من نوع البنتليري) Pantellerian.

ويبدو أن ذلك قد جاء نتيجة التوسع الكبير والتطور العمراني الذي حدث في المدينة في منتصف القرن الثاني الميلادي. ويصعب متابعة التطور اللاحق للأنواع 59-62، وذلك على الرغم من توفر بعض الدلالات التي تؤكد حدوث تطور بالنسبة للحواف العليا للأنواع المتأخرة حيث هي أكثر طولاً وقلطحة. وخير مثال لهذه الأنواع التي

ومن بين الاغطية التي عثر عليها يعد النموذج 104 لافتا للنظر حيث يشتمل على تفاصيل مختلفة، (ولو أنه لم يتم الكشف عن نموذج واضح حتى الآن). ومظهره يكشف عن تباين كبير في مكوناته وميلا نحو ثنائية الشكل وربما يدل ذلك على أنه يتكون من مركب فوق آخر أكثر من كونه مظهرا جانبيا واحدا غير متناسق. ومن المحتمل ظهور أشكال جديدة في المستقبل والتي يمكن ربطها بمظاهر جانبية مختلفة. إن أشكال الاغطية الصغيرة في النماذج (110, 112, 113, 114, 115, 117) تكشف عن ثبات نسبة مادة الجير الداخلة في تركيبها.

وقد لوحظ وجود اختلافات كبيرة في مكونات أصناف الأواني المتوسطة وكذلك الأمر بالنسبة للكبيرة كما في النماذج (207, 212) وتلك التي تكون مشابهة في تكوينها للنماذج (213-218).

الرسومات:

تم ترقيم الرسومات طبقا للقاعدة التالية: الرقم الذي يسبق العلامة العشرية يحدد نوعية الأناء، والرقم الذي يتبع العلامة يدل على قارورة معينة يتم تعريفها بواسطة رقم المصنف. وفي حالات معينة سجلت الصفات الخاصة بقوارير مختلفة من نفس النوع على نفس الرسم.

وجود أنواع في طبقات الموقع

تبين الأشكال من 23 إلى 42 توزيع بعض الأنواع التي غالباً ما يعثر عليها في طبقات الموقع. إن مواضع الرموز الدالة على وجود النوع تتوقف على المحيط الذي يوجد فيه النوع كما في الشكل 72 حيث المجموع الكلي لما عثر عليه في معبد انطونين يشتمل على المجموعات التي سبق وأن نشرها كنريك (1986).

دراسة ونتائج:

(1) الفترة الفينيقية المبكرة (القرنين الخامس والسادس قبل الميلاد).

تدل الرموز على أن أول ما ظهر من الأطباق الخزفية هي الأنواع من 1-3 (غير عميقة) و (30-32 عميقة) وتشكل نسبة 1.7% من جميع هذه الأطباق التي عثر أمثلة منها في المواقع التي يعود تاريخها إلى القرن الخامس قبل الميلاد.

والأنواع المعروفة والتي يتكرر العثور عليها باستمرار هي 8, 9 (القليلة العمق) و 33-35 (العميقة) وهي كلها تشكل نسبة 18.7% من مجموع الأطباق الخزفية التي اكتشفت حتى الآن. وجميع هذه الأنواع ظهرت بأعداد كبيرة في الفترة التالية.

والأطباق الخزفية الأخرى التي وجدت في المنطقة وتعود لنفس الفترة هي الأنواع 18, 19 (2.7%, 0.9%). ومن بين الأواني الصغيرة والمتوسطة النماذج 134, 142, 143 والتي ظهرت خلال هذه الفترة (0.4%, 1.2%, 0.7% على التوالي من كل صنف).

وفيما يتعلق بالأواني الفينيقية الكبيرة الحجم نجد الأنواع 234-242 وهي تشكل نسبة 26.3% من مجموع الأواني والأحواض التي عثر عليها. ولا يعرف تاريخها فيما عدا نموذج واحد من النوع 242 الذي قد يعود تاريخه إلى هذه الفترة.

ويوجد نوعان مميزان من القناني الفينيقية يعود تاريخهما إلى هذه الفترة وهما 396, 397 على التوالي يشكّلان نسبة (3%, 5.5%) من مجموع ألاباريق والقناني.

المنف الأول:

وهو يشمل القوارير التي تحتوى في تكوينها على المرو (الكورتز)، الحديد الاحمر وحجر جيرى (الحجر الجيرى دائما بكميات قليلة). وهذه الصناعة تعرف " بالخزف " وهي تشمل س 9% من القوارير الواردة في البحث (باستثناء القوارير المصنوعة باليد والوانى المغلقة، وجميع الوانى ذات الخصائص المختلفة). والانواع التي تتشابه معها هي: 7, 15, 16, 21, 37, 38-41, 53-57, 96, 98, 101, 103, 116, 117, 153. أما الانواع التي عشر عليها في قرطاج والتي تعرف بالوانى الخزفية فهي ضرب من المصنوعات الخزفية المبكرة التي ظهرت في العهد الرومانى والخزف الافريقي الاسود (انظر هيز 1976 ص 87, 93) وهي تدل على أن هذا النوع من الخزف قد جرى في شمال تونس.

المنف الثانى:

وهذا المنف يشمل الوانى التي يدخل في صناعتها كميات كبيرة من حبيبات مواد بركانية، وهو يتألف من أقل من 3% من مجموع المواد التي جرت دراستها في هذا البحث (باستثناء تلك المصنوعة باليد والمغلقة ، وجميع الانواع ذات الخصائص المختلفة). وهي تشبه في تكوينها الانواع 37 و 152 والتي ربما تعود الى نفس المصدر. وهناك نوع خاص من القوارير يتميز بوجود رقائق زجاجية كبيرة تشبه الذهب قطرها (1-2 ملم).

المنف الثالث:

وهذا النوع من القوارير يعتمد في صنعه على حجر الكلس والمرو ، وهو يشكل أكبر نسبة من القوارير التي عشر عليها. وكمحاوله لتعيين التقسيمات الخاصة بهذا المنف فقد تم تصنيف القوارير على أساس نسبة المرو إلى حجر الكلس الداخلى في تركيبها ، وبذلك أمكن تعيين أربعة أقسام:

(1) قوارير مصنوعة كلياً من المرو (أو نسبة ضئيلة من حجر الكلس).

(2) نسبة المرو تفوق نسبة حجر الكلس.

(3) نسبة متساوية من المرو وحجر الكلس.

(4) نسبة حجر الكلس أكبر من نسبة المرو.

إن اتحاد هذه المواد بنسب مختلفة أو متساوية نتج عنه وجود ما يزيد على عشرين نوعاً من القوارير أمكن وضع جدول تصنيف لها يحوى معلومات خاصة بكل قارورة على حده بواسطة جدول التصنيف ظهرت فيه نسب المواد المستخدمة في بناء القوارير في خط عمودى بينما ظهر النوع في خط أفقى. وفي حالتين (أنواع 161 - 162 و 213 - 218) نجد أن عدد الأمثلة من الوفرة بحيث لا يتسع المجال لتدوين معلومات مفصلة لجميع هذه الأنواع وما أمكن ذكره نجده أسفل الأنواع الواردة في جدول التصنيف.

وفيما يتعلق بالأطباق الخزفية العميقة Casseroles ولو أنه استمر إنتاج نمط معين خلال الفترة من القرن الثالث ق.م حتى القرن الثانى ق.م ، إلا أنه بالنسبة لأشكال معينة ظهرت بعض الاختلافات وهو ما يدل على إنتاج أنواع جديدة ضمن النمط العام. ويبدو هذا الاختلاف بصورة واضحة في النماذج 33 - 35 وكذلك بالنسبة لجرار 42 ، 44 ، 46 ، 48 ، 50 فإنها تختلف عن مثيلاتها الأصغر حجماً وهي الأشكال 43 ، 45 ، 47 ، 49 ، 51. ورغم أن هذا الاختلاف يرتبط كلية بالحجم فإن الوانى الصغيرة أجود صنعاً وأكثر صقلاً. ونجد أن الأطباق الخزفية العميقة تتشابه في المظهر وذلك كما في النماذج 58 ، 59 ، 60 ، 62.

الجزء الثاني: الفخار غير المصقول بقلم ج. دور

يتضمن هذا البحث دراسة لأنواع وأنماط الأواني الفخارية وما بينها من تشابه وذلك باستخدام المعلومات التاريخية الواردة في الدراسة التي أعدها الدكتور كنريك (1986). وقد بلغ عدد القوارير التي جرت دراستها ما يزيد على أربعة آلاف تم إختيارها على أساس القرائن المتعلقة بمصدرها ومكان العثور عليها والتي يمكن بواسطتها معرفة مراحل تطور صناعتها. وقد جرى تصنيف هذه القوارير في مجموعات على أساس التشابه في الشكل وذلك على النحو التالي:

أنواع 1-29 :	أطباق خزفية قليلة العمق.
أنواع 30-70 :	أطباق خزفية عميقة.
أنواع 71-73 :	قوارير ذات فتحات ضيقة.
أنواع 74-75 :	قوارير ذات مقابض.
أنواع 77-79 :	جرار واكواب صغيرة مختلفة.
أنواع 95-109 :	أغطية كبيرة.
أنواع 110-130 :	أغطية صغيرة.
أنواع 131-206 :	أواني وأطباق صغيرة ومتوسطة.
أنواع 207-222 :	أواني متوسطة وكبيرة الحجم.
أنواع 223-285 :	أواني وأحواض كبيرة.
أنواع 286-327 :	أواني مصنوعة باليد.
أنواع 328-419 :	أباريق ، قوارير وقناني.

وفيما يتعلق بالتعريف الخاص بهذه الأنواع فقد تم بحثه في مدخل المصنف الخاص بهذه العينات حيث تضمن شرحاً مبوباً حسب اللون والتكوين وطريقة الصنع. ويشمل هذا البحث على قوائم لكل نوع من القوارير بالإضافة إلى الأنواع المماثلة سواء أكانت من بين المجموعتين اللتين تضمنها بحث الدكتور كنريك الذي نشر عام 1986 في مجلة الدراسات الليبية أو من تلك العينات التي عثر عليها في مواقع أخرى.

الصناعة:

جرى فحص القوارير بمساعدة جهاز تكبير من نوع (س 20 تكبير مجهز بعينة مليمترية) ، حيث أمكن تدوين معلومات تتعلق بلون القارورة وحجمها. وقد اختيرت خمسة مجموعات كعينات وهي:

نوع 1 (ت1) :	عقده < 0,1 ملم
نوع 2 (ت2) :	عقده < 0,2 ملم
نوع 3 (ت3) :	عقده < 0,5 ملم
نوع 4 (ت4) :	عقده < 1,0 ملم
نوع 5 (ت5) :	عقده < 2,0 ملم

التركيب: جرى وصف عام لمكونات النوع (حجر جيرى ، المرو ، حبيبات زجاجية سوداء) مع تسجيل الترتيب التنازلي للتكرار. ولوحظ أن النوع المتوفر بكثرة هو ذلك المتميز بوجود حبيبات معدن الفلسبار الزاوية. وهذه هي صناعة الخزف " البنتليرى (انظر بيكوك 1984).

وفيما يتعلق بالمجموعة المصنوعة بعجلة الفخار فإنه يمكن تقسيمها إلى ثلاثة مجموعات:

ترجمة ملخص الكتاب

يتضمن هذا الكتاب دراسة خاصة بالقوارير المصنوعة من الفخار غير المصقول (المستخدمة في الاغراض المنزلية) وكذلك مواد البناء التي عثر عليها في صبراته خلال عمليات التنقيب عن آثار التي أجريت بإشراف الفقيه ج.ب. ويرد بيركن Word-Perkins و ك. كينيون K. Kenyon خلال الفترة 1948 - 1951م.

الجزء الاول: القوارير بقلم ن. كـي

تم اعداد هذا البحث على أساس الدراسة الخاصة بالمخلفات الاثرية التي جرى اكتشافها في صبراته والتي تتألف من حافة عليا لعدد 1716 قارورة و 59 قاعدة (1-1). وتعود أغلب هذه المخلفات الى الفترة الممتدة من أواخر القرن الخامس وأوائل القرن الرابع قبل الميلاد حتى أواخر القرن الاول قبل الميلاد، ويرجع تاريخ البعض منها الى الفترة الممتدة من أواخر القرن الاول ق.م حتى أواخر القرن السادس وبداية القرن السابع الميلاديين. والأنماط التي تعود الى هذه الفترة هي من 450 ق.م - 130 ق.م وتشمل كورنثيان ب (نموذج 1 ، شكل 2). قوارير ماسليوت (نوع 2 ، شكل 3). شمال أفريقي يشمل مجموعة قوارير محلية الصنع (نموذج 3 ، 4 ، الاشكال 3 - 6).

قوارير نوع ايطالي يوناني (نموذج 6 ، شكل 7). وعلى الرغم من أن أغلب الاواني التي تعود الى القرن الثاني ق.م هي من صنع محلي الا أنها تتضمن عدداً من الاواني الايطالية الصنع نوع درسل 1 (نموذج 11 ، شكل 11ج). ومن بين هذه المخلفات أنواع مستوردة تعود الى الفترة من أواخر القرن الاول ق.م والثالث الميلادي وهي تشمل درسل 6 (نموذج 21) ، درسل ايطالي - أسباني نوع 2 - 4 (نموذج 13 ، شكل 11) ودرسل 6-11 و 20 من جنوب أسبانيا (نموذج 14 ، 15 شكل 11) ، وتونس الأفريقية 1 (نوع 17 ، شكل 13) ، قوارير موريتانية (أنواع 18 ، 19 و 28 (أشكال 13 و 14). أما القوارير الطرابلسية فهي تشكل نسبة كبيرة من قوارير هذه الفترة (نوع 16 ، أشكال 11-13). وعثر ايضاً على مجموعة متنوعة من الاواني المصنوعة في أفريقيا الشمالية والتي تمثلها النماذج (29 ، 31 ، 32 ، 33-35 (اشكال 14-15).

وتشكل القوارير الطرابلسية والتونسية أغلب المجموعة التي تعود الى الفترة الرومانية المتأخرة من القرن الرابع الميلادي حتى منتصف القرن الخامس الميلادي (أنواع 21 ، 22 ، 26 ، 34-35 ، الاشكال 14-15).

ويوجد عدد قليل من الاواني تعود الى الفترة المتأخرة من منتصف القرن الخامس الى القرن السابع الميلاديين، وهي تمثل قوارير عثر عليها في منطقة شرق البحر المتوسط ويظهر أغلبها في الأنواع (25 ، 27 و 30) (شكل 14). ويبلغ عدد القوارير التي اكتشفت في الفترة المتأخرة أكثر من نصف المجموعة. وألحق هذا البحث الموجز عن القوارير (1.2) بقائمة تتضمن أختام القوارير الفينيقية التي عثر عليها في صبراته كما جرى مقارنتها بالعينات التي سجلت في مواقع أخرى (1.3 ، أشكال 17-22). وفي الفصل الخاص بالقوارير جرى وصف للاواني الفخارية المصنوعة في طرابلس وشمال أفريقية (1.4).

اكتشافات أثرية في صبراته
1948 - 1951م

المجلد II

المكتشفات

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مواد بناء
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أشرف على اعداده

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