Transport Amphorae and Trade in the Eastern Mediterranean

Acts of the International Colloquium at the Danish Institute at Athens, September 26-29, 2002

Edited by *Jonas Eiring* and *John Lund*

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Cover Illustration: A composite photograph of the amphorae *in situ* at the
Alonnesos wreck by the courtesy of the excavator, Dr. Elpida Hadjidaki.

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Preface

In the morning of 17 April 1902, Christian S. Blinkenberg and Karl F. Kinch disembarked at Rhodes. For the next twelve years, the two scholars and their associates intermittently excavated the acropolis of Lindos and investigated several other sites on the island. Thus began a tradition for Danish archaeological expeditions to the Mediterranean, which has flourished ever since.

The first scientific publication to emerge from the expedition to Rhodes was M.P. Nilsson's *Recherches sur les timbres de Lindos* (1909). Hence, when it was decided to celebrate the centenary of the expedition by a colloquium at the Danish Institute at Athens, the theme "*Transport Amphorae and Trade in the Eastern Mediterranean*" was a natural choice.

It was natural, also, for the Danish National Museum and the Danish Institute at Athens to collaborate on taking this initiative. Blinkenberg was curator at the museum when the Rhodes Expedition was launched, and pottery studies have traditionally been a core research area for the Collection of Classical and Near Eastern Antiquity. The Danish Institute at Athens has also inaugurated a new era of Danish archaeological fieldwork in Greece in collaboration with the Greek archaeological service, notably a survey of Southern Rhodes (1994), and excavations at Chalkis (1995-2001) and Kalydon (from 2002).

On behalf of the two institutions involved, it is a great pleasure for us to thank the public and private foundations, which generously defrayed the expenses of the colloquium in Athens and this publication of the papers delivered at the conference. We extend our warmest thanks also to all individuals, who contributed to the success of the initiative.

Carsten U. Larsen
Director of The National Museum
of Denmark

NATIONALMUSEET
national museum of denmark

Jørgen Mejer
Director of The Danish Institute
at Athens 2001-2003

Introduction

Jonas Eiring & John Lund

The potential of transport amphorae for elucidating ancient economic history is well nigh universally recognized. In the words of D.P.S. Peacock and D.F. Williams: "amphorae ... provide us not with an *index* of the transportation of goods, but with direct witness of the movement of certain foodstuffs which were of considerable economic importance, and which were an essential part of Roman culture. It is hard to conceive any archaeological material better suited to further our understanding of Roman trade".[1] This applies equally to the Eastern Mediterranean before the ascent of the Roman Empire.

The study of transport amphorae developed into a scientific discipline in the nineteenth century.[2] Thus, in a lecture read in 1847, J.L. Stoddart stated "the ancient commerce of the Mediterranean is illustrated in many respects by the diotal manubria [i.e. amphora stamps], and by the knowledge now acquired of their origin".[3] It is no coincidence that he refers specifically to amphora stamps, because in those days, and for much of the twentieth century, the epigraphic aspect played a leading role in amphora research.

For a large part of the twentieth century, many excavators in the Eastern Mediterranean countries disregarded – and often even discarded – un-stamped amphora fragments (complete amphorae were, of course, kept but rarely published). This situation did not begin to change until J.A. Riley and J.-Y. Empereur demonstrated the vital importance of taking un-stamped amphorae into account,[4] a realisation that had dawned earlier in other parts of the world, where amphora stamps occur more rarely.[5] Riley's approach at Benghazi changed the entire face of Roman amphora studies,[6] and the Carthage volumes solidified the dominance of this method.[7] Still, it was rarely followed through completely, and Mark Lawall justifiably characterized amphora studies of the 1990s as being "in need of archaeology".[8]

At the beginning of the twenty-first century, amphora studies might equally be called a discipline in need of history. True, transport amphorae played a not inconsiderable role in M. Rostovtzeff's "*Social and Economic History of the Hellenistic World*", but many historians who have dealt with the Eastern Mediterranean since then have largely ignored this class of evidence or stressed the many methodological uncertainties involved in their study. The picture is gradually changing,[9] but the full potential of transport amphorae as a source for history – economic and otherwise – has hardly yet been fulfilled.

It would be a mistake, though, to conclude that amphora studies have reached an impasse; the case is quite the reverse, as witnessed by the increasing rate of scientific gatherings. The first, which was held in Rome in 1974, was devoted to the "*Méthodes classiques et méthodes formelles dans l'étude des amphores*".[10] It was followed in 1984 and 1986 by colloquia in Athens and Siena devoted to "*Recherches sur les amphores grecques*",[11] and "*Amphores romaines et histoire économique: dix ans de recherche*". The 1990s saw two amphora conferences with geographical themes: the colloquium in Istanbul 1994 on "*Production et commerce des amphores en Mer Noire*",[12] and the conference at Seville in 1998 on Baetic amphorae.[13]

In recent years a growing number of such meetings have been devoted to the Hellenistic and Roman pottery of the Eastern Mediterranean: the workshop on "*Hellenistic and Roman Pottery in the*

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[1] Peacock & Williams 1986, 2.
[2] Cf. Garlan 2000,11-20.
[3] Stoddart 1850, 50; cf. also *idem* 1853.
[4] Riley 1979; Empereur 1982a.
[5] Peacock (ed.) 1977.
[6] Riley 1979.
[7] Hayes & Riley 1976; Riley 1976; Riley 1981b.
[8] Lawall 2001b, 533.
[9] In the case of Rhodes, *cf.* Gabrielsen 1997, 64-71; Rauh 1999; Wiemer 2002, 576-586.
[10] *Méthodes classiques.*
[11] Garlan & Empereur (eds.) 1986; *Amphores romaines* 1989.
[12] Garlan (ed.) 1999.
[13] *Ex Baetica Amphorae* 2000.

Eastern Mediterranean. Advances in Scientific Studies" at Nieborow in Poland in 1993,[14] the colloquium on "*Les céramiques en Anatolie aux époques hellénistique et romaine: production et echanges*" in Istanbul 1996,[15] a colloquium on "*Byzantine and Early Islamic Ceramics in Syria-Jordan*" at Amman in 1994,[16] a Ph.D-seminar for young scholars at Sandbjerg in February 1998 on "*Trade Relations in the Eastern Mediterranean from [the] Late Hellenistic Period to Late Antiquity: the Ceramic Evidence*",[17] the XXI International RCRF Conference at Ephesos and Pergamon in 1998,[18] and the conference in Lyon in 2000 on "*Céramiques hellénistiques et romaines. Productions et diffusion en Méditerranée orientale (Chypre, Égypte et côte syro-palestinienne)*".[19] Also, one should not forget the conferences in Greece on Hellenistic pottery, which have been held since 1986,[20] and the Roman pottery workshops in Leuven, hosted by the ROCT Network, even if the latter have a wider scope.[21] However, before the colloquium at the Danish Institute no scientific gathering had focused on the transport amphorae of the Eastern Mediterranean.

The purpose of the colloquium in Athens was to create a forum for an informal dialogue between the acknowledged experts in the field of amphora studies, the *amphorologues proprement dit,* and those scholars who are equally versed in a wide range of ceramic types, as well as newcomers to either of the two fields. By doing so, we hoped to break down barriers, which might in any event be more imaginary than real, between different scholarly and national traditions and also between specialists in various periods and/or geographical regions. In consideration of the inter-regional circulation of amphorae, it also seemed logical to include some contributions dealing with amphora finds outside the Eastern Mediterranean.

Our goal was twofold: on the one hand to describe the current state of the art, and on the other to attempt to define fruitful venues for future research, on the basis of the contributions in the form of papers and posters, and also during the discussions. To help us chart possible future directions of amphora studies, we invited Mark L. Lawall and Gérald Finkielsztejn to contribute their perspectives to the concluding chapter, and we are most grateful to them for having accepted to join forces with us in this unthankful task.

We want to thank the participants in the colloquium for having heeded our call to contribute papers or posters,[22] for having taken part in the lively discussions, and for having complied with the deadline in sending us their manuscripts. Nicholas K. Rauh was enormously helpful throughout the planning process. Special thanks are also due to "the dynamic duo": John W. Hayes and Paul Reynolds, who consented to serve as a permanent panel of respondents. The latter distributed a handy map of the distribution of regional amphora classes in the Levant, of which he has allowed us to publish an updated version (Fig. 1).[23]

We are no less thankful to the *doyen* of amphora studies, Yvon Garlan, for having supported our efforts from the beginning and for presenting the inaugural paper: "*Comment peut-on être amphorologue?*" at the Ecole française d'Athènes. We are grateful to the director of the EFA,. Dominique Mulliez, for kindly hosting the opening reception and supporting the participation of former members of the School, and to the director of the American School of Classical Studies at Athens, Stephen Tracy, for inviting all participants to a memorable garden party.

A special vote of thanks is due to Jørgen Mejer, former director of the Danish Institute at Athens, whose enthusiastic backing was instrumental in

[14] Meyza & Młynarzyk (eds.) 1995.
[15] Abadie-Reynal (ed.) 2003.
[16] Villeneuve & Watson (eds.) 2001.
[17] Briese & Vaag forthcoming.
[18] *ReiCretActa* 36 2000.
[19] Blondé *et al.* (eds.) 2002.
[20] *Α'ΕλλΚερ; Β'ΕλλΚερ; Γ'ΕλλΚερ; Δ'ΕλλΚερ; Ε'ΕλλΚερ.*
[21] Poblome *et al.* (eds.) forthcoming; publications of the other workshops are forthcoming.
[22] In addition to the contributions published in this volume, a number of papers and posters were presented at the colloquium, which have been – or will be – published elsewhere: Effie Athanassopoulos & Ian Whitbread, The 4th Century BCE Amphora Workshop at Tsoukalia, Alonissos: a Report on Recent Investigations; Victoria Georgopoulou, Vassilis Kiligoglou & Anno Hein, Archaeological and Chemical Charactarization of Coan Amphorae from Kardamaina; Marek Palaczyk, Amphorenstempel aus Eretria, and Sabine Ladstätter, Amphorae in the Destruction Layers of Hanghaus 1 and 2/Ephesus.
[23] To be published in Reynolds forthcoming.

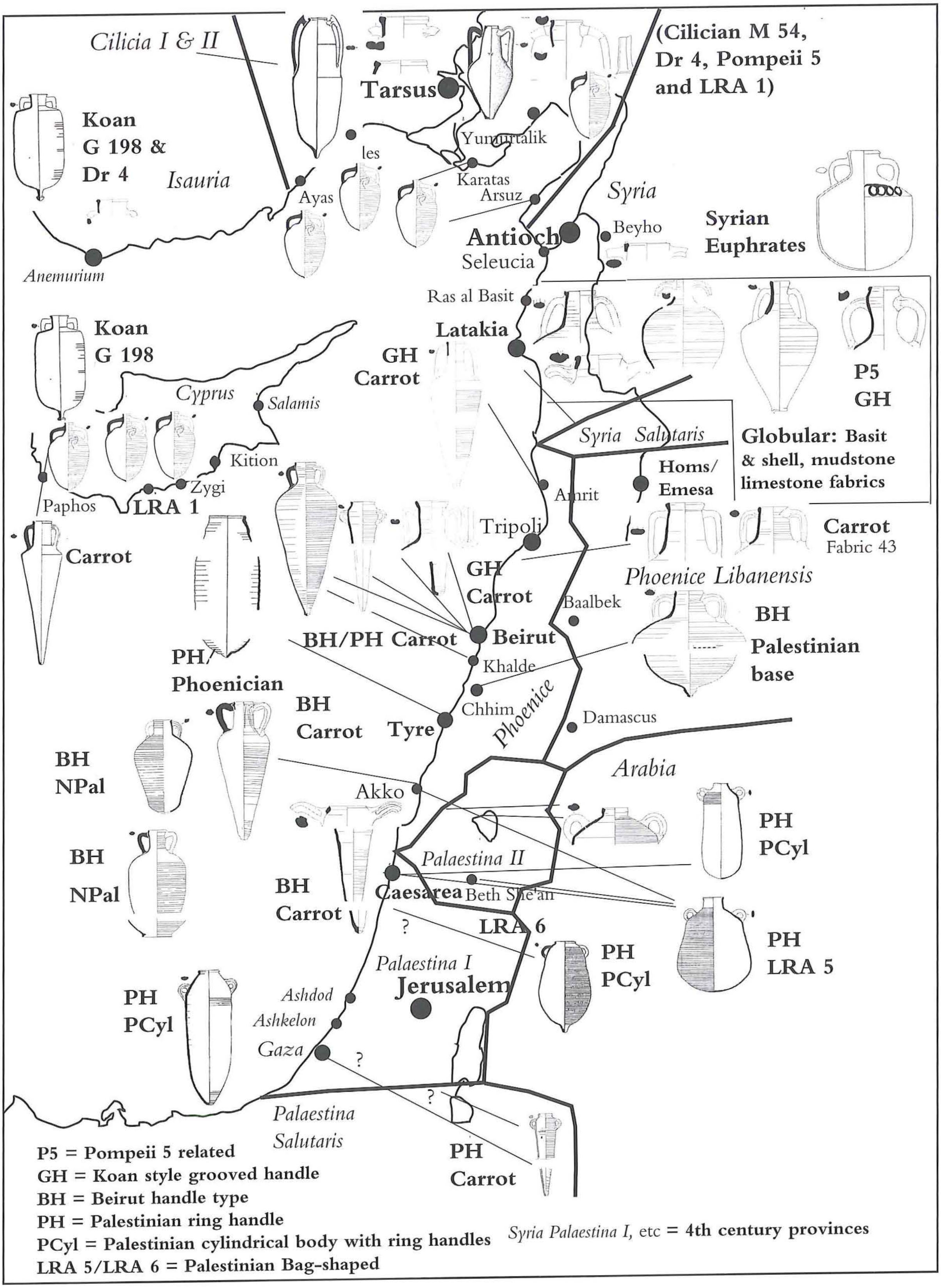

Fig. 1: The distribution of regional amphora classes in the Levant, Roman and Byzantine periods. The provincial boundaries according to the 4th century *Notitia Dignitatum* are also roughly indicated, cf. Reynolds forthcoming.

bringing the colloquium to fruition, and to the National Museum of Denmark for supporting our initiative in numerous ways from day one.

During the editing process Sergey Vnukov and Vladimir Stolba unstintingly helped us with the Cyrillic titles, and William van Andringa kindly proof-read the French articles. Erik Hallager, the present director of the Danish Institute at Athens, assisted with practicalities and advice based on his long publishing experience. He designed the cover of the volume, a composite photograph of the amphorae *in situ* at the Alonnesos wreck, which was put at our disposal by courtesy of the excavator Elpida Hadjidaki. Unless otherwise indicated, all line drawings of complete amphorae in this volume are reproduced in scale 1:10; fragments and other kinds of vessels are rendered at 1:4, and stamps at 1:1.

Last but by no means least we extend our sincere thanks to the Danish Research Council for the Humanities, the Carlsberg Foundation, Generalkonsul Gösta Enbom's Foundation, H.P. Hjerl Hansen Mindefondet for Dansk Palæstinaforskning, Grosserer E. Schou's Fond, The National Museum of Denmark, Politiken Fonden and Dronning Margrethe og Prins Henriks Fond for financial support.

Les amphores méditerranéennes d'importation trouvées à Zeugma: présentation préliminaire[1]

Catherine Abadie-Reynal

Le site de Séleucie-Zeugma se trouve sur la rive droite de l'Euphrate, à une vingtaine de km au nord de l'actuelle frontière entre la Syrie et la Turquie. La ville de Séleucie de l'Euphrate fut fondée au début du IIIe s. av. J.-C. par le roi Séleukos Ier Nikator. Elle se trouve au point de franchissement du fleuve par une grande voie commerciale qui relie le domaine méditerranéen à la Mésopotamie et, plus à l'est aux Satrapies Supérieures (actuelle Iran), puis à l'Extrême-Orient, ou vers le sud, au désert arabique.

Séleucie appartint d'abord à l'empire séleucide, puis, lorsque celui-ci se disloqua, la ville passa sous le contrôle de la Commagène, avant d'être incorporée dans la province romaine de Syrie probablement vers 31 av. J.-C. L'importance grandissante de la route commerciale contribue à la prospérité de la ville qui assez rapidement apparaît dans les textes sous le nom de Séleucie-Zeugma, puis de Zeugma tout court, ce qui signifie en grec « le pont, le lien » en témoignage du pont, probablement de bateaux, qui permettait aux caravanes de franchir le fleuve. C'est également à Zeugma que les marchands s'acquittaient des droits de douane lorsqu'ils entraient en Syrie. De plus, la ville acquit une grande importance stratégique: après la conquête de la Mésopotamie par les parthes, la frontière de l'empire romain se stabilisa sur l'Euphrate et Séleucie-Zeugma devint une ville-frontière où stationna pendant plus d'un siècle une légion. Finalement, au milieu du IIIe s. ap. J.-C., elle eut à faire face aux raids sassanides qui marquèrent un coup d'arrêt à la prospérité de la ville: celle-ci ne se remit jamais vraiment de ces attaques. Pourtant, son existence est attestée, dans les textes, jusqu'au XIe s.[2]

C'est en 1917 que l'historien belge Frantz Cumont identifia le site. Malgré son importance historique évidente et quelques prospections conduites sur le terrain dans les années 70 par Jörg Wagner,[3] il fallut attendre la construction d'un barrage hydroélectrique en aval du site pour que des fouilles de sauvetage fussent entreprises, en 1992, par le musée de Gaziantep auquel s'associa notre mission française, financée par le Ministère des Affaires étrangères, qui a travaillé sur le site entre 1995 et 2000. Finalement, juste avant l'immersion d'une partie du site, pendant l'été 2000, cette organisation fut renforcée par l'adjonction d'une équipe anglaise et les subsides apportés par le Packard Humanities Institute.

Le matériel trouvé dans les fouilles est encore en cours d'étude. Du fait de la configuration du site et de son histoire, il présente certaines particularités qu'il convient de souligner avant de commencer. Les couches archéologiques sont en général, dans les vallons, recouvertes par plusieurs mètres de colluvionnement. De plus, les niveaux d'occupation se succèdent sur près de mille ans: tout cela explique, que, pour des raisons de sécurité et de temps, nous n'ayons guère pu atteindre les niveaux inférieurs qu'en de rares sondages, très limités, qui n'ont pas permis de mettre au jour du matériel abondant. En fait, plus généralement, la plus grande partie des couches fouillées doit être datée entre le milieu du IIIe s. et le VIIIe s.

Seuls, environ les trois-quarts du matériel mis au jour ont, à l'heure actuelle, été classés et fichés. Une part importante du travail de bibliographie reste à faire. Autrement dit, les quelques tendances qui se dessinent à partir de cette base d'étude doivent

[1] Tous les dessins ont été faits par M. Dohet.

[2] Pour les principales sources écrites qui permettent de restituer, à grandes lignes, l'histoire du site, voir Kennedy 1998, 139-162.

[3] Voir Wagner 1976.

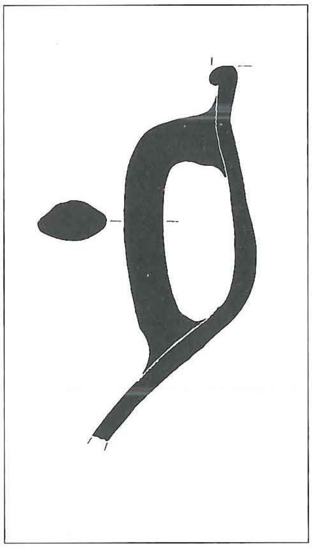

Fig. 1: Amphore fragmentaire à décor peigné.

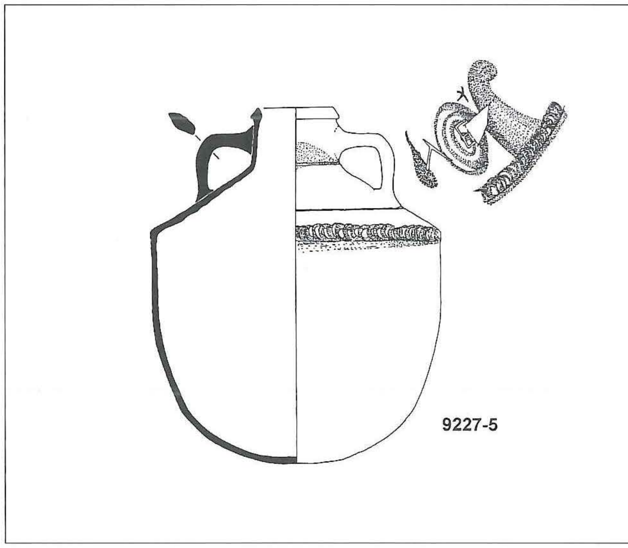

Fig. 2: Amphore à décor peint.

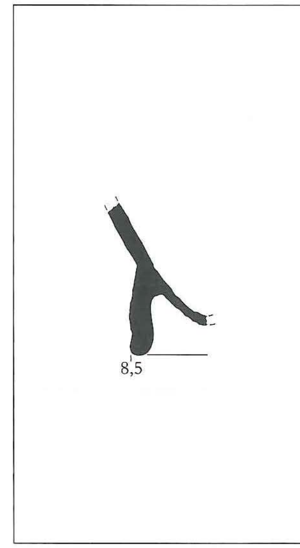

Fig. 3: Un pied d'amphore Kapitän 2.

être considérées avec précaution. Dans un premier temps, il faut souligner que, si le matériel amphorique est abondant à Zeugma, il s'agit le plus souvent d'amphores locales ou régionales à décor peigné (Fig. 1) ou, pour les couches les plus tardives, à décor peint (Fig. 2). Leur étude n'entre pas dans le cadre de cette communication qui envisage uniquement le matériel amphorique d'origine méditerranéenne importé sur ce site.

Ce type de matériel n'est pas très fréquemment représenté à Zeugma: sur 5800 fragments de céramique classés actuellement, seuls 321 fragments appartiennent à des amphores d'importation. Ce matériel amphorique représente donc environ 5,5 % de l'ensemble du matériel céramique. Il semble que Zeugma, sans être à l'écart des échanges méditerranéens de denrées, n'y participe que de façon modérée. En même temps, il convient de confronter ces données avec la céramique fine importée qui est abondamment présente sur le site, en tout cas à partir du V^e s. ap. J.-C. (sigillées phocéenne, chypriote et africaine).

Pour les époques dont les contextes sont fréquents dans les fouilles, cinq grands types d'amphores sont représentés à Zeugma: le type Kapitän 2 (Fig. 3) est attesté par 32 fragments. Il constitue donc environ 10 % du total du matériel amphorique. Ce sont des conteneurs qui sont datés généralement des III^e et IV^e s. ap. J.-C. Un exemplaire (12023.20) (Fig. 3) trouvé à Zeugma provient d'un contexte archéologique intéressant: il a été trouvé dans une couche de destruction datée par une monnaie de Philippe l'Arabe; les autres fragments viennent pour la plupart de couches de démolition très hétérogènes.

Ces amphores paraissent avoir été fabriquées dans plusieurs ateliers qui se trouvent, de façon certaine, dans le domaine égéen.[4] Différentes hypothèses ont été proposées. On a pu supposer que ces amphores étaient originaires de la région orientale de la mer Egée, plus précisément de l'île de Cos[5] ou encore de Samos[6] bien que la pâte, en général peu micacée, paraisse infirmer cette hypothèse. Finalement, on a pu proposer également l'existence d'un atelier produisant ce type d'amphores à Ephèse. [7] Il semblerait qu'elles aient contenu du vin.[8] En Orient, elles sont

[4] Empereur & Picon 1989, 233.
[5] Keay 1984, 137.
[6] Grace 1971, 72, n. 51.
[7] Outschar 1996, 37.
[8] Panella 1986, 627-628.

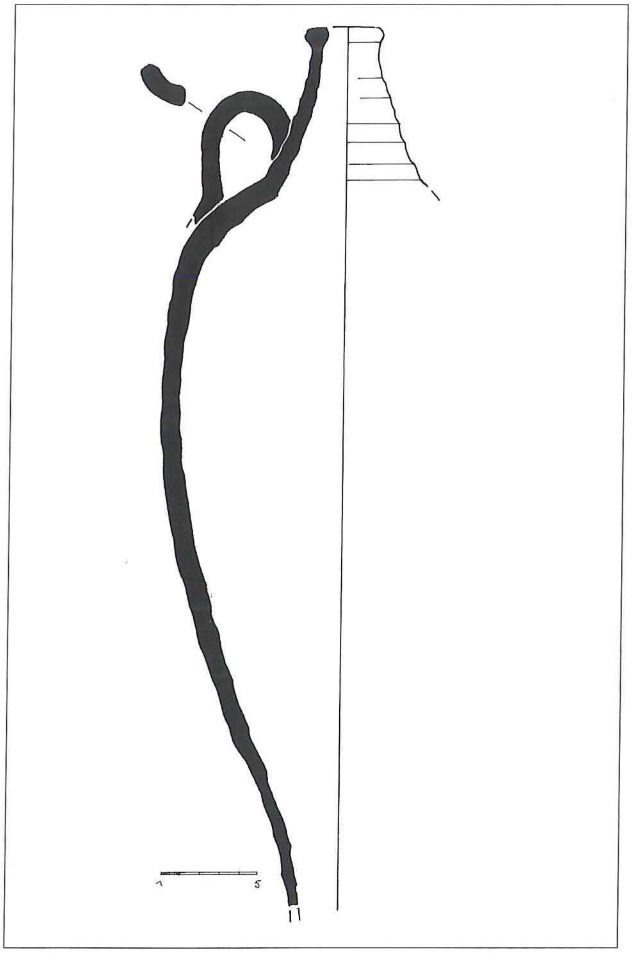

Fig. 4: Une amphore fragmentaire de type Agora F 65/66.

très largement attestées, entre autres à Paphos, Salamine, Tarse, Doura Europos ainsi qu'en Israël.[9]

Les liens de Zeugma avec le bassin égéen sont également attestés par la présence en assez grand nombre de l'amphore Agora d'Athènes F 65/66, à une seule anse, à laquelle succède l'amphore LRA 3, selon la classification de Carthage, à deux anses. A vrai dire, dans le matériel de fouille, la distinction entre les deux types est souvent difficile à faire. Réunis, ils sont représentés par 48 fragments: ils constituent donc près de 15 % de l'ensemble du matériel amphorique d'importation. Parmi les exemplaires les mieux conservés, on peut présenter l'amphore 12512.2 (Fig. 4) qui a été trouvée dans une couche de démolition postérieure à la destruction du milieu du IIIe s. (Fig. 5). Elle appartient encore au type monoansé. Ces amphores, qui font leur apparition au cours du Ier s. ap. J.-C. sont utilisées, pour le type à une seule anse, jusqu'à la fin du IVe s. Ensuite, le type tardif LRA 3 à deux anses pourrait avoir été en usage depuis le IVe s. et jusqu'à la fin du VIe s. La plupart des fragments trouvés à Zeugma proviennent de contextes tardifs (démolitions, fosses d'épierrement). Il est donc possible de supposer qu'ils appartiennent plutôt à des amphores LRA 3. L'origine de ces amphores est attribuée généralement à l'Asie mineure occidentale. Plus précisément, on a pu proposer Aphrodisias, la vallée du Méandre ou encore la région d'Ephèse et la vallée du Caÿstre.[10] Leur contenu n'a pu être précisé jusqu'à présent: il se pourrait qu'elles aient servi au transport de vin,[11] de *garum*,[12] d'onguents[13] ou de miel.[14] On trouve ces amphores, à titre d'exemple, à Tarse,[15] en Syrie-Palestine,[16] à Paphos,[17] et aux Kellia.[18] Elles semblent également avoir été populaires à Sumaqa, établissement dans les montagnes du Carmel,[19] ce qui montre que ce type de matériel a aussi été importé sur des sites ruraux de l'intérieur.

Avec cette dernière amphore, prennent fin les types égéens présents de façon significative à Zeugma. D'autres amphores tardives, originaires, elles, du Moyen-Orient ont pu être repérées. Tout d'abord, il s'agit de l'amphore LRA 1 en suivant le classement de Carthage dont on peut situer la production sur la côte de Cilicie[20] et à Chypre.[21] On a trouvé jusqu'à présent 105 fragments de ce type d'amphores, ce qui est très important: cela représente

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9 Panella 1986, 627, n. 36, fig. 25; on peut ajouter, entre autres, Hayes 1991, 207, fig. 71, n° 8, 209, fig. 72, n° 21; Levine & Netzer 1986, 162 et 171, fig. 1, n° 7.

10 Slane 1994, 148, n. 20; Outschar 1996, 38; Lemaître 1997, 317; Gassner 1997, 183, 186, 187; Sodini 2000, 184-185, n. 44.

11 Panella 1986, 622, n. 29; Reynolds 1995, 71.

12 Bonifay & Piéri 1995, 111-112; Bonifay *et al.* 1998, 111; Sodini 2000, 185.

13 Keay 1984, 287.

14 Martin 1999, 357.

15 Jones 1950, 203 et 274, n° 797 et fig. 162.

16 Sodini & Villeneuve 1992, 199, fig. 3.1-2.

17 Hayes 1991, 92-93 et fig. 39, n° 6-27.

18 Egloff 1977, 116, type 181.

19 Kingsley 2001, 270-273, table 1b.

20 Empereur & Picon 1989, 236 et fig. 18.

21 Rautman *et al.* 1999, 379, 382-387; Demesticha & Michaelides 2000, 289-296.

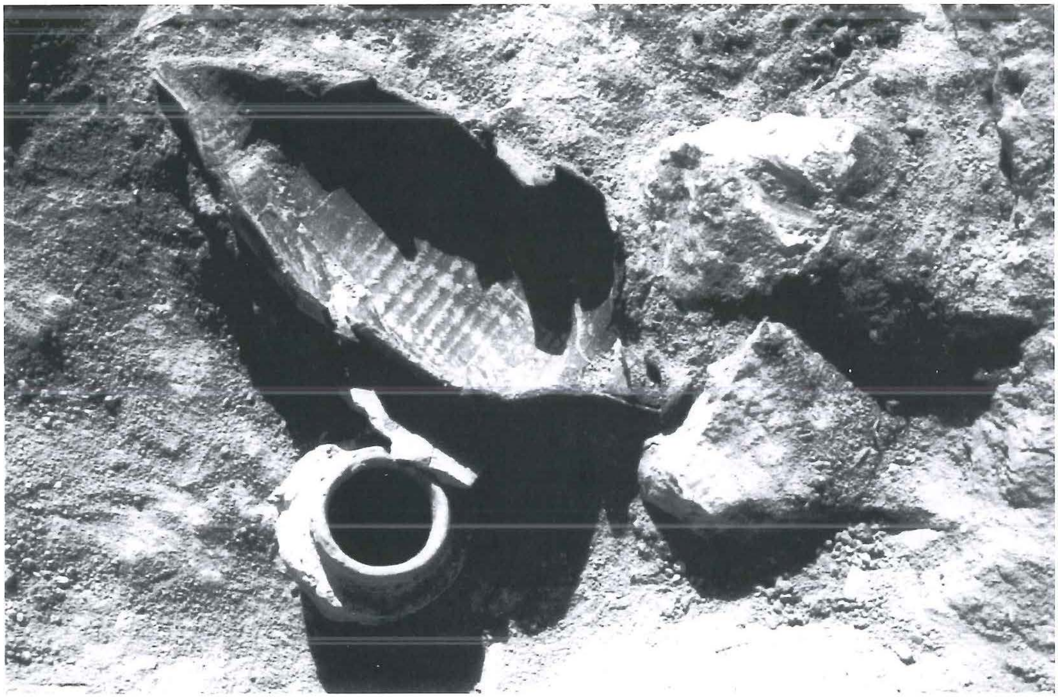

Fig. 5: La même amphore *in situ* (cliché C. Abadie-Reynal).

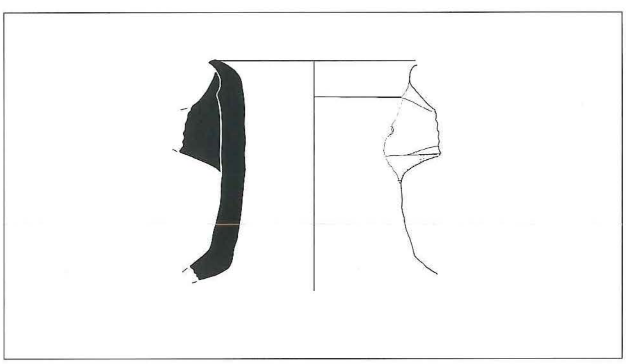

Fig. 6: Une amphore fragmentaire LRA 1 (type Kellia 164).

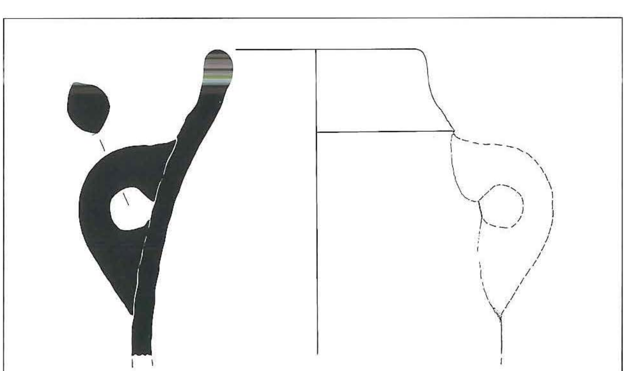

Fig. 7: Une amphore fragmentaire LRA 4.

environ 1/3 de l'ensemble du matériel amphorique d'importation. En fait, ces amphores présentent de nombreuses variantes de pâtes et de formes sans que l'on puisse les associer à des ateliers précis.[22] Il semble que les exemplaires à pâte rose soient, à Zeugma, les plus nombreux puisqu'ils représentent environ les 2/3 des fragments appartenant à cette forme, bien que l'on trouve également des fragments d'amphores LRA 1 à pâte beige crème. D'après le diamètre de l'embouchure, on peut également, en suivant Egloff, distinguer deux variantes: l'une, caractérisée par un col étroit (type Kellia 169)[23] serait plus ancienne puisqu'elle serait datée entre la deuxième moitié du IV^{e} s. et le début du VI^{e} s. Elle n'est que peu représentée à Zeugma. Sur ce site, la plupart des exemplaires dont nous avons l'embouchure (Fig. 6) appartiennent au type plus récent, dit type Kellia 164,[24] dont l'embouchure présente un diamètre compris entre 10 et 12,5 cm. Il serait daté

[22] Bonifay & Piéri 1995, 109; Portale & Romeo 2001, 328.
[23] Egloff 1977, 113.
[24] *Ibid.*, 112.

entre le début du VI[e] s. et la fin du VII[e] s. Autrement dit, ces amphores paraissent être surtout des importations tardives sur le site de Zeugma. Elles sont fréquemment attestées, y compris sur les sites moyen-orientaux de l'intérieur,[25] comme Déhès,[26] le Nord du Sinaï[27] et Dibsi Faraj,[28] à titre d'exemples. Elles auraient contenu du vin,[29] mais peut-être aussi de l'huile.[30]

Les amphores palestiniennes occupent également une certaine place à Zeugma. Le groupe le mieux représenté est celui des amphores LRA 4 dans le classement de Carthage, encore dites amphores de Gaza (Fig. 7), bien que d'autres centres de production aient probablement existé.[31] Nous avons, pour l'instant, comptabilisé 19 fragments appartenant à ce type, qui constitue donc environ 6 % du matériel amphorique. Ces amphores, sans doute majoritairement vinaires, bien qu'elles aient également pu contenir de l'huile,[32] du poisson[33] ou même du blé,[34] sont fréquentes en Syrie du Nord et en Palestine;[35] elles sont présentes à Jérash,[36] à Tell Keisan,[37] Tell Fara,[38] à Césarée[39] et à Pella.[40] Cela dit, elles n'ont généralement guère été repérées à l'intérieur des terres. Certes, la carte de répartition présentée par Riley est maintenant ancienne;[41] pourtant, à la lumière des publications plus récentes, elle n'a pas, de ce point de vue, été modifiée, comme le montre S.A. Kingsley.[42] Les trouvailles de Zeugma viendraient affirmer vigoureusement la présence de ces conteneurs à l'intérieur des terres. Ces amphores de Gaza auraient été exportées en nombre à partir du V[e] s. et jusqu'à la fin du VI[e].[43] Les contextes de trouvailles de Zeugma semblent montrer qu'elles appartiennent généralement à des niveaux plutôt tardifs.

Elles y côtoient d'autres amphores palestiniennes, qui sont pourtant en bien moins grand nombre. Il s'agit des amphores LRA 5 dans la classification de Carthage. A Zeugma, elles ne sont, pour l'instant, représentées que par 9 fragments et ne constituent donc que moins de 3 % de l'ensemble du matériel amphorique. Elles sont généralement datées des V[e] et VI[e] s. et apparaissent, à Zeugma, dans des contextes tardifs. Ces amphores, avant tout vinaires,[44] paraissent avoir eu, également, une distribution quasi exclusivement maritime, ce qui fait tout l'intérêt des exemplaires trouvés à Zeugma.[45] On les trouve à Césarée,[46] à Jérusalem,[47] à Tell Fara,[48] à Tell Keisan,[49] à Pella[50] et à Jérash.[51] Leur nombre, plus restreint que celui des amphores de Gaza, s'explique par le fait qu'elles ont toujours eu une distribution plus limitée.

A côté de ces grands types, une partie des amphores apparaît comme de provenances diverses. Elles représentent pour l'instant 77 fragments, soit environ 24 % du matériel amphorique d'importation. Toutes, à ce stade de l'étude, n'ont pas été identifiées. Cependant, quelques trouvailles surprenantes doivent être relevées. Ainsi, parmi les amphores plus anciennes, plusieurs fragments (trois au minimum) semblent appartenir à des amphores Dressel 7/11 originaires de Bétique[52] (Fig. 8) et ayant sans doute transporté du *garum*[53] et d'autres salaisons.[54] Ces amphores espagnoles qui ont surtout été diffusées au I[er] s. ap. J.-C. ont déjà été repérées, de façon

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[25] Pour une carte de répartition du type, Pacetti 1995, fig. 1.

[26] Bavant & Orssaud 2001, 37 et 43, fig. 5, n° 24.

[27] Arthur & Oren 1998, 201-202, fig. 6.5.

[28] Harper 1980, 327-48, n° 69-71.

[29] Rothschild & Boros 1981, 86; Bonifay & Piéri 1995, 109; Portale & Romero 2001, 328.

[30] Bonifay & Piéri 1995, 109; Sodini 2000, 185.

[31] Bonifay & Piéri 1995, 112; Arthur 1998, 161-162; Arthur & Oren 1998, 201.

[32] Rothschild & Boros 1981, 86; Whitehouse *et al.* 1985, 203; Bonifay & Piéri 1995, 112, n. 92.

[33] Bonnifay & Villedieu *et al.* 1989, 29.

[34] Mayerson 1992, 79.

[35] Sodini & Villeneuve 1992, 197, fig. 2.3.

[36] En dernier lieu, Uscatescu 2001, 62.

[37] Landgraf 1980, 82.

[38] Tubb 1986, 52, fig. 1.

[39] Blakely 1988, 35-37.

[40] Watson 1992, 239-240, fig. 10, 76, 77.

[41] Riley 1979, 221, fig. 46.

[42] Kingsley 2001, 54, fig. 3.4.

[43] Reynolds 1995, 71.

[44] Bonifay & Villedieu *et al.* 1989, 29.

[45] *Ibid.*

[46] Blakely 1988, 38, fig. 6.5.

[47] Magness 1993, forme 4, 160-161, 223-226.

[48] Tubb 1986, 56, fig. 3, 1-2, fig. 5, 1-2, 7-11.

[49] Landgraf 1980, fig. 21-22, 23a.

[50] Watson 1992, 238-239, fig. 9, 64-72.

[51] Uscatescu 2001, 62 et fig. 3.3.

[52] Carandini & Panella (eds.) 1973, 507, 509.

[53] Beltràn Lloris 1970, 415, 417; Carandini & Panella (eds.) 1973, 509.

[54] Desbat & Martin-Kilcher 1986, 343.

Fig. 8: Une embouchure d'amphore Dressel 7/11.

Fig. 9: Une pointe d'amphore africaine Keay XXV.

épisodique, en Orient: ainsi à Paphos[55] ou encore à Jérusalem. Pourtant, de nouveau, leur distribution est avant tout côtière et, à notre connaissance, elles apparaissent pour la première fois si loin à l'intérieur des terres, en tout cas dans cette partie de l'Empire romain. De même provenance, signalons également un fragment d'amphore Keay XIXB[56] qui est diffusée principalement au IV^e^ et au début du V^e^ s.

Il nous a également été possible de reconnaître, parmi les importations occidentales, provenant de l'épaisse couche de destruction qui marque la fin de l'occupation d'une partie des maisons de Zeugma, vers le milieu du III^e^ s., quelques exemplaires d'amphores vinaires[57] Dressel 2/4 originaires de Campanie (résiduelles?) ainsi que des amphores du type Benghazi MRA 13,[58] dites amphores de Forlimpopoli qui ne sont guère attestées, en Orient, qu'en Grèce et en Crète[59] ainsi que sur la côte occidentale de l'Anatolie[60] et à Beyrouth.[61] Ces amphores, originaires probablement pour la plupart de l'Italie du Nord-est, et plus précisément peut-être de la Romagne, sont particulièrement fréquentes aux II^e^ et III^e^ s. Ce serait des amphores vinaires.[62]

On trouve, parmi ces amphores diverses, un certain nombre de conteneurs originaires d'Afrique. Nous pouvons, par exemple, relever, entre autres, une pointe d'amphore (Fig. 9) qui correspondrait en fait au type Keay XXV,[63] un conteneur originaire de Tunisie, daté du IV^e^ et de la première moitié du V^e^ s., qui aurait servi au transport soit d'huile,[64] soit de vin,[65] soit peut-être aussi de sauce de poissons.[66] Les informations sur la diffusion de ces amphores en Orient sont très limitées: signalons pourtant leur présence, entre autres, en Crète,[67] ainsi qu'en Palestine, à Sumaqa.[68]

Enfin, nous avons pu repérer un certain nombre d'amphores de Sinope: un fond d'amphore-carotte à pâte rouge,[69] mais aussi un nombre plus important d'amphores à pâte claire datées du VI^e^ s.[70] Ces vases qui auraient contenu vraisemblablement de l'huile d'olive ou des olives[71] ont déjà été repérés en Orient, à Séleucie, Adana, Tarse, Ras el Bassit, Tripoli du Liban[72] ou encore à Beyrouth.[73]

En conclusion, je dirais que cette étude n'en est qu'à son début. Cependant, d'ores et déjà, un point paraît se dégager de cette rapide présentation: alors que Zeugma se trouve à quelques 150 km de la côte méditerranéenne, son matériel amphorique d'importation est influencé par le commerce méditerranéen, que ce soit au III^e^ s. ap. J.-C. ou à l'époque romaine

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55 Hayes 1991, 88.
56 Keay 1984, 156-168.
57 Tchernia 1986a, 45.
58 Riley 1979, 197, fig. 85, 256.
59 Hayes 1983, 145, type 7 et fig. 21; Gavrilaki & Nikoloudaki 1988, 41-42, type c, fig. 6, pl. 8a.
60 Pulak 1989, 4 et 9, fig. 6 (gauche).
61 Je remercie P. Reynolds de m'avoir communiqué ces informations.
62 Tchernia 1986a, 256-260.
63 Keay 1984, 184-212.
64 Keay 1984, 193.
65 Bonifay & Piéri 1995, 95.
66 Keay 1984, 193; Reynolds 1995, 109.
67 Portale & Romeo 2001, 313-315, pl. LVII a-e, g.
68 Kingsley 2001, 58.
69 Kassab Tezgör & Tatlıcan 1998a, 429; Kassab Tezgör 1999, 120.
70 Kassab Tezgör & Tatlıcan 1998b, 447; Kassab Tezgör 1999, 122.
71 Kassab Tezgör 1998b, 440.
72 Empereur & Picon 1989, 232-233 considérées, probablement à tort, comme produites à Séleucie de Piérie.
73 Je remercie P. Reynolds d'avoir bien voulu me le signaler.

tardive. Bien sûr, Zeugma se trouve sur une importante route commerciale qui relie le domaine méditerranéen à la Mésopotamie et, au-delà, au Golfe Persique et à l'Extrême-Orient. Cette pénétration du matériel méditerranéen s'est faite, sans aucun doute par cette voie; d'ailleurs, on trouve également, à Zeugma, de nombreuses sigillées tardives chypriotes ainsi que des sigillées claires africaines. Mais, au-delà de cette évidence, il est important de noter que ce matériel de Zeugma nous apporte la preuve que la détermination des aires de distribution, pour la céramique méditerranéenne, est encore complètement tributaire du petit nombre de sites fouillés ainsi que de leur situation, en général, près des côtes. Les amphores ont circulé par voie terrestre, en nombre relativement significatif. L'avenir et la poursuite des recherches nous diront si cette constatation s'explique par la nécessité avant tout, de satisfaire aux exigences de confort et de qualité de vie des habitants très urbains de Zeugma, ou bien si ce matériel amphorique d'importation ne faisait, pour une bonne part, que transiter par Zeugma, pour être ensuite diffusé dans l'ensemble de la région et, plus loin, vers l'est.

Stamped Amphora Handles from Bet-She'an: Evidence for the Urban Development of the City in the Hellenistic Period[1]

Donald T. Ariel

Most archaeological chronologies are built upon disruptions or changes in import patterns of archaeological artifacts for entire sites. But it is also nice when one can use finds in order to establish the urban development within a site. In the Hellenistic period, amphora finds can be useful, assuming we can understand the demographic development of the site. Nevertheless, we know of no previous case in which a contribution to the chronological understanding of the urban development of a city-site has been convincingly achieved by using amphora material.[2]

The Rhodian class of amphoras perhaps lends itself best to such an approach, as very close datings for the eponym names appearing on them have been accepted, and, particularly recently, have been refined. The periods in which the stamping of Rhodian amphoras grows are also periods in which urbanization changed to a great extent, at least in the regions of the world most influenced by Hellenization. The so-called "Hippodamean" urban plan with orthogonal street sytems and blocks of insulae became common in the Hellenistic period. The "Hippodamean" planners often had to contend with difficult local topography. In order to create Hellenistic cities, of which the inhabitants could be proud (with a theater, marketplace, temple, etc.), existing cities were relocated *down* from ancient Tels onto large adjoining plateaus or into valleys.

The trend toward relocation of cities has been theorized for the early post-Classical and Hellenistic worlds. Rarely, though, have archaeologists been able to pinpoint such transitions. The new refinement of dating for certain classes of amphora stamps may now contribute to the examination of this phenomenon.

Bet-She'an (Arabic Beisan; classical Nysa-Scythopolis) is a strategic urban center situated at the confluence of the Jezreel and Jordan rivers. It stood on the most important east-west trade route connecting Egypt with easterly points and ultimately with Mesopotamia. Reference to the city in Hellenistic, Roman and Byzantine times – when it was known as Scythopolis or Nysa – are too numerous to mention.

With rich soil and abundant water, Bet-She'an and its surrounding communities were a bread basket for the surrounding area. The city is possibly mentioned for the first time in the nineteenth-century BC Egyptian Execration Texts, and definitely appears in the most important Egyptian topographical lists of the Bronze and Iron Ages. According to the Bible, Bet-She'an is one of the cities from which the Israelites did not rout the Canaanites (Joshua 17:11; Judges 1:27), and the city onto whose walls the Philistines hung the bodies of King Saul and his sons (1 Samuel 31:10). Renamed Nysa or Scythopolis, Bet-She'an was the main city

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[1] Acknowledgements: Our thanks to Amihai Mazar for permission to study this material from the Hebrew University excavations at Tel el Husn, to Gabi Mazor, Rachel Bar-Nathan and Gérald Finkielsztejn for putting the data regarding Tel Istabbah at my disposal (the catalogue sections of Finkielsztejn forthcoming a and b), to Niculae Conovici for his helpful comments on some of the stamps from Tel el Husn, and to Shannon C. White, Fowler/Van Santvoord Keeper, Near Eastern Collections, University of Pennsylvania Museum of Archaeology and Anthropology, for her assistance in examining the stamped amphora material from the University of Pennsylvania excavations at Tel el Husn.

[2] But see Ariel 1990, 21-25; *id.* 2001, 268-69. My arguments there about the difference between the different neighborhoods in Jerusalem were forced, since they were based on too small a sample.

of the Hellenistic/Roman Decapolis, and the only city of the Decapolis west of the Jordan River.

The site of Bronze- and Iron-Age Bet-She'an (Tel el Husn) is located on a large ten-acre mound, rising some eighty meters above its perennial water supply: the Jalûd (Harod) River, which flows north of it. Directly north of the river the much lower Tel Istabbah is located.

The first excavations in Bet-She'an (in ten seasons between 1921 and 1933 by the University of Pennsylvania, and directed by Clarence Fisher, Alan Rowe and Gerald Fitzgerald) were one of the most important archaeological enterprises during the British Mandate in Palestine in the years following World War I. However, the expedition team almost completely removed the top five strata of the Tel in order to focus on the Bronze- and Iron-Age remains. The Hellenistic stratum described in the original reports turned out to be ephemeral, based mostly upon wrongly dated remains.[3] But some evidence for the Hellenistic period was indisputable: a hoard of twenty tetradrachms of Ptolemy II, dating to *c.* 249 BC, was found in a pot at the southern edge of the summit.[4] One intact Rhodian amphora and 29 other isolated stamped handles were published.

In 1989, large-scale excavations commenced, conducted by the Institute of Archaeology of the Hebrew University of Jerusalem and the Israel Antiquities Authority. The focus was on the Roman town, located in the valley south of Husn. There, the excavation of a theater, amphitheater, forum, temple and baths was completed. Significantly, no remains prior to the Roman period were found. Excavation on Tel el Husn was also renewed, as well as the first systematic excavations at Tel Istabbah. The latter site has proven to be the primary location of the Hellenistic city of Scythopolis, about which more below.

There was little hope of finding Hellenistic remains in the renewed excavations on Husn, owing to the aggressive excavations there earlier in the century. Consequently, it was fortuitous that a residential quarter (Area P) of the Hellenistic period on the ancient Tel was located and excavated.[5] Two stratigraphical phases of this quarter were revealed.

Apart from the excavation of the monastery by the first expedition, and a small salvage excavation in 1951, little was known about Tel Istabbah. Until 1977, when a small salvage excavation of two squares was conducted at Tel Istabbah, the remains of the Hellenistic *polis* were presumed to be found under the Roman town south of Tel el Husn. The excavator, V. Tzaferis, came upon a floor with restorable Rhodian (and one Knidian) amphoras, but apparently made no attempt to restore them.[6] Finkielsztejn has identified roughly thirteen associations from among the 39 stamped handles found there.[7] But there was then no understanding that the Hellenistic finds would be restricted to Tel Istabbah.

Large-scale excavations commenced at Tel Istabbah across the river, after no remains of the Hellenistic *polis* were found underneath the Roman town excavated in the early 1990s. A well-developed, if short-lived, city with a "Hippodamean" urban plan, was revealed (Area W). A high level of domestic building had been aspired to, as could be deduced from the tri-color plastered walls and some remains of stucco. The ceramic finds included imported Hellenistic *terra sigillata* and a great deal of imported amphoras. A quarter of fragmentary public buildings was excavated (Area Z). The entire site had undergone a conflagration, bringing the occupation at the Tel to an end. This destruction may be associated with the conquest of the city by the Hasmonean ruler, John Hyrcanus I, in *c.* 108 BC.[8]

But what of the dating of the Hellenistic remains on the ancient Tel el Husn, and those of Tel

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[3] Thiersch 1932; Applebaum 1989, 5.

[4] Fitzgerald 1931, 51-56, Nos. 1-20. Most are of the coins of the hoard date to Ptolemy II (285-246 BC). The latest identified coin of the hoard is also of Ptolemy II, dating to his thirty-seventh regnal year, or 249 BC (Fitzgerald 1931, 56, no. 19). Applebaum interpreted the existence of the hoard to indicate that in fact no settlement existed on Tel el Husn at the time; Applebaum 1989,5.

[5] Mazar & Sumaka'i Fink forthcoming.

[6] Landau & Tzaferis 1979.

[7] Finkielsztejn 1993, 337-342.

[8] Mazor & Bar-Nathan 1998; Finkielsztejn 1998a.

Istabbah, on separate sides of the Jalûd River? Did the town outgrow the confines of the upper Tel, and consequently expand to the hills across the river? Or was the ancient Tel abandoned in preference for the more spacious Tel Istabbah? Were any urban functions left on Tel el Husn? In this paper we would like to illustrate the use of the amphora evidence (corroborated by the numismatic finds) for the date of the relocation of this important city from its ancient location to a new locale as part of its Hellenistic redefinition. At Bet-She'an this took place at the end of the third century.

In spite of its importance for a long uninterrupted period, in the Persian period, ancient Bet-She'an was unoccupied.[9] When was the town re-occupied? Based upon its Greek name, Scythopolis, Abel suggested in 1952 that the settlement was established as a military colony of Scythian troops.[10] There is now no consensus regarding the historical value of the fact that the Hellenistic city is named after the Scythians. Most scholars have proposed that Scythopolis, the Hellenistic reincarnation of Bet-She'an, was founded by the Ptolemies.[11] Gideon Fuks has suggested that Scythopolis was founded around 260.[12] He related its foundation, together with that of at least three other cities, to Ptolemy II's preparations for the Second Syrian War. The well-known Zenon archive provides clear evidence of Ptolemy II's activity in the region around 259 BC. The next known event in the history of Scythopolis occurs some time after 240, when Josephus Flavius reports an incident in which the people of Scythopolis refused to pay their taxes, whereas they previously had been paying them.[13] A third reference to Scythopolis relates that, during the conquest of the region by the Seleucids in 218, the city voluntarily capitulated to Antiochus III.[14]

The foundation date *c.* 260 for the *polis* of Scythopolis need not have meant much. The establishment of a polis by a king was often little more than a ceremony. But by *c.* 240 there was a polis, and all the more so by 218. Where did the first citizens of Scythopolis live? The answer is clear: on Tel el Husn. The domestic structures found in Area P show that the site was not merely a Ptolemaic military installation. The scatter of the roughly fifty[15] stamped handles throughout the Tel, predominantly of the third quarter of the third century, does not point to a single military outpost but rather to a significant settlement on different parts of the Tel.[16]

Taken as a whole, there is a significantly high percentage of stamps from the third quarter of the third century BC among the amphoras at Tel el Husn. In the recent and more systematic excavations of Area P, all but one of the stamps fall in the third and the very beginning of the second centuries BC. The only exception was found in a Byzantine context. It may be that many of the other later second-century BC stamps from Fitzgerald's excavations did not derive from occupation levels on the Tel.

Three hundred and ten stamped Rhodian am-

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[9] James 1966, 154, but see Zori 1962, 197; Tsori 1977 & Stern 1982, 4.

[10] Abel 1952, 57.

[11] But see Avi-Yonah 1962, 54.

[12] Fuks 1983, 44-45, 47-51.

[13] Josephus, *Ant.* xii,169; Fuks 1983, 49.

[14] Schürer 1979, 144.

[15] Thirty-one were published by Fitzgerald (Fitzgerald 1930,16; 1931, 44-46). Their rubbings were sent to Virginia Grace in Athens. It is not clear whether Grace provided Fitzgerald with identifications or whether Fitzgerald used them in his report, as his publication of the amphora stamps was quite poor. There were apparently thirty-three stamped handles from the excavations, as Grace noted that number on her table summarizing the relative quantities of such finds in the region, in her 1962 Nessana report (Grace 1962,106, note). Thirty-two handles were examined by myself two months ago in the University of Pennsylvania Museum of Art and Archaeology. This does not include the one pair of handles found still connected (Fitzgerald 1931,44). It does include six handles apparently not noted in Fitzgerald's reports, so the number of stamped handles from the earlier excavations appears to have been higher than the reported amount, somewhere between thirty-four and thirty-eight.
The second group of handles, deriving from the 1992-1993 excavation seasons of the Institute of Archaeology of the Hebrew University of Jerusalem on Tel el Husn, will be published by this author. Eighteen stamped amphora handles were retrieved.

[16] All of the 1992-1993 season's handles were found in Area P. Fitzgerald's handles were not found near there. Fifteen (approximately half of the total) were found on the highest terrace. This area, denoted by Fitzgerald as the summit, is where the (now Roman) Temple was situated. It is also where the coin hoard was found. The other stamped handles were found on the lower terraces, a number in Houses I and III, far from where Area P is located.

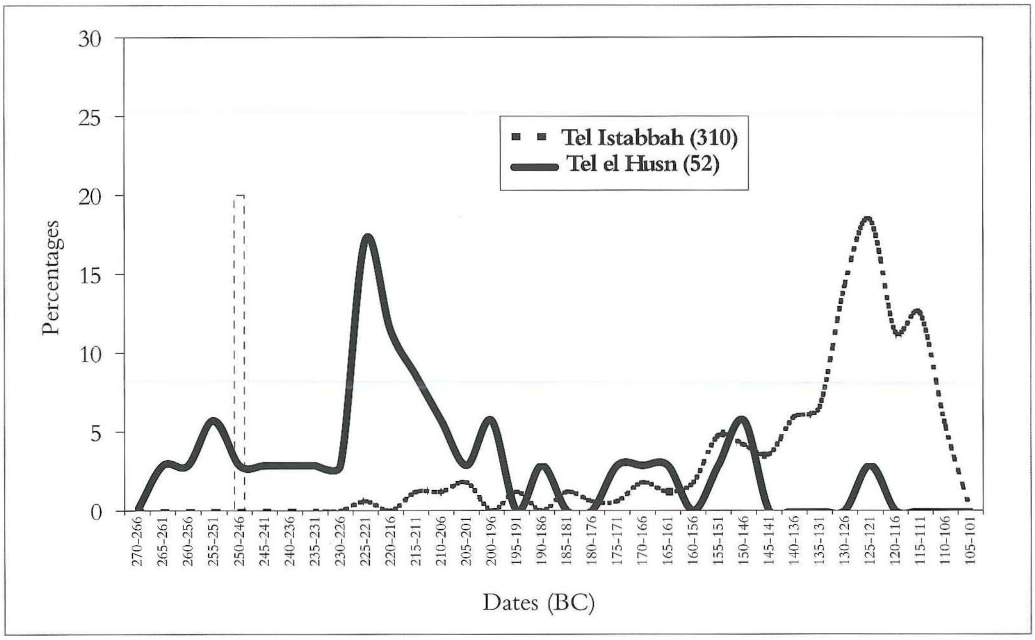

Fig. 1 Distribution of well-dated amphora stamps from Tel el Husn and Tel Istabbah in Bet She'an

phora handles derive from Tel Istabbah.[17] The excavations revealed many complete amphoras on floors of destruction layers, dating to the conquest of the city by John Hyrcanus I in 108 BC, based upon the appearance of one handle bearing the Rhodian eponym officiating in the following year.[18] The number of handles from Tel Istabbah is more than six times the number of handles from excavations at Tel el Husn. However, as Istabbah yielded many complete or restorable amphoras, the ratio between the two Tels is actually much smaller.

The information on the well-dated handles from both Tels was plotted in five year groups according to Finkielsztejn's lower chronology, and layed out in the same way Finkielsztejn has done in his most recent work,[19] except that instead of quantities, the percentages of the finds from the two Tels are compared (Fig. 1). I have added (in a thin dotted line) the 249 BC hoard of twenty tetradrachms found on the Tel el Husn, in order to corroborate the conclusion, which may be drawn from the amphora material: the Hellenistic settlements at Tel el Husn and Tel Istabbah, at opposite sides of the Jalûd river, barely overlap.

Based on this graph, then, the chronological pegs noted above for the history of Scythopolis – between 260 and 218 BC – provide a historical context for the main period of occupational activity in Tel el Husn, as seen in the coin and amphora finds. According to Fuks the polis was founded at approximately 260 BC. The earliest stamps at Tel el Husn may be two circular fabricant stamps with the same name. Both read Κλέων in retrograde, and on both the letters are placed around a dot. On one (Fig.

[17] The earliest excavation there, by Tzori in 1951, uncovered a large number of stamped amphora handles (Ariel 1988, 31, note 2). I located a list of approximately 75 stamped amphoras handles in February 1987, and published one upper part of a Rhodian amphora from that excavation in 1988 (Ariel 1988, 31-32). In all Finkielsztejn has been able to associate 182 stamped amphora handles excavated or collected by Tzori from Tel Istabbah (Finkielsztejn forthcoming a). 174 are Rhodian. The 1977 excavations there uncovered 38 more amphora stamps (Landau & Tzaferis 1979; 36 Rhodian). Finkielsztejn forthcoming a also reexamined this group. Finally the three seasons of excavations by the IAA directed by G. Mazor and R. Bar-Nathan produced and additional 104 stamped handles, 100 are Rhodian. Based on the dates of the amphoras, the assemblages date to the conquest of the city by John Hyrcanus I (108 BC). The most recent excavations of Mazor and Bar-Nathan revealed more complete amphoras on floors of destruction layers dating to the same conquest (Mazor & Bar-Nathan 1998, 33-34).

[18] Ἀγοράναξ: Finkielsztejn 1998a, 40-41; Finkielsztejn forthcoming a: Rh 140.

[19] Finkielsztejn 2001a; 2001b.

Fig. 2 Stamp of Κλέων (Tel el Husn, excavations of the Institute of Archaeology of the Hebrew University of Jerusalem, Reg. no. 286120).

Fig. 3 Stamp of Κράτων (Tel el Husn, excavations of the Institute of Archaeology of the Hebrew University of Jerusalem, Reg. no. 186188/2).

2), the whole is enclosed in a circle framed by rays. The circle is similar to a stamp of Δώρος 1st, who employed a «dot in rayed frame» device. An eponym Πολυκλῆς is also known on a circular stamp with dot in rayed frame device.[20] An amphora of Δώρος 1st, produced in the year of Τίμαρχος, exists in the Museum of Rhodes.[21] Both Πολυκλῆς and Τίμαρχος are dated *c.* 262 to *c.* 247 BC. Assuming Κλέων and Δώρος 1st were contemporaries or near contemporaries, Κλέων should be dated to the middle of Period I. A drawing of a stamp possibly naming Δώρος 1st was published as Knidian in 1871.[22] A related illegible stamp, considered unclassified, was recently published from 'Akko.[23] Its device is described as a "frame of hollow squares" with a dot. The second stamp reading Κλέων is also retrograde around a dot, but is not enclosed in a rayed framed circle. An identical stamp to this one exists in Virginia Grace's Amphora Archive in Athens. A similar stamp (but without retrograde inscription or dot) has been published from Samos,[24] where it is given a general date in third century BC.

Another fabricant stamp, probably dating to this early period, is also rare. The stamp reads Κράτων in one row (Fig. 3). In the second row is a monogram probably reading ΑΓ. The stamp has affinities to stamps of the fabricant Σωτᾶς 1st, who also produced stamps with his name in one row and a monogram in the second row.[25] The monogram may refer to the month 'Αγριάνιος, as many monograms are now thought to have meant.[26] On the basis of three eponym connections, the date of the period of activity of Σωτᾶς 1st began *c.* 264 BC. We suggest that the fabricant Κράτων worked around the same time. A similarly dated fabricant stamp names 'Ονάσιμος 1st.[27] This fabricant worked in the term of Πολυκλῆς,[28] who officiated *c.* 262 to *c.* 247 BC.

If there is some doubt about the exact dating of the above stamped handles, there should be more certainty about the dating of two circular stamps of the fabricant 'Ἄξιος. On one stamp the word 'Αξίου appears horizontally above a rose as central device. All are encircled by a border of dots. The second stamp has the rose in a double frame with the word 'Αξίου appearing around it, with letters facing outwards.[29] These types are described by Finkielsztejn.[30] Based upon his analysis of all of the different types employed by this fabricant, Finkielsztejn proposed locating both types early in his sequence, with a date of *c.* 246-45 BC.[31]

Another stamp reads ['Επὶ] Σθε/[νέλ]α. The same type, with the reading as restored here, is found in Nilsson,[32] and Porro.[33] Σθενέλας appears on button stamps, indicating he officiated during the period

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[20] Albeit unpublished; in the Amphora Archive in Athens.
[21] Information from N. Conovici.
[22] Dumont 1871, pl. XIII:25.
[23] Finkielsztejn 2000a, 149, Cun1.
[24] Isler 1978, 137, no. 465.
[25] Finkielsztejn 2001a, 77.
[26] Finkielsztejn 2001a, 182.
[27] Fitzgerald 1931, 45, no. 12 [corrected reading].
[28] Finkielsztejn 1990, no. 312.
[29] University of Pennsylvania Museum of Archaeology and Anthropology no. 29-103-199, apparently unpublished by Fitzgerald.
[30] Finkielsztejn 2001a, 64-65, types A-IIrg1 and A-IIr.
[31] Finkielsztejn 2001a, 92.
[32] Nilsson 1909, 479, no. 373.
[33] Porro 1916, 120, no. 172.

of activity of the workshop of 'Ιεροτέλης,[34] but in Period I, since he appears without months. 'Ἄξιος (discussed above) also made amphoras with the same eponym. The subtype of the fabricant 'Ἄξιος, in which this eponym appears (later than the subtype above), points to a term for Σθενέλας between *c.* 244 and *c.* 236 BC.

Finally we have another circular stamp with button device reading Τιμοκλῆς. The reading of the name on the poorly preserved stamp has been kindly provided by M. Savvatianou-Pétropoulakou. A similar type of stamp of Τιμοκλῆς 1st was published from Salamis[35] and Bizone, Cavarna.[36] The eponym is dated between *c.* 244 and *c.* 236 BC.

All eight of these stamped handles can be said to be contemporary with the hoarding of the twenty silver tetradrachms after *c.* 249 BC. It would have been good if Fuks had dated the event described in Josephus, when the Πρῶτοι of Scythopolis refused to pay their taxes, to soon after 249 BC, the date of the coin hoard. Then the deposition of the hoard may have been associated with the demand for the tax. But, alas, Fuks dated the event after *c.* 240 BC.

For the Bet She'an period between 240 and 218 BC, the following stamped handles have been found at Tel el Husn: eponym Παυσανίας (apparently the 1st) and fabricants Δαμόνικος, Μίκυθος 2nd,[37] Ξενότιμος[38] and Σωτηρίδας. Two handles with the name of the fabricant Κρέων were also found.[39] A stylistic association with the eponym 'Αγλώκριτος may extend Κρέων's period of activity into Period IIb (*c.* 219 to *c.* 210 BC).[40] Another fabricant in this period may be 'Απολλοδώρος.[41]

Had we not accepted Finkielsztejn's lower chronology, the parameters for the early history of Nysa-Scythopolis (260 and 218 BC) would roughly constitute the beginning and end dates for the high period of amphora imports I am describing. With the adoption of Finkielsztejn's lower chronology,[42] the dates of some of the stamped amphora handles from Tel el Husn fall after 218 BC, when the entire region was overrun, and the people of Nysa-Scythopolis capitulated to Antiochus III without a battle. However, the dates of the stamped amphora handles roughly remain within the parameters of the Ptolemaic reign in the city, until *c.* 200 BC. We may of course technically argue that the amphoras arrived in the city after that date. However, in our view, the relative quantities compellingly establish that it was the long-lasting Seleucid conquest of the region after the battle of Paneion in 200 BC, which defined the end of the main Hellenistic occupation on Tel el Husn.

The following stamped handles, later than 218 BC, have been found on Tel el Husn: eponyms 'Αγλώκριτος,[43] Εὐφράνωρ,[44] Παυσανίας,[45] Σιμύλινος,[46] Σωχάρης[47] and Χαρμοκλῆς,[48] and fabricants 'Αγοράναξ,[49] Δίσκος 1st,[50] 'Ελλανίκος,[51] 'Επίγονος 1st, Μόσχος[52] and Πασιών.[53]

An apt summary of the amphora finds on Tel el Husn is Fig. 4, in which the best-preserved profiles are presented from the more recent excavations. The curved profiles of the handles indicate a date in the second half of the third century BC for the assemblage.

In his, as yet unpublished, report on the amphoras from Tel Istabbah Finkielsztejn believed a "significant settlement" also existed there already in the last quarter of the third century.[54] To be sure, the earliest eponym from Tel Istabbah dates between *c.* 224 and 220 BC.[55] The earliest complete amphora

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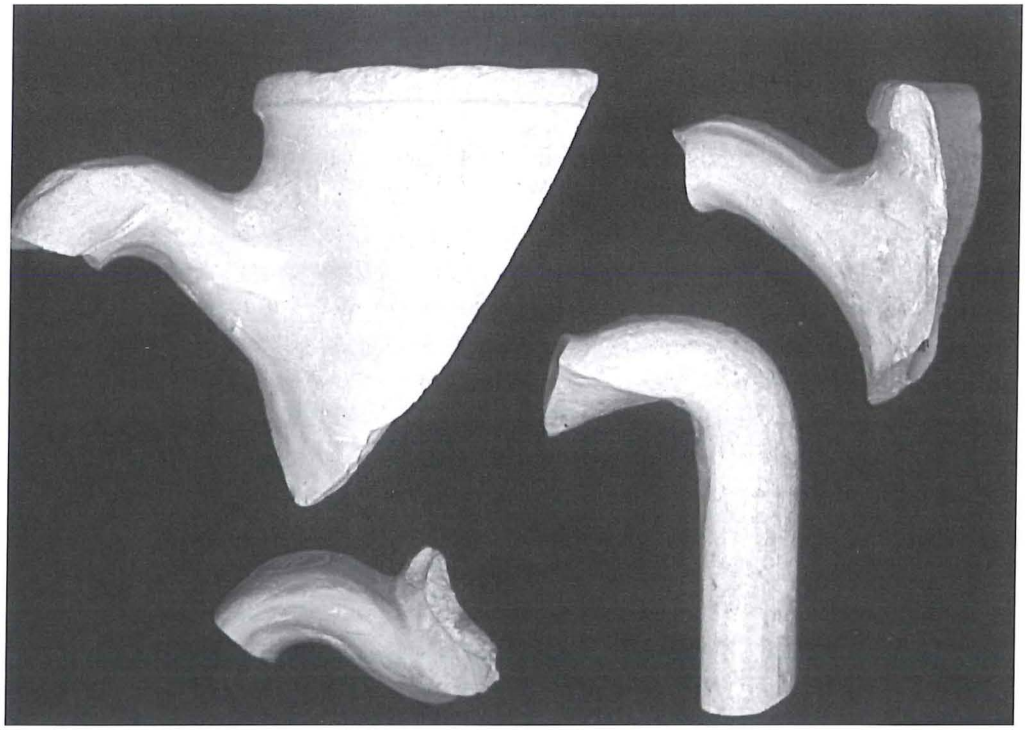
[34] Grace 1963, 328, n. 20.
[35] Calvet 1978, 227, no. 43.
[36] Лазаров 1975, no. 14; reference from N. Conovici.
[37] Twice, Fitzgerald 1931, 45, nos. 10a–b.
[38] Fitzgerald 1931, 45, no number [corrected reading].
[39] One is Fitzgerald 1931, 45, no. 9.
[40] Finkielsztejn 1990, under no. 238.
[41] Fitzgerald 1931, 45, no. 3.
[42] Finkielsztejn 2001a.
[43] Twice; one is Fitzgerald 1931, 45, no. 1.
[44] Without 'επί; Гетов 1995, no. 110 [reference from N. Conovici] publishes a similar type.
[45] Apparently the 2nd, twice, one is Fitzgerald 1931, 45, no. 4.
[46] Fitzgerald 1931, 45, no. 6 [corrected reading].
[47] Twice, Fitzgerald 1931, 45, Nos. 8 [corrected reading] and 9.
[48] Fitzgerald 1931, 45, no. 5.
[49] Fitzgerald 1931, 45, no. 2.
[50] Fitzgerald 1931, 45, no. 6.
[51] Fitzgerald 1931, 45, no. 7.
[52] Twice, one is Fitzgerald 1931, 45, no. 13 [corrected reading].
[53] University of Pennsylvania Museum of Archaeology and Anthropology no. 29-103-182, apparently unpublished by Fitzgerald, unless it is Fitzgerald 1930, 16, no. iii.
[54] Finkielsztejn forthcoming a and b.
[55] 'Αγήσιππος; Finkielsztejn forthcoming a: Rh 3.

Fig. 4 Profiles of four stamped amphora handles (Tel el Husn, excavations of the Institute of Archaeology of the Hebrew University of Jerusalem): upper left: Εὐφράνωρ (Reg. no. 186051); upper right: 'Ἄξιος (Reg. no. 986222); lower left: Κράτων (Reg. no. 186188/2); lower right: Κλέων (Reg. no. 286120).



from Tel Istabbah is dated by 'Αγέστρατος 2nd to *c.* 161 BC.[56] In all likelihood this amphora was still being used (or should we say reused) until the destruction of Hellenistic Nysa-Scythopolis in 108 BC. The excavators of Tel Istabbah do not believe any of their fine or common wares can date earlier than *c.* 170 BC. Just as the amphora dating *c.* 161 BC continued in use for over half a century, we may expect a few amphoras antedating the second quarter of the second century BC would have arrived with the first occupants at Tel Istabbah. This may explain the small numbers of late third century stamped handles found on Tel Istabbah. Consequently, the Tel was occupied from the sometime after the beginning of the second quarter of the second century and until 108 BC.

Today we may suggest that Nysa-Scythopolis was displaced from Tel el Husn to Tel Istabbah across the river. The Hellenistic occupation on Tel el Husn was significant, and definitely earlier than that found in nearby Tel Istabbah.

This impression is reinforced by the numismatic evidence for Tel el Husn and its vicinity. In addition to the hoard of twenty Ptolemaic tetradrachms found on the Tel, five isolated third-century BC Ptolemaic coins have to date been published from the vicinity of Bet-She'an. Three derive from Tel el Husn,[57] and two from excavations just below it.[58] In comparison, a larger number and wider scatter of second-century BC Seleucid coins have been found and noted in the vicinity.[59] Only a few were found on Tel el Husn (all from the current excavations, and all from Area P). Judging from the coins, therefore, it appears likely that the third-century BC settlement at Bet-She'an was restricted to the vicinity of the Tel el Husn. The distribution of second-century BC coins was significantly wider, with a few coins also found at Tel el Husn.

[56] Finkielsztejn forthcoming b: Rh 4.

[57] Amitai-Preiss forthcoming, no. 13; Fitzgerald 1931, 56-57, nos. 21-22.

[58] Yannai 1990, 37.

[59] Amitai-Preiss forthcoming; Berman 1992, 46; Berman 1995, 41; Fitzgerald 1931, 56-60; Fitzgerald 1939, 11-12; Yannai 1990, 37; Zori 1967, 167.

A rich stratum from the Early Bronze Age (third millennium BC) has been found below the Hellenistic remains at Tel Istabbah, so the Hellenistic period was not the only time Bet-She'an was located north of the Jalûd River. The phenomenon of an ancient Tel being unoccupied between the Early Bronze Age and the Hellenistic period, some seventeen centuries, repeats itself in Tel Beth Yerah (Khirbet Kerak; ancient Philoteria) at the southern end of Lake Tiberias. This site was, according to Fuks, one of the three other *poleis* founded by Ptolemy II around 260 BC, together with Scythopolis. This adds credence to the idea that such foundations were not merely renaming of extant towns.

By relocating the Hellenistic city from Tel el Husn to Tel Istabbah, rather than to the valley south of Tel el Husn, there was a preservation of some level of natural defensibility, and no loss in agricultural land. Nevertheless, it was apparently expected that the architectural needs of the Hellenistic city would be better served in the new location. Judging from the small amount of second-century BC amphora material found on Tel el Husn, the function of the ancient Tel was apparently redefined. It may have been projected to become an "acropolis" for the town of Scythopolis located on Tel Istabbah across the river. It is possible that the Temple was in fact located there, although there is no longer any archaeological evidence for it, except the fact that the Roman temple was located on the ancient Tel.

Conclusion

A careful look at the distribution of the amphora finds and the numismatic evidence suggests that most of the activity on Tel el Husn was restricted to the third century, and especially the second half of that century. The evidence reinforces the University of Pennyslvania expedition's supposition of significant activity on the Tel, especifically in the third century BC.[60] It lends support to Fuks' historical analysis regarding the beginning of the Hellenistic occupation at Bet-She'an. The amphoras and other ceramic evidence from nearby Tel Istabbah points to an occupation in the beginning of the second quarter of the second century. The chronological conclusions for both sites cast light on the movement of ancient cities down from Tels to more spacious locales in the course of the Hellenistic period, and are exemplary of the potential of spatial analysis of stamped amphora finds for understanding the urban development of Hellenistic sites.

60 Rowe 1930, 44-45.

Le commerce antique en Phénicie d'après les amphores locales et importées de Beyrouth

Catherine Aubert

Introduction

Les fouilles de sauvetage menées dans le centre ville de Beyrouth, entre 1993 et 1997, ont permis de dégager les premiers vestiges de la ville hellénistique dans les sites Bey002 (Fig. 1) et Bey026 (Fig. 2). Il s'agit d'un habitat, dont l'architecture en grand appareil et la peinture murale intérieure témoignent d'une forte hellénisation.[1] Concernant les pratiques alimentaires, on observe que les coutumes culinaires locales empruntent plusieurs éléments de vaisselle grecs hellénistiques.[2] Par ailleurs, la consommation de vins à la fois locaux et importés est attestée par la découverte, dans les mêmes contextes stratigraphiques, d'amphores produites en Phénicie et de conteneurs originaires de Grèce, de Grèce de l'Est et peut-être de Chypre.

Le matériel amphorique recueilli provient, en majeure partie, de la fouille stratigraphique traditionnelle. Cependant, certains spécimens ont été dégagés au cours du démontage du site effectué dans le cadre du projet de conservation des vestiges.[3] Plusieurs anses rhodiennes timbrées ont été trouvées au cours de ce démontage et fournissent d'importants éléments de datation pour l'implantation de ce quartier d'habitat.

Les types d'amphores

L'abondance du matériel amphorique nous informe sur la pratique courante de consommer du vin chez une population dont le degré d'hellénisation est plus ou moins important suivant les maisons. Par ailleurs, il livre de nombreux témoignages sur l'histoire de la ville et sur son potentiel économique et commercial.

Fig. 1 Site Bey002, Place des Martyrs (photo aérienne de l'auteur).

Fig. 2 Site Bey026 au premier plan et Bey002 au fond, Place des Martyrs (photo aérienne de l'auteur).

Les amphores grecques et de tradition grecque

On a recensé plusieurs types égéens dont certains exemplaires sont cnidiens (Fig. 3).[4] Une amphore, dont seule la base est conservée, pourrait être originaire de Chios (Fig. 4).[5] D'autres productions de Grèce de l'Est sont identifiables à la présence de mica dans la pâte, mais s'agissant de parois, il est exclu d'identifier les types représentés. Cependant, les différentes couleurs et compositions de pâte montrent

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[1] Aubert & Eristov 2001.

[2] Aubert 2000.

[3] Aubert & Neury 1999.

[4] Pour comparaison, cf. Empereur & Hesnard 1987, 60 et pl. 3. 15.

[5] Pour comparaison, cf. Blondé *et al.* 1991, 231, fig. 8. 54.

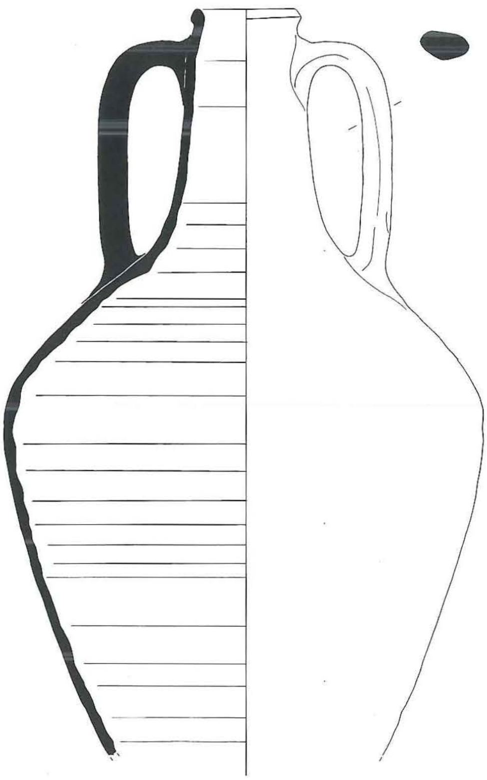


Fig. 3 Bey002.427.32, amphore de Cnide, dessin Rachelle Antonios.

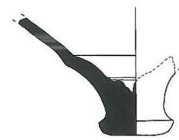


Fig. 4 Bey002.507.33, amphore de Chios, dessin Rachelle Antonios.

que ces fragments proviennent de régions ou du moins d'ateliers différents. Parmi eux, on signalera un exemplaire à pâte beige – vert et engobe beige clair portant un décor de deux filets parallèles rouge pâle, de quelques millimètres de largeur chacun, peints dans le sens de la hauteur de l'amphore.. Une hypothèse d'identification peut être faite grâce à un col d'amphore muni d'une partie des anses conservé à Délos.[6] Ce fragment d'amphore présente les mêmes filets verticaux rouges, disposés irrégulièrement sur le col. Une marque de peinture plus large apparaît sous la lèvre ainsi que sur une des anses. Le type du conteneur est vraisemblablement rhodien bien que la pâte soit différente de l'argile rhodienne. Il s'agit donc probablement d'une imitation.

Les amphores rhodiennes

Parmi le matériel recensé, on retiendra la prédominance des conteneurs rhodiens, dont on conserve essentiellement les anses, quelques fonds et de nombreux fragments de parois, mais aucun exemplaire complet.

La chronologie des importations rhodiennes, basée sur des critères typologiques et sur des travaux récents,[7] s'étale d'environ 250 à 100 av. J.-C. Elle est généralement confirmée par les autres éléments de datation, comme les monnaies ou la céramique fine importée.

Pour le matériel privé de contexte, on peut parfois proposer une datation assez précise, comme dans le cas d'une anse timbrée 'Αριστοκλῆς (catalogue 76), et portant le timbre secondaire O (omicron).[8] Il pourrait en effet être question d' 'Αριστοκλῆς II (171 – 140), malgré l'absence de contexte, en raison de la présence de ce timbre secondaire.[9]

Les timbres rhodiens

L'étude épigraphique n'étant pas l'objet de cette publication, on se limitera ici à quelques remarques, effectuées à partir du lot d'anses timbrées comptant actuellement 110 exemplaires.[10] Sur l'ensemble de la collection, on dénombre parmi les estampilles lisibles, 34 timbres portant la mention d'un éponyme (Tableau I) et 43 celui d'un fabricant (Tableau II), auxquels s'ajoute la catégorie des estampilles incomplètes mais permettant de distinguer éponymes et fabricants, qui regroupe 8 éponymes et 3 fabricants. Dix-neuf timbres sont très mutilés et 3 sont tout à fait inutilisables dans le cadre d'une étude quantitative par catégorie.

[6] Musée de Délos, inv. TD196 – B20853.

[7] Finkielsztejn 2001a.

[8] Deux autres timbres secondaires ont été trouvés isolés (Bey002.507.48, Bey026.409.18).

[9] Finkielsztejn 2001a, 113: fréquence du timbrage secondaire introduite par son père Δαμοκράτης I.

[10] L'étude épigraphique sera présentée dans un autre article, en cours de préparation.

Tableau I

Les éponymes

Éponyme	Incertain	Attribut	Datation	Période	Cat.	Inventaire
'Αγέμαχος		rose	181	III c	95	Bey026.442.32
)αγορα		rose			82	Bey026.1.916
'Αγοραναξ			108	V c	80	Bey026.1.914
'Αινησίδαμος		Hélios	179 245	III c I c	14 36	Bey002.133.67 Bey002.454.72
'Αρίστακος			136	V a	31	Bey002.445.13
'Αριστείδας			226	I c	38	Bey002.454.80
'Αριστόμαχος			après 100	VI	110	Bey026.510.7
'Αριστόπολις		Hélios	119	V c	6	Bey002.98.187
'Αρχιδάμος				III c	59	Bey002.613.3
	)εμος				39	Bey002.454.98
Θεαίδητος		Hélios?	171/169	III d	99	Bey026.442.36
Θέστωρ			192	III a	33 52	Bey002.454.61 Bey002.542.3
ι)έρε(					35	Bey002.454.66
)ιέρεως					43	Bey002.483.13
ι)έρεως		étoile			106	Bey026.496.27
Καλλικράτης		rose	176 ou 129	III c (ou V b)	12	Bey002.133.64
Καλλικρατίδας		rose	225-175	II a – III c	10 28	Bey002.116.3 Bey002.425.TII.AII/III.S
Κλεώνιμος		 étoile	259 ou plutôt 182	I b ou plutôt III b	35 91	Bey002.454.66 Bey026.442.24
Κρατίδας		Hélios	187	III b	68	Bey002.805.1
Νικασαγόρας		Hélios	172/170 ou 132	III d (ou V b)	30	Bey002.443.2
Ξενοφάνης			189	III b	1	Bey002.HS.208
Ξενόφαντος			210 ou 151	II b ou IV b	75	Bey026.1.254
Ξενοφῶν		rose	164/162	III e	64 102	Bey002.715.1 Bey026.442.103
Παυσανίας		rose	152	IV b	72	Bey026.1.211
)ρωνοθ					88	Bey026.409.13
Σώδαμος		Hélios		V?	87	Bey026.409.12
Τιμασαγόρας		Hélios	184	III b	84	Bey026.317.1
Τιμόδικος			145	V a	20	Bey002.395.14
Τιμόθεος		Hélios	128 (133-126)	V b	23	Bey002.408.8
Τιμούροδος		rose	160-153	IV a	19	Bey002.386.117

Tableau II

Les fabricants

Fabricant	Incertain	Attribut	Datation	Période	Cat	Inventaire
’Αγαθοκλῆς			d. II ou 175-163	III a ou III d-e	29 58 103	Bey002.429.2 Bey002.592.4 Bey026.442.120
’Αθανόδοτος		corne d’abondance	175-165	III d-e	96	Bey026.442.33
’Αντίμαχος		caducée	170-147	III d – IV b	92	Bey026.442.27
’Αριστίων			198-173	III a – III d	47 74	Bey002.507.17 Bey026.1.213
’Αριστοκλῆς + contre marque O		rose	(250-225) ou 171-140	(I b – II a) ou III d – V a	76	Bey026.1.554
’Αριστοκράτης		4 astérisques	192-184	III a- III b	24 97 107	Bey002.409.33 Bey026.442.34 Bey026.502.1
Δαμοκράτης		rose	198-133 ou 125-100	III a – III d ou V b – VI	5 51	Bey002.97.3 Bey002.517.61
Διόδοτος			170-146 ou 125-100	III d – IV b ou V b – VI	8	Bey002.98.189
Διοκλῆς			199-175	II c – III c	15	Bey002.148.E
Διος			194-164	III a – III e	37	Bey002.454.78
’Επίγονος			210-209	fin II b – début II c	46	Bey002.497.17
	)εα( )νικου)εδ( )νικου	rose			71	Bey002.1305.1
Εύκλειτος		caducée	133-126	V b	70	Bey002.1158
Εὐφράνωρ		Hélios	133-122	V a – V b	78	Bey026.1.912
Ευ(ρ)οςΕυ(ι)ος		caducée			7	Bey002.98.188
’Ιμας		caducée			57	Bey002.586.3
Καλλιους		4 astérisques	165 au moins	III e au moins	100	Bey026.442.45
Κρέων			225-200	II a – II c	27	Bey002.425.TI.AI.6.S
Μαρσύας			183-151	III b – IV b	11 16 40 60 94 98 108	Bey002.133.61 Bey002.150.TI.AIII.3.E Bey002.454.138 Bey002.619.94 Bey026.442.31 Bey026.442.35 Bey026.506.1
Νικασίων		rose	169-150	III d – IV b	105	Bey026.496.26
’Ολυμπος		torche enflammée	179-177	III c	79 104	Bey026.1.913 Bey026.464.7
Πολιξενος			163-150	III e – IV b	109	Bey026.510.6
Σεφυρος		rose	199-150?	II c – IV b	4	Bey002.94.1

Fabricant	Incertain	Attribut	Datation	Période	Cat	Inventaire
Σωκράτης		torche enflammée	225-200 ou 204-172	II a – II c ou II c – III d	32 44 53 61 69	Bey002.454.19 Bey002.483.41 Bey002.542.4 Bey002.641.1 Bey002.824.1
Φιλαίνιος			189-169	III b – III d	93	Bey026.442.30
Φιλοκράτης		caducée	184 au moins ou fin II – d. I	III b au moins, ou VI	81	Bey026.1.915

On considère par conséquent que le nombre de timbres d'éponymes et de fabricants s'équilibre à peu de chose près: en cumulant les timbres lisibles et identifiables on atteint le nombre de 42 éponymes pour 46 fabricants. Restent 22 timbres à répartir dans les deux catégories. Cela signifie qu'il n'y a pas eu de perturbation sérieuse sur le site, nonobstant l'aspect souvent mutilé de certains spécimens.

Malgré l'absence de paires d'anses solidaires lisibles, plusieurs groupes d'anses ont été découverts dans une même unité stratigraphique, ce qui permet de proposer une restitution des paires.[11] Douze unités stratigraphiques sont concernées. Parmi elles, l'US Bey026.442 rassemble 15 timbres, dont trois sont illisibles. Les timbres lisibles sont les suivants:

Tableau III

US Bey026.442

Texte et attribut	Catégorie	Datation	Période	Catalogue	Numéro d'inventaire
ʼΑγέμαχος̣ + rose	éponyme	181	III c	95	Bey026.442.32
Θεαίδητος+ Hélios?	éponyme	171/169	III d	99	Bey026.442.36
Κλεώνιμος+ étoile	éponyme	259 ou plutôt 182	I b ou III b	91	Bey026.442.24
Ξενοφῶν	éponyme	164/162	III e	102	Bey026.442.103
ʼΑγαθοκλης	fabricant	début II ou 175-163	III a ou III d-e	103	Bey026.442.120
ʼΑθανόδοτος + corne d'abondance	fabricant	175-165	III d-e	96	Bey026.442.33
ʼΑντίμαχος + caducée	fabricant	170-147	III d – IV b	92	Bey026.442.27
ʼΑριστοκράτης + 4 astérisques	fabricant	192-184	III a- III b	97	Bey026.442.34
Καλλιους + 4 astérisques	fabricant(e)	165 au moins	III e au moins	100	Bey026.442.45
Μαρσύας	fabricants	183-151	III b – IV b	94 98	Bey026.442.31 Bey026.442.35
Φιλαίνιος	fabricant	189-169	III b – III d	93	Bey026.442.30

[11] Il s'agit des US 98, 133, 454, 483, 507 (cat. 47-50), 542 (cat. 52-54), 797 (cat. 66-67) du site Bey002 et les US 324 (cat. 85-86), 409 (cat. 87-88) 442 (cat. 89-103), 496 (cat. 105-106), 510 (cat. 109-110) du site Bey026.

Ils se partagent en 8 fabricants et 4 éponymes, auxquels on peut raisonnablement ajouter les 3 exemplaires illisibles, ce qui donnerait un total de 7 éponymes pour 8 fabricants. L'homogénéité de la chronologie de ce matériel permet de renforcer cette hypothèse, observée également dans les autres ensembles d'anses mentionnés ci-dessus.

Sur les 41 timbres de fabricants lisibles, on dénombre 25 noms différents. Deux d'entre eux se répètent sur plusieurs amphores (Tableau II).

Σωκράτης apparaît sur cinq anses. Il est suivi de la torche enflammée, à l'exception d'un timbre estampillé sur un vase de petites dimensions, n'appartenant pas à une amphore.[12] Ce timbre, largement attesté à Rhodes, connaît une importante diffusion dans les sociétés hellénisées.[13]

De même, on soulignera la fréquence du timbre du fabricant Μαρσύας, qui apparaît 7 fois sur l'ensemble de la collection rassemblée à ce jour. On constate que le cadre du timbre présente dans tous les exemplaires des angles arrondis, que les caractères sont souvent peu soignés, de taille différente, et plus ou moins espacés entre eux et que le mois est toujours mentionné. Mais deux timbres se distinguent de ce schéma général, l'un étant inscrit en caractères rétrogrades,[14] l'autre portant le nom du mois en première ligne, au contraire des autres et de la pratique générale.[15]

Les 33 timbres portant la mention du mois livrent un total de neuf mois, regroupant la totalité des mois d'été:

Artamitios: catalogue no. 23, 34, 41, 48, 80.
Agrianios: catalogue no. 1, 15, 28.
Hiakinthios: catalogue no. 31, 51, 98.
Panamos: catalogue no. 30, 75, 106.
Karneios: catalogue no. 19, 94.
Dalios: catalogue no. 9, 12, 20, 39, 49, 102.

Seulement trois mois d'hiver sont mentionnés:

Petageitnios: catalogue no. 82, 110
Sminthios: catalogue no. 16, 40, 59, 72, 88
Thesmophorios: catalogue no. 11, 60, 95, 108.

Partant de ces observations, on constate que la production des amphores domine durant les mois de Dalios, puis à parts égales de Sminthios et d'Artamitios. Ces périodes correspondent, pour la première à celle des vendanges (septembre, octobre), et les autres au printemps (mars, avril, mai), époque au cours de laquelle les potiers devaient préparer le stock de conteneurs supposés nécessaires à la récolte de l'année en cours. Une étude plus détaillée des périodes d'activité des potiers en Grèce et au Levant apporterait certainement des informations importantes sur l'organisation des exploitations agricoles d'époque hellénistique.

Les attributs sont présents sur un total de 44 timbres. On dénombre 7 attributs rhodiens différents. Ils apparaissent sur 19 timbres d'éponymes (Tableau I) et 25 de fabricants (Tableau II) et se repartissent de la façon suivante:

Timbres à la rose:
- 8 éponymes (cat. 10, 12, 19, 28, 64, 72, 82, 95)
- 6 fabricants (cat. 4, 5, 51, 71, 76, 105)

Timbres au buste d'Hélios:
- 9 éponymes (cat. 6, 14, 23, 30, 36, 68, 84, 87, 99)
- 1 fabricant (cat. 78)

Timbres à l'étoile:
- 2 éponymes (cat. 91, 106)

Timbre à la corne d'abondance:
- 1 fabricant (cat. 96)

Timbres au caducée:
- 5 fabricants (cat. 7, 57, 70, 81, 92)

Timbres aux 4 astérisques:
- 4 fabricants (cat. 24, 97, 100, 107)

Timbres à la torche enflammée:
- 7 fabricants (cat. 32, 44, 53, 61, 69, 79, 104).

Seul un timbre ne porterait qu'un attribut, le trident, sans inscription, si l'on en juge par la position de celui-ci au centre de l'estampille (catalogue 90).

12 Catalogue 53. Cf. ci-dessous, p. 5: « Les amphoriscoi ».
13 Nilsson 1909, 481, n. 382.
14 Catalogue n. 11.
15 Catalogue n. 94. Cf. Nilsson 1909, 452-453, n. 298.

Les timbres non rhodiens

D'une façon générale, on note que la période de plus forte concentration des importations de Grèce de l'Est est située pendant le dernier quart du IIe siècle (125-100). Parmi ce matériel, deux anses appartiennent à des amphores de Cos, l'une portant l'arc et la massue, l'autre la massue seule (Tableau IV). On mentionnera également la partie supérieure d'une amphore à lèvre champignon, dont l'anse porte un timbre peu lisible, dont l'origine est probablement la région d'Éphèse.

Tableau IV

Amphores coennes

Fabricant	Incertain	Attributs	Catalogue	Numéro d'inventaire
Μιννιῶν		massue	62	Bey002.656.8
	)νικι	arc/massue	21	Bey002.398.28

Les amphoriscoi

S'ajoutent à ces conteneurs de grandes dimensions destinés au transport du vin, des amphoriscoi, dont la plupart présentent une argile et un type semblables à ceux des amphores rhodiennes. Ils portent un timbre anépigraphe, à l'exception d'un exemplaire timbré Σωκράτης (Tableau II, catalogue 53).[16] On suggère, à titre d'hypothèse, que ces amphores miniatures contenaient des échantillons du vin commercialisé dans les amphores de transport. Dans ce cas, l'étude des marques devrait pouvoir établir leur rapport avec un atelier ou un lieu de production particuliers.

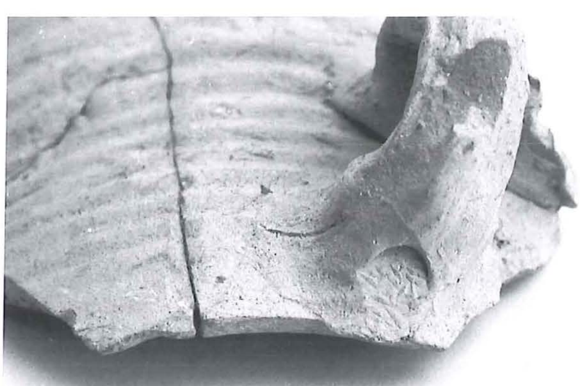


Fig. 5 Bey002.90.79, amphore levantine timbrée.

Les amphores levantines

Les amphores grecques sont toujours associées à des amphores locales, de tradition syro-palestinienne, ou phénicienne, dont le type est attesté à partir du Ve siècle et reste en usage jusqu'aux IIIe et IIe s. av. J.-C.[17]

Les plus anciennes, et les moins nombreuses aussi, sont les amphores de type en sac, ayant une argile claire, rose ou crème, une lèvre légèrement retournée vers l'extérieur, placée directement sur l'épaule, et des anses torsadées en oreille fixées entre l'arête de l'épaule et la panse, parfois timbrées en caractères phéniciens (Fig. 5). Le fond est arrondi.[18]

Une deuxième série, usuellement appelée biconique ou torpédo, présente une morphologie semblable à celle qui précède dans la partie supérieure (Fig. 6).[19] Elle a un fond pointu, tantôt à parois concaves (Fig. 7) ou rectilignes (Fig. 8) et base aplatie, tantôt à parois plus ou moins évasées et fond convexe (Fig. 9, 10).

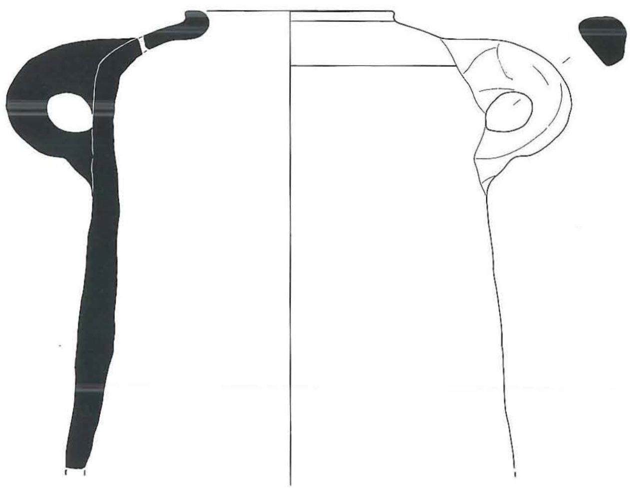
Un autre type, à pâte beige-rose ou orange foncé, présentant le même type de lèvre que les précédentes, mais avec de multiples variantes, une épaule peu marquée et un fond pointu, s'ajoute à cet inventaire des formes. Les anses sont implantées plus bas

[16] Cf. ci-dessus p. 4.

[17] Zemer 1977, 25-35, n. 19-29, pl. 7.

[18] Zemer 1977, 32, n. 27.

[19] Defernez 2002, 237.



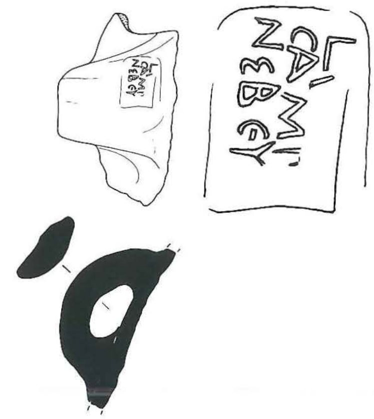


Fig. 11 Bey002.454.140, amphore levantine, dessin Rachelle Antonios.

Fig. 6 Bey002.541.5, amphore levantine, dessin Rachelle Antonios.

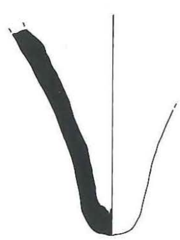


Fig. 7 Bey002.541.45, amphore levantine, dessin Rachelle Antonios.

Fig. 8 Bey002.541.46, amphore levantine, dessin Rachelle Antonios.

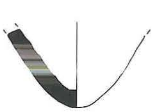


Fig. 9 Bey002.541.48, amphore levantine, dessin Rachelle Antonios.

Fig. 10 Bey002.541.44, amphore levantine, dessin Rachelle Antonios.

sur la panse par rapport au type torpédo. Elles ont un profil aplati, évasé vers le haut, et fréquemment deux arêtes sur le dessus (Fig. 11). Un fort pourcentage de ces anses porte un timbre, souvent très mal estampillé, et dans ce cas ne laissant voir que le cadre. Etant peu visible il est souvent ignoré par l'archéologue. Les timbres lisibles, dont le nombre s'élève actuellement à 29 exemplaires, sont inscrits en caractères grecs et sémitiques.

Malgré la présence des importations grecques, nettement minoritaires, l'attribution de ces conteneurs locaux au transport du vin est tout à fait défendable, si l'on retient les propos de Pline sur la richesse en vin de Bérytos.[20] Les amphores locales transportaient vraisemblablement du vin local, consommé par l'ensemble de la population, tandis que le vin rhodien était réservé à une élite.

Le texte des timbres, dont l'étude est en cours, mentionnerait dans certains cas le nom de Beyrouth.[21] Cela confirmerait d'une part la provenance de la série d'amphores à pâte orange foncé, proche de celle de la céramique commune locale, et d'autre part signalerait l'existence d'une gestion de la production par les autorités locales, dont l'origine levantine ou grecque reste à établir.

Certains de ces timbres, assez bien datés par les timbres rhodiens associés, se situent entre la chronologie haute de l'établissement hellénistique, vers la fin du III[e] siècle, et le courant du II[e] siècle.

[20] Plin. *HN* 14. 7, 74; 15. 17, 66.

[21] L'étude épigraphique des anses levantines est placée sous la direction de Pierre Bordreuil.

Tableau V

Unités stratigraphiques des timbres levantins

Bey002.HS.207 Bey002.111.15 Bey002.133.68 Bey002.133.69 Bey002.133.70 Bey002.386.131 Bey002.386.132 Bey002.416.TI.AII.4 Bey002.416.TI.AIII.5.S Bey002.427.33 Bey002.427.34 Bey002.427.101 Bey002.427.209	Bey002.454.58 Bey002.454.140 Bey002.454.141 Bey002.454.142 Bey002.454.144 Bey002.619.95 Bey002.619.138 Bey002.619.139 Bey002.619.140 Bey002.619.141 Bey002.619.151 Bey002.790.3	Bey026.HS Bey026.464.12 Bey026.496.28 Bey026.496.29

Parmi les unités stratigraphiques communes aux anses timbrées rhodiennes et levantines, on peut attribuer des dates probables: entre 180 et 176 pour l'US 133, au plus tard en 192 pour l'US 454 et vers 150 pour l'US 619.

Les amphores à anses de panier

Plus rarement, des amphores à anses de panier, souvent dénommées chypriotes, apparaissent dans les contextes hellénistiques. D'après des recherches récentes, ce type d'amphores serait plutôt destiné au transport de l'huile, mais pas exclusivement.[22]

Si l'on en juge par l'argile, les exemplaires de Beyrouth proviendraient d'au moins trois ateliers levantins différents: on distingue une argile beige à brune, à dégraissants gros et abondants, gris clairs et gris foncés (Fig. 12), une argile rouge à dégraissants sableux, proche de celle de Beyrouth et une argile crème vacuolaire, à fins dégraissants gris, qui présente de fortes similitudes avec celle de Saïda. Une quatrième production se caractérise par une argile orange à brune contenant des dégraissants blancs et gris clairs ainsi que des coquillages. Elle serait chypriote.

Ces conteneurs apparaissent à la fois dans les niveaux de fondation de l'habitat hellénistique, datés du III^{e} siècle, et en association avec des amphores rhodiennes du dernier quart du II^{e} siècle. Par ailleurs, ces données stratigraphiques étayent la thèse de la fabrication de ce type d'amphores au-delà du IV^{e} siècle, au Levant.[23]

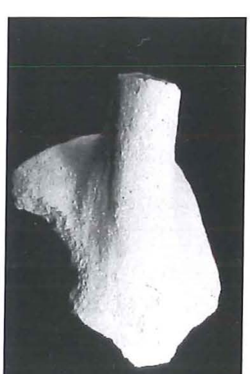


Fig. 12 Bey002.638.4, amphore à anses de panier, photo H. Fontaine.

Autre type

Une amphore punique Maña C 2a, dont le type est originaire de la région de Carthage, est identifiable grâce à sa base allongée et à la couleur de sa pâte rouge lie de vin, à engobe crème épais (Fig. 13).[24] Il s'agit là d'un exemplaire unique pour les deux sites étudiés ici (Bey002 et Bey026), qui confirme la datation de son contexte stratigraphique, entre le deuxième quart et le milieu du II^{e} siècle.[25]

[22] Defernez 2002, 237; Jacobsen 2002, 174.
[23] Jacobsen 2002, 177.
[24] Je remercie Marc Lawall pour l'identification de cette amphore.
[25] Guerrero Ayuso & Roldán Bernal 1992, 47-50, pl. 7. 13.

Fig. 13 Bey002.98.247, amphore Maña C 2a.

Vraisemblablement destinée au transport du vin, la présence de cette amphore en Méditerranée orientale doit être mise au compte des échanges placés sous l'égide de Rome entre la Péninsule ibérique et l'Italie, et entre l'Italie et la Phénicie. Ceux-ci, signalés par la présence de céramique campanienne A, en particulier dans le niveau stratigraphique de provenance de cette amphore, et dans plusieurs autres sites de Beyrouth,[26] sont attestés plus largement par la découverte d'autres amphores Maña C au Levant Sud.[27]

Conclusion

Les résultats de cette étude montrent que Beyrouth tient une place importante parmi les lieux de production de vin et les ports de commerce de Méditerranée orientale. Cette activité s'exerce non seulement avec la Grèce et la Grèce de l'Est mais aussi avec d'autres régions du Levant. En revanche, peu de traces d'échanges avec Rome ont pu être mis en évidence à Beyrouth, au contraire du Levant du Sud, où les amphores de Brindes sont nombreuses.

Parmi les importations, seules les amphores rhodiennes reflètent une activité commerciale régulière, et cela pendant environ deux siècles. Viennent-elles directement de Rhodes ou sont-elles redistribuées à partir de Délos? Bien qu'il soit prématuré de répondre à une telle question, on ne constate pas d'augmentation notable du nombre d'amphores rhodiennes à partir de la fondation de l'établissement des Poséidoniastes de Bérytos à Délos, vers le milieu du II^{e} siècle. Aussi retiendra-on, pour le moment, l'hypothèse d'un approvisionnement ne passant généralement pas par Délos, où les rhodiennes ne sont pas majoritaires, au contraire des cnidiennes.

Quant aux autres importations d'amphores grecques et de tradition grecque, il faut les mettre au compte d'entreprises individuelles, échappant à tout système d'échange organisé et officiel.

Aux types bien connus s'ajoute une série de conteneurs dont l'identification reste incertaine et que l'on classe dans la catégorie des amphores de tradition grecque en raison des caractéristiques de la pâte, à la granulométrie assez fine et homogène et à l'engobe régulier et peu épais. Ici, seules des analyses pourraient permettre de faire des identifications précises de provenance, voire d'atelier.

Mais la typologie ne suffit pas à établir la provenance d'un récipient. En effet, certains types ont été imités, dans un but de contrefaçon commerciale, et leur interprétation ajoute à la complexité de l'analyse.[28] Ce problème, maintes fois soulevé, est connu en particulier pour les transporteurs de vins fameux, comme celui de Rhodes.[29]

Concernant les produits importés, on remarque un réel intérêt pour la consommation du vin. Parmi

[26] Arnaud 1996, 118.

[27] Rappel de Sam Woolf au cours de ce même colloque.

[28] Sartre 1995, 74.

[29] Une amphore conservée au Grand Sérail de Beyrouth, semblait être originaire de Rhodes. Son examen m'a permis de constater qu'elle n'avait pas été fabriquée avec une argile rhodienne. Seule une anse était timbrée, en caractères illisibles. Je remercie M. Fouad el Saad de m'avoir permis l'accès à ce bâtiment officiel.

les productions régionales et locales, certains conteneurs transportaient tantôt de l'huile tantôt du vin, mais leur proportion respective ne peut pas être évaluée avec précision.

L'étude des amphores découvertes à Beyrouth et au Liban n'en est qu'à ses débuts mais l'examen des collections anciennes, ajoutée à celle des trouvailles récentes, éclairera considérablement nos connaissance sur la production, la circulation et la consommation des denrées.

L'examen des timbres grecs et levantins, constituant déjà d'importants corpus à Beyrouth, apportera de significatives références historiques, dans une région par ailleurs très pauvre en inscriptions. Ses résultats permettront d'aborder l'histoire commerciale de la région sur de nouvelles bases, en particulier la production de vin local et sa commercialisation, le rôle de relais des villes phéniciennes vers les régions intérieures de la Syrie antique, l'importance des ports dans le commerce régional et avec la Grèce.

Importazioni di anfore orientali nell'Adriatico tra primo e medio impero

Rita Auriemma & Elena Quiri

Lo studio che intendiamo presentare in questa sede si sofferma sulle anfore di produzione orientale rinvenute in quattro diversi contesti, pressoché inediti, all'estremo sud e all'estremo nord dell'Adriatico occidentale (Fig. 1): due a Brindisi, via S. Chiara e Atrio Cattedrale,[1] uno a S. Foca (Le) ed uno a Trieste, dai recenti scavi di via Crosada nel cuore della Cittavecchia. Ci soffermeremo in particolare sulle forme più significative a livello quantitativo e su alcune forme particolari.

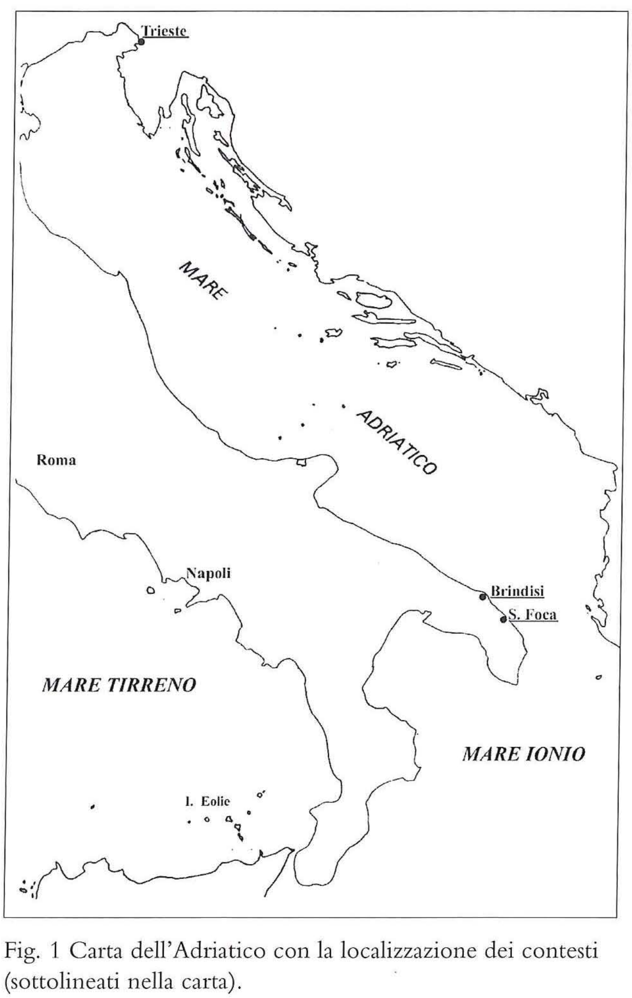


Fig. 1 Carta dell'Adriatico con la localizzazione dei contesti (sottolineati nella carta).

Produzioni

Tra i rinvenimenti anforari dei due contesti brindisini e di S. Foca, i valori quantitativi delle diverse produzioni anforarie sono simili, con una spiccata prevalenza delle anfore orientali, che superano il 60% di presenze (Fig. 2), sottolineando la grande vitalità di commerci che legava l'Oriente con la penisola salentina ed in particolare con Brindisi, il cui porto doveva certamente rappresentare un importante nodo di redistribuzione.[2] Il loro arco cronologico va dal I al IV sec. AD, ma le presenze sono consistenti soprattutto dal II, con un picco nel III sec.

Abbiamo scelto di presentare anche i dati triestini, benché ancora in corso di studio, per l'interesse e l'affidabilità stratigrafica dei contesti selezionati: si tratta solo di quelli riferiti alle fasi dal II e prima metà del III secolo AD, e in giacitura primaria. In essi le importazioni orientali mantengono una considerevole rilevanza, sebbene con indici più bassi rispetto ai contesti salentini (25,5%), secondi, però, solo a quelli delle produzioni italiche centrosettentrionali, in queste fasi ancora particolarmente fiorenti (44% ca.); superano comunque quelle africane, nonostante la capillare affermazione di queste in tutto il Mediterraneo.

La quantità di forme identificate e la loro provenienza da tutto il bacino del Mediterraneo orientale, sia insulare, sia continentale, ha comportato l'esigenza di suddividere le produzioni a seconda dell'area cui esse fanno riferimento, sebbene per alcune forme l'afferenza sia ipotetica (Fig. 3). Le aree sono: Creta,

[1] Per una nota preliminare sulle strutture e i materiali dello Scavo del Cortile del Vescovado/Atrio Cattedrale cfr. D'Andria 1997, 117. In particolare sulle anfore Pastore 1994; Auriemma & Quiri forthcoming.

[2] Per le relazioni tra l'Oriente ed il Salento nell'antichità cfr. Salento porta d'Italia.

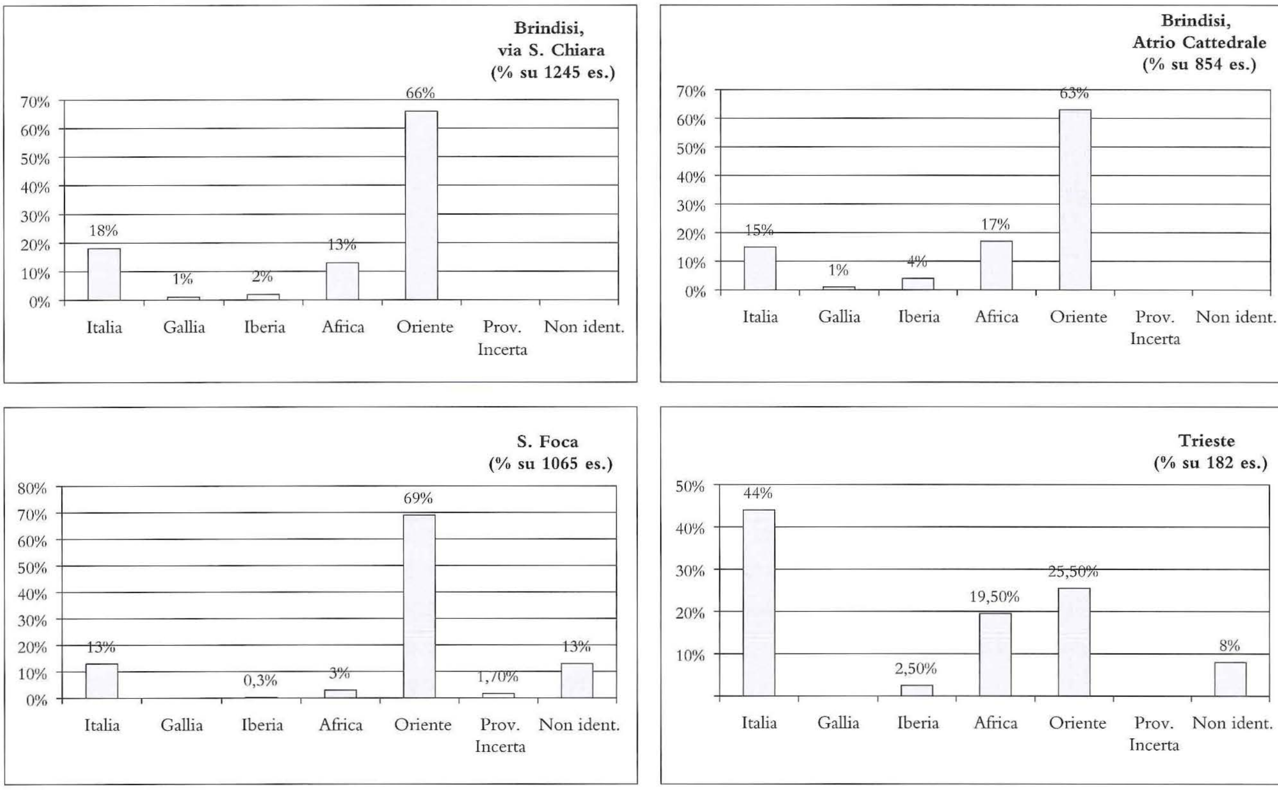


Fig. 2 Aree di produzione delle anfore nei quattro contesti.

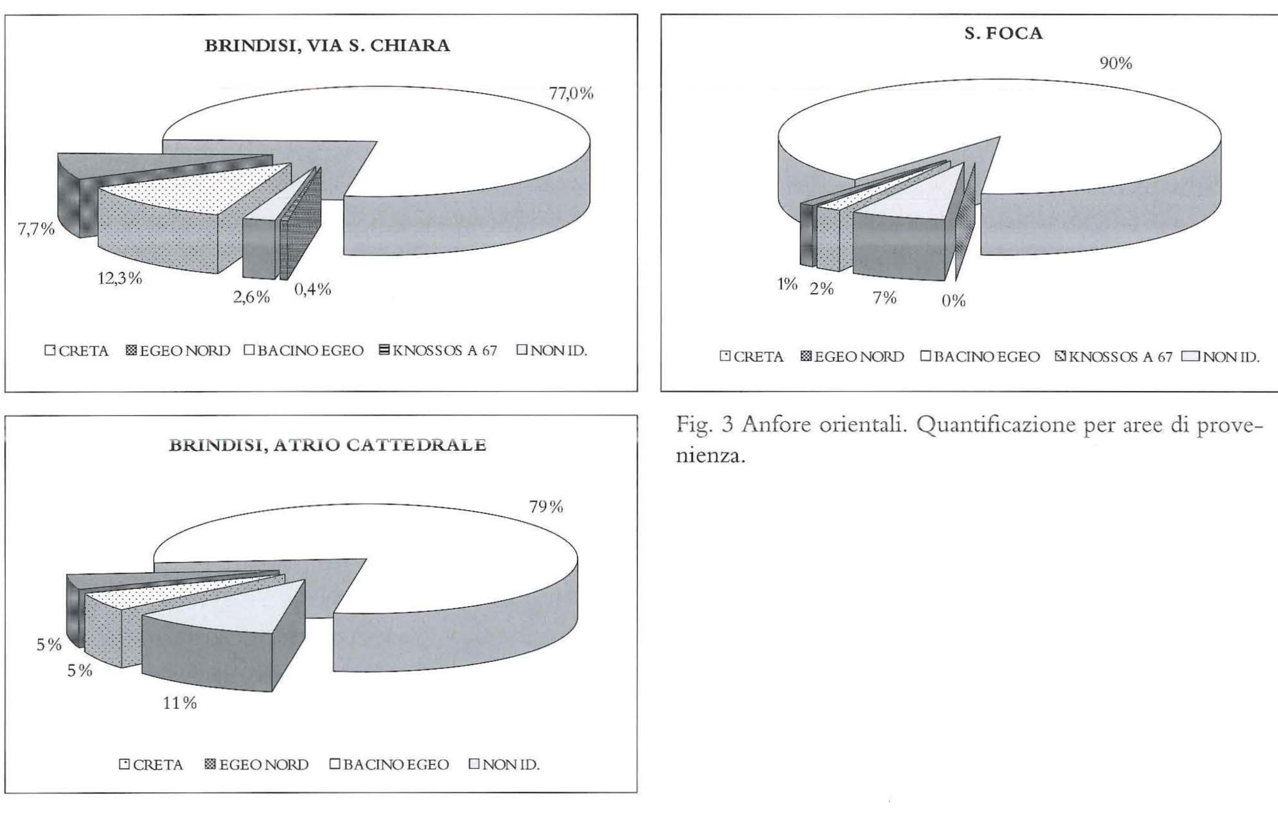


Fig. 3 Anfore orientali. Quantificazione per aree di provenienza.

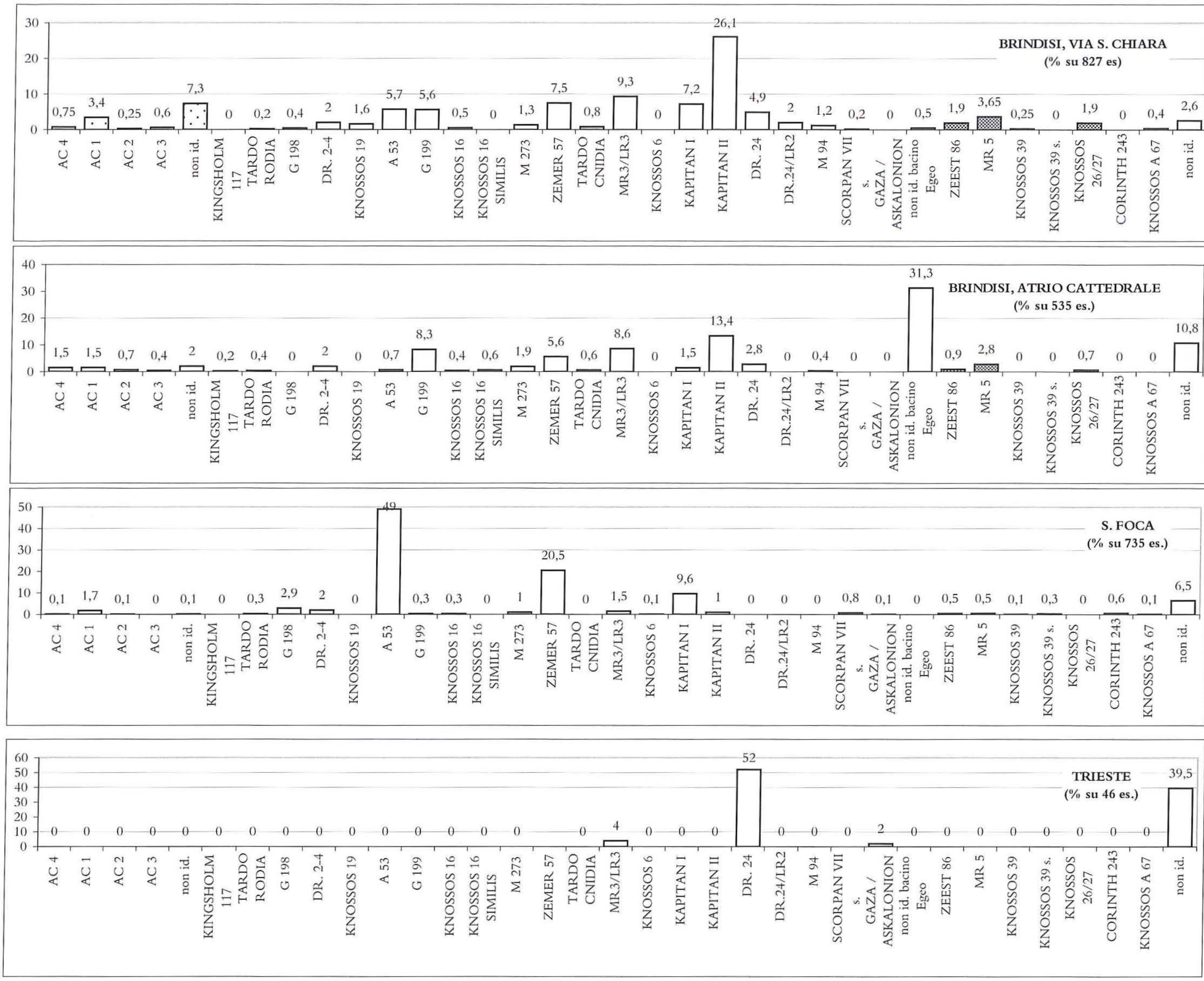


Fig. 4 Anfore orientali presenti nei quattro contesti.

Egeo orientale e Asia Minore, Egeo settentrionale-area pontica. La gran parte delle anfore orientali proviene dal bacino Egeo orientale e microasiatico. La presenza massiccia di anfore egeo-orientali a S. Foca (Fig. 4) trova riscontro nella prevalenza di due o tre forme (Knossos A 53, Zemer 57 e Kapitän I), mentre le altre sono quasi inesistenti. Analoga è la situazione di Trieste romana, in cui spiccano essenzialmente la Dressel 24/Knossos 15, e una produzione a quella assimilabile; per il resto si tratta solamente di isolate attestazioni di poche forme. Nei due contesti brindisini, pur riscontrandosi picchi di alcune produzioni (le stesse di S. Foca), il repertorio appare, invece, estremamente diversificato.

Per quanto riguarda le anfore di **produzione cretese** (Fig. 5), si sono riconosciute quattro forme della classificazione di Antigone Marangou[3] (*AC* 1-4). I loro indici di presenza sono modesti a S. Foca, mentre a Brindisi si attestano su una percentuale del

[3] Marangou-Lerat 1995, 68-74.

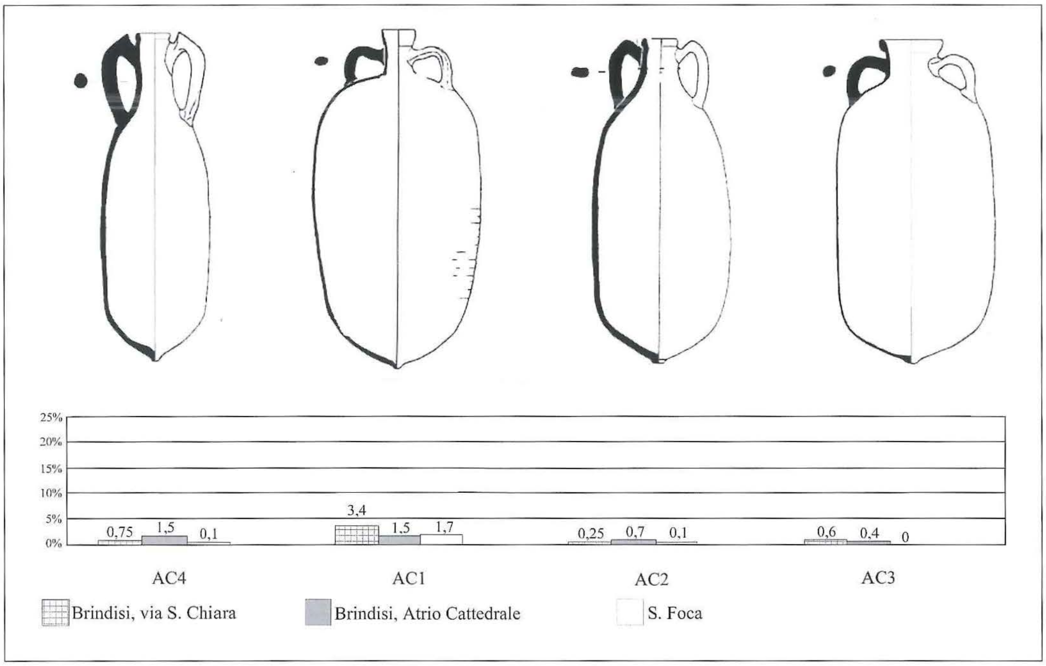


Fig. 5 Anfore di produzione cretese e relativa quantificazione nei quattro contesti.

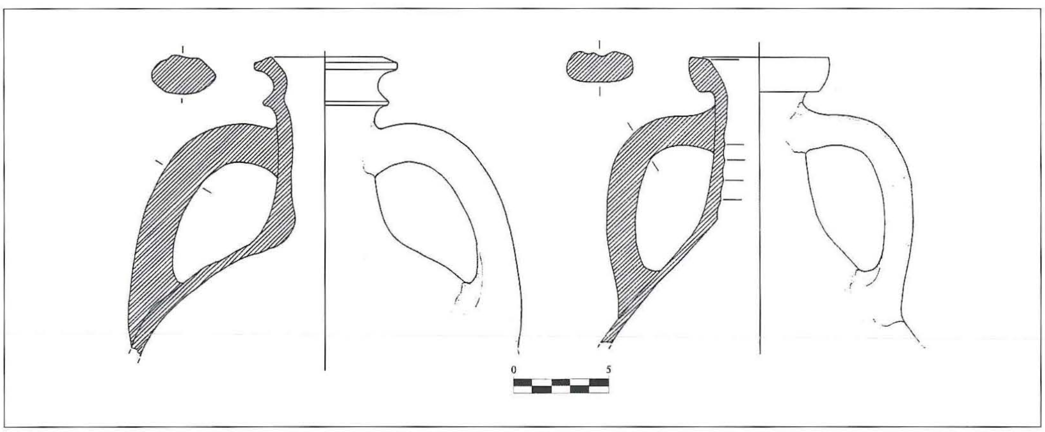


Fig. 6 Anfore di probabile produzione cretese da Brindisi, via S. Chiara.

5% ad Atrio Cattedrale e del 12,3% a via S. Chiara; questo ultimo dato rispecchia la situazione salentina più generale, dove si sono individuate rilevanti importazioni di vino cretese. Anche le diverse incidenze delle forme trovano riscontri con l'andamento generale delle loro esportazioni: mentre l'*AC* 1, in particolare modo, e l'*AC* 4 presentano una diffusione piuttosto capillare nel Mediterraneo occidentale, si rilevano basse percentuali di *AC* 2 e *AC* 3: l'*AC* 2 sembra privilegiare il mercato tirrenico, ed in particolar modo la Campania, mentre l'*AC* 3 la costa adriatica e l'area padana.[4]

Presentiamo rapidamente alcuni esemplari, provenienti da Brindisi via S. Chiara, non identificati con forme precise già classificate (Fig. 6); è tutta-

[4] *AC* 2: Creta, Grecia, Africa settentrionale (Berenice, Leptis Magna, Cartagine), Pyrgi, Ostia, Pompei, Lipari; un solo frammento da Trieste; appaiono, insieme alle *AC* 4, nel relitto dalmata di Koromašno. Marangou *AC* 3/ Gortina *ARC* 3: Creta, Atene, Alessandria e Marina el Alamein in Egitto, coste tirreniche di Italia e Francia (Pompei, Frejus, Narbonne), basso (Canale d'Otranto) e alto Adriatico e Italia settentrionale (Padova, Vicenza, Verona, Altino, Oderzo, forse Brescia, Aquileia e Pola). I tipi 2, 3 e 4 sono prodotti da età claudia fino alla fine del II secolo AD. Più estesa (fino a età severiana) è la produzione della *AC* 1. Per la distribuzione e la cronologia cfr. Auriemma & Quiri forthcoming, con riferimenti bibliografici. Degni di nota i dati di Olimpia, dove le anfore cretesi sono, tra quelle importate, le più comuni (Martin 2000, 428), e di Cartagine, a partire dal secondo quarto-metà del I secolo AD (Martin Kilcher 1998, 513-514, che sostiene, *contra* la Marangou, come queste anfore non siano esportate prima del regno di Claudio).

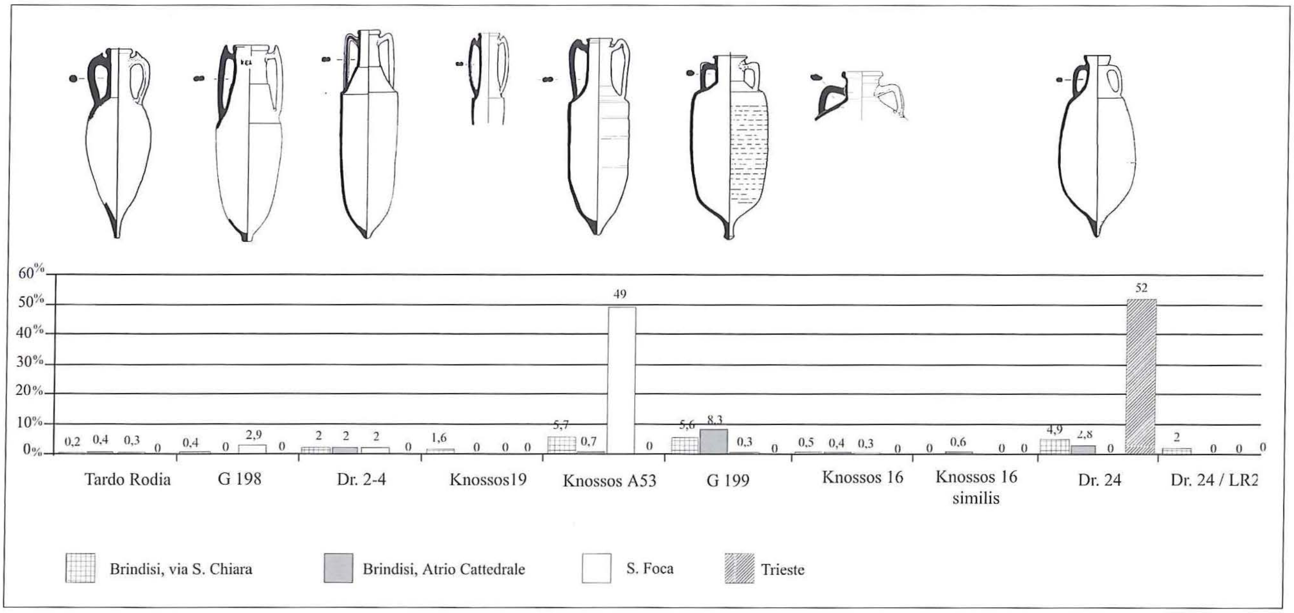
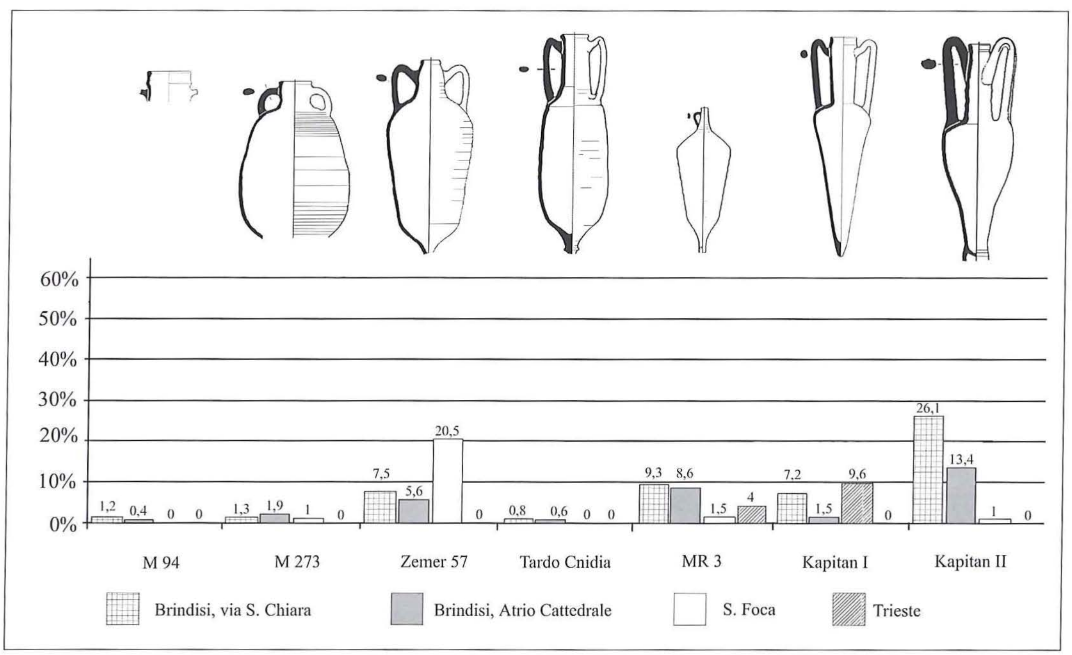


Fig. 7 Anfore di produzione egea e microasiatica e relative quantificazioni nei quattro contesti.

Fig. 8 Anfore di produzione egea e microasiatica e relative quantificazioni nei quattro contesti.



via forse possibile ascriverli alla produzione cretese, per le caratteristiche morfologiche e analisi macroscopica degli impasti, di colore tendente al rosso, piuttosto depurato, con una quantità variabile di mica dorata.

Le anfore prodotte nel bacino **Egeo orientale** e in **Asia Minore** (Figg. 7-8), come già detto, sono quelle maggiormente rappresentate nei contesti di Brindisi e S. Foca (tra il 77 e il 90%). Non ci soffermiamo sulle forme generalmente più conosciute e più frequenti in Occidente: le **tardo rodie/Camulodunum 184** e le **Agora G 198**, per le quali rimandiamo alle precedenti analisi.[5]

[5] Auriemma & Quiri forthcoming.

Fig. 9 Anfora Knossos A 53 dal relitto di Grado.

Tra le **Dressel 2-4**, a testimonianza dei diversi centri produttivi, per il contesto di via S. Chiara, si sono isolate varie famiglie di impasti che riconducono a diverse aree di provenienza: impasti egeo orientali; impasti saponosi che ricordano le *MR* 3 e le *LR* 2, ma anche impasti che rimandano al mondo egeo settentrionale; indicazioni analoghe provengono dalle Dressel 2-4 attestate a Trieste in livelli diversi da quelli esaminati in questa sede.

Il tipo **Knossos A 53** (Fig. 9), afferente alla vasta ed eterogenea famiglia della Dressel 5, è il più rappresentato a S. Foca (un terzo circa del complesso del materiale anforario) e ben attestato a Brindisi via S. Chiara (quasi il 6%), ma esiguo ad Atrio Cattedrale. Hayes classifica questa forma nel tipo Knossos 19, dal quale, invece è nettamente distinto da peculiarità morfologiche e metrologiche,[6] come si evince dai recenti rinvenimenti di Iasos,[7] dalle evidenze salentine, nonché da numerose anfore del relitto di Grado, databile attorno alla metà del II sec. AD,[8] e da un'anfora rinvenuta in una tomba della necropoli di Voghenza, associata ad una moneta di Faustina Maggiore.[9] Il quadro della distribuzione è limitato all'Egeo orientale e alla costa adriatica occidentale, ma probabilmente risulta penalizzato dalla genericità di identificazione di cui 'soffre' questo contenitore, occultato nelle segnalazioni di Dressel 2-4 o Dressel 5. La resinatura cospicua presente su tutti gli esemplari del relitto di Grado e le tracce individuate su alcuni frammenti di S. Foca suggeriscono una prima destinazione d'uso come contenitore vinario, che, d'altronde, ben si accorderebbe con la presunta origine egeo-orientale, se non decisamente microasiatica, di queste anfore, indiziata dagli impasti rossi, saponosi, riccamente micacei. Occorre però tener presente che potevano essere riutilizzate, come attestano gli esemplari del relitto di Grado, contenenti conserve di pesce.

Alla stessa tradizione morfologica della precedente è ascrivibile la forma **Knossos 19**, la cui origine

6 Hayes 1983, 149: *'Sub-Koan type'*.

7 Berti & Desantis forthcoming.

8 Auriemma 2000, 33-34.

9 Voghenza, 292, 307, fig. 191 e tav. XLVI, 1. Alcune anfore in altre tombe della necropoli di Voghenza presentano caratteristiche simili a quelle della Knossos A 53, ma il cattivo stato di conservazione non ha permesso disegni integrativi o foto: cfr. in particolare l'anfora dalla tomba 52: *ibidem*, 151, tav. XXXIII, 6. Si segnala poi un gruppo di anfore rinvenute in drenaggi del I sec.d.C. a Oderzo, che possono classificarsi come una variante più antica del tipo in questione, con il collo appena meno lungo e stretto: Cipriano & Ferrarini 2001, 63-64. Questo "prototipo" è presente anche ad Augst: Martin Kilcher 1994, 344, 346, fig. 131, tav. 119, n. 2325.

egeo-orientale è indiziata dall'analisi macroscopica degli impasti e da iscrizioni greche. Essa non è molto attestata in Adriatico: è presente soltanto nel Canale di Otranto, a Brindisi via S. Chiara, a Margherita di Savoia e a Porto Recanati.[10]

Dalla seconda metà del I e fino a tutto il III secolo AD si riscontra la presenza dell'anfora probabilmente vinaria **Ath. Agora G 199**. A Brindisi raggiunge percentuali tra il 5 e l'8%, in contrasto con i dati quantitativi delle presenze in Adriatico, dove conosce comunque un grado significativo di circolazione: si segnalano esemplari a Parenzo (Croazia), ad Aquileia e a Trieste, sempre in quantità limitata; un solo esemplare proviene dai fondali del porto istriano di Vinjole.[11] Di essa è possibile identificare due produzioni: una, più consistente, presenta un impasto riconducibile all'area insulare egea, l'altra è forse riferibile all'isola di Cipro (c.d. tipo Paphos, con impasto camoscio, privo di mica e ingobbio giallastro).

Provenienti dal contesto di via S. Chiara sono tre orli pertinenti ad un frazionale della Ath. Agora G 199, identificabili con la forma **Ath. Agora M 239** *similis*.

Alcuni esemplari, per lo più salentini (uno solo triestino), sono stati identificati con il tipo **Knossos 16** e **Knossos 16** *similis*, forse di produzione cretese,[12] dal caratteristico orlo ad anello convesso esteriormente e concavo all'interno, in modo da formare un profilo a 'S'.

Dagli scavi di Brindisi, ma soprattutto da Trieste, proviene un numero piuttosto elevato di frammenti pertinenti la forma **Dressel 24**.[13] Si tratta di un'eterogenea famiglia di anfore, dal contenuto probabilmente oleario,[14] ad orlo imbutiforme, collo troncoconico, anse a bastone con gomito più o meno rilevato, impostate sotto l'orlo e sulla spalla larga, priva di marcata distinzione dal corpo ovoidale o a limone, che termina in un piccolo puntale conico. Le attestazioni dei vari tipi riferibili alla forma di II e III secolo (Knossos 15, *MR* 18/Zeest 90 e Knossos 18) (Fig. 10)[15] si stanno facendo sempre più numerose nella penisola, ed in particolare in area adriatica e cisalpina,[16] anche se rimangono ancora limitate rispetto alla diffusione, negli stessi secoli II e III, lungo il basso Danubio e le coste del Mar Nero, in Grecia e in area egea, e a Berenice.[17] Dai frammenti provenienti da via S. Chiara è possibile ipotizzare una vasta area di produzione, che molto probabilmente investe anche la zona centro-meridionale dell'Egeo, oltre quella pontica, fortemente evocata dalla densità dei rinvenimenti. A Trieste, nei contesti selezionati, la forma, rappresentata quasi esclusivamente dal tipo Knossos 15, domina incontrastata, con il 52% di presenze rispetto all'insieme di anfore orientali, in associazione con le produzioni cretesi che mostrano caratteristiche morfologiche simili. Le stratigrafie triestine permettono di precisare il *range* di circolazione

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[10] Panella 1986, 619; Auriemma forthcoming a; Volpe 1991, 115; Mercando 1974, 297. Cfr. Auriemma & Quiri forthcoming per le altre evidenze nel Mediterraneo.

[11] Auriemma forthcoming c, con riferimenti bibliografici. L'anfora è frequente nel Mediterraneo orientale: Paphos (Hayes 1991, 91-92, tipo III), Cnosso (Hayes 1983, tipi 17 e 45, fig. 26, A101, 156), Gortina (Rendini 1997, 372), Efeso (Panella 1986, 622, n. 24), Anemurium, Alicarnasso, Didyma (Wintermeyer e Tuchelt 1980, tav. 58, n. 197, 149), Alanya (Williams 1989, 92), Atlit (Zemer 1977, 52, n. 41), nel Sinai settentrionale (Arthur & Oren 1998, 199), Benghazi (Riley 1979, 186-187), Atene (Hoepfner 1976, fig. 251, n. K 168, Kerameikos; Robinson 1959, G 199, L 11, M 239, Agorà), Olimpia (Martin 2000, 428), Corinto (Slane 2000, 303). E' presente anche in alcuni contesti occidentali: a Cartagine (Martin Kilcher 1998, 525), Pompei e Ostia con indici esigui, Ampurias (CIL IV, 2, XXVII-XXVIII; Carandini & Panella (eds.) 1973, 474-476, 631, fig. 34; Panella 1986, 622-623; Beltran Lloris 1970, 563-564, fig. 230, nn. 1-2), golfo di Fos (Sciallano & Sibella 1991, da recupero subacqueo), Lione (Lemaître 2000, 473), relitto di Punta Mazza presso Milazzo (Ollà 1997, 68, databile alla prima metà del III sec. AD), relitto di Lampedusa (Parker 1992, 234, n. 567).

[12] Hayes 1983, 147, fig. 22, A47. B. Bruno classifica come "anfore egee affini alla *Cretoise* 3" almeno tre esemplari dal deposito del *Capitolium* di Brescia che a nostro avviso potrebbero ascriversi alla forma in questione: Bruno 2002, 284.

[13] Per una discussione sulle Dressel 24 cfr. Manacorda 1975, 378-383; Panella 1986, 624-625.

[14] Carreras Monfort 1999, 97-98: uno degli esemplari reca un *titulus pictus* in cui si legge *oleum*.

[15] Un tentativo di inquadramento e puntualizzazione tipologica è in Auriemma forthcoming c.

[16] Pompei e Roma (Castro Pretorio), per la produzione più antica, di I sec.d.C. (Panella 1986, 625, nota 32); per i tipi medioimperiali si hanno notevoli attestazioni, oltre che a Ostia e a Roma (Monte Testaccio), ad Alba, Torino, Brescia, e nel relitto di Camarina. Non consideriamo come pertinenti il tipo Dressel 24/Knossos 18 gli esemplari del relitto di Punta Mazza e analoghi, per le differenze di morfologia e contenuto: cfr. la discussione e i riferimenti bibliografici in Auriemma forthcoming c.

[17] Auriemma & Quiri forthcoming.

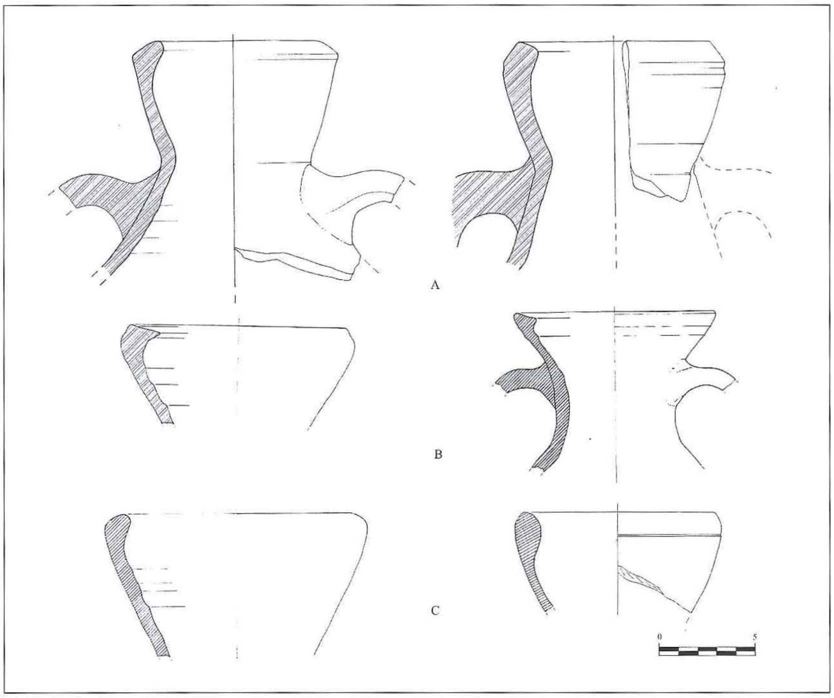

Fig. 10 Dr. 24. A: tipo Knossos 15 da Trieste; B: tipo Knossos 18 da Brindisi, via S. Chiara; C: tipo Benghazi MRA 18/Zeest 90 da Brindisi, Atrio Cattedrale.

di questo tipo, attestato anche a Brindisi, dalla metà del II ai decenni iniziali del III secolo AD.

A questo contenitore, in via S. Chiara, si aggiungono alcuni frammenti di dimensioni più piccole che abbiamo identificato con una **forma di passaggio tra la Dressel 24 e la LR 2** (Fig. 11). E' difficile stabilire una cronologia precisa e tracciare un quadro esatto della sua diffusione all'interno del Mediterraneo, a causa della difficoltà di individuazione.

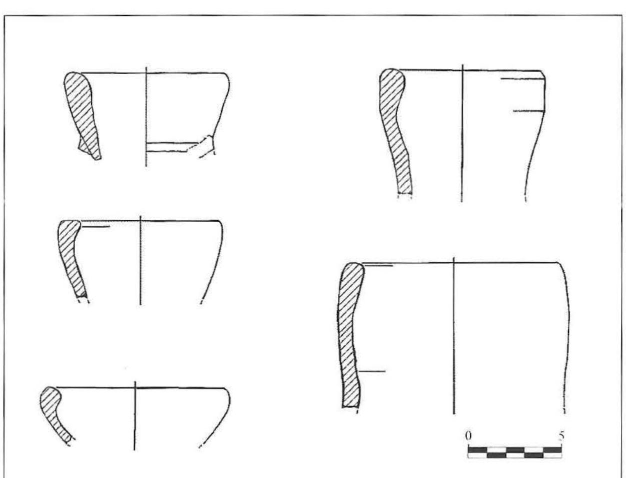

Fig. 11 Forma di passaggio tra Dr. 24 e LR2 da Brindisi, via S. Chiara

Da Brindisi provengono una serie di orli, le cui caratteristiche morfologiche e gli impasti rimandano a produzioni orientali. Essi trovano confronto con la forma **M 94** dell'*Athenian Agora*: un'anfora micacea, con orlo a fascia sull'alto collo cilindrico, corpo piriforme slanciato su fondo piatto, ad anello; le anse si impostano sul collo subito sotto l'orlo e sulle spalle leggermente carenate.[18] Robinson propone una datazione al II sec. AD. La cronologia potrebbe comunque essere abbassata fino al III secolo, data la frequenza di questo tipo all'interno dei depositi brindisini, e in base ad altri confronti.[19] Non è conosciuta la diffusione di questa forma in Adriatico.

La forma **Ath. Agora M 273** è presente con una percentuale dell'1-2 circa sia a Brindisi che a S. Foca, contesti che permettono di retrodatare l'inizio della produzione al II secolo, forse avanzato, come peraltro suggeriva anche la composizione del carico

[18] Robinson 1959, 98.

[19] Ollà 1995-1996, 176, fig. 54, n. IX.2.2 (dal relitto di Punta Mazza).

Fig. 12 Zemer 57 (collezione privata).

del relitto di Camarina.[20] E' diffusa in maniera capillare nel Mediterraneo occidentale[21] e, in particolare, lungo la costa adriatica, ad Aquileia e Trieste, Ravenna, Canosa, Egnazia, Porto Badisco (Le).[22] L'analisi macroscopica degli impasti degli esemplari di Brindisi e S. Foca permette di accostarli a quelli delle anfore Knossos A53, per le quali si suggerisce analoga origine egeo-orientale.

Anche per la forma **Zemer 57** (Fig. 12), prodotta tra II secolo avanzato e IV sec. AD, il limite cronologico alto è offerto dai contesti salentini,[23] che mostrano percentuali rilevanti: a Brindisi rappresenta il 5,6 – 7,5% di tutte le anfore orientali, a S. Foca addirittura il 14% del materiale anforario nel suo complesso, secondo solo al tipo Knossos A53. La distribuzione interessa vari siti costieri del Mediterraneo orientale e meridionale.[24] Nel Salento, oltre alle attestazioni citate, si segnala quella di Alezio,[25] mentre nella Carta Archeologica Subacquea figurano due esemplari: uno da Frigole (Le), ed un altro da Torre Ovo (Ta).[26] Alcuni esemplari inediti si trovano nel Museo di Aquileia. L'ipotesi di una produzione palestinese di queste anfore è avallata da recenti rinvenimenti effettuati nel corso di un *survey* compiuto nell'area del Sinai.[27] Un'origine, invece, egeo-orientale o insulare è indiziata dalle argille: alcuni impasti presentano spiccate analogie con quelli di produzioni cretesi, altri, molto rari (sono attestati a Brindisi ma non a S. Foca), trovano confronti con quelli delle anfore Knossos A53 e Ath. Agora M 273.

Sicuramente microasiatiche sono le anfore **cnidie di età imperiale**, presenti in minima quantità a Brindisi, negli scavi di via S. Chiara, Atrio Cattedrale e nel presunto relitto del Porto Medio, in altri contesti di Trieste coevi a questi di Crosada, a Brioni, e nei relitti di Grado, dei decenni centrali del II secolo,

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[20] Auriemma 1997a, 136.

[21] Marsiglia (Bonifay & Pieri 1995, 114; Pieri 1998, 239, con bibl.). In Italia è presente a Roma: S. Cecilia (Auriemma forthcoming b), S. Marco (contesti inediti), *Schola Praeconum* (Whitehouse *et al.* 1982, 71, n. 98); nella necropoli della Pieve a Finalmarina (Murialdo 1988, 237-238, fig. 7.5), nell'Isola di S. Pietro-Taranto (D'Andria & Mastronuzzi 1999, nn. 19 e 82).

[22] Ravenna: Stoppioni Piccoli 1983, 138; Aquileia: Cipriano & Carre 1987, 487; Canosa: Volpe 1985, 220-224; Egnazia: D'Andria 1977, 84, tav. III, n. 22; Porto Badisco, da rinvenimento subacqueo: Auriemma 1997b. Cfr. Auriemma & Quiri forthcoming.

[23] Un'ulteriore conferma della cronologia "alta" è la presenza di quest'anfora nel carico di Punta Mazza, della prima metà del III sec. AD. (Ollà 1997, 98).

[24] Berenice, Tripoli (Riley 1979, 234, n. D 384), la Palestina, Atene (Zemer 1977, 70-72). In Sicilia, oltre quelli di Punta Mazza, un esemplare frammentario si è rinvenuto nelle acque dell'isola di Vulcano (Albore Livadie 1985, 68). Un orlo proviene dai livelli tardoantichi delle Arene Candide, nel Finale ligure (Murialdo 1993-1994, 235, fig. 7.2).

[25] Giannotta 1981, 233, tav. 62, n. 32 (identificato con una Dressel 2-4, ma morfologia e impasto richiamano decisamente il tipo in esame).

[26] Auriemma forthcoming a.

[27] Dobbiamo l'informazione a P. Arthur, che ringraziamo.

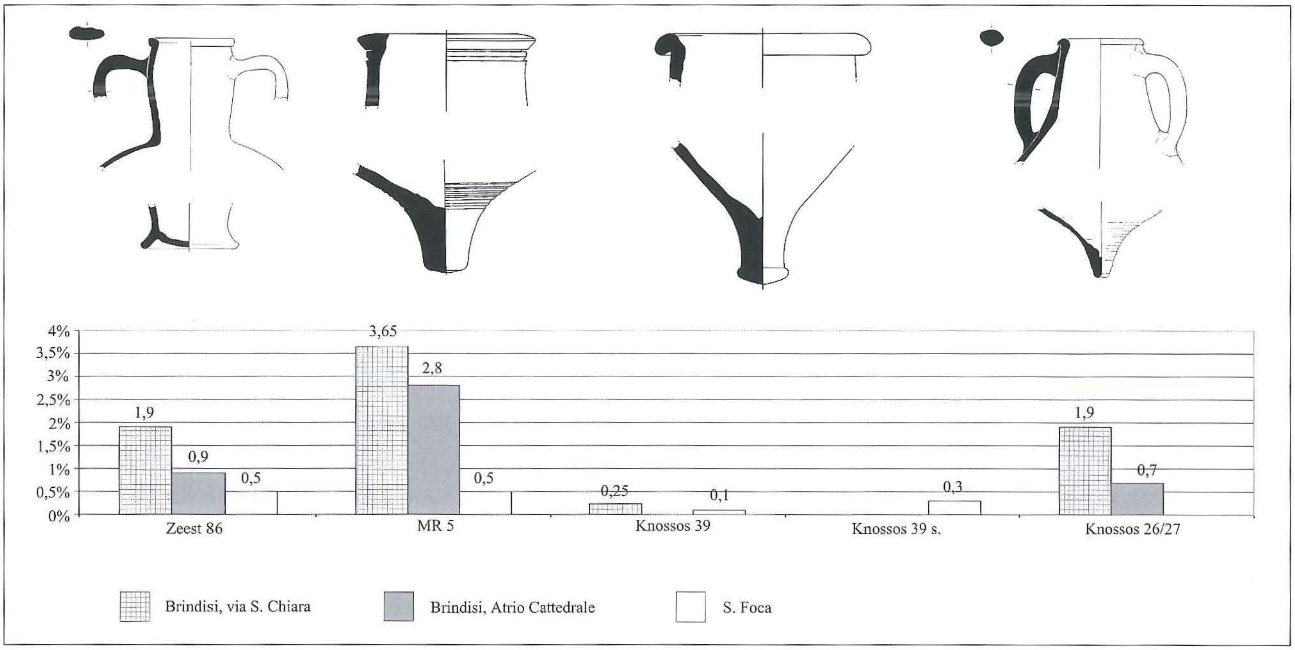

Fig. 13 Anfore di produzione pontica e relativa quantificazione nei contesti di Brindisi e S. Foca

e di Mlin, in Dalmazia centrale.[28] La rotta adriatica conduce questo flusso di importazioni da Aquileia nel Norico e nella Pannonia, come dimostrano le evidenze di Magdalensberg, Savaria e Salla.[29]

Le *MR* **3** a S. Foca non raggiungono il 2%, a Trieste il 4%, mentre a Brindisi coprono percentuali di presenza degne di nota (8,6% e 9,3%), in linea con la loro diffusione nel mondo mediterraneo sia orientale[30] che occidentale:[31] si rilevano evidenze in tutta l'area altoadriatica e cisalpina in genere e nel basso Adriatico.[32]

Le anfore **Kapitän I** sono attestate con consistenti indici di frequenza sia a S. Foca[33] (9,6 %) che a Brindisi S. Chiara (7,2%), mentre ad Atrio Cattedrale non raggiungono il 2% di presenze. Si sono individuati alcuni esemplari in uno scarico di fine II – inizi III sec.d.C. a Trieste e nel relitto di Grado.[34] Gli impasti sono grossolani, ruvidi, simili a quelli delle Kapitän II e delle *MR* 5.

La **Kapitän II**,[35] scarsamente attestata a S. Foca (1%), domina invece i contesti brindisini: a S. Chiara è la forma in assoluto più rappresentata tra quelle orientali (26%). Anche questo contenitore non sembra molto diffuso in area altoadriatica e adriatica orientale: a Trieste appare in contesti più tardi, e

[28] Auriemma & Quiri forthcoming. Queste evidenze si aggiungono a quelle di Pompei, Ostia, Fishbourne, Luni, Atene, Corinto (Panella 1986, 621; Frova (ed.) 1977, tav. 278, 17; Slane 2000, 301), Cartagine (Martin Kilcher 1998, 525). Un *unicum* è presente nel deposito del *Capitolium* di Brescia (Bruno 2002, 280). Irrilevanti le presenze a Lione, sia in età augustea, sia nei contesti di fine II – prima metà del II (Lemaître 2000, 468).

[29] Bezeczky 1993.

[30] Regione di Sardi, Valle dell'Hermos e del Meandro, Efeso e la regione a sud: zone di produzione; Sinai settentrionale, Santuario di Demetra e Kore a Corinto, Atene, Olimpia, ecc.: cfr. Auriemma & Quiri forthcoming.

[31] Roma, Ostia, Lione (nei contesti datati tra 190 e 250 d.C., raggiunge il 20% delle importazioni orientali) Cartagine. Non appare in Gallia settentrionale, mentre è ben documentata in Inghilterra, a Londra e Colchester, soprattutto in contesti di III e IV secolo. Cfr. *ibidem*, con riferimenti bibliografici.

[32] Cfr. Panella 1986, 614 e 622-624, note 7 e 31. Si ricordano, inoltre, attestazioni ad Aquileia, nel territorio friulano e giuliano, in altri contesti nella stessa Trieste, a Milano, Brescia e in altre località della Lombardia, a Torino nel presunto relitto del Porto Medio a Brindisi, nel Canale d'Otranto: *ibidem*.

[33] Dove sono più numerosi i frammenti pertinenti al tipo b, con orlo a fascia e sezione triangolare. Sono stati identificati con il tipo a alcuni orli frammentari e la parte superiore di un'anfora conservata al Museo di Lecce.

[34] Auriemma forthcoming c; ead. 2000, 38.

[35] Carandini & Panella (eds.) 1973, 596 ss.; Carandini & Panella (eds.) 1977, 228-229, 282; Panella 1986, 616-617, nota 11, 627-628, nota 36 e fig. 25 (carta di distribuzione).

ad Aquileia si è rinvenuta nel riempimento di un pozzo del Foro.[36]

L'identificazione di anfore come provenienti dalla **zona settentrionale dell'Egeo o dal Mar Nero** (Fig. 13) non è sempre confermata da studi precisi sulle forme e da analisi petrografiche, ma si basa spesso sulla frequenza dei rinvenimenti nella zona del Ponto e del Bosforo. Per l'identificazione dell'anfora **Zeest 86** i confronti provengono da Phanagoria[37] e da Paphos.[38] La forma (un paio di esemplari a S.Foca e forse a Trieste) copre a Brindisi una percentuale significativa (tra l'1 e il 2%), se si considera che sembra assente nei contesti occidentali (almeno da quanto si evince dalle pubblicazioni). Dalla varietà degli impasti è possibile ipotizzare diverse aree di produzione oltre quella pontica: cretese, egea in genere o mediterranea orientale.

La gran parte delle produzioni presumibilmente pontiche è rappresentata dalle ***MR* 5**, che figurano sia tra i materiali di Brindisi via S. Chiara e Atrio Cattedrale, sia tra quelli di S. Foca (tre frammenti). Le attestazioni interessano prevalentemente il II – III sec. AD; le date graffite sugli esemplari ateniesi, per affinità con quelle presenti sulle *MR* 3, indicano nel II secolo l'inizio della circolazione.[39] Non sembra abbia circolato dopo il IV sec., benché la produzione continui fino al VI secolo, come indicano le presenze in Scizia e più a sud, fino a Costantinopoli.[40]

L'origine pontica sembra attualmente accertata in base alla frequenza dei rinvenimenti, soprattutto nelle regioni settentrionali e occidentali del Mar Nero.[41] Recenti scoperte hanno individuato uno degli impianti produttivi in un sito della Dacia centrale, Micasasa (od. Romania).[42] Il contenitore è attestato inoltre, sebbene sempre con indici modesti, a Istanbul,[43] Atene,[44] Corinto,[45] Demetrias,[46] Creta,[47] Benghazi, Apollonia,[48] nel Sinai settentrionale,[49] a Ostia.[50] Nulla si sa del contenuto di quest'anfora dalla grande capacità.[51]

Un paio di frammenti provenienti da Brindisi, via S. Chiara, che presentano impasti marrone rossiccio, molto simili a quelli delle *MR* 5, afferiscono al tipo **Knossos 39**. Dagli esemplari editi la datazione oscilla tra il II e il III sec.[52] Dall'analisi dell'impasto è possibile attribuire al contenitore un puntale cilindrico piuttosto alto, pieno, desinente in un largo bottone.

Coeve sono le **Knossos 26/27**, indicate come produzione pontica da Hayes,[53] sulla base dei peculiari impasti, depurati, caratterizzati da inclusi angolari vulcanici,[54] e della frequenza nei contesti dei centri costieri del Mar Nero e dei centri militari danubiani. L'incidenza di questa forma a Brindisi è pari a quella delle Zeest 86, percentuale piuttosto alta se si considera che non trovano altri confronti se non con il materiale rinvenuto a Cnosso e in area pontica, con un esemplare integro rinvenuto a Oderzo, e, forse con un frammento dai livelli di Crosada, in posizione residuale.[55] Dall'analisi degli impasti, oltre che dalle dimensioni notevoli, è stato possibile attribuire a questa forma una serie di puntali conici con

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36 Jurišić 2000, 21; Auriemma forthcoming c, con bibliografia precedente; in Cisalpina, invece, è presente sicuramente anche a Milano (Verzar Bass (ed.) 1994, 401; Paniale 1990, 380).

37 Зеест 1960, 135, tav. XXXVI, 86, databile al II-III sec. AD.

38 Hayes 1991, 154, fig. LV, 63, databile ad età flavia.

39 Lang 1955, 281-282, tav. 80, nn. 28-29.

40 Opaiţ 1996, 214; Arthur 1998, 170

41 Зеест 1960, 114-115, 169, tipo 80 (l'odierna Kerch e Phanagoria; cfr. Opaiţ 1996, 214 (Topraichioi, Murighiol, Histria, Sacidava, Dinogetia, Tropaeum Traiani, Varna, Odarci).

42 Comunicazione di A. Ardet "The Roman Province of Dacia. Aspects of commerce in light of amphoras", nell'ambito del XXIII Int. Congress Rei Cretariae Romanae Fautores (Roma, 29 sett. – 6 ott. 2002).

43 Riley 1979, 188 (contesti di fine II e III sec.); Hayes 1992, 63, tipo 4, fig. 47, 158-160.

44 Robinson 1959, 69, K115.

45 Williams II & Zervos 1983, 15, n. 27, tav. 7. V. da ultimo anche Slane 2000, 303.

46 Opaiţ 1996, 213, con riferimento bibliografico.

47 Hayes 1983, 155, fig. 25 n. 90.

48 Riley 1979, pp. 188-189.

49 Arthur & Oren 1998, fig. 5, n. 7: livelli di III e IV sec. d.C.

50 Carandini *et al.* 1968, 112, tav. XLV, 582.

51 In media 60-80 lt, ma talora fino a 100: Opaiţ 1996, 214.

52 Hayes 1983, 155.

53 *Ibidem*, 151. Riteniamo di poter identificare la forma di Hayes con gli esemplari classificati da Зеест nel tipo 84: Зеест 1960, tav. XXXV, 84a; alla stessa forma può essere assimilato il tipo Зеест 73, che presenta, però, anse a nastro costolate: *ibidem*, tav. XXX.

54 Alcuni impasti degli esemplari di Brindisi, via S. Chiara sono tipici della produzione di Sinope; in un caso, invece, bisogna ipotizzare un'imitazione della Knossos 26/27 in una regione non ben precisata (informazione S. Vnukov).

55 L' esemplare opitergino è in corso di studio da parte di C. Belotti.

scanalature, morfologicamente simili a quelli delle *MR* 5. Hayes propone una datazione al III sec. AD, datazione che può, però, oscillare tra il II e il III sec., in base ai rinvenimenti in area pontica.[56] L'area di produzione sembra potersi individuare, in base alla densità di rinvenimenti, nel Chersoneso, nella zona di Panticapaeum. La distribuzione interessa in particolar modo le regioni pontiche e danubiane, fino alla Pannonia, ma copre anche l'Egeo e raggiunge l'Africa settentrionale.[57]

Anfore orientali di produzione incerta

I livelli di Brindisi e S. Foca restituiscono pochi ma significativi frammenti dello *specimen* **Knossos A 67** (Fig. 14). Questo tipo è classificato da Hayes come parte del tipo 26;[58] tuttavia sembra che l'articolazione dell'orlo e del collo distinto dalla spalla, il corpo globulare e le pareti relativamente sottili dell'ampia pancia desinente in un piccolo puntale conico arrotondato all'estremità, possano essere considerate caratteristiche peculiari di una forma a sé stante. Anche gli impasti sono diversi rispetto agli altri esemplari del tipo 26: più depurati, benchè presentino piccoli inclusi neri forse di origine vulcanica. Un contenitore di recente recuperato con le reti a strascico nel Canale di Otranto (Fig. 15) costituisce l'unica attestazione pressoché completa di questo tipo. Gli impasti particolarmente depurati e la densità dei rinvenimenti potrebbero suggerire un'origine corinzia.

Fig. 15 Knossos A 53 da recupero subacqueo nel Canale di Otranto.

Sporadici frammenti dai livelli di II – III sec. di S. Foca e un frammento dalle acque di Giancola (Brindisi) sono assimilabili al tipo **Corinth 243** o **Bulbous amphora neck** (Fig. 16), rinvenuto con una certa frequenza nei livelli romani di Corinto. È attestato anche ad Atene, in un contesto di II sec.

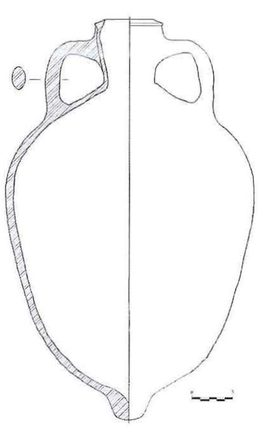

Fig. 14 Disegno ricostruttivo di Knossos A 53

[56] Зеест 1960, tav. XXX, 73b.

[57] Per il quadro della circolazione, cfr. da ultimo Benea 2000, 435-437 (che classifica la forma come Зеест 84), con riferimenti bibliografici.

[58] Hayes 1983, 151.

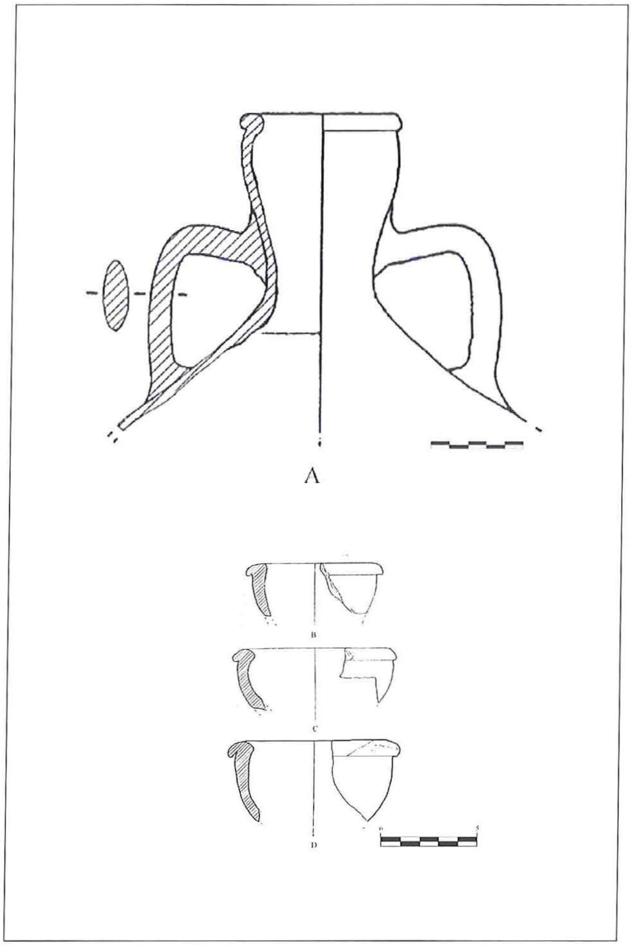

Fig. 16 Bulbous Amphora neck/Corinth 243. A: esemplare da Corinto (da Corinth XVIII); B-D: esemplari da S. Foca.

dell'Agorà, e forse anche in Turchia (Serçe Liman).[59] Dati recenti confermano un circuito preferenziale adriatico: agli esemplari salentini si aggiungono quelli restituiti da contesti di Altino e Oderzo, che retrodatano l'inizio della circolazione al I sec. AD.[60] La Slane lo attribuisce ipoteticamente a fabbriche egeo-orientali, insieme ad altri contenitori che presentano analogo rigonfiamento del collo, segno caratteristico di produzioni dell'Egeo orientale (si pensi alle anfore 'chiote' di età classica). Questa peculiarità morfologica viene diffusamente copiata anche nella ceramica comune (anforette o brocche) rinvenuta a Corinto e di probabile produzione locale.[61] Nonostante l'ampia distribuzione delle produzioni egee nel Mediterraneo orientale e occidentale quest'anfora non sembra diffusa, anche se potrebbe essere facilmente confusa, per le sue dimensioni ridotte, con altre classi di materiali.

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[59] Williams II & Zervos 1985, 59, tav. 9, n. 8; Slane 1990, 109, fig. 28, n. 243; Slane 2000, 301, fig. 14c.
[60] Cipriano & Ferrarini 2001, 78-79, figg. 39-40.
[61] Williams II & Zervos 1985, 57, fig. 1.

Un dauphin aulète sur les timbres amphoriques de Thasos[1]

Nathan Badoud

Une série de timbres thasiens[2], tous issus de la même matrice, se distingue par un emblème sans équivalent sur les amphores grecques. Ces timbres sont «récents», c'est-à-dire qu'ils sont postérieurs à la réforme du timbrage opérée entre 335 et 330[3], et qu'ils se composent de trois éléments: l'ethnique Θασίων; le nom du magistrat éponyme; et un emblème qui symbolise le fabricant de l'amphore (fig. 1)[4]. L'éponyme, Ἀπολλόδωρος, a exercé ses fonctions au cours de la guerre de Chrémonidès, entre 267/6 et 262/1[5]: malgré l'état fragmentaire ou imparfait de tous les timbres de la série, l'identification ne fait aucun doute. Les éditeurs ont par contre hésité à reconnaître un dauphin dans l'emblème du fabricant, à cause de l'étrange morphologie de l'animal[6]. Pourtant, le graveur a clairement représenté les différentes parties d'un dauphin (fig. 2), en se conformant aux conventions du style grec[7]: il a figuré la tête de manière réaliste – on y reconnaît le bec et le melon –, mais au lieu de reproduire la nageoire caudale de profil, à l'horizontale, il l'a placée dans un plan vertical, illustrant ainsi l'assimilation du cétacé à un poisson. Du point de vue de sa constitution, le dauphin de Thasos ne présente ainsi qu'un seul signe particulier: il ne possède pas de nageoires pectorales, mais des bras humains. Dans chacune de ses mains, il tient un tuyau qui remonte jusqu'à sa bouche. Ces deux tuyaux réunis forment un instrument de musique, un αὐλός, et l'emblème représente donc un dauphin aulète[8].

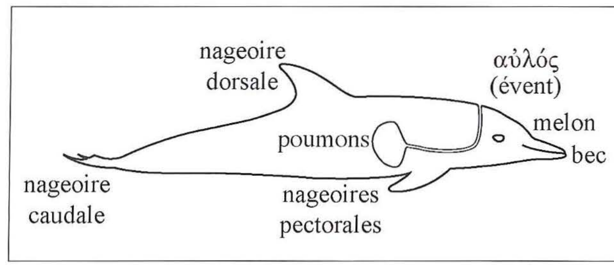

Fig. 2. Anatomie du dauphin *(Delphinus delphis)*.

L'αὐλός est parfois constitué d'un seul tuyau, muni d'un embout où se fixe une anche double, comme sur les hautbois modernes. Mais le plus souvent, et c'est ici le cas, l'αὐλός se compose de deux tuyaux

Fig. 1. Timbre du fabricant au dauphin aulète sous l'éponyme Ἀπολλόδωρος· produit à Thasos vers 267/6-262/1 et découvert à Abdère.
Musée de Kavala, 670.
Θασίων
Ἀπολλόδωρος
Dauphin aulète ↑→

[1] Mes remerciements vont à Livia Buzoianu, Michel Debidour, Yvon Garlan et Yves Grandjean.

[2] Exemplaires publiés: Poenaru Bordea 1974-1975, 7, nº 1; Debidour 1979, 288, fig. 3, 6; Buzoianu 1982, 147, nº 19. Exemplaires inédits: musée de Thasos 19843 (photothèque de l'Ecole française d'Athènes, C 846, 5 et 6); Pella, A 2167 (*ibid.* L 7285, 61); musée de Constanţa, M 9915, M 9947; musée de Simferopol, A-2716 = *IosPE* III, nº 1830 [*n.v.*].

[3] Garlan 1999a, 53.

[4] Sur la gravure des matrices thasiennes, voir Garlan 2000, 93-112.

[5] Pour une tentative de mise au point, voir Badoud 2003, 584-585.

[6] Si Poenaru Bordea 1974-1975 ne marque aucune hésitation, c'est que le timbre qu'il publie est cassé à droite.

[7] Stebbins 1929, 9-18.

[8] Y. Garlan, remarque sur la thèse d'habilitation de M. Debidour, *Les timbres amphoriques thasiens de type récent*, soutenue à Lyon le 23 octobre 1999.

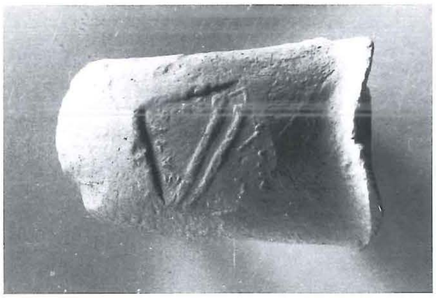

Fig. 3. Timbre du fabricant Σάτυρος sous l'éponyme Λάμιος produit à Thasos vers 370-365 et découvert à Athènes.
Athènes, American School of Classical Studies, SS 4739.
Σάτυ|ρος | Λάμιο|ς *Aulos*

complémentaires, joués simultanément[9]. Notons-le au passage: les «deux torches» qui servent d'emblème à un timbre thasien ancien, apposé sur une amphore du fabricant Σάτυρος sous l'éponyme Λάμιος (vers 370-365)[10], ont en réalité toutes chances de constituer un αὐλός double, aux embouchures évasées (fig. 3)[11].

D'ordinaire, ce sont des hommes, des satyres ou des dieux qui jouent de l'αὐλός, non des animaux. Il existe cependant une autre représentation de dauphin aulète: elle se trouve au médaillon d'une coupe attique trouvée à Vulci, qui appartient au groupe de Siana et remonte au deuxième quart du VI^{e} siècle (fig. 4)[12]. Nous tenons là un parallèle suffisamment solide pour garantir l'identification de l'emblème thasien. Qui plus est, la technique picturale et l'espace disponible sur la coupe ont donné au peintre d'Athènes deux avantages sur le graveur de Thasos: il a pu représenter le dauphin jusque dans ses moindres détails[13], et l'intégrer dans une image plus développée. Le peintre de la coupe a ainsi poussé l'imitation jusqu'à doter son dauphin d'une φορβειά, une sorte de muselière utilisée par les aulètes humains pour contrôler leur souffle[14]. La comparaison du timbre et de la coupe contribuera à éclairer le motif du dauphin aulète.

Pourquoi les dauphins ont-ils joué de l'αὐλός? Pour répondre à cette question, il faut d'abord considérer l'anatomie du dauphin et consulter les textes. Le dauphin, comme tous les cétacés, respire à l'aide d'un évent, sur lequel débouche un conduit relié aux poumons; l'évent reste clos en plongée, mais il s'ouvre dès que l'animal fait surface (fig. 2). Or, Aristote nous apprend que les Grecs disposaient de deux mots pour désigner le conduit respiratoire du dauphin. Dans l'*Histoire des animaux*, en effet, il définit d'abord les cétacés comme «tout ce qui a un αὐλός»[15], puis comme «tout ce qui a un φυσητήρ»[16]. Le terme d'αὐλός est marqué par une forte polysémie[17]: dès l'époque archaïque, il s'applique indifféremment à toute espèce de «tuyau creux et allongé»[18]. Comme nom d'agent, φυσητήρ désigne littéralement «ce qui sert à souffler» ou «le souffleur». Bien que φυσητήρ puisse à l'occasion qualifier un instrument à vent[19], seul αὐλός s'est spécialisé au point de signifier, dans son emploi le plus fréquent, l'instrument représenté sur la série de timbres thasiens. Ce premier excursus par les textes démontre que la polysémie d'αὐλός associe l'évent du dauphin à un instrument de musique[20].

A les considérer maintenant sous l'angle de la religion, l'αὐλός et le dauphin présentent un autre trait commun: ils sont tous deux liés à Dionysos et Apollon. L'αὐλός, d'une part, accompagne le thiase dionysiaque, mais c'est à Apollon que les aulètes consacrent le morceau le plus difficile de leur répertoire, le nome pythique, qui retrace le combat du dieu contre le serpent de Delphes[21]. Le

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9 Reinach 1912, 300-332. Sur le rapport des deux tuyaux, Bélis 1984, 111-122. Cf. Bélis 1989, 138-141.

10 Garlan 1999a, 181, n° 428.

11 Bon & Bon, 491, n° 2138, identifiaient l'emblème à «deux torches ou deux flûtes parallèles».

12 Rome, Villa Giulia, inv. 64608. Simon 1976, 78-79, pl. 61 (intérieur et extérieur de la coupe). Siedentopf 1990, 322, fig. 55.3. Spivey & Rasmussen 1986, 6, fig. 13. Lissarrague 1987, 115-117, fig. 93. Descoeudres 2000, 332, fig. 7. Cf. Piettre 1996, 19-20. L'extérieur de la coupe porte une frise continue de palmettes et un sphinx sur chaque face.

13 Sur la typologie des dauphins dans l'art archaïque, voir Isler 1977, 23-32.

14 Sur cet accessoire, voir Bélis 1986a.

15 Arist., *HA*, IV, 10 [537a31-537b2].

16 *Ibid.*, VI, 12 [566b, 3].

17 Skoda 1983, 262-269.

18 Chantraine 1968, 140-141.

19 Hdt., IV, 2, utilise ainsi le mot à propos d'un instrument scythe.

20 Cf. Lissarrague 1987, 115.

21 Bélis 1999, 132.

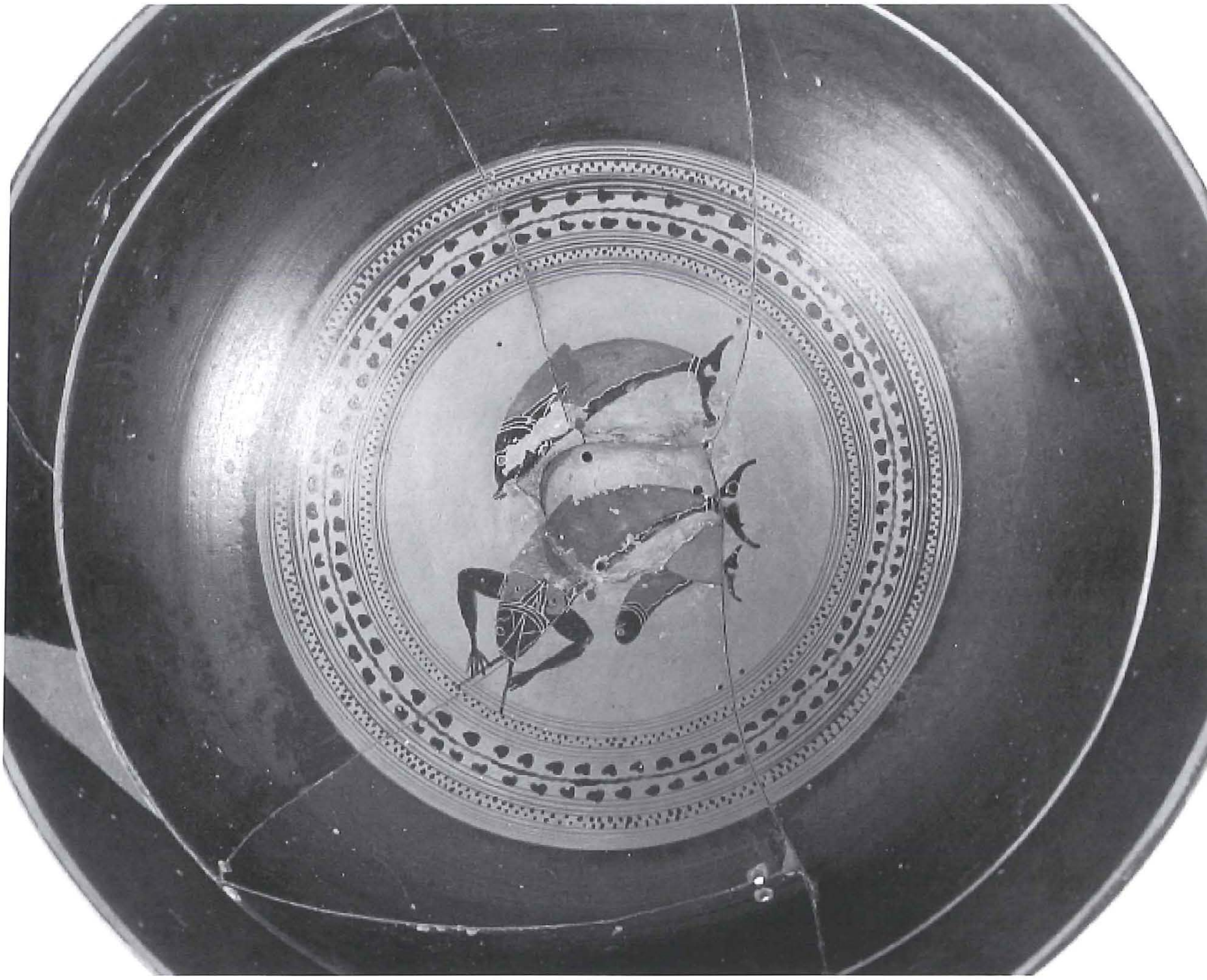

Fig. 4. Coupe de Siana produite à Athènes vers 575-550 et découverte à Vulci. Diamètre: 24.5 cm. (Hauteur: 12.5 cm.) Rome, Villa Giulia, inv. 64608.

dauphin, d'autre part, intervient dans la mythologie des deux divinités, dans des circonstances difficiles à définir[22]. Garant de la citoyenneté, Apollon delphinien préside à l'initiation des éphèbes; l'étymologie rattache son épiclèse au dauphin[23]. Il est vrai qu'en ramenant les naufragés sur son dos, l'animal assure leur réintégration à la cité, et qu'il goûte fort, comme Apollon, la musique et les jeunes gens[24]. Mais cela ne suffit sans doute pas à expliquer l'épiclèse de delphinien. La dimension marine de Dionysos, en revanche, est beaucoup plus affirmée (le dieu reçoit même, à Pagases, l'épiclèse de πελάγιος)[25], et le dauphin y participe de deux manières. Il assure d'abord le retour de la vie sur terre – en convoyant Dionysos et les héros qui lui sont apparentés[26] –, ou sa perpétuation dans la mer, comme en témoigne la métamorphose des

[22] Il n'y a rien à tirer de Somville 1984.
[23] Graf 1979.
[24] Calame 1996, 320-321.
[25] Otto 1969, 171-173. Pour l'épiclèse, voir Théopomp. Hist. frag. Jacoby F 2b, 352 (schol. T. *Il.* XXIV, 428).
[26] Inventaire des sources littéraires dans Stebbins 1929, 60-73. Burkert 1972, 218-226. Usener 1899, 138-180.

pirates tyrrhéniens en dauphins par Dionysos[27]. La nature du dauphin l'attire ensuite, incidemment, vers le κῶμος dionysiaque: son front bombé lui vaut d'être surnommé σιμός, à l'image du satyre[28]; et si, à l'origine, la formule homérique de la «mer couleur de vin», οἶνοψ πόντος[29], n'évoque sans doute pas Dionysos[30], les poètes (lyriques en particulier) ont souvent comparé le banquet à un navire, les convives à un équipage et l'ivresse à un naufrage[31]. C'est dans le domaine artistique que le rapprochement de la mer et du vin porte à conséquence pour le dauphin.

La coupe de Siana, dont une frise de lierre borde le médaillon, associe en effet le dauphin aulète au monde du banquet et du κῶμος dionysiaque. François Lissarrague[32] l'a rapprochée d'un ensemble de vases, pour la plupart produits aux VIe et Ve siècles, qui, par leur forme de navire ou leur décor marin, matérialisent le lien entre la mer et le vin[33]. Le dauphin apparaît maintes fois sur ces vases: il peut notamment servir de monture à des guerriers, presque toujours accompagnés par un aulète debout qui les apparente à un chœur théâtral[34], ou à Eros, susceptible de jouer lui-même de l'instrument[35]. La familiarité du dauphin avec l'homme et la musique, manifeste dans l'histoire d'Arion[36], et son intérêt pour l'αὐλός, que F. Lissarrague illustre par un fragment de Pindare sur lequel nous reviendrons[37], expliqueraient qu'entre les espèces marines le dauphin ait été choisi pour participer au banquet. Les trois dauphins de la coupe de Siana seraient donc des *kômastes* animaux, et les bras du dauphin aulète auraient en quelque sorte un caractère contingent: le peintre les aurait donnés au dauphin pour lui permettre de jouer de l'αὐλός.

Tel n'est pas l'avis de Jean-Paul Descoeudres[38], qui considère que les dauphins de Dionysos ont une valeur eschatologique. Il appuie son raisonnement sur des ouvrages importés ou réalisés en Etrurie, à commencer par la tombe dite des Lionnes, à Tarquinia, qui remonte à la fin du VIe siècle[39]. Les peintures murales y figurent une scène de banquet[40], que souligne une frise aquatique où évoluent des dauphins. Les deux félins qui ornent le tympan, des panthères en réalité, évoquent Dionysos, dont l'importance funéraire dans la région se trouve confirmée par le décor et le mobilier d'autres tombes étrusques. Mais la frise aquatique? Elle apparaît également sur les miroirs étrusques de la même période, très régulièrement associée à des scènes dionysiaques; une hydrie à figures noires, attribuée au peintre du Vatican 238 – sans doute produite à Vulci vers 500 –, permet d'en préciser l'interprétation (fig. 5)[41]. Si le rapport des deux registres supérieurs avec Dionysos ne peut être que conjecturé – les danseurs du col participent peut-être à un thiase, le triton de l'épaule pourrait être identifié à Glaukos[42] –, le registre inférieur ne laisse

[27] Herter 1980 (le rapport entre les *Métamorphoses* d'Ovide et la frise du monument de Lysicrate n'est pas démontré). Sur la localisation du mythe, voir Briquel 1984, 273-275: si le témoignage d'E., *Cyc.*, 18, permet de conjecturer que les Tyrrhéniens venaient d'Etrurie, l'enlèvement de Dionysos est le plus fréquemment situé à Naxos. Pour le traitement artistique du sujet, cf. *infra* n. 41.

[28] Stebbins 1929, 5.

[29] *Il.*, II, 613, etc.; *Od.*, I, 183, etc.

[30] *Contra* Daraki 1982, 3-22. Le seul argument chronologiquement pertinent est la mention d'un taureau «couleur de vin» dans une tablette mycénienne.

[31] Slater 1976, 161-170; 1981, 205-214. Lissarrague 1987, 104-108. Pour le traitement artistique du sujet, cf. *infra* n. 32.

[32] Lissarrague 1987, 108-118.

[33] Voir en dernier lieu Laurens 2002, 179-186, pl. 47-49.

[34] Catalogue de ces représentations dans Green 1985, 95-118, nos 6, 13-17. Malgré l'absence d'aulète, c'est bien un chœur qui se trouve représenté sur le *psykter* d'Oltos (no 6): voir Sifakis 1967, 36-37.

[35] Schefold 1960, 207, no 222.

[36] Inventaire des sources littéraires dans Stebbins 1929, 66-69; cf. *infra* n. 70.

[37] Pi., frag. Snell 140b, 15-17 (cf. Plu., *Quaes. con.*, VII, 5, 2 [704 F] = *Sol. an.*, 36 [984 C 1]. Il faut désormais se référer à l'édition de Race (Loeb, 1997) et renoncer à la traduction de Puech (Belles Lettres, 1923).

[38] Descoeudres 2000, 325-334. L'article ne fait pas référence à Lissarrague 1987.

[39] Cf. Steingräber 1985, 324-325, no 77 (bibliographie), pl. 97-104.

[40] Deux aulètes y participent.

[41] Toledo, Museum of Arts, 82.134. Voir la bibliographie réunie par Descoeudres 2000, 330, n. 26. Sur l'attribution au peintre du Vatican 238, voir Spivey & Rasmussen 1986. Avant le monument chorégique de Lysicrate (335/4 av. J.-C.), il n'est pas de représentation assurée de la métamorphose des pirates: voir la liste établie par Descoeudres 2000, 334, n. 40. Pour d'autres représentations de métamorphoses d'hommes en dauphins, ou d'hybrides, cf. *infra* n. 46.

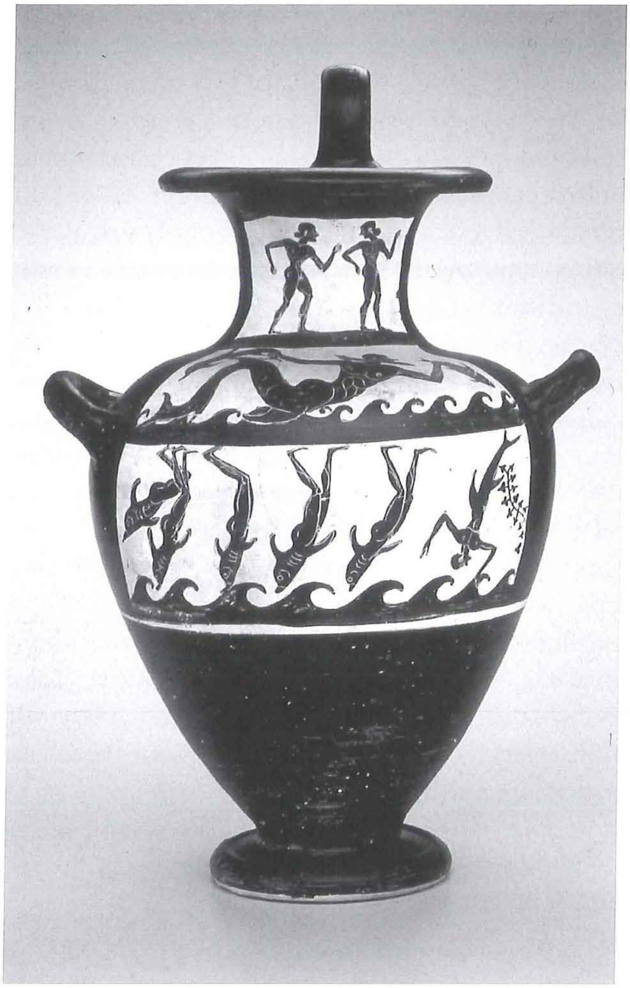

Fig. 5. Hydrie attribuée au peintre du Vatican 238, produite à Vulci (?) vers 500; lieu de découverte inconnu. Hauteur: 52.1 cm. Diamètre de la panse: 29.6 cm.
Toledo, Museum of Arts, 82.134.

aucune place au doute. Les six plongeurs représentés sur la panse se métamorphosent en dauphins, et la branche de lierre qui apparaît sur la gauche du panneau indique que cette métamorphose est l'œuvre de Dionysos. La scène rappelle inévitablement l'épisode des pirates tyrrhéniens, mais il serait abusif d'en faire une simple illustration du mythe rapporté par l'*Hymne homérique à Dionysos*, tant sont nombreuses les divergences: aucune trace de l'épiphanie de Dionysos sur l'hydrie, ni d'ours ni même de navire[43]! Combinée au poème, l'image atteste cependant la croyance en un au-delà maritime, semblable à l'île des bienheureux évoquée par Hésiode[44], et soumis à Dionysos, qu'un fragment d'Héraclite assimile à Hadès[45]. Par conséquent, la frise de la tombe des lionnes marquerait la séparation entre le monde des vivants et le monde des morts, et ses dauphins seraient en réalité des défunts, que Dionysos aurait métamorphosés pour leur permettre de gagner son royaume. Parmi les vases qui figurent des êtres tenant à la fois de l'homme et du dauphin[46], c'est la coupe de Siana qui confirmerait le mieux cette hypothèse: le dauphin aulète serait bien un *kômaste*, mais un *kômaste* humain, dont les bras seraient l'indice de la métamorphose.

Par les analyses contrastées qu'il a suscitées, le thème du dauphin aulète illustre bien l'ambivalence des rapports entre Dionysos et le monde marin[47]. Les timbres de Thasos, qui figurent souvent des thèmes

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[42] Dionysos empêcha Glaukos d'approcher Ariane à Naxos. Selon Descoeudres 2000, 330, les parties sexuelles du triton, «clairement visibles», seraient l'indice conventionnel d'une condition servile ou socialement modeste. Mais ni les origines (pêcheur, certes, mais d'origine divine dans plusieurs versions de la légende) ni l'iconographie de Glaukos ne suffisent à étayer cette hypothèse: voir Jentel 1988, 271-273.

[43] *H. Bacch.*, I, 45-48 (le jeune Dionysos se transforme en lion et suscite un ours). Pour une illustration moderne de l'hymne, voir Vigenère 1597, 162.

[44] Hes., *Op.*, 170-171.

[45] Heraclit., frag. Diels-Kranz 15.

[46] Aux documents mentionnés par Descoeudres 2000, 332, on ajoutera les références de Herter 1980, 131, n. 2. Ridgway 1970, 91, suggère de reconnaître un chœur d'hommes «avec des dauphins attachés à leur dos» sur une face d'une hydrie attribuée au peintre de Pâris (Hannestad 1974, n° 5), mais les personnages féminins poursuivis sur l'autre face s'y opposent.

[47] Il en va de même de la coupe d'Exékias, dont l'analyse conclut le chapitre de F. Lissarrague 1987, 116-118, fig. 94, et l'article de Descoeudres 2000, 334, fig. 8. Constatant que cette coupe a été retrouvée à Vulci, comme l'hydrie du peintre du Vatican 235 et la coupe au dauphin aulète, J.-P. Descoeudres se demande si elle a été créée «non seulement pour le marché étrusque en général, mais à l'instigation d'un client particulier». Gras 1985, 648, considère quant à lui que «la coupe d'Exékias exalte [...] le triomphe du commerce grec et de Dionysos», et qu'elle portait «un message capable d'être parfaitement interprété par la clientèle étrusque». L'iconographie serait-elle déterminée par quelque loi du marché? L'exemple du dauphin aulète, attesté aux époques archaïque et hellénistique, sur une coupe athénienne et des timbres thasiens, laisse penser le contraire. Cf. Reusser 2002, 145-190, qui conclut à la non-spécificité de l'iconographie des vases attiques retrouvés en Etrurie.

dionysiaques, laissent penser que l'animal ressortit exclusivement au monde du vin: il serait a priori étonnant que le graveur de matrices ait introduit un motif eschatologique sur les amphores de la cité. La coupe de Siana elle-même admet difficilement une autre explication. Sous le dauphin aulète, en effet, le peintre a représenté un dauphin dont la petitesse n'est pas le trait le plus singulier: il s'agit d'un dauphin phallique[48]. La représentation n'est pas sans parallèle; à Thasos, par exemple, un dauphin (plutôt qu'un poisson) en forme de phallus accompagne une inscription pédérastique gravée sur l'une des portes de la ville[49]. S'agissant de la coupe, deux explications sont envisageables. Le peintre a pu simplement tirer parti de la forme du dauphin; il a pu aussi jouer sur les mots, en considérant l'animal comme une φάλλαινα, une baleine[50]. Bien qu'à l'époque classique le terme soit déjà connoté par la monstruosité[51], au plan de l'étymologie, φάλλαινα n'est pas défini par la notion de taille. Bien plus, φαλλός et φάλλαινα dérivent d'une même racine (*bhel-)[52], et se répondent comme φῶκος et φώκαινα, ou θεός et θέαινα[53]. L'analogie des deux mots était donc perceptible[54], et un passage controversé de Pausanias[55], qui relate la consécration à Dionysos φαλλήν d'une statue découverte en mer, la sollicite peut-être. Les gens de Méthymna avaient ramené dans leurs filets une souche d'olivier dont l'extrémité figurait un visage (πρόσωπον): son aspect, au dire de Pausanias, était divin mais étranger. Interrogée, la pythie recommanda de vénérer Dionysos φαλλήν[56]. Suivant son conseil, les gens de Méthymna conservèrent la statue de bois (ξόανον), et en envoyèrent une en bronze à Delphes. Selon Françoise Frontisi-Ducroux[57], qui a repris l'analyse du dossier, la consécration de la statue à Dionysos φαλλήν s'expliquerait par son aspect au moment de la découverte. Le commentaire de l'oracle de la pythie par Oenomaos[58] juxtapose en effet l'adjectif φαλληνός et les adjectifs de matière λίθινος, χαλκέος et χρυσέος, appliqués à d'autres statues. «Φαλληνός serait dérivé du même radical qui a fourni φάλλη (φάλλαινα); plutôt qu'à la forme de la baleine, on pensera aux boursouflures que, avec des concrétions, le séjour dans l'eau aurait provoquées.» «On peut aussi supposer une contamination sémantique avec les termes issus d'une autre racine *bhel- exprimant la pâleur, la blancheur, qui a fourni en grec l'adjectif φαλός glosé λευκός (blanc) par Hésychius, φαλιός (même sens) et divers dérivés»[59]. Cependant, si la statue trouvée en mer avait été blanchie par la corrosion, on ne comprendrait pas que la statue envoyée à Delphes, qui en était probablement la réplique – ou qui du moins n'oblitérait pas techniquement la singularité qui avait motivé la dédicace – fût en bronze et non en marbre ou quelque autre matériau blanc. Par contre, lorsqu'il était martelé, le bronze pouvait reproduire des boursouflures: évoquant le boxeur Amykos, durement entamé par les combats, Théocrite le déclare «martelé comme un colosse»[60]! Mais rien ne permet d'exclure que la statue de Méthymna ait eu l'aspect d'un φαλλός (même son extrémité en forme de visage[61]) et sa prise en mer en faisait une φάλλαινα acceptable. En tous les cas, le dauphin phallique ne saurait témoigner d'aucune métamorphose: c'est le peintre qui a librement associé deux réalités différentes. Les bras du dauphin aulète ont donc bien, comme le supposait F. Lissarrague, un caractère contingent.

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48 La chose a échappé à Lissarrague 1987.

49 Dans une lettre datée du 3 juin 1925, H. Seyrig écrit à Ch. Picard: «La fouille de la nouvelle porte a conduit à la découverte d'une chambre [...]. Sur le parement intérieur de la chambre est un graffito qui représente un phallus, auquel on a donné, par quelqu'intention [*sic*] plaisante, la figure générale d'un poisson. Au dessous [*sic*], on lit: ΣΟΧΗΘΕΩΓΕΝΟΥΣ, peut-être προ]σοχή ....» (Archives de l'Ecole française d'Athènes, FCP 1,11.) Le rapport sur les fouilles de Thasos pour le mois de mai 1925 ne contient plus la description détaillée de la gravure; il en reste cependant une photographie (*ibid.* Thasos 1-1925 E annexe).

50 Φάλη dans Lyc., 84, 394.

51 Ar., *V.*, 35, 39.

52 Taillardat 1980, 1175.

53 Immisch 1915, 194-197. Il est vrai que dans le dialecte rhodien φάλλαινα désigne l'âme (schol. Nic. *Th.*, 760), mais c'est la πετομένη ψυχή, l'âme volante, un phalène et non une baleine (cf. schol. Ar. *Ran.*, 507).

54 Dans la comédie, φαλλός donne lieu à des jeux de mots parfois subtils: voir Henderson 1975, 112-113.

55 Paus., X, 19, 3.

56 Le mot dépend d'une conjecture assurée de Lobeck.

57 Frontisi-Ducroux 1991, 193-201.

58 Cité par Eus., *PE*, V, 36.

59 Frontisi-Ducroux 1991, 196-197.

60 Theoc., XXII, 47: σφυρήλατος οἷα κολοσσός.

61 Voir par exemple Keuls 1993, 77, n° 63; 81, n° 69.

Plusieurs textes évoquent le goût du dauphin pour l'αὐλός. Le plus ancien est un fragment de Pindare dont il a déjà été fait mention[62], mais dont l'originalité reste à relever. Le poète se compare à un dauphin, attiré par le son de l'αὐλός. Malgré les lacunes du fragment, le contexte semble montrer que l'αὐλός ne sonne pas pour Dionysos, mais pour Apollon: aucun autre document ne réunit ainsi le dieu, l'instrument et l'animal. Dans un passage de son *Electre* qui sera parodié par Aristophane[63], Euripide imagine qu'un dauphin se balance à la proue d'un navire, et que les chœurs des Néréides dansent autour de lui[64]; l'auteur qualifie ce dauphin de φίλαυλος.

ΧΟΡΟΣ

Κλειναὶ νᾶες, αἵ ποτ' ἔβατε Τροίαν
τοῖς ἀμετρήτοις ἐρετμοῖς
ἵν' ὁ φίλαυλος ἔπαλλε δελ-
πέμπουσαι χορεύματα Νηρῄδων,
φὶς πρῴραις κυανεμβόλοι-
σιν εἱλισσόμενος [...].

434 χορεύματα Diggle χοροὺς μετὰ L.

CHŒUR

Navires glorieux, qui autrefois alliez à Troie accompagnant avec des rames innombrables les chœurs des Néréides, là où le dauphin ami de l'*aulos* se balançait, décrivant des cercles pour les proues aux éperons bleus [...].

Comment comprendre cette épithète? Les traducteurs et les commentateurs sont unanimes: le dauphin est φίλαυλος parce qu'il aime le son de l'αὐλός. Ce serait donc un humain qui attirerait le dauphin en jouant de l'αὐλός[65], et plus précisément le τριηραύλης chargé de donner la cadence aux rameurs[66], dont l'institution à Athènes remontait à Thémistocle[67]. Il est pourtant une scholie d'Aristophane qui propose une explication différente du texte d'Euripide: le dauphin φίλαυλος ne serait pas un auditeur, mais un joueur d'αὐλός[68].

τὸ δέ, ἵν' ὁ φίλαυλος, ἐξ Ἠλέκτρας] φίλαυλος δὲ ὁ τοὺς αὐλοὺς καὶ τὰ μέλη ποιῶν. αἰνίττεται δ' ἴσως εἰς τὸν Ἀριόνιον μῦθον.

Ce passage, «là où le dauphin ami de l'*aulos*», provient de l'*Electre*. Est ami de l'*aulos* celui qui fait de l'*aulos* et des chants. Il s'agit peut-être d'une allusion au mythe d'Arion.

Le témoignage de la scholie, corroboré par la série de timbres thasiens et la coupe de Siana, a valeur de *lectio difficilior*, et donne un sens très satisfaisant au texte d'Euripide: c'est le dauphin qui fait danser les Néréides à la proue du navire, et non le τριηραύλης, souvent décrié comme un musicien de bas étage[69]. Les mots en φιλ-, en effet, ont souvent un double sens, actif et passif: le φιλόμυθος, par exemple, éprouve autant de plaisir à écouter des histoires qu'à les raconter. Loin de disqualifier le scholiaste, la mention d'Arion, célèbre pour sa cithare, rejoint une tradition méconnue qui attribue au poète une activité d'aulète[70]. Il importe toutefois de noter que dans une autre tragédie d'Euripide, *Iphigénie en Tauride*, Pan, dont la syrinx rythme la nage des rames, occupe la position d'un τριηραύλης[71]: l'interprétation traditionnelle du dauphin φίλαυλος ne peut donc être rejetée.

Les textes font part de l'intérêt du dauphin non seulement pour l'αὐλός[72], parfois nommé

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[62] Cf. n. 37.

[63] E., *El.*, 435. Ar., *Ran.*, 1317.

[64] Sur la conjecture de la ligne 434, voir Diggle 1994, 153-154 (reprise d'un article de 1977), et West 1980, 14.

[65] Selon Plu., *Sep. sap. con.*, 19 [162 F], les dauphins dansent et suivent les navires lorsque la nage des rames est accompagnée par un chant ou de l'αὐλός.

[66] Euripide: Kovacs (Loeb, 1998), 199, n. 10; Denniston (ed.) 1939, 102; Parmentier (Belles Lettres, 1925), 208, n. 2. Aristophane: Dover (ed.) 1993, 355. Quand il n'est pas question du τριηραύλης, c'est l'histoire d'Arion qui est invoquée: Stanford (ed.) 1958, 184.

[67] Max. Tyr., XXVII, 6.

[68] Schol. Ar. *Ran.*, 1317.

[69] Bélis 1999, 75-79.

[70] Schamp 1976, 105-109, qui n'allègue pas la scholie d'Aristophane.

[71] E., *IT*, 1125-1131 (cf. n. 64) Apollon fait figure de κελευστής, comme Orphée dans *Hyps.*, frag. I, 3, 10. Cf. Guthrie 1935, 28. *Contra* Bélis 1999, 76.

[72] Cf. n. 36, 64, 65. Voir encore S. E., *M.*, VI, 32, et Ael., *NA*, XII, 45. L'αὐλός accompagne la métamorphose des pirates dans [Apollod.], III, 5, 3, et Nonn., *D.*, XLV, 163.

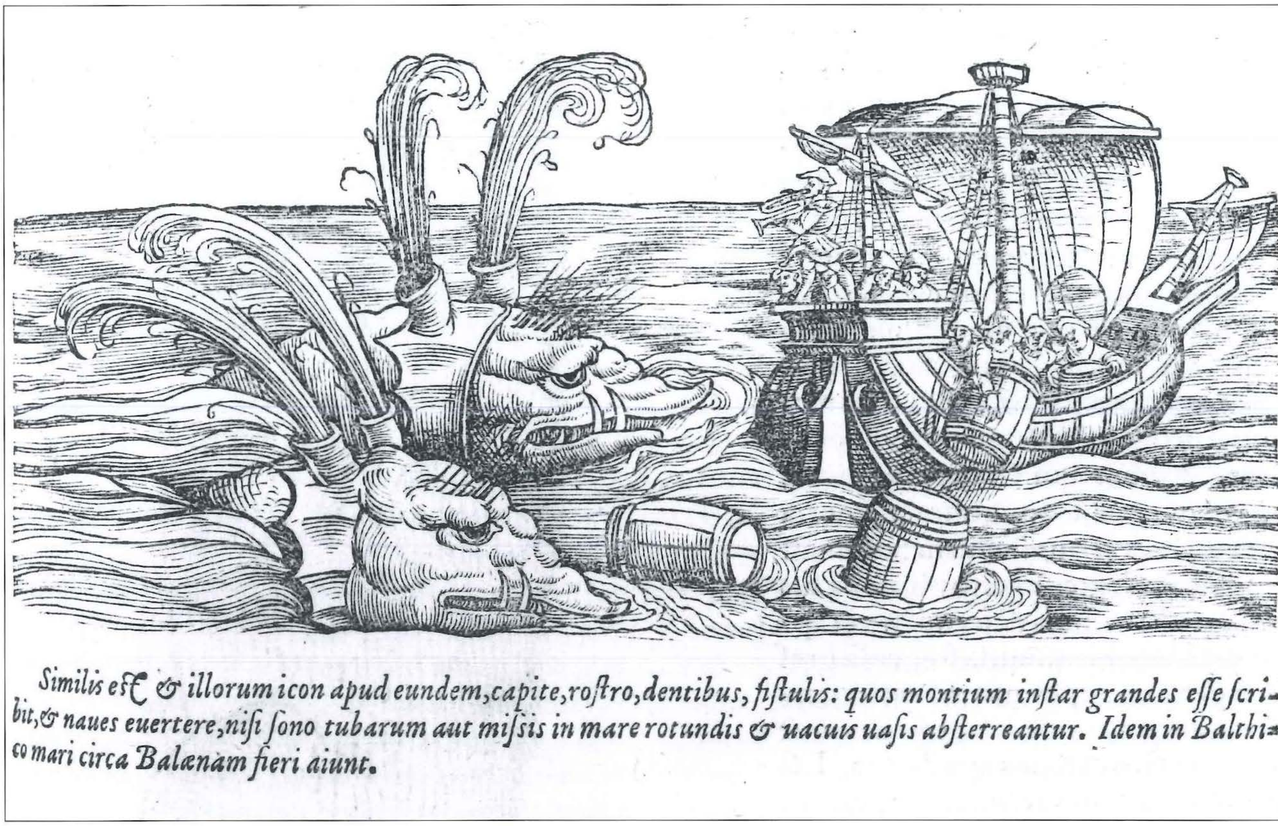

Fig. 6. Gravure de Conrad Gesner (1560), d'après Olaus Magnus (1555). Des marins des Féroé tentent d'échapper à un cétacé en lui jetant des tonneaux et en lui jouant de la trompette.
Bibliothèque publique et universitaire de Neuchâtel.

κάλαμος[73], mais aussi, plus tard, pour d'autres instruments à vent – syrinx[74] ou orgue hydraulique[75]. Dès lors, est-ce la polysémie d'αὐλός ou la simple analogie physique de l'instrument avec le conduit respiratoire du cétacé qu'illustre le motif du dauphin aulète?

En 1551, Pierre Belon du Mans[76], auteur de la première étude moderne sur le dauphin, nomme «flûte» l'évent de l'animal: il ne fait là que (mal) traduire le terme d'αὐλός, qu'il a trouvé chez Aristote[77]. Une quinzaine d'années plus tard, le naturaliste suisse Conrad Gesner décrit les rapports de l'homme avec la baleine[78]: ses commentaires et ses planches s'inspirent de la description des peuples du Nord par Olaus Magnus[79]. Sur la première planche (fig. 6), un trompettiste se charge d'effrayer le cétacé[80]: il n'y a aucune analogie entre l'animal et l'instrument. Mais sur la seconde planche (fig. 7), l'animal se fait dépecer. Un joueur de

[73] *AP*, VII, 214. Sur l'identité de l'αὐλός et du κάλαμος, Bélis 1986b, 22, n. 9.
[74] Opp., *H.*, V, 455-456.
[75] Plin., *HN*, IX, 24. Chacun des tuyaux de l'orgue hydraulique est un αὐλός ne donnant qu'une seule note. Sol., *Coll. rer. mem.*, XII, 6, qui paraphrase Pline, remplace *hydraulis* par *tibia*, αὐλός. Une inscription rhodienne atteste l'utilisation de l'orgue hydraulique dans le culte de Dionysos: voir Reinach 1904, 203-210.
[76] Belon du Mans 1551, 28.
[77] Cf. n. 15.
[78] Gesner 1560, 176-177, pour la première édition des gravures.
[79] Olaus Magnus 1555, 740, 745, 761.
[80] Selon Arvy 1977, 275, à l'époque moderne, le musicien embarqué sur les navires pouvait aussi avoir vocation à attirer les cétacés.

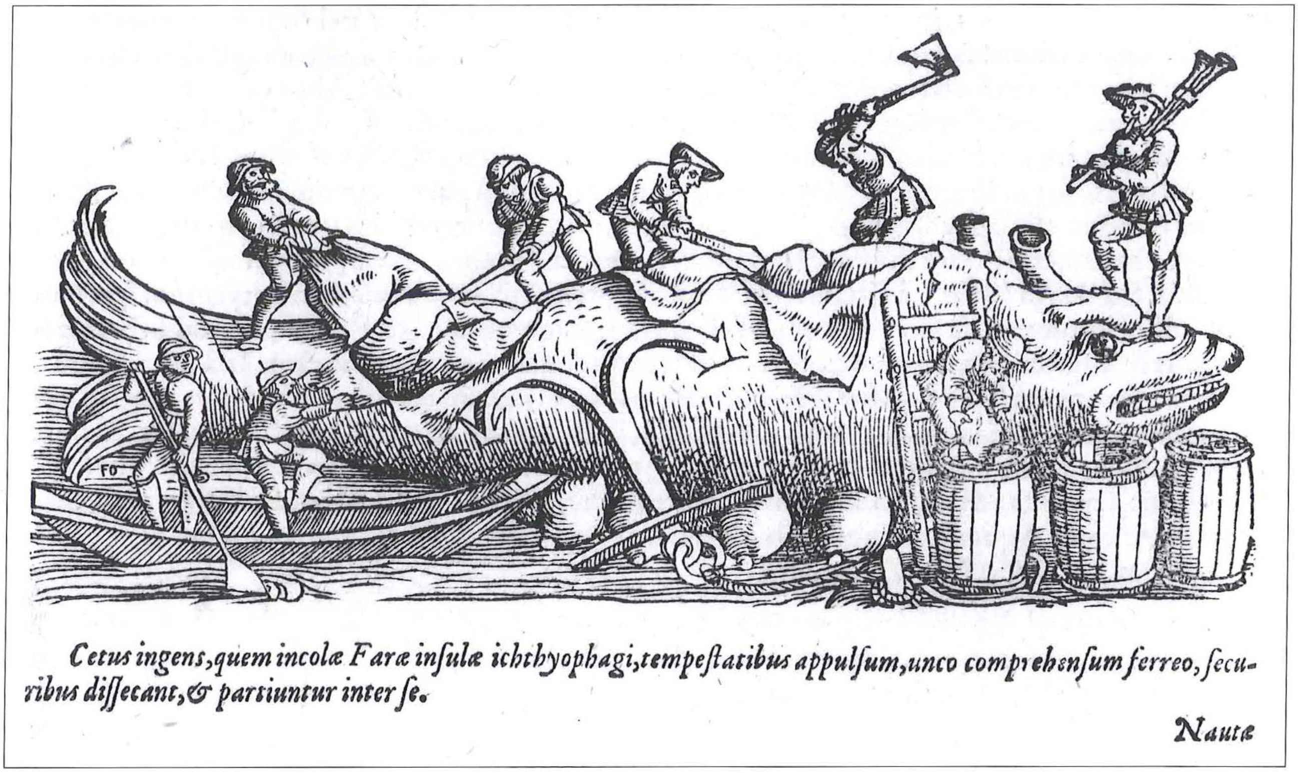

Fig. 7. Gravure de Conrad Gesner (1560), d'après Olaus Magnus (1555). Des habitants des Féroé dépècent un cétacé au son de la cornemuse.
Bibliothèque publique et universitaire de Neuchâtel.

cornemuse se tient sur la tête du cétacé[81]. Les deux «souffleurs» se font face: les tuyaux de la cornemuse répondent aux évents de la baleine. Si l'analogie physique était seule entrée en ligne de compte, le dauphin, doté d'un évent simple[82], n'aurait pas joué d'αὐλός. Le motif du dauphin aulète est donc avant tout l'illustration d'un mythe[83] généré par la polysémie d'un mot[84].

Post-scriptum. Gerda Schwarz, «Selige Helden. Überlegungen zur Darstellung bewaffneter Delphinreite», *Jahreshefte des Österreichischen archäologischen Institutes in Wien* 71 (2002), pp. 251-263, allègue de nouveaux documents, tant archéologiques que littéraires, qui tendent à identifier les hoplites montant des dauphins à des guerriers morts. L'analyse des documents présentés ici ne s'en trouve pas affectée.

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[81] Le joueur de cornemuse, comme le trompettiste, n'apparaît pas dans les vignettes d'Olaus Magnus (ni en 1555 ni dans les éditions suivantes). Le texte de Gesner 1558, 382-384, comme celui d'Olaus Magnus 1555, ne l'évoque pas non plus, contrairement au trompettiste. C'est donc la nature du cétacé qui doit expliquer l'apparition du joueur de cornemuse.

[82] Chez les baleines à dents (Odontocètes), dont fait partie le dauphin, l'évent est simple, alors que les baleines à fanons (Mysticètes) sont dotées d'un évent double.

[83] Cf. Gagnepain 1982, 114: «Si le *logos* est éminemment action du langage sur lui-même en fonction de l'ordre des choses, le *muthos*, au contraire, est action du langage sur les choses dans le but de les conformer à ce qu'il dit.»

[84] Le dauphin ordinaire, qui ne joue d'aucun instrument, apparaît fréquemment sur les timbres amphoriques grecs, et thasiens en particulier (cf. Garlan 1999a, 21; Bon & Bon 1957, 29): l'existence d'un dauphin aulète et la fréquence des thèmes dionysiaques sur les timbres de Thasos tendent à le rapprocher de Dionysos.

Ateliers d'amphores de la *chôra* égyptienne aux époques romaine et byzantine

Pascale Ballet & Delphine Dixneuf

On présentera de manière synthétique les résultats acquis depuis une dizaine d'années en Egypte, résultats visant à compléter notre connaissance du réseau des ateliers amphoriques implantés dans la *chôra* égyptienne aux périodes romaine et byzantine (fig. 1). Quelques ateliers byzantins, rapidement explorés et sommairement présentés, seront plus amplement étudiés par Delphine Dixneuf.[1]

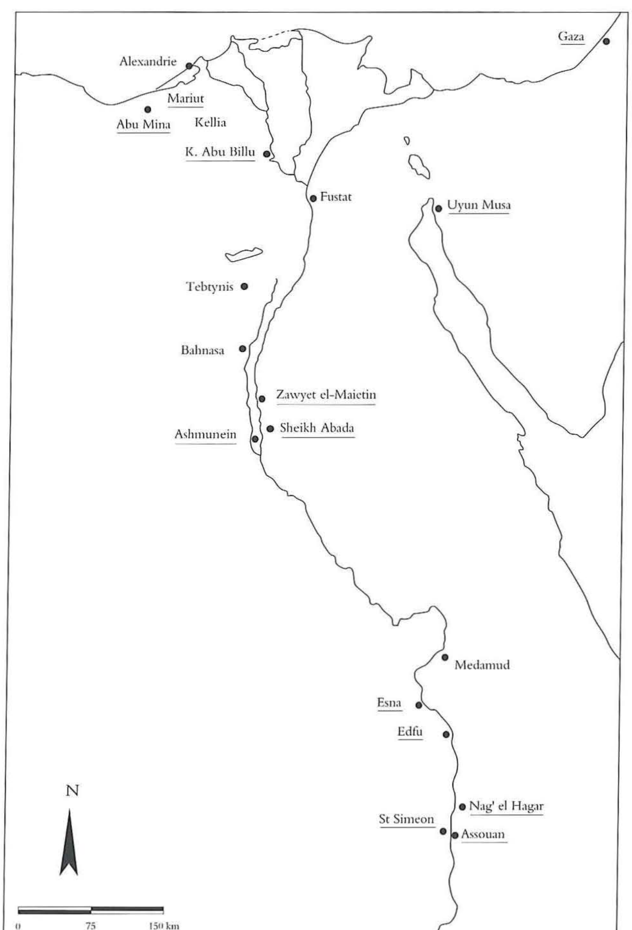


Fig. 1 l'Egypte romaine tardive. Principaux sites et centres de production (soulignés) mentionnés dans le texte

Etat des recherches sur les principaux ateliers de l'Egypte impériale et byzantine

Il y a une dizaine d'années, les grandes zones de production et les principaux ateliers reconnus étaient les suivants. *La Maréotide* a été révélée par les prospections de Jean-Yves Empereur et Maurice Picon, dont les principales productions connues se répartissent en Dressel 2-4 à anses bifides (AE 4) et en type bitronconique (AE 3) (fig. 2).[2] Les travaux actuellement menés par Kaan et Gonja Şenol sur les productions locales trouvées dans les contextes de consommation de la mégapole alexandrine prolongent ces enquêtes préliminaires.[3] À une cinquantaine de kilomètres au sud-ouest d'Alexandrie, est situé **le monastère d'Abu Mina** producteur d'amphores *Late Roman Amphora* 5/6 à pâte calcaire, à contenu vinaire selon toute vraisemblance (fig. 3).[4] La diffusion serait principalement régionale; elle ne semble pas, à quelques exceptions près, franchir les limites du Delta.[5]

La **Moyenne** Egypte s'illustre par les grands ateliers d'Ashmunein (Hermopolis Magna) et de Scheikh Abada (Antinoopolis), producteurs de *Late Roman* 7 vinaires (fig. 5); à Ashmunein, on produit également des amphores bitronconiques (ici appelées *Late Roman Hermopolite A*) (fig. 4) ainsi qu'à Zawiyet el-Maïetin.[6] La diffusion des *LRA* 7 est large; elle couvre toute la vallée du Nil et, bien au delà, atteint les rives de la Gaule méridionale.[7]

[1] Dans le cadre d'une thèse de Doctorat (codirection P. Ballet et J.-Y. Empereur).

[2] Empereur & Picon 1989; Empereur & Picon 1992; Empereur & Picon 1998; Empereur 1998.

[3] Şenol 2001.

[4] Engemann 1992.

[5] Egloff 1977 type 186.

[6] Bailey *et al.* 1982; Bailey & Spencer, 1982; Ballet *et al* 1991.

[7] Bonifay & Villedieu 1989, 31-32 et fig. 13; Bonifay & Piéri, 1995, 114; Piéri 2000, 25-26.

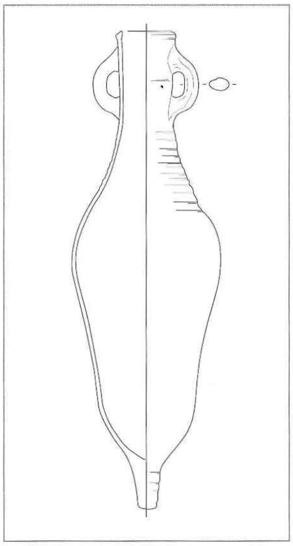


Fig. 2 Amphore bitronconique à pâte calcaire du Mariut (ou *Amphore Egyptienne* 3) (d'après Empereur & Picon 1998, fig. 4)

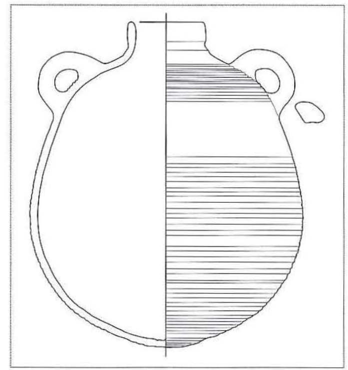


Fig. 3 Amphore LRA 5/6 à pâte calcaire d'Abou Mina, Kellia type Egloff 186 (d'après Egloff 1977, pl. 60)

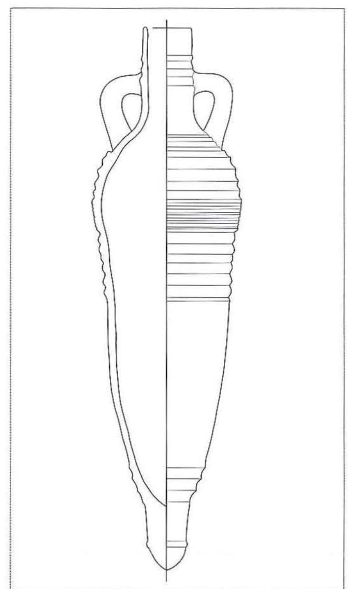


Fig. 5 Amphore *LRA* 7 à pâte alluviale, Ashmunein (d'après Bailey *et al.* 1982, fig. 35b)

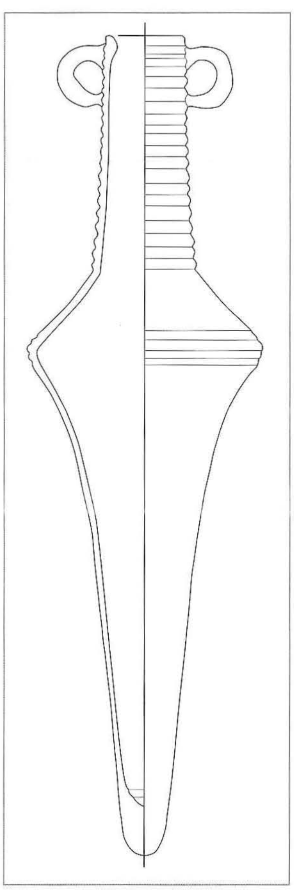


Fig. 4 Amphore bitronconique à pâte alluviale, Ashmunein (ou *Late Roman Hermopolite* A) (d'après Bailey *et al.* 1982, fig. 35a)

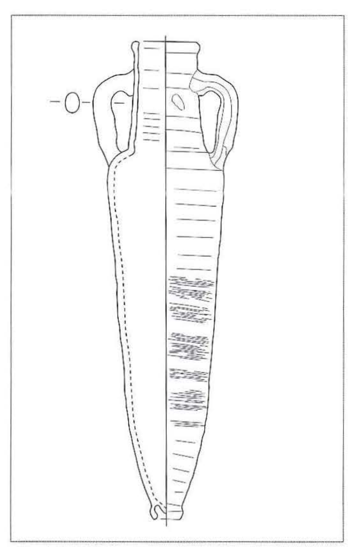


Fig. 6 Amphore assouannaise à pâte kaolinitique, type de l'Aga Khan. Haut-Empire (d'après Ballet & Vichy 1992, fig. 11b)

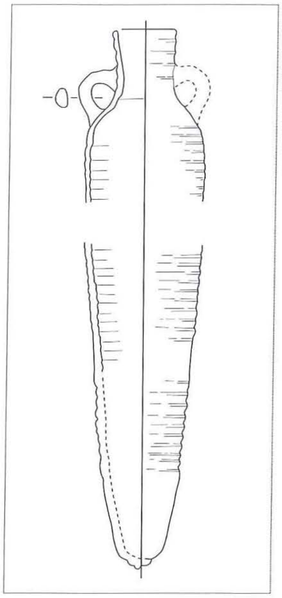


Fig. 7 Amphore assouannaise à pâte kaolinitique. Époque byzantine (d'après Gempeler 1992, K 715, fig. 122, 4-5)

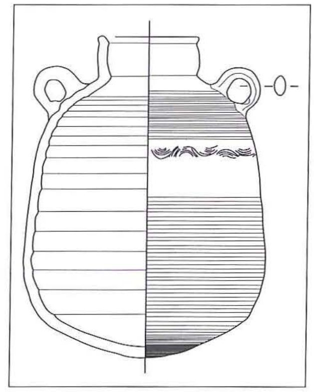


Fig. 8 Amphore *LRA* 5/6 à pâte alluviale, Kellia type Egloff 187 (d'après Egloff 1977, pl. 60)

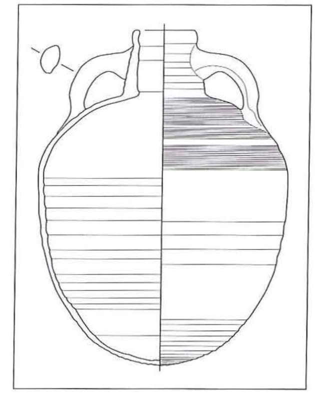


Fig. 9 Amphore à pâte alluviale, Kellia type Egloff 167 (d'après Bonnet 1994, fig. 225, n° 64)

La région d'Assouan comprend plusieurs centres utilisant les argiles kaolinitiques locales, et produisant, outre les amphores, de la céramique fine et commune.[8] Du nord au sud, les ateliers sont implantés à Naga' el-Hagar, près de Kôm Ombo, sur l'île d'Éléphantine, la rive ouest d'Assouan, près du mausolée de l'Aga Khan, et au monastère de Saint-Siméon.[9] À l'époque impériale, l'atelier situé à proximité du mausolée produit des amphores à grande cuve lisse et à pied creux (fig. 6).[10] À l'époque byzantine, il s'agit d'amphores à panse striée, de différents modules (fig. 7),[11] dont on pouvait voir quelques exemplaires *in situ* dans le monastère de Saint-Siméon, il y a quelques années.

Bien qu'il n'existe pas, dans l'état actuel des recherches, d'ateliers d'amphores dans le désert oriental, il importe de mentionner les travaux menés sur les sites de consommation,[12] sur les ports de la mer Rouge,[13] et les réflexions qu'ils suscitent sur les ateliers de la Vallée susceptibles d'alimenter les établissements de carriers et les fortins des pistes caravanières.

Les acquis récents

Depuis la dernière décennie, le dossier des amphores byzantines a connu un développement notable, en particulier dans l'Egypte du nord. À partir du VII[e] siècle, en contexte de consommation, les sites des Kellia[14] et d'Istabl Antar, à Fustat,[15] montrent la part croissante des amphores ovoïdes de fabrica tion égyptienne, inspirées des modèles orientaux (*LRA* 5/6), à pâte calcaire, grossièrement qualifiée d'amphore d'Abu Mina (fig. 3) ou Egloff 186,[16] à pâte siliceuse (fig. 8), et l'apparition d'un type peu répandu, de morphologie hybride, non classé dans les séries byzantines définies par Riley. Par commodité, on en gardera l'appellation éponyme, à savoir Egloff 167 (fig. 9).

8 Adams 1986.

9 Ballet & Vichy 1992, 113-116.

10 Ballet & Vichy 1992, figs. 10-11.

11 Principalement de fabrique I, selon Gempeler 1992, 20, et qui semble correspondre aux kaolinites locales. Adams 1986, 545, fig. 305; Gempeler 1992, 189-193, K 703-724

12 Tomber 1992; Brun 1994.

13 A titre de rappel, mentionnons les rapports annuels de la mission de Bérénikè, édités par S.E. Sidebotham & W.Z. Wendrich; Tomber forthcoming.

14 Fouilles de la Mission Suisse d'Archéologie Copte (MSAC) et de l'Institut français d'archéologie orientale (IFAO), Ballet *et al.* 2003.

15 Fouilles de l'IFAO, sous la direction de R.-P. Gayraud, étude céramologique menée par Chr. Vogt: Vogt 1997.

16 *Supra*, fig. 3.

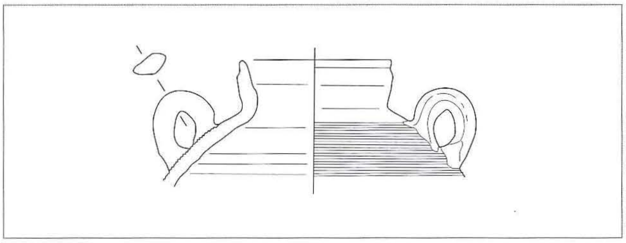


Fig. 10 Amphore *LRA* 5/6 à pâte alluviale. Kôm Abu Billu (d'après Ballet 1994, fig. 11)

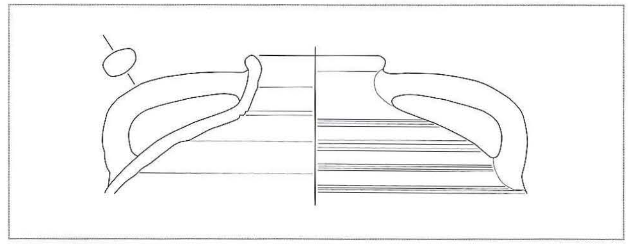


Fig. 11 Amphore « à col tronconique », à pâte calcaire, 'Uyun Musa (d'après Ballet 2001 fig. 16)

Un atelier d'amphores *LRA* 5/6 à pâte alluviale dans le Delta occidental. Kôm Abu Billu/Térénouthis

L'atelier de Kôm Abu Billu/Térénouthis, près de l'actuelle Terrana, est producteur de *LRA* 5/6 à pâte alluviale (figs. 8, 10), dont la fabrication ne semble pas commencer avant le début du VII^e^ siècle. L'atelier a été repéré lors de prospections pédestres.[17]

Le centre est situé à l'ouest de la branche canopique, à l'endroit où l'on franchit traditionnellement, à l'époque byzantine, le bras du fleuve pour relier Alexandrie à Babylone[18]. Un peu plus tard, à la période islamique, Térenouthis est toujours l'un des points de rassemblement des marchandises venant de Fustat, la nouvelle capitale fondée par les Arabes. De là, les caravanes empruntent la route désertique occidentale, ponctuée d'étapes, en particulier les établissements monastiques du Wadi Natrun et de Deir Abu Mina, et gagnent le nord-ouest de l'Egypte et Alexandrie. La forte fréquentation de cet axe nord-occidental peut être expliquée par le commerce du natron, exploité dans la dépression du Wadi Natrun.[19] Au temps de l'Expédition d'Egypte, selon le mémoire du général Andréossy, les caravanes se regroupent à Terrana avant de se rendre vers les gisements du Wadi Natrun y chercher le natron. Toujours selon la même source, le voyage, aller et retour, ne prend qu'une journée et, une fois le chargement effectué, les convois reviennent à leur point de départ.

Les amphores *LRA* 5/6 et les conteneurs de type Egloff 167, également produits dans cet atelier, pourraient constituer un emballage possible pour transporter le natron. Cette hypothèse permettrait de comprendre la diffusion des amphores *LRA* 5/6 à pâte siliceuse, et de type Egloff 167, en certains points du Wadi Natroun, et notamment aux abords du monastère de Jean Kolobos, aux Kellia, situés à faible distance de la piste caravanière longeant le désert, et à Fustat, la capitale du pays.

L'atelier de 'Uyun Musa, les « Sources de Moïse »

Une variante de l'amphore Egloff 167 à pâte calcaire est produite par les ateliers de 'Uyun Musa,[20] les « Sources de Moïse », situées à une dizaine de kilomètres au sud de Suez, sur la côte occidentale du Sinaï et que borde la route menant vers les sites côtiers de Ras Sudr, Abu Zenima et al-Tor. Selon la tradition, à 'Uyun Musa, au cours de l'Exode, le Patriarche rendit potable l'eau saumâtre en plongeant un bâton dans les eaux amères de la fontaine de Mara et put ainsi abreuver les Hébreux assoiffés. À quelques centaines de mètres au nord des «Sources de Moïse», situées dans une modeste

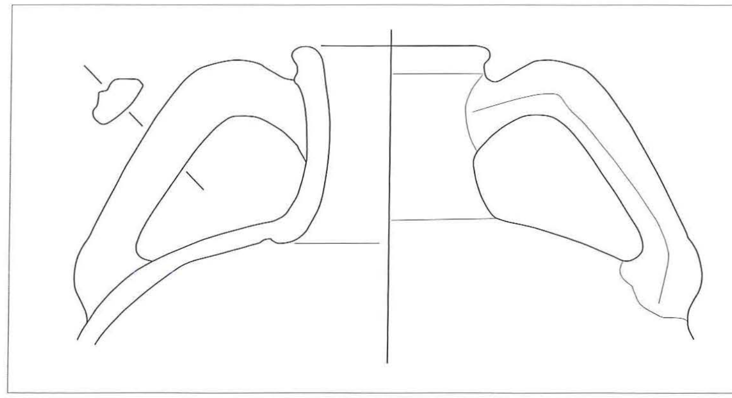
[17] Ballet 1994.

[18] Une description du trajet, à partir d'Alexandrie, figure dans les *Actes* d'Apatir et d'Iraî: « Au bout de cinq jours, tu atteindras Térénouthi. Traverse le fleuve et marche au midi de ce côté, tu arriveras au *castrum* de Babylone et tu demanderas Apocradjône, le moine, originaire de Pineban », citée par Amélineau 1893, 77.

[19] Picon 2001, 21-23, figs 1-2; Foy & Nenna, 2001, 34-36

[20] Ballet 2000 [2001] et 2001.

Fig. 12 Imitation d'amphore *LRA* 1 à pâte calcaire. Uyun Musa (d'après Ballet 2001 fig. 9)



palmeraie, les fouilles du Conseil suprême des Antiquités Egyptiennes ont mis au jour un atelier de potiers s'étendant sur un hectare environ[21]. En ce lieu, dont le toponyme actuel n'est pas attesté avant le XIIe siècle, une fabrication de récipients à pâte calcaire y a été reconnue et peut être datée des VIIe-VIIIe siècles. À côté de céramique à usage hydraulique (tuyaux, canalisations en U, godets de *saqia)* et de céramique commune, une partie importante de la production consiste en amphores dont trois types principaux ont été identifiés: une variante du conteneur Egloff 167 (fig. 11); un type apparenté aux *LRA* 5/6; enfin, une amphore imitant la *LRA* 1 (fig. 12), les véritables *LRA* 1 importées étant également attestées sur le site.[22] Aucun élément ne permet d'identifier le ou les contenus de ces amphores, qui pourraient toutefois avoir été utilisées comme outres à eau pour la traversée des proches régions inhospitalières et arides.

L'histoire de l'atelier, de taille néanmoins modeste à l'inverse de celui de Térénouthis, situé près d'une source et sur un axe de communication traditionnel et ancien, celui de la piste nord-sud longeant la côte occidentale de la péninsule, reflète sans doute l'évolution du réseau des pistes sinaïtiques. Il est en effet à faible distance des routes qui mènent vers le Sinaï intérieur, et notamment près de l'embranchement de la voie permettant d'atteindre l'oasis de Feiran à la période protobyzantine et au début de l'occupation arabe; de là, on accède au monastère de Sainte Catherine qui fit l'objet d'une attention toute particulière des musulmans dès les premiers temps de leur présence en Egypte et sur ses marges orientales. L'atelier dont l'activité se situe entre la fin de la période copte et les premiers temps de l'islam pourrait témoigner d'une fréquentation toujours assidue du monastère et sa périphérie.

À proximité des « Sources de Moïse », une autre route traverse le plateau central de Tih, en passant par l'actuelle Nakhl, et permet d'atteindre le golfe d'Aqaba. Cet axe se développe sous Saladin et contourne par le sud le royaume latin de Jérusalem.[23] Bien que l'atelier soit antérieur à la période ayyoubide, il anticipe peut-être le tracé de cette piste surtout empruntée à partir des XI^{e}-XII^{e} siècles.[24] Constituant sans doute un gîte d'étape, l'atelier s'inscrit dans la tradition millénaire qui fait des « Sources de Moïse » l'un des lieux potentiels où l'eau miraculeuse put abreuver les Hébreux errant dans le désert du Sinaï.

Problématiques et axes de recherche

En termes de pistes de recherche à exploiter, plusieurs enquêtes pourraient être engagées.

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[21] *Magallat 'alam al-atar* XLIII, juin 1986.

[22] En Egypte et sur ses marges, les imitations locales de *LRA* 1 sont relativement rares; signalons toutefois l'amphore à pâte siliceuse et à dégraissant végétal produite, selon toute vraisemblance, dans l'atelier de Saint-Jérémie, à Saqqara, Ghaly 1992, 168, fig. 16a-b, identification confirmée par P. Ballet, alors consultée par Dr Holeil Ghaly sur le matériel de Saint-Jérémie.

[23] Mouton *et al.* 1996, 42.

[24] Sur les pistes du Sinaï central à l'époque médiévale, Mouton *et al.* 1996, 56-57.

Poursuivre l'identification des ateliers d'amphores

Il reste encore bien des régions à explorer, en particulier le Delta central et oriental, le nord de la Moyenne-Egypte, et la région thébaine. Dans l'état actuel de nos connaissances, le réseau des ateliers présente ici, en apparence, un maillage très lâche, qui ne reflète sans doute pas la densité réelle des centres de production d'amphores dans l'Antiquité tardive. Du moins, conviendrait-il de s'en assurer. Il s'agirait notamment de mieux connaître les productions amphoriques du Delta intérieur et oriental. Toutefois, l'un des grands ateliers de céramique fine et commune à l'époque hellénistique et romaine, celui de Bouto, à l'est de la branche de Rosette, pourrait être producteur d'amphores.[25] À Tanis, une étude récente fait le point sur les importations d'amphores tardives, à la suite de prospections menées sur le tell de Sân el-Hagar; les traces d'une production amphorique ne semblent pas décelables.[26]

En dépit d'analyses typologiques portant sur les amphores romaines de la région thébaine (fig. 13),[27] une seule étude s'attache à reconnaître clairement les productions locales, toutes catégories de céramique confondues;[28] les enquêtes systématiques sur les ateliers de la région n'ont pas été encore engagées, ou du moins, n'ont pas encore fait l'objet de publication de grande ampleur.

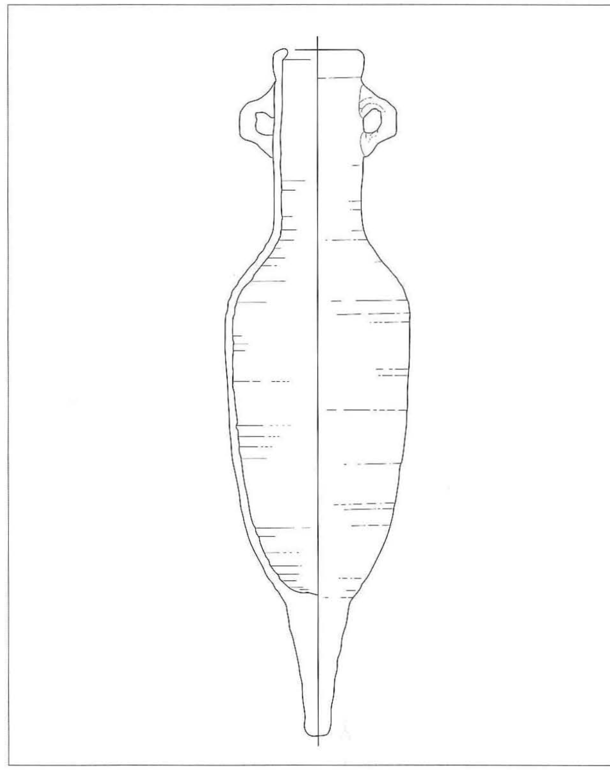


Fig. 13 Amphore bitronconique à pâte alluviale, temple de Séthi Ier, Gourna (d'après Mysliwiecz 1987, n° 947)

Mieux comprendre l'évolution de la production et la diffusion de certains conteneurs

Dans les niveaux omayyades et abbassides de Fustat, deux types de *LRA* 7 connaissent une évolution différenciée: l'amphore à épaule arrondie ou très légèrement carénée disparaît au milieu du IX^e^ siècle, et est remplacée par le type à épaule fortement carénée, parfois marquée d'un ressaut,[29] type attesté en nombre substantiel jusqu'au début du X^e^ siècle. Il importerait de savoir si les ateliers de Moyenne Egypte demeurent les fournisseurs des centres de consommation du Nord (Fustat et Alexandrie), et prolongent ainsi leurs activités jusqu'aux IX^e^-X^e^ siècles. Dans ce cas, l'organisation de l'exploitation et de la commercialisation vinicoles, ainsi que la consommation de vin n'auraient pas connu de changements notables depuis la période byzantine.

Enfin, étudier la production et la diffusion des amphores assouannaises, dont le marché privilégié semble être la Nubie et non l'Egypte où, à l'inverse de la céramique fine, les conteneurs sont faiblement diffusés.

25 Travaux en cours de J. Bourriau, Institut Archéologique Allemand, Le Caire.

26 Bavay *et al.* 2000.

27 Matériel tardif du temple de Sethi Ier à Gourna, Mysliwiecz 1987; celui de la rive occidentale de Thèbes, la Vallée des Reines et le Ramesseum, Lecuyot 1996, 155-59; amphores de Tôd, Pierrat 1996, 189-206.

28 Lecuyot & Pierrat 1992.

29 Vogt 1977, 258-59.

The Use of Rhodian Amphorae in Hellenistic Graves at Nea Paphos, Cyprus

Craig Barker

This paper aims to introduce a wider audience to an unusual funerary custom, evident in Hellenistic burials in the Paphos district of western Cyprus and in particular at the site known as the "Tombs of the Kings" near Nea Paphos. The funerary custom involved the use of amphorae, mostly imported Rhodian vessels.[1]

The ancient necropolis known as the "Tombs of the Kings" is located two kilometres north of the ancient city walls of Nea Paphos and is today an area, approximately one square kilometre in size, incorporated into the World Heritage-listed Paphos Archaeological Park.[2] Although the area is separated from the ancient city by modern development and to the visitor may look like an isolated site, the "Tombs of the Kings" necropolis is part of a much larger Hellenistic and Roman necropolis stretching towards the north and east of the city. Some of the graves at the "Tombs of the Kings" site are much larger and more elaborate in construction than the normal Paphos graves, but are effectively part of the larger pattern of burials around the ancient city. Many of these graves were excavated in salvage projects during the 1980s when the area underwent a massive tourist-led development boom.[3] In order to fully understand Hellenistic burial practice in the Paphos district, one has to integrate the analysis of the "Tombs of the Kings" material with a detailed study of some of the material from other, mostly still unpublished, excavations; a situation which will hopefully be possible in the near future, as more work is done on the recording of material recovered from the necropoleis of Nea Paphos.

The area known as the "Tombs of the Kings" was probably first used for burials shortly after the foundation of Nea Paphos, traditionally dated to the very end of the fourth century BC,[4] and continued to be used as a cemetery until at least the second century AD. Most of the graves are of Hellenistic date, although there are a number of examples of graves, which were emptied and reused for later Roman burials. Other graves have been badly damaged or destroyed by stone quarrying and tomb looting.

Despite its modern name, there was no royalty buried at the "Tombs of the Kings" necropolis: there were no local kings during the Ptolemaic domination of the island. The name nevertheless conveys the impressive architectural nature of some of the rock-cut tombs, which are unique on Cyprus.[5]

There are basically three types of tomb constructed at the "Tombs of the Kings" site. The first is the simple singular shaft grave (or *mnema*-grave) carved into the bedrock, often with a carved ledge surrounding the grave, which would support the three stone slabs that acted as a cover. This type of

[1] Research on the amphorae and other materials from the 'Tombs of the Kings" is currently being conducted by the University of Sydney Tombs of the Kings Project. The Project wishes to express its gratitude to the Department of Antiquities of the Republic of Cyprus for its continued support, and in particular the help of Dr Sophocles Hadjisavvas for his permission to record and publish material from the tombs. Additional thanks are expressed to the staff of the Paphos District Archaeological Museum, especially Mr Demetrios Stelliou and Dr Eustathios Raptou; Dr Paul Croft; Professsor Pascale Ballet; Professor Demetrios Michaelides; and Professor Richard Green and other members of the University of Sydney's excavations at the theatre site of Nea Paphos. Fellow Project team members are thanked, especially Andrew Merryweather, Elizabeth Bollen, Matthew McCallum, Hugh Beames and Bernadette McCall. The University of Sydney Tombs of the Kings Project has been financially supported by a small grant from the Australian Research Council, the Department of Antiquities of Cyprus and private contributions.

[2] Hadjisavvas 1997, 22-28.

[3] Although many of these tombs remain unpublished, some have been examined in detail. See Michaelides 1984; Michaelides & Młynarczyk 1988.2.

[4] Daszewski 1987, 171-175; Bekker-Nielsen 2000.

[5] Hadjisavva *s.d.*

Fig. 1 The dromos of chamber tomb TB 1988/2 at the 'Tombs of the Kings' necropolis (photo: Craig Barker).

Fig. 2 Peristyle Tomb 3 at the 'Tombs of the Kings' necropolis (photo: Craig Barker).

grave is common in the Paphos district.[6] The second type of tomb is the chamber tomb (Fig. 1). These tombs are the Hellenistic form of the traditional style of Cypriot funerary architecture.[7] One or several burial chambers are entered through a stepped dromos. In the chamber(s) a series of shaft graves are carved into the floor, and a series of loculi are carved into the walls, each with an individual burial. The third type of tomb is the so-called peristyle tomb (Fig. 2), of which there are six at the "Tombs of the Kings" site. The peristyle tomb has a large central open courtyard with a stepped dromos leading down into it. A number of burial chambers access the central, peristyled courtyard. These six tombs, architecturally unique on Cyprus, show clear parallels with Alexandrian tombs, and most notably Tomb 3, which is very similar in design to the Tombs of Mustafa Pasha.[8] These architectural similarities strongly emphasise the close cultural and political links between Ptolemaic Egypt and Paphos.

The individual graves mostly contained a single burial with a series of grave goods placed at either the foot or the head of the body of the deceased. In the case of smaller loculi and some of the other burials, the grave goods were often placed in the chamber, positioned to sit in front of the grave.

The "Tombs of the Kings" site attracted considerable archaeological interest in the nineteenth and early twentieth centuries, when a number of the larger peristyle tombs were cleared, including two opened by the infamous American consul Luigi Palma di Cesnola.[9] Systematic excavation did not begin on the site until 1977, when Sophocles Hadjisavvas, the current director of the Department of the Antiquities of the Republic of Cyprus, lead excavations at the site. They lasted until 1990.[10] Additional excavations of a quarried peristyle tomb were conducted between 1998 and 2000 by Paul Croft. The Department of Antiquities invited a team from the University of Sydney in 1997 to

[6] Michaelides 1990.

[7] Vessberg & Westholm 1956, 32-33, 50-51; Wright 1992.

[8] Adriani 1936.

[9] Cesnola 1877, 219-224. See also Myers 1914; Marangou 2000; Karageorghis et al. 2000.

[10] Hadjisavvas 1985a and b.

Fig. 3 Two Rhodian amphora in situ from a shaft grave in TK98, at the 'Tombs of the Kings', excavated in 1999 (photo: David Neville).

catalogue and eventually publish the material from the sixteen years of excavations.[11] The University of Sydney Tombs of the Kings Project hopes to set an example of a successful project, specifically designed to complete publication of material from earlier excavations, a concept particularly encouraged by the current administration of the Department of Antiquities in Cyprus.[12]

As already noted, a large part of the site has already been damaged or destroyed by looting and quarrying. Much material from different graves has been mixed. It has nevertheless been possible to reconstruct a number of intact grave groups. A wide range of material was interred in the graves or in the burial chambers at the site. Finds included jewellery, lamps, ceramic and glass unguentaria and flasks, terracotta and stone figurines, a variety of ceramic jugs, jars and cooking pots, and amphorae. A number of interesting observations can already be made about the material. Firstly, although a number of locally made fine-ware colour-coated bowls were found in the excavations, none were actually interred in graves; all come from areas of ritual burning of offerings located at, or near, the entrance of tombs. This is unlike contemporary tombs from elsewhere on Cyprus, where fine wares are frequently found interred in graves. There does appear, at this stage, to exist distinct differences between the funerary customs displayed at the "Tombs of the Kings" site and other Hellenistic burials in the Paphos district, and those from elsewhere on the island.

Perhaps the most significant of the funeral customs noted at the "Tombs of the Kings" is the style of interment of amphorae. Elsewhere in Cyprus it is relatively unusual to find amphorae in Hellenistic graves, but at the "Tombs of the Kings" and elsewhere in Paphos most tombs contained two amphorae in each burial. This custom of interring two amphorae in each tomb was first noted by Demetrios Michaelides in 1990,[13] based upon his observations of the salvage excavations in the eastern necropolis. The work at the "Tombs of the Kings" and at other, largely unpublished, graves elsewhere in the western district of Cyprus, suggests that this practice was relatively widespread, even if limited to the Paphos district.[14] In most tombs at the "Tombs of the Kings" the two amphorae were placed at either the head or the feet of the body. Great care was exhibited in keeping the vessels standing upright: they were often lent against the walls of the shaft tomb (Fig. 3), or supported by stones around the toe. At least one stopper is preserved from the "Tombs of the Kings". Presumably the amphorae were still filled with their contents when placed in the grave.

[11] Barker & Merryweather 2002.

[12] Hadjisavvas & Karageorghis (eds.) 2000.

[13] Michaelides 1990.

[14] For examples of published Hellenistic tombs from elsewhere in western Cyprus containing two Rhodian amphorae see Markides 1916, 13; Hadjisavvas 1980, 257.

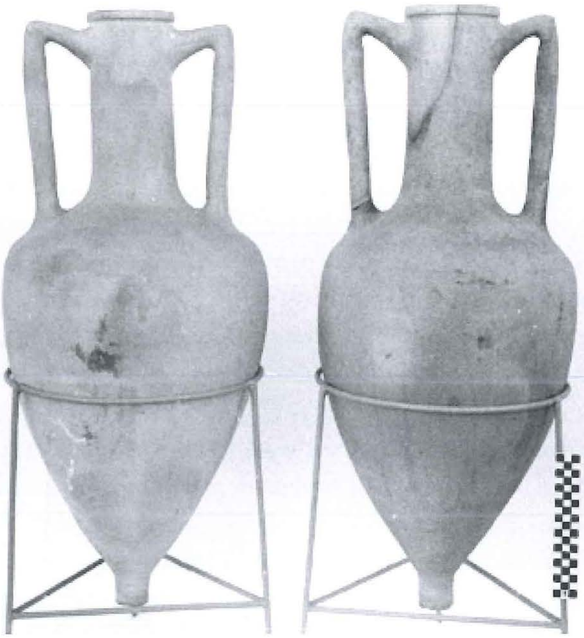


Fig. 4 Two Rhodian amphora from Tomb 1979 Mn. I (photo: John Hargreaves).

The majority of the 734 recovered stamped amphora handles are Rhodian (Fig. 4). That is not surprising, when one considers the apparently consistent domination of Rhodian vessels in the eastern Mediterranean markets,[15] the important role of Nea Paphos harbour in facilitating trade between the Aegean and Alexandria and the obvious connections between the island and Alexandria.[16] All quantitative analysis provided in this paper is preliminary and based upon the stamped material, but the unstamped material seemingly reflects a similar pattern.

The potential of these stamped Rhodian handles is enormous, when one considers that as a result of this Paphian burial custom there are four stamps in each grave displaying the custom, providing a *terminus post quem* for deposition and helping tighten the internal chronology of the Rhodian stamp series through the linking of eponym and fabricant names. From the excavations, a total of 23 intact, or near intact, amphorae were recovered, 19 of which contain Rhodian eponym-fabricant combinations, some not previously known (see Appendix).

Despite the majority of tombs having been looted and damaged and much of the material being mixed, including broken stamped handles becoming separated from their 'matching' handle, it is still possible to attempt some preliminary form of chronological interpretation of the material.

The majority of the readable Rhodian stamps found at the "Tombs of the Kings" site date in the second century BC, in particular to Periods III and V (Table 2).[17] Excavations in Cyprus, particularly of domestic and public sites, have revealed material predominantly from the early second century BC. Of note are the published stamped amphorae handles from Salamis,[18] Kition-Bamboula,[19] and from the Polish excavations at the Houses of Thesus and Ion at Nea Paphos[20] (Table 3).

It is clear that the material from "Tombs of the Kings" does not reflect the chronological pattern identifiable elsewhere in Cyprus and at other centres of importation in the eastern Mediterranean. There are more finds from later in the second century BC, and there is relatively little cross-over of stamp dies and even names between the "Tombs of the Kings" material and those published finds from the Polish excavations in Nea Paphos. This difference can perhaps be best explained as reflecting the funeral usage of the vessels at the "Tombs of the Kings" site. Any chronological variation may instead reflect the period of greatest usage of the "Tombs of the Kings" necropolis for burials. Presumably tombs and graves closer to the ancient city walls of Nea Paphos are likely to contain earlier vessels, and those further out mainly later vessels. The "Tombs of the Kings" saw its greatest period of activity in the second half of the second century BC, when the large peristyle tombs were being constructed in

[15] See for example, Lund 1993b, 366-369.

[16] Fraser, 1972, 162-169 for a useful if outdated discussion on the nature of Hellenistic Rhodian amphorae trade to the great emporium.

[17] For the question of Rhodian chronology see Finkielsztejn 2001a.

[18] Calvet 1972 and 1978.

[19] Calvet 1982 and 1993.

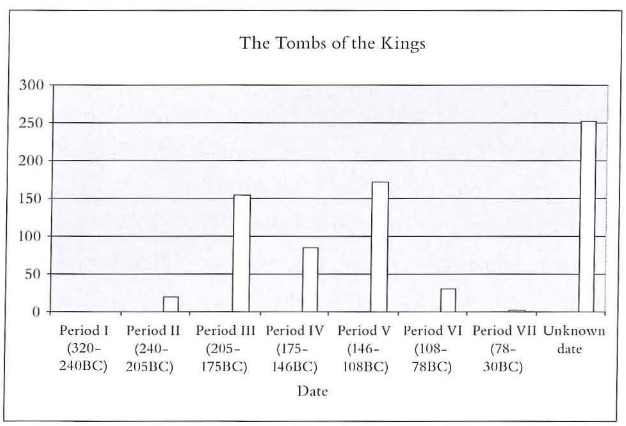
[20] Sztetyłło 1976 and 1990a.

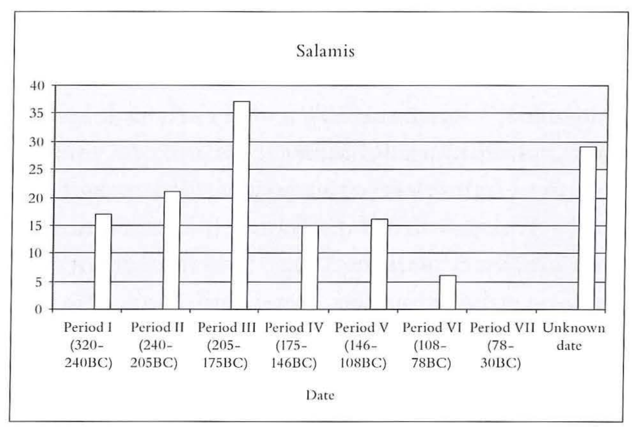
Rhodian	714
Chian	5
Knidian	3
Thasian	2
Koan	1
Sinopean	1
Cypriot	1
Unknown	7
TOTAL	734

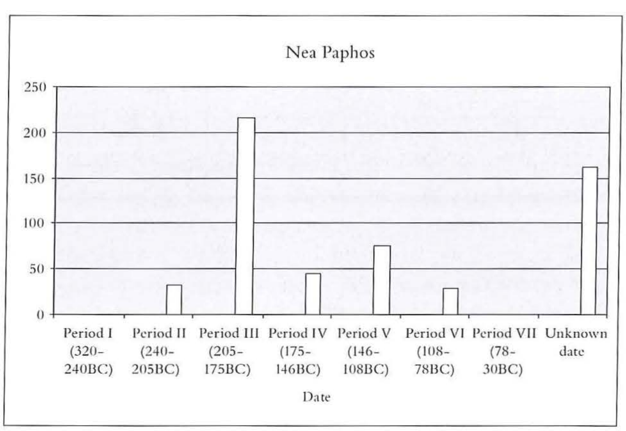
Table 1: The origin of the stamped amphora handles from the "Tombs of the Kings" necropolis.

Period I (*c.* 320 – *c.* 240 BC)	0
Period II (*c.* 240 – *c.* 205 BC)	19
Period III (*c.* 205 – *c.* 175 BC)	154
Period IV (*c.* 175 – *c.* 146 BC)	84
Period V (*c.* 146 – *c.* 108 BC)	172
Period VI (*c.* 108 – *c.* 78 BC)	30
Period VII (*c.* 78 – *c.* 30 BC)	3
Stamps which could not be restored	113
Stamps with no preserved lettering	112
Stamps which are broken	27
TOTAL	714

Table 2: A preliminary chart of the chronology of the stamped Rhodian amphora handles from the "Tombs of the Kings" site.







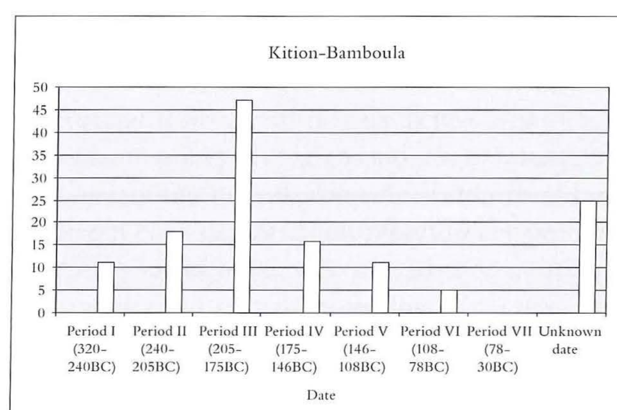


Table 3: A chart showing chronological differences between the "Tombs of the Kings" site and other published Cypriot Rhodian amphorae finds.

Fig. 5 Two duplicate jugs from a grave in Tomb 1983/1 (photo: John Hargreaves).

imitation of the Alexandrian models. Hopefully this hypothesis can be tested in future with the analysis of graves cleared in the salvage excavations of the 1980s and 1990s.

The reason why the Hellenistic Paphians decided to place two amphorae in each individual grave is not clear; perhaps it is a reference to the *Dioskouroi*.[21] This custom is definitely a localised trait, archaeologically visible so far only in western Cyprus. Upon closer examination of some of the tomb groups without amphorae it was noted that they usually contain two jugs, two pitchers or two cooking pots of similar shape and fabric (fig. 5). This Paphian practice of doubling particular types of grave goods has been dubbed 'duplication' by the Tombs of the Kings Project.[22] Although it is not yet clear whether the differences in the type of material duplicated in the tombs represent differences in the age, gender or social status of the deceased, or merely the overall size of the grave, it is apparent that imported amphorae were the predominant item used in this burial practice. It is an unusual end for amphorae imported from the Aegean and is perhaps indicative of some sort of secondary use of the vessels,[23] but is a burial custom that provides some form of chronological indication of the deposition of the amphorae and other grave goods interred in each grave as a result of the information provided by the stamped amphora handles.

Appendix: Intact Rhodian amphorae from the "Tombs of the Kings" featuring preserved eponym-fabricant combinations

This appendix presents the 45 stamps found on the 23 intact amphorae bearing stamps. They are placed within their original context with their duplicate amphora found in the same grave, i.e. four stamps are presented from each context where the grave was intact.

Amphorae One and Two (from Tomb TB 1988/1)

Amphora One (TB 1988/140)

Fig. 6 Stamps of Amphora One (photos: Angela Brkic).

ΝΑΝΙΟΣ

ΕΠΙ ΠΕΙΣΙΣΤΡΑΤΟΥ
ΠΑΝΑΜΟΥ

The stamps of the fabricant Nanis and the eponym Peisistratos on this amphora date it to *c.* 160 BC.[24] The stamps on Amphorae One, Two, Three and Four have been previously published.[25]

[21] There are a number of references to the *Dioskouroi* as amphorae in various ancient media, including Apulian red-figure vases and stone relief, which are outside the scoop of this paper. See for example the marble relief dedicated to Argenidas, in which the twins are shown in human form, as *dokama* and as amphorae: Hermary 1986, 577 no. 122.

[22] Barker & Merryweather 2002.

[23] Although the recurrence of particular names and die among the material from the graves suggest that at least some vessels were purchased from the same batch of amphorae imports (see Amphorae One and Two and Three and Four).

[24] Finkielsztejn 2001a, 193.

[25] Barker 2002.

Amphora Two (TB 1988/141)

Fig. 7 Stamps of Amphora Two (photos: Angela Brkic).

ΝΑΝΙΟΣ

ΕΠΙ ΤΙΜΟΥΡΡΟ
ΔΟΥ
ΠΑΝΑΜΟΥ

The fabricant Nanis and the eponym Timourrodos date this amphora to *c.* 159/158 or 158/157 BC.[26]

Amphorae Three and Four (from Tomb TB 1985 Peribolos Γ. Tomb 17)

Amphora Three (TB 1985/69)

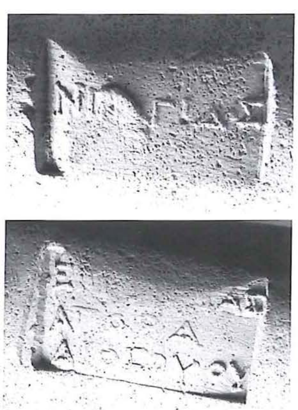


Fig. 8 Stamps of Amphora Three (photos: Angela Brkic).

ΝΙΚ[Α]ΓΙΔΟΣ

ΕΠΙ [ΤΙΜ]ΑΣ
ΑΓΟΡΑ
ΔΙΟΣΘΥΟΥ

The fabricant Nikagis and the eponym Timasagoras date this amphora to *c.* 184 BC.[27]

Amphora Four (TB 1985/70)

Fig. 9 Stamps of Amphora Four (photos: Angela Brkic).

ΝΙΚΑΓΙΔΟΣ

ΕΠΙ ΤΙΜΑΣ
ΑΓΟΡΑ
ΔΙΟΣΘΥΟΥ

The fabricant Nikagis and the eponym Timasagoras date this amphora to *c.* 184 BC.

Amphorae Five and Six (from Tomb TB 1983/1)

Amphora Five

Fig. 10 Stamps of Amphora Five (photos: Angela Brkic).

ΜΙΔΑ cluster
caduceus

ΕΠ[Ι] ΑΝΑΞΙ
[Β]ΟΥΛΟΥ
[- - -]ΡΙΟΥ

The fabricant Midas and the eponym Anaxiboulos date this amphora to between 141/140 and 138/137 BC.[28]

[26] Finkielsztejn 2001a, 193.
[27] Finkielsztejn 2001a, 192.
[28] Finkielsztejn 2001a, 195.

Amphora Six (TB 1983/1 ar. 123)

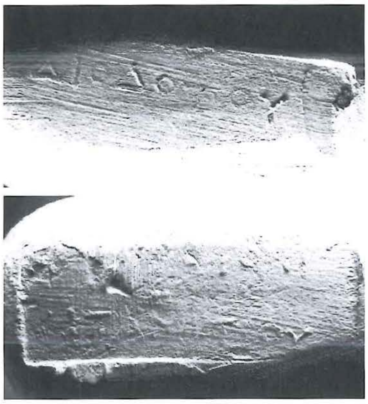


Fig. 11 Stamps of Amphora Six (photos: Angela Brkic).

ΔΙΟΔΟΤΟΥ

ΕΠ[Ι ΑΝΔ]ΡΟΝΙ
[ΚΟ]Υ
[Α]ΡΤΑΜΙΤΙΟΥ

The fabricant Diodotos II and the eponym Andronikos date this amphora to *c.* 132 BC.[29]

Amphorae Seven and Eight (from Tomb TK 1999 T.98)

Amphora Seven (TK 1999 T. 98 81)

Fig. 12 Stamps of Amphora Seven (photos: John Hargreaves).

ΑΜΥΝΤΑ wreath

ΕΠΙ ΞΕΝΟΦ
ΩΝΤΟΣ
ΥΑΚΙΝΘΙΟΥ
(lunate *sigma*)

The fabricant Amyntas and the eponym Xenophon date this amphora to *c.* 164-162 BC.[30]

Amphora Eight (TK 1999 T. 98 82)

Fig. 13 Stamps of Amphora Eight (photos: John Hargreaves).

ΜΑΡΣΥΑ
ΥΑΚΙΝΘΙΟΥ

Head of Helios ΕΠΙ ΑΘΑ
ΝΟΔΟΤΟΥ
(*nu* is retrograde)

The fabricant Marsyas and the eponym Athanodotos date this amphora to *c.* 170/168 BC.[31]

Amphorae Nine and Ten (from Tomb TB 1979 mnema Π)

Amphora Nine (TB 1979 Μν Π/1)

Fig. 14 Stamps of Amphora Nine (photos: John Hargreaves).

ΔΡΑΚΟΝΤΙΔΑ
caduceus

ΕΠΙ ΝΙΚΑΣΑ
ΓΟΡΑ
ΘΕΣΜΟΦΟΡΙΟΥ

The fabricant Drakontidas and the eponym Nikasagoras II date this amphora to *c.* 131 BC.[32]

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[29] Finkielsztejn 2001a, 195.
[30] Finkielsztejn 2001a, 192.
[31] Finkielsztejn 2001a, 192.
[32] Finkielsztejn 2001a, 195.

Amphora Ten (TB 1979 Μν. Π/2)

Fig. 15 Stamps of Amphora Ten (photos: John Hargreaves).

ΕΥΚΛΕΙ
ΤΟΥ
caduceus

ΕΠΙ ΑΝΔΡΟ
ΝΕΙΚΟΥ
ΚΑΡΝΙΕΟΥ

The fabricant Eukleitos and the eponym Andronikos date this amphora to *c.* 132 BC.[33]

Amphorae Eleven and Twelve (from Tomb TB 1979 mnema I)

Amphora Eleven (TB 1979 Μν. Ι/1)

Fig. 16 Stamps of Amphora Eleven (photos: John Hargreaves).

ΑΡΙΣΤΩΝΟΣ
caduceus

ΕΠΙ ΑΡΧΙΔΑ
[Μ]ΟΥ
ΥΑΚΙΝΘΙΟΥ

The fabricant Ariston and the eponym Archidamos date this amphora to *c.* 180/178 BC.[34]

Amphora Twelve (TB 1979 Μν. Ι/2)

Fig. 17 Stamps of Amphora Twelve (photos: John Hargreaves).

ΜΑΡΣΥΑ
ΑΓΡΙΑΝΙΟΥ

Head of Helios ΕΠΙ ΚΑΛΛΙ
ΚΡΑΤΙΔΑ
(*nu* is retrograde)

The fabricant Marsyas and the eponym Kallikratidas II date this amphora to *c.* 175/173 BC.[35]

Amphorae Thirteen and Fourteen (from Tomb TB 1996 T.1)

Amphora Thirteen (TB 1996 T.1/1)

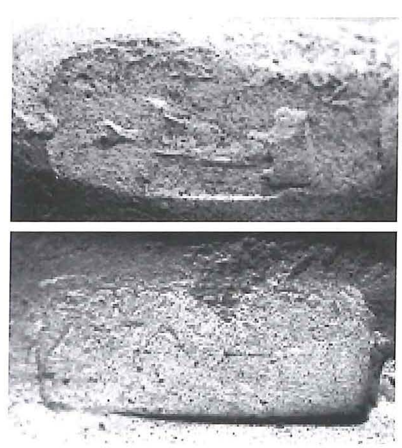

Fig. 18 Stamps of Amphora Thirteen (photos: Craig Barker).

ΡΩΔΟΝΟΣ
herm

ΕΠΙ Τ[ΙΜΑ]ΓΟΡΑ
ΑΡΤΑΜΙΤΙΟΥ

The fabricant Rhodon II and the eponym Timagoras date this amphora to *c.* 124-120 BC.[36]

[33] Finkielsztejn 2001a, 195.
[34] Finkielsztejn 2001a, 192.
[35] Finkielsztejn 2001a, 192.
[36] Finkielsztejn 2001a, 195.

Amphora Fourteen (TB 1996 T.1/2)

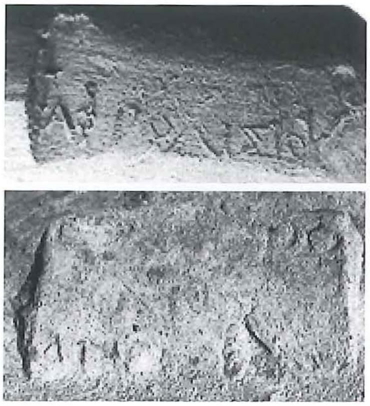

Fig. 19 Stamps of Amphora Fourteen (photos: Craig Barker).

ΑΦΡΟΔΙΣΙΟΥ

Ε[ΠΙ] ΙΕΡΩ
ΝΟΣ
ΑΓΡ[ΙΑΝΙΟΥ]

The fabricant Aphrodisios III and the eponym Hieron II date this amphora to *c.* 121 BC.[37]

Amphorae Fifteen, Sixteen and Seventeen

Rather unusually three intact Rhodian amphorae were recovered from this tomb. This may indicate a slight variation on the duplication custom, or else may indicate two burials (either contemporaneous or a reuse of the grave) with the fourth amphora not surviving.

Amphora Fifteen (TB 1977 T.11/1)

Fig. 20 Stamps of Amphora Fifteen (photos: John Hargreaves).

ΜΑΡΣΥΑ
Β
ΠΑΝΑΜΟΥ

Head of Helios ΕΠΙ ΑΓΕ
ΜΑΧΟΥ

The stamps of the fabricant Marsyas and the eponym Agemachos date this amphora to *c.* 181/179 BC.[38]

Amphora Sixteen (TB 1977 T. 11/2)

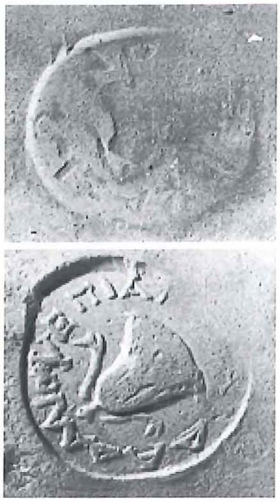

Fig. 21 Stamps of Amphora Sixteen (photos: John Hargreaves).

ΝΙΚ]ΑΣΙΩΝΟ[Σ central rose anchor?

ΕΠΙ Α[ΡΧΙΛ]ΑΙΔΑ ΔΑΛΙΟΥ central rose

The circular stamps on this amphora bear the names of the fabricant Nikasion and the eponym Archilaidas. The amphora may be dated to *c.* 165/163 BC.[39]

Amphora Seventeen (TB 1977 T. 11/3)

Fig. 22 Stamps of Amphora Seventeen (photos: John Hargreaves).

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[37] Finkielsztejn 2001a, 195.
[38] Finkielsztejn 2001a, 192.
[39] Finkielsztejn 2001a, 192.

This amphora bears two circular stamp impressions with central roses. The names on both the fabricant and the eponym stamp cannot be read. The amphora would date to the second century BC.

Amphora Eighteen (from Tomb TB 1988/2 Pyre 1.5-2.0M)

Amphora Eighteen (No Inv. Number)

Fig. 23 Stamps of Amphora Eighteen (photos: John Hargreaves).

[H]ΡΑΚΛΕ	ΕΠΙ [ΝΑΥΣΙ]
ΩΝΟΣ cluster	ΠΠΟΥ
	ΑΡΤΑΜΙΤΙΟΥ

This broken and restored amphora from the area of ritual burning in front of the chamber of tomb TB 1988/2 bears the stamps of the fabricant Herakleon and the eponym Naysippos. The amphora dates to *c.* 113 BC.[40]

Amphora Nineteen (from Tomb TB 1988/2 NW corner)

Amphora Nineteen (TB 1989/56)

Fig. 24 Stamps of Amphora Nineteen (photos: Angela Brkic).

Α[ΡΙΣΤΟ]ΜΕΝ	ΕΠΙ ΑΡΙΣ
ΕΥΣ [- - -] ΝΘΙΟΥ	ΤΩΝΙΔΑ

The fabricant stamp on this amphora has been restored as belonging to Aristomenes.[41] The fabricant Aristomenes and the eponym Aristonidas date this stamp to *c.* 222 BC.[42] This amphora was found with an unstamped Chian amphora (TB 1989/55).

Amphora Twenty (from Tomb TB 1989/1)

Amphora Twenty (TB 1989/1 ar. 89)

Fig. 25 Stamps of Amphora Twenty (photos: Angela Brkic).

ΝΙΚΙΑ	ΕΠΙ ΠΑΥΣΑΝΙ
	Α
	ΘΕΣΜΟΦΟΡΙΟΥ

The fabricant Nikias and the eponym Pausanias III date this amphora to *c.* 152 BC.[43] This amphora was buried with an unstamped Rhodian amphora (TB 1989/1 ar. 90).

[40] Finkielsztejn 2001a, 195.

[41] The name is rare but not unknown for a fabricant. See Porro 1916, 113.

[42] Finkielsztejn 2001a, 191.

[43] Finkielsztejn 2001a, 193.

Amphora Twenty-One (from Tomb TB 1988/2 Atrium 2.3M)

Amphora Twenty-One (No Inv. Number)

Fig. 26 Stamp of Amphora Twenty One (photo: Craig Barker).

[ΕΠ]Ι ΤΙΜΟΘΕΟΥ ΑΡΤΑΜΙΤΙΟΥ
central Helios head

This amphora bears the stamp of the eponym Timotheos dating it to *c.* 128 BC.[44] The handle which once bore the fabricant's stamp impression no longer survives.

Amphora Twenty-Two (from Tomb TB 1990/2 Dromos)

Amphora Twenty-Two (No Inv. Number)

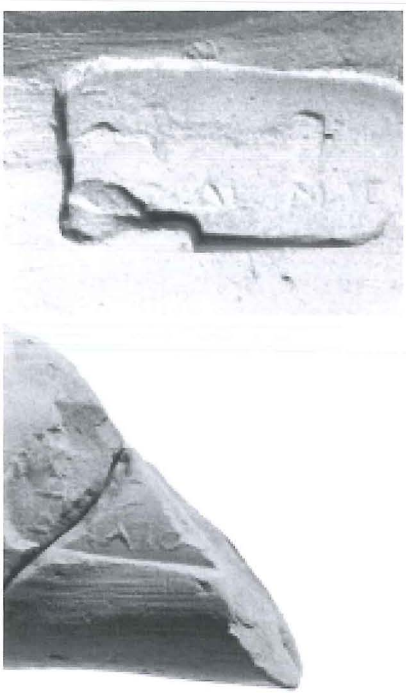

Fig. 27 Stamps of Amphora Twenty Two (photos: John Hargreaves).

herm [- - -]
[Ρ]ΩΔΟΝΟΣ Δ[- - -]
ΔΑΛΙΟ[Υ]

The fabricant Rhodon II is dated to the last quarter of the second century BC.[45] The eponym's name is not preserved well enough to enable a restoration of the name.

Amphora Twenty-Three (from Tomb TB 1988/2 NW chamber floor)

Amphora Twenty-Three (No Inv. Number)

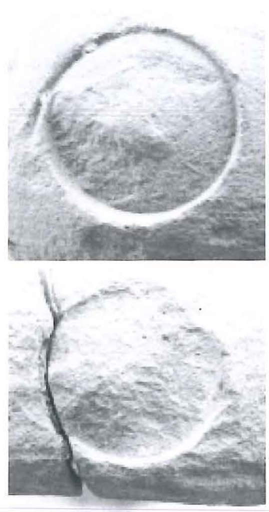

Fig. 28 Stamps of Amphora Twenty Three (photos: John Hargreaves).

The names on both of these stamps are illegible. The amphora probably dates to the second century BC.

44 Finkielsztejn 2001a, 195.
45 Ariel & Finkielsztejn 1994, 214.

Early Roman Food Import in Ephesus: Amphorae from the Tetragonos Agora[1]

Tamás Bezeczky

Although we have a fair amount of information on the agricultural production and food commerce of the Roman Empire, a number of questions are still unanswered. The publications[2] on the mass of objects found at the excavations will contribute to the answers. This paper surveying the Roman period amphorae of the Tetragonos Agora is part of the process. Since the objects are still being studied, only the major types of amphorae will be mentioned now.

The Ephesian food imports from the Western Mediterranean grew significantly from the end of the second century BC. There are only sporadic Hellenistic 'Graeco-Italic' pieces among the finds from the earlier period (no. 1).[3] It seems most likely that the increase in the number of Italian wine and olive-oil amphorae is related to Roman immigration. After the foundation of the free port at Delos, Roman merchants appeared everywhere in the region. When the province of Asia was set up in connection with the Attalos inheritance, Rome declared its rule in the region.

Datable Ephesian amphorae come from various strata of the street in front of the Hellenistic Stoa. The earliest, Dressel 1 (no. 3-5), Lamboglia 2 (no. 6) and 'Punic tradition' (no. 2) amphorae, were found among the finds of 'Hellenistic street II'. The earliest Eastern Sigillata A and Palestinian 'semi-fine baggy jar' (no. 24) fragments also came from these strata. Their juxtaposition and a stamp from Rhodes[4] date the strata to the end of the second and the beginning of the first centuries BC. Italian amphorae are mixed with amphorae from Rhodes, Chios, Cnidus, Cos and Aegean "locally produced" amphorae.[5] This is the time when the Rhodian 'red-fabric' amphorae first appear. Dressel 1 and Lamboglia 2 amphorae were used for transporting the well-known Tyrrhenian and Adriatic wines. These were produced from the third quarter of the second century BC to the end of the first century BC.

The objects from 'Hellenistic Street I' can be dated to a later period, after *c.* 60 BC. Although there are still Dressel 1 and Lamboglia 2 among the amphorae, the Brindisi type also makes its appearance. One of the Dressel 1B amphorae has a stamp CAA (no. 4) and one Lamboglia 2 amphora has a stamp ER[TE]C on its rim.[6] Two other Lamboglia 2 amphorae carry a LICIN[7] and a C.OPIM stamp (no. 6).[8] The Brindisi amphora found in 'Street I' has no stamp, but the handles of three amphorae of the same type have stamps of the workshop. One

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[1] I would like to thank Prof. Friedrich Krinzinger for permission to publish the material from Ephesus and the Agora excavator Dr. Peter Scherrer for the stratigraphic data. Special thanks to my brother Gábor Bezeczky who translated the manuscript and Ágnes Vári who made the final drawings for press.

[2] Latest very important paper Lund 2000a, with an excellent bibliography.

[3] 'Graeco-Italic' amphorae in: phase H2b and later in the early Roman layers; compare Lawall 2001: "This area where a street running East-West crossed between the two halves of the West Stoa revealed the most useful strata. The major phases may be summarized as follows: H1 = construction of the West Stoa South, ca. 260-250 BC; H2a = construction and use of the West Stoa North, 3rd quarter 3rd century; H2b = filling in the street drain, ca. 220; H3 = layers over the street drain fill, ca. 175 BC; H4 = widening the street, mid 2nd century; and H5 = accumulation on and over the wider street, late 2nd through early 1st century".

[4] 'Ιεροκλευς worked in Periods V to VI, late 2nd early 1st c. BC, Grace & Savvatianou-Pétropoulakou 1970, E 24; I would like to thank M. Lawall for this information.

[5] Some of them identified by Lawall: see his article in this volume. "Local production" is here meant to mean not only Ephesus and the Ephesus region, but Aegean production in general, even though the identification of the amphorae made in this region is still problematic.

[6] Bezeczky 2001, 11, no. 6. Similar stamp published Mercando 1989, 118, no. 4, Fig. 30-31b.

[7] Bezeczky 2001, 11, no. 5; CIL XII 5683.162 Vieille-Toulouse, Callender 1965, 867 c.

[8] The Dr 1B amphora stamp CAA and Lamboglia 2 amphora stamp C.OPIM. We have not found similar stamps.

of these was produced in the workshop called 'La Rosa' and has the stamp [P]HILIPVS.BETIL (no. 7).[9] Betilienus was the owner of the workshop and Philip(p)us was a slave. The *figlina* produced this amphora during the second quarter of the first century BC. The other stamp is [V]ISELLI.[10] Several amphora stamps with Visellius' name have been identified among the finds from the recently excavated workshop at Giancola.[11] This pottery workshop had, in the first part of the first century BC, belonged to the Visellii gens. The third amphora has the stamp MENOPILVS. Menop(h)ilus was a slave of Vehilius.[12] Such stamps have been published from the workshops of Apani and Giancola, both in the region of Brindisi. The Vehilius workshop was in production in the second part of the first century BC. The Apulian olive-oil amphora seems to have made its first appearance in the Eastern Mediterranean in the late second century BC,[13] and continued into the Augustan period. In addition to the stamped pieces, some more fragments belong to Brindisi-type amphorae: on the basis of the typology of the Apani workshop,[14] they can be classified as type III. There are two other types of Brindisian amphorae at Ephesus. A rim fragment belongs to the Apani IIA type (no. 8), and the upper part of an amphora belongs to Giancola type 7A (no. 9).[15]

In the first part of the first century BC amphorae arrived from Baetica, probably containing *defrutum* or *sapa* and used for various purposes in the kitchen.[16] They belong to a form called "Lomba do Canho 67" (no. 18).[17] The type was succeeded in a later period by the Haltern 70 amphorae (no. 19).[18]

The importation of the Italian fruit Dressel 21-22 amphorae started in the middle of the first century BC. One amphora stamp POST.CVRT (no. 11) can be associated with M. Postumus Curtius. Cicero mentions that his friend [Curtius] Postumus had a freedman called Curtius Mithres, whom he used to visit in his house at Ephesus.[19] Postumus Curtius had estates in Campania and Apulia,[20] and amphorae for wine, olive-oil (?) and fruits were presumably produced on his estates. The stamps occur on different types of amphorae, as well as on a tile.[21] The *titulus pictus* CE or CER, on a Dressel 21-22 amphora (no. 12) from Calabria, refers to *cerasi* or *cerina*, cherries or waxed plums.[22] There are only two stamped (M.HER.PICENT) Dressel 6A amphorae (no. 10) in Ephesus among the many fragments. They were produced in the workshop of Herennius somewhere near Picenum. The younger M. Herennius Picens was consul in AD 1,[23] and served in Ephesus as proconsul of Asia under Augustus. The amphorae with Herennius' stamps reached Northern Italy, Magdalensberg, Athens and Carthage.[24] The Lamboglia 2 amphorae were produced from the late second to the middle of the first century BC. Their manufacture apparently ceased sometime in the 30s and replaced by the Dressel 6A amphorae, produced between 30 BC and AD 40.[25] Very often these Dressel 6A amphorae were produced in Lamboglia 2 workshops, and it is often difficult to distinguish the two types from each other. These amphorae produced in Italy's Adriatic coast.[26]

The Western trade intensified during the Augustan period. Italian wine came in Dressel 2-4 amphorae from Campania (no. 13). Importation of Spanish wine in Pascual 1 amphorae (no. 20), fish sauce in Beltran I amphorae (no. 22) and olive-oil from Baetica started. One of the amphorae has a stamp on the rim, characteristic of the early (Augustan-Tiberian period) Dressel 20 type.[27] The amphora with the stamp Q.ANT.R... (no. 21) was produced in

9 Similar stamp were published by Palazzo 1993, 232, T. 106.
10 Excavated by Peter Scherrer in the so called Serapeion area in 1990, Bezeczky 2001, 11, No. 3.
11 Manacorda 1990, 382; Manacorda 1994, 4-7.
12 Desy 1989, 234.
13 Lund 2000a, 84.
14 Palazzo 1989, 548-553
15 Manacorda 1998, 324, Tav. 1. No. 5.
16 Werff 1984, 379-381.
17 Fabião 1989, 65-70, Fig 5.
18 Tchernia 1980, 306; Carreras Monfort 2000, 420
19 Cicero ad fam. XIII. 69.1; Hatzfeld 1919, 102.
20 Wiseman 1971, 255 no. 353 C.Rabirius; Bezeczky 2001, 11, no. 2.
21 Manacorda 1989, 457, fig. 15; CIL I² 2340d
22 Callender 1965, 13; Werff 1986, 114.
23 Bezeczky 2001, 11, no. 7; Wiseman 1971, no. 205; Zaccaria 1989, 481. His father was also consul in 34 BC.
24 Cipriano & Carre 1989, 85-88.
25 Piccottini 1997, 204-205, fig. 96.
26 Carre 1985, 214-217.
27 BA..., Agora No. 95/100.

La Catria workshop.[28] It can be dated in the Claudian to Flavian periods.[29] North African oil was also used. The ancient Tripolitana amphorae (no. 16) appear from the Augustan period[30] and, later, the Tripolitana II amphora type (no. 17).

Later in the first century AD, there are a few Gauloise 4 wine amphorae from southern France (no. 15).[31] Finally, the North Italian Schörgendorfer 558 amphorae contained olives (no. 14).[32] R. Tomber recently found fragments of Schörgendorfer 558 amphorae in Egypt, and rim and handle fragments were identified in Pergamon.[33] They are rare at all three sites, but it is significant that they found their way to the Eastern Mediterranean.

Amphorae produced in the vicinity of Ephesus appear in every stratum of the mid-first century BC. The type with one handle is well known and resembles the Athenian Agora form F65-66 (no. 29).[34] The fabric varies and is very rich in mica. The amphorae from Italy and Spain are mixed with the previously mentioned Aegean amphorae: the later amphorae from Rhodes (no. 25), Chios (no. 26), Cnidus (no. 27), Cos (no. 28) and the "locally produced" amphorae (no. 37 and 38). Greek wines are still represented, although in smaller quantities when compared with earlier periods.

With many Rhodian amphorae without stamps, the development of the shape can be followed at Ephesus as well. They were not only produced in Rhodes, but, according to the analyses of both Peacock and Williams, and Picon and Empereur, there were a number of workshops in the neighbouring islands as well as in Asia Minor.[35] The fabrics of the Coan amphora types are even more varied. Yet another type of wine amphora present at Ephesus is Dressel 5 (no. 33). According the analysis of the clay, it was produced somewhere in the Aegean region.

There are a number of variations of the Dressel 25 type (no. 23). As van der Werff[36] put it: "The step-shaped rim resembles that of the late 'Corinthian A' amphorae as well as some Brindisine rim shapes". Their fabric is not homogeneous. One of the handle fragments has a Greek stamp: Ζοίλο(υ).[37] This is obviously the name of a slave, also occurring on a Dressel 25 amphora found at Ostia. Van der Werff suggested that the provenance of these amphorae might be Southern Italy or Greece.[38] The consumption of Cretan wine is evidenced by the fragments of the AC4 (no. 31) and AC2 (no. 32) amphorae.[39] Lawall has described another amphora type (no. 30) as a 'cup-shaped' amphora: "above Street II but still below the level of Street I, there is the first appearance of a poorly-understood cup-shaped rim form. This form appears in stratified contexts at Troy either very late in the 2nd century or early in the 1st century, but necessarily before the sack of Troy in 85 BC by Fimbria".[40] There are quite a few pieces in Augustan or even later strata. This type can be a forerunner of the so-called Dressel 24 type, and the fabric is sometimes identical. Finally there are also a few Agora G 199 (no. 35), Pompeii XIII/Agora G 198 (no. 36) and Agora M 54 (no. 40) handle fragments from the Aegean region, and a neck-handle fragment and base from Egypt in silted fabric (no. 39).

These amphorae (with the exception of the micaceous, one-handle vessel produced somewhere near Ephesus) were mainly imported. The proportion of the food imported from the Western Mediterranean is at about 10-15 percent and it never exceeds 20 percent. To summarise, we may say that at Ephesus the trade in food commodities reflects the same basic trends that have been observed in other major trade centres.[41]

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[28] Bezeczky 2001, 12 and 16, no. 10.

[29] Carreras Monfort & Funari 1998, 108, no. 61.

[30] Hesnard 1980, 148, Pl. 6,4; Sciallano & Silabella 1991.

[31] Laubenheimer 1985, 261-293; Peacock & Williams 1986, 142-143, Class 27; Martin Kilcher 1994, 360-361.

[32] Muffanti Muselli 1986, 187-215; Bezeczky 1997, 158-161;

[33] I am grateful to Roberta Tomber and Sarah Japp for the information.

[34] Robinson 1959.

[35] Peacock & Williams 1986, 102-104, Class 9; Empereur & Picon 1989, 226, Fig. 1.

[36] Werff 1986, 115-116.

[37] Agora No: 87/040.

[38] Werff 1986, 116.

[39] Marangou-Lerat 1995, 77-82 and 84-89.

[40] I am grateful to Mark Lawall for his paper: Preliminary Report on the Chronology of the Stratified Levels in the Teragonos Agora (unpublished). Cf. his article in this volume.

[41] Aquileia: Carre & Cipriano 1987, Fig. 1 and 2; Carthage: Martin Kilcher 1993, Fig. 10; Levant: Finkielsztejn 2000b, T 105-108.

Note on the registration: The excavations in the Agora at Ephesus have unearthed thousands Roman amphora fragments, and the systematic study of the amphorae started in 1998. We record the digital photos and the technical details (Fig. 7.1-2 and 4); the box number; size and location of the section; the chronology of the excavation; as well as the '*Fundjournal*' (containing the description of the ceramic and other objects) in a database in order to have access to them.[42] The database contains photomicrographs of 10 and 20 times magnification of the fresh breaks of the fragments deemed important (Fig. 7.3). There is a collection of reference of photomicrographs of the amphorae from the Italian, African and Spanish kilns and workshops (Fig. 7.5). The reference amphorae and the ones found at Ephesus can be compared within the same screen. The database is connected to a 3D software (Graphisoft ARCHICAD), which makes it possible to access the stratigraphical position of the objects according to the data produced by the excavation (Fig. 7.6).

[42] The application software was created by Péter Hornung (using the FileMakerPro 5 and ARCHICAD softwares).

Fig. 1

1. 'Graeco-Italic', Rim, neck fr., *BoxNo*: 96/051 (10), *Site*: Hellenistic robber trench (WSN/1), red (2.5YR 5/6), surface: buff (7.5YR 8/2), Diam. = 17.4 cm, Th = 3.3 cm, H = 4.3 cm.

2. Van der Werff type 2, Rim, neck fr., *BoxNo*: 92/040 (504), *Site*: Hellenistic street II, light red – red (10R 6/8-5/8), surface: buff (10YR 8/2), Diam. = 17.1 cm, Th = 1.5 cm, H = 4.9 cm.

3. Dressel 1A, Rim, neck, handle fr., *BoxNo*: 90/127 (1184), *Site*: Hellenistic building period (WSN), light red (2.5YR 6/8), surface: buff (7.5YR 8/4), *titulus pictus* with red ink: AT T, A-T in ligature, Diam. = 17 cm, Th = 3 cm, H = 12.5 cm.

4. Dressel 1B, Rim, neck, handle frs., *BoxNo*: 90/103 (999), *Site*: stayfind from the wall 87/4-1 and 90/1-1, *Stamp*:..CAA (...), light red (2.5YR 6/6), Diam. = 18 cm, Th = 2.9 cm, H = 25.5 cm.

5. Dressel 1C, Rim, neck-, handle frs. *BoxNo*: 89/017 (14), *Site*: Hellenistic robber trench (WSS/3), red (10R5/6), Diam. = 15 cm, Th = 2.9 cm, H = 15 cm, *Bibl:* Bezeczky 2001, No. 11, Taf. 5.

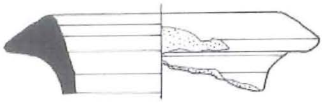
6. Lamboglia 2, Rim, neck fr., Box*No*: 90/188 (1210), *Site*: Roman Agora, *Stamp*: C.OPIM, buff (10YR 8/3-7/3), Diam. = 18.6 cm, Th = 2.9 cm, H = 4.4 cm.

7. Brindisi – Apani III, handle fr., *BoxNo*: 95/199 (204), *Site*: Roman W-Stoa, *Stamp*: [P]HILIPVS.BETIL; Philip(p)us Betil(ieni), reddish yellow (5YR 6/6), surface reddish yellow (7.5YR 7/6), H = 14.7 cm, *Bibl:* Bezeczky 2001, No. 4, Taf. 2, 3.

8. Brindisi – Apani IIA, Rim fr., *BoxNo*: 88/17 (1308), *Site*: Roman Agora, reddish yellow (5YR 6/6), Diam. = 16.5 cm, Th = 1.7 cm, H = 8.2 cm.

9. Brindisi – Giancola 7A, Rim, neck, handles, *BoxNo*: 87/042 (4), *Site*: Roman Agora, reddish yellow (7.5YR 6/6), Diam. = 19 cm, Th = 2.8 cm, H = 30.3 cm, *Bibl:* Bezeczky 2001, No. 31, Taf. 7.

10. Dressel 6A, Rim, neck fr., *BoxNo*: 89/007 (123), *Site*: Roman Agora, *Stamp*: M.HER.PICEN., M. Her(renni) Picen[t](is), buff (10YR 8/4), Diam. = 18 cm, Th = 2.8 cm, H = 7.4 cm, *Bibl:* Bezeczky 2001, No. 7, Taf. 2 and 3.



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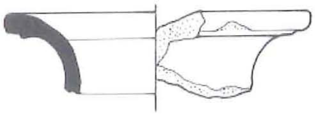

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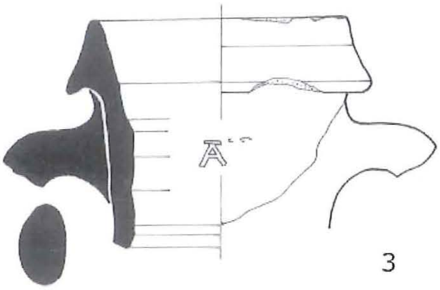

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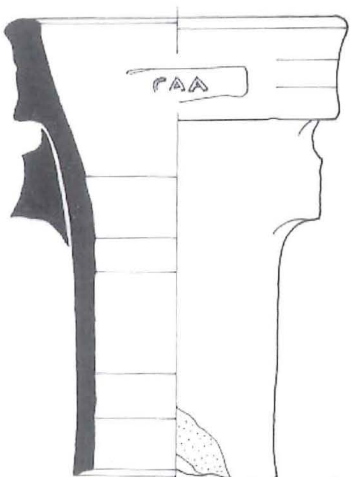

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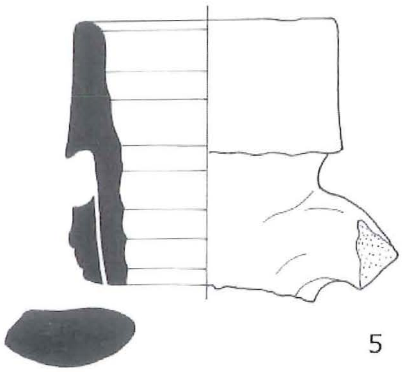

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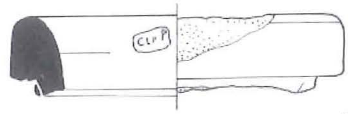

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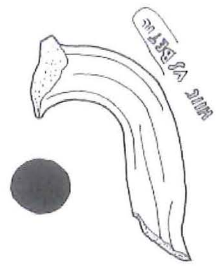

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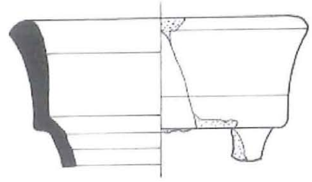

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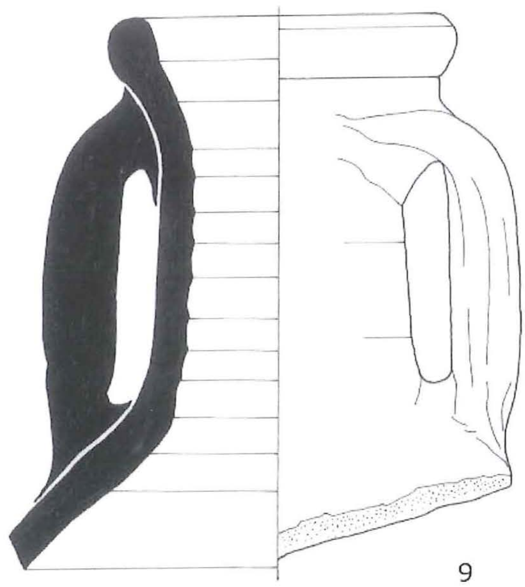

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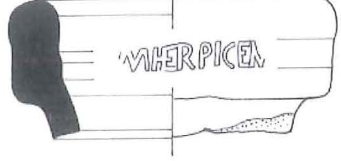

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Fig. 2

11. Dressel 21-22, *BoxNo*: 96/044 (15), *Site*: Roman Agora I building period, *Stamp*: POST.CVRT, (S-T and V-R-T in ligature), Post(umi) Curt(i), reddish yellow (5YR 6/6) surface: buff (10YR 7/4), Diam. = 18.5 cm, Th = 1.8 cm, H = 7.4 cm, *Bibl:* Bezeczky 2001, No. 2, Taf. 2 and 3.

12. Dressel 21-22, Rim, neck fr., *BoxNo*: 89/022 (1111), *Site*: Roman Agora, *Inscr: titulus pictus* with red ink: CE.., *Ce(rasa)? or Ce(rina),* very pale brown (10YR 7/4), surface: buff (10YR 8/3), Diam. = 19 cm, Th = 2 cm, H = 9.3 cm.

13. Dressel 2-4, Rim, neck, handle fr., *BoxNo*: 96/020 (1371), *Site*: Roman Agora, gray (10YR 6/1), surface: light red (2.5YR 6/6), Diam. = 13.4 cm, Th = 1.4 cm, H = 5.8 cm.

14. Schörgendorfer 558, Body, handle fr., *BoxNo*: 99/042 (1610), *Site*: Roman Drain, reddish yellow (5YR 6/6); surface: buff (7.5YR 8/4), H = 12 cm.

15. Gauloise 4, Rim, neck, handle fr., *BoxNo*: 99/045 (92), *Site*: Roman Drain, buff (10YR 7/4), Diam. = 12 cm, Th = 2.1 cm, H = 14.3 cm.

16. 'Tripolitana Anciene', Rim, neck fr., *BoxNo*: 96/005 (1366), *Site*: Roman Agora, light reddish brown (5YR 6/4), Diam. = 19 cm, Th = 2.3 cm, H = 6.5 cm.

17. Tripolitana II, Rim, neck fr., *BoxNo*: 96/051 (2), *Site*: Hellenistic robber trench (WSN/1), gray (5YR 5/1); surface: pink (5YR 8/4), Diam. = 17 cm, Th = 2.4 cm, H = 6 cm.

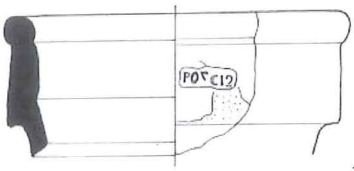
18. "Lomba do Canho 67", Rim, neck fr., *BoxNo*: 87/036 (1356), *Site*: Agora, Stratum IV, light brown – reddish yellow (7.5YR 6/4-6/6), Diam. = 16.5 cm, Th = 2.2 cm, H = 12.1 cm.

19. Haltern 70, Rim, neck, handle fr., *BoxNo*: 93/063 (423), *Site*: Roman Agora, pink (7.5YR 7/4); surface: white: (10YR 8/2), Diam. = 18.5 cm, Th = 2.6 cm, H = 9 cm.

20. Pascual 1, Rim, neck fr., *BoxNo*: 89/009 (1194), *Site*: Roman Agora – Hellenistic WSN/1 Robber trench?, reddish yellow (5YR 6/6), surface: pink (5YR 7/4), Diam. = 15 cm, Th = 2.1 cm, H = 7.4 cm.

21. Dressel 20, handle fr., *BoxNo*: 89/005 (128), *Site*: Roman Agora, *Stamp*: Q.ANT.R, Q. Ant(onius) R[ug](a), dark buff (7.5YR 6/4), H = 13 cm, *Bibl:* Bezeczky 2001, No. 10, Taf. 2, 3.

22. Beltran I (Dressel 9), Rim, neck fr., *BoxNo*: 88/013 (700), *Site*: Roman Agora, buff (10YR 8/4-7/4), Diam. = 23 cm, Th = 2.2 cm, H = 8 cm.



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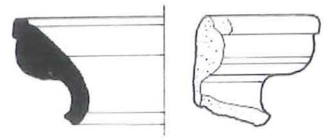

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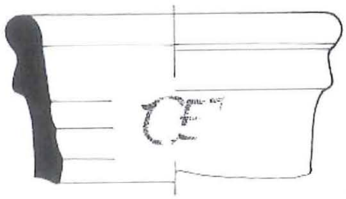

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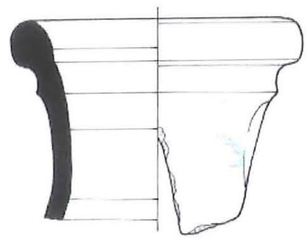

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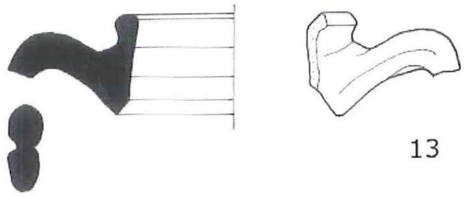

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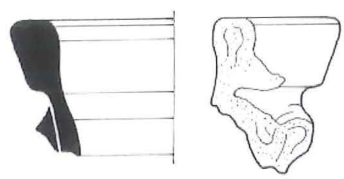

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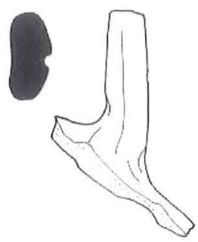

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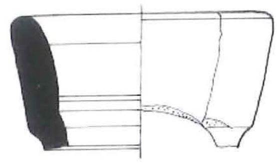

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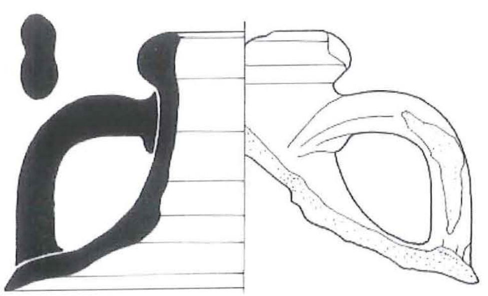

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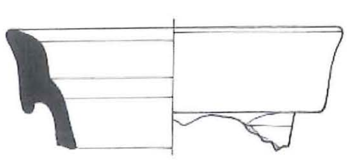

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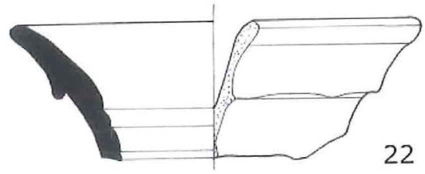

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Fig. 3

23. Dressel 25, Rim, neck, handle fr.,*BoxNo*: 93/032 (1361), *Site*: Hellenistic robber trench (WSN/1+2), light red (2.5YR 6/6), surface: reddish yellow (5YR 7/6-6/6), Diam. = 13.6 cm, Th = 1.7 cm, H = 13.6 cm.

24. 'Semi-fine baggy jar', Rim, neck, handle fr., *BoxNo*: 89/016+89/018 (1213+1228), *Site*: Hellenistic robber trench (WSN/1)?+ Roman Agora, reddish yellow (5YR 6/6), Diam. = 13 cm, Th = 1.9 cm, H = 12.3 cm.

25. Rhodian, Rim, neck, handle fr., *BoxNo*: 89/027 (1298), *Site*: Roman Agora, red (2.5YR 5/6), Diam. = 12.4 cm, Th = 1.2 cm, H = 11 cm.

26. Chian, handle fr., *BoxNo*: 96/042 (203), *Site*: Roman Agora building period I, *Stamp*: Ματρ.. (retr., alpha inverted), H = 8.9 cm.

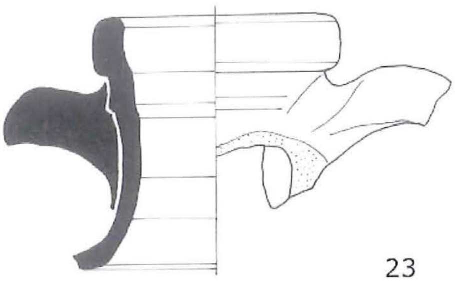
27. Cnidian, Base fr., *BoxNo*: 95/025 (91), *Site*: Hellenistic street II-III, yellowish red (5YR 5/6), H = 7.6 cm.

28. Coan, Rim, neck, bod fr., handles, *BoxNo*: 96/051 (36), *Site*: Hellenistic robber trench (WSN/1), red (2.5YR 5/6), surface: buff (10YR 8/3), Diam. = 11 cm, Th = 1.2 cm, H = 27 cm.

29. Agora F65-66, Rim, neck, handle, *BoxNo*: 89/031 (290), *Site*: Hellenistic robber trench (WSN/1), gray (10YR 5/1); surface: light red (2.5YR 6/6), Diam. = 5.6 cm, Th = 0.7 cm, H = 10.8 cm.

30. 'Cup shaped rim', Rim, neck, handle frs., *BoxNo*: 93/032 (1260), *Site*: Hellenistic robber trench (WSN/1+2), reddish yellow (5YR 5/6), Diam. = 14.6 cm, Th = 1.5 cm, H = 23.7 cm.

31. Cretan AC 4, Rim, neck, handle fr., *BoxNo*: 87/016 (1307), *Site*: Roman Drain, pale yellow? (2.5Y 7/4), Diam. = 6.3 cm, Th = 0.7 cm, H = 10.5 cm.



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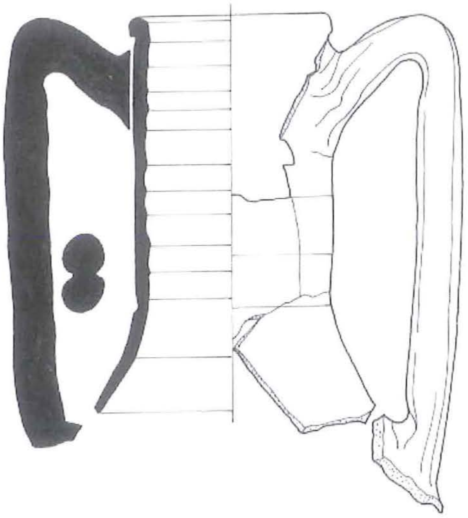

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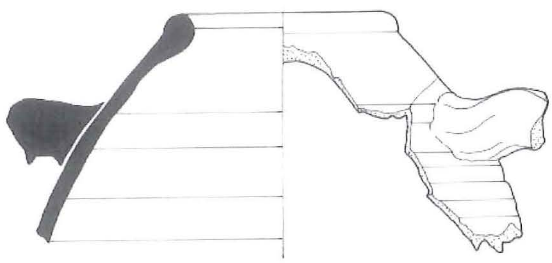

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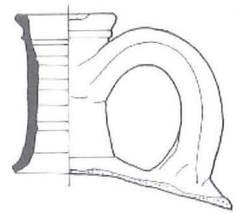

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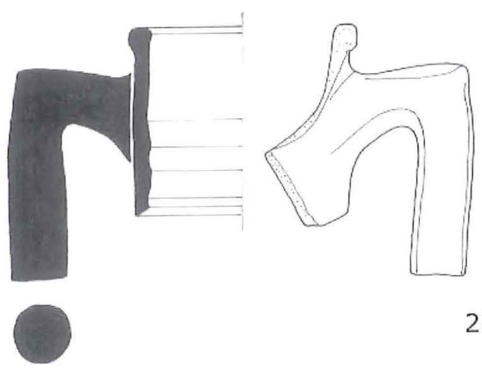

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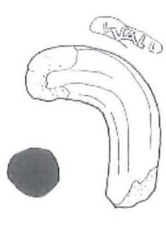

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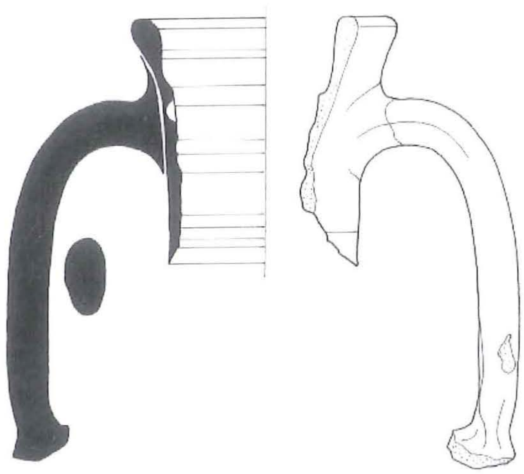

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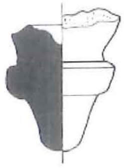

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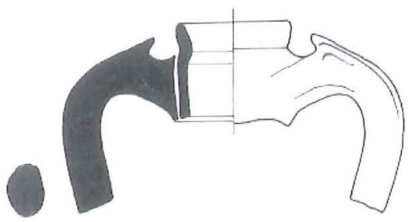

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Fig. 4

32. Cretan AC2, handle fr., *BoxNo*: 98/031 (1606), *Site*: Roman Agora, yellow (10YR 8/6), H = 17.7 cm.

33. Dressel 5, handle fr., *BoxNo*: 95/302 (1608), *Site*: West-street, gray (10YR 5/1); surface: light red (2.5YR 6/6), H = 6.7 cm.

34. Pseudo Coan Pinched handle?, handle fr., *BoxNo*: 99/042 (1615), *Site*: Roman Drain, red (2.5YR 5/6), H = 6.5 cm.

35. Agora G 199, Rim, neck, handle fr., *BoxNo*: 95/180 (1328), *Site*: R-W-Stoa, light reddish brown (5YR 6/3), Diam. = 12.5 cm, Th = 0.9 cm, H = 6.5 cm.

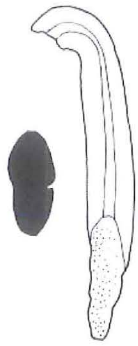
36. Pompeii XIII/Athenian Agora G 198, handle fr., *BoxNo*: 97/028 (1604), *Site*: Roman West Stoa chamber M, light reddish brown – reddish brown (5YR 6/4 – 5/4), H = 8.5 cm.

37. 'Local Aegean 1', Rim, neck, handle fr., *BoxNo*: 95/002 (28), *Site*: strayfind, Diam. = 11.2 cm, Th = 1.2 cm, H = 10.5 cm.

38. 'Local Aegean 2', Rim, neck, handle fr., *BoxNo*: 96/047 (283), *Site*: Hellenistic robber trench (WSN/1), light reddish brown (5YR 6/4), Diam. = 13 cm, Th = 1.2 cm, H = 13.2 cm.

39. Egyptian, Base fr., *BoxNo*: 90/007 (1627), *Site*: Roman Agora, Early Roman filling, reddish brown (5YR 4/4), H = 10.7 cm.

40. Athenian Agora M54, handle fr., *BoxNo*: 97/036 (1603), *Site*: Roman West Stoa chamber M, reddish yellow (7.5YR 7/6), H = 15.5 cm.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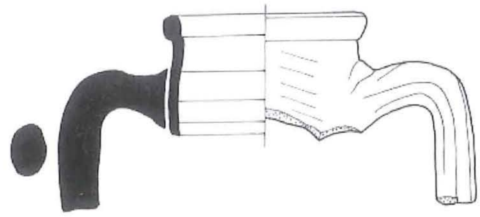
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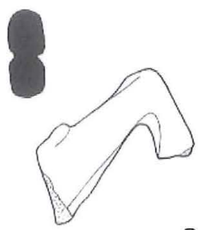
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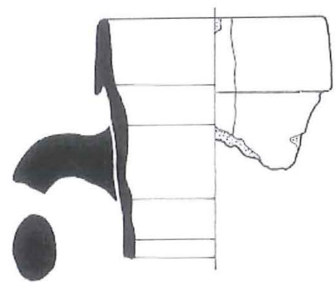
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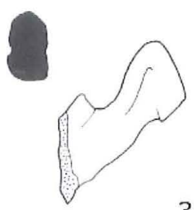
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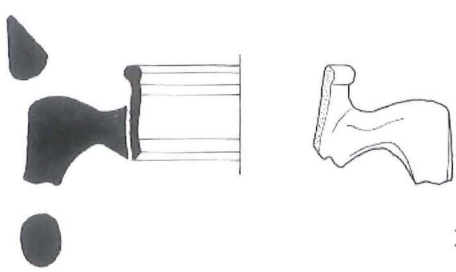
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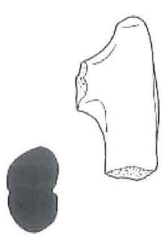
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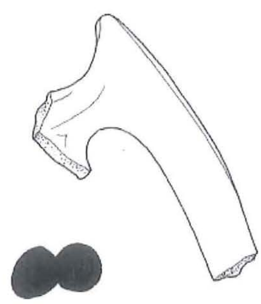
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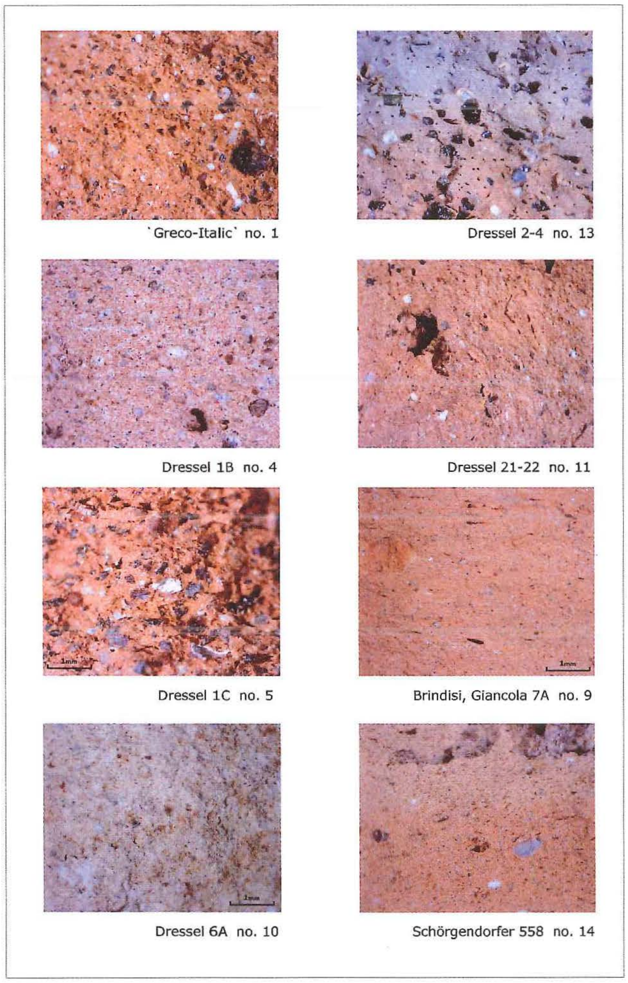

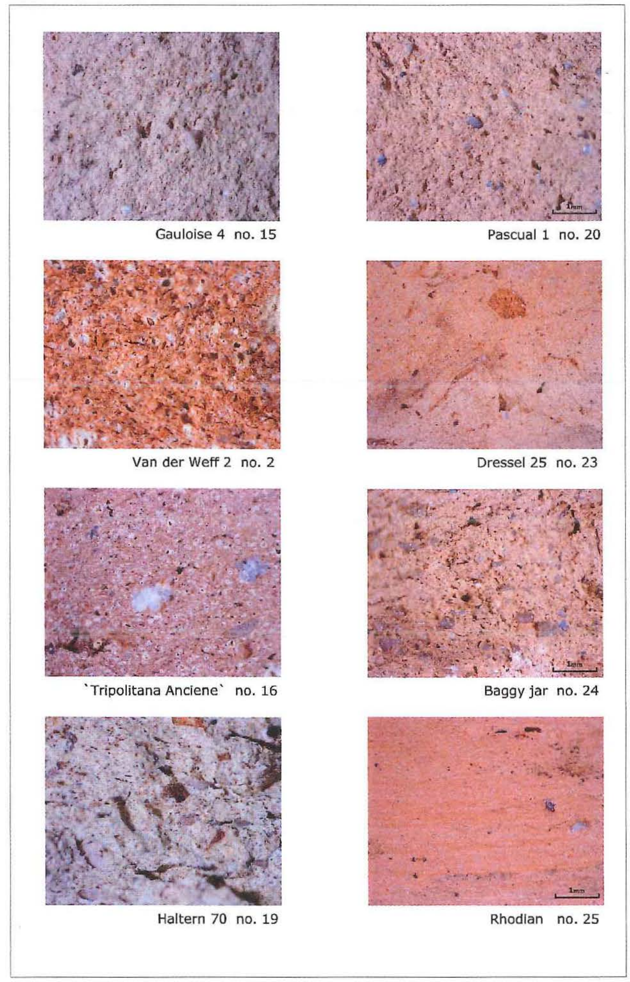

Fig. 5

Photomicrographs 20x times magnification
no. 1; no. 4; no. 5; no. 9; no. 10; no. 11; no. 13; no. 14.

Fig. 6

Photomicrographs 20 times magnification no. 15; no. 2;
no. 16; no. 19; no. 20; no. 23; no. 24; no. 25.

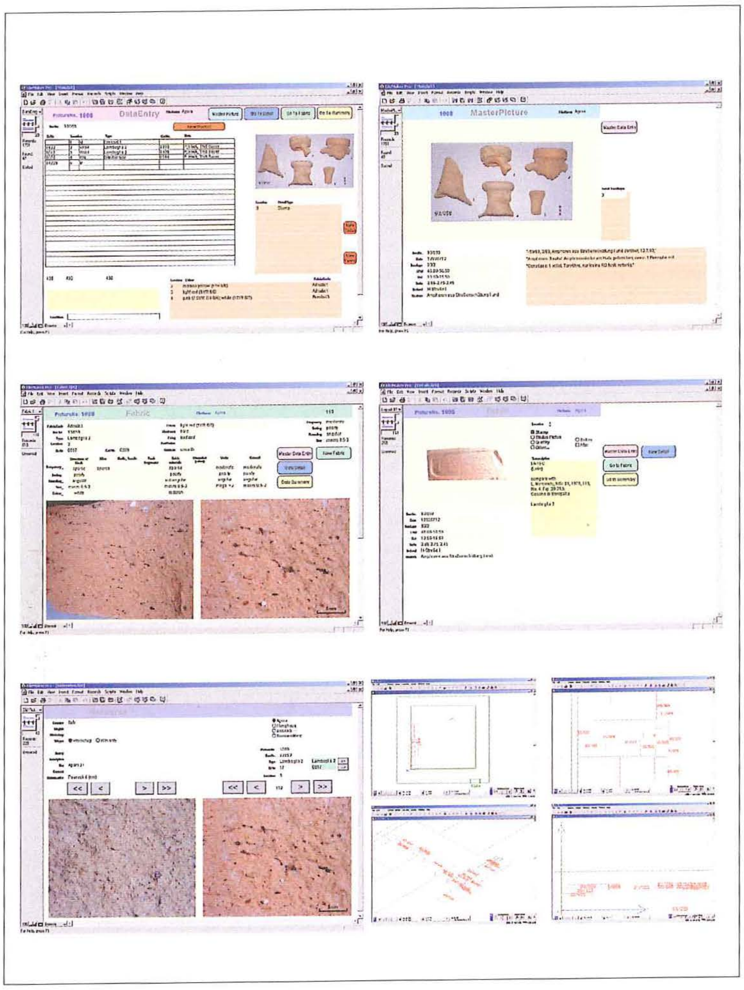

Fig. 7

Method 1-5. Screen FileMaker Pro 5 software application for amphora database.
6. ARCHICAD 3D software application.

Les problèmes actuels de la chronologie des timbres sinopéens

Niculae Conovici

En 1998, en publiant le catalogue des timbres sinopéens trouvés à Histria (Istros), j'ai proposé une nouvelle chronologie relative de cette série.[1] Elle avait comme point de départ les travaux antérieurs (en particulier ceux de Б.Н. Граков, В.И. Цехмистренко, В.И. Кац, Н.Ф. Федосеев et Y. Garlan), ainsi que mes propres recherches fondées sur l'analyse interne d'environ 7000 timbres et sur ce que je connaissais de leurs contextes de découverte. J'avais amorcé le nouveau classement des magistrats (astynomes) sinopéens quelques années auparavant, en étudiant quelque 2300 timbres trouvés en Roumanie, dont la plupart provenant d'Istros, de Callatis et du site gète fortifié de Satu Nou – « Valea lui Voicu », avec la bibliographie disponible. L'histoire de cette recherche, ainsi que mes autres contributions sur le même sujet, ont été largement présentées dans le premier chapitre de mon livre.

À mes débuts, l'ancienne chronologie publiée en 1929 par le grand savant russe Граков continuait à être utilisée, malgré les corrections apportées à sa chronologie absolue de ses six groupes et les observations fort importantes de Цехмистренко sur la typologie des timbres sinopéens. Les chercheurs soviétiques utilisaient aussi le manuscrit achevé en 1954 par Е.М. Придик et Граков (*IosPE* III),[2] qui contenait entre autres 9035 timbres sinopéens (et aussi un grand nombre de lectures fautives...).[3]

Pour établir la chronologie relative des astynomes, j'ai utilisé plusieurs méthodes, en tenant compte des informations contenues dans les timbres des diverses périodes. Au fur et à mesure que j'amassais les informations dans une base de données, j'ai constaté que la typologie des timbres sinopéens établie par Граков et complétée par Цехмистренко était en principe correcte: c'est pourquoi j'ai maintenu la division des timbres en groupes chronologiques. Par contre, le contenu de chaque groupe était mal précisé, parfois erroné, à cause de la quantité insuffisante des timbres connus à l'époque. Une partie des astynomes du IV^{e} groupe, par exemple, figurait dans d'autres groupes; certains apparaissaient deux fois, à cause de la mention irrégulière du patronyme dans les groupes IV et V;[4] et il y avait aussi des noms mal lus, des confusions entre fabricants et astynomes, et même des noms appartenant à d'autres centres de production (Chersonèse et Tyras).[5] De telles erreurs se sont transmises dans une partie de mes articles antérieurs,[6] avant que j'aie pu vérifier l'ensemble des noms attestés. En cette occasion, la possibilité d'accéder au fichier de M. Garlan a été essentielle pour corriger les lectures fautives trouvées dans diverses publications anciennes. J'ai abouti à un nombre total de 161 magistrats, répartis en cinq groupes chronologiques (j'ai renoncé au sixième groupe de Граков, parce que la répartition des magistrats entre les groupes V et VI était infirmée par la documentation archéologique). À l'intérieur de chaque groupe, j'ai établi plusieurs sous-groupes, en m'appuyant sur des critères typologiques (groupes I et II), sur de nouvelles associations entre magistrats et fabricants dans tous les groupes, sur la succession des graveurs de timbres dans divers ateliers (groupes III-V), et sur des contextes archéologiques (Satu Nou, Cogealac, Elizavetovskoe, Tanaïs etc.). Je suis même allé jusqu'à classer par années les magistrats

[1] Conovici 1998.

[2] Sur le sort de ce manuscrit voir Кац 1989 and 1993, 111, n. 35; Федосеев 1993.

[3] Par exemple 275 noms de magistrats « sûrs » et 25 « douteux », dont 164 seulement ont été confirmés par les études ultérieures.

[4] Conovici 1989.

[5] Федосеев 1993, 87-97 et Tab. I avec 66 lectures fautives, dont 9 provenant de Chersonèse et 1 de Tyras.

[6] Conovici *et al.* 1989; Avram *et al.* 1990 et sa version réduite dans Кац & Монахов (eds.) 1992, 229-253, avec les corrections des éditeurs (248-251).

que je connaissais le mieux (dans certaines parties des groupes I, III et V, ainsi que dans l'ensemble du groupe IV), là où la succession des graveurs me paraissait la plus sûre. Si bien que tous les astynomes attestés, ainsi que les timbres de fabricant et les timbres « à date », sont entrés dans une chronologie relative cohérente qui, il va sans dire, ne pouvait être que le reflet provisoire de mes connaissances au moment de sa rédaction. De nouvelles découvertes et la publication de collections inédites apportent chaque année de nouvelles associations de noms, qui peuvent en modifier l'ordonnance: dans le corpus des *IosPE* III figurent également des lectures que je ne peux pas contrôler.

Heureusement, la coopération internationale s'est fortement développée pendant la dernière décennie. Parallèlement à mon travail, d'autres chercheurs se sont intéressés au même problème et des contacts personnels ont permis l'échange rapide d'informations. Le russe Н.Ф. Федосеев de Kertch a lui aussi proposé une nouvelle chronologie sinopéenne, fondée sur l'analyse informatisée de l'ensemble des timbres dont il avait connaissance (plus de 15 000).[7] Sa liste de magistrats est presque identique à la nôtre, à trois ou quatre exceptions près.[8] Même si je ne suis pas convaincu de la possibilité d'obtenir une succession correcte par des moyens mécaniques, il est vrai que chacun de ses groupes (notion qu'il évite d'utiliser) a un contenu assez proche des miens. Mais les différences de détail sont importantes, surtout pour le groupe V, le plus long de tous (68 ans). Il y a aussi des différences entre les deux variantes qu'il a présentées en 1994.[9] Et même s'il appuie sa chronologie sur pas moins de 22 contextes archéologiques, il faut dire que les réalités stratigraphiques des plus anciennes couches de Satu Nou – « Valea lui Voicu » contredisent parfois ses résultats.[10]

Nos chronologies absolues sont également différentes. Selon Федосеев, qui s'intéresse à « la dynamique de l'import-export », « à partir d'une succession déterminée de magistrats sinopéens et d'un choix représentatif de centres d'importation, on peut étudier l'essor et le déclin du commerce, puis le relier à des événements connus... Pour chacun des centres de consommation, l'analyse des importations sinopéennes correspond au développement historique de ce centre ».[11] À partir de quoi il déduit que le timbrage régulier à noms de magistrats aurait duré entre 375 et 212 av. J.-C environ et que les timbres « à date » (calculés d'après l'ère séleucide de 312/311 av. J.-C.).[12] seraient d'une époque ultérieure (203-189 av. J.-C.). Mais il est très difficile de se rallier à une telle conception: parce qu'il est très risqué de juger de l'évolution du timbrage sinopéen d'après le peu que nous connaissons de l'histoire politique et surtout économique de Sinope, et encore plus des autres centres grecs du Pont Euxin. Avant même de tenter un tel rapprochement, il faudrait au contraire avoir établi un classement sûr des magistrats: autrement, n'importe quelle chronologie peut être « confirmée » par l'histoire événementielle (comme en témoigne la bibliographie existante!).

De mon côté, j'ai préféré rapporter les indications offertes par les complexes « fermés »[13] au nombre de magistrats attribués à chaque groupe: le deuxième quart du IV^{e} s. av. J.-C. se rapportant au premier groupe (à 17 noms) et le troisième quart au début

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[7] Бобылев & Федосеев 1989; Fedoseev 1999, 45-48 (tableau de concordances entre magistrats et fabricants).

[8] Федосеев 1993, avec la liste corrigée des noms de magistrats. Il y a deux noms (*Pollôn* et *Phormiôn*) qui ne font pas partie de la série étudiée par nous et des différences dans l'identification des homonymes. Voir aussi les critiques formulées par Garlan, dans Empereur & Garlan (eds.) 1997, 174-177, nos. 76-78.

[9] Федосеев 1994; *idem* 1999, 27-48, Tableau III.

[10] *Ibidem*. Dans le Tableau III, les noms attestés à Satu Nou ne sont pas tous marqués, et l'auteur ne tient pas compte de leur répartition par couches. Même ainsi, il y a là des interruptions assez nombreuses qui demandent une explication, surtout la grande « pause » de la fin de l'intervalle.

[11] *Ibidem*, p. 29.

[12] Voir dernièrement Сапрыкин & Федосеев 1999. Selon les auteurs, Sinope ne pouvait pas utiliser l'ère pontique avant la conquête de la ville par Pharnace I^{er}; les premiers timbres « à date » seraient de l'an 203/202 (= 109 de l'ère séleucide), quelques années après la fin du timbrage aux noms d'astynomes (212), ce qui confirmerait la chronologie absolue « haute » proposée par Федосеев. Les arguments pour l'adoption de cette ère par Sinope après la mort de Lysimaque sont indirects (par comparaison aux autres cités grecques voisines, notamment de Cappadoce: p. 141). Mais si la chronologie absolue de Федосеев n'est pas exacte, tous ses arguments tombent! Dans ses ouvrages antérieurs, Федосеев était au contraire un adepte de l'ère pontique.

[13] Conovici 1998, 50-51. Les complexes utilisés étaient: le puits Valma de Thasos, la tombe d'un guerrier de Vani (Géorgie), le Tumulus 8 du groupe des « 5 Frères » d'Elizavetovskoe, l'épave d'El Sec, quelques « dépôts » de l'Agora d'Athènes cités par V. Grace.

du groupe II (à 38 noms). Sans trop y insister, j'ai proposé de situer le début du timbrage vers 355-350 av. J.-C. et donc sa fin vers 190 av. J.-C. Les timbres « à date » auraient commencé en l'an 188/187 (= 109 de l'ère pontique de 297/296 av. J.-C.).[14] Étant bien entendu que ma datation peut être « vieillie » de quelques années, jusque vers 360 av. J.-C., pour respecter le parallélisme établi par Цехмистренко, entre la représentation de l'emblème de la cité (l'aigle becquetant un dauphin) sur les timbres du premier groupe et sur les monnaies.[15]

Une troisième chronologie des timbres sinopéens sera sous peu publiée par Garlan.[16] Sans y insister, on peut suivre ses voies de recherche d'après ses publications préalables. Grâce à une vaste expérience acquise en étudiant les timbres thasiens, et à l'accumulation d'un fichier contenant plusieurs milliers de timbres étudiés directement en Russie (y compris dans le manuscrit des *IosPE* III), en Ukraine, en Roumanie, en Bulgarie, en Grèce, etc., et à Sinope même, il est maintenant le mieux informé de ce matériel. À côté des méthodes suivies par d'autres chercheurs, il en a introduit de nouvelles: l'étude des regravures, la généalogie des fabricants et la fouille des ateliers à Sinope. Deux de ces méthodes sont déjà présentes dans le premier article qu'il a consacré à ce sujet.[17] La liaison faite entre les fabricants *Épikratès* et *Manès* (père et fils) sur la foi d'un timbre regravé publié par Цехмистренко a mis en évidence l'existence à Sinope d'ateliers « familiaux », et a permis la séparation du premier groupe en deux « paquets » chronologiques. Par l'étude des emblèmes d'atelier rencontrés dans les groupes II et III, ainsi que des patronymes de fabricant, un autre atelier de famille à été identifié.[18] En regroupant les magistrats qui datent les timbres de cet atelier, on obtient d'autres « paquets » de noms (même si la situation est ici plus compliquée, dans la mesure où la distinction chronologique entre *Poseidônios I* et *Poseidônios II* dans le cadre d'un même groupe n'est pas évidente et où on connaît des timbres de la même année signés par deux membres de cette famille (*Theudôros et Poseidônios II, Poseidônios II et Kallisthénès*). Cela signifie que dans un seul atelier pouvaient travailler en même temps deux ou bien plusieurs « fabricants ». Par le témoignage comparé de plusieurs ateliers de ce genre, distingués soit par des emblèmes communs, soit par des patronymes de fabricants, soit par des fouilles de dépotoirs d'ateliers, on peut obtenir des « paquets » successifs de plus en plus restreints.

En 1994 ont commencé la prospection et ensuite la fouille des ateliers amphoriques de Sinope, conduites par Garlan et Dominique Kassab Tezgör, avec le concours des archéologues turcs.[19] Tandis que le premier s'est concentré sur quelques ateliers d'époque hellénistique de la péninsule de Boz-Tepe, à Zeytinlik et Nisiköy,[20] la seconde a fouillé plusieurs ateliers situés dans la zone côtière de Demirci (14 km au sud de Sinop), dont un seul datait du IV^{e} siècle av. J.-C. Les autres ateliers de Demirci sont d'époque romaine (III^{e} – VI^{e} s.), et permettent de suivre l'évolution des amphores sinopéennes non timbrées de cette période.[21]

La fouille de plusieurs fours et dépotoirs a donné quelques centaines de timbres sur anses d'amphores et sur tuiles, appartenant à de nombreux fabricants de tous les groupes.[22] Parmi eux, on a distingué quelques ateliers de plus longue durée, qui vont permettre d'affiner l'ordonnance chronologique de plusieurs magistrats. Est apparu aussi un certain nombre d'associations nouvelles.

La chronologie absolue des astynomes sinopéens

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[14] *Ibidem*, n. 328, sur les difficultés d'accepter l'ère séleucide pour Sinope.

[15] Цехмистренко 1960, 67-68; Кас 1979, 186-187.

[16] Y. Garlan, *Les timbres céramiques sinopéens trouvés à Sinope*, mss. Je remercie l'auteur de m'avoir autorisé à citer son ouvrage et à le consulter avant publication.

[17] *Idem* 1990.

[18] Celui de l'emblème « fleur »: *Poseidônios I – Theudôros Poseidôniou – Poseidônios II Theudôrou* et *Kallisthénès Theudôrou*.

[19] Une présentation générale de ces explorations a été réalisée en 2000 par les deux auteurs avec le concours du Ministère des Affaires Etrangères français sur le site *http://www.diplomatie.gouv.fr/culture_scientifique/archeologie/turk/index.html* « Les ateliers amphoriques de Sinope (Turquie) »: Garlan & Kassab Tezgör 1996, 327-334; Drahor *et al.* 1995.

[20] Garlan & Tatlican 1997; *iidem* 1998.

[21] Kassab Tezgör 1996; Kassab Tezgör & Tatlican 1998; Kassab Tezgör *et al.* 1998.

[22] À cause des dimensions nécessairement réduites des sondages pratiqués, il est à présumer que toute la production de ces ateliers n'est pas représentée dans les échantillons ramassés. La possibilité d'avoir simultanément plusieurs fabricants dans un même atelier pourrait induire des perturbations dans la construction de la chronologie. Dans ce cas, seule la succession des graveurs pourra faire la différence.

a encore besoin d'autres repères. Ils sont fournis par les contextes archéologiques « clos », où l'on trouve des timbres amphoriques de divers centres de production ainsi que d'autres objets bien datés. À l'heure actuelle, quand les chronologies d'autres grandes séries de timbres amphoriques (Thasos, Héraclée du Pont, Chersonèse, Rhodes, Cnide) sont établies d'une manière indépendante, la comparaison des timbres provenant de centres divers s'avère très utile pour vérifier les chronologies proposées. Elle a donné de bons résultats dans l'établissement de la chronologie absolue des timbres de Thasos,[23] de Chersonèse[24] ou d'Héraclée Pontique, ainsi que des amphores en général.[25] Les dernières fouilles de Tanaïs semblent confirmer notre chronologie sinopéenne par la présence de timbres rhodiens mieux datés dans les mêmes complexes[26] (genre de confirmation qui n'a évidemment qu'une valeur relative et ne va pas jusqu'à indiquer des années précises).

Parmi les nombreux problèmes soulevés par les amphores sinopéennes timbrées, on peut encore en citer d'autres, comme le coefficient du timbrage dans chaque atelier,[27] les capacités des amphores, le prix de leur contenu, les graffiti. Pour ce qui est de la typologie des amphores et de leurs standards supposés on peut citer dernièrement les contributions de С.Ю. Монахов,[28] Garlan et Fuat Dereli.[29]

Dans un avenir très proche, nous pouvons attendre la publication de nouveaux *corpora* de timbres sinopéens provenant surtout du bassin de la mer Noire: en premier chef de Sinope même, et puis surtout des grandes collections du Nord pontique qui attendent depuis longtemps leur publication. La multiplication des complexes archéologiques « clos » est également un autre secteur de recherche très prometteur, sans parler de la continuation de la fouille des ateliers. Une zone restée pratiquement non explorée est la côte sud du Pont Euxin, le territoire de Sinope et les colonies sinopéennes (Kytoros, Kotyora, Kérasous), ainsi que les autres villes sud-pontiques comme Héraclée Pontique, Amisos ou Trapézous. Les nombreux timbres sinopéens découverts en Bulgarie[30] et en Géorgie[31] doivent aussi venir compléter nos connaissances. Les moyens actuels de communication (l'Internet) permettent la publication finale d'un catalogue illustré de toutes les matrices des timbres sinopéens, comme résultat d'une collaboration internationale. Avec un tel instrument de travail, la publication des nouvelles découvertes et la valorisation des anciennes collections devenues trop grandes pour une publication traditionnelle sur papier seront facilitées.

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[23] Виноградов 1972, 45-56.

[24] Кац 1994.

[25] Брашинсий 1984a; Монахов 1999a.

[26] Jöhrens 2001, 447-448.

[27] On peut maintenant trouver des estimations diverses en ce sens.

[28] Монахов 1992; *idem* 1993.

[29] Dereli & Garlan 1997.

[30] Banev *et al.* 1985 parlent d'une grande collection de 1350 timbres provenant de Bizonè, dont 366 de Sinope. Dans mon fichier figurent seulement 141 timbres de toute la Bulgarie (une partie étant inédite), dont seulement 37 de Bizonè. Les timbres trouvés à Sozopol (Apollonie Pontique) sont encore inédits.

[31] Sur les relations très étroites entre Sinope et Colchide, voir Брашинсий 1973; Ceckhladze 1992.

The Typology and Trade of the Amphorae of Sinope. Archaeological Study and Scientific Analyses

Hasan N. Erten, Dominique Kassab Tezgör, Isık R. Türkmen & Abdullah Zararsız

The workshop of Demirci, 15 kilometres south of Sinope, was active between the third and the sixth centuries AD. As a result of excavations, a typology of the amphorae, which were produced there, could be established.[1] The commercial roads have been partly traced, showing up to now two main axes: one in the direction of the Black Sea region, the other one in the direction of the Eastern Mediterranean.

These first results raise some questions: how to explain the diversity of the colour of the clay among the different types of Sinopean amphorae? Were all the amphorae of whitish clay known in the Pontic area produced in Sinope, or were some of them produced in Heraclea Pontica, as it has been often assumed? Are the amphorae, which belong to some types identified as Sinopean, but which have been found at other sites with own workshops, exports or imitations? While the archaeological expertise does not provide answers to these questions, the scientific analyses approach the problems by examining the composition of the clay and comparing products of diverse provenances. Tiles have been also intensively produced in the workshop of Demirci. They show the same diversity of colours and for comparison a few fragments have been analysed.

1. Clays and Types of the Sinopean Amphorae[2]

Different colours of clay are seen at the workshop at Demirci: pinkish, reddish and whitish, which succeed each other in time and which correspond to specific amphora shapes. The clay only differs in the colour, since the tempers, as we can see them with the naked eye, appear to be the same: some black sand, which has been identified with pyroxene in the previous studies devoted to Sinopean amphorae, inclusions of calcite, quartz, feldspar, and some red inclusions. These red inclusions can be hard like a mineral or powdery and crumbling away. We can observe the same differences in the colour of the clay of the tiles: some are of a reddish colour, others of a whitish colour, but they seem to have similar tempers.

Do we have, as we may think at first glance, the same type of clay? It might appear so, since some shapes of amphorae, which are associated with reddish clay take sometimes a lighter colour, while some light clay amphorae turn to pinkish or reddish. Then, could the difference of colour be the consequence of the temperature of the firing or of the atmosphere in the kiln?

The Pinkish Clay Amphorae

Thanks to the stamps present on the handles of the Hellenistic amphorae of Sinope, which carry the symbol of the city, the clay of that centre has been identified and its characteristics used to recognize amphorae of a later date. During the Hellenistic period, the clay was pinkish and the inside wall of the container often had a purple tint. Its main temper was the pyroxene, which is usually considered as an identifying mark of Sinopean production. [3]

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[1] Kassab Tezgör 1996; Kassab Tezgör & Tatlıcan 1998; Kassab Tezgör & Dereli 2001. The excavations of Demirci have been financed by the French Ministry of Foreign Affairs and generously sponsored by the wine producer Kavaklıdere in Ankara.

[2] We shall describe here only those types of amphorae, which are related to the samples that have been analysed. For the main types, cf. Kassab Tezgör forthcoming a.

[3] Monakhov 1993.

Fig. 1a Neck of a pinkish clay amphora.

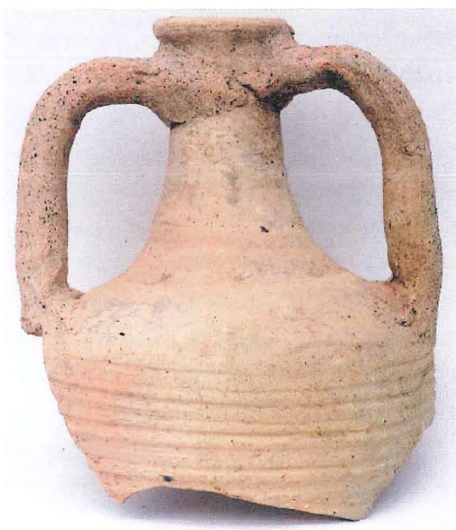

Fig. 1c Neck of a whitish clay amphora.

The amphorae produced in Demirci during the third century AD, which represent the older shape known at that workshop, have been made with the same pinkish clay (Fig. 1 a). The wall of some of them has the same duality of colour, with the outside pinkish and the inside purple (Fig. 1 d and e).

The Reddish Clay Amphorae

During the second half of the fourth century AD, coloured clay amphorae appeared: they were more or less reddish, turning to an orange hue (Fig. 1 b and f). Their production was intensive and continued during the fifth century AD. They had various shapes and capacities, but the small amphorae (around 6 litres) – so-called carrots because of their thin and elongated shape – were the most produced and the most exported vessels.

Fig. 1b Neck and shoulder of a reddish clay amphora.

The Whitish Clay Amphorae

Towards the beginning of the sixth century AD, the reddish clay amphorae gave way to whitish clay ones (Fig. 1 c and g). The clay could turn to a light brown or yellow colour, sometimes to a greenish one. To this new colour correspond new shapes, which, as the carrot amphorae, were of a small capacity. The more frequent form had a long and narrow neck and a conical body ending with a convex base.

Fig. 1d Detail of the outside wall of a pinkish clay amphora.

Fig. 1e Detail of the inside wall of a pinkish clay amphora.

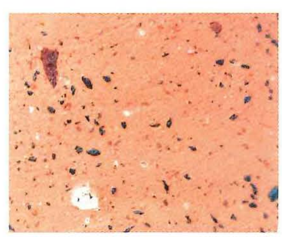

Fig. 1f Detail of the reddish clay.

Fig. 1g Detail of the whitish clay.

2. The Other Centres of Production during the First Centuries AD

Besides Sinope, only very few workshops have been identified in the Black Sea region in the Roman period. The attribution of amphora types to a centre of production is made more difficult by the similarity of the appearance of the clay and of some morphological features.

The Whitish Clay Amphorae

The question if the whitish clay amphorae originated from one or several centres of production is a problem, which only began to be solved recently. As a matter of fact, other types than the ones known in Demirci have been made with clay, similar in colour and in the presence of pyroxene.[4] Russian amphorologists had attributed them to Sinope and/or to Heraclea Pontica (today Ereğli). Without excluding the possibility of a third centre, the workshop located not far from Heraclea Pontica confirms this hypothesis.[5]

The So-Called Carrot Amphorae

Did Sinope have the exclusivity of the so-called carrot amphorae? A workshop which had been producing a similar shape as well as *Late Roman I* amphorae has been pointed out in Seleucia of Pieria.[6] If it was a production centre and not a deposit, we have an evident example of the same shape produced in two different places, one imitating the other.

The Colchian and Pseudo-Colchian Amphorae

There is now no doubt that Colchis was a centre of production, whose amphorae were characterized by brownish-red clay, rich in pyroxene. The neck often has a ridge at the height of the upper part of the handles and the foot is finished by a protuberance, which corresponds inside to a ribbon of clay turning like a spiral.[7]

Another group of amphorae includes the morphological elements, which are typical of Colchis, except the inner element, while the clay seems somehow different: it has been temporarily called "pseudo-Colchian".[8]

The Presence of Pyroxene

Although pyroxene is usually admitted as a criterion for a Sinopean attribution of clay, it needs more caution. If we consider that all the pinkish, reddish and whitish clay amphorae, which are attributed to Sinope, the whitish clay ones to Heraclea Pontica, and the brownish-red ones to Colchis, contain some pyroxene, then the presence of it is not decisive. That pyroxene should be found in amphorae from a larger area along the southern and eastern coasts of the Black Sea is not surprising, since all the littoral is bordered by beaches of black sand.

Caution is also due for another reason, when using pyroxene as a criterion. All the parts of a Sinopean amphora do not contain the same density of pyroxene: while it is quite high in the neck and the handles of some containers, it can be lower, if not nearly absent in the rest of the body (Fig. 1 b and c). Just as the presence of pyroxene does not necessarily mean that an amphora originates from Sinope, its absence does not mean that it does not.

3. Circulation of Amphorae Produced in the Black Sea Area

Sinopean, Colchian and pseudo-Colchian amphorae have been exported all around the Black Sea.[9] Thanks to the publications of the sites, the commer-

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4 Šelov 1986.
5 Arsen'eva *et al.* 1997, 187.
6 Empereur & Picon 1989, 232, 233, fig. 9 and 10.
7 Tsetskhladze & Vnukov 1992, 366; *Id.* 1993, 83.
8 Kassab Tezgör & Akkaya 2000.
9 For a first study of the commercial roads of the amphorae which have been produced in Demirci-Sinope, cf. Kassab Tezgör forthcoming b.

cial net can be fairly well followed. By contrast, the distribution of the amphorae to the Mediterranean Sea is incompletely known. However, the studies in progress are showing that it was an important trade, widely spread and in large quantities.

Amphora Exports to Black Sea Countries

The Northern cities of Tanais at the mouth of the Don River and of Gorgippia in the Bosporan Kingdom received significant imports of amphorae. At Tanais mainly whitish clay amphorae of the types, which we have proposed to attribute to Heraclea Pontica, have been found.[10] But reddish clay amphorae were also present, especially the carrot ones. Among the amphorae of diverse types and provenances, which have been discovered in Gorgippia, the ones of Colchian origin are well represented, and samples have been taken for analysis.[11]

Amphora Exports to the Eastern Mediterranean[12]

If we consider the data given by the publications up to now, among the reddish clay amphorae produced in Sinope during the late Roman period, the carrot ones have been exported in the highest numbers to the sites of Eastern Mediterranean. From Seleucia Pieria southwards, they have been found all along the Syrian coast.

Among whitish clay amphorae, the ones with a long and narrow neck and a conical body have been mainly exported. They have also been discovered in Seleucia Pieria and in Ibn Hani (near Laodicea on the Syrian coast), and their distribution has reached Jordan and Israel. We also find Colchian and pseudo-Colchian amphorae in Seleucia Pieria and on the Syrian coast, although in smaller numbers.

Origin of the Exports

If it is possible to differentiate the composition of the clay of the amphorae produced in Sinope from that of the amphorae produced in Heraclea Pontica, do we find the same distinction between the amphorae of Heraclea Pontica exported in Tanais and the ones of Sinope exported in Mediterranean Sea, in Seleucia Pieria and in Ibn Hani? Are the reddish clay carrots exported to Tanais Sinopean? And more delicate question, the ones found in Seleucia Pieria, do they originate from the possible workshop, which has been surveyed, or have they been imported from Sinope? Lastly, does the composition of the clay of the pseudo-Colchian allow us to relate them with Colchis or with Sinope, or does it offer some differences, which guide us to the search for another production centre?

All these are questions to which the following scientific analyses can bring the beginning of an answer.

4. Scientific Methodology[13]

We are presenting here the first results of the clay investigation of samples from Sinope and from the Black Sea region as well as the Eastern Mediterranean areas. The analyses of the samples will be resumed in the coming research, which will have a greater number of samples and some complementary methods of analyses.

The conclusions of the principal component analyses, which have been used to classify the samples by production centres, are quite promising. Such analyses will be developed to determine the provenance of other Black sea region amphorae.

PXRD and XRF Analyses

The elemental and the mineral compositions of the archaeological samples were sought by powder

[10] Arsen'eva *et al.* 1997, 188-190.

[11] Алексеева 1997, 418 pl. 136, 3 and 505 pl. 223, 1 and 2.

[12] Kassab Tezgör & Touma 2001.

[13] The authors would like to thank to Dr. Dilek Güvenç (Dept. of Mathematics, Bilkent University, Ankara) for her generous help on the computations of Principal Component Analysis, and to Dr. Сергей Ю. Внуков (Dept. of Classics, Institute of Archeology, Russian Academy of Science, Moscow) for his valuable discussions regarding the colour of the amphorae.

X-Ray diffraction (PXRD) and energy dispersive X-Ray fluorescence (EDXRF) spectroscopy. Examinations of the PXRD patterns of the samples provided information about the mineralogical compositions, whereas the elemental compositions were determined by EDXRF analyses.

The number of samples that were analysed by PXRD and XRF spectroscopy is given in Table 1. For the PXRD and XRF analyses, samples (except raw clays) were first washed with distilled water in order to get rid of the impurities present on the surface. After having been dried completely, they were grounded in a mortar with a pestle. Powder samples of five grams were prepared for analysis. The PXRD analysis was carried out using a Rigaku Miniflex model instrument. The source consisted of unfiltered Cu K-alpha radiation, generated in a tube operating at 30 kV and 15 mA. Spectra were recorded with 2 theta values ranging from 2 to 50 (70 in some samples) degrees in steps of 0.01 degree. The mineral compositions of the samples were only qualitatively determined following a search-match procedure.

The XRF analysis of the samples was carried out with a high performance Oxford ED-200 EDXRF system, located at the Nuclear Research and Training Centre of the Turkish Atomic Energy Authority, Ankara. Thirty elements (Mg, Al, Si, P, S, K, Ca, Ti, V, Cr, Mn, Fe, Co, Nd, Sm, Cu, Zn, Ga, As, Se, Rb, Sr, Zr, Pb, Th, Sb, Cs, Ba, La, Ce) were determined throughout the analyses. XRF pellets were positioned in front of a Si (Li) detector and irradiated with X-rays originating from a Rh target. The tube power was 50 W and the maximum current was 1000 μA. Eight different sediment and soil standards were used during the measurements and the spectra were acquired and analysed using Oxford Xpert Ease software.

Principal Component Analysis

The results of the XRF analyses were evaluated by principal component analysis, using the SAS programme package installed on Bilkent University's Unix system. The elements V, Cr, Mn, Fe, Ga, Rb, Zr, Ba and La were found to be most suitable for determining the principal components in terms of standard errors and variation among the samples.

Principal component analysis is a multivariate analysis technique for examining the relationships among several quantitative variables. It is widely used in provenance determination of archaeological samples,[14] or to simulate the connection between compositional variation and the external factors of geographical samples.[15] By this technique the observed variables are transformed into new variables, which are referred to as principal components. They are the linear combinations of the observed variables; they have maximum variation and are orthogonal. The orthogonality assures that they are uncorrelated with each other.

Assume that we have an n x p data matrix where n is the number of samples and p is the number of variables. First a p x p variance – covariance matrix S is calculated. Afterwards a vector a_1 (with $a_1^T a_1 = 1$) of length p is found which maximises the variance $a_1^T S a_1$. The resulting variable

$$z_1 = \sum_{i=1} a_{1i} p_i$$

is known as the first principal component and gives the linear combination of the variables with the maximum variance.[16] Further principal components can be derived so that each is orthogonal to the previous components. In this way the original p-correlated variables can be transformed to p orthogonal variables with decreasing variance. The usefulness of this method arises from the property that usually less than p principal components are enough to represent a high proportion of the variance of the original p variables.

In this study, relative mass fractions of the elements, expressed as percentages, were employed as variables and the principal components were found for each sample. The elements were chosen so that they were determined with small standard errors, and they represent a good variation among the samples.

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[14] LaBrecque *et al.* 1998, 95-100; Yap Ch.-T. & Hua Y.-N. 1995, 981- 986.

[15] Tokalıoğlu & Kartal 2002, 127-140.

[16] Johnson & Wichern 1992, 357-358.

The first few principal components are usually enough to reveal a significant result for the provenance determination. One can decide on the relationship among the samples and their provenances by looking at the separations and overlaps on the scatter plot of principal components. Samples from the same provenance segregate on one part of the scatter plot, which makes it easy to comment on the origin of a sample. Often the scatter plot of principal component 1 vs. principal component 2 gives enough information; sometimes the scatter plots of first and third or second or third principal components are needed for a better precision.

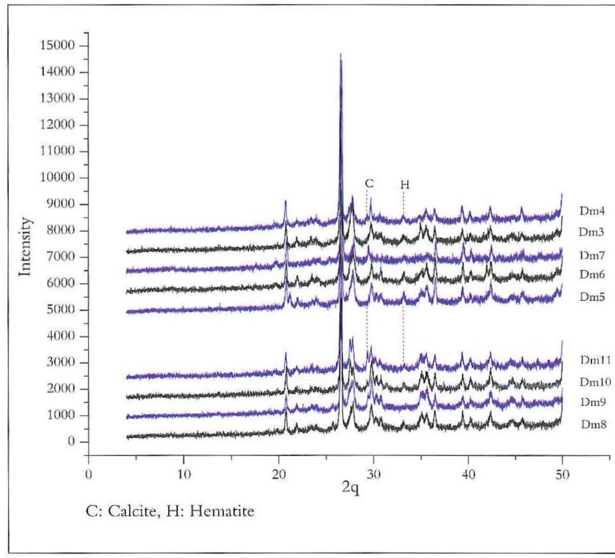

Fig. 2 PXRD patterns of some red clay and white clay amphorae.

5. Results and Discussion

Through data collection and observations, we analysed the mineral and elemental compositions of Sinopean amphorae and tiles, and investigated the possible reasons for the different colours observed. We examined the relation between Sinopean production and archaeological samples found in other provenances as well.

Sinopean Clay Composition

In Fig. 2, PXRD patterns of some Sinopean red-clay and white-clay amphorae are shown. It can be asserted from these patterns that the Sinopean amphorae of both colours contain the minerals quartz, feldspars, calcite, hematite and pyroxene and seen to be of the same composition[17].

For comparison, compositions of some raw clay samples and black sand, collected at the site of the workshop in Demirci, were also investigated, as well as red inclusions taken from amphorae and tiles (Fig. 4 and 5 a,b). It was found that the black sand consists of pyroxene-type minerals and the red inclusions consist of hematite. The raw clays do not, however, contain any of those minerals. We can see in Fig. 4 that the raw clays contain the minerals montmorillonite, quartz, feldspars and varying amounts of calcite. As the archaeological data suggest, the black sand was used as temper and is the source of pyroxene-type minerals in both types of Sinopean amphorae. On the other hand, hematite, which could be present in amorphous form in the raw clays, cannot be detected by PXRD, since peaks cannot be observed from an amorphous structure. Montmorillonite has been discovered in the raw clays, but not in the amphorae. This shows that the firing temperature for the amphorae must have exceeded 700° C, at which point the montmorillonite minerals begin to lose their crystallinity.[18]

Two different trends are observed for the red clay amphorae in Fig. 2: In PXRD patterns of carrot type amphorae (Dm3, Dm5, Dm6), the most obvious peak of calcite at $2\theta = 29.4°$, is absent. In addition, pyroxene peaks are greatly reduced in comparison to the white clay amphorae. The reduction of pyroxene peaks is stronger in the red clay amphorae, which are not the carrot type (Dm4, Dm7). However, small amounts of calcite are detected in PXRD patterns of those amphorae. The samples of white clay amphorae Dm8, Dm9, Dm10 and Dm11 have nearly the same mineral composition as the red-clay amphorae, but they contain larger amounts of calcite and pyroxene type minerals.

[17] This mineral composition is compatible with a previous study: Demirci & Akyol 1995, 55.
[18] Zhu *et al* 1997, 23.

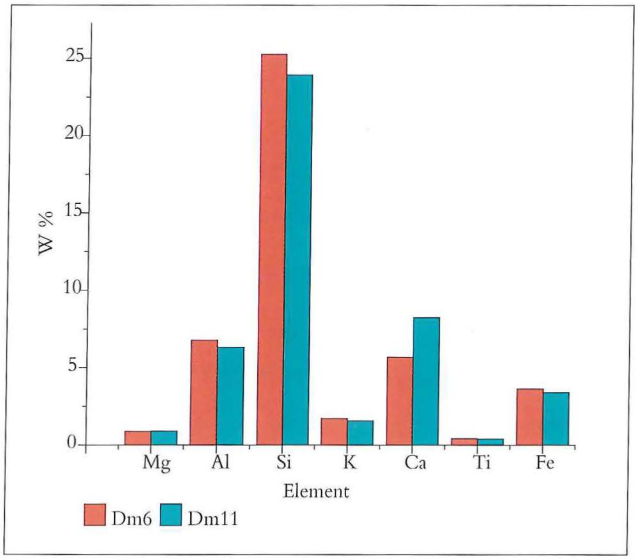

Fig. 3 Elemental comparison of red clay carotte type (Dm 6) and white clay amphora (Dm 11).

Hematite, α-Fe_2O_3, appears to be present in both the red-clay and white-clay amphorae. The red colour observed in the amphorae could come from hematite, since that mineral is responsible for the red colour observed in various other cases.[19]

In Fig. 3, the elemental contents determined by ED-XRF analyses for the red clay and the white clay amphorae are shown. Although the other elemental ratios are similar to each other, the amount of elemental calcium is lower in red-clay amphorae in comparison with the white clay ones. As the quantity of elemental calcium does not change with firing, the amount of elemental calcium must also be lower in the initial composition for the red clay amphorae. The variation in the amount of elemental calcium could be due to the variation of mineral calcite in the samples, which supports the observations made in Fig. 2 that the red clay amphorae have either lower amounts of mineral calcite or have none at all.

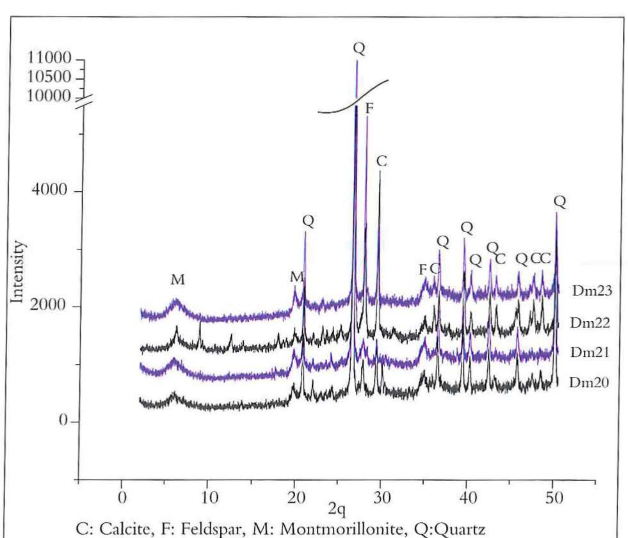

Fig. 4 PXRD patterns of raw clay from Demirci.

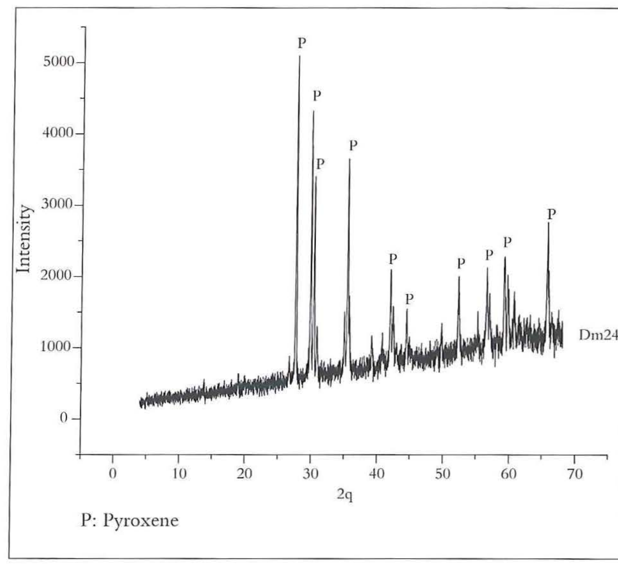

Fig. 5 a: PXRD pattern of black sand.

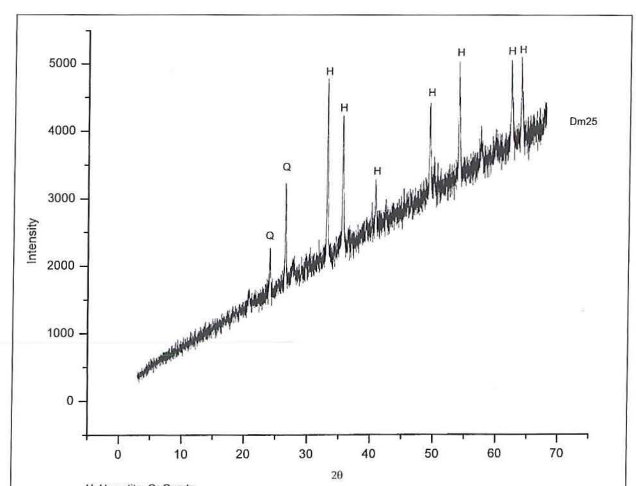

Fig. 5 b: PXRD pattern of red inclusion.

[19] Colagero *et al.* 2000, 440; Uda *et al.* 2000, 758-761; Bondioli *et al* 1998, 723-729.

The firing temperature and the firing atmosphere could affect the mineral compositions of the amphorae leading to different physical appearances. The presence of minerals such as calcite, hematite, feldspars and pyroxenes, and their distributions in the ceramic masses may provide information on the firing conditions of amphorae and their different physical properties.

The mineral calcite has a calcination temperature of 800 to 850° C,[20] and starts to decompose above 800° C. Further chemical reactions may take place in the clay matrix by increasing the firing temperature, which will lead to the formation of new mineral phases such as wollastonite, anorthitic plagioclases, and pyroxenes. Particularly the formation of pyroxenes at temperatures around 900-950 °C, can be responsible for the creamy colours obtained for the ceramics.[21]

The mineral hematite (α-Fe_2O_3), in which the iron is found in a state of oxidation (Fe^{3+}), is often responsible for the red colour. An oxidative environment is required to form hematite minerals. However, a reduced atmosphere, achieved during the baking process, might reduce (Fe^{3+}) to (Fe^{2+}), and lead to the decomposition of hematite into FeO:

$$Fe_2O_3 \rightarrow FeO + O_2$$

As a result of this transformation, the red colour originating from mineral hematite could disappear.

Concerning the effect of firing temperature and the firing atmosphere on mineral compositions and the colors of the ceramics, we can say that the firing temperatures and the redox environments achieved in the kiln during the production of red clay and white clay amphorae were different from each other. However, further investigations of clay compositions with more samples of red clay and white clay amphorae, also supplimented with firing tests on the raw clays are required to estimate approximate firing temperatures.

Besides the red clay and white clay amphorae, some red- and white-clay tiles and pink-clay amphorae from Demirci were investigated in terms of their mineral compositions by PXRD. In Fig. 6, the PXRD patterns for the red and white clay tiles are given. It is seen that red-clay tiles contain as much

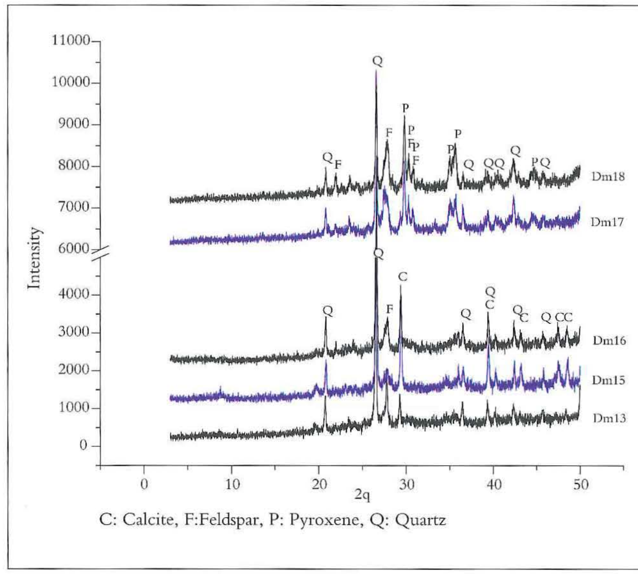

Fig. 6 PXRD patterns of red clay and white clay tiles.

calcite as the white clay tiles, but they lack the pyroxene type minerals and hematite. On the other hand, white tiles contain the minerals quartz, feldspars, calcite and pyroxenes, but lack hematite.

The pink-clay amphorae are composed of two layers: the outer layer has a pinkish tint and the inner one a purple tint. Analyses show that the pinkish layer contains calcite and the side with a purple tint lacks it (Fig. 7). The observations made for the tiles and the pink-clay amphorae cannot be explained with the arguments given on the possible reasons of red and white colour observed for red and white clay amphorae, and the subject will be further discussed on the basis of new analyses throughout the progress of this project. Following new analyses, the presence of other colouring minerals like TiO_2 and their interaction with the bulk composition under different firing conditions could give a better understanding of the subject.

[20] Jordan *et al* 2001, 92; De Benedetto *et al.* 2002, 184.
[21] Molera *et al.* 1998, 190-200.

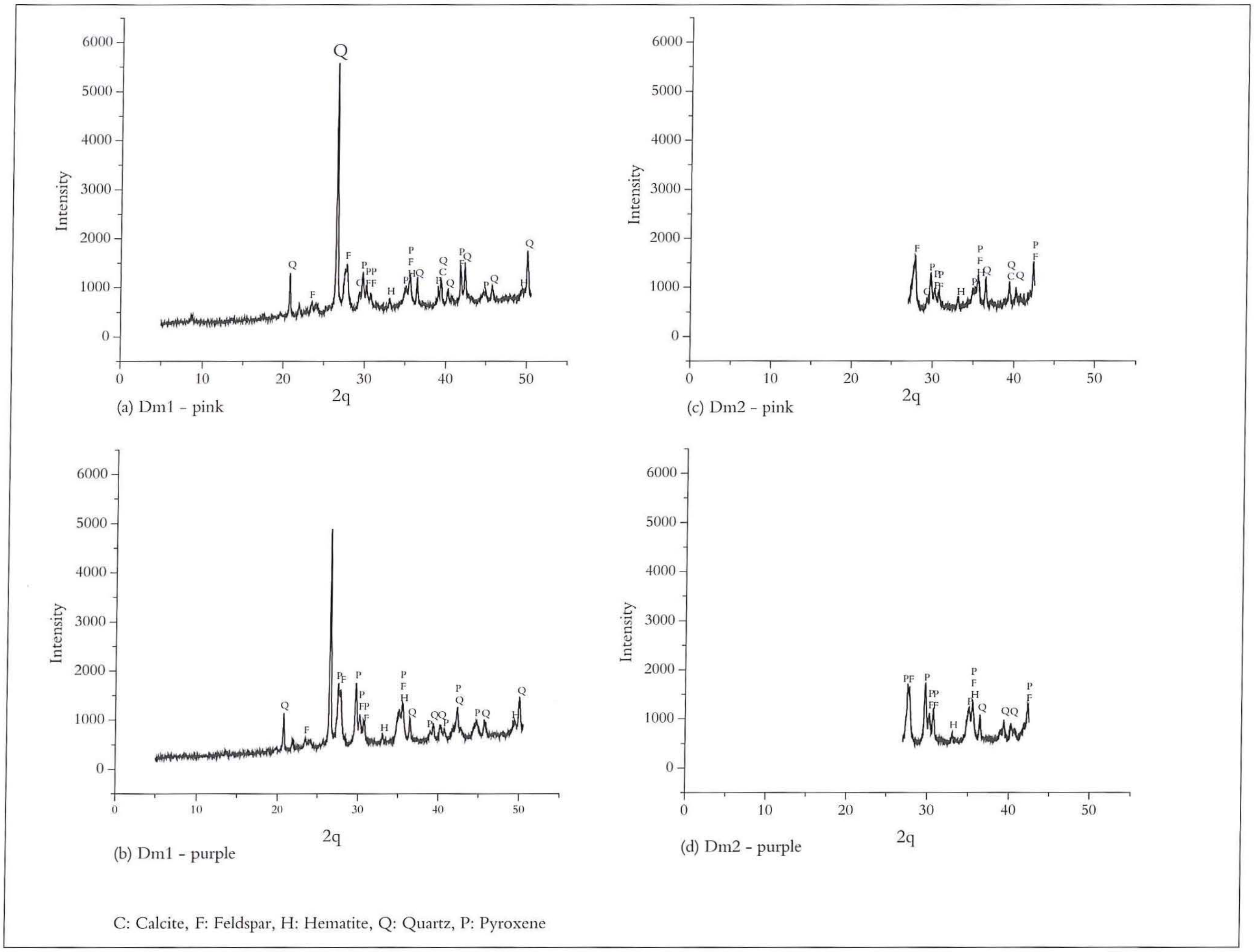

Fig. 7 PXRD patterns of pink and purple sides of pink clay amphorae.

Determination of the Provenance of the Amphorae

After the characterization of Sinopean amphorae, provenances of the amphorae taken from different production centres were determined by principal component analysis. Given in Fig. 8 is the scatter plot of principal component 2 vs. principal component 1. It is evident from the plot that there is a strong relationship among the samples from Sinope, Ibn Hani and Antioch. The scatter plot also shows the separation of Colchian-type amphorae from Sinope, Antakya, Ibn Hani, Heraclea Pontica, and Tanais. In addition, the pseudo-Colchian amphorae, which were found in different regions, are also separated from other provenances.

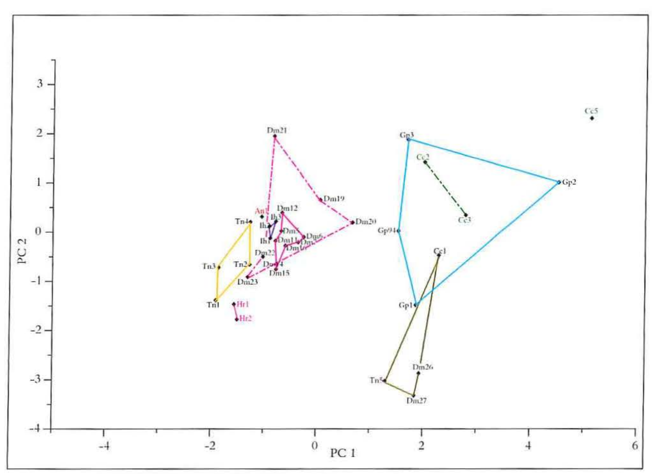

Fig. 8 Scatter plot of the principle components for provenance determination of samples.

Amphorae from Sinope

The results obtained by principal component analysis could be verified by comparison of the mineral compositions that have been obtained by PXRD analyses. These comparisons are shown in Fig. 9 a – d. As is clear from Fig. 9 a, the samples of white-clay amphorae from Sinope, as well as the ones from Antioch and Ibn Hani, have very similar mineral compositions. This is an indication of the same production centre for the samples from Antioch and Ibn Hani, namely Sinope.

Although it is not very obvious from the scatter plots of principal components, PXRD results show that the carrot-type amphora of Tanais is very similar to those from Sinope. In Fig. 9 b, it is clearly seen that the PXRD patterns of carrot-type amphorae from Sinope and Tanais match each other, if we ignore the hematite peak that was detected in the amphorae from Sinope.

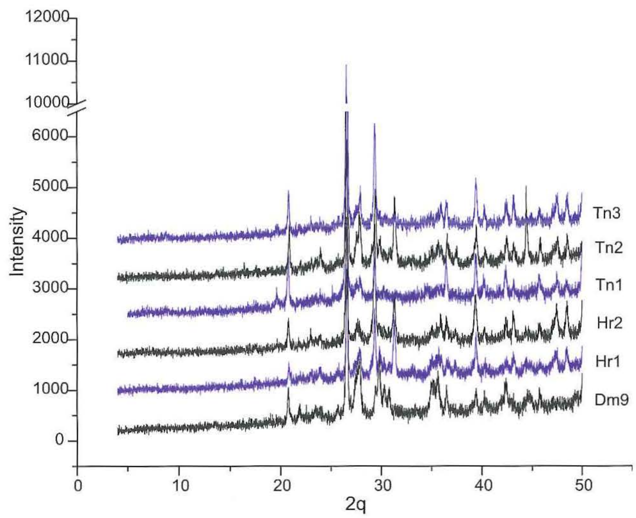

Fig. 9a White clay amphorae from Sinope, Ibn Hani and Antioch.

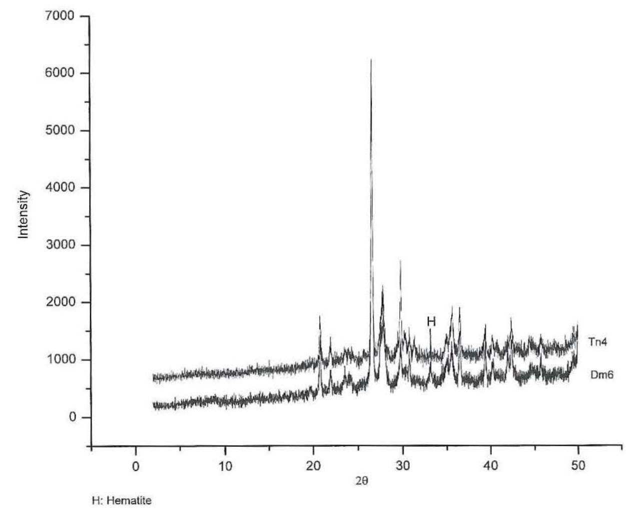

Fig. 9b Carrot type amphorae from Sinope and Tanais.

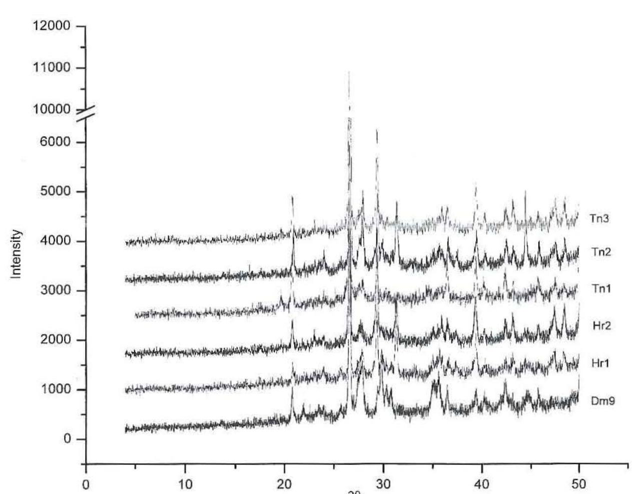

Fig. 9c White clay amphorae from Sinope, Heracleia Pontica and Tanais.

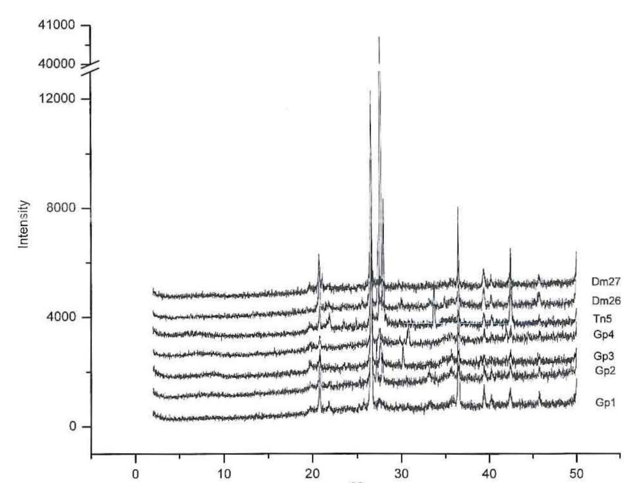

Fig. 9d Colchian amphorae from Gorgippia and pseudo-Colchian amphorae from Tanais and Sinope.

Amphorae from Heraclea Pontica and Tanais

A similarity is found between some white-clay amphorae from Heraclea Pontica and the sample Tn2 of Tanais (Fig. 9 c). On the other hand, the other two samples from Tanais do not show such resemblance. Furthermore, any significant relation is obscure in the scatter plot of principal components 1 and 2, most probably due to the lack of more samples from the Heraclea Pontica and Tanais. Besides, both amphorae from Heraclea Pontica and Tanais are different from those produced at Sinope, as is evident from the principal component analysis and from the PXRD patterns shown in Fig. 9 c.

Amphorae from Gorgippia and Pseudo-Colchian Amphorae

Both PXRD patterns given in Fig. 9 d, and the scatter plot of the principal components, give convincing evidence that the samples from Gorgippia are of Colchian production, as was claimed by the excavators. However, these samples also represent some differences from the brown-clay Colchian amphorae, which were analysed in other studies in terms of mineral compositions.[22] The most significant difference is the absence of pyroxene and epidote peaks in samples from Gorgippia, which are to be found in all Colchian brown-clay samples in other analyses.[23]

Some pseudo-Colchian samples were also analysed. The samples were taken from Tanais, Sinope and Colchis. As seen in Fig. 9 d, they show differing PXRD patterns, which means that their mineral compositions vary. The Colchian sample from Gorgippia Gp2 and the pseudo-Colchian sample Dm26 seem, on the other hand, to be composed of nearly the same type of minerals. Except for those two samples, the composition of pseudo-Colchian and the Gorgippian samples seems to be different. The principal component analysis also shows that the pseudo-Colchian samples do not give any significant indication of similarity with other provenances.

Conclusion

The analyses carried out on the archaeological samples revealed that the red-clay and white-clay amphorae from Sinope consisted of the minerals quartz, feldspar, calcite and hematite, which are all common minerals generally found in raw clays, and the added temper of pyroxenes, which are characteristic of the Sinopean amphorae.

The red and white colours, observed in the amphorae, were discussed and it is proposed that the clay was the same in both types of amphorae and that the colour was a function of the firing temperature and firing atmosphere. The observations for the tiles and pink-clay amphorae were left unexplained at this stage of studies, since they show a different trend than the observations made for red- and white-clay amphorae.

PXRD patterns, together with principal component analysis, showed that white-clay amphorae from Antioch and Ibn Hani are of Sinopean production. On the other hand, a white-clay amphora from Tanais was found to be much similar to the ones from Heraclea Pontica and different from the Sinopean ones. This proves that Sinope was not the only centre of production for white-clay amphorae. Heraclea also had workshops, which were exporting to Tanais. For the red-clay carrot-type amphorae of Tanais, it was found that the composition does not differ so much from Sinope, and that it could be a Sinopean production.

The sherds analysed from Gorgippia were found to represent typical differences from all other samples, but also from the brown-clay Colchian amphorae. The pseudo-Colchian amphorae were found to have varying mineral compositions, and do not have similarities with the amphorae from other provenances, except two of them which are closed to a Colchian sample.

22 Tsetkhladze & Vnukov 1992, 374 –385.
23 *Ibid.*, 379

Table 1. The samples analysed by PXRD and XRF methods.

Find Spots	Sample	Name	Type	Description
Demirci	1	Dm1	Pink clay	fragment of an amphora
	2	Dm2	Pink clay	fragment of an amphora
	3	Dm3	Red clay	fragment of an amphora
	4	Dm4	Red clay	fragment of an amphora
	5	Dm5	Red clay	fragment of an amphora
	6	Dm6	Red clay	fragment of an amphora
	7	Dm7	Red clay	fragment of an amphora
	8	Dm8	White clay	fragment of an amphora
	9	Dm9	White clay	fragment of an amphora
	10	Dm10	White clay	fragment of an amphora
	11	Dm11	White clay	fragment of an amphora
	12	Dm12	White layer on top of the red one	fragment of an amphora
	13	Dm13	Red clay	fragment of a tile
	14	Dm14	Red clay	fragment of a tile
	15	Dm15	Red clay	fragment of a tile
	16	Dm16	Red clay	fragment of a tile
	17	Dm17	White clay	fragment of a tile
	18	Dm18	White clay	fragment of a tile
	19	Dm19		raw clay
	20	Dm20		raw clay
	21	Dm21		raw clay
	22	Dm22		raw clay
	23	Dm23		raw clay
	24	Dm24		black sand
	25	Dm25		red inclusion
	26	Dm26	Pseudo-Colchian	fragment of an amphora
	27	Dm27	Pseudo-Colchian	fragment of an amphora

Find Spots	Sample	Name	Type	Description
Heraclea Pontica	28	Hr1	White clay	fragment of an amphora
	29	Hr2	White clay	fragment of an amphora
Tanais	30	Tn1	White clay	fragment of an amphora
	31	Tn2	White clay	fragment of an amphora
	32	Tn3	White clay	fragment of an amphora
	33	Tn4	Red clay	fragment of an amphora
	34	Tn5	Pseudo-Colchian	fragment of an amphora
Gorgippia	35	Gp1	Colchian type	fragment of an amphora
	36	Gp2	Colchian type	fragment of an amphora
	37	Gp3	Colchian type	fragment of an amphora
	38	Gp4	Colchian type	fragment of an amphora
Colchis (Georgia)	39	Cc1	Pseudo-Colchian	fragment of an amphora
	40	Cc5		modern brick
Antioch	41	An1	White clay	
Ibn Hani	42	Ih1	White clay	
	43	Ih2	White clay	
	44	Ih3	White clay	

Establishing the Chronology of Rhodian Amphora Stamps: the Next Steps

Gérald Finkielsztejn

The scope of my book, *Chronologie détaillée et révisée des éponymes amphoriques rhodiens de 270 à 108 av. J.-C. environ. Premier bilan*,[1] was for various reasons limited. The field of my work initiating the research, i.e. the Southern Levant in the Hellenistic period, was mostly useful to put in order the chronology in the second half of the second century BC down to 108 BC. The stamps at my disposal in Israel and Alexandria, in addition to most of the already published material on the topic, helped me work mostly on the relative chronology based on the types and styles of the stamps. I did not analyse the many stamps of the end of the second and first half of the first centuries BC of the latter collection. This was due to lack of time and the specific difficulties in identifying the various styles of many rectangular stamps not bearing any device, and the overly large size of most of the dies, as compared to the narrowing "horn-shaped" handles of the amphorae (see below). But, most of all, I felt the necessity to publish relatively quickly the dates I arrived at, almost three decades after V. Grace succeeded in reaching substantial results, and six years after I completed my Ph.D. dissertation.

As a consequence, it is clear that a lot more has still to be done in the field of the Rhodian amphora stamps. In the last chapter of my book, I invite colleagues involved in the study of the Rhodian stamps to continue the work, and I notice with great satisfaction that reactions have already appeared. There are reviews of the book (published or forthcoming) and personal communications from – and discussions with – archaeologists as well as historians. Here I briefly list some of the questions still remaining to be addressed and I also present a few examples of criticisms and new results strengthening the "lower chronology" and facilitating improvements of specific points. I must also admit that questions – new and old – are still raised by the works recently initiated.

The chronology I suggest should be refined and the gaps and uncertainties still remaining and emphasized in the book should be completed. This should be done on the basis of good archaeological contexts: substantial results have already been published by M. Lawall with his analysis of the key "Pergamon Deposit". His comprehensive study involves a thorough re-examination of the stratigraphy of the excavation – more than a century old – and of the historical accounts of the so-called good relations between Pergamon and Rhodes, on which the chronology of V. Grace's Period III was based. Lawall confirms the lower chronology of the stamps in the first third of the second century BC, by re-dating the deposit, and thereby "frees" us from a biased historical interpretation. I only regret that, although I clearly realized the inadequacy between the traditional historical interpretation and the Pergamon Deposit in 1995, even in the frame of the new chronology (expressed in a sentence quoted in his article), Lawall misunderstood my point. I presented a (too) concise re-examination of the (supposed) good relations between Pergamon and Rhodes, suggesting that they may have started in 201 BC only, and were troubled in 180 BC. I certainly did not suggest the dates of 201-180 BC "by way of resolving the problem" but as a preliminary examination based on Éd. Will's historical conclusions. If the earliest amphorae of the deposit indeed date (coincidentally) in the first years of the second century, the last ones are dated *c.* 164 BC (now *c.* 161 BC), almost twenty years after the conflict on the Straits of the Pontus! My sentence quoted by Lawall (without the introducing "En revanche,...") obviously stated that for me the new lower chronology did *not* fit the traditional historical interpretation *at*

[1] Finkielsztejn 2001a.

all and not "just as well", and so did not "replace one 'historical' argument by another one by suggesting a later period for good relations sufficient for intensive trade between Pergamon and Rhodes", as Lawall sincerely but wrongly concluded.[2] In any event, his more comprehensive analysis of the sources has clarified the case and both his factual conclusions and mine are finally in agreement. In that same article of 1995 I considered the new date of the end of the Pergamon Deposit noteworhty, as it follows quite closely that of the declaration of Delos as a free port by the Romans (*c.* 161 and 166 BC respectively). In the case of the Pergamon Deposit this seems purely coincidental, since names of early eponyms of the subsequent Period IV do appear in other contexts in the city.[3] However, this may be meaningful in the case of Athens, as suggested by a (very) preliminary examination of (a mere list of) the Rhodian names appearing in the building fill of the Stoa of Attalos, I realize that the last eponyms are also dated in the very end of Period III. If the dating of that building a few years later is confirmed by the (independently analysed) chronology of the Knidian amphora stamps, the drastic decrease in the imports of wine from Rhodes so soon (about five years) after the declaration may mean that the decision of implementing new trends of trade in the Eastern Mediterranean – first evidenced by J.-Y. Empereur and confirmed by myself and, it seems, also by G. Le Rider – was very quickly enforced (under Rome's control?).[4] Another context now seems to be irrelevant to the building of the chronology of Period IV. That is Hama in Syria, as J. Lund reminds us in his review of my book, where traces of earlier occupation are evidenced. On the other hand, it seems that the context of Koroni is in better accordance with the Rhodian chronology than I expected, as N. Badoud seems to demonstrate in his review of my book.[5]

New evidence of names in relevant series of stamps should also be checked. J. Lund again noticed a group of ten eponym stamps from a well at Halicarnassus, which confirms that at least eight eponyms were closely contemporaneous, in a span of about fifteen years not yet fully ordered: Kallikrates 1st (233-230), Aristeus and Nikon (229-227), Philokrates (226-225), Aristeidas 1st, Kallikratidas 1st and Xenaretos (224-220) and Sochares (219-218, maybe earlier).[6] New names should be tracked, although it seems that, except for Period I and Periods VI-VII, we seem to have all the eponyms. The study of the circular stamps with a Helios head by M. Palaczyk is quite meaningful but shows some discrepancies with my own chronology that do not seem likely to me in several cases. However, as far as the end of the sequence is concerned, we are in the problematic Period VI, when too many stamps of complementary series from various workshops are difficult to read or to classify stylistically.

By listing the name of an Agestratos 3rd in the concluding table of the latter article, Palaczyk again raises the problem of names of Rhodian eponyms, dated by inscriptions – or rather by epigraphists – in the period of systematic stamping, who never date amphora stamps (the eponym is dated in 129 BC).[7] Chr. Habicht kindly informed me of his current systematic research – also boosted by remarks in my book – on inscriptions dated by Rhodian eponyms. This question is indeed puzzling, although some reasons may be suggested for such discrepancies (it is another task to demonstrate them): a bad year for the production of wine, even a disease, or the sudden death of an eponym before the beginning of the production of amphorae... This is possible as, without revealing the content of the work of a colleague in progress, I see only one more name in that case. The identification of homonyms is linked

[2] Lawall 2002a, 304-305, with references to Finkielsztejn 1995, 280-282. Lungu 1990, 210, also came to the same conclusion about the period of good political relations between the two powers, and she – contrary to myself – suggested to relate them with active economical exchanges between them; see Lavall 2001b.

[3] See Burow's part II in Börker & Burow 1998, where eleven out of the fourteen eponyms of Period IV are represented. See Lavall 2001a.

[4] Finkielsztejn 2001b, 194-195, with n. 31.

[5] Lund 2002; Badoud 2003.

[6] Lund 2002. The types of these stamps, as well as those endorsed by fabricants in the same deposit may help refining the chronology. I hope to return to these stamps on another occasion.

[7] Palaczyk 2001, 328. I should like to draw attention to the discovery of a die from Thasos that was never used to stamp amphoras. However, this unusual case may be linked to the workshop rather than to the official dating the stamp.

to this question, and Habicht suggests the possibility of another earthquake that could have occurred during the office of Theuphanes 2nd: that of 198 BC. And indeed, I do list him early in the span of *c.* 203-199 BC, mainly on the basis of stylistic evidence. If the epigraphic evidence is correct, this eponym would be dated slightly later than the styles of his stamps suggest. V. Lungu has already suggested that one of the possible dates for this eponym would be lower.[8]

This raises the question of the validity of the stylistic evidence, and especially the *continuity* of the use of a precise style, even engraved by one given hand. Interruptions of activity or, maybe rather, the possibility to use closely related styles contemporarily in a given workshop (by the same engraver), may interfere with our classification of the stamps. The latter possibility is taken in consideration by N. Conovici, and I hope that he will bring some examples in his forthcoming catalogue of the stamps from Histria.[9] Again, a great deal of openness is definitely required from those of us who decipher Rhodian stamps, in order not to give excessive weight to even the clearest evidence of the stamps themselves. However, the study of style remains a valuable means of understanding the organization of the workshops and their production (see below).

In any event, it is required to record the eponym-fabricant connections systematically and to recognize their styles of stamps, in order to better use the isolated fabricants' stamps for dating purposes. The systematic recording of the eponym-months connections is required in order to refine the knowledge of both the careers of the eponyms and, maybe, the establishment of the Rhodian calendar. Due to lack of time and comprehensive data, I did not take into account the evidence of the intercalary month *Panamos deuteros* in my book. Of course, such a datum has to be fully recorded to refine the chronology, although the cycle of its use is still not understood.[10] A very detailed study of eponym/fabricant "secondary stamps" connections should also be undertaken – a huge task – in order to fully comprehend their significance and understand the organization of the production.[11] These latter connections would be quite efficiently studied if specifically computerized.

The most comprehensive of the tasks still pending is, of course, to build the chronology of the periods not detailed in the book: Period Ia (304 – 271 BC) with the so-called proto-Rhodian stamps, Period VI (107 – 86 BC) and Period VII (85 BC – Augustus). For the latter period it includes checking my suggestion to divide the period in two: Period VIIa (85 – *c.* 40) and VIIb (*c.* 40 -Augustus).[12] Scholars working in areas where significant quantities of amphorae were imported during the relevant periods may achieve that task. In the best positions are our colleagues N. Conovici for the Black Sea (and most awaited for, the catalogue of Histria with, no doubt, a comprehensive introduction on the chronology), G. Jöhrens for Syria, Russia and Athens, and G. Senol in the Amphora Laboratory of the *Centre d'Études Alexandrines*, directed by Jean-Yves Empereur, having the stratified discoveries of the recent excavations in Alexandria at her disposal (in addition to the huge collection of the Graeco-Roman Museum) and some finds from various areas in Turkey.

The publication of catalogues should be rendered more synthetic, in order to avoid those boring and unnecessary lists of parallels from anywhere in the world and generally from non-meaningful contexts. An international meeting of specialists on amphora epigraphy took place in May 2003, initiated by Y. Garlan and A. Tchernia hosted by J. Remesal Rodríguez at the Universitat de Barcelona, in which the topic of "How to publish amphora stamps?" was discussed. I personally think that a corpus of the Rhodian amphora stamps com-

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8 Finkielsztejn 2001a, 112, 191; Lungu 1990. She is followed by N. Conovici (see next note); Habicht 2003.

9 N. Conovici kindly sent me his forthcoming review of my book. If a given engraver changed his style every month, this probably explains that different styles were used during a same year (but supposedly not a same month) in a given workshop.

10 Lungu 1990, 216, does take the intercalary month into account (repeated in a cycle of three years). Its use during the year of Iasikrates should be added to her list. On the Greek calendars, see Trümpy 1997 (thanks to N. Badoud for bringing this publication to my attention).

11 Palaczyk 1999 should be enhanced by including the unpublished examples from more collections, especially those collected in V. Grace's file.

12 Finkielsztejn 2000c. The relevant stamps from Jerusalem have now been published: Ariel 2000, 273-274, nos. 26-27.

parable to that of the Thasian, Sinopean, Knidian or even Koan is beyond realistic reach. Besides the enormous quantity of dies, this is essentially due to the many examples bearing only the name of a fabricant, or even some of the late Period V-Period VI ones, dated by the eponym name and the month, in style and organization preventing secure distinctions. I intend to try and devise a standard table for the concise publication of catalogues, which would include the minimal relevant data: photograph, reading, identification of persons, date and bibliography relevant to the die (i.e. parallels for the completion of the reading) and dating (reliable contexts or specific studies). This would limit unnecessary phrases, the unavoidable comments being concentrated in the conclusion. It could be the base of an on-line data base, much more realistic to achieve than a classical corpus.[13]

The importance of setting the chronology of the Rhodian stamps according to the "traditional" criteria does not have to be explained or justified, simply because stamps are among the most common objects found in the Hellenistic World, especially in the Eastern Mediterranean. However that task cannot be achieved without parallel researches on the organization of the production and the system of stamping (briefly evoked above). The reason why such a field of research has not received the required attention of specialists notwithstanding – it has for the production and stamping of Thasian amphorae – it is clear, and now urgent, that some specific studies should be undertaken.[14]The succession of fabricants in a given workshop should be established by a) identifying the specific "symbol" attached to a given workshop – as this seems precisely to be the aim of such devices – and b) identifying the script of the engravers who made the stamps. This may allow listing the connections between stamps of various workshops that may have been somehow connected, again on the basis of the styles of their respective series of stamps. The existence of actual "associations" of fabricants among these connections should be determined – such as the one definitely evidenced, to my understanding, by the stamp reading "Timakrateus kai Herakleitou" – as well as actual dynasties of fabricants. These studies should contribute to the understanding of the significance of the control of Rhodian amphora production. No texts are available to help us for any of the production centres, but I suggest – among other possibilities – that the stamping of amphorae should be compared with the minting of coins.[15] This may certainly contribute to the understanding of the most disputed topic of "What was controlled?". Whether or not the control concerned the capacity of the vessels – based on standards, specific to a city or shared by a "koinon" – the stamping was definitely the responsibility of the city administration (even if it was so-called "private", i.e. applied in the workshop itself). I must admit that M. Lawall's studies on the earlier forms of amphorae, distinguishing "regionalism" or "koinon" ("North Greek" with "stem-toe", "South-East Greek" with "mushroom-rim" – the latter already recognized by J.-Y. Empereur and M. Picon –, Chian...)[16], strengthen my conviction that this direction of research should be further examined. One of the methods should be the (rough) evaluation of amphora capacities of vessels, recognized as belonging to a contemporary "regional" pottery group, to establish whether or not they are similar. Whenever possible, these capacities should be compared with known standards to evaluate the number of "chous" of wine or oil they were supposed to carry. The later "individualization" of the form of vessels (Rhodian, Knidian, Koan...) – that misled earlier scholars towards the assumption that "one form equals systematically one production centre" – should further be understood. The capacity of vessels, whose centre of production is still unidentified, may help localizing its origin in regions using a similar standard. The above suggestions are, for the time being, wishful thinking, but should not remain so for long.[17]

Most of the above questions could definitely be solved by identifying and exploring the workshops

[13] Finkielsztejn forthcoming c.

[14] See on all the following topics Garlan 2000, based on the observation of most series of stamps (and not only the Thasian).

[15] See Finkielsztejn 2002b.

[16] Lavall forthcoming; Empereur & Picon 1986a.

[17] Finkielsztejn forthcoming d.

on the island of Rhodes itself, as it was very successfully and done in Thasos (quite extensively), in Knidos and in the Rhodian Peraea. To render the task more efficient it is obvious that a systematic survey to localize the workshops should be undertaken. Sampling and even excavations of the numerous refuse dumps that are still preserved – near the coast and probably along rivers further inland – should then follow. In view of the enourmous quantities of Rhodian amphora stamps found in contexts of consumption all over the Hellenistic World, delaying the implement of such a key fieldwork would prove seriously damaging.

It is my wish and hope that international funding can be provided for these aims. After all, Rhodes is part of the World Heritage, and as such any foreign contribution to the scientific exploration of the island should be proposed, under the umbrella of the already overburdened 22nd Ephorate of the Dodecanese.

Les représentations de vases sur les timbres amphoriques thasiens

Yvon Garlan & Francine Blondé

L'iconographie de l'art antique est de longue date, dans la culture occidentale, un objet privilégié de recherche et d'imitation. Aussi bien est-il étonnant de constater qu'en sont aujourd'hui le plus souvent absents les emblèmes (ou attributs) figurant sur les timbres amphoriques grecs: parce que leur petite taille et leur schématisme les rendent difficilement exploitables (en dépit de leur expressivité); et aussi par méconnaissance générale de ce genre de documentation (y compris de la part de nombreux amphorologues qui apprécient mal leur rôle dans les systèmes de timbrage et n'y prêtent que peu d'attention).

Telle est la lacune que nous voudrions ici signaler et commencer à combler, en prenant comme exemples, non pas des images à valeur essentiellement religieuse (qui ont été jusqu'ici les seules à être parfois considérées),[1] mais des représentations de vases, c'est-à-dire d'objets plus ou moins banals de la vie quotidienne. Et en ne retenant d'autre part, de tous les timbres amphoriques grecs, que ceux de Thasos.

Les raisons générales de ce double choix sont multiples. Les timbres amphoriques de Thasos (une trentaine de milliers d'exemplaires issus de quelque 4300 matrices) sont dans l'ensemble mieux connus que les autres grandes séries timbrées du monde grec, provenant de Rhodes, Cnide, Sinope ou Héraclée du Pont, car leur étude a été stimulée, depuis le début du XX[e] siècle, par la présence sur place de l'École Française d'Athènes. La meilleure preuve en est qu'ils sont les seuls à avoir été l'objet de deux corpus parus à moins de 50 ans d'intervalle: celui d'Antoine et Anne-Marie Bon[2] paru en 1957 (avec la collaboration de Virginia Grace) et celui d'Y. Garlan et M. Debidour dont j'ai publié le premier tome en 1999.[3] Trois grands ensembles s'y distinguent, qui sont plus ou moins bien datés:

- les « prototimbres » circulaires ou quadrangulaires, ornés seulement d'emblèmes, qui ont probablement été émis pendant un bref laps de temps (une ou deux décennies?) vers le milieu de la première moitié du V[e] siècle;
- les timbres « anciens », qui comportent généralement[4] deux noms propres (un nom de magistrat annuel chargé du contrôle de la production amphorique et un nom de fabricant), un ethnique et un emblème (de 395-390 à 335-330);
- les timbres « récents » où disparaît habituellement le nom du fabricant (de 335-330 jusque vers le milieu du II[e] s. av. J.-C).[5]

Quant à leur système emblématique (au moins des timbres anciens et récents), il a également été élucidé: la plupart du temps, les cachets, confectionnés par un graveur unique et répartis ensuite dans les différents ateliers, portaient des emblèmes individuels de fabricant renouvelé chaque année par le magistrat responsable; mais il arrivait aussi qu'un emblème de magistrat figurât sur toute son émission, seul ou accompagné d'un petit emblème secondaire de fabricant. En découlent, du point de vue iconographique, deux caractéristiques des emblèmes amphoriques de Thasos (et de la plupart des autres grands centres de production).

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[1] Salviat 1964 (interprétation profondément modifiée par Kallintzi 1996); Sztetyłło 1966a; Sztetyłło 1966b; Sztetyłło 1971. Pour Sinope, voir le fouleur de raisin reconnu par Garlan 1990b, tandis que Avdeev 1991 interprète de façon fantaisiste le motif du flambeau et que Шталь 1991 n'est pas davantage fiable.

[2] Bon & Bon 1957.

[3] Garlan 1999a. Pour une bibliographie sélective de la production amphorique thasienne, voir Garlan 2000, 197.

[4] Un des d'eux noms (surtout celui du magistrat) peut en effet être remplacé par un petit emblème: phiale, étoile (parfois accompagnée d'une pastille), pilos, goryte.

[5] Cette restriction s'explique par l'apparition temporaire, vers le milieu du III[e] s., de noms abrégés de fabricants.

- La première est qu'ils ont été dictés, non par la fantaisie individuelle des fabricants, mais par l'esprit bureaucratique des magistrats responsables de la production amphorique et qu'il s'agit donc là de documents administratifs qui valent plus comme signifiants que comme signifiés et devaient donc avant tout être suffisamment « typés » pour être aisément reconnus par des contrôleurs en dépit des variations apparentes dues au style des graveurs ainsi qu'aux défauts d'impression et au degré d'usure des cachets ou des timbres.
- D'un système de timbrage où prédominent les emblèmes annuels de fabricants il résulte également que leur répertoire à Thasos est particulièrement abondant et varié. Quelques-uns d'entre eux se rapportent sans difficulté à des cultes civiques ou largement répandus tels que ceux d'Héraclès (statue, arc et carquois, flèche, massue), de Dionysos (satyre, thyrse, dauphin)[6] ou d'Hermès (statue, caducée). Mais beaucoup d'autres, qu'il n'est pas toujours aisé de distinguer des précédents, ne semblent avoir qu'une vague signification religieuse ou n'en avoir pas du tout (parties du corps humain tels que têtes, mains, pieds; quadrupèdes; oiseaux; insectes; poissons; plantes; vases et objets de toutes sortes) et ont été choisis pour des raisons qui nous restent inconnues: banales ou subtiles, mais en tout cas pas pour plaire à telle ou telle puissance étrangère.[7]

Si de ce répertoire nous avons retenu les vases, c'est que nous pouvons comparer, dans des conditions assez favorables, leurs représentations à leurs modèles possibles (même à l'état fragmentaire): vases de céramique commune, produits dans les mêmes ateliers que les amphores; vases de céramique fine ou semi-fine dont nous commençons à pouvoir distinguer, grâce aux analyses chimiques aussi bien que stylistiques, les exemplaires locaux des exemplaires importés (surtout d'Attique aux V^{e}-III^{e} s.); vases métalliques, qui ont été retrouvés, avec une relative abondance, dans le nord de la Grèce.

Représentations et modèles peuvent ainsi s'éclairer réciproquement, nous offrant une image relativement précise, sinon détaillée, des vases qu'évoquaient aux yeux des graveurs de cachets les « commandes » qui leur étaient passées par les magistrats amphoriques: avec des variantes qui correspondent soit à autant de modèles d'identité différente, soit à autant de représentations différentes d'un même modèle de la part d'un ou de plusieurs graveurs. Nous avons là un moyen précieux de contribuer à une classification céramique véritablement « objective », c'est-à-dire conforme à la vision des utilisateurs antiques et non des descripteurs modernes. Vaste programme dont nous ne pourrons offrir ici qu'un petit nombre d'exemples.

Le premier sera le plus simple, sinon le plus fréquent: c'est celui des amphores commerciales, autrement dit des « amphoras on amphoras » pour reprendre le titre d'un article sur les Corinthiennes B publié par C. G. Koehler.[8] Elles représentent 2 % des cas, à en juger par les timbres anciens: ce qui nous interdit, en bonne logique, de faire de ce motif iconographique une réclame en faveur des amphores et donc du vin de Thasos.

Des amphores thasiennes de la fin de l'époque archaïque et du début de l'époque classique, bien qu'elles fussent produites et exportées en abondance, nous n'avons paradoxalement qu'une connaissance assez imprécise. Elles semblent (ou du moins certaines d'entre elles) se caractériser essentiellement par une panse ovoïde, à tendance globulaire, et un pied en sabot plus ou moins caréné: traits qui se retrouvent sur un timbre que j'ai attribué, pour d'autres raisons,[9] à la série protothasienne.

Durant la période des timbres anciens et récents, que nous examinerons ensemble puisque le passage

[6] Voir ci-dessous la communication de Nathan Badoud relative à « Un dauphin aulète sur les timbres amphoriques de Thasos ».

[7] Ce mode d'explication historiciste a été souvent utilisé, sans preuve et contre toute vraisemblance: par Nilsson 1909, 168 et 174; Граков 1929, *passim*; Grace 1946, 33-35; dans plusieurs articles de Н.Ф. Федосеев relatifs à Sinope (voir Garlan forthcoming); etc.

[8] Koehler 1982, avec quelques allusions aux Corinthiennes A (milieu du ve s.), Chiotes (troisième quart du ve s.) et Thasiennes (285, n. 4). Sur la typologie des amphores thasiennes, voir parmi les productions récentes: Garlan 1988, 12-14; Blondé et al. 1991; Grandjean 1992; Garlan 1999a, 58-69; Монахов 1999a.

[9] À cause de sa forme, de la pâte de son support et de son lieu de trouvaille; Garlan 1999a, n° 47.

des uns aux autres (en 335-330) n'a apparemment eu aucun effet sur la forme des amphores, notre documentation s'améliore nettement, et se prête même à des observations plus rigoureuses que celles qui sont de mise en céramologie. Relativement bien datée par la présence de magistrats éponymes et souvent attribuable à différents ateliers connus par la fouille de leurs dépotoirs ou la mention de noms de fabricants, elle interdit en effet de trop « lisser » les données pour aboutir à des explications typologiques passablement arbitraires.

À partir de 370 environ jusque vers 280, les timbres peuvent porter comme emblèmes des amphores bien connues, dites « biconiques » (type I): il s'agit de demi-mesures dont la capacité paraît être allée en se réduisant de 13 l à 6 l environ au fil des décennies, en même temps que se seraient accentuées leurs caractéristiques formelles (longueur du col, étroitesse de la panse à épaulement plus ou moins marqué, longueur du pied en manchon). Évolution qui est dans l'ensemble avérée, mais qui semble s'être déroulée de façon irrégulière, puisque au moins dans certains ateliers elle serait parvenue à son terme dès la fin des timbres anciens (Fig. 1 et 2)[10] et n'aurait fait ensuite que se stabiliser pendant les cinq premières décennies de timbres récents,[11] jusqu'à l'époque de Prèxipolis (Fig. 3) vers 280. Et la même évolution s'observe dans les amphores complètes timbrées de type I, dont on possède un échantillonnage bien fourni pour l'époque ancienne,[12] de son début au temps de Labros[13] (Fig. 4) jusqu'à sa phase finale sous Nikias[14] (Fig. 5), ainsi que sous les premiers éponymes récents.[15]

Au temps des timbres anciens existent également des amphores dites « en toupie », à col court, à épaulement très marqué et à panse conique directement liée, par un rapport angulaire, à un sabot caréné, et qui, par rapport aux précédentes, font figure de « mesures » puisque leur capacité est d'une vingtaine de litres. Plus ou moins abondamment représentées

Fig. 1 Timbre ancien d'Amyntôr et de Prôtiôn (Bucarest 26349).

Fig. 2 Timbre ancien de l'éponyme au pilos et de Simaliôn (Garlan 1999a, n° 860).

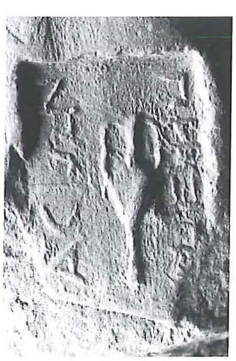

Fig. 3 Timbre récent de Prèxipolis (Bon and Bon 1957, n° 1417: M. Kerč, KKK 2527).

[10] Garlan 1999a, n° 453 (Kléophon 1) et, surtout dans le sous-groupe G, vers 345-335, *ib.*, n° 833 (Pei-), n°821 et 820 (Amyntôr), n° 912 (Hippidès), n° 860 (l'éponyme au pilos) et n° 970 (Aristokratès).

[11] Bon & Bon 1957, n° 1030 et 16 fig. 1 (Krinis); *ib.*, n° 556 (Déalkos, 335-330); Avram 1996, n° 265 (Léôdikos, vers 320); Bon & Bon 1957, n° 626 (Eualkidès, vers 320); *ib.*, n° 381 (Aristophanès I, vers 315); *ib.*, n° 159 (Alkeidès, 315-310); *ib.*, n° 560 ainsi que Avram 1996, pl. XXV/334 et pl. XLIII/579 (Deinôpas I, vers 310); *ib.*, n° 727 (Hèrodotos, 310-305); Bon & Bon 1957, n° 536 (Déalkos, vers 305); *ib.*, n° 1057 (Kritias, vers 305); *ib.*, n° 1013 et Avram 1996, pl. XXV/330 (Kratistônax, 305-300); *IosPE* 1753 (Aischriôn, vers 300); Bon & Bon 1957, n° 829 (Thespôn, vers 300); Avram 1996, pl. XXIX/383 (Ainéas, vers 295); Garlan 1993, 161 et 166 fig. 68 (Pythiôn V, vers 290); *ib.*, 161 et 166 fig. 71 (Skymnos I, vers 290); Bon & Bon 1957, n° 914 (Kèphisophôn, 290-285); *ib.*, n° 1242 (Nikodèmos I, vers 285); *ib.*, n° 1417 (Prèxipolis: fig. 3, M. Kerč, KKK 2527).

[12] Soixante-deux profils sont publiés dans Garlan 1999a, pl. I-VIII, et vingt-cinq autres dans Монахов 1999a, *passim*.

[13] Garlan 1999a, n° 142, 4, pl. I.

[14] Garlan 1999a, n° 939/ 89, pl. VII. Cf. Bon & Bon 1957, 17 ou Garlan 1999a, n° 601, 3, pl. VI (éponyme au croissant-étoile).

[15] Монахов 1999a, 391 fig. 174/2 (Épi Tèléphaneos, vers 335); *ib.*, 344 fig. 149/1 (Déalkos, 335-330); Bon & Bon 1957, 17 et 18 fig. 3/1 (Hèrakleitos à l'arc, 330-325).

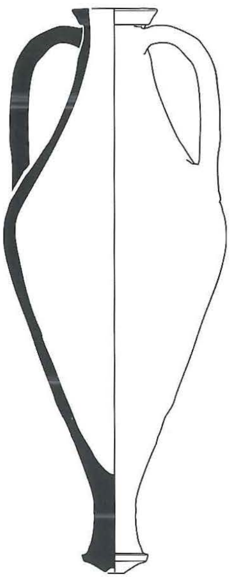

Fig. 4 Amphore ancienne de Labros et Damastès (Garlan 1999a, pl. I, n° 142, 4).

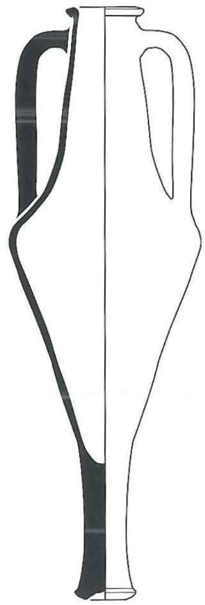

Fig. 5 Amphore ancienne de Nikias et Dèmalkès (Garlan 1999a, pl. VII, n° 939, 89).

Fig. 6 Amphore « en toupie » des environs de 360 (ME 82.905: Garlan 1999a, pl. I).

Fig. 7 Timbre d'Aristotélès (Th 10221).

dans les fouilles thasiennes à l'état fragmentaire,[16] elles ne s'y rencontrent guère entières (mis à part un exemplaire non timbré des environs de 360: Fig. 6)[17] et ne semblent guère avoir été beaucoup exportées (à en juger du moins d'après leur quasi-absence des kourganes du nord de la mer Noire). Or elles sont également très peu attestées sur les timbres, puisque le premier exemple n'y apparaît qu'au début des timbres récents, sous Aristotélès (Fig. 7),[18] preuve supplémentaire sinon de leur faible diffusion, du moins de leur absence de « popularité ».

À ce type « en toupie » je donnerai le numéro IIa dans la mesure où je n'ose encore le distinguer nettement d'un type IIb[19] qui semble bien en avoir dérivé dans le dernier quart du IV^{e} s., au prix d'un allongement du col ou du pied, et parfois aussi d'un adoucissement de l'épaule ainsi que d'un léger gonflement de la partie inférieure de la panse donnant à l'amphore une allure plus trapue et une forme plus ovoïde (avec une capacité de 17-18 litres). De ce type existent quelques exemplaires timbrés, dont les plus anciens datent de la dernière décennie du IV^{e} s.[20] et les plus récents du milieu du III^{e} s. (par ex. de l'éponyme Satyros II: Fig. 8).[21] Il est en tout cas assez souvent représenté sur les timbres amphoriques, depuis Nausôn (vers 320-315)[22] jusqu'aux groupes stylistiques contemporains ou légèrement postérieurs à la guerre de Chrémonidès (« au génitif », « à l'animal passant »,

[16] Elles constituent 13,65 % du matériel amphorique thasien dans le puits Valma et 64,7 % dans le Jardin de l'École Française.

[17] Garlan 1985, 741 fig. 10; Garlan 1999a, 62 et pl. I (ME 82.905).

[18] Th 10221: atelier de Kalonéro.

[19] Bon & Bon 1957, 19, confond totalement ces deux sous-types.

[20] Брашинский 1980, 110, n° 37 (Poulys, vers 315); Bon & Bon 1957, 19 fig. 4 /3 (Kléophôn II, vers 305); Зеест 1960, 87, et pl. IX, 21b (Déalkos, vers 305). Pour le début du III^{e} s., voir Grace 1986, 555 fig. 3/11 (Pythiôn V) et peut-être aussi Bon & Bon 1957, 22 fig. 6/5 (Autokrateus).

[21] M. Rhodes, portant le timbre de Bon & Bon 1957, n° 1517.

[22] Th 4392. Cf. Гетов 1995, n° 86 et 87, p. 154 (Timoklès, vers 315); Bon & Bon 1957, n° 1818, avec deux cachets: A) Debidour 1979, 283 fig. 2/5; B) Garlan 1986, 252 fig. 38c (Kléophôn II, vers 305); Garlan 1993, 166 fig. 68 (Pythiôn V, 295-290: atelier de Kounophia).

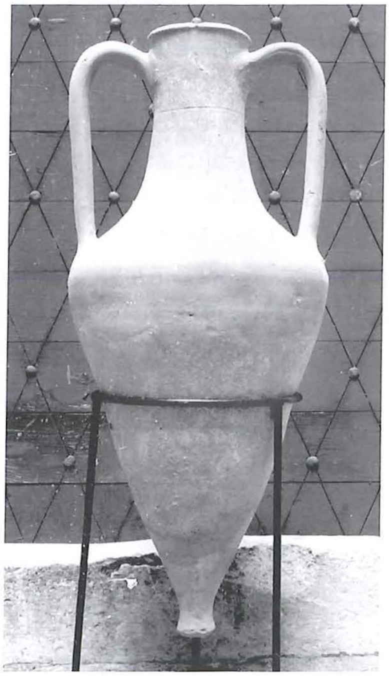

Fig. 8 Amphore récente de Satyros II (M. Rhodes).

« au rhyton » et « au pithos »),[23] ainsi qu'avec bon nombre d'éponymes à sigma lunaire qui sont de peu antérieurs ou postérieurs aux groupes précédents (par exemple Léômédôn: Fig. 9).[24]

Sur les timbres des éponymes de la seconde moitié du III^e s., apparaît un nouveau type d'amphore (III), dérivant peut-être de la variante ovoïde du type IIb: élancé, au profil fuselé, « le col s'évasant par degrés insensibles jusqu'à former la panse, et celle-ci à son tour s'effilant lentement et régulièrement jusqu'au sabot terminal »[25] qui se réduit parfois à un simple bouton: il en existe plusieurs représentations sous des éponymes à *sigma* lunaire du milieu du III^e s. tels que Satyros II[26] ou Alkimos II,[27] dans le groupe « de Ba(-) »[28] et « d'Euthy(-) »[29] ou sous d'autres éponymes à *sigma* angulaire tels que Mégisteus (Fig. 10),[30] voire sous des éponymes très tardifs à *sigma* lunaire et *omega* cursif.[31] Des amphores timbrées de type III ont été conservées entières[32] (par exemple sous Astykréôn: Fig. 11), mais elles sont relativement peu nombreuses en raison du tarissement contemporain des exportations thasiennes en mer Noire.[33]

Très rares sont les représentations qui s'intègrent mal au schéma que nous venons de présenter: par exemple, sur un timbre d'*épi Tèléphanéos* (335-330), une amphore aux proportions massives (Fig. 12),[34] qui confirmerait l'origine thasienne d'un exemplaire

Fig. 9 Timbre récent de Léômédôn (Th 16039, atelier de Chioni).

Fig. 10 Timbre de Mégisteus (Th 7221).

[23] Th 2016. Cf. Avram 1996, pl. XXXV/460 (Hèrophôn I, vers 270); Bon & Bon 1957, n° 590 et Avram 1996, pl. XXXV/467 (Dèmalkès, 270-265); Bon & Bon 1957, n° 863 (Idnadès, 270-265); *ib.*, n° 807 (Théopompos, 270-265).

[24] Th 16039. Cf. Garlan 1986, 250 fig. 36k (Alkimos II); Börker & Burow 1998, pl. 31, n° 438 (Amphandros); Bon & Bon 1957, n° 258, 265 et 325 (Aristoklès I); *ib.*, n° 600, 600 bis, 600 ter et Avram 1996, pl. XXXVII/496 (Diagoras); Bon & Bon 1957, n° 638 (Euagoras); *ib.*, n° 657 d'Euboios; *ib.*, n° 1108 (Lysandros); *ib.*, n° 1349 et 1949, ainsi que Börker & Burow 1998, pl. 33, n° 466 (Polykratès); Bon & Bon 1957, n° 1380 (Polytimos); Avram & Poenaru Bordea 1988, pl. 4/74, (Skymnos II); Bon & Bon 1957, n° 1220 (Nikanôr Hègè: groupe « à la feuille de lierre »).

[25] Bon & Bon 1957, 19.

[26] Debidour 1979, 283 fig. 2/14.

[27] Garlan 1986, 250 fig. 36k.

[28] Garlan 1993, 172 fig. 78 (Phanokritos) et 79 (Gorgos).

[29] Bon & Bon 1957, n° 485 (Boulèkritos); Garlan 1993, 163 fig. 37 (Euainétos dans l'atelier de Kounophia).

[30] Th. 7221. Cf. Bon & Bon 1957, n° 156 (Alexandridès); n° 273 (Aristagoras); Grace-Salviat 1962, ou Garlan 1988, 15 fig. 15 ou Garlan 2000, 94 fig. 47 (Astykréôn I); Garlan 1993, 172 fig. 84 (Ératôn); Börker & Burow 1998, pl. 20, n° 545 (Euphrillos); Bon Bon 1957, n° 858 (Thrasônidès); Lenger & Grace 1958, 390, n° 61 (Kadmos); *ib.*, 394, n° 76 (Labros); Bon & Bon 1957, n° 1787 (Lysagoras); *ib.*, n° 1214 (Nikagoras); Debidour 1979, 290 fig. 3/2 (Simaliôn I); Bon & Bon 1957, n° 1708 (Choiros).

[31] Grace & Savvatianou-Pétropoulakou 1970, 357, n° E 223 (Aristophôn).

[32] Bon & Bon 1957, 21 fig. 4/5 et n° 491 (Boulèkritos); *ib.*, 21 fig. 4/4 et n° 146 (Aischrôn; capacité de 20,875 l); *ib.*, n° 1443 et Grace 1934, 202 fig. 1 (Pythiôn Ly-), Bon & Bon 1957, 21 fig. 6/6 et n° 1699 (Chairippidès).

[33] On n'en trouve ainsi aucun exemple dans Монахов 1999a.

[34] Th 4667: voir Lungu 1995, 245, n° 29 et 262, n° 563.

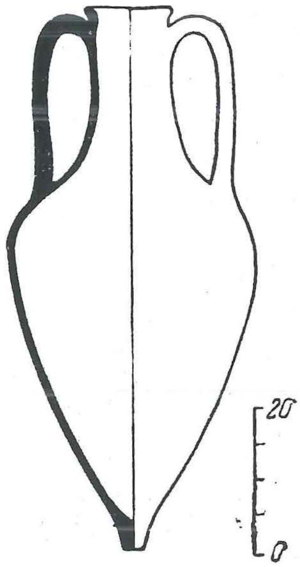

Fig. 11 Amphore d'Astykréôn trouvée à Olbia en 1896 (Зеест 1960, 87, pl. IX/22).

Fig. 12 Timbre d'Epi Tèléphanéos (Th 4667).

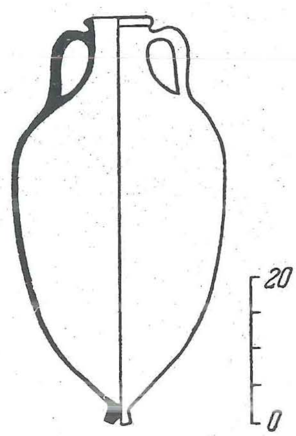

Fig. 13 Amphore thasienne ou d'influence thasienne (Зеест 1960, pl. VII, 19).

trouvé au nord de la mer Noire (Fig. 13), ou des amphores globulaires à pied apparaissant sur des timbres à sigma angulaire tardif d'Aristoklès et de Gorgos dans la seconde moitié du IIIe siècle.[35]

S'il est vrai que ces images d'amphores thasiennes sur les amphores elles-mêmes ne bouleversent pas le classement de celles-ci, elles permettent cependant d'en apprécier la popularité, d'en nuancer la typologie et surtout d'en préciser la datation.

Les représentations de vases non amphoriques sur les timbres thasiens sont bien plus nombreuses que les précédentes (un peu plus de 10 % des cas à l'époque ancienne, presque 17% pour les timbres récents). Elles couvrent d'autre part au moins une douzaine de formes principales de vases – ou, de manière plus large, d'objets directement liés à leur utilisation.[36] À l'aide de quelques exemples, j'évoquerai ici trois aspects du sujet:

1 le répertoire des formes et le rapport de l'image avec la réalité archéologique;
2 la question de savoir si les données chronologiques exceptionnelles fournies par les timbres peuvent être exploitées et de quelle manière;
3 enfin la signification du choix des images dans la Grèce des IVe et IIIe siècles.

Le répertoire des formes et ses parallèles archéologiques

Mon idée de départ était de comparer les représentations de vases sur timbres avec le matériel céramique. J'ai en effet étudié cette céramique dans la Thasos du IVe s. et je la connais dans une certaine mesure ailleurs en Grèce jusque dans la première moitié du

[35] Bon & Bon 1957, n° 326 et 501.

[36] J'ai pu disposer non seulement des timbres publiés dans Garlan 1999a et dans plusieurs articles d'Yvon Garlan et de Michel Debidour, mais aussi du fichier personnel d'Yvon Garlan, que je remercie ici pour son aide. La publication des timbres récents de Thasos par Michel Debidour est en préparation. Parmi les formes principales l'alabastre, le canthare et la coupe-canthare, la cruche, la lampe, le cratère, la phialé, le seau et le puisoir sont majoritaires, mais il y a aussi d'autres formes, comme le skyphos, le rhyton, la marmite, le stamnos, le vase à puiser, le vase lacrymatoire. Parmi les formes principales, on pourrait distinguer une centaine de types et de sous-types. Pendant le colloque Z' Διεθνές συμπόσιο για την αρχαία Μακεδονία, tenu en octobre 2002 à Thessalonique, après notre colloque sur les amphores, une communication a été présentée par T. Stoyanov, intitulée « Pieces of Metalwork as emblems on the amphora stamps of Thasos: interpretation issues ». N'ayant pas assisté à ce colloque, je n'ai pas pu rendre compte du contenu de cette communication.

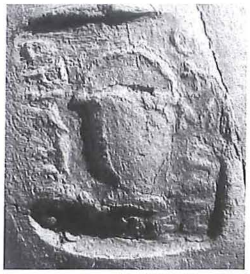

Fig. 14 Situle.

a) Timbre récent de Aristodikos. Emblème: situle (type A) (ÉFA)

b) Situle en argent de type A, ovoïde (Themelis & Touratsoglou 1997, fig 111, D 4). Derveni, Tombe D (325-300)

c) Situle en bronze de type B, à paroi concave (Votokopoulou [éd.] 1993, fig. 263). Derveni, Tombe A (325-300)

d) Timbre récent de Théopompos. Emblème de situle (type C)

e) Situle en bronze de type C, à goulot (Votokopoulou [éd.] 1993, fig. 305). Nikisiani, Tumulus, Tombe G (deuxième moitié du IVᵉ s.)

IIIe siècle, c'est-à-dire durant une grande partie du timbrage amphorique thasien. Je pensais donc que c'était une question relativement aisée à traiter. Mais deux difficultés se sont très vite présentées.

La première est que peu de timbres correspondent dans le détail à ce que je connais des vases rencontrés à Thasos dans les habitats du IVe siècle. Certaines formes sont même complètement absentes du répertoire céramique thasien.[37] En revanche, à la vue des publications des tombes macédoniennes, et notamment de celles de Derveni,[38] j'ai été frappée par les ressemblances qui existent entre le matériel en métal retrouvé sur ce site et les emblèmes amphoriques thasiens.

Ma problématique initiale a ainsi pris une orientation imprévue: elle s'est étendue à un domaine que je connaissais mal, celui de la vaisselle en métal et même, dans une moindre mesure, en verre.[39]

Commençons par trois types d'objets qui s'inspirent évidemment de formes métalliques et qui ont commencé à orienter mes comparaisons.

Seau ou situle (Fig. 14a-e)

Le seau n'est pas représenté sur les prototimbres et ne figure qu'exceptionnellement sur les timbres anciens; mais il se rencontre à plusieurs reprises dans les vingt dernières années du IVe siècle, puis de façon régulière pendant un siècle sur les timbres récents.[40]

Même s'il en existe quelques versions miniatures en céramique, il est clair que le seau à anse mobile n'est pas une forme du répertoire céramique grec. En revanche, il est très fréquemment attesté en métal (argent et bronze) dans des contextes funéraires, no-

[37] Pour les formes et types principaux à Thasos, voir entre autres Blondé 1985, 281-344 et Blondé 1989, 481-545.

[38] Themelis & Touratsoglou 1997. Voir aussi Sideris 2000 avec bibliographie importante.

[39] À Thasos, très peu de vases en métal sont répertoriés, mais il est vrai qu'une recherche systématique d'éventuels petits fragments n'a jamais été entreprise. Le verre de certains ensembles est en cours d'examen par Marie-Dominique Nenna. Pour les influences céramique/métal, voir entre autres, à part les articles mentionnés plus loin, Drougou & Touratsoglou 1997; Vickers & Gill 1994a.

[40] Notre étude se fonde sur l'examen de 34 matrices comportant des situles.

tamment en Macédoine et en Thrace: si bien que l'on considère actuellement, et à juste titre, que la Grèce du Nord est un de ses lieux de production.[41] On en connaît bien trois types différents (la situle ovoïde, la situle à paroi concave et la situle à goulot, qualifiées d'A, B, C par G. Zahlhaus), qu'on retrouve, mais dans des proportions différentes, sur les timbres.[42]

Puisoir (Fig. 15a-d)

Le puisoir, absent des prototimbres, apparaît sur les timbres anciens à partir du groupe F, soit entre 360 et 345. Mais c'est sur des timbres récents qu'il se rencontre le plus souvent.[43] La louche ou le puisoir – qui n'est pas un vase, mais fait partie des ustensiles à liquides de la vie quotidienne et du mobilier funéraire – est également en rapport direct avec les productions métalliques. Bien qu'on en trouve des fragments en céramique (Fig. 15a), ses représentations sur timbres ont évidemment leurs meilleurs parallèles dans le répertoire d'argent des tombes macédoniennes.[44] Deux types sont à distinguer:

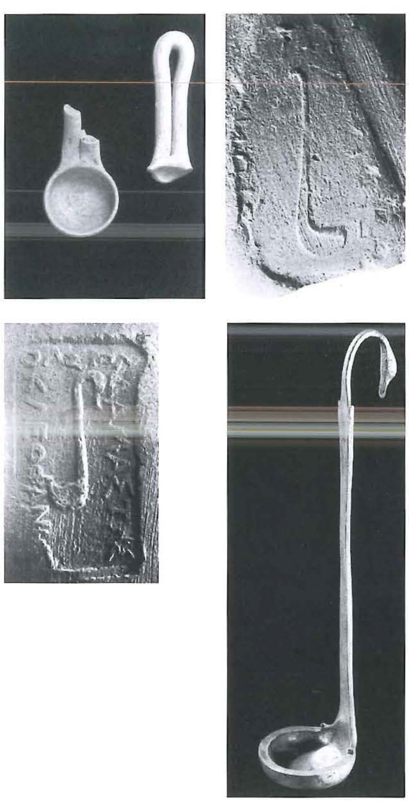

Fig. 15 Puisoir.

a) Fragments de puisoirs en céramique (Thasos, terrain Valma, puits rond)

b) Timbre ancien d'Archestratos. Emblème: puisoir simple (Garlan 1999a, n° 783)

c) Timbre de Damastès II. Emblème: puisoir terminant en tête de cygne (Garlan 1999a, n° 710)

d) Puisoir en argent, terminant en tête de cygne (Themelis & Touratsoglou 1997, pl. 12, B 2). Derveni, Tombe B

1 un type à anse verticale simple, recourbé à l'extrémité, qui est largement majoritaire sur les timbres, aussi bien anciens que récents, mais qui reste peu connu (ou plutôt peu publié) en version métallique;
2 un type à anse recourbée, se terminant par une tête de cygne, qu'on trouve sur les timbres de Damastes II au milieu du IV^{e} s. (dans le groupe ancien F2, en 350-345). Ces emblèmes trouvent leurs parallèles dans les tombes de Derveni.

Rhyton (Fig. 16a-c)

Il est compréhensible que nous n'ayons pas trouvé de rhyton, même fragmentaire, dans les habitats thasiens. Bien que cette forme existe en céramique ainsi qu'en métal (Fig. 16a-b montre deux cas qui se réfèrent clairement au répertoire métallique), elle reste néanmoins exceptionnelle. Un rhyton est déjà reproduit sur un timbre ancien de Téléas (du groupe A, et donc dans les années 395-380); mais sur les timbres récents, mis à part une matrice de Daiphrôn (vers 320), il se limite à un seul groupe de timbres, qui se situe dans le deuxième quart du III^{e} siècle.[45]

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[41] Pour l'origine des seaux, on a longtemps privilégié des ateliers de Grande Grèce, mais les trouvailles (d'objets aussi bien que de déchets de production) ont prouvé l'existence d'ateliers en Macédoine, qui pour certaines types sont d'ailleurs plus anciens que ceux d'Italie du Sud.

[42] La situle ovoïde y est largement majoritaire, notamment sur les timbres anciens d'Althèm- et de Mess-, qui datent de ca. 365-350, puis sur les timbres récents entre le dernier quart du IV^{e} s. et le milieu du III^{e} s., ainsi que sur une série de la fin du troisième quart de ce siècle. Pour un commentaire de ces situles en métal, voir surtout Zahlhaas 1971, Pfrommer 1983 et Zimmermann 1998. Sur un exemplaire unique en verre, voir Weinberg 1992, cat. 44 et p. 22. Le seau à paroi plutôt concave est présent sur le timbre d'un seul éponyme récent, Antianax, dans le deuxième quart du III^{e} s. Le seau à goulot est un des emblèmes de l'éponyme Théopompos à la même époque.

[43] L'échantillonage étudié contient 101 matrices.

[44] Pour un exemple en Thrace, voir Archibald 1998, 281.

[45] Sur les rhyta, voir Shefton 1998, 643 note 75 avec bibliographie antérieure, et note 76 sur ceux qui sont de forme achéménide perse. Shetfton indique qu'on a des témoignages d'une production grecque de ces derniers à partir du deuxième quart du v^{e} s., sans qu'on en connaisse les ateliers ou la clientèle. Il suppose que c'est le travail d'artisans grecs « settled within the Persian empire, at Sardis or perhaps on the Black sea ». Il donne aussi des références empruntées au répertoire iconographique.

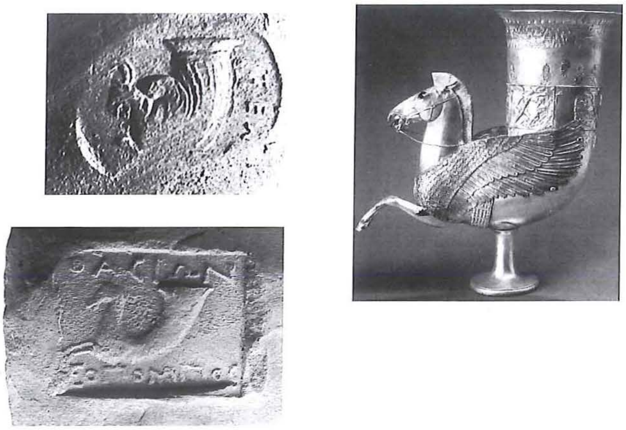


Fig. 16 Rhyton

a) Timbre ancien de Téléas. Emblème: rhyton à protome en forme de griffon ailé (Garlan 1999a, n° 84)

b) Timbre récent de Démalkès. Emblème: rhyton à protome en forme de cheval (ÉFA)

c) Rhyton en argent doré, à protome en forme de cheval ailé (Vickers and Gill 1996, Fig. 2.3)

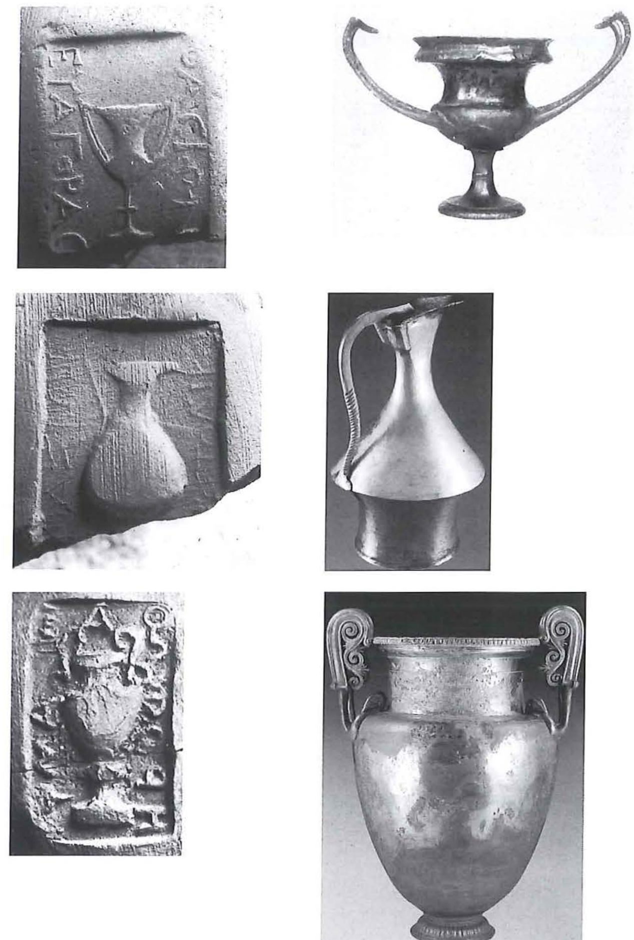


Fig. 17

a) Timbre d'Evagoras. Emblème: canthare (ÉFA)

b) Coupe-canthare à anses élancées à retour angulaire et pied haut mouluré en bronze (Themelis & Touratsoglou 1997, pl.113, D 9). Derveni, Tombe D

c) Timbre récent d'Aristodikos. Emblème: cruche à bec prononcé (ÉFA)

d) Cruche à bec prononcé « Schnabelkanne », en argent (Andronikos 1984, fig. 172)

e) Timbre d'Amphi-. Emblème: cratère à volutes (Garlan 1999a, n° 303)

f) Cratère à volutes en bronze (Themelis & Touratsoglou 1997, pl. 1). Derveni, Tombe A

À côté de ces formes, rarissimes en céramique, plusieurs emblèmes représentent des vases qui existent aussi bien en céramique qu'en métal, mais où le graveur semble s'être surtout inspiré de la version métallique. Les figures 17 et 18 en donnent quelques exemples:[46]

- le canthare qui, entre autres types, comporte surtout un type à pied haut et mouluré;[47]
- la cruche qui, à côté de types simples à embouchure ronde ou trilobée principalement attestés en céramique, inclut aussi des types plus complexes comme la cruche à bec en biais et à anse élancée (« *Schnabelkanne* »);
- le cratère qui, parmi les 4 types figurés, est surtout représenté par le cratère à volutes;[48]
- la petite lécythe à bord large, désignée par B. Sparkes comme lécythe de la « Talcott-class », en version céramique aussi bien que métallique;[49]
- l'amphore « bouchée », qui a ses plus proches parallèles en métal et se trouve aussi en verre.

[46] En ce qui concerne les formes mentionnées ci-dessous, notre corpus comprenait 65 matrices de canthare, 44 de cruche, 65 de cratères à volutes, 1 de lécythe de la « Talcott class », 12 d'amphore bouchée et 17 de lampe.

[47] Voir aussi plus bas.

[48] Pour le cratère à volutes, voir entre autres Schleiffenbaum 1989.

[49] Sur cette série limitée de vases, voir Sparkes 1977, 8-25.

Fig. 18

a) Timbre d'Aristokratès. Emblème de petite lécythe du type «Talcott Class» (Garlan 1999a, n° 966).

b) Petite lécythe du type Talcott Class (Themelis & Touratsoglou 1997 pl. 86, B 23). Derveni, Tombe B

c) Timbre récent de Diagoras. Emblème: amphore à couvercle (ÉFA)

d) Amphore à couvercle, en argent (Andronikos 1984, fig. 183). Prince's Tomb

e) Timbre de Mégôn II(?). Emblème: lampe (Garlan 1999a, n° 1008)

f) Alabastre en verre, à tenons latéraux (Themelis & Touratsoglou 1997, pl. 6, A 45). Derveni, tombe A

g) Timbre ancien de Phanokritos. Emblème: alabastre à tenons (Garlan 1999a, n° 555)

À quoi on peut ajouter la lampe, dont le rebord autour du bec peut parfois suggérer une forme métallique (à moins qu'il ne résulte que du creusement du trou de la mèche), tandis que d'autres formes, comme l'alabastre avec ou sans tenons, évoquent le verre et la pierre.

Le choix des exemples qui précèdent montre bien le lien qui existe entre le métal ou le verre et le choix de l'emblème. Mais il existe aussi plusieurs autres types de vases (par exemple la cruche à col arrondi, le pithos, le lacrymatoire...) qui, tout en restant minoritaires, font uniquement référence à la céramique.

Les indices chronologiques

La chronologie est évidemment un des éléments centraux de notre enquête. Pour la datation des timbres, je n'ai pas eu à intervenir: les dates sont données de façon absolue par Y. Garlan et M. Debidour, avec toutes les explications, nuances et réserves nécessaires. Par rapport à la céramique que les plus optimistes datent à un quart de siècle près – et encore seulement pour certaines formes –, la précision de la chronologie établie pour les timbres est une donnée de première importance, d'autant qu'elle a été obtenue indépendamment des chronologies céramiques. Si l'on exclut le problème de la fiabilité de l'image, il est clair que les timbres sont des sortes de « points fixes ». À un détail près toutefois: c'est que le timbre donne une forme ou un type existant à une date précise, alors que ceux-ci ont une durée de vie plus longue en céramique. Il ne faut donc pas oublier que leur fabrication comporte un début, une évolution et une fin, et que, de surcroît, l'usage qui en est fait peut déborder largement de ce cadre.

Dans de rares cas, la céramique peut inversement aider à la chronologie des timbres. C'est ainsi que la lampe gravée sur certains prototimbres (Fig. 19a-b), qui est de forme cylindrique basse à épaule arrondie et possède un petit bec à trou de mèche proche du bord, est un des éléments qui ont été utilisés pour la datation de cette série: on considère que celle-ci a été fabriquée « probablement pendant un bref laps de temps (une ou deux dé-

Fig. 19

a) Prototimbre. Emblème: lampe (Garlan 1999a, n° 19)

b) Lampe thasienne (Thasos, Phari)

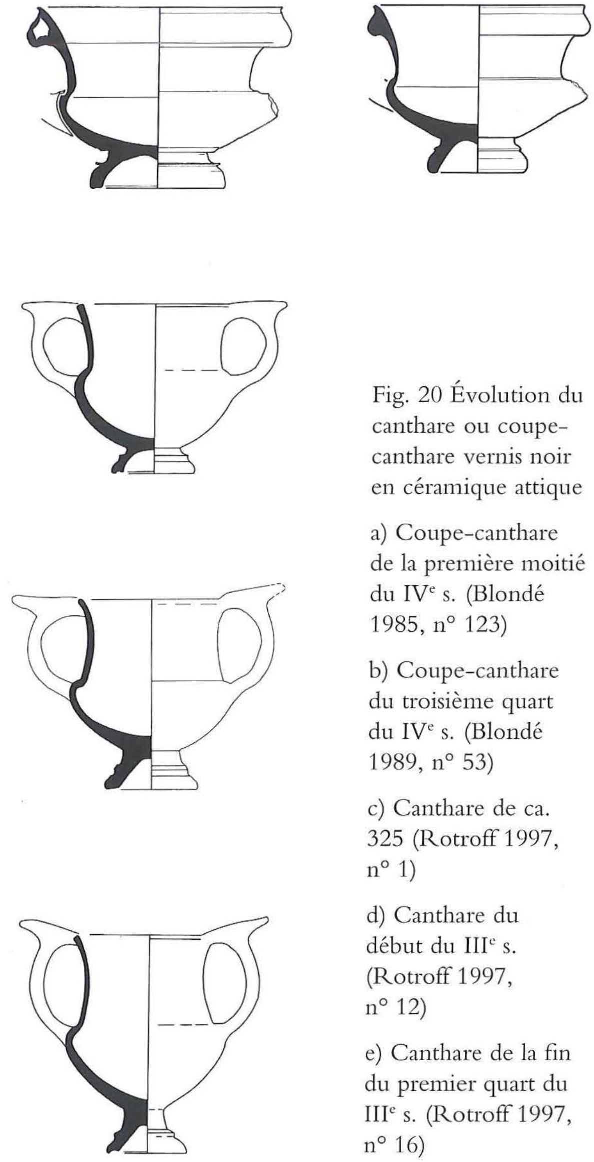


Fig. 20 Évolution du canthare ou coupe-canthare vernis noir en céramique attique

a) Coupe-canthare de la première moitié du IV[e] s. (Blondé 1985, n° 123)

b) Coupe-canthare du troisième quart du IV[e] s. (Blondé 1989, n° 53)

c) Canthare de ca. 325 (Rotroff 1997, n° 1)

d) Canthare du début du III[e] s. (Rotroff 1997, n° 12)

e) Canthare de la fin du premier quart du III[e] s. (Rotroff 1997, n° 16)

cennies?) vers le milieu de la première moitié du V[e] siècle ».[50]

Si les matrices représentant des vases métalliques ne peuvent en principe servir à la datation des amphores, elles sont en revanche susceptibles de contribuer efficacement à la chronologie d'un matériel métallique qui est généralement très mal daté. La plupart de ces vases ont en effet été trouvés dans des contextes funéraires et sont datés par eux (notamment par les céramiques), bien qu'ils soient très souvent nettement plus anciens que les offrandes céramiques.[51] C'est pourquoi il me semble que, dans les chronologies proposées pour les vases en métal, les marges d'erreurs restent encore grandes et pourraient être de plusieurs manières réduites par la datation précise de l'iconographie amphorique.[52]

Compte tenu des remarques précédentes, nous commenterons ici quelques cas de figures.

- L'exemple du canthare et de la coupe-canthare montre que la datation de certains types peut être ainsi confirmée.

On sait qu'en version céramique, les canthares et les formes proches comme la coupe-canthare et la coupe à calice (« calyx-cup ») sont très nombreux au IV[e] s. Vers la fin du IV[e] s. et le début du III[e] s., ils constituent les principaux vases à boire. Pour les périodes qui nous concernent ils fournissent, par leur diversité et leur sensibilité aux « modes », un des indices essentiels de l'évolution céramique.

L'évolution de la forme se suit bien à partir des

[50] La lampe correspond au type 21 A ou B de Howland 1958 qui va de la fin du vie s. au dernier quart du V[e]. Le cercle central représenté sur la matrice correspond à un tube qu'on trouve plutôt dans les versions les plus anciennes, telles que le type 21A que l'on situe, sur des bases solides, avant le milieu du V[e] siècle. Cf. Garlan 1999a, 57.

[51] Cf. aussi Archibald 1998, 274.

[52] Plusieurs publications montrent la relation entre vases métalliques et céramiques: voir entre autres Vickers *et al.* 1986; Pfrommer 1983; Rotroff 1997, *passim*; Shefton 1998, 619-662; Sideris 2000, 3-36; Zimmermann 1998; Drougou 2000, 305-314.

[53] Voir les analyses de Sparkes & Talcott 1970 et de Rotroff 1997, basées sur des exemplaires provenant de l'Agora, mais aussi d'autres contextes: pour la première moitié du IV[e] s., →

exemplaires attiques de l'Agora d'Athènes.[53] Elle est à peu près parallèle pour les canthares et les coupes-canthares. Dans cette évolution (Fig. 20), aussi bien les proportions générales que la hauteur du pied donnent des indices chronologiques nets. En gros, le canthare et la coupe-canthare évoluent d'un vase aussi large que haut vers un vase élancé.[54] Au début la vasque repose directement sur la base; mais, à partir de la deuxième moitié et sûrement à partir du dernier quart du IV^e^ s., s'insère entre les deux éléments un pied bas qui grandit pour atteindre sa hauteur maximale dans le deuxième quart du III^e^ siècle. Deux types de bord sont à distinguer: le bord mouluré et le bord simple, qui comporte presque toujours un léger épaississement de la lèvre. Le début des bords moulurés est antérieur à celui des bords simples: il est bien attesté dans le deuxième quart du IV^e^ s. (presque tous les canthares d'Olynthe sont de ce type), tandis que le bord simple ne commence pas avant le milieu du siècle. Les deux types continuent par la suite à exister parallèlement, mais dans d'autres proportions quantitatives: pour les canthares de la période hellénistique ancienne, le bord simple est environ trois fois plus courant que le bord mouluré, qui semble disparaître vers 300, tandis que le canthare à bord simple continue son développement jusqu'à la fin des années 270 et cesse d'être fabriqué vers 250.

Les timbres dont la figure 21 présente un échantillonnage permettant de suivre cette évolution: c'est un exemple typique de série dont les timbres confirment la chronologie établie par d'autre moyens.

Mais la forme la plus courante sur les timbres fait référence à un canthare ou coupe-canthare spécifique, à pied haut avec une ou plusieurs bandes en relief (voir Fig. 17b).[55] S.I. Rotroff indique que le type est courant au III^e^ siècle en Italie et dans la partie est de la Méditerranée, mais rare en Grèce même. Quelques exemplaires plus anciens sont connus à partir du dernier quart du IVe siècle[56]. S.I. Rotroff suppose que ce type a continué à être fabriqué peut-être jusque dans le dernier quart du III^e^ siècle.[57] Les timbres confirment que la production de cette forme cessa à cette date, mais ils pourraient indiquer aussi qu'elle commença nettement plus tôt qu'on ne le pense, au V^e^ siècle. En effet, on retrouve le type sur un prototimbre (Fig. 22), groupe qui daterait




Fig. 21 Timbres anciens et récents avec emblème de canthare

a) Timbre de Nikias (groupe G 2, datant de 345-335 environ) (Garlan 1999a, n° 953)

b) Timbre récent de Thasôn I (fin du IV^e^ s.) (ÉFA)

c) Timbre récent de Kléophôn I (fin du IV^e^ s.) (ÉFA)

d) Timbre récent de Aischriôn HB (fin du premier quart du III^e^ s.) (ÉFA)

→ Olynthe; avant 307, le Batîment Z du Céramique; pour le premier quart du III^e^ siècle, la citerne de Menon et, jusqu'au milieu du siècle, Abschnitten I-IV du Dipylon Well et Koroni. L'étude des contextes thasiens, où canthares et coupes-canthares sont essentiellement importés d'Attique, confirme cette analyse, mais les vases sont souvent trop fragmentaires pour qu'on puisse tenir compte de tous leurs éléments indicatifs.

54 Proportions diam/H (indices Rotroff 1997): dans la première moitié du IV^e^ s., 1,14; vers 325, 0,96 env.; au début du III^e^ s., de 0,87 à 0,93; vers le milieu du III^e^ s., de 0,69 à 0,78.

55 Au moins 43 matrices, dont la plupart sur les timbres récents.

56 Rotroff 1997, 88-89. Pour un fragment provenant de Thasos, voir Kahil 1960, 127, pl. V, n° 32.

57 Rotroff 1997, 89:« The tall cup-kantharos appears as a motif on moldmade bowls beginning in ca 225, which suggests that it continued to be made, in silver if not in clay, at least until the early last quarter of the 3rd B.C. » Elle remarque (note 18) qu'il est illustré même sur des bols à relief « as late as second quarter IInd c. », ajoutant prudemment « This does not necessarily mean, however, that the shape was still current; the motif, once part of the repertoire, might well have been retained long after the shape that inspired it had fallen into disuse ».

Fig. 22 Prototimbre. Emblème: canthare à pied haut (Garlan 1999a, n° 50)

« entre la fin du VI^{e} et le milieu, voire troisième quart du V^{e} s. ».[58] Mais c'est un cas de figure qui mérite d'être approfondi, car le canthare représenté s'accorde mal avec la datation proposée pour la série des prototimbres: il me semble en effet nettement plus tardif. Le profil est celui d'un canthare à bord mouluré qui n'est pas connu en céramique avant le deuxième quart du IV^{e} siècle. Mais le pied est, comme nous l'avons vu, du type haut et mouluré qui évoque les formes métalliques. S'agirait-il d'un prototype, ou y aurait-il un problème d'insertion dans la série considérée?

- Le cratère appelle également une confrontation avec des points de vue nouveaux sur la disparition de sa forme.

À partir des exemplaires de l'Agora d'Athènes, S.I Rotroff a analysé et interprété de façon intéressante la place du cratère dans le symposium.[59] Elle a montré la rareté du cratère en argile à l'époque hellénistique par rapport aux époques précédentes. Ce fait avait déjà été constaté par R. Edwards à Corinthe: il suggérait que les Grecs de l'époque hellénistique délaissèrent les cratères en céramique au profit de versions en métal. Rotroff pousse l'analyse plus loin et démontre une évolution profonde du symposium, de l'époque archaïque jusqu'à l'époque hellénistique. Le déclin final du cratère céramique est frappant.[60] Il ne disparaît pas, mais « developed into a symbol in its own right, quite independent of its original practical function ». Rotroff traduit cette diminution en terme social et politique: la place importante, aux V^{e} et IV^{e} s., du « public dining » et la démocratisation du symposium qui popularisa le cratère céramique à usage domestique, et par contre, à partir de l'époque hellénistique, l'emploi de grands cratères en métal en signe de prospérité, mais en dehors de l'usage domestique. Or quand on suit l'évolution des cratères figurés sur les timbres, on voit que leur représentation couvre toute la période du timbrage, puisqu'on les retrouve jusque sur les timbres à éponymes tardifs, comme ceux de Hèragoras.[61] Dans une certaine mesure, cela confirme la théorie de Rotroff, en prouvant une fois de plus la référence courante à des objets métalliques sur les timbres.

Le choix des emblèmes

La référence aux vases en métal peut s'expliquer de plusieurs façons:

- Ce choix peut avoir été dicté par la nécessité de préférer une image « parlante ». Car il est normal de choisir des formes aux articulations prononcées, plutôt qu'un petit bol, une petite salière, une petite lopas, aux formes difficilement identifiables.
- On peut d'autre part supposer que les vases métalliques étaient aussi plus répandus dans la vie quotidienne que ne le suggèrent les données archéologiques. À Thasos, les vases eux-mêmes certes manquent (sans doute parce qu'ils ont été refondus); mais les indices de travail du métal (débris et traces de fabrication) y apparaissent de mieux en mieux, même s'ils n'ont attiré que très récemment l'attention des chercheurs.

[58] Garlan 1999a, 57.

[59] Rotroff 1996.

[60] À l'Agora, on a inventorié 128 cratères en céramique à figures noires, 700 à figures rouges et 121 exemplaires dans la période hellénistique.

[61] Bon & Bon 1957, n° 698. Sur les 55 matrices de cratères examinés, 18 appartiennent au timbrage ancien (surtout les timbres d'Arist(-) du groupe D, daté par Y. Garlan de 370 à 365; les autres, sur les timbres récents, se repartissent de façon régulière à partir des vingt dernières années du IV^{e} s. jusqu'à la fin du troisième quart du III^{e} s. Trois matrices (de Hégésippos, de Hèragoras et de Satyros) se situent après cette date, dans le dernier quart du III^{e} s. et même peut être au II^{e} s.

Les parallèles les plus frappants qui existent entre les objets et les timbres se trouvent essentiellement dans les plus riches des contextes funéraires. Mais faut-il pour autant en conclure que c'est surtout à ces contextes que l'image représentée sur les timbres fait référence? À mon avis, non. D'abord parce que, comme je viens de le dire, on n'aura sans doute jamais une idée précise de l'importance des vases métalliques dans la vie de tous les jours; ensuite parce qu'on trouve aussi dans l'iconographie amphorique des vases d'usage quotidien, bien que certains types aient pu être éventuellement liés aux sanctuaires (l'alabastre à fleur par exemple, courant sur les timbres récents).

Il me semble donc que les magistrats amphoriques ont simplement puisé leurs emblèmes dans le monde réel qui les entourait, monde où vie et mort, religion et vie quotidienne se mélangeaient, et qu'ils y ont privilégié des formes parlantes, faciles à identifier et dont plusieurs, par leur valeur intrinsèque, les avaient frappés. Pour les graveurs, il ne s'agissait pas non plus de copier exactement, mais de créer une image bien connue des contemporains, qu'ils ont souvent cherchée dans les productions thrace et macédonienne. Cette inspiration m'a d'autant plus frappée qu'elle va à l'encontre des conclusions que je tire de l'étude de la céramique trouvée à Thasos même. J'ai en effet dû me rendre à l'évidence qu'au IV^e^ siècle, en dehors d'une considérable présence de vernis noir attique, aucune autre importation d'importance n'a existée à côté des fabrications locales.

Mais n'oublions pas que ce qui est en question dans l'amphore et son timbre, ce n'est pas seulement la céramique, c'est aussi le vin, qui avait ses propres règles et circuits de distribution.

Transport Amphorae from Euesperides (Benghazi), Libya. A Presentation of Preliminary Results

Kristian Göransson[1]

Introduction

Euesperides is situated within the suburbs of the modern city of Benghazi in eastern Libya. The site of the ancient city has been known since the 1950s, when surface finds led Richard Goodchild to identify the visible remains with Euesperides.[2] Excavations were undertaken by the Ashmolean Museum, Oxford in the 1950s, but they have never been fully published.[3] Euesperides was excavated again by Barri Jones in the late 1960s,[4] and by John Lloyd and Ahmed Buzaian in the 1990s.[5] The current excavations were initiated in 1999 as a project organised jointly by the Society for Libyan Studies, London and the Department of Antiquities of Libya, directed by Paul Bennett (Canterbury Archaeological Trust), Dr Andrew Wilson (Institute of Archaeology, University of Oxford) and Ahmed Buzaian (Garyunis University, Benghazi).[6]

Greeks from Thera had arrived in Libya some time after the middle of the seventh century BC in search of a place where they could found a city. According to Herodotus the Therans founded Cyrene in 631 BC, after having been led from the coast up to the plateau of the Green Mountain by Libyan tribesmen.[7] Herodotus writes that during the rule of the third king of Cyrene, Battus II, Greeks from many different states were encouraged to settle in Libya in order to make the initially small Theran colony grow.[8] It is not known exactly when Euesperides was founded or by whom, but the earliest finds of residual fine pottery from the current excavations date back to the last quarter of the seventh and early sixth centuries BC.[9] This means that Euesperides was founded within a generation of Cyrene, and only shortly after the foundation of Tocra, at which point Cyrene would have been too newly established to be sending out its own colonies. It therefore seems probable that the founders of Euesperides were colonists from different places in the Greek world. The early colonisation of Cyrenaica, which resulted in the foundation of several cities including Taucheira (Tocra) and Apollonia (Susa), should thus be viewed as a mixed Greek enterprise rather than a sub-colonisation of the region by the Therans of Cyrene. For long Cyrene remained the most important Greek city in Cyrenaica, but its hegemony did not go unquestioned by the other Greek states in the region nor, indeed, by the Libyan tribes at whose expense the city grew.[10]

There is evidence from the early third century BC of industrial production of purple dye from *Murex trunculus* shellfish,[11] and purple-dyed wool or cloth was probably one of the city's exports.

[1] I would like to express my gratitude to Dr Andrew Wilson, University of Oxford, for reading and commenting on earlier drafts of this paper and for inspirational discussions of the topics raised in it.

[2] Goodchild 1952.

[3] Publication of the Ashmolean Expedition 1952-1954 is in preparation by Michael Vickers and David Gill. Some articles on finds from those excavations have appeared: Vickers & Gill 1986; Vickers et al. 1994; Gill 1998.

[4] Jones 1983; Jones 1985.

[5] Hayes & Mattingly 1995; Lloyd et al. 1995; Buzaian & Lloyd 1996; Lloyd 1997; Lloyd *et al.* 1998.

[6] Interim reports of the current project: Wilson *et al.* 1999; Bennett *et al.* 2000; Wilson *et al.* 2001; Wilson *et al.* 2002. The project is funded by the Society for Libyan Studies, London and the Craven Committee of the University of Oxford, and was supported also in 2000 by a grant from the Oppenheim Foundation.

[7] Hdt. 4.158.

[8] Hdt. 4.159-160.

[9] Zimi 1999, 160-161; *ead.* 2000, 138-139; *ead.* 2002, 107.

[10] Hdt. 4.145-205.

[11] Hall 2002, 97-101.

Another sought-after produce of Cyrenaica, which may have been exported from Euesperides, was *silphium*, grown on the pre-desert steppe to the south of the city.

The existence of the city was threatened when the sheltered port in the lagoon started to silt up. This appears to have happened some time in the early third century BC. However, the decision to abandon the city appears to have been forced upon the inhabitants in the 250s BC after the death of Magas, who was the governor of Cyrenaica.[12] The people of Euesperides were settled in a new city closer to the coast, which today lies under the centre and harbour of modern Benghazi. The new city was subsequently named Berenice in honour of the daughter of Magas, who became the queen of Ptolemy III.

Fig. 1 General view of Area P from NE, showing the site of the Hellenistic courtyard house before the complete clearing of modern graves. Photo: K. Göransson.

The excavations

The current excavations are divided into three areas: P, Q and R. Areas P and Q are both situated in the upper city on the Sidi Abeid mound. Area R is situated in the lower city, SW of the mound, near the former Es-Selmani salt marsh. Domestic quarters dating to the late Hellenistic period have been unearthed in Area P, including an early Hellenistic courtyard house (Fig. 1). In Area Q, the sequence of street deposits and flanking houses dating to the city's last decades have been investigated and the positions of what appears to be three different phases of defensive wall circuits established.

The Hellenistic floors from Euesperides are of particular interest with their mixed technique of pebbles and irregular tessellated designs dating to *c.* 261-250 BC.[13] The use of *opus signinum* in one of the floors is strong evidence for western influence and this contact with the west is supported by the ceramic assemblage, not least the amphorae, many of which are Punic.

Excavations in Area R in the lower city have revealed a sequence of deposits associated in turn with an early Hellenistic courtyard building and activities relating to the production of purple dye. Large deposits of discarded, broken *Murex* shells and traces of firing have been found.[14]

The study of the amphorae

The four completed seasons of excavations have yielded a substantial amount of amphorae from the three areas. With the exception of some surface finds, all amphorae come from excavated, mainly well-stratified deposits. The identified amphorae are primarily late Classical and early Hellenistic. The study of the amphorae began in earnest in 2001, with the creation of a database with a shape typology and fabric series. There is still a large backlog of material from the excavations of 1999 and 2000, currently being studied by the author. Judging by the hitherto processed amphorae, it is already obvious that Euesperides imported amphora-borne products on a large scale from various parts of the Mediterranean. At the site are amphorae from Mende, Thasos, Kos and Samos as well as Graeco-Italic amphorae, which may come from Sicily or South Italy, and Punic amphorae from Tripolitania, Tunisia and the Straits of Gibraltar. There is also evidence of local production of amphorae in clays which are similar

[12] Wilson 2002, 120.

[13] For a discussion on the importance of the mosaics see Wilson 2001, 156-160.

[14] Hall & Helm 2001, 165-166; Hall 2002, 97-101.

to locally produced coarse wares as well as local fine pottery.[15] The local clays are generally greenish in colour and rich in calcareous inclusions. One of the identified local fabrics contains an abundance of microfossils, which makes it easy to recognise and separate it from the imported pottery, but only a few sherds have been identified as local, as opposed to the vast number of imported amphorae.

Microscopic fabric analysis on all processed sherds has so far resulted in the identification of about 100 amphora fabrics at the site. The various fabrics are grouped according to the appearance of the clay matrix. Petrographic analysis with thin sectioning of the samples may help to refine the grouping of the fabrics. It is hoped that further quantification and fabric analysis of the amphora assemblage will be instrumental in understanding the extent of trade with amphora-borne products at Euesperides. Since the local clay is so distinct, fabric analysis using quantification by count and weight can help us reconstruct the relative amounts of imports from different sources, even if we presently may not be able to say exactly where some of the imported wine or oil came from. However, refined analysis may help to shed light on local variations in for example Aegean amphora fabrics.

The study of the amphorae is aimed at investigating the involvement of Euesperides in what appears to have been a set of complex interregional trading networks, both to the east and to the west. The shipping contacts between Euesperides and the rest of the Mediterranean must have been undertaken on a large enough scale to provide the city with wine, oil, fish products as well as various types of coarse wares and fine wares. It is also to be hoped that the identified amphorae from Euesperides will provide good dates for the development of shapes, since the sherds found in the excavations often can be fairly securely dated, given that the majority of them come from well-stratified deposits.

Corinth and Cyrenaica

The largest single group of identified amphorae sherds found at Euesperides comes from Corinth and consists of Corinthian B amphorae. By using Koehler's typology, the two most common Corinthian B shapes have been identified and dated to the late fourth century and to *c.* 275 BC, respectively.[16] Corinthian A amphorae are also present at the site, but so far only a few rims and handles have been identified; the excavations have not yet reached levels earlier than the Classical period.

The Corinthian B fragments at Euesperides have been divided into a dozen separate fabric classes, of which some display such minor variations that they have been grouped together. Two of these groups (Euesperides Amphorae Fabric Groups 2.1 and 2.2) contain more sherds than the others and they correspond respectively to Whitbread's Corinthian fabric classes 1 and 3-4,[17] with Group 2.2 being the larger of the two. Whitbread's class 3-4 is characterised by well-levigated, pale brown clay with few inclusions, mainly quartz, some limestone, sparse shiny black grits and (rarely) traces of golden mica.

It is worth noting that not only the amphorae are dominated by Corinthian products, but Corinthian material also constitutes the largest group of imported coarse wares excavated at the site. At this stage it is too early to say whether this has to do with the organisation of long-distance trade in the period. The finds from Euesperides do, however, make it clear that Corinth played an important role as an *entrepôt* for the trade with Cyrenaica in the late fourth and early third centuries BC. Furthermore, in the third century, Corinthian B amphorae, which probably carried wine,[18] were certainly being shipped to the central Mediterranean on a large scale, as indicated by numerous finds in Magna Graecia (for example in shipwrecks off Brundisium and Tarentum) and Sicily (for example at Gela, Camarina, Megara Hyblaea, Motya and in the waters near Syracuse).[19] It is interesting to note that Corinthian A and B amphorae have been found in quite large numbers in the American excavations of the commercial port at Carthage.[20] In the case of Carthage,

[15] Göransson 2001, 172 and Swift 2001, 170-171.
[16] Koehler 1992, pl. 4a & 4b.
[17] Whitbread 1995, 274-279.
[18] Koehler 1992, 280-283.
[19] Koehler 1978, 231-239.
[20] For the imported amphorae see Wolff 1986b.

Wolff suggests Syracuse as a possible *entrepôt* for the distribution of Corinthian products to Carthage.[21] At Euesperides, it seems more likely that the Corinthian amphorae came more or less directly from Corinth, since there is a Corinthian dominance also in the coarse wares and relatively few Sicilian sherds in the total ceramic assemblage. Given the presence of Punic amphorae at Euesperides (see the following section) it is conceivable that Euesperides also might have served as an *entrepôt* in the shipping of goods between Corinth and the Punic areas in the western parts of North Africa.

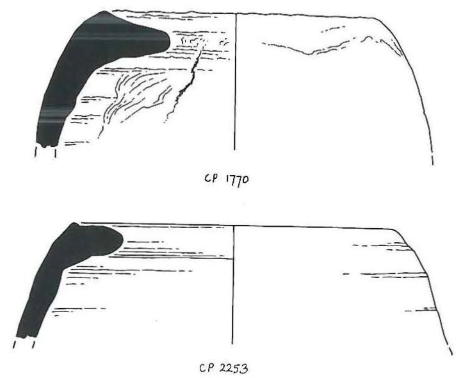


Fig. 2 Rim of Punic amphora from Area Q. Type Mañá D or Ramón T-4.2.1.5, second quarter of fourth century BC to mid third century BC. Drawing: D. Hopkins. [CP2253].

Punic amphorae[22]

Punic amphorae were found in all excavated areas. Several distinct fabrics have been isolated within the group, all of which are characterised by an abundance of quartz and limestone inclusions in a porous dark red, pale red or greenish-white clay matrix. Black or red iron ore is often present. In a number of cases the surface is covered in a white salt wash.

The Punic amphorae identified at Euesperides fall into three main classes. One sherd belongs to Ramón's sub-group SG-11.2.1.0, produced in the region of the Straits of Gibraltar or along the Spanish or Moroccan Atlantic coasts, and probably dating to the fifth or early fourth century BC. The second class consists of some sherds without rims, which appear to belong to Ramón's type T-7.2.1.1, trumpet-mouthed amphorae. These were probably produced in Tunisia, Tripolitania or Western Sicily. At Euesperides they were found in street deposits dating to *c.* 300-250 BC. The third, and most common, class of Punic amphorae is the so-called "torpedo jar"(Fig. 2), i.e. Mañá D or Ramón's Series 4.0.0.0, which was manufactured in Tunisia and the central Mediterranean in the fourth and third centuries BC. The contents of these amphorae may have been salted fish.[23]

This Punic material is particularly interesting given the scarcity of Punic amphorae identified (or published) at excavations of Greek cities. Greek sites in the eastern Mediterranean with published Punic amphorae from the fifth and fourth centuries BC are: Athens, Corinth, Olympia, and Halicarnassus,[24] a list to which Euesperides may now be added. In the third century BC, Mañá C amphorae are found at Delos, Ephesus, Halicarnassus and several Levantine sites, including Haifa and Ashkelon.[25] Punic amphorae at Greek sites appear to have been neglected or unidentified by many excavators, but if they start looking for it they will find it, and the picture of trade between Greek states and the Punic world will gradually become clearer.

Stamped handles

Numerous stamped handles have been found in all areas, and impressions of all stamps and samples of the fabrics have been taken for further analysis and identification. Among the identified stamped handles are three Thasian stamps: from Area P comes one dated to *c.* 350-345 BC, depicting a strigil and a vessel with the inscription: Θα(σιον) | (Π)ανφαη(ς)

[21] Wolff 1986b, 143-145.

[22] I am indebted to Dr Andrew Wilson for doing the bulk of the identification work on the Punic material presented here. See Göransson & Wilson 2002, 109-113 and figs. 18-19 for a more detailed discussion.

[23] Göransson & Wilson 2002, 113.

[24] Ramón 1995, 145-147; Docter 1999, 491.

[25] I am grateful to Dr Sam Wolff for informing me of finds of Punic amphorae at the listed sites.

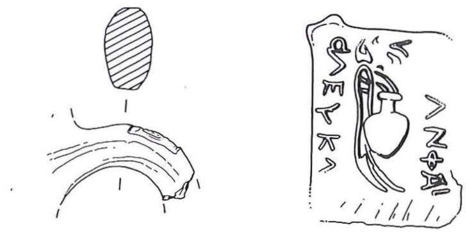


Fig. 3 Thasian stamped handle from Area P. Drawing: D. Hopkins. [CP1348].

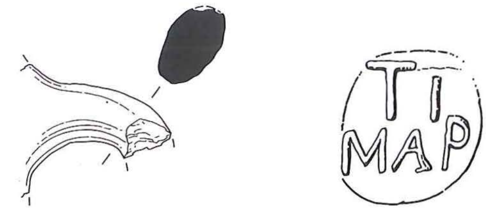


Fig. 6 Stamped handle from Area P, possibly early Rhodian. Drawing: D. Hopkins. [CP1130].

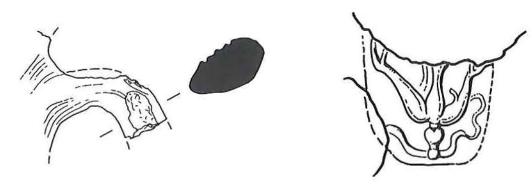


Fig. 7 Stamped handle of local amphora from Area P, possibly depicting a silphium plant. Drawing: D. Hopkins. [CP1127].

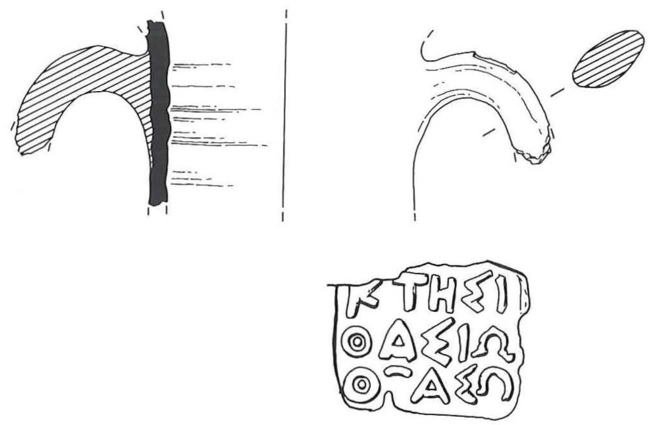


Fig. 4 Thasian stamped handle from Area Q. Drawing: D. Hopkins. [CP1975].

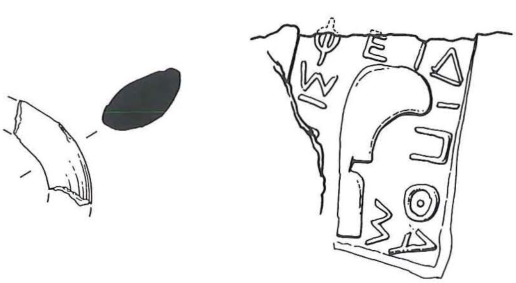


Fig. 5 Thasian stamped handle from Area Q. Drawing: D. Hopkins. [CP1128].

| Λευκ(ων) (Fig. 3);[26] in Area Q two stamps have been found, one dated to the late 390s or 380s BC, with no device and the inscription: Κτησι(ς) | Θασιω(ν) | Θρασω(νιδες) (Fig. 4),[27] and another dated to *c.* 365-60, depicting a sickle and the inscription: Φειδ|ιπ(ος) Θα|σι(..) | (Μυ)ισ(κος) (Fig. 5).[28]

One stamp bearing the inscription Τι | μαρ(...), probably Timarchou, may be an early Rhodian stamp (Fig. 6).[29] The colour of the handle is light orange brown (Munsell 7.5YR 8/4) with a slightly lighter surface. It is very hard fired with a harsh feel and slightly hackly fracture, moderate to sparse red and black inclusions and abundant voids, which all are rounded and ill-sorted.

Another stamp of particular interest may depict the source of Cyrenaica's wealth, namely a *silphium* plant (Fig. 7).[30] The interpretation of the device on

[26] Garlan 1999a, 244, no. 729 (Groupe F2).

[27] Garlan 1999a, 120, no. 126 (Groupe B).

[28] Garlan 1999a, 196, no. 500 (Groupe E1).

[29] I am grateful to Dr Sergei Vnukov and Dr Mark Lawall for their help with this stamp.

[30] See also photograph in Wilson *et al.* 1999, fig. 15.

this stamp found in Area P is, however, very difficult, since only half the stamp is preserved. It does appear to be a plant, which bears some similarities to *silphium* plants as depicted on Cyrenaican coins, but only the stalk and lower leaves are visible. The fabric of the stamped handle is by all appearances local, with the characteristic abundance of microfossils and voids.

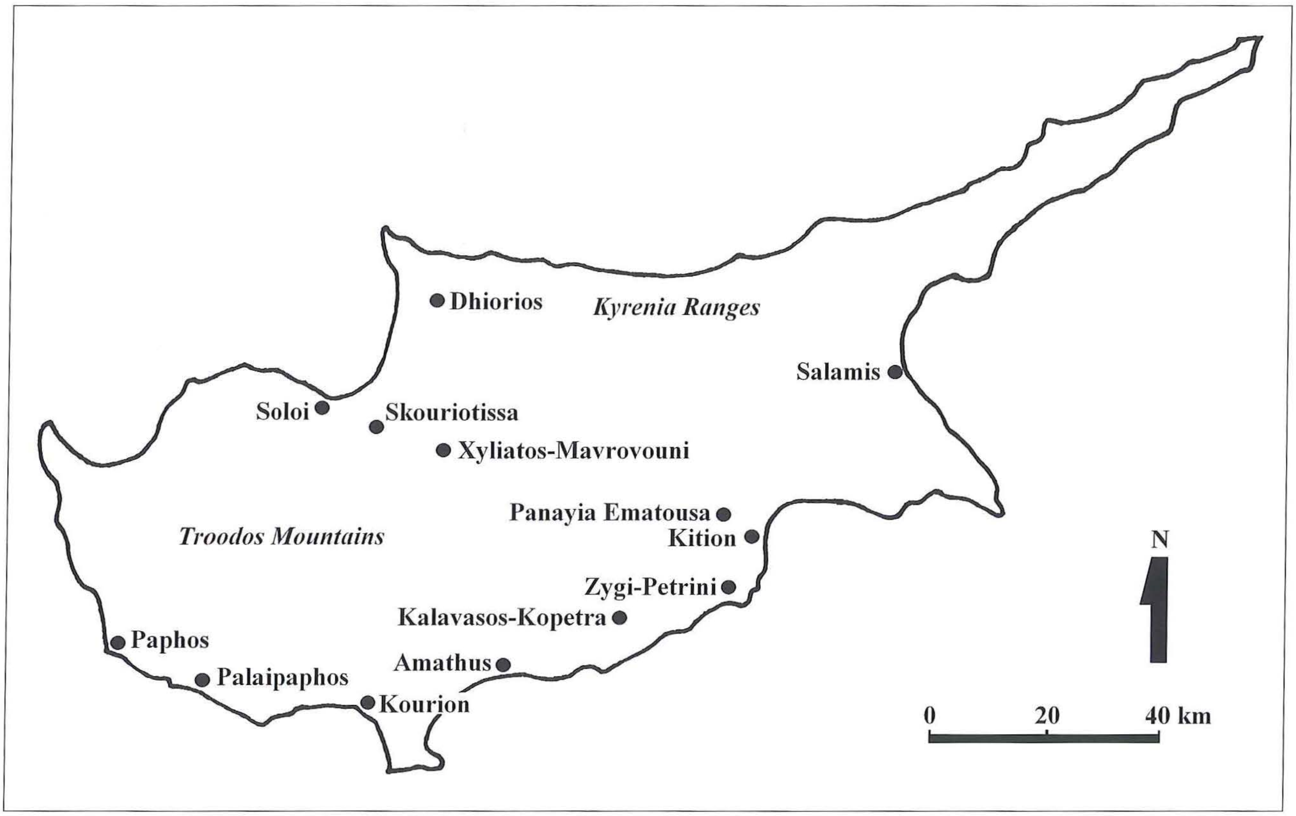
Conclusion

Although the detailed study of the amphorae at Euesperides is still at an early stage, the results so far are very promising. The city imported a wide range of amphora-borne commodities from all over the Mediterranean world: wine came from Mende, Thasos, Kos, Samos and Corinth; olive oil also came from Corinth; fish products reached Euesperides from the Punic West. The analysis of fine and coarse wares from Euesperides tells us that in those pottery categories more than 80 and 20 per cent, respectively, are imports. This raises some fundamental questions about the nature of Greek trade in the late Classical and early Hellenistic periods. Do we expect a city on the North African coast to rely so heavily on imports? Over 80 per cent of the fine wares are high-quality Attic black-glazed pottery, whereas amphorae and imported coarse wares are mainly Corinthian. Is that strange? We also see Punic imports in levels from the fifth to the third centuries BC, indicating a well-established trade with the Punic cities. What did Euesperides export in return for these commodities? *Silphium* and purple dyed wool seem likely answers, but I would suggest that Euesperides, with its good location between East and West, might also have served as an *entrepôt* in the long-distance trade of the fourth and third centuries BC. The Punic traders may have purchased *silphium*, but they were presumably not interested in importing purple dyed wool, since they were manufacturing it themselves, which leaves wine from other Greek states one possible commodity available to them at Euesperides.

Local production of amphorae appears to have been limited. So far, only two amphora fabrics have been identified as local among a range of over a hundred different fabrics, which have been studied and described in the database. The work on the fabric series will continue, as will the development of the shape typology. Even if we cannot assign many of the different fabrics to known shapes, we can at least tell whether or not they are local since the local clay is so characteristic. Such a fundamental part of the study of economic life at an excavated city is surprisingly often overlooked at Greek sites, as is the quantification of pottery. It is to be hoped that this newly initiated study of the amphorae from Euesperides, taking account of shapes, fabrics and quantification of all stratified sherds, will prove successful and contribute to our understanding of the nature of Greek trade.

Regional Distribution of Transport Amphorae in Cyprus in the Late Roman Period[1]

Kristina Winther Jacobsen



The island of Cyprus is characterised by a very varied geology resulting in an equally varied landscape. The central Troodos Mountains divide the island into well-defined regions, each with its own identity. S. and A. Sharrett have suggested that, during the early first millennium BC, ships destined for northwestern Syria and Phoenicia followed a route along the southern coast of Cyprus to Kition and Salamis, whereas those bound for Egypt and Israel passed by Palaipaphos and Amathus.[2] This pattern was corroborated by John Lund, who studied the distribution patterns of Cypriot Sigillata and pinched-handled amphorae of the Late Hellenistic to Middle Roman period.[3] Southeastern Cyprus was closely linked with the economy of northwestern Syria, while western Cyprus was oriented towards Egypt, Israel and Cilicia. (Fig. 1)

[1] Acknowledgements: The people to whom I am grateful for the permission to publish the material and all the hardworking members of the teams; Dr. Lone Wriedt Sørensen, University of Copenhagen, directs the Danish Archaeological Excavations at Panayia Ematousa. The Troodos Archaeological & Environmental Survey is directed by Dr. M. Given & Prof. A.B. Knapp, University of Glasgow, Dr. V. Kassianidou, University of Cyprus and Prof. J. Noller, Oregon State University. Material from Xyliatos Mavrovouni was collected under the supervision of→

This paper aims to examine if the distribution of transport amphorae of the Late Roman period, generally a period of expansion and prosperity in Cyprus, supports the divergent trade patterns indicated by the material of the Late Hellenistic to Middle Roman period. It is also a chance to introduce material from the Troodos Archaeological and Environmental Survey (TAESP). Working on the northern slopes of the Troodos Mountains and down towards the Morphou Bay, TAESP offers a rare insight into the archaeological material in the Solea valley in the northern part of Cyprus. Within the survey area lies the Skouriotissa mine, the largest ancient copper mine in Cyprus with a small dump of transport amphorae of the Roman period no longer *in situ*.[4]

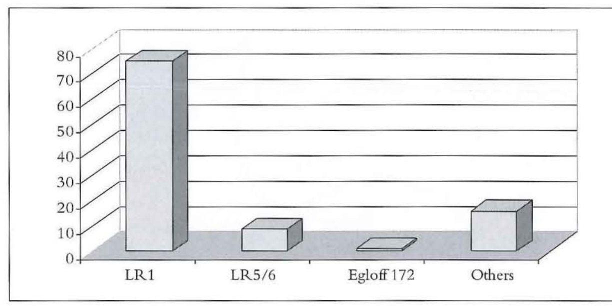
If the distribution patterns of the earlier periods prevail into the Late Roman period, one would expect the amount of Egyptian and Palestinian amphorae to drop as we move east along the southern coast of Cyprus, and the amount of Northern Syrian amphorae to drop as we move west.

The first obstacle is the fact that the analysis has to be based on secondary sites as these represent the most fully published Late Roman amphora assemblages, owing either to the present political situation or to ongoing work. Available finds from southern Cyprus do, however, indicate that the world around the island had shrunk in the Late Roman period: apart from a few fragments from the West, particularly from Tunisia, imported amphorae arrived mostly from the East. It is unfortunately not possible to create a statistically valid impression of the distribution, since the material is not published in a manner allowing for a proper statistical analysis. Some patterns are on the other hand clear, such as the complete domination of LR1 amphorae at all Late Roman sites in southern Cyprus. Among other standard Late Roman amphorae, Palestinian and Gaza amphorae appear to be common, but they are mainly mentioned *en passant* in the publications. Egyptian amphorae of the Late Roman period appear in southern Cyprus, albeit irregularly – and Aegean types even more so.

A few secondary sites offer material for tentative quantification: Panayia Ematousa in the East, Kalavasos-*Kopetra* in the centre and the Palaipaphos hinterland in the West.[5] Tentative, since precise data concerning the type of fragment, whether diagnostic or undiagnostic, is not available from all three areas.

At Panayia Ematousa the LR1 amphorae represent 75% of all identified Late Roman amphorae; Palestinian LR5 amphorae represent 8.6%, while Egyptian amphorae, in the form of Egloff type 172, represent less than 1% (Fig. 2).[6] A handful of fragments may belong to Late Roman amphorae of unknown provenance, but the LR4 amphora from Gaza, which occurs regularly in Cyprus, has not been found at Panayia Ematousa.

Fig. 2 Panayia Ematousa.



The finds from Kalavasos represent the only published quantified material.[7] With approximately 70% of the total, LR1 is the most popular amphora at Kalavasos, and of that amount 60% are imports from the mainland, while approximately 20% belong to a regional Cypriote importation from the lower Mesaoria plain and the south coast of Cyprus (Fig. 3). LR2 from the Aegean, LR4 and LR5/6 account for less than 10%. Finally, types present at less than 1%

→ Angus Graham, University College of London. The material from the Hellenistic Theatre in Paphos was collected as part of the Australian Archaeological Excavations, directed by Prof. Richard Green, University of Sydney.

[2] Sherratt & Sherratt 1993, 372-73.

[3] Lund 1999, 11-12.

[4] Material from the amphora dump was studied in 2003. The vast majority of the material collected belongs to the same type of thin-walled self slip amphora, so far unidentified, but probably Early Roman.

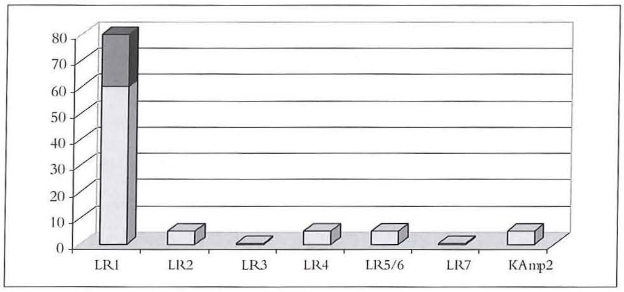
[5] All the sites mentioned in the article can be found on the map (fig. 1).

[6] Jacobsen forthcoming.

[7] Rautman 2003, 211-212, tables 5.5-6.

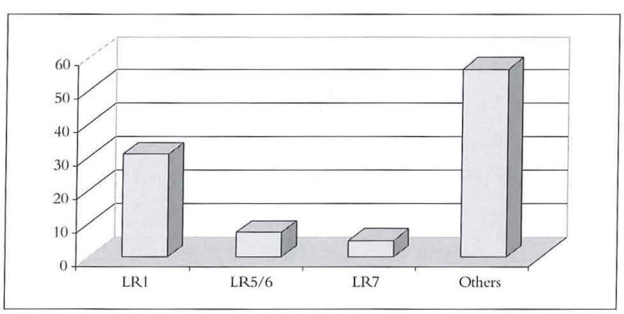
of the total are LR3 from the Aegean and LR7 from Egypt. At Kalavasos, the northern Syrian connection goes back to the fourth century AD when the so-called carrot-shaped KAmp2 amphora is present at less than 10%.[8]

Fig. 3 Kalavasos Kopetra.



Tentative quantification of the finds from the Canadian survey of the hinterland of Palaipaphos indicates that LR1 amphorae still dominate at 31%, while LR5/6 are present at 7.5% and LR4 at 5% (Fig. 4).[9] The amount of LR1 amphorae is very low compared with Panayia Ematousa and Kalavasos, but the published material presents only a sample of the material collected by the Palaipaphos survey. Of more exotic finds, one Late Roman fragment of North African origin has been identified.

Fig. 4 Palaipaphos.



Apart from the dodgy methodology, there is one major flaw in the scheme. LR1 amphorae were produced in both northern Syria and southern Cyprus. For the model to work, the proportion of LR1 amphorae from northern Syria should drop as we move west and *vice versa*. To get a clear picture of the distribution pattern, we would need to be able to distinguish between the amphorae from those areas by eye. There is some argument as to where LR1 amphorae were produced in Cyprus. Several places have been suggested,[10] but only two proper kiln sites have been identified: Paphos and Zygi-*Petrini*. More than one fabric has been identified at Panayia Ematousa, but no detailed description of the fabric of the LR1 amphorae produced at Paphos has yet been published.[11] All the amphorae found at Panayia Ematousa appear to be of the developed form and the rim diameter, averaging 10-11 cm, is larger than the diameter of the amphorae produced at Paphos, averaging 8-9 cm (Fig. 5). Some of the amphorae found at Panayia Ematousa correspond to the fabric of amphorae discovered in the earthquake collapse at Kourion, but these belong to an earlier form, from when the site of Panayia Ematousa still lay abandoned in the fourth century AD.[12] Some LR1 amphorae found at Zygi-*Petrini*, a small amphora kiln site, approximately 20 km from Panayia Ematousa, also have a large rim diameter, and the description of the fabric corresponds well with the most common fabric at Panayia Ematousa.[13] It is, however, a different fabric from the one used for the amphorae produced locally at Zygi-*Petrini*. The presence of LR1 amphorae of more than one fabric is common in Cyprus. At Kalavasos-*Kopetra* four different fabrics have been identified.[14]

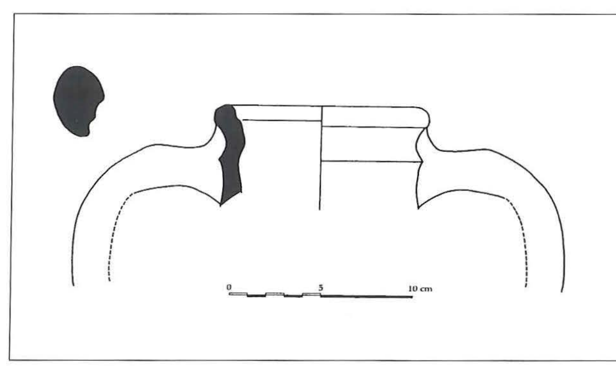


Fig. 5.

[8] Empereur & Picon 1989, 232, fig. 9-10.
[9] Lund 1993a, 129-35.
[10] Empereur & Picon 1989, 242; Williams 1987, 237.
[11] Demesticha 2000, 549-50.
[12] Williams 1987, 237.
[13] Manning *et al* 2000, 251.
[14] Rautman 2000, 321.

The finds from the Late Roman dump site at the Hellenistic theatre in the urban centre of Paphos cannot be quantified, but should not be ignored. The LR1 amphorae are predominant and here several fabrics have also been identified. The proportion of local amphorae compared with the imported material is again unknown. Other imports are, as we have come to expect, LR4, LR5-6, LR7 and other Egyptian amphorae, and they are all quite common. Considering the very close contact between Paphos and Egypt in the Hellenistic period, a higher percentage of Egyptian amphorae at Paphos would not be surprising, but this cannot be corroborated statistically.[15] A few exotic finds from Africa and the West issues a warning that imports into the urban centres represent a more complicated pattern than at the secondary sites. Based on the occurrence of Cypriot red slip wares and red tiles, Marcus Rautman has suggested that imports at Kalavasos came via Paphos,[16] but only very few Aegean LR3 amphorae of the Late Roman period have been identified there.[17]

The Solea valley in north central Cyprus was very prosperous in the Roman period.[18] According to the excavators, the town of Soloi flourished from the Severan period until the fourth century AD, and finds from the hinterland indicate that the prosperity continued into the Late Roman period. The main evidence for the prosperity at Soloi is a proper Roman portico as it is known from the Levant, a type of structure very rarely identified in Cyprus. Apart from the Late Roman basilica, very little archaeological evidence exists from Late Roman Soloi, but three LR1 amphorae found *in situ* in the basilica appear to be very similar to the Paphos production.[19] Unfortunately, further studies of Soloi are not possible at the moment due to the political situation in Cyprus.

Moving into the hinterland, the Skouriotissa mine must have been the main source of income to the town of Soloi, from where copper would have been shipped to the rest of the Roman Empire. Most of the ancient mine is now buried under the enormous twentieth-century spoil heap, but some important features are still to be explored. An impressive slagheap dominates the western side of the mining area, in total more than 300 m long and at places up to 18 m high. The slagheap is full of pottery, and the suggested date ranges from the late fourth to the early seventh century. The material is surprisingly homogeneous, and the frequency of Phocean Red Slip Ware form 3 at Skouriotissa suggests a date in the sixth century for much of the exposed part of the heap. The most common finds appear to be tiles and transport amphorae. LR1 amphorae are again predominant, but other types appear, and so far one LR4 fragment has been identified (Fig. 6).

The distribution of pottery indicates that a second Roman mining settlement, further inland at Xyliatos-*Mavrovouni*, culminated in the sixth century AD.[20] Although dominated by a small slagheap, the character of the settlement is not unlike the previously mentioned Kalavasos in southern Cyprus, only considerably smaller and probably less prosperous. The proximity of the slagheap suggests a smelting settlement, but it could have been combined with metal working and agricultural activities. Interestingly, only a few fragments of LR1 amphorae have been identified at Mavrovouni, and the more common types appear to be local. Two types of amphorae made of self-slip fabrics appear at Mavrovouni, both with twisted bases (Fig. 6). Several diagnostic fragments have been identified and, although morphologically different, both types appear to be rather heavy and thick-walled, compared with LR1 amphorae. The fabrics are closely related and the differences may be only a matter of sorting. The temper appears to be natural. Apart from some quartz, the dominant temper consists of round, black and reddish-brown inclusions with some light reflection on the surface, probably mineral. The difference between the texture of the wheel-turned body parts and the handmade bases and handles is considerable.

[15] According to John W. Hayes, who has published the pottery from the House of Dionysos and is very familiar with Paphos material, the proportion of Egyptian amphorae goes up in the seventh century.

[16] Rautman 2000, 322.

[17] Hayes 1991, pl. 25,1.

[18] Ginouves 1989.

[19] Tinh 1985, fig. 229-239.

[20] Graham, Jacobsen & Kassianidou forthcoming.

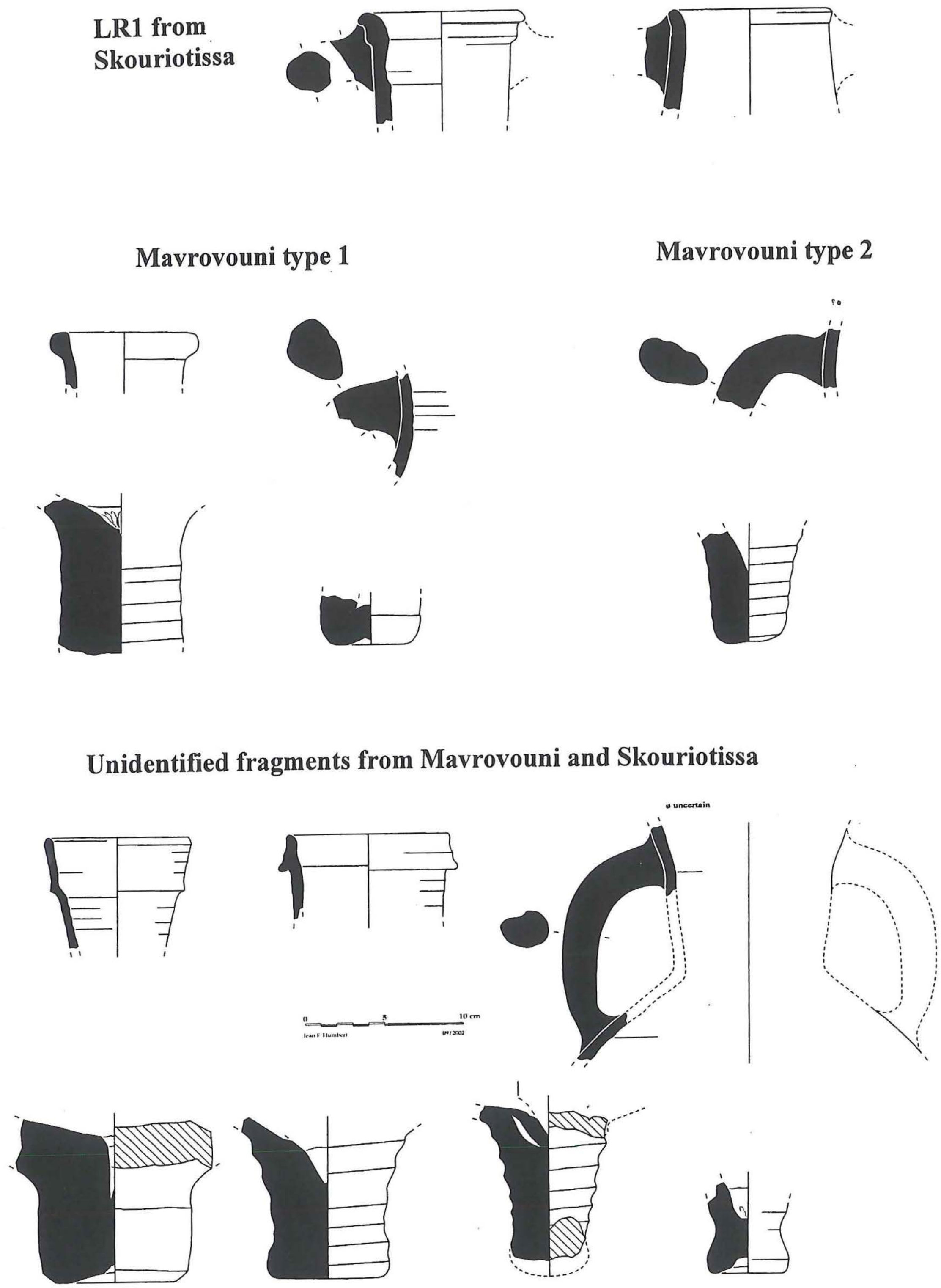

LR1 from
Skouriotissa
Mavrovouni type 1
Mavrovouni type 2
Unidentified fragments from Mavrovouni and Skouriotissa
ø uncertain
0 5 10 cm

Fig. 6.

Several other amphora fragments made of self-slip fabrics have been identified in the survey area, and a variety of twisted bases indicate that it is a common feature. Three similar bases have been identified at Dhiorios, another secondary Late Roman site in the Morphou bay, where LR1 amphorae, the so-called wheel-ridged amphorae, otherwise appear to dominate.[21] LR1 amphorae have also been found in the nearby Kornos Cave.[22] As far as I know, these types of amphorae do not appear in southern Cyprus at all, certainly not at Panayia Ematousa or Paphos, which, in my view, suggests that the economies of southern and northern Cyprus were independent from one another, just as they are today.

To return to the trade patterns: there is a problem distinguishing between Cypriote and North Syrian LR1 amphorae, but there is also another aspect. Whether imported or Cypriote, LR1 amphorae dominate all Late Roman sites in the South. In the North, LR1 amphorae dominate the important sites of the Solea valley, such as Skouriotissa and probably Soloi, but in the rural sites of the hinterland they appear to compete with other types of amphorae. Self-slip fabrics are very common in and around the Solea valley and I believe this to be a regional amphora type produced somewhere on the central north coast of Cyprus. The largest river in Cyprus runs through the Solea valley making it one of the most fertile areas on the island and one that must have produced considerable agricultural surplus besides the extraction of copper.

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21 Catling 1972, 71.

22 Catling & Dikigoropoulos 1970, pl. 29.

Amphorenstempel und die Gründung von Tanais[1]

Gerhard Jöhrens

Nach Erscheinen der revidierten rhodischen Stempelchronologie von Gérald Finkielsztejn[2] habe ich mich nochmals mit dem Gründungsdatum von Tanais beschäftigt.[3] Die frühesten *rhodischen* Stempel in Tanais weisen in die Jahre um 261 bzw. 260 v. Chr.: Ein Amphorenstempel der Kampagne 1999 aus dem Gebiet der Agora von Tanais trägt den Namen des Fabrikanten Sotas I mit einem Monogramm *My Omikron* in der zweiten Zeile.[4] Dieser Fabrikant ist auf intakten rhodischen Amphoren mit den Eponymen der Jahre 261 bzw. 260 v. Chr., Lysandros bzw. Epicharmos, verbunden.[5] Epicharmos ist auch in Tanais vertreten,[6] der Amphorenstempel gehört aber zu den wenigen Fragmenten, die ich nicht gesehen habe, da es sich um einen Fund des Jahres 1870 handelt, und die Funde dieser Untersuchung in Tanais sind im Historischen Museum von Moskau magaziniert. Für die Jahre *vor* 261 v. Chr. fehlt in Tanais bisher (nachdem in den Grabungen der letzten Jahre an mehreren Stellen der gewachsene Boden erreicht wurde) jegliches rhodisches Stempelmaterial; dies gilt auch für den Eponymen Polyaratos I aus dem Beginn der Periode I b. Die zwei ohne Abbildung beschriebenen Stempel aus Tanais in dem postum erschienenen Aufsatz von Шелов in der *Вестник Танаиса*[7] nennen den Homonym Polyaratos II, der bedeutend später, erst in die Mitte der Periode V zu datieren ist.[8] Durch einen Druckfehler in der *Вестник Танаиса* wurde von den zwei Stempeln – nach dem Text identische Abdrucke – einer dem frühen, der zweite dem späteren Beamten zugeschrieben. Für die Jahre *nach* 261/260 v. Chr. sind bisher im Emporion nur die Beamtennamen Hagemon[9] und Ainesidamos I belegt,[10] und erst ab 240 v. Chr. beginnt mit den Eponymen Sthenelas, Euphranoridas, Theudoros I, Damokrates I, Timokles I und Aretakles[11] eine kontinuierliche Reihe rhodischer Eponymen in diesem

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[1] Mein Dank gilt B. Böttger, S. Il' Jašenko und S. Naumenko, die mir die Bearbeitung der gestempelten Amphorenhenkel aus ihren Grabungen in Tanais anvertraut haben, ebenso auch J. Fornasier, der mich nach Übernahme der Grabungsleitung im Jahr 2000 um weitere Mitarbeit bat.

[2] Finkielsztejn 2001a; ich bereite eine ausführliche Besprechung dieser für die rhodische Stempelchronologie bedeutsamen Arbeit für die AM vor. – Die für das Gründungsdatum von Tanais entscheidende Datierung der Periode I b in die Jahre von ca. 270 bis ca. 246 v. Chr.: ebenda 188 Tab. 17.

[3] Ich hatte mehrmals Gelegenheit, über das Emporion Tanais vorzutragen: Auf dem 9. Internationalen Vani-Symposion, 17.-24. 09. 1999 („Zum Import nach Tanais anhand gestempelter Amphorenhenkel", s. Jöhrens 2002, 141-147), in der Zentrale des Deutschen Archäologischen Instituts in Berlin (3. 7. 2000, auf dem Colloquium „Kultur unterwegs" über „Das Emporion Tanais") sowie an den Abteilungen Madrid (23. 10. 2000 „Das Emporion Tanais. Gründungsdatum und 'Handelsbeziehungen' nach Ausweis der Amphorenstempel") und Athen (8. 2. 2001: „Strabo XI 2, 3 und rhodische Amphorenstempel. Zur Gründung von Tanais an der Maeotis"); s. auch Jöhrens 2001, 369-373.

[4] Jöhrens 2001, 370 Abb. 2, 264; 431 Nr. 264.

[5] S. jetzt Finkielsztejn 2001a, 49 Anm. 59; 77, 87, 93, 184 (mit der älteren Lit.).

[6] Шелов 1975, 51 Nr. 102.

[7] Шелов 1994, 19 Nr. 64. 65; vgl. Jöhrens 2001, 463. Zur Datierung des Eponymen Polyaratos I s. jetzt Finkielsztejn 2001a, 57. 188 Tab. 17 (ca. 269 v. Chr.).

[8] S. ebenda 134-135, 140, 157 Tab. 12.1; 171, 195 Tab. 21 (ca. 125 v. Chr.); Palaczyk 2001, 325-326. 328 gibt mit „ca. 133 v. Chr." ein etwas früheres Datum.

[9] Jöhrens 2001, 467 Nr. 216 (Korrektur zu Шелов 1994, 33 Nr. 216); Datierung innerhalb der Periode I b nach Finkielsztejn 2001a, 188 Tab. 17: zwischen 259 und 249 v. Chr.

[10] Jöhrens 2001, 381 Nr. 13. Finkielsztejn 2001a, 188 Tab. 17: ca. 245 v. Chr., Beginn Periode I c.

[11] Sthenelas: Grabung 2000 in Fläche VI. Rundstempel des Fabrikanten Axios; zum Stempeltyp s. Finkielsztejn 2001a, 63 (mit Nachweisen). – Euphranoridas: Jöhrens 2001, 439 Nr. 307. – Theudoros I: ebenda p. 465 (Korrektur zu Шелов 1994, 28 Nr. 150). – Damokrates I: Jöhrens 2001, 389 Nr. 51. – Timokles I: ebenda p. 460 (Korrektur zu Шелов 1975, 120 Nr. 465). 468 (Korrektur zu Шелов 1994, 40 Nr. 269). – Aretakles: Grabung 2001 in Fläche XIX. Zum Stempeltyp s. Jöhrens 1999, 11 Nr. 1 (Athen, NM Inv. N 70 EM 4). – Zur Datierung dieser sechs Eponymen in die Jahre von ca. 240 bis 235 v. Chr. s. Finkielsztejn 2001a, 188 Tab. 17. – Zu den hier im Text genannten Grabungsflächen VI. XIX und XX im Stadtgebiet von Tanais vgl. Arsen'eva & Böttger 1997, 485 mit Abb. 39.

Handelsplatz.

Wie verhält sich das Material an gestempelten Amphorenhenkeln anderer Provenienzen in Tanais zu diesen von den rhodischen Stempeln her gewonnenen Daten?

Nicht zu berücksichtigen, da sicher aus dem benachbarten Elizavetovka nach Tanais ‚verschleppt', sind in diesem Zusammenhang (für Tanais zu) ‚frühe' Objekte wie der thasische Stempel des Leukon,[12] vereinzelte frühe Amphorenstempel aus Chersones, Herakleia und unbestimmter Herkunft[13] sowie sinopische Stempel der Astynomen Pythokles, Demetrios 1 und Kallisthenes 1 Nossou.[14] Bevor ich auf diese drei Astynomen eingehe, will ich betonen, daß ich in der Datierung der Stempel aus Sinope dem Kollegen N. Conovici folge,[15] dessen – im Gegensatz zu Н.Ф. Федосеев[16] – tiefere Chronologie mehrmals in Tanais aufgrund von Vergesellschaftungen sinopischer und rhodischer Stempel bestätigt werden konnte. Als Beispiel sei der Astynom Herakleides 3 Mikriou angeführt; er wird von Conovici in die Jahre zwischen etwa 235 und 229 v. Chr. datiert, während er nach den Ergebnissen von Федосеев ca. 253 v. Chr. anzusetzen wäre.[17] In der Grabung 1999 (Fläche VI, Straße bei Haus 2) kam bei –2,85 m ein Stempel dieses Astynomen zu tage; wenig tiefer, in der Nutzungsschicht unter dem Straßenpflaster vor dem anstehenden Boden, lag bei –3,20 m ein Stempel des rhodischen Fabrikanten Kreon, ohne Monatsangabe, aus dem Ende der Periode I c, d. h. aus den Jahren von ca. 244 bis 235 v. Chr. Auch in den Fällen, in denen Conovici und Федосеев in der Datierung nicht so extrem auseinanderliegen, scheint sich eher die Datierung von Conovici zu bestätigen; dies gilt etwa für Anthesterios Noumeniou,[18] einen Astynom aus dem ersten Drittel der Gruppe Vc, nach Conovici aus den Jahren zwischen 242 und 236 v. Chr.[19] Der Stempel mit seinem Namen war in Tanais vergesellschaftet mit einem Stempel des Beamten Euphranoridas,[20] der von Finkielsztejn jetzt ca. 239 v. Chr. datiert wird.[21] Zurück zu den soeben genannten drei Astynomen. Für die zwei in Tanais gefundenen Stempel des Astynomen Pythokles habe ich keine weiterführenden Angaben: Ein Exemplar stammt aus den Funden von 1853, das zweite wurde von S. Il' Jašenko im Magazin des Museums Tanais unter den alten Beständen gefunden ohne Angaben zum Fundort oder Funddatum; beide sind sicher nach Tanais ‚verschleppte' Stücke. Der Stempel des Astynomen Demetrios wurde 1999 in der Fläche VI gefunden in der Schicht vor dem anstehenden Boden; aus dieser Schicht stammt auch einer der wenigen Stempel aus Chersones, die in Tanais zutage kamen, genannt ist der Astynom Matris. Auch diese beiden Stücke sind wohl ‚Hinterlassenschaften' aus Elizavetovka. Der Stempel, der den Astynomen Kallisthenes 1 Nossou nennt, wurde ebenfalls 1999 (Fläche XXIII) gefunden; er ist suspekt, denn aus der Fundstelle in der Pflasterung kamen ansonsten nur rhodische Stem-

[12] Streufund aus dem Jahr 1988; Шелов 1994, 39-40 Nr. 264; Jöhrens 2001, 468. Datierung des Beamten Nymphon nach Garlan 1999a, 238: Gruppe F 2, zwischen 350 und 345 v. Chr.

[13] Jöhrens 2001, 368 mit Anm. 5; 456-457 Nr. 405. 406 (zwei frühe Stempel aus Chersones); 457 Nr. 407 (der einzige bisher in Tanais gefundene Stempel aus Herakleia); 458 Nr. 412 (Stempel unbekannter Herkunft; nach dem Kontext im Kerameikos von Athen spätestens aus dem Anfang des 3. Jhs. v. Chr.).

[14] Pythokles: Шелов 1975, 145 Nr. 575; Jöhrens 2001, 453 Nr. 391. Zur Datierung (Gruppe IIId) s. Conovici 1998, 35-36. 38 Nr. 70 (ca. 282/81 v. Chr.); Федосеев 1998, 258 (291 v. Chr.). – Demetrios 1: Jöhrens 2001, 449 Nr. 367. Zur Datierung (Gruppe IV) s. Conovici 1998, 39 Nr. 75 (ca. 276 v. Chr.); Федосеев 1998, 258 (284 v. Chr.; früher datierte er den Astynomen in die Jahre um 296 v. Chr., s. Marčenko & Žitnikov & Kopylov 2000, 65). – Kallisthenes 1 Nossou: Jöhrens 2001, 455 Nr. 398. Zur Datierung (Gruppe IV) s. Conovici 1998, 39 Nr. 82 (ca. 269 v. Chr.); Федосеев 1998, 258 (278 v. Chr.).

[15] S. Conovici 1998, 21-51 (mit dem Beginn der Stempelung ca. 355/350 v. Chr.).

[16] Н.Ф. Федосеев ließ die erste Gruppe der sinopischen Stempel bereits um 365 v. Chr. beginnen, s. etwa Федосеев 1992, 159. 163. Jetzt datiert er niedriger, s. Федосеев 1998, 258-259. Seine ‚hohe' Datierung z. B. noch in Marčenko & Žitnikov & Kopylov 2000, 65; s. aber ebenda 261 den Hinweis auf die „neuesten und möglicherweise etwas niedrigeren Datierungen der Amphorenstempel".

[17] Conovici 1998, 44. 49; Федосеев 1998, 259.

[18] Jöhrens 2001, 371 Abb. 3, 364; 448 Nr. 364.

[19] Conovici 1998, 43. 48 Nr. 109. Федосеев datiert jetzt (Федосеев 1998, 259) ca. 244 v. Chr.

[20] Jöhrens 2001, 439 Nr. 307 (vgl. oben mit Anm. 11).

[21] Finkielsztejn 2001a, 261. – Auch die (im Gegensatz zu Федосеев 1998, 259: ca. 261 v. Chr.) tiefere Datierung des Astynomen Pasichares 2 Demetriou durch Conovici 1998, 43. 48 Nr. 113 an den Beginn der Gruppe Vc, zwischen ca. 242 und 236 v. Chr., findet in Tanais eine Stütze, da aus dieser Schicht auch rhodische Stempel der Eponymen Daemon und Kallikratidas I stammen (s. Jöhrens 2001, 453 zu Nr. 388), nach der revidierten Chronologie von Finkielsztejn 2001a, 191 Tab. 18 ca. 228 bzw. 224 v. Chr.

Herkunft	Шелов 1975	Шелов 1994	*EurAnt* 2001	Grabungen 2000-2002	**Total**
Rhodos	530	244	339	82	**1195**
Sinope	32	9	43	24	**108**
Kos	14	5	9	1	**29**
Knidos	12	3	11	2	**28**
Chersones	6	1	2		**9**
Thasos		2			**2**
Herakleia			1		**1**
Chios			1(?)		**1**
Unbestimmt	11	5	5	7	**28**
Total	**605**	**269**	**411**	**116**	**1401**

Tabelle 1.

pel der Perioden IIIc (Eponym Archidamos II, ca. 180/178 v. Chr.) und IV (Eponym Gorgon, ca. 154/153 v. Chr.). Wie aber steht es mit den drei Astynomen der Gruppe IV, Kratistarchos Menonos, Aischines 4 Iphios und Hekataios 2 Lamachou, die sowohl auf Amphorenstempeln aus Elizavetovka als auch aus Tanais genannt sind?[22] Können sie als Zeugen eines – wenn auch nur kurzen – zeitlichen Nebeneinanders der beiden Emporia herangezogen werden?[23] Ich meine, nein. Dagegen spricht die Tatsache, daß Elizavetovka plötzlich[24] zerstört wurde, nach der jüngst veröffentlichten Studie „einem feindlichen Überraschungsangriff zum Opfer gefallen ist".[25] Der letzte auf sinopischen Stempeln genannte Eponym in Elizavetovka ist Eucharistos 2 Demetriou, etwa 261 v. Chr. zu datieren;[26] und er ist in diesem Emporion mit mehr als 20 Exemplaren belegt. Auch die drei sinopischen Astynomen der Jahre 266, 264 und 263 v. Chr. (Kratistarchos Menonos, Aischines 4 Iphios und Hekataios 2 Lamachou) sind in großen Stückzahlen in Elizavetovka vertreten (insgesamt 54 Exemplare), aber nur mit je einem Fragment in Tanais. Von dem bereits erwähnten Stempeltyp des Fabrikanten Leukon unter dem thasischen Beamten Nymphon (s. oben mit Anm. 12) sind bisher 40 Exemplare bekanntgeworden; allein 26 wurden in Elizavetovka gefunden.[27] Meiner Meinung nach sind all diese Stempel ebenfalls nach Tanais verschleppt worden, d. h. es handelt sich um Hinterlassenschaften aus Elizavetovka. Schließlich kamen bisher in den Untersuchungen in Tanais sinopische Stempel

[22] Kratistarchos Menonos: Врашинский 1980 Nr. 629. 630 (Elizavetovka). Шелов 1975, 142 Nr. 564 (Tanais). Conovici 1998, 39 Nr. 85 (ca. 266 v. Chr.); Федосеев 1998, 258 (277 v. Chr.; früher um 287 v. Chr. datiert, s. Marčenko & Žitnikov & Kopylov 2000, 65). – Aischines 4 Iphios: Врашинский 1980 Nr. 558 (Elizavetovka). Шелов 1994, 36 Nr. 253 (Tanais). Conovici 1998, 39 Nr. 87 (ca. 264 v. Chr.); Федосеев 1998, 258 (271 v. Chr.). – Hekataios 2 Lamachou: Врашинский 1980 Nr. 603 + 709 (Elizavetovka). Шелов 1975, 140 Nr. 558 (Tanais). Conovici 1998, 39 Nr. 88 (ca. 263 v. Chr.); Федосеев 1998, 258 (274 v. Chr.; früher um 284 v. Chr. datiert, s. Marčenko & Žitnikov & Kopylov 2000, 65).

[23] Zur gleichzeitigen Existenz von Elizavetovka und Tanais s. Brašinskij & Marčenko 1984, 21-22 („höchstens einige Jahrzehnte"); vgl. ferner Marčenko & Žitnikov & Kopylov 2000, 59. 67. 261 („... eine gewisse, offenbar äußerst kurze Periode gemeinsamer Existenz der bosporanischen Kolonie auf der ‚Akropolis' von Elizavetovka und des frühen Tanais").

[24] Zum plötzlichen und vollständigen Untergang s. Marčenko & Žitnikov & Kopylov 2000, 63. 67.

[25] Marčenko & Žitnikov & Kopylov 2000, 259 (aufgrund der „zahlreichen Brandspuren, Menschenknochen und zerbrochenen Keramik in allen Baukomplexen der Ansiedlung").

[26] Врашинский 1980 Nr. 614-617; zur Datierung an das Ende der Gruppe IV s. Conovici 1998, 39.

[27] Garlan 1999a, 247 zu Nr. 743.

aus den Jahren vor 259 v. Chr. nie in eng datierbaren Fundkomplexen zutage, sie stammen vielmehr stets aus Schichten, die Stempel aus verschiedenen Perioden enthielten, vergleichbar dem Befund in der Getreidegrube 10 (Grabung Д.Б. Шелов 1961) mit sinopischen Stempeln, die von Hekataios 2 Lamachou (ca. 263 v. Chr.; s. oben mit Anm. 22) über Leon Leontiskou (ca. 258 v. Chr.; s. unten mit Anm. 34) bis zu Hikesios 3 Bakchiou (ca. 247 v. Chr.; s. unten mit Anm. 37) reichen.[28] Vergleichbar ist ein Befund aus der Kampagne 1997.[29] Hier trafen die Ausgräber im Gebiet der Agora auf eine Schicht mit Amphorenstempeln aus Sinope und Rhodos; genannt sind u. a. die Astynomen Pythochrestos Apollonidou (ca. 252 /250 v. Chr.; s. unten mit Anm. 37) und Zenis Apollodorou (ca. 245 v. Chr.; s. unten mit Anm. 41) sowie der rhodische Eponym Ainesidamos I (ca. 245 v. Chr.);[30] darüber hinaus notierten sie ferner Füße von herakleischen und Solocha I-Amphoren sowie Fragmente von Schwarz- und Rotfirnisgefäßen und Tischgeschirr vom Ende des 4. bis zur 1. Hälfte des 3. Jhs. v. Chr., d. h. „relativ viel für Tanais frühes Material".[31]

Bei der Analyse der in Tanais gefundenen sinopischen Stempel ist aber noch ein anderes Faktum von Bedeutung: nämlich, daß in einzelnen Kampagnen der letzten Jahre der Anteil der Stempel aus Sinope im Verhältnis zu denen aus Rhodos gegenüber den früheren Ergebnissen erheblich angestiegen ist.

Die Zahlen in der Tabelle 1, die sich nicht nur auf das publizierte Material aus den in Tanais durchgeführten Untersuchungen und Grabungen[32] stützen, sondern auch die unpublizierten Stempel der Kampagnen 2000 bis 2002 in der Fläche VI[33] sowie der Grabungen 2001 und 2002 im Areal XIX berücksichtigen, lassen dies nicht so klar erkennen, wie es erst aus der Analyse einzelner Kampagnen deutlich wird. Denn auf den ersten Blick überwiegen nach wie vor die Stempel aus Rhodos, und daneben sind nur noch diejenigen aus Sinope für das frühe, also das hellenistische Tanais von Bedeutung. Wenn man aber nur das Verhältnis der Stempel aus Rhodos und Sinope betrachtet, so fällt in den Jahren ab 2000 ein Anstieg auf:

Was die Fläche VI betrifft, so ist allein die Kampagne 2000 in der Straße bei Haus 2 (Fortsetzung der Arbeiten des Jahres 1999; vgl. o. mit Anm. 17) mit 56 Stempeln von Bedeutung; denn 2001 und 2002 kamen im Areal VI an anderer Stelle, im Turm 3, nur insgesamt zehn gestempelte Amphorenfragmente zutage, alle rhodischer Provenienz, überwiegend aus der Periode III, der Zeit des Pergamon-Komplexes. Von den Stempeln der Kampagne 2000 in VI sind 39 rhodischer Herkunft, der früheste nennt den Eponymen Sthenelas (ca. 240 v. Chr., vgl. oben Anm. 11). Sinope ist mit neun Fragmenten vertreten, von denen die frühesten vier die Astynomen Leon Leontiskou (Ende Gruppe IV), Phainippos Pasicharou (Gruppe Va), Choregion Leomedontos und Posideios 2 Thearionos (beide Gruppe Vb) nennen, das sind die Jahre von etwa 258 bis 243 v. Chr.[34] Vergleichbar sind Befunde in der Fläche XIX: Aus der Kampagne 2000 kommen 24 Stempel (16 rhodische, 7 sinopische, 1 koischer); der früheste rhodische nennt den Eponymen Pausanias I aus der Periode II a (ca. 225 v. Chr.)[35], die frühesten sinopischen dagegen drei Astynomen der Gruppe Vb, Apollodoros 3 Dionysiou (zwei Expl.),[36] Pythochrestos Apollonidou und Hikesios 3 Bakchiou,[37] das sind die Jahre von etwa 252/250 bis 247 v. Chr.[38] In der Grabung 2001 wurden im Areal XIX insgesamt 20 Stempel gefunden (11 rhodische, 7 sinopische und 2 knidische); die frühesten rhodischen nennen den Beamten Aretakles (ca.

[28] Шелов 1975, 140 Nr. 558; 142 Nr. 567; 141 Nr. 562; s. auch ebenda 139 zur Datierung des Materials aus der Getreidegrube in das 3. wie auch in das 2.-1. Jh. v. Chr.

[29] S. Arsen'eva & Böttger 1998, 384-385 mit Abb. 4.

[30] Jöhrens 2001, 454 Nr. 392; 449 Nr. 371; 381 Nr. 13.

[31] Arsen'eva & Böttger 1998, 384.

[32] Die Funde an gestempelten Amphorenhenkeln bis Grabung 1991 wurden publiziert von Шелов 1975 und Шелов 1994; die der neuen Grabungen durch Verf. (unter Mitarbeit von S. Il' Jašenko) 2001. Zu den ebenda 368 Tab. 1 noch nicht berücksichtigten Amphorenstempeln aus der Grabung 2000 in Fläche XIX s. Arsen'eva *et al.* 2001, 330-336.

[33] Ich danke S. Naumenko herzlichst, daß sie mir diese Funde an Amphorenstempeln aus der Fläche VI in Form von Graphit-Abreibungen und Zeichnungen zugänglich gemacht hat.

[34] Conovici 1998, 39 Nr. 93; 48 Nr. 98. 102. 107.

[35] Arsen'eva *et al.* 2001, 332-333 Abb. 3, N 2751; zur Datierung s. Finkielsztejn 2001a, 191 Tab. 18.

[36] Arsen'eva *et al.* 2001, 332 Abb. 3, N 2752; 336.

[37] Ebenda 332 Abb. 3, N 2723; 334.

[38] Conovici 1998, 48 Nr. 99. 101. 104.

235 v. Chr., s. o. Anm. 11) sowie den Fabrikanten Theudoros, der fast in der gesamten Periode II (Beginn etwa 234 v. Chr.) aktiv war.[39] Dagegen werden auf den sinopischen Stempeln die Astynomen Zenis Apollodorou (Gruppe Vb) sowie Eucharistos 3 Kallisthenou und Pasichares 2 Demetriou (Gruppe Vc)[40] genannt, die in die Jahre zwischen 245 und 236 v. Chr. zu datieren sind.[41] Die Untersuchungen in 2002 an anderer Stelle in Fläche XIX lieferten neben sechs rhodischen Stempeln (schlecht erhalten und bisher ungelesen, aber alle mit einer Monatsangabe, d. h. keiner dieser Stempel gehört in die Periode I) einen weiteren nach Tanais ‚verschleppten' Stempel (vgl. oben mit Anm. 12-14), genannt ist der Fabrikant Sinopion.

Die 24 sinopischen Stempel aus den Grabungen 2000-2002 (s. Tab.1) machen fast 21% des Gesamtbefundes für diese drei Kampagnen aus bzw. sogar fast 30% im Verhältnis Rhodos zu Sinope. Im Gesamtverhältnis zu Rhodos lag Sinope bisher zwischen etwa 3,5 bis maximal ca. 12,5%. Was ist die Ursache für diese Verschiebung? Der Anstieg auf etwa 30% erklärt sich durch eine der Zielsetzungen bei der Neuaufnahme der Grabungen in Tanais, die Konzentration auf das hellenistische Tanais: Nach den ersten Untersuchungen bereits 1853 in Tanais durch П.М. Леонтьев, weiteren Forschungen etwa 1870 und den jährlichen Kampagnen der Unter-Don-Expedition von 1955 bis 1991 war unser Wissen von dem hellenistischen Tanais sehr gering. Deshalb ist auch einer der Schwerpunkte der neuen Grabungen in Tanais seit 1993, den deutsch-russischen Feldforschungen in der Fläche XIX, dem Gebiet der hellenistischen und römischen Agora,[42] bzw. seit 1994, der Neuaufnahme der Grabungen der Unter-Don-Expedition u. a. im Gebiet des hellenistischen und römischen Temenos (Fläche XX), die Erforschung des frühen, des hellenistischen Tanais.[43] Als ein Beispiel für die bisherigen Ergebnisse sei der hellenistische Keller unter Raum 3 des römischen Baus 3 angeführt.[44] Dieser Keller – wie auch weitere Gebäudekomplexe in diesem Areal[45] – geben eine Vorstellung von der Neugestaltung des Agora-Gebietes, denn die Ergebnisse der Ausgräber machen deutlich, daß dieses Gebiet bewußt aufgegeben wurde, um eine Freifläche für die Agora zu gewinnen.[46] Die Nutzungsphase des Kellers vor seiner Aufgabe wird durch zwei sinopische Stempel umrissen: Genannt sind auf den Stempeln die Astynomen Hikesios 2 Hestiaiou (einer der letzten Astynomen der Gruppe IV, ca. 259 v. Chr.),[47] bzw. Phemios 3 Theupeithou, Astynom der Gruppe Vc (ca. 229 v. Chr.).[48] Die Jahre von 259 bis 229 v. Chr. sind nun zugleich diejenigen Jahre, die fast durchgehend durch Astynomennamen auf sinopischen Stempeln in Tanais belegt sind.[49] Mehr als 70% der in Tanais gefundenen (und gelesenen) Stempel aus Sinope gehören in diesen Zeitraum; nach 229 v. Chr. gelangten dagegen gestempelte Amphoren aus Sinope nach dem bisherigen Befund nicht mehr so kontinuierlich nach Tanais. Aus dieser Tatsache schließe ich mit Blick auf den oben angeführten, abweichenden Befund aus der Analyse der rhodischen Stempel (Kontinuität erst ab etwa 240 v. Chr.), daß in den ersten zwei Jahrzehnten des Emporions, den Jahren von etwa 261/260 bis um 240 v. Chr., eine stärkere Ausrichtung nach Sinope bestand und daß erst mit dem allmählichen Übergang des Emporions Tanais zur Polis Tanais die Lieferungen aus Rhodos stärker und dann sehr bald nahezu monopolartig wurden.

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39 S. jetzt ausführlich Finkielsztejn 2001a, 95-100.

40 Vgl. oben mit Anm. 21.

41 Conovici 1998, 48 Nr. 106, 111, 113.

42 Über die Neuaufnahme der Grabungen in Tanais 1993 als gemeinsame deutsch-russische Feldforschungen informiert Böttger 1995a, 99-118.

43 Ab Band 1, 1995 der Eurasia Antiqua berichten die Ausgräber in den jährlichen Vorberichten über die Ergebnisse zu der hellenistischen Periode von Tanais.

44 S. Arsen'eva & Böttger 1998, 384-387; Arsen'eva & Böttger 1999, 412-418. Zur Lage des Kellers s. Abb. 1 der Beil. „Tanais XIX 1999. Architekturgesamtplan" in Arsen'eva & Böttger 2000.

45 Vgl. Arsen'eva *et al.* 2001, 333-334 (unterkellerter hellenistischer Gebäudekomplex in Quadrat 94/9, Bau 4, Raum 1).

46 Zu der „Neuplanung des Areals" s. Arsen'eva & Böttger 1999, 417-418.

47 Arsen'eva & Böttger 1999, 416 Abb. 9, 4; Jöhrens 2001, 371 Abb. 3, 375; 450 Nr. 375. – Zur Datierung s. Conovici 1998, 39-40 Nr. 92. Федосеев 1998, 258: 270 v. Chr.

48 Arsen'eva & Böttger 1999, 416 Abb. 9, 3; Jöhrens 2001, 454 Nr. 394. – Zur Datierung s. Conovici 1998, 44-45. 49 Nr. 122. Федосеев 1998, 259: 243 v. Chr.

49 Für diese 31 Jahre fehlen bisher auf Stempeln in Tanais nur die fünf Astynomen Metrodoros 1 Aristagorou, Iobakchos Molpagorou, Dionysios 5 Apemantou, Hekataios 3 Posideiou und Heronymos 2 Poseidoniou.

Ainos: An Unknown Amphora Production Centre in the Evros Delta

Chrysa Karadima

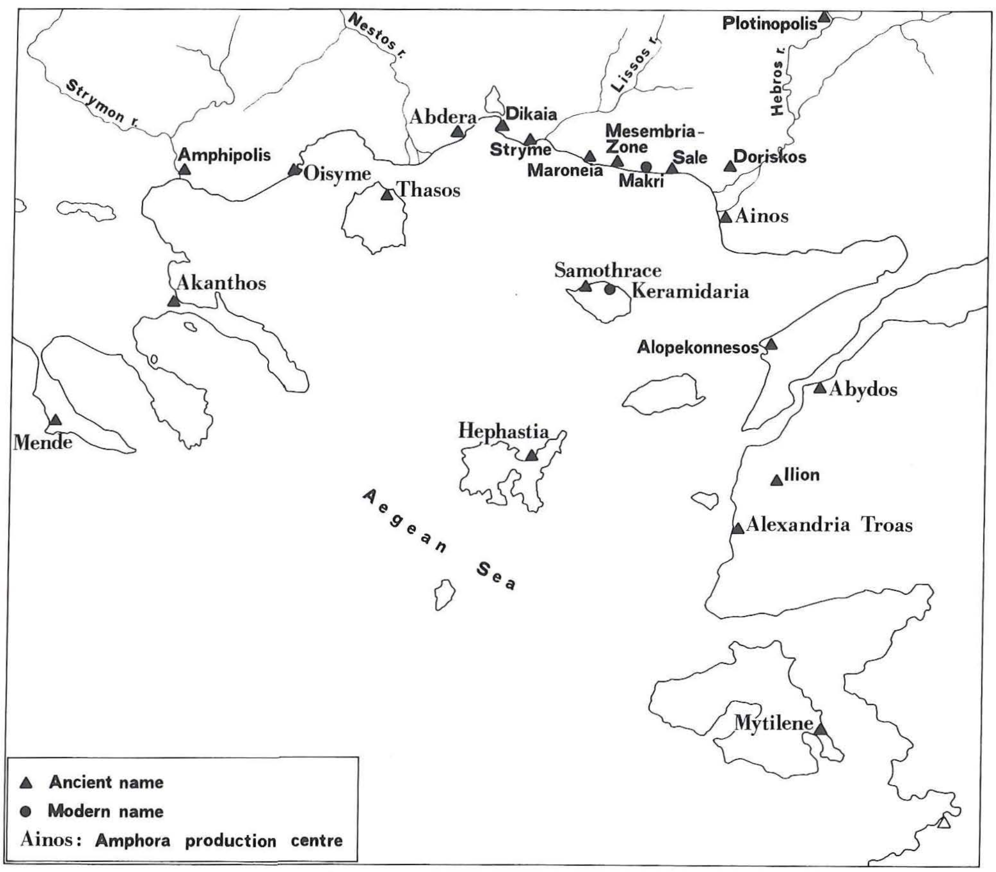

Fig. 1. Amphora production centres in the North Aegean.

Ainos, the modern Turkish *Enez*, was an Aeolic colony on the eastern side of the Evros estuary,[1] originally colonised by Alopekonnesos and subsequently by Mytilene and Kyme in the second half of the seventh century BC.[2]

References in ancient literary sources to the known centres of wine production in the North Aegean – Thasos, Mende, Akanthos, Maroneia, Oisyme (Fig. 1) – do not include Ainos or other smaller centres in the region, evidently, as in the case of Samothrace, because of the minor importance of their production. Nevertheless we have indirect information that there were vineyards at Ainos. Pliny tells us that the Hebros changed its course and flowed closer to Ainos, with the result that the vineyards froze.[3]

In the last ten years the study of the amphora material at the Komotini Museum from earlier and more recent surface surveys[4] and excavations by

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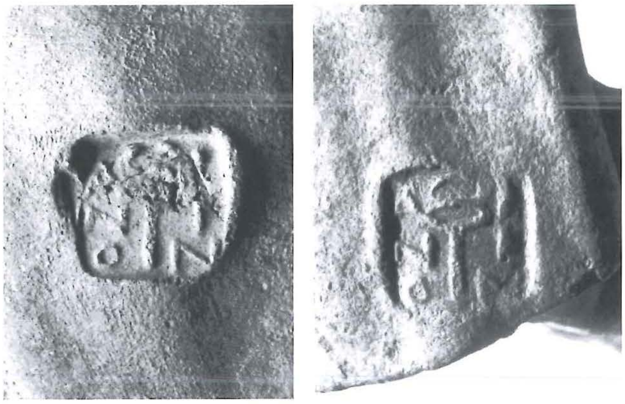
[1] Herodotus 7.58: ...Αἶνον τε Πόλιν Αἰολίδα καὶ Στεντορίδα λίμνην παρεξιών ... ("... Aenos, an Aeolian city, and likewise Lake Stentoris ...").

[2] May 1950, 1-7; Loukopoulou 1989, 62-63.

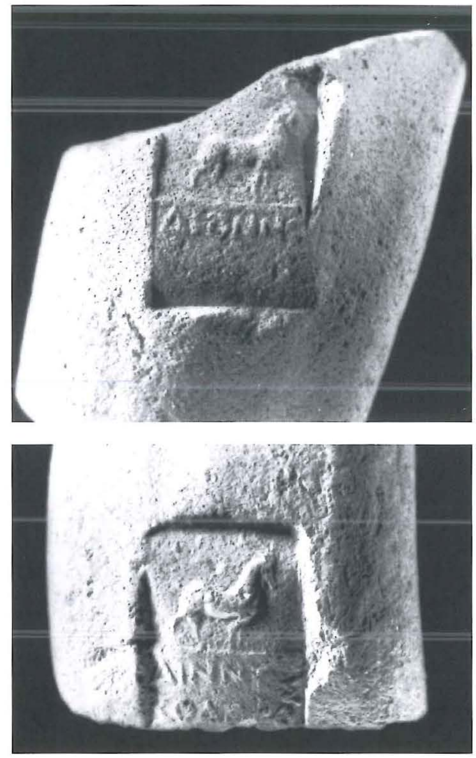
[3] Pliny15.3.30: "... vites aduri, quod non antea, ... Aenos sensit admoto Hebro, ..."; Isaac 1986, 143.



Figs. 2-3. Stamped amphora handles of Ainos (cat. of stamps n.s. 1, 2).

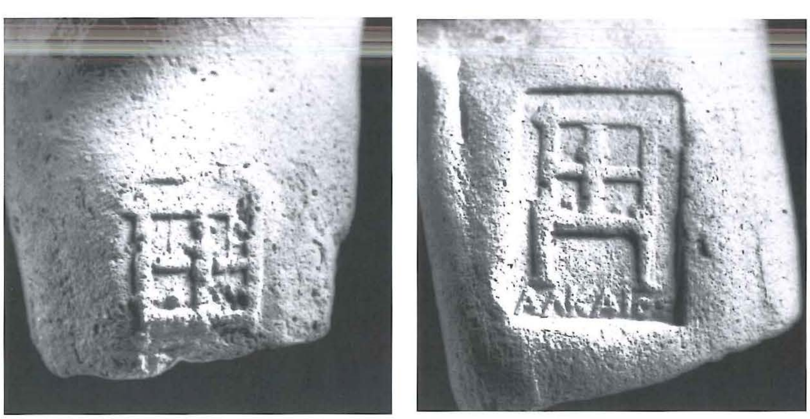
Figs. 4-5. Bronze coins of Ainos (cat. of coins n.s. 1-2).

Fig. 6. Stamped amphora handle of Ainos (cat. of stamps n. 3).



Figs. 7-8. Stamped amphora handles of Ainos (cat. of stamps n.s. 4, 5).

Fig. 9. Silver coin of Ainos (cat. of coins n. 3).



Figs. 10-11. Stamped amphora handles of Ainos (cat. of stamps n.s. 6, 7).

Figs. 12-13. Bronze coin of Ainos (cat. of coins n. 4a-b).

the 19th Ephorate of Prehistoric and Classical Antiquities of Thrace,[5] has led to a link between this material (about 100 stamped handles and numerous diagnostic amphora sherds) and the local production of Ainos, the important Greek colony in Thrace. Its position at the entrance to the Evros Delta and its safe harbour ensured Ainos an important role in the control of the transit trade to the Thracian hinterland and the Black Sea via the Evros, which was navigable.[6]

Originally three stamped amphora handles were found bearing the device of a caduceus and the inscription Αἴ/νι/ον (Figs. 2-3); the stamps follow the reverse type of the coins of the city (Figs. 4-5) and confirm the existence of amphora workshops at Ainos. A fourth handle with a caduceus bearing the name Κλ/ευ/μέ/νο/υς is classified in the same group (Fig. 6). Subsequently other types of stamps were recognised, which reproduce the city's numismatic types in the Classical and Hellenistic periods with remarkable closeness. They comprise a series of stamps with a goat device (Figs. 7-8), which constituted the fixed reverse type from the fifth to the end of the third century BC (Fig. 9), and another interesting series with a xoanon of Hermes on a throne (Figs. 10-11). May states it was a "cult statue of Hermes standing on a high backed throne, maybe the Ἑρμῆς Περφεραῖος", already known as a device on the fifth-century silver tetradrachms.[7] On the silver drachms of the fourth century BC, the xoanon appears on the reverse type in profile, while on a rare bronze coin (Figs. 12-13),[8] it is full-faced, as on the silver tetradrachms of Lysimachos,[9] where it appears as a symbol. A similar stamped handle from the Athenian Agora bearing the name [Δι]ότιμο[ς] was originally published by the Bons,[10] and attributed with reserve to Ainos, but subsequently linked to the *snares* of the Dioscuri.[11] The series of stamps presented leaves no room for other interpretations than that of the cult statue on a throne.

Familiarity with the yellow to pink ochre clay containing specks of mica, and the repetition of the devices and names on the stamps, appearing in exceptional variety of shapes (rectangular, triangular, ivy leaf shaped, circular) and high quality echoing that of the coins of the city, led to the attribution to Ainos of other types of stamps. They usually bear devices relating to wine and the cult of Dionysos and frequently appear as secondary symbols on the coins of the city: cluster of grapes, ivy wreath, caduceus (Figs. 14-18) and amphora (Figs. 19-21). The latter contributed to the recognition of the type of the amphora of Ainos, which had already been depicted on its coins, and to the attribution with relative accuracy of the surface finds to the local production (Figs. 22-23). Other devices appear, like the thyrsos, cornucopia (Figs. 24-25), altar, satyr mask, anchor, insect, kantharos and dolphin, and are accompanied by different names, usually in nominative: Ἀθανῆς, Ἀλκαῖος, Δίοννος, Διότιμος, Δίφιλος, Ματρόδωρος, Παρμένων; or in genitive: Ἀλκαίω, Ἡρακλείτω, Ἡρακλείδα (Figs. 26-28). The Aeolic origin of the names and general dropping of the masculine in –α and –ω,[12] are indications of an early date for the material, which for the present is not attested elsewhere. The material also includes monograms or abbreviated names (Figs. 29-30), as well as illegible devices without inscriptions. Lastly, we will mention one stamp from Ainos itself and Ilion,[13] which bears the name Πολτύ/δωρος and is connected with the mythical king Poltys and the earlier name of Ainos, which, according to Strabo, was Πολτυοβρία.[14]

The greater part of the presented material came from ancient Doriskos, on the western side of the

[4] Καραδήμα 2000, 666-67.
[5] Καλλιντζή 1997, 900, 913.
[6] Casson 1926, 255-59.
[7] May 1950, 272-73.
[8] Strack 1912, 188 Taf. V, 10;
[9] Герасимов 1939, 277; Müller 1858, Taf. IV: 114-23.
[10] Bon & Bon 1957, 492: 2143.
[11] Salviat 1964, 491-95.
[12] Blümel 1982, 233-39.
[13] Kaygusuz & Erzen 1986, 10, Taf. 2: nr.16, from Ilion 44 "A 7/8/36 Trench 4DR".
[14] Strabo 7.6.1.319.

Evros estuary, and from Makri (a small *emporium* in the Peraia of Samothrace), Mesembria-Zone and Maroneia (Figs. 31-33). The homogeneity of the material in the composition of the clay has also been confirmed by a series of chemical analyses (16 samples of stamped material and 12 of common pottery from Doriskos), which in spite of some differences and the small range of the samples indicate its common provenance in the Evros valley).[15]

From the very few published examples, it appears that the Ainos amphorae had a limited distribution in the northeastern Aegean (Amphipolis, Thasos, Abdera, Maroneia, Mesembria-Zone, Doriskos, Plotinopolis, Ilion),[16] the Black Sea (Odessos, Bizone, Tyras, Mirmekion, Pantikapaion) and sporadically Athens, Corinth and Delos.

The exact date of the material is not yet certain, but it can be placed chiefly within the fifth and fourth centuries BC,[17] and in certain cases in the third (mainly Maroneia[18] and the unpublished material from Mesembria-Zone).

We hope that the investigations being carried out at Ainos by the University of Istanbul will confirm our conclusions and add new evidence for this material.[19]

Catalogue of stamped amphora handles

1. Maroneia, K9548, caduceus↑, Αἴ/νι/ον.

2. Maroneia, K9320, caduceus↑, Αἴ/νι/ον.

3. Maroneia, K9688, caduceus↑, Κλ/ευ/μέ/νο/υς. S lunar.

4. Doriskos, K11370, goat facing right↑, Δίοννος.

5. Doriskos, K11379, goat facing right↑, Δι ννυ/σόδωρο/ς.

6. Makri, K6538, Hermes xoanon on a throne↑. The name of the eponym is missing.

7. Doriskos, K10815, Hermes xoanon on a throne↑, 'Αλκαῖος.

8. Doriskos, K6556, cluster of grapes↑, 'Αθα/νῆς.

9. Makri, K6521, cluster, ivy wreath↑, 'Α/θανῆς.

10. Thasos, Th11180, cluster, ivy wreath↑, Δίφιλος.

11. Makri, K6545, ivy wreath, Παρμέ[νων].

12. Makri, K6544, cluster, device, caduceus↑, 'Αλκαῖος.

13. Doriskos, K10813, caduceus, amphora↑, 'Αθ α νῆς.

14. Makri, K6553, amphora↑, 'Αθανῆς.

15. Doriskos, K6666, amphora↑, [Δι]ότιμος.

16. Plotinopolis, K12063, thyrsos←, cornucopia↑, Δίον/νος.

17. Makri, K11387, thyrsos←, cornucopia↑, Ματρό/δωρος.

18. Doriskos, K10461, dolphin←, Ἡρακλείδα.

19. Makri, K6523, caduceus←, 'Αλκαίω, monogram Γ.

20. Mesembria-Zone, K6830, caduceus, Ἡρακ/λείτω.

21. Makri, K6528, monogram A.

22. Makri, K6530, 'Αντι-.

Catalogue of coins

1. Mesembria-Zone, ANK5181. Bronze coin of Ainos, reverse (440-412 BC): Caduceus↑, Αἴ/νι(ον).

2. Maroneia, ANK785. Bronze coin of Ainos, reverse (280-200 BC): Caduceus↑, Αἴ/νι/ον.

3. Feres, ANK1353. Silver tetradrachme of Ainos, reverse (455/4-453/2 BC): goat↑, Αἴνι(ον).

4a-b. Amphipolis? ANK1841. Bronze coin of Ainos (365-341 BC). Obverse: Hermes xoanon on a throne↑. Reverse: cornucopia, Αἴ-νι(ον).

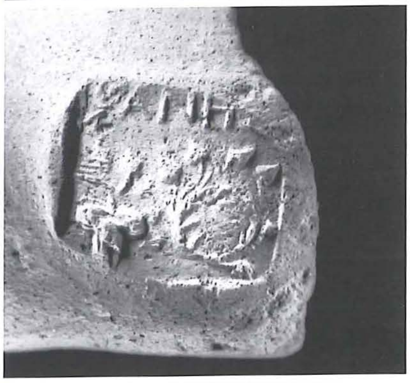
[15] Results of the examination in the Lyon Archaeometric Laboratory by M. Picon & F. Blondé.

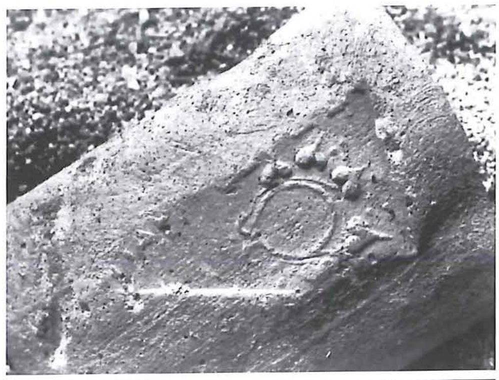
[16] I owe this information to many colleagues who kindly provided me with references, photographs and/or rubbings, designs: Y. Garlan, N. Conovici, D. Kallintzi, M. Koutsoumanis, A. Vavritsas, P. Tsatsopoulou.

[17] Зеест 1960, 90, XIII, 27ª; Kaygusuz & Ersen 1986, 8-10; Garlan 1989, 480, fig. 1: i, j, n; Καλλιντζή 1997, 900, 913:15-17.

[18] Καραδήμα 1998, 487-96.

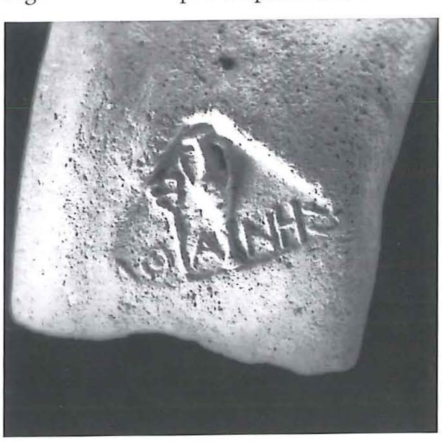
[19] Başaran 2000, 251-259; also in English, id. 2001, 219-22, where there is a detailed bibliography. Ş. Başaran reports the discovery of a pottery kiln and a waster dump? of amphorae in Ainos in this article. I would like to express my sincere thanks to Professor Başaran for kindly showing amphora finds to me from his excavations at Ainos, when I visited the site some years ago.



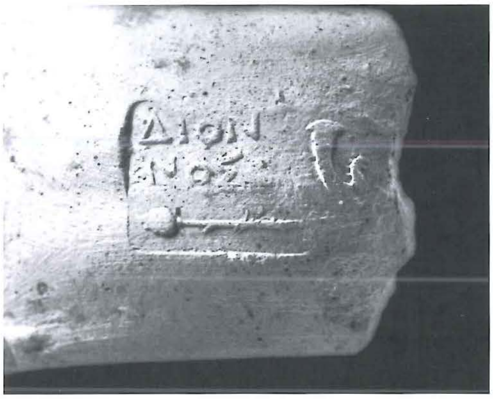


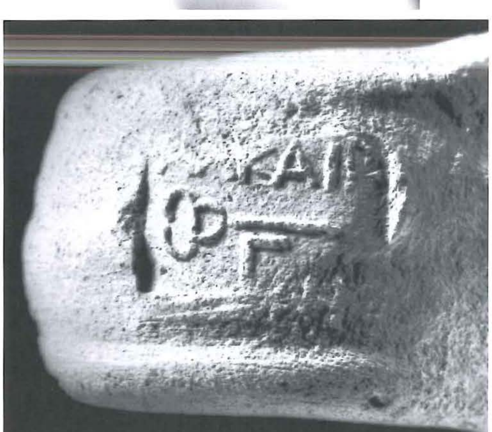
Figs. 14-18. Stamped amphora handles of Ainos (cat. of stamps n.s. 8-12).

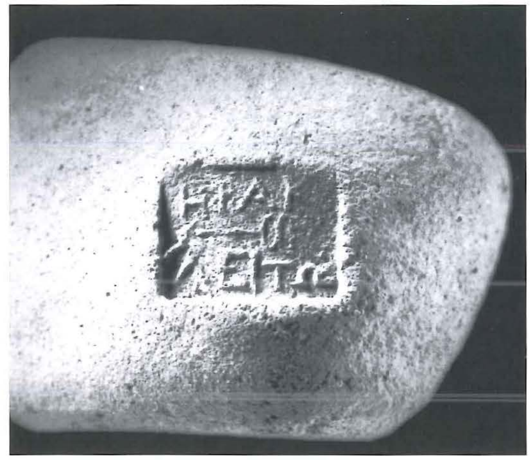
Figs. 19-21. Stamped amphora handles of Ainos (cat. of stamps n.s. 13-15).

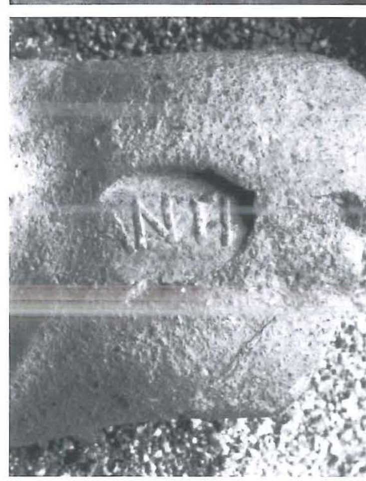


Figs. 22-23. Amphora as an emblem on amphora handles.

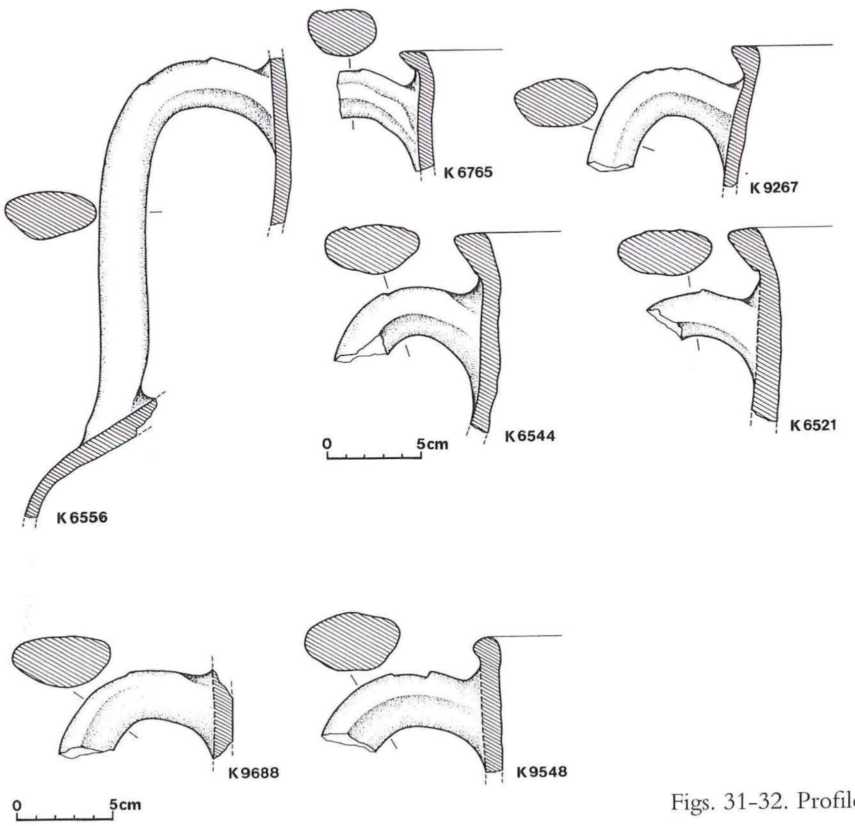








Figs. 24-30. Stamped amphora handles of Ainos (cat. of stamps n.s. 16-22).



Figs. 31-32. Profiles of stamped amphora handles of Ainos.

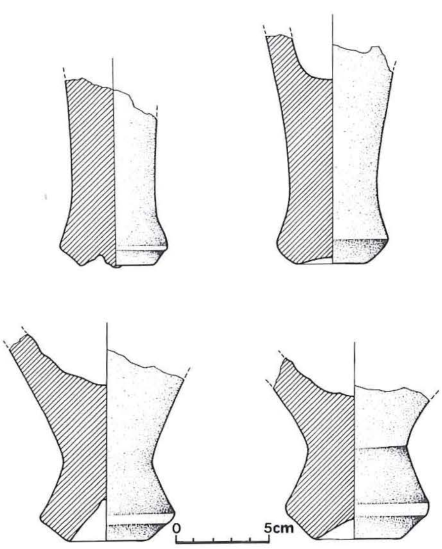


Fig. 33. Profiles of amphora toes found at Doriskos.

Knidian Amphora Chronology, Pergamon to Corinth

Carolyn G. Koehler & Philippa M. Wallace Matheson[1]

Knidos was the major source of wine imported into Athens in the Hellenistic period. Figure 1 shows the numbers of amphora fragments of various classes in the AMPHORAS-Project database that were found in and around Athens: in the Agora, the Kerameikos, the slopes of the Acropolis, the Olympieion, and elsewhere. Since we are dealing simply with the number of inventoried fragments here, we cannot extrapolate from these figures the actual quantities of wine imported.[2] But the general outline is clear: Knidian wine predominates (67%).[3] Rhodian, at 19%, is second by quite a bit. Nothing else is close: Thasian is 2%, and the rest, such as Chian and Koan, each make up less than 1% of the total.

It is striking that, from the late third to the early first century, Athens seems to have taken in something over two-thirds of the wine exported from Knidos. Figure 2 shows datable stamped handles exported from Knidos and the percentages of that total imported by Athens for Virginia Grace's Periods 3,

[1] We are grateful to the Excavations of the Athenian Agora at the American School of Classical Studies for permission to reproduce the photographs in Figs 4, 5, and 7, and, for Fig. 8, to the Musée Gréco-Romain at Alexandria. We are also grateful to all who supported the creation of the computer database of the AMPHORAS Project, from which we have generated the statistics about Knidian amphora stamps, and particularly to those who did the exacting work of entering the data from Virginia Grace's complex card file system. Special thanks go to the 1984 Foundation for its funding.

[2] Inventoried fragments include mostly stamped examples, for Knidian of the 2nd century probably a high percentage of exports but nevertheless an unknown proportion. One must keep in mind that on most Knidian amphoras -- but often not in the period of the phrourarchy, nor in that of the *andres* -- the same stamp was impressed on both handles.

[3] For the increase of Knidian stamped handles relative to Rhodian in the course of the 2nd century in deposits at the Athenian Agora, see Grace 1985, 7.

Figures for the different classes of amphora fragments inventoried in Athens

Origin / Class of jar	Fragments		Per cent of total
Knidos	25127		67.1 %
Rhodes	7189		19.2 %
Thasos	912		2.4 %
unidentified	2374		6.3 %
other	1864		5.0 %
Chios		373	
Roman		292	
Kos		282	
Parmeniskos group		162	
Corinth		143	
small sites (< 100 each)		612	
Total	37466		100 %

Fig. 1 Figures for the different classes of amphora fragments inventoried in Athens.

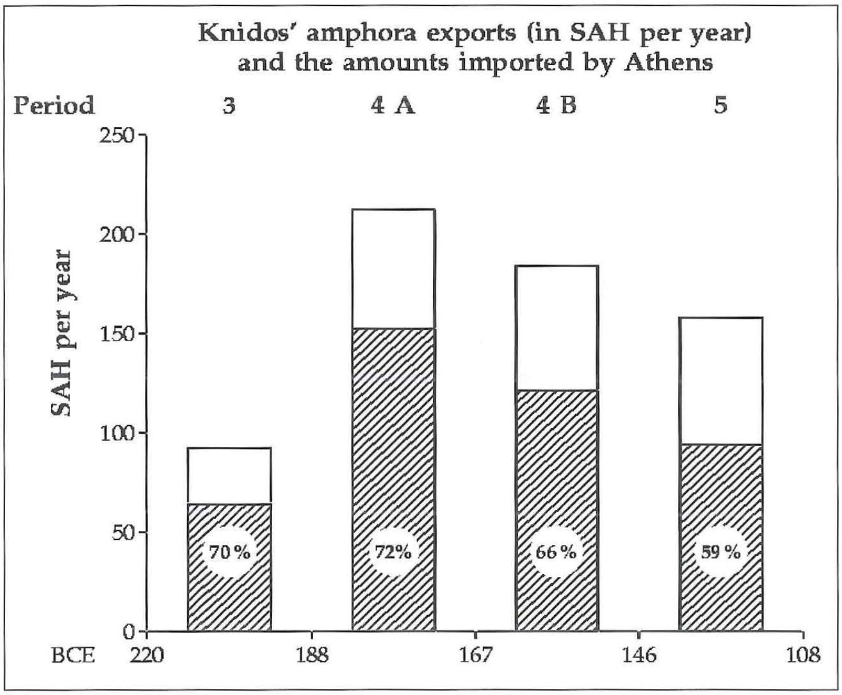


Fig. 2 Knidos' amphora exports (in stamped amphora handles per year) and the amounts imported by Athens.

4 A, 4 B, and 5.[4] The relative bulk of the trade for each period is expressed as "stamped amphora handles per year": the number of handles with stamps of the period is divided by the number of years in the period (Fig. 3).

Contexts in the Athenian Agora, where nearly 40,000 stamped pieces are now recorded from the excavations, are critical for establishing the chronological sequence of the class. Rhodian stamps are found in most of these contexts. The hundred-plus years of the full stamped sequences of Knidian and Rhodian, roughly coinciding with the second century BC, are pegged at one end by the Pergamon Deposit and the Middle Stoa Building Fill in the Athenian Agora, with stamped amphora handles belonging to Grace's Period 3 and the beginning of her Period 4.[5] Mummius' destruction of Corinth in 146 provides a marker for the middle of the century and the beginning of Period 5. At the century's other end comes the destruction of Samaria in 108. That, coincidentally, is also the year that begins the sequence of 20 pairs of duovirs named in Knidian stamps as *andres*. They were probably part of the Roman tax-collecting apparatus brought to a halt by Mithridates' victories in 88.[6]

All these contexts affect Rhodian and Knidian alike. But the Knidian stamps have a further historical peg in the form of the phrourarchy, a period of approximately 20 years in which the stamps bear the names of phrourarchs, in addition to, or replacing, the normal annual eponyms.[7] This period, Knidian 4 A in Virginia Grace's chronology, begins with the Peace of Apameia in 188, the treaty by which Rhodes was granted sizable possessions on the mainland nearby. It ends in 167, when Rhodes was weakened by Rome's declaration of Delos as

[4] These periods were most recently laid out in Grace 1985, 31-32 (for Knidian) and 42 (Rhodian).

[5] On stamped handles in the Pergamon Deposit, see Grace 1985, 3 with note 2; and 8-9 for Rhodian eponyms in it that she dates 182-176. For dating the deposit as a whole to 210-175, see Grace & Savvatianou-Pétropoulakou 1970, 290-291; cf. Grace 1974, 192. Börker 1998 offers a new publication of the stamps in the Pergamon Deposit; Lawall 2002a considers the stratigraphical evidence for a lower dating. On the Middle Stoa Building Fill, see Grace 1985.

[6] Grace 1985, 31; see also 34-35 for a list of *andres* and the eponyms with which they are combined.

[7] Grace 1985, 14-15, 31-32.

Figures for SAHs exported from Knidos and imported by Athens, Alexandria, and Delos

Period	3	4 A	4 B	5	total
Dates (BC)	220–188	188–167	167–146	146–108	
Nr of years	32	21	21	38	112
Datable SAHs from Knidos	2958	4670	3698	6024	17350
SAHs per year					
from Knidos	92	212	184	158	
to Athens	64 = 70 %	152 = 72 %	121 = 66 %	94 = 59 %	
to Alexandria	17 = 18 %	26 = 12 %	33 = 17 %	40 = 25 %	
to Delos	2 = 2 %	12 = 6 %	13 = 7 %	14 = 9 %	
Total imports	90 %	90 %	90 %	93 %	

Fig. 3 Figures for stamped amphora handles exported from Knidos and imported by Athens, Alexandria, and Delos.

a free port and by its loss of the territories it had gained in Caria and Lycia.

Recently a new, lower chronology has been proposed by Gérald Finkielsztejn for Rhodian jars.[8] What consequences would this lower dating of the Rhodian series have for the Knidian found in the same contexts? Could the phrourarchy period be redated? Would it *need* to be redated? We will discuss the chronological evidence for the phrourarchy in some detail.

In the early period of full stamping on Knidian jars, Period 3, the names of the eponymous magistrate and the manufacturer of the jar are given in the same stamp. The eponym is sometimes termed ΔΑΜΙΟΥΡΓΟΣ, a title known to belong to officials of Knidos. At some point this pattern is broken, and stamps appear naming in addition another eponym, accompanied by the title ΦΡΟΥΡΑΡΧΟΣ (Fig. 4).

Phrourarchs are not otherwise attested at Knidos either in literary or in inscriptional evidence, and thus no external historical evidence exists for a military garrison there. The amphora stamps have been considered to provide the primary evidence for Rhodian control of Knidos between 188 and 167, attesting, in fact, "frequently changing Rhodian phourarchoi, mercenary leaders rather than Rhodian citizens."[9] It is true that Rhodes is alleged to have imposed military garrisons on some other subject states, such as Teos, but it is equally true that the title phrourarch was used in other contexts in Asia Minor for officials whose duties were more civic

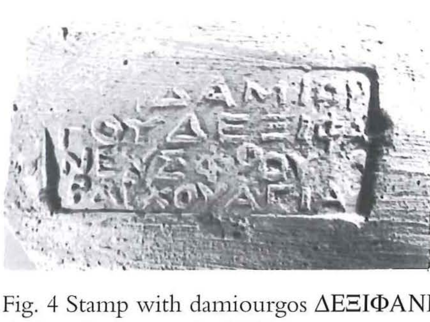


Fig. 4 Stamp with damiourgos ΔΕΞΙΦΑΝΗΣ (with preposition) and phrourarch ΑΓΙΑΣ (KT 1663; SS 02909). Agora Excavations, American School of Classical Studies at Athens.

[8] Finkielsztejn 2001a, 196, fig. 22.1 summarizing his revised dating; cf. 197, fig. 22.2 for Grace's chronology.

[9] Fraser & Bean 1954, 93-94 with note 3; Berthold 1984, 167, note 1, agrees because of the Rhodian devices that appear on Knidian coinage between 188 and 167. Reger 1999, 89 and 96-97 (note 47) infers that Knidos was free because it was one of the cities to send arbitrators to settle the war between Miletos and Magnesia.

than military.[10] The term by itself is not sufficient to decide the nature of the organization to which the Knidian phrourarchs belonged.

For a brief period, damiourgoi and phrourarchs coincide in the same stamp; the fabricant's name would have appeared in the stamp on the other handle. The three names, in fact, are often variously divided between a pair of stamps. In the course of the phrourarchy period, the damiourgos disappears and the new eponym, bearing the title ΦΡΟΥΡΑΡΧΟΣ or ΦΡΟΥΡΑΡΧΩΝ, sometimes abbreviated ΦΡΟΥ(, appears together with the fabricant (Fig. 5). The phrourarch thus becomes the only eponymous official in the stamps, and his name often occurs simply with the preposition ΕΠΙ.

Virginia Grace has shown that there must have been three phrourarchs per year.[11] The two damiourgoi Dexiphanes and Sokrates, each found with three different phrourarchs, prove this (Fig. 6). Additionally, the damiourgos Aristogenes appears with two phrourarchs. Fifty-five of these phrourarch names are now known. Given that three were appointed each year, the period of the phrourarchy must have lasted for at least nineteen years. The two decades they represent were logically placed at the time when historically it is known that Rhodian

Fig 5 Stamp naming phrourarch ΚΛΕΑΝΔΡΙΔΑΣ (here abbreviated ΚΛΕΑΝΔΡΙ((with preposition and title, and fabricant ΑΠΟΛΛΩΝΙΟΣ (KT 173; SS 14505). Agora Excavations, American School of Classical Studies at Athens.

[10] On phrourarchs, see RE 20, 773-780; for phrourarchs at Teos, Robert & Robert 1976, 155, 196-199. Jefremow 1995, 50-58 surveys evidence on the "purely military" Ionian phrourarchies of Miletos, Magnesia, Priene, and Teos. His thesis is that the "Phrurarchie, wie Strategie in der hellenistischen Zeit von einem Militär- zu einem Zivilamt evoluierte und in Knidos die Rolle einer Kontrolbehörde spielte." We offer independent arguments below for the connection of the phrourarchs with amphora production; we do not follow his higher dating of the Knidian phrourarchs and proposed longer term of office.

[11] Grace 1985, 14 with note 30; fuller discussion in Grace & Savvatianou-Pétropoulakou 1970, 319.

Phrourarchs Named on Knidian SAHs with Another Eponym

Name occurs	as Phrourarch with φρ. / ἐπί	plus Damiourgos
ΑΝΤΑΝΔΡΟΣ	14 / 157	ΑΝΤΙΔΟΤΟΣ? 1
ΑΓΕΣΤΡΑΤΟΣ	15 / 64	ΑΡΙΣΤΟΓΕΝΗΣ 1
ΜΕΝΕΚΡΑΤΗΣ	1 / 40	ΑΡΙΣΤΟΓΕΝΗΣ 1
ΑΓΙΑΣ	20	ΔΕΞΙΦΑΝΗΣ 20
ΕΥΦΡΩΝ	19	ΔΕΞΙΦΑΝΗΣ 14
ΤΑΥΡΙΣΚΟΣ	10 / 14	ΔΕΞΙΦΑΝΗΣ 4
ΑΡΙΣΤΙΩΝ	8 / 6	ΕΥΓΕΝΗΣ 1
ΕΠΙΝΙΚΙΔΑΣ	48 / 30	ΘΕΥΓΕΝΗΣ 8
ΟΛΥΜΠΙΟΔΩΡΟΣ	17	ΠΟΛΥΧΑΡΜΟΣ 17
ΑΠΟΛΛΩΝΙΟΣ	20 / 84	ΣΩΚΡΑΤΗΣ 3
ΜΟΣΧΟΣ	15	ΣΩΚΡΑΤΗΣ 15
ΦΙΛΟΚΡΑΤΗΣ	9 / 6	ΣΩΚΡΑΤΗΣ 7
ΕΥΚΡΑΤΙΩΝ	40 / 78	ΤΙΜΑ- 3

All figures represent numbers of stamps known.

Fig. 6 Table of phrourarchs occurring with damiourgoi.

Fig. 7 Period 4 A jar (SS 14142), 1:10. P.H. 0.794 m. (tip missing). Agora Excavations, American School of Classical Studies at Athens.

Fig. 8 Aristokles' circular stamp on a Knidian jar with "rose" device (KT 0238 ABC 9). Musée Greco-Romain, Alexandria.

domination of the Peraia was at its most extensive. At the end of this time, when the phrourarchs disappear from the stamps, Knidos returns to its previous pattern of naming in its stamps one eponym, sometimes called a damiourgos, with the fabricant.

Certainly a new connection between Knidos and Rhodes is apparent at this period in the jars themselves. In some Knidian amphoras of the phrourarchy period the clay not only looks Rhodian, but has been proven, in one instance analyzed by neutron activation at Brookhaven, to be indistinguishable from Rhodian fabric.[12] Similar clay deposits may well exist on the Datça Peninsula – we do not have to assume that the jar was actually made in Rhodes – but such fine, light-colored clay makes a sharp contrast to the coarse, reddish-tan clay characteristic of Knidos.[13] Its use is likely to have been deliberate.

During the phrourarchy period, some jars that *were* made of normal Knidian clay were often covered with a creamy slip, as though to approximate a Rhodian color. The amphora in Fig. 7 is one such, made in the term of the phrourarch Philippos by Aristagoras.[14] Another of the manufacturers using the pale slip was Aristokles, who is paired with the phrourarch Agnon on one jar top, and on another with the phrourarch Timophon.

Aristokles, manufacturing Knidian jars, used the Rhodian circular style of stamp, including in the center of some the *rhodon*, symbol of Rhodes on its coins and amphora stamps (Fig. 8).[15] Indeed, Aristokles is known to us as a Rhodian fabricant who produced a great number of jars on Rhodes stamped with this "rose". So Rhodians (and Rhodian style) were incorporated in a significant way in producing Knidian amphoras during the phrourarchy period.

The phrourarchs themselves, however, were not Rhodians. Their names are not Rhodian names, nor do we see any evidence that they were mercenaries in Rhodes' employ. Forty-five per cent of their names are otherwise attested at Knidos, either in inscriptions or in the amphora stamps, which is the same percentage as the names of the annual eponyms they interrupted, the damiourgoi. Thus, the phrourarchs are ethnically no different from

[12] Grace & Savvatianou-Pétropoulakou 1970, 319-320, with note 1.

[13] Whitbread 1995, 72 and 75-76.

[14] The distinction is clear when this jar is viewed next to others in the representative sequence of Knidian amphoras illustrated in Grace 1979b, fig. 64 (2nd from left); a full caption for that figure appears in Grace & Savvatianou-Pétropoulakou 1970, 317-318, note 2. Aristagoras is the fabricant also of the combination type of the damiourgos Dexiphanes and the phrourarch Agias (Grace & Savvatianou-Pétropoulakou 1970, 319).

[15] Grace & Savvatianou-Pétropoulakou 1970, 319-320; Grace 1985, 17-18 and pl. 3, nos. 19-21.

the usual Knidian magistrates.[16] Further, fifteen out of the 55 phrourarchs, or over one-quarter, have names that appear in amphora stamps also as *fabricants in the same period*. This is a significantly greater figure than is found in other periods, and we wonder whether the pool from which the phrourarchs were drawn may have included Knidian amphora manufacturers.[17]

We therefore conclude, insofar as one can conclude from such onomastic evidence, that the phrourarchs represent an internal Knidian body specific to the wine trade, one that may have included some of the amphora producers themselves. As we saw earlier (Fig. 2), the trade figures for Knidian wine export more or less doubled in the period when phrourarchs are named in the stamps, so the administrative reorganization that the phrourarchs represent does not provide evidence of any suppression of Knidian interests by Rhodes, but rather of a thriving co-operation between the two states.

If, then, the phrourarchs were *not* part of a historically datable Rhodian military administration, can we use archaeological evidence to assign new dates to the twenty-year period when they appear in the amphora stamps? For this we turn to the excavations at the Athenian Agora and at Pergamon.

Phrourarch stamps are found in the Middle Stoa Building Fill – a few early ones – and in the Stoa of Attalos foundation filling, including late ones, followed by nine damiourgoi from the post-phrourarch period, 4 B. In addition, Corinth and Carthage, which were destroyed in 146, have phrourarch stamps, as well as Knidian eponyms of Period 4 B. These stamps, and ones related by name connections and/or other contexts at the Agora, can be presumed all to be earlier than, or at least not much after, 146.

In her 1985 article on the Middle Stoa Building Fill, Virginia Grace published a list of the Knidian eponyms, identifying 23 as belonging to her Period 4 B, following the phrourarchs and preceding the destruction of Corinth and Carthage, i.e., 23 years of Knidian amphora stamps after the phrourarchy ended.[18] Counting backwards from 146 we arrive at an end-date of 169 for the phrourarchy, which is two years earlier than the historical end of Rhodian domination in Asia Minor.

These dates can be adjusted by only a year or two either way: if we allow a couple of post-phrourarch eponyms to arrive on handles at Corinth after the destruction, we could bring the end-date of the phrourarchy down to the official end of Rhodian "domination" in Knidos of 167. Virginia Grace herself believed that the phrourarchy lasted the full 22 years from 188 to 167 and that the Stoa of Attalos, with its nine post-phrourarch eponyms, should therefore be dated in 157 BC.

As far as the Middle Stoa is concerned, we feel very strongly that the *absence* of Knidian amphora stamps after the first four to five years of the phrourarchy period is significant. The sheer quantity of Knidian wine being imported into Athens all through the first half of the second century means that the absence of later phrourarchs in the Middle Stoa, coupled with their presence in many other later contexts in the area, is a clear proof that the Middle Stoa filling was closed within two or three years of 183 BC.

Pergamon is a different matter. An enormous number of amphora stamps were found together in a deposit at Pergamon, which was originally thought to date from about 220 to 180. In her Middle Stoa article, Virginia Grace points out that the Knidian stamps, including some from the early phrourarchy period, would date the Pergamon deposit to a year or two after the Middle Stoa Building Fill, since it contains some of the same phrourarchs plus one or two more. The Rhodian stamps, she thought, continue some years later, down to 175.[19] The new low-

[16] Blümel 1992 is the primary source of names in Knidian inscriptions used here. The present authors earlier presented aspects of the onomastic evidence for phrourarchs as predominately Knidian in a paper, "Names on Knidian Amphora Stamps," delivered in memory of Virginia Grace on January 17, 1995 at the American School of Classical Studies at Athens.

[17] We are still working on exactly what happened in the next period, 4 B -- there seems to have been an unusually high number of the damiourgoi, who occur again as the only eponymous magistrate after the phrourarchy period, with names that can be found at other periods in the amphora stamps. Perhaps the trend towards selecting magistrates from the ranks of the amphora manufacturers continued to grow.

[18] Grace 1985, 31-34. Two corrections were made by Grace to this list after its publication: an eponym Antidotos of Period 4 A should be added, and Dion of 4 B does not occur in the fill of the Stoa of Attalos.

[19] Grace 1985, 7-8 (Rhodian) and 15 (Knidian).

ering of the Rhodian chronology would bring this another decade or so later; if so, shouldn't we expect stamps of the last 12 or 15 years of the phrourarchy in this deposit? The answer probably has to do with the sparseness of the wine trade between Knidos and Pergamon. There were only eight or nine Knidian stamps in the deposit itself, versus around 900 Rhodian; only a further 17 Knidian stamps have been recorded from the whole site.[20] They range over the whole period of Knidian stamping, but imports from Knidos were clearly meagre and sporadic, so the absence of later phrourarch stamps need not be a large consideration in establishing a *terminus ante quem* for the deposit as a whole.

So for the Pergamon Deposit, the chronology of Knidian stamps does not have to be linked with that of the Rhodian. For the Middle Stoa Building Fill, whose stamps from Knidos are closely knit with those of the phrourarchy period and the rest of the tight sequence of the first half of the second century, the Rhodian may provide a test case of the new chronology.

Finally, to answer the rest of our initial questions, the phrourarchy is not tied in our view as a military body to any hypothetical Rhodian take-over in Knidos, but it does seem to have fulfilled an administrative role for the manufacture of amphoras during a period of close Rhodian and Knidian relations. It cannot be moved much in date away from the 188-167 range associated with increased Rhodian activity in the area. The phrourarchy at Knidos remains a mysterious magistracy, but it clearly has ramifications for the study of co-operative production, of increased trade in Knidian wine, and of the complexities of Hellenistic chronology.

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[20] Börker & Burow 1998, 56-58 for stamps in the Pergamon Deposit, and 110-112 for stamps from elsewhere at the site.

Archaeological Context and Aegean Amphora Chronologies: A Case Study of Hellenistic Ephesos

Mark L. Lawall

Research on amphora chronologies in the Late Classical and Hellenistic periods tends to focus on the major classes of stamped amphoras. Little attention has been paid to the "minor classes" of stamped amphoras and even less to the amphora classes lacking stamps altogether. On the one hand this tendency is understandable in terms of the great promise attached by economic historians to counts of stamped handles from different producers in very narrow time periods.[1] And yet, the major classes (Thasos, Rhodes, Knidos, and Kos in the Aegean; Herakleia Pontica, Sinope, and Chersonesos in the Black Sea) account for only a portion, often only a minor portion, of any site's amphora consumption. For this reason alone study of the "minor classes" and unstamped amphora types is increasingly desirable for the more thorough use of amphoras as evidence for economic history.[2]

The chronological study of such amphoras must differ in terms of methodology from the major stamped classes.[3] Large closed deposits of such "minor" stamps are not forthcoming (*cf.* the Pergamon deposit for the Rhodian series),[4] and even if they were available it would not be possible to determine how many years the stamps in question represent (again, as was possible for the Pergamon deposit). Furthermore, the rarely-stamped amphoras tend to carry only one name on the stamp, thereby denying the possibility of clusters of links between fabricants and eponyms.[5] Analyses of engraving styles for the stamps and re-engravings and re-uses of older dies are rarely possible when the stamps themselves appear so sporadically.[6] Of course, if there are no stamps at all, such methods used in the study of major stamp classes will be entirely inapplicable. Instead, whether for minor classes of stamps or amphoras without stamps, chronological research depends heavily or even exclusively on the archaeological contexts of the finds and the study of the development of form in light of this archaeological evidence.

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[1] See for examples, Rostovtzeff 1941, 775-776; Finley 1987, 98-99; Gabrielsen 1997, 64-71 and Davies 2001, 27-29 (the latter two scholars tempering discussion of that promise with equally valid criticism). Many thanks are due to my colleagues at Ephesos, in particular Christine Rogl, for assistance during my study of Hellenistic amphoras from the Tetragonos Agora. This paper has also benefited immensely from the advice and assistance of Ioulia Tzonou-Herbst and Guy Sanders of the Corinth excavations, Jack Kroll, Elizabeth Gebhard, Benjamin Millis, Susan Rotroff, Carolyn Koehler, and, although only in a posthumous way through her files, Virginia Grace. Gérald Finkielsztejn and Yvon Garlan provided useful corrections to the paper as delivered at the conference. I am also grateful to A. Kaan Şenol and G. Şenol for information concerning finds in the region of Ephesos and its broader vicinity.

[2] See for examples, Lawall 1999; 2002b; and 2003.

[3] Б.Н. Граков provides the fundamental statement of methodology for stamp classifications and chronologies (1929, 102-106). His often cited methodological elements are 1) paleography of the stamps, 2) iconography, 3) links between magistrates and fabricants, 4) onomastic evidence, 5) grammar or syntax of the stamps, and archaeological evidence is offered more as a supplement to the list of five in Граков's text. More recently there has been a greater emphasis placed on the distinction between absolute and relative chronologies, see most recently Garlan 2000, 139-148 and Finkielsztejn 2001a, 43-46.

[4] Schuchhardt 1895; Börker 1998.

[5] Finkielsztejn 2001a for Rhodian links between fabricants and series of eponyms; Grace 1934, 219, fig. 2 showing links between Rhodian names; and 1956, fig. 6 showing links between Thasian eponyms and fabricants in tabular form, updated for the early period stamps by Garlan 1999a, table between pages 96 and 97.

[6] By engraving style, I refer here more to details of devices rather than letter-forms; comparisons among letter forms may be useful even within the minor classes of stamps. For detailed stylistic analysis, see Finkielsztejn 2001a. For re-engravings, see Garlan 2000, 146-149 with references to earlier notices.

Such an emphasis on archaeological context in a detailed fashion is not entirely alien to amphora studies – not even to studies of the major Hellenistic stamped classes. Until very recently, however, archaeology played a fairly general role, defining *termini post quem* or *termini ante quem* for major collections of stamps. Amphora studies have often used large closed deposits or collections of stamps from cities founded or destroyed at known dates to develop chronological frameworks.[7] Even greater attention to stratified fills or sequences of isolated closed deposits, however, is needed for the study of minor classes of amphoras or those lacking stamps altogether. As with any sort of pottery, changes in amphora forms can be documented through such archaeological contexts to establish a relative chronology. Independently datable objects in the same contexts or external historical evidence for their dates can provide a framework for the absolute chronology of the amphora class in question.

No element of this process is innovative; indeed, the application of such practices to the study of amphoras dates to the earliest archaeology of Western Europe. The historical survey, with which I begin this paper, demonstrates that detailed and extensive application of such practices to the study of amphoras and especially to the study of "minor classes" of Hellenistic amphoras is a relatively recent phenomenon. Such detailed attention to archaeological context, however, can result in significant progress in understanding the chronologies of the many amphora types circulating in the Hellenistic Eastern Mediterranean. The second part of this paper provides an example of this process and progress through a case study of the so-called Nikandros group.

Archaeology in the history of amphora chronologies

Three elements of archaeological research are especially important for the study of minor amphora classes and amphoras without stamps: stratified sequences, isolated closed deposits, and proposed links to historical circumstances or events providing independent evidence for the absolute chronology. A brief survey reveals a long history of the archaeological tools needed for developing amphora chronologies, but only the relatively recent adoption of these methods on a grand scale. Particularly striking is the slow appearance of synthetic presentations of amphora typologies and chronologies, outside the major Hellenistic stamped types, whether for individual classes of amphora or broader periods.

1779 to 1930: Establishing the Tools

Some of the earliest publications of amphoras appear in the British journal *Archaeologia* in the late eighteenth century from collections and excavations in England. Although this material dates well after the Hellenistic period, the journal provides evidence both for an early interest in such artifacts and for an early use of the idea of artifact associations for dating. In an article from 1779, Rev. Mr. Lort wrote "Yet, as [the bronze axe-heads] have been often found in Roman stations, accompanied by Roman coins, [his opponent] supposes them to have been Roman workmanship, after the old British models."[8] Archaeological record-keeping in this period was rudimentary; nevertheless, a 1787 publication of numerous amphoras and stamps was accompanied by a sketch plan of the sewer trenches that brought them to light.[9]

[7] For example, the most recent statement on the Rhodian chronology depends heavily on destruction or abandonment dates in the late 2nd century BC, see Finkielsztejn 2001a. The absolute chronology of Thasian amphora stamps is pinned by the historically dated, small assemblage of amphora stamps at the Ptolemaic encampment site of Koroni (see Garlan 1999a, 52; and see Vanderpool *et al.* 1962). The Knidian chronology is fixed in part by the destruction of Corinth in 146, and by comparisons between the Middle Stoa and Stoa of Attalos building fills, but historical interpretations of the stamps themselves (concerning phrourarchs and duovirs) have traditionally played a stronger role than archaeology (Grace 1985, 13-18 and Grace & Petropoulakou 1970, 318-323; though now cf. Koehler & Matheson, this volume).

[8] Lort 1779, 108. Thus, a generation before the more thoroughly articulated ideas of associations between artifacts presented by Christian Jürgensen Thomsen and Jens Worsaae (Greene 1995, 26-28; Roskams 2001, 17; Gräslund 1981, 46) the principle was already in common use.

[9] Gough 1787; one other early amphora publication is Lysons 1792, pl. 10, fig.1, a 1st-century AD Rhodian amphora from a collection in Gloucester county.

Attention to amphoras of the Hellenistic and earlier periods does not appear until the nineteenth century. By the latter part of that century the transcription of stamps was clearly an acceptable pursuit for the classical archaeologist,[10] and by then the essential tools of amphora chronologies were also developed. As early as 1847, with J.L. Stoddart's publication of stamps from Alexandria, the foundation date of that city in 332 BC was accepted (albeit incorrectly) as providing the *terminus post quem* for amphora stamps. Stoddart proposed the Rhodian chronology as continuing to the reign of Vespasian; however, by 1853 J. Franz reduced this broad span, on epigraphical grounds, to a concentration in the second and first centuries.[11] Numerous collections of amphora stamps, some of them gained from excavations, some from antique shops, were published with some regularity in the 1870s and 1880s. Carl Schuchhardt's publication of the Pergamon deposit in 1895, however, offered the first serious consideration of archaeological find spot in a chronological discussion. Schuchhardt combined a cursory idea of an architectural date for the Deposit's find spot with historical considerations to arrive at a range of dates for the stamps as during the reigns of Attalos I and Eumenes II.[12] Schuchhardt's method of starting with the archaeological record and then seeking further refinement and explanation from the historical record would become a standard practice in later decades.[13] Subsequent attempts to refine the Rhodian stamp chronology, as in the work of F. Bleckmann (1907 and 1912) and H. van Gelder (1915), continued with a more general use of archaeology (e.g. the assumption that stamps found at Carthage, regardless of where precisely they were found, should date before 146 BC) and further attention to "intrinsic" evidence (counting eponyms, linking eponyms to datable inscriptions). During this time, then, archaeology primarily offered a means of gathering the stamps more than a means of refining chronologies.[14]

In 1886, while Schuchhardt was copying the Pergamon deposit stamps, archaeology was already being employed in a far more rigorous fashion for establishing dates of other amphoras. That year, W. M. Flinders Petrie published the results of his 1884-1885 excavations at Naukratis.[15] He summarized the site's stratigraphy, documented the relative sequence of various Archaic through Hellenistic amphora types, and associated specific strata with historically attested events in the site's history. This process allowed Petrie to assign absolute dates for certain amphora forms; white-slipped Chian amphoras were, for example, given a date in the seventh century BC.[16]

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[10] Jöhrens (1998) provides the most explicit documentation of this practice. Garlan (1990a) provides a brief sketch of the early history of amphora-stamp studies, and this essay was expanded upon with references added in 2000. Bon & Bon 1957, 49-55 provides useful, partly annotated references to early stamp publications. For the history of amphora (largely stamp) studies in the Black Sea region, see Shelov-Kovedjaev 1986.

[11] Stoddart 1850; Birch 1873, 139 for the general Alexandrian date; Stoddart himself seems to specify *c.* 304 BC to Vespasian for Rhodian stamps (I have not seen a copy of Stoddart myself, this reference is from Franz 1853, iv). Franz 1853, iii-iv discusses the dates of various stamp classes (without reference to archaeological evidence). Becker 1869, 513-535, in an extended response to Franz places the starting dates of Rhodian and Sinopean stamps in the 5th century, and Knidian and Thasian in the 4th century, with all continuing into the 1st century BC. Becker's arguments depend largely on letter forms with brief references to findspot (largely to exclude dates after the 1st century BC). See too, Граков 1929, 106-107 on the developing ideas on amphora stamp chronologies.

[12] Schuchhardt 1895; cf. Börker 1998; Lawall 2001a and 2002a.

[13] Similarly, Boehlau (1898, 23 and 30-32) uses historical considerations and associations between artifacts to arrive at dates for Archaic amphoras from a necropolis on Samos.

[14] E.g., Pottier & Reinach 1887 includes amphora stamps from among the finds from Myrina; Шкорпил 1904, publishes stamps from excavations near Kerch.

[15] Petrie 1886; the stratigraphy and the absolute dates of the levels and associated pottery are discussed pp. 19-23.

[16] This is the first example I have found of an explicitly stratigraphical approach to amphora studies. While Garlan (1990 and 2000) provides historiographical studies of the identification and interpretation of amphora stamps, I have not found similar treatment of the developing methodology of amphora research as a part of archaeology. Petrie's interests in making explicit archaeological methods were not limited to amphoras of course; see too Petrie 1899 and 1904.

1930s-1980s: Documenting the presence of amphoras in archaeologically defined contexts

By 1900, the two essential archaeological methods – study of closed deposits and stratigraphical analysis – were already introduced. Starting in the 1930s and continuing through the 1980s,[17] these methods were applied with some frequency to studies of amphora chronologies. The ending date of the 1980s marks a shift in the scale and goals of such work rather than a shift in actual methods.

The greater use of closed deposits in pottery chronologies, and particularly regarding amphoras, from the 1930s on, can be attributed to the influential early publications from the Athenian Agora. Homer Thompson's 'Two Centuries of Hellenistic Pottery', published in 1934, while largely ignoring amphoras, established a long-lasting trend by its emphasis on isolated "deposits" for building the ceramic chronology.[18] One explanation offered for this emphasis on deposits is the scarcity of deep, rich stratified fills at the Agora.[19] Furthermore, the strata that were available lacked well-preserved shapes, which Thompson and his contemporaries needed in order to develop typological sequences for the fine-wares.[20] Closed deposits such as wells and cisterns provided such material. These deposits also provided finite groups that could be compared even before detailed analysis of the excavation results. Thompson's article must have been largely complete by 1933 and much of the research must have occurred in the first two years of excavation. There would have been little time for detailed consideration of stratigraphy.

In the 1930s a number of publications began to appear with specific emphasis on the associations, provided by closed deposits, between amphoras and other datable objects. Virginia Grace's 1934 dissertation offered dates for certain stamps using the evidence of pottery in the same contexts.[21] Lucy Talcott's 1935 publication of Athenian Agora well R13:4 initiated a series of articles from the American excavations both in Athens and Corinth documenting the amphoras (and other pottery) from single closed deposits.[22] In the same year, the multi-volume publication of the Swedish Cyprus Expedition provided hundreds of new associations between amphoras and other artifacts from various Cypriot necropoleis.[23] Marcele Lambrino, in 1938, published an extensive discussion of Archaic East Greek amphoras from Histria, many of which were found in a single large dumped fill.[24]

Sealed deposits (well-fills and graves in particular) have continued to be the dominant venue for publishing amphoras and amphora fragments. Grace herself only undertook three publications of specific deposits: well N7:3 with Cedric Boulter in 1953; the finds from the Pnyx, especially Pnyx phase III in 1956;[25] and the Middle Stoa in 1985.[26] Far beyond what is recorded in these publications, Grace's ideas of stamp chronology depended heavily on her typescript reports on all Agora deposits with amphora stamps or significant numbers of amphoras

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17 From roughly 1910 through 1930, amphora research seems to have slowed considerably. In the early 1930s Virginia Grace wrote, "... the publication of [small groups of stamped amphora handles] has almost ceased since archaeology has become specialized." Grace 1934, 206. There are noteworthy exceptions including Maiuri's publication (1924) of the Villanova deposit; Macalister (1912) listing stamps from Gezer; Technau (1929) on stamps from Samos, and Ebert (1913) and Farmakovsky (1914) publishing amphoras from Black Sea tumuli (though these latter two publications involve the amphoras themselves more than the stamps).

18 Thompson 1934.

19 Rotroff 1987, 1 with note 2.

20 I owe this observation to Susan Rotroff; the importance of shape sequences from well-preserved pieces is made explicit in Rotroff 1997, 8-10.

21 Grace 1934, especially pp. 222-223, in her discussions of dates for earlier Rhodian stamps.

22 Talcott 1935; other similar approaches are found in Talcott 1936, Pease 1937, Campbell 1938, Corbett 1949, Boulter (with Grace) 1953, and most recently Roberts 1986.

23 Gjerstad *et al.* 1935.

24 Lambrino 1938. Another early publication with vague attention to stratigraphy and the phasing of the site in terms of the presentation of the amphoras (albeit only as group photographs) is found in Белов 1938.

25 Grace 1956a.

26 Of these, it should be noted, only N7:3 is a truly closed context. The other two included later material that may be difficult to distinguish from the bulk of the filling in question. For later material in Pnyx III, see Rotroff & Camp 1996; for the Middle Stoa, see Rotroff 1988.

without stamps.[27] Beyond Grace's work, particularly amphora-rich examples include the west necropolis at Eleusis, the South Hill excavations at the Kerameikos and the Stoa Gutter well in the Athenian Agora.[28] Tumuli from the north coast of the Black Sea often provided large collections of roughly contemporary amphoras from the burial chambers and their construction fills. While many of these were excavated before 1930, only since the late 1940s has there been much detailed consideration of the amphora finds from the burials.[29] An addition to the idea of closed deposits in the 1960s through 1980s came in the series of Archaic through Hellenistic shipwreck excavations: Porticello, El Sec, Kyrenia, Serçe Limani (Hellenistic wreck), and Grand Congloué remain some of the most often cited and debated in chronological studies.[30]

Throughout this period, from the 1930s to the 1980s, there was some interest in the use of stratified or isolated occupation phases in the development of amphora chronologies. *Histria* II, for example, published in 1966, presents amphora profiles with accompanying indications of stratigraphy.[31] Amphoras have also been published from specific phases at other Black Sea sites, such as Mirmekion and Tiritake, and from rural sites of short duration, including many from the region of Olbia.[32] One of the first presentations of stratified amphora material from the Aegean basin is found in a series of preliminary publications and a dissertation presenting the Punic Amphora Building at Corinth.[33] For an example of a short-lived rural site of exceptional importance in terms of Aegean amphora chronologies, there is the Ptolemaic camp at Koroni in southern Attica, which over the course of the 1960s and 70s eventually resulted in a revised chronology for early Hellenistic amphoras and amphora stamps.[34]

1960s-1980s: The beginnings of typological syntheses

Few of the publications attempted to place amphora forms in chronological order on the basis of a series of closed deposits. Ираида Зеест's amphora typology published in 1960 began to take this next logical step towards chronological studies of specific types.[35] Through the 1970s and 1980s Иосиф Брашинский addressed various specific types and their developments through time.[36] The most thorough exploitation of the chronological evidence in the Black Sea region, however, did not occur until much more recently (see below). Ursula Knigge's work at the Kerameikos noted the development of the Chian series through a series of late sixth- and fifth-century graves. Typological studies in the 1960s and 1970s, by Grace (for Chian and Samian amphoras), Carolyn Koehler (for Corinthian amphoras), and Barbara Clinkenbeard (for Lesbian amphoras) emphasized the methodology of interpolating otherwise undatable shapes within a broad framework of development, provided

[27] The Grace papers also include completed, yet unpublished manuscripts of tomb groups and other stamp assemblages from outside Athens. It is also clear from Grace's correspondence with John Caskey (August 19 1948) concerning Troy and with David Robinson (Feb. 8 1950) concerning Olynthos that by the late 1940s she was focused primarily on the publication of corpora of stamps of each major class and explicitly avoided committing to further publication of material on a site by site or, presumably, context-by-context basis. The publications of Delos (Grace & Savvatianou-Pétropoulakou 1970) and Tarsus (Grace 1950) did not have the same focus on closed deposits.

[28] Mylonas 1975; Knigge 1976; and Roberts 1986.

[29] E.g., Брашинский 1965; Манцевич 1975 (Solokha tumuli, excavated in the first decades of the 20th century, see, e.g., Farmakovsky 1914); Тереножкин & Мозолевский 1988 (Melitopol tumulus, excavated in 1954); Rolle *et al.* 1998 (Chertomlyk tumulus, first studied in 1763 with most of the excavation occurring in the 19th century).

[30] Parker 1992 includes most of the bibliography related to these and other wrecks. See too Lawall 1998a on the Porticello date, and Gibbins 2001 provides a new overview of Classical and Hellenistic shipwrecks.

[31] Dimitriu 1966.

[32] For Mirmekion, see Гайдукевич 1987; for Tiritake, see Кутайсов 1990. For short-lived sites, see, for example, Рубан 1979 and the collection of material presented by Крыжицкий *et al.* 1989.

[33] Williams 1978, 15-20 and 1979, 107-124; Zimmerman-Munn 1983, esp. 379-386.

[34] Vanderpool *et al.* 1961; Grace 1963; Grace 1974; the most detailed account of the revisions to the Rhodian chronology resulting from the Koroni excavations is found in a lengthy letter from Grace to Ingeborg Scheibler, dated May 30 1974, assisting the latter's study of lamps from the Kerameikos (Scheibler 1976).

[35] Зеест 1960, building on her earlier publications from the 1950s.

[36] Брашинский 1976, 1980, and 1984a. Лейпунская 1981 carries out a similar level of synthesis of the state of chronological knowledge while adding greater focus on typology.

by shapes from datable closed deposits (shipwrecks, graves, well deposits, etc.).[37] Even with the models provided by Зеест, Grace, Knigge and Koehler, the publications of isolated closed deposits in the 1930s-1980s tended to focus on the immediate material at hand from a single context, rather than linking multiple closed deposits together to form chronological sequences of amphora forms.

1990s to the present: Amphoras and archaeology on an increased scale

If the essential methods for the study of rarely or never stamped amphoras were well established by the 1980s, they took on much greater significance in the 1990s. There was an explosion of publications of Archaic and Classical amphora typologies and assemblages from the Black Sea region.[38] Especially significant among these in terms of breadth of material have been Александр Абрамов's and Сергей Монахов's publications through the 1990s, emphasizing synchronisms among forms (including the often wide range of contemporary variation within types), datable stamps, and other artifacts.[39] From the Black Sea region, too, starting in 1989, there was a greater emphasis on archaeologically defined groups of stamps for the purposes of proposing groups of names that should be in reasonable chronological proximity.[40]

This increased interest in publishing archaeologically defined groups of amphoras has also developed in the Aegean. Yves Grandjean's publication, in 1992, of the stratified assemblages from the Silen Gate excavations is the first example in the Aegean of publishing amphora profiles according to stratified groups.[41] The following year Yvon Garlan published broadly stratified clusters of amphora stamps from the Kounouphia kiln site on Thasos, and this provided an essential breakthrough for the Thasian stamp chronology.[42] Far more often, publications focus on single deposits or a series of isolated deposits, but even in such publications the quantity of amphora material being published has increased at an encouraging rate. Notable examples include Francine Blondé and her colleagues' publication of the amphoras without stamps from the "Valma" well on Thasos, Alan Johnston's publications from the terrace fills of the Aphaia temple on Aegina and the excavations at Kommos, Peter Callaghan's sequence of isolated deposits at Hellenistic Knossos, Ingrid Metzger's and Stefan Schmid's studies from Eretria, and Ioannis Akamatis' publication of well deposits at Pella.[43]

For the study of amphoras without stamps or "minor classes" of stamps, as with other classes of Aegean pottery, the closed deposit – the bigger the better – is still the dominant ideal.[44] Stratified sequences have never played an extensive role in chronological studies of amphoras, and one wonders if Homer Thompson's 'Two centuries...' still exerts unintended methodological influence.

Although the scale of amphora publication in the Eastern Mediterranean, including amphoras without stamps, has increased dramatically in the past decade, two major gaps in the research remain. First, most of the recent work has focused either on pre-Hellenistic amphoras or, for the Hellenistic period, on the stamps rather than the amphoras themselves. As noted earlier, the chronological study of the minor

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37 Grace 1971 and 1979a; Koehler 1978; Clinkenbeard 1982.

38 E.g., Рубан 1990 and 1991; Завойкин 1992.

39 Абрамов 1993a; 1993b; Абрамов & Масленников 1991; Монахов 1995/6; 1999a; 1999b.

40 See for examples, Conovici 1989; Avram 1996; Lungu 1999 and this volume.

41 Grandjean 1992. Numerous examples of a more stratified approach are readily found from Israel, perhaps growing out of the traditions established much earlier in Levantine archaeology as noted with Petrie's work in Egypt cited above. For an early example of such a publication, see Hamilton 1934; more recently, see Elgavish 1968 and 1974; Dothan 1971; Bennet & Blakely 1989; Stern 1995; and Rochman-Halpern 1999. Unfortunately, this published material has rarely been synthesized with existing scholarship within the Aegean or Black Sea regions.

42 Garlan 1993 and 1999a.

43 Blondé *et al.* 1991; Johnston 1990 and 1993; Callaghan 1992; Metzger 2000; Schmid 2000a and 2000b; Akamatis 2000.

44 For Hellenistic pottery more generally see the Hellenistic pottery conferences (*Α΄ΕλλΚερ*, *Β΄ΕλλΚερ*, *Γ΄ΕλλΚερ*, *Δ΄ΕλλΚερ*, *Ε΄ΕλλΚερ*) with their emphasis on graves and well-deposits as κλειστά σύνολα. Extensive necropoleis with amphora burials have not, unfortunately, received much attention. Kaltsas 1998 is the most thorough treatment to date of a northern Greek necropolis, Akanthos, but he omits drawings or post-excavation photographs of the amphoras themselves.

classes of stamps depends far more on study of the amphoras carrying the stamps, and this has not been undertaken for the Hellenistic period. As a result, there has been little progress in terms of defining the chronological developments of minor stamp classes, and even less concerning amphoras without stamps.[45] A second gap in the research stems from the fact that so much of the more synthetic work on developments of specific types has been carried out in the Pontic region. In this work there has been less attention to Hellenistic types, especially minor stamp classes and amphoras without stamps, since the imports to the Black Sea at this time seem considerably reduced both in terms of volume of finds and diversity of sources.[46]

And yet, the necessary evidence for filling these gaps is generally available from properly excavated and recorded sites around the Aegean (and elsewhere). The basic methodology – building a relative sequence of developing forms through stratified contexts and isolated deposits, pinned to an absolute chronology by associated finds and (where possible) historical circumstances – already has a strong foundation in past amphora research. The case study of the Nikandros group, which I present below, is intended to show the progress that can be made when these methods are applied to Hellenistic amphoras just as they have been already applied to earlier and later periods.

Archaeology and the Nikandros Group

When I began work on the Hellenistic strata at the Tetragonos Agora at Ephesos in 1999,[47] the Nikandros group was understood as follows. In 1970 Virginia Grace discussed the group in *Délos* 27.[48] For the development of the shape, she cited a jar with a monogram stamp, from Athenian Agora deposit E3:1, then dated to before *c.* 300 BC. Another jar, found in Agora cistern G11:1 closed early in the third quarter of the second century, carries the name Nikandros (Fig. 1). Grace dated the stamps of this group from Delos as possibly within the second half of the second century. Grace suggested linking this group to Kos, both on the similarity of the overall form of the amphoras to Koans and on account of the overlap of stamped names between the Nikandros group and the Koan corpus; others have agreed with this attribution.[49] Very little changed until Verena Gassner's 1997 publication of finds from a Late Hellenistic drain fill at Ephesos dated by the latest Rhodian stamps and accompanying fine wares to the last third of the second century BC.[50] The many examples of Nikandros group stamps and other fragments at Ephesos led Gassner to suggest that the Nikandros group might be local Ephesian production.[51]

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[45] One area of great progress, however, is in the Parmeniskos group thanks to Akamatis' publications (2000 and 1998)

[46] This gap is made clear by the fact that Монахов (1999a) devotes roughly 400 pages to pre-Hellenistic complexes and roughly 140 pages to the Hellenistic period.

[47] Overviews of the results of these excavations appear in Langmann 1990 and Scherrer 2001. Recent preliminary publications of pottery and other finds from the specific area under consideration here include Bezeczky 2001 and Kerschner *et al.* 2000.

[48] Grace & Petropoulakou 1970, 365-367.

[49] Avram 1989; Finkielsztejn 2000b, 210.

[50] Gassner 1997, especially pages 105-113; cf., Hayes 1999, 716, suggesting a closing date 170-150 BC. His arguments are weakened by the strong possibility that the eponym stamp of Kallikrates (Gassner 1997, no. 390) should be identified as the period V eponym, Kallikrates III. Although this particular die is only otherwise known from an example in the Benaki collection in Alexandria (unpublished, from Grace card files), Ariel & Finkielsztejn (1994, no. 59) assign another die of the same name with lunate epsilon and sigma to this third homonym. Nachtergael (1978, 52-53) notes the problem of distinguishing Kallikrates II (at Pergamon Deposit, Börker 1998, nos. 215-222) from III. Given that the Pergamon Deposit (period III) examples all show squared epsilon and barred sigma, it seems very likely that this Ephesos example should be assigned to Kallikrates III. Finkielsztejn (2001a, 195) proposes a date of *c.* 130 BC for Kallikrates III. In addition it is important to note that Hayes was not able to compare this deposit to other middle and late 2nd-century Ephesian assemblages: Liko 2001 and Ladstätter & Lang-Auinger 2001. Rotroff (2001, 614) notes the significant presence of earlier pottery in objecting to the presentation of this fill as chronologically homogenous, but she accepts the late 2nd-century closing date. Siebert (2002, 111) notes with skepticism the presence of 3rd-century Rhodian handles (see correction above) in a late 2nd-century fill, and objected to the use of what was absent to establish the closing date. So long as the wider date range of the material in the fill is recognized, the arguments from both what is present and what is absent remain valid for establishing the closing date.

[51] Gassner 1997, 107. Note that the reference to Mitsopoulos-Leon 1985 in Gassner's list of sources should refer to pages 247-251.

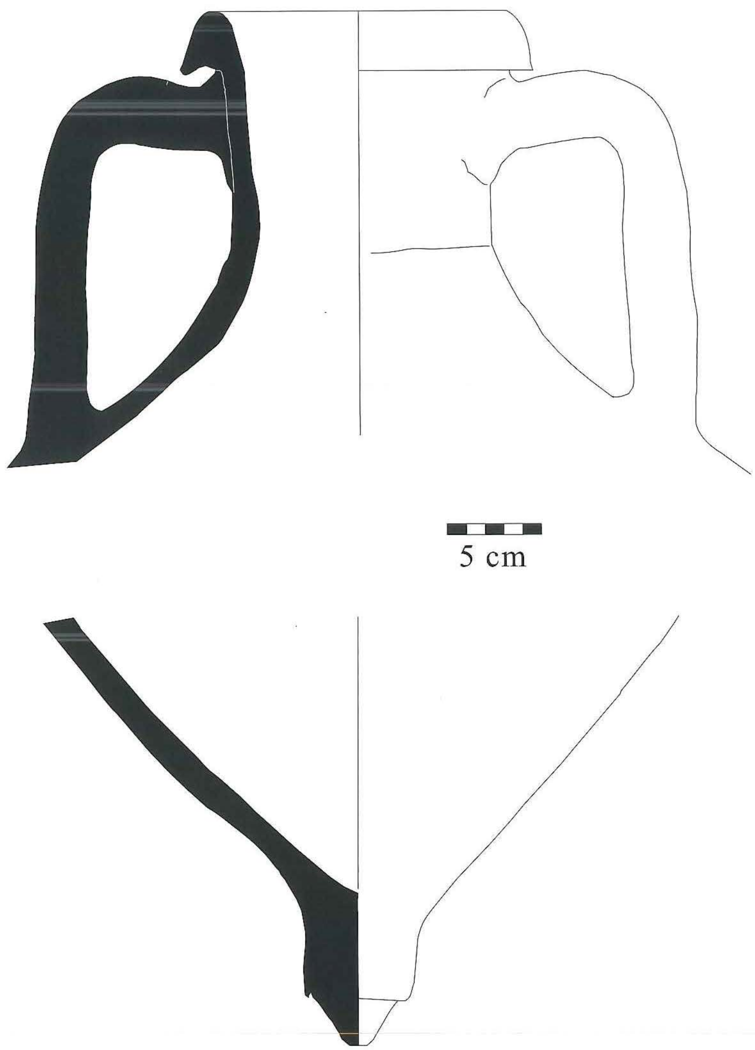


Fig. 1 Nikandros group amphora from Athenian Agora Deposit G11:1, with stamp naming Nikandros (P3980). Drawing after PD 1454-10 (scale 1:4), Courtesy American School of Classical Studies Agora Excavations.

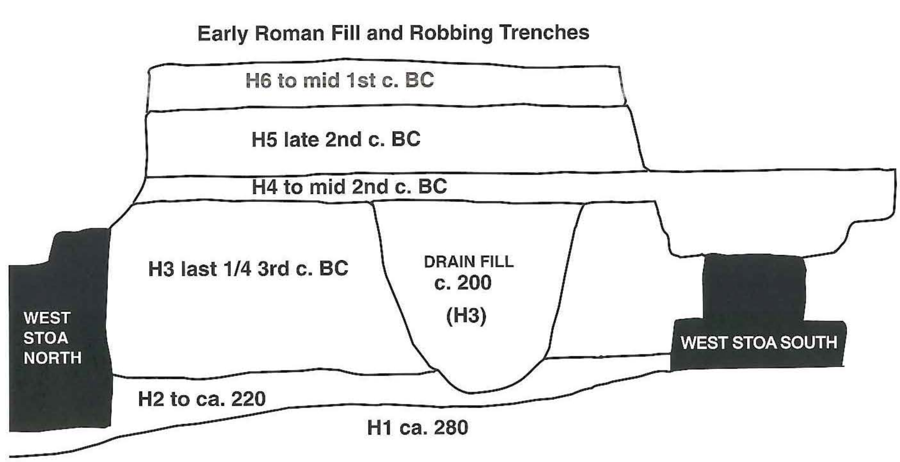


Fig. 2 Simplified section drawing, excavations of Tetragonos Agora, Ephesos, showing Hellenistic ceramic phases. Based on drawing provided by P. Scherrer.

While I agree with Gassner that the Nikandros group (or at least a large portion of the stamps assigned to this group) is Ephesian, my interest is chronology rather than place of manufacture. Gassner's work, with its focus (in terms of the Hellenistic material) on one context of admittedly long duration, could add little to the understanding of the Nikandros-group chronology: various different rim and toe forms appeared together in this fill as did various monogram and single-name stamps.[52] As Grace had already noted in the Delos publication, these name stamps could date to the third quarter of the second century or later. Grace's comments have not been improved upon despite Gassner's and others' more recent finds.[53]

Excavations along the west side of the Tetragonos Agora offer the possibility of refining the chronological understanding of the Nikandros group. The process starts with a point of methodology. Below Roman paving of the first century AD, excavation revealed a massive dumped fill. Below this fill appeared a series of stratified contexts associated with a roadway and stoa of the Hellenistic Agora (Fig. 2). The pottery here is often much more fragmentary than the pieces from the overlying fill. Given the reality of limited research time, it was necessary to choose either to study and publish the contents of the massive dumped fill, a closed deposit of the grandest sort, or to focus on the stratified sequences.

The choice between these options is driven by the gaps in Hellenistic amphora research noted above. The attraction of so many stamps in the Hellenistic period has meant that amphoras without stamps and parts of amphora away from the stamp itself (e.g., toes or rims) are poorly understood. So, within the large dumped fill, how would one put the pieces in the correct order? One could apply some generally accepted principles of amphora development,[54] but doing so would remove the possibility of testing these principles. One could seek parallels from other sites' datable contexts, but doing so would not let the Ephesos excavation results contribute *new* chronological evidence, and new evidence is very much needed! Given these circumstances, stratified sequences are the obvious starting point.

The Ephesian evidence

Tracing fragments of Nikandros-group amphoras upwards through the Tetragonos Agora stratigraphy reveals the group's development and the essential outline of its chronology. The earliest fragments belonging to the Nikandros group appear in the earliest post-refoundation activity at the site and, therefore, likely date to the first quarter of the third century (phase H1).[55] The rim is quite widely out-flaring without the turned-down profile that will appear in later contexts. The toes show a wide concave or hollowed base with a lipped conical profile to the toe itself (Fig. 3). The earliest construction fills, phase H2, are dated by frequent Rhodian and Rhodian *peraea* stamps of the 260s through 240s, with a few as late as the 220s.[56] At this point two contemporaneous rim forms appear: 1) widely projecting, but now turned down, with a rounded outer edge and undercut lower surface or 2) thicker, less projecting with less undercutting. In this same phase H2, the toes develop from a deep, wide hollow under the conical knob to a neatly stemmed piriform shape with a small hollow underneath (Fig. 4). Neither names nor monograms of the Nikandros group appear in these earliest levels. In the subsequent phase, H3, the majority of the datable material falls in the

[52] See note 50 above concerning the wide chronology of the material in this filling.

[53] Recent commentaries on the Nikandros group have not yet been able to take account of Gassner's volume (e.g., Garlan 2002, 188; Ariel 1999 and 2000; Finkielsztejn 2000), nor do they offer specific new discussion of the Nikandros stamp chronology.

[54] There are few such principles articulated. The "rule" most often cited is for types to become taller and narrower through time (Grace 1971, 75-76; Koehler 1978, 2-3 and 18; Clinkenbeard 1982, 251; cf. Johnston 1984, 208). While this is often true within correctly isolated types, one can never assume that any taller narrower jar is later than a more rotund jar of a different type. Within details such as forms of rims and toes, developments can only be defined on a type-by-type basis.

[55] Ephesos was refounded by Lysimachos shortly after 287 BC (Polyaenus 4.7.4 and 4.17; and Frontinus 3.3.7), so earliest Hellenistic fill and construction levels over the previous Archaic and Classical "village" should date late in the first quarter of the 3rd century, see Scherrer 2001.

[56] Latest datable material includes a Rhodian stamp of Timokleidas with stylized head of Helios, dated *c.* 220 by Finkielsztejn 2001a, 191, table 18.

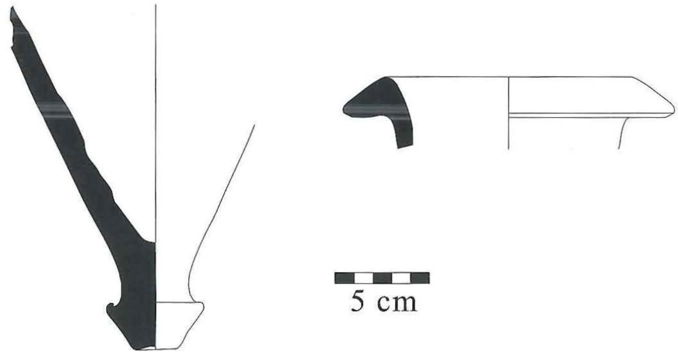


Fig. 3 Ephesos H1, early 3rd c. BC. Nikandros group rim and toe (scale 1:4). Drawing by author.

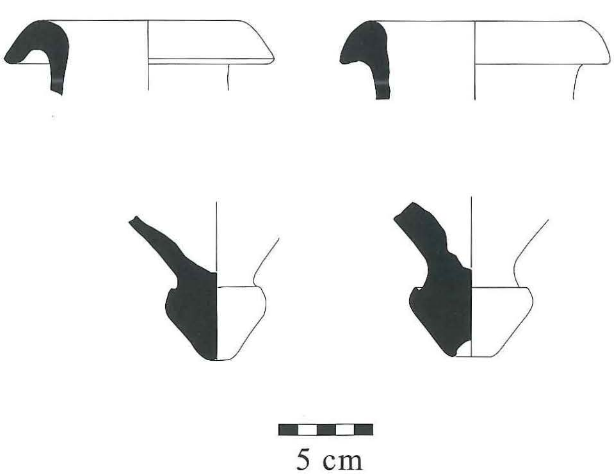


Fig. 4 Ephesos H2, *c.* 270-220 BC. Nikandros group rims and toes (scale 1:4). Drawing by author.

240s and 230s, with the latest datable material perhaps entering the earliest years of the second century.[57] Monogram stamps begin to be used here with a wide range of rim types. The wider, out-projecting rim from the previous period is now folded down more distinctly and there is often a crease under the rim. The thicker rim form from H2 is now more undercut. There are also two rim forms in this H3 phase that show a distinctly concave outer face and very sharp outer edge. One of these is quite everted and widely out-projecting. The other is noticeably thicker from top to bottom. In both cases, the lower edge of the rim tends to rest on (or very near) the handle. Finally, there is also a simple rounded rim that appears in this period, even with monogram stamps. In H3 fills, the new form of the toe has a flatter base, with no hollow, and a convex to concave profile from top to bottom (Fig. 5).

The chronology I have sketched so far already conflicts with what Grace suggested in 1970. Then, the monograms were thought to date from the late fourth century. This discrepancy is easily reconciled. The latest stamps in E3:1 are of Rhodian period I, and hence, in 1970, were thought to date largely to the later fourth century. After 1974 the transition to Rhodian period II dropped to *c.* 240, as marked by Thompson's group B.[58] Grace had suggested that the Nikandros group amphora in E3:1 should be earlier than a similar amphora in Thompson's Group B (P1113), and so Susan Rotroff placed E3:1 nearer the middle of the third century.[59] The Group B amphora, however, is of a different fabric

[57] The latest material includes a coin, possibly a Chian issue of the early 2nd century (C. Rogl and S. Karwiese pers. comm.).
[58] Grace 1974.
[59] Rotroff 1997, 444; the comparison between the two amphoras is first made in Grace & Petropoulakou 1970, 366.

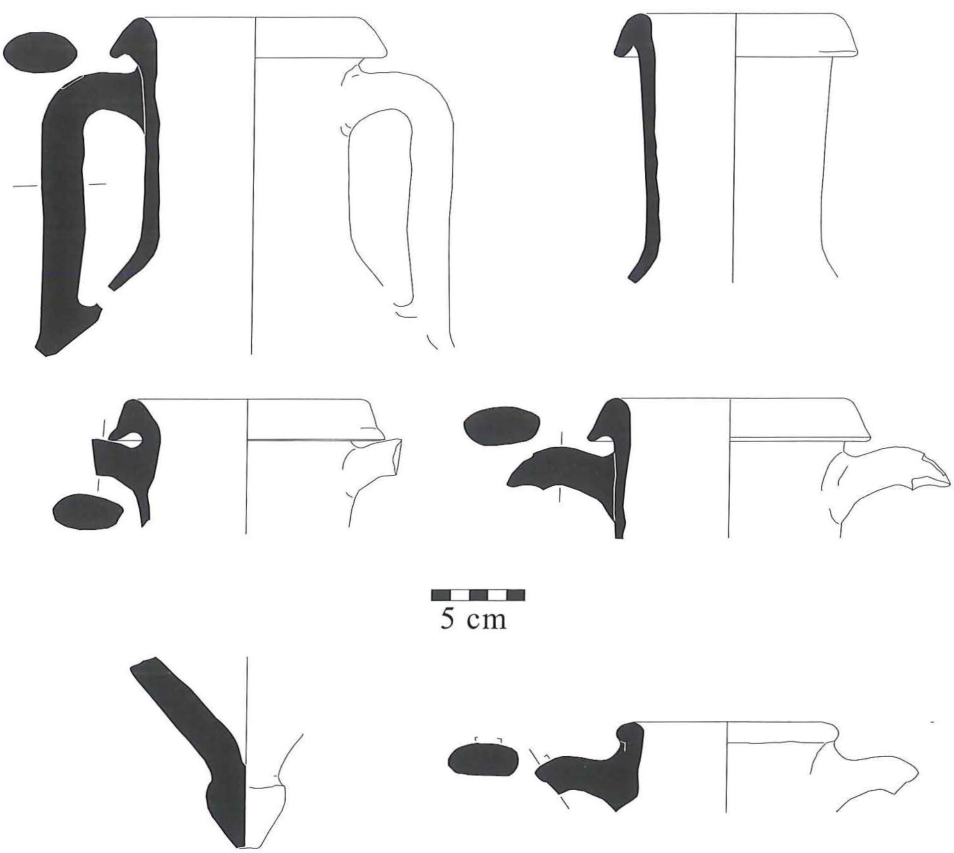


Fig. 5 Ephesos H3, late 3rd c. BC. Nikandros group rims and toes (scale 1:4). Drawing by author.

with a more angular, coarsely modeled toe than is common in the Nikandros group, and I hesitate to compare the two jars too closely. Placing both E3:1 and Group B in the third quarter of the third century would fit with all pottery types still preserved from both deposits and would bring E3:1 into line with the Ephesos stratigraphy. The association between Ephesian monogram stamps and Rhodian stamps of the 240s and 230s, as seen in Athens, is precisely echoed by the Ephesian stratigraphy.

Returning to Ephesos, then, there is only minor development in the rim forms visible in the strata of the first half of the second century, phase H4.[60] The sharp-edge rims, too, now show a creased underside, and the taller, thicker form (without a sharp outer lower edge) moves closer to the handle and is not so thick from interior to exterior face (Fig. 6). Rounded rims continue in this period without significant change in form.

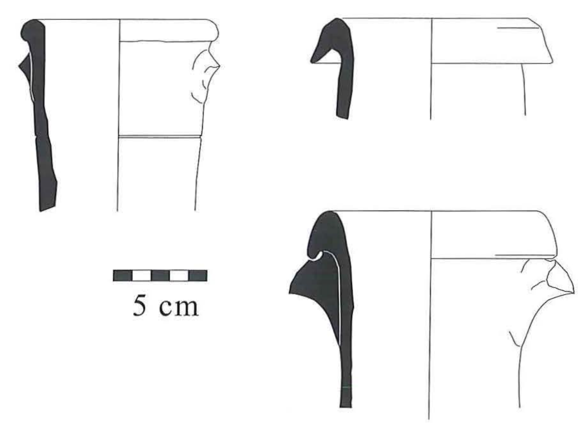


Fig. 6 Ephesos H4, to mid 2nd c. BC. Nikandros group rims (scale 1:4). Drawing by author.

[60] The latest material here includes a stamp of the Period III Rhodian fabricant Diodotos (Börker 1998, no. 436); later still are two possibly mid 2nd century coins (Rogl and Karwiese pers. comm.).

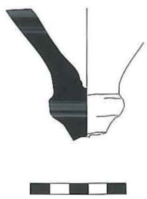
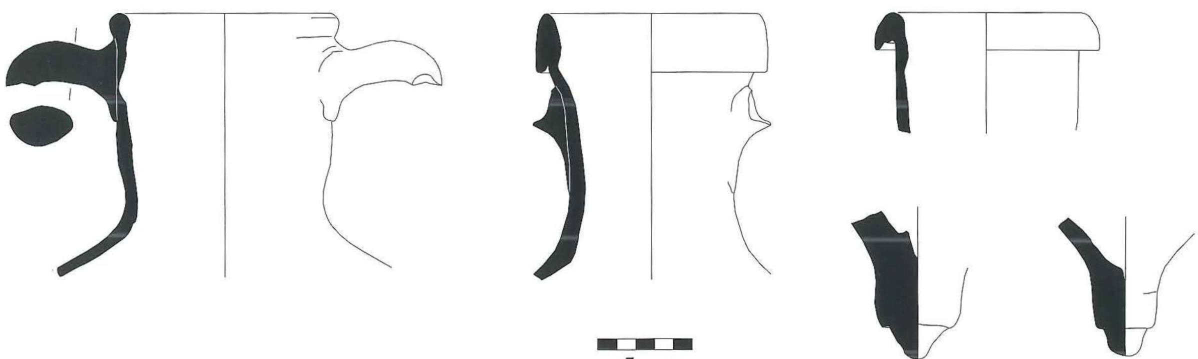


Fig. 7 Ephesos H5, late 2nd c. BC. Nikandros group toe (scale 1:4). Drawing by author.

Fig. 8 Ephesos H6, to mid 1st c. BC. Nikandros group rims and toes (scale 1:4). Drawing by author.



Stamps with names begin to appear in the next phase, H5, dated after the middle of the second century.[61] In the same general phase as the earliest name stamps, too, are the first stratified appearances of Ephesian mold-made bowls. There are no preserved developments in the rims in this period, but the toes show a more dramatic convex to concave, two-degree profile, at times giving the appearance of a rounded cuff of clay encircling a peg-like toe (Fig. 7).

Name stamps continue to appear in strata dated late in the second century and perhaps go on to the middle of the first century BC. These dates are required by the presence of early Eastern Sigillata A, white-ground lagynoi, now-frequent examples of Ephesian mold-made bowls, western Mediterranean amphoras, a Phoenician hole-mouth jar, and a Rhodian stamp of the fabricant Ierokles (II).[62] The rims in this period show a more vertical outer face than before and there is a new form that is quite tall and narrow in profile. Rounded rims seem more common, and there is a tendency towards a somewhat bulging neck, regardless of the specific form of rim. The most distinctive change for these latest Hellenistic forms is in the toe, where the new style has vertical upper sides and a pointed nub at the base surrounded by a distinctive cuff of clay (Fig. 8).

Evidence outside Ephesos

Finds of Nikandros-group amphoras at other sites can now be considered in light of the Ephesian sequence. Very few fragments of these amphoras, apart from the stamped examples, have been published. Even so, published jars and fragments and the more commonly published stamps provide necessary additional points of reference for the Ephesian evidence. External evidence is particularly available and wel-

[61] The date for this phase in the second half of the 2nd century depends primarily on its relative position over the strata of phase H4 and below those of H6.

[62] For the date of Ierokles II, see Finkielsztejn 2001a, 160; Grace 1962, 116, no. 8; and Mertens 1955, 84, no. 4, fig. 36, the latter two references being to late 2nd or early 1st-century findspots of this fabricant. For the dates of the western Mediterranean amphoras I thank Tamas Bezeczky, who is responsible for their publication (see his contribution to this volume and Bezeczky 2001, nos. 12 and 42); for information on the finewares, I thank Christine Rogl. The Phoenician hole-mouth jar is similar to the form published by Berlin 1997, 151-152, and 155-156, PW480, "present by HELL 2A (*c.* 125 BCE)".

Site/Deposit	Terminal or other significant Dates	Features of Nikandros group material
Corinth	146 BC with amphora imports increasing again *c.* 100 BC	5 Nikandros group stamps, including Nikandros and Menophilos
Jerusalem	145 BC with imports increasing again *c.* 100 BC	Menophilos
G11:1, Athenian Agora	*c.* 140 (V. Grace date)	Nikandros stamp on jar with Ephesos H6 style toe
Serapieion C dromos building fill (Delos)	*c.* 140 (V. Grace) or late 2nd century (Bruneau 1980)	Nikandros stamp
Gezer	Better chances for imports before 142 and between 134 and 125 BC	Melanos
Maresha	Before 112 BC	Ephesos H5 style toes, one H6 style toe; stamps of Melanos, Bion, and Arkhide(s?)

Table 1. Nikandros-group Stamps and Jar fragments from outside Ephesos in datable contexts of the second century BC.

come for the second half of the second century. The strata from the Ephesos Agora excavations of this period are not especially rich in amphora finds and there are few specific indications of specific dates dividing phases H4, H5 and H6. H5 should date later than the middle of the second century since these strata overlie the mid-century coins and stamps in H4. H6 continues well into the first century, but the specific transitional date between H5 and H6 is uncertain. Table 1 lists the sites and deposits outside Ephesos that provide useful terminal dates over the course of the late second century.

Corinth might provide secure evidence for the starting date for the name stamps, since the city was sacked in 146. Five names are known from Corinth, including Nikandros himself.[63] Unfortunately, Corinth cannot be treated as a secure fixed point. At least eleven of a published list of 50 Knidian stamps at Corinth date between 146 and 108, and another 39 fall between 108 and 86; a well deposit includes latest pottery of the late second or early first centuries BC; and other evidence, too, suggests continued life at Corinth between 146 and 44 BC.[64] Perhaps the early careers of the Nikandros-group names do date before 146 as indicated by these finds at Corinth; yet such an early date seems troubling with the first, and even then only rare, appearance of the name stamps at Ephesos *above* the strata with mid-century stamps and coins.

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[63] Nikandros (C-75-29); Exakestos (C-69-66); Menophilos (C-80-20) to be discussed further below; Nikanor (C-87-118); Charitos (C-91-3); compiled by V. Grace, listed here by the kind permission of G.D.R. Sanders. One example of a stamp, naming Sotairos, possibly attributable to the Nikandros group also appeared Schuchhardt's Pergamon Deposit (1895, no. 1318; Börker 1998, no. 595 expressing some uncertainty as to the attribution of the name to this group), but this could easily be one of many pieces gradually excluded from the "Deposit" over the past decades (see Börker 1998, nos. 532-536 and 562). The excluded pieces have all been Rhodian or Knidian stamps of known chronology, known to date far later than the rest of the group. Since the Nikandros group has not been datable, this particular stamp could not be candidate for exclusion.

[64] Williams II 1978, 21-23 especially note 29, listing the inventory numbers of Knidian stamps (the presence of stamps at Corinth later than 146 was already noted by Grace 1953, 119, note 7); see Romano 1994 for the well deposit. The well includes two examples of "tubular" amphoras (see Finkielsztejn 2000, 214) as well as seven Italian amphoras close in form to Lamboglia type 2. While a late 2nd century date seems likely for these amphoras, any degree of precision in their dates seems difficult. For further on the interim period at Corinth, see Walbank 2002 and 1997; Romano 1993; Pemberton 1989; Wiseman 1979, 491-496; Harris 1941, 156-8. I thank Benjamin Millis and Elizabeth Gephardt for useful advice and references.

The toe form associated with the name Nikandros further militates against placing his career before 146 BC. On the one hand, the Nikandros-stamped jar from G11:1 at the Athenian Agora (mentioned above as a cornerstone to Grace's Nikandros chronology), a deposit closed early in the 140s, would fit well enough with the Corinthian date of before 146. The closing date of G11:1 was based on the dates of the accompanying Knidian stamped amphoras.[65] But the toe from G11:1 is the late Hellenistic cuffed form of toe (Ephesos "H6 style") (see Figs. 1 and 8). A date in the early 140s for this jar is difficult to reconcile with the fact that the new form of toe does not appear in the Ephesos stratigraphy until well *after* name stamps first appear after the middle of the century. An alternative that would create a better fit between the evidence from Ephesos and from Corinth would be to place the Nikandros group stamps at Corinth at the very end of the second century, at which time there is a clear resurgence of activity even before the official foundation of the colony in 44 BC.[66]

Indeed, a later date for G11:1 is rendered more likely when other jars from the same deposit are compared with jars from other Agora contexts. For example, a Koan amphora from G5:3, a well deposit dated near the middle of the second century, is much wider with a significantly taller neck as compared with a Koan amphora from G11:1; it seems unlikely these are even roughly contemporary jars.[67] Likewise a jar related in form, but not in fabric, to Brundisian amphoras from G11:1 has a similar toe and with a moderately more rounded body compared with the jar of the same type, from C9:7 closed *c.* 100 BC.[68]

Evidence from Delos similarly supports a late closing date for G11:1 and, therefore, a late second-century date for the Nikandros group material at Corinth. At Delos, Nikandros appears in the *dromos* fill of Serapeion C. Grace placed the Knidian stamps from this fill early in period V only shortly after 146.[69] Phillipe Bruneau, however, has cited epigraphic evidence that an earlier dromos was still in use in the 150s BC and that dedications of sphinxes for Serapeion C occurred in the early first century BC.[70] Bruneau also places the accompanying finewares (with many mold-made bowls and white-ground lagynoi, similar to the assemblage one finds in Ephesos phase H6) in the late second or even early first century BC.[71]

If Serapeion C and G11:1 are both closed late in the second century, then Corinth may not, in this case, provide a secure *terminus ante quem* of 146 BC for this name. Instead, the Nikandros group at Corinth would fall in the period of renewed activity in the late second century. This line of argumentation, however, should be considered next in terms of another site where a mid second-century terminal date has been argued and where a Nikandros group stamp also appears: Jerusalem.

Recent publication of amphora stamps from the Jewish Quarter of the Old City in Jerusalem includes an example of a Nikandros-group stamp naming Menophilos.[72] This name is also attested at

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[65] Rotroff 1997, 453; detailed lists of Knidian and other stamps from this deposit are on file at the Athenian Agora.

[66] As documented by Williams II 1978, 21, note 29, and Romano 1994.

[67] The Koan jars in question is illustrated in Grace 1979b, fig. 56; the example from G5:3 is second from left; the example from G11:1 is third from left. Grace (notes dated 27 April 1959 and 27 September 1961) has suggested that the G5:3 jar was simply quite old when it entered that well, possibly from an earlier period of use fill, hence the much wider body as compared with the more up to date Koan example in G11:1. This is of course possible. Since there has never been a detailed study of the Koan amphora chronology either in terms of the stamps or the forms of the jars, the assumed residuality of the G5:3 jar remains simply a possibility; equally possible is that the closing date for G11:1 and the date of its Koan amphora are too early.

[68] The jar from C9:7 is illustrated by Grace 1979b, fig. 38, third from left. E.L. Will suggests (pers. comm. during the Athens conference) that these are Brundisian. The fabric, however, is a coarse, soft-fired, brown or dark grey with chunks of mudstone and other inclusions creating a lumpy surface (cf. the hard, very pale buff or white fabric of the stamped Brundisian jars, with smooth surface and readily visible small white bits on the surface). Furthermore, the fabric and the form continue in Athens and elsewhere in Greece long after the end of round-body Brundisian production in Italy (e.g., a fractional example from Robinson 1959, J50, 3rd c. AD).

[69] As reported by Marcadé 1954, 220 and repeated in Grace & Petropoulakou 1970, 366.

[70] Bruneau 1980.

[71] For the list of workshops represented in this fill see Laumonier 1977, 9; for the date of activity of the PAR monogram workshop and references to independently datable findspots, see Rogl forthcoming.

[72] Ariel 2000, 274, no. 31.

Corinth on a stamp found under a first-century BC pavement, and on Delos accompanied by very late second- or early first-century Knidian stamps.[73] For Jerusalem, the closure of the city to Aegean imports on religious grounds has been argued on the basis of the sudden disappearance of Rhodian imports *c.* 145 BC, as a result of the siege of the fortified Akra at Jerusalem by the Maccabees and the subsequent enforcement of Jewish law against the use of foreign pottery.[74] And yet, as with Corinth, the security of the Jerusalem *terminus ante quem* is open to considerable debate. For Jerusalem, the uncertainties lie both in the date of significant emphasis on the impurity of imported jars and their contents, especially if the jars are cleaned and new contents are present, as well as in the consistency of observance of such laws across the ritually diverse Jewish population.[75] Some jars may have entered the city at any time after 145, even if the general political and religious circumstances were sufficient to end consistent, large-scale imports. For both Corinth and Jerusalem there is an undeniable drop in amphora imports in the 140s BC. Both cities, however, share a resurgence of imports late in the second century. Finkielsztejn associates some late second-century foreign imports with the reign of Alexander Jannaeus (starting in 103 BC),[76] and a late second-century date would be appropriate for various non-Rhodian amphoras, published from both the City of David and Jewish Quarter excavations.[77]

Further evidence for late second-century or even early first-century name-stamping is provided by Donald Ariel's publication of a well-preserved example from Giv'at Yasaf near Akko.[78] The shoulders are more sloping than those of the G11:1 jar, and the rim, published in a poorly stanced profile-drawing of a jar with the same name from the Ephesos South Gate,[79] has the more upright outer face of the H6 rims (thicker variant) at Ephesos. The more rounded profile of the handle as compared with the Nikandros jar from G11:1 might also support a later date for the Giv'at Yasaf jar. Ariel suggests that the Giv'at Yasaf jar might date near the time (unknown) of the site's Hellenistic abandonment.[80] A Dressel 24-predecessor rim fragment from the same site might pull the date of this abandonment to *c.* 100 or slightly later.[81] This amphora type appears in the final phase of Hellenistic building at Ilion and in massive dumped fills shortly thereafter following the sack of that city by Gaius Fimbria in 85 BC. Nikandros group fragments from that same post-Fimbria clean-up fill use the very flat H6 style rim and the cuffed toe.[82] The same Dressel 24-predecessor rims appear at Ephesos in phase H6.

Assigning the Nikandros group name stamps to the late second-century "windows of opportunity" at Corinth and Jerusalem fits well with the indications provided by the stratigraphy at Ephesos and other associations among finds at Athens, Delos, Giv' at Yasaf and Ilion. Without the mid-century termini from Corinth and Jerusalem, we are still left with little indication for when such stamps appear over the latter half of the second century. The most useful evidence in answering this question comes from the sites of Gezer and Maresha in Israel.

A Nikandros-group stamp naming Melanos is published from Gezer,[83] a site likewise associated with the debate concerning amphora imports and ritual purity as well as the various conflicts of the later second century in that region. Finkielsztejn has argued in this case, too, that gaps in the record of Rhodian imports correspond well with periods

[73] The example from Corinth is C-80-20, findspot information from I. Tzonou-Herbst. The example, from Delos (TD 6552) is unpublished, information from card files of V. Grace; another example from Delos is published by Grace & Petropoulakou 1970, E245, with illustration, pl. 61, showing very upright (late form) outer face of rim.

[74] Finkielsztejn 1999 and 2001a, 171-2.

[75] See Ariel & Strikovsky 1990 and Ariel 2000, 276-280.

[76] Finkielsztejn 1999, 28 and 2001a, 170.

[77] Ariel 1990, pl. 2, nos. 2, 3, 6, and 7; Avigad 1970, 139, pl. 34B (an amphora of Lamboglia type 2).

[78] Ariel 1999, 28-89, no. 13.

[79] Gassner 1997, no. 401.

[80] Ariel 1999, 29.

[81] Rochman-Halpern 1999, 104, fig. 18.9.

[82] This material from Ilion will be published in the final report on the excavations of the western Sanctuary area in the *Studia Troica* monograph series. The amphora type in question is published by Finkielsztejn 2000, pl. 109f from Maresha.

[83] Macalister 1912, no. 200. During a visit to the Rockefeller Museum in Jerusalem in December 2002, facilitated by Donald Ariel and Allegre Saraviego, I studied a large fragment of the top of a Nikandros group jar of, by now, unknown provenance with the preservation of the letters essentially matching the reading by Macalister.

of Jewish control of Gezer between *c.* 142 and 134-132, and again after *c.* 125.[84] As with Jerusalem, there are some imports at Gezer perhaps at the very end of the second or beginning of the first century BC. In the case of Melanos, however, this latter period is not very likely, since the name also appears at Maresha, a site destroyed in 108 following an earlier attack in 112 or 111.[85] If the Melanos jar was imported to Maresha before 112, then the more likely period for the Gezer amphora is between 132 and 125. The same period is frequently attested among the Rhodian stamps at Maresha,[86] thereby supporting such a date for Melanos. A starting date for Nikandros name stamps is therefore indicated as late in the third quarter of the second century.

Finds from Maresha also help date the transition from H5 to H6 at Ephesos in terms of amphora forms. The Nikandros-group stamps at Maresha do not survive with larger fragments of the relevant jars; however, there are large fragments and nearly complete jars (without stamps) of this type perhaps to be assigned near the latest phase of the site's habitation. From these finds, it is clear that the essential form of the G11:1 Nikandros jar was in use before 112 BC, since a nearly identical unstamped jar has been found at Maresha.[87] The toe of the jar from Maresha does not yet show the distinctive cuff apparent in other H6 toes at Ephesos. And yet, the majority of the Maresha toes may be placed in a sequence of development immediately before the H6 style toes at Ephesos. There is indeed one fragment at Maresha that does show the cuffed H6 form.[88] The H6 style toe was therefore introduced within the last quarter of the second century. Precisely as was seen at Ephesos, the name-stamps began first and the shift to the H6 toe followed. Nikandros names are common at Maresha, but the new form of toe was only just introduced *c.* 112.

Table 2 sets out the stratified phases at Ephesos in terms of these data from other sites. The addition of evidence from Israeli sites and the evidence from Ilion allows the insertion of a division in phase H5 between the introduction of name stamps and the use of a toe form, just anticipating the H6 form at Ephesos. Further refinement of the group's chronology (e.g. specifying chronologically significant packets of names) depends on close study of the fabrics of all potential group members to determine whether all names assigned to this group indeed belong to the same amphora class. Further progress also depends on a much more thorough study of the stamp dies and their associated rim, toe, and handle profiles (where available). Such a detailed study of the "intrinsic" dating criteria for these stamps goes far beyond the scope of this paper. Further reports of finds from stratified contexts or sites with convenient destruction or foundation dates would also be useful.

Methodological Implications and Remaining Problems

Consider the changes suggested in the foregoing case study. The dates for monogram stamps have been moved from the late fourth century to the later part of the third and into the second century. The name-stamps have shifted from a date in the third quarter of the second century date to starting, probably, late in the third quarter, but being more often found near the end of the second century and into the first century. For the forms we have moved from having no explicit discussion of the development to multiple stages in the development of the toes and a general sense of the evolution of the rim form.

These chronological refinements for the Nikandros group depend, first, on moving upwards through a chosen series of strata thereby allowing the rough coordination between changes in form and externally datable artifacts (especially coins and Rhodian

84 Finkielsztejn 2001a, 170.

85 Finkielstejn 2002a, 231-232; 2001a, 170; cf. Kloner 2001, 111 placing the destruction of the city in 112/111. I am most grateful to Gérald Finkielsztejn for permission to mention material from his 1993 thesis. The stamp of Melanos is published in Finkielsztejn 1993, 424, Ni4, pl. 47.29.

86 Finkielsztejn 2002a, 231.

87 The well-preserved Nikandros group jar is published in Finkielsztejn 1993, 423-424, Ni1, pl. 50). These finds from Maresha are the subject of an extended (and long-since completed) report by Finkielsztejn awaiting publication.

88 These observations are based on a brief study of the Maresha amphora finds in the Romema storeroom in Jerusalem in December 2002, generously facilitated by Gérald Finkielsztejn, Donald Ariel, and Ada Asoudri.

Phase of development	Dates from Ephesos	Supporting evidence and other comments
H2	*c.* 260s – 220s by Rhodian handles	no stamps
H3	to *c.* 240s – *c.* 200 by Rhodian handles	monogram stamps starting *c.* 230, date supported by E3:1 in Athens
H4	to mid 2nd century by coins and Rhodian handles	monograms continue
H5	mid to late 2nd century	name stamps start in the 130s according to evidence from Gezer and Maresha.
Late H5	late 2nd century, but not clearly distinguished in the sequence at Ephesos	120s-110s – taller toe but without cuff, continued name stamps according to evidence from Maresha
H6	*c.* 115(?) to *c.* 50 BC	Name stamping continues (finds in Corinth and Jerusalem). The H6 toe appears by 112 (Maresha, and G11:1 in Athens). The flattened H6 rim does not appear so early, but does appear before 85 BC (Fimbrian context at Troy)

Table 2: Coordinating Ephesian evidence with indications from other sites.

stamps). By moving upwards through the strata it was readily apparent which forms represented new developments, and which were either residual or earlier forms continuing in use.[89] This methodology also allowed the recognition of accompanying amphora forms of other types that might prove useful in making connections with dated assemblages at other sites. Further refinement of the chronology depended on the fortuitous publication of stamps or well-preserved jars from other sites.

The importance of a stratigraphic study of amphora material, preferably in collaboration with stratigraphic study of the other artifacts as well, is made clear when one considers that previous publications of Nikandros group material has been unable to advance the question of the group's chronology beyond what Grace pronounced thirty-three years ago. Gassner perhaps had the most likely opportunity; however, the Hellenistic amphora material only came from one deposit. Multiple deposits, preferably stratified, provide the key to progress. The value of this approach has been clearly demonstrated both by Сергей Монахов's work using Black Sea assemblages and by Yvon Garlan's gradual accumulation of evidence from multiple workshops and dumped fills in Thasos town itself.[90]

Obviously, multiple closed deposits and stratified contexts are not always available. They more often appear, however, when an interest in studying amphoras from such contexts is made known to those overseeing the excavations. So long as Hellenistic amphora stamps are considered the only part of the amphora worth saving, and so long as these are considered by the non-specialist to be intrinsically datable, there is no pressure to apply archaeology to amphora fragments (i.e. keeping track of where amphora fragments are found and preserving them just as at least some sample of other "diagnostic" sherds tends to be saved).

It must be admitted that the sorts of chronological refinement I have offered in this paper will never approach the year-by-year sequences beginning to be achieved for Rhodian and Thasian

[89] For recent, quite rigorous discussions of residual pottery, see Guidobaldi *et al.* 1998.

[90] Монахов 1999a and 1999b; Garlan 1999a and 1993 in particular.

stamps.[91] For most archaeological situations, however, even artifacts datable to half- or quarter-centuries are extremely welcome for determining a site's history. Even for the application of amphora evidence to questions of economic history, the need for hyper-precision offered by some stamp series may be questioned. An extended discussion of this issue is beyond the scope of the present paper, but in the context of a conference bringing together researchers of the Hellenistic and Roman periods, a brief point may be drawn from the later periods. For the Roman period, especially the later Empire, the lure of stamps is considerably reduced, and the concomitant expectations for chronological precision are greatly reduced. In that field there has nevertheless been considerable discussion, debate, and demonstrable progress concerning economic history in terms of amphoras. The same can be said of the late eighth through sixth centuries BC, in terms of Etruscan trade with the Aegean, in Italian and French scholarship; here again the amphoras are studied simply as broadly datable pots. Hence the impossibility of year-by-year precision for "minor classes" and unstamped amphoras does not provide a scientifically defensible reason to ignore Hellenistic amphoras outside the major stamped classes.[92]

With sufficient study, Hellenistic amphora fragments, rather than being simply potential bearers of independently datable stamps, can serve as valuable "diagnostic" pottery, both for archaeological chronologies and as evidence for economic history.

[91] See Avram 1996 and Finkielsztejn 2001a. There is, it should be noted, some skepticism as to the possibility of accuracy in assigning such precise dates to amphora stamps, e.g., see Debidour 1998.

[92] For significant uses of broadly datable amphoras for economic history outside the Hellenistic period, see for examples Tomber 1993; Reynolds 1995; Gras 1985; Albanese Procelli 1997. For economic studies using various levels of chronological precision in the Hellenistic period, see for examples Finkielsztejn 1995 and 2001b; Lund 1993b; and see discussion in Garlan 1999b.

Fundamental Links in the Economic Chain: Local Ports and International Trade in Roman and Early Christian Cyprus[1]

John R. Leonard & Stella Demesticha

Introduction

Background

Although past archaeological studies in Cyprus both on land and in the sea have provided an abundance of ceramic, especially amphora, evidence that has greatly contributed to our understanding of the island's regional trade connections during the Roman and Early Christian (or Late Roman) periods (mid first century BC to seventh century AD), we have only just begun to grasp the workings of the Roman province's local economy. The Cyprus Coastal Survey, however, the primary author's doctoral study,[2] has in recent years recorded coastal maritime sites representative of the chain of local ports that played a fundamental economic role in Roman Cyprus and the trade of domestic and foreign goods along the Cypriot south coast. Presented here are the sites of "Dreamer's Bay" (*Akrotiri-Vounari tou Kambiou*) on the southern littoral of the Akrotiri Peninsula and Alaminos-Latourou Chiftlik *c.* 13 km west of Cape Kiti (Fig. 1).[3]

Dreamer's Bay has previously been identified as the site of a settlement that flourished in the fifth and sixth centuries AD,[4] while Alaminos-Latourou Chiftlik was recorded by H. Catling in 1959 as a Cypro-Geometric cemetery and Hellenistic-Roman settlement (Cyprus Survey Archives, Cypriot Department of Antiquities). Both sites contain extensive surface scatters of broken pottery consisting primarily of transport amphorae. The amphora remains at Dreamer's Bay represent various types and origins, but a predominant type there are Late Roman 1 (LR1) amphorae. At Alaminos-Latourou Chiftlik the situation is somewhat different, as virtually all the ceramic material to be seen in the scatter of surface pottery along the site's seaboard belongs to LR1 amphorae.

Since 1999, the present authors have combined their efforts to begin re-examining the surface pottery at Dreamer's Bay and Alaminos-Latourou Chiftlik primarily for the purposes of reassessing the date of the Dreamer's Bay site and determining the nature and relatedness (or lack thereof) of the two sites' respective LR1 assemblages. In addition, a ceramic waster from Dreamer's Bay[5] and the markedly homogeneous character of the LR1 scatter at Alaminos-Latourou Chiftlik have led us to question

[1] The authors would like to thank certain individuals for their encouraging, collegial support of our research, including especially in the Cypriot Department of Antiquities Director S. Hadjisavvas, D. Pilides, and G. Georghiou. We also express our deep appreciation to G. Hennings and F. and A. Garrod, who through the years have greatly facilitated our access to Dreamer's Bay and provided invaluable other assistance. We owe a particular debt of gratitude to F. Haggerty for his kind permission to disseminate results of his Akrotiri and Dreamer's Bay surveys, as well as for sharing his excellent aerial photographs. Other old and new friends also came through, with A. Sacorafos once again providing essential logistical support, A. Hooton finding time to prepare superb illustrations, and S. Fox acting as anchorwoman, as usual, during the final throes of manuscript prep. Lastly, we offer our sincere thanks to the organizers of the Danish Institute's memorable amphora colloquium, J. Lund and J. Eiring, for their kind invitation to contribute to the proceedings.

[2] Leonard 2004 forthcoming.

[3] The Akrotiri site's official toponym, Vounari tou Kambiou, is superseded here by the more familiar "Dreamer's Bay", a local name which is almost universally employed and under which the site was first published (Heywood 1982).

[4] Heywood 1982, 169-171.

[5] This waster comprises part of the comparative collections of the Cyprus American Archaeological Research Institute (CAARI) in Nicosia.

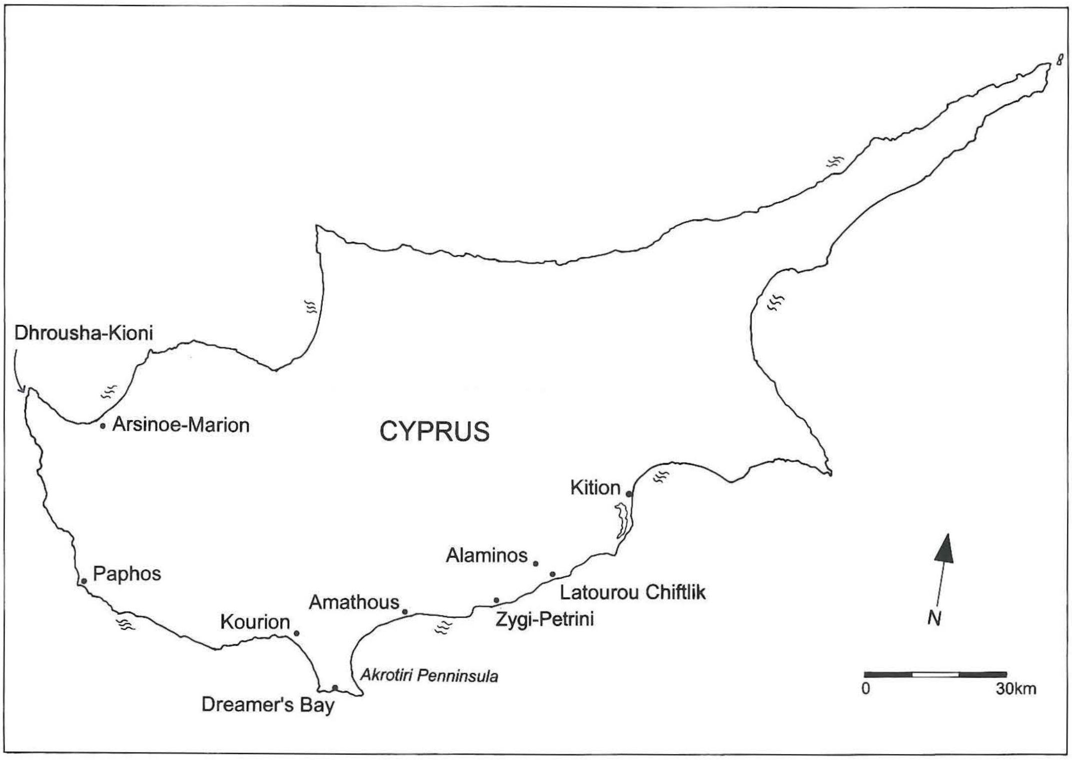

Fig. 1. Cyprus: ancient port sites mentioned in the text (A. Hooton).

whether these two sites were centers for the local production of LR1 amphorae.

Although the results of our surface investigations at Dreamer's Bay in 1999 and 2003 and Alaminos-Latourou Chiftlik in 2002 and 2003 should be considered preliminary, and petrographic analyses on ceramic samples collected at the two sites are ongoing, several points are already noteworthy. At Dreamer's Bay, our confirmation of ceramic material from Late Hellenistic and Early to Mid-Roman times, including examples of the distinctive "pinched-handle" amphorae of the first to fourth century AD,[6] now suggests that the supposedly late, single-period site was instead an active Hellenistic, Roman and Late Roman commercial port with local as well as foreign connections. Dreamer's Bay, which may also have been an amphora production center, was probably the port of the long-obscure "Kourias" or "Kargaiai", mentioned by the Augustan geographer Strabo and the anonymous author of the *Stadiasmus sive Periplus Maris Magni* respectively, in their Roman-period descriptions of Cypriot coastal places.[7] Alaminos-Latourou Chiftlik, on the other hand, was a small rural settlement or *villa rustica*, not included in textual accounts of ancient Cyprus, whose inhabitants appear to have participated – at least during Late Roman times – in the *cabotage* of local agricultural products shipped in LR1 amphorae. Small and medium-sized coastal sites like these are increasingly being recognized as essential primary evidence for the study of ancient Mediterranean economic practices.[8]

[6] The designation "pinched-handle" was first attributed in print to these amphorae by Leonard (1995a), following the survey of a western Cypriot anchorage at Dhrousha-Kioni where the type was found represented in great number. For subsequent use of the term, cf. Lund 1999, 10, n.40; 2000b, esp. 565, n.1; Rauh & Slane 2000, 325-328. Recently, the origin of the designation has become confused: cf. Rauh & Will 2002, 49, n.6. Although Leonard should probably apologize for taking liberties with the traditional nomenclature (e.g. Zemer 41, Mid Roman 4, Mau XXVII/XXVIII), he, like others, finds the descriptive term "pinched-handle" useful as it emphasizes the jars' most distinctive feature.

[7] Strabo 14.6.3; *Stadiasmos* 303.

[8] Cf. Horden & Purcell 2000.

Dreamer's Bay

The ancient site at Dreamer's Bay lies within the confines of the British RAF Akrotiri Base on the southern littoral of the Akrotiri Peninsula, west of modern Limassol (Figs. 2-3). Akrotiri's environmental setting has been markedly dynamic and changeable through the ages, especially during the last two or three millennia. The southern area of the now squarish peninsula was originally a roughly triangular islet separated from the mainland by a wide navigable channel. By Late Hellenistic or Early Roman times, however, alluvial silt flowing from the mouths of the flanking Kouris and Garyllis rivers, in combination with sediments deposited through eastward-flowing longshore currents, had created a tombolo joining the islet to the mainland with massive sand bars. Whether these sand bars had already accumulated to the point of projecting above sea level by Early Roman times, or constituted flooded reefs that only emerged to form dry land later in the Roman period, remains undetermined, but by the Late Roman era ships were probably no longer able to navigate unobstructed through the former strait.[9]

During a geological study of Akrotiri's low western terrain in the late 1950s, Late Roman pottery was unearthed at a depth of *c.* 10 m below the present ground level, which generally stands less than one meter above sea level.[10] Furthermore, commercial gravel quarrying on western Akrotiri in the 1970s struck the possible remains of a Hellenistic or Roman shipwreck, consisting of stamped amphora handles of supposed Pergamene origin and the headless marble statuette of a draped Aphrodite.[11] Depending on how one reconstructs the palaeoenvironmental setting, the ship carrying these items may (for whatever reason) have sunk in the strait's increasingly choked waters or run aground on a nascent sandy shoreline.

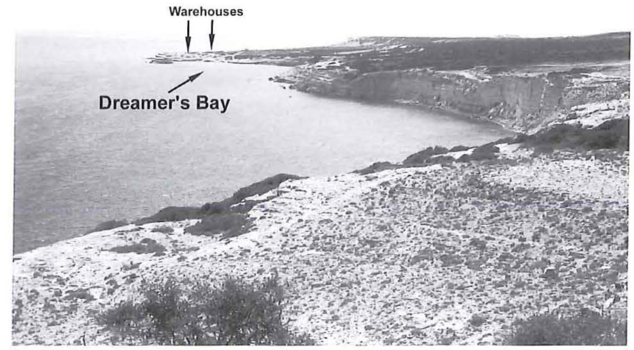

Fig. 3. Dreamer's Bay, Cyprus (J.R. Leonard).

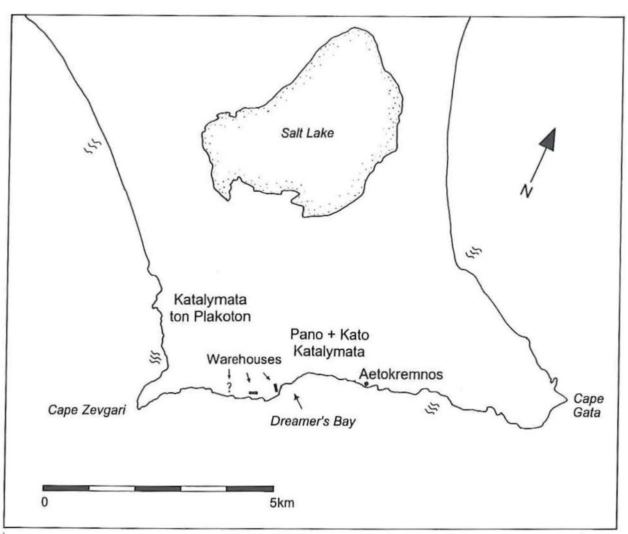

Fig. 2. Akrotiri Peninsula, Cyprus (A. Hooton).

The eastern side of the Akrotiri Peninsula did not form as quickly as the western and remained at least partially open to the sea until some time in the Middle Ages. Following the closure of the peninsula's interior to the open sea, a salt lake, still visible today, formed in the center of the low-lying tombolo.

It is important to consider the environmental setting of the settlement at Dreamer's Bay in the Hellenistic and Roman periods, as it may have had great impact on the site's relations with other settlements along the Cypriot south coast. At present we cannot be certain whether or not there was a road connecting the southern tip of the incipient Akrotiri Peninsula to the mainland, since no traces have been discovered. Nevertheless, the western

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9 For Akrotiri's paleomorphology and archaeology, including bibliography, cf. Leonard 2004 forthcoming..

10 Bear & Morel 1960, 55.

11 Karageorghis 1978, 884, figs. 19a-b. No actual ship's timbers are mentioned in the report as having been recovered during the quarrying operations.

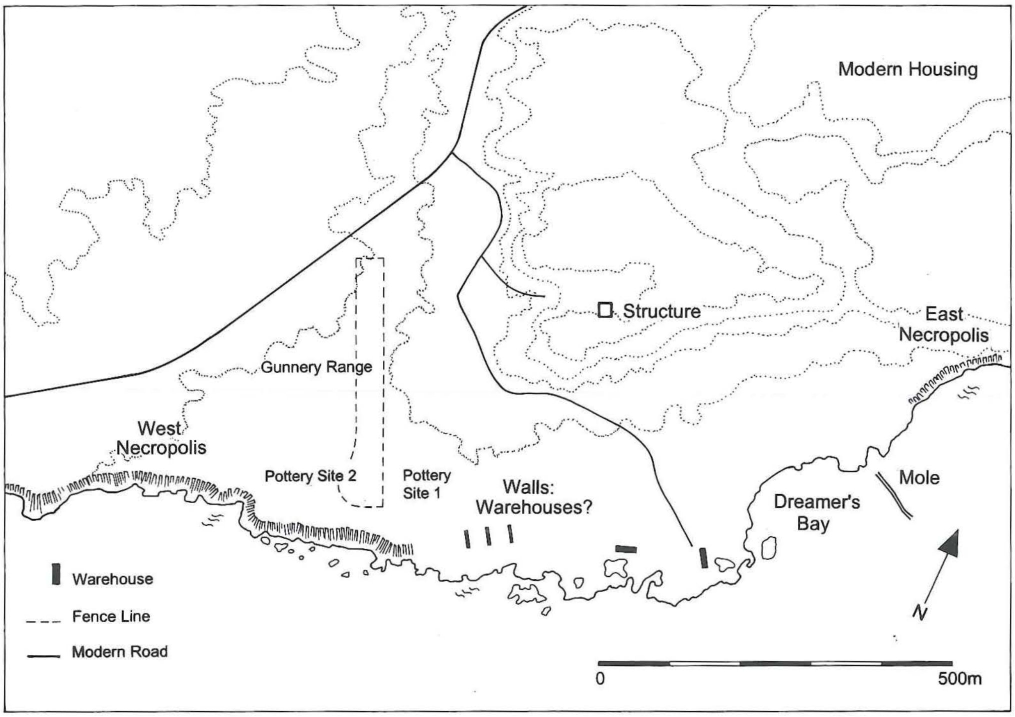

Fig. 4 Dreamer's Bay, site plan (A. Hooton).

central portion of the peninsula was in all likelihood still, at least occasionally, washed by the sea. Ships or coasting craft would therefore have been essential to the residents of the Dreamer's Bay site and neighboring inland settlements on the former Akrotiri islet to maintain reliable commercial or other contact with the outside world.

Textual references to the Akrotiri Peninsula first appear in the Roman period. Strabo describes a place called Κουριάς that lies west of Amathous and is "peninsula-like" (χερρονησώδης).[12] Pliny provides only the Latinized name *Curias* in his first-century AD enumeration of coastal places,[13] while the geographer Ptolemaios in the second century writes Κουριάς 'άκρα (i.e. Cape Kourias).[14] The *Stadiasmos*, however, an anonymous text probably dating to about the mid-fourth century AD, calls the place Καργαίαι and records it as being a cape or promontory ('ακρωτήριον) with a harbor (λιμήν), an anchorage ('ύφορμος), and a supply of fresh water.[15]

The *Stadiasmos* passage is perhaps the most intriguing, because its description of a harbor appears to reflect the actual topography of Dreamer's Bay. The site at Dreamer's Bay is one of four Roman or Late Roman settlements on Akrotiri Peninsula, including Pano and Kato Katalymata north of the bay and Katalymata ton Plakaton to the northwest (Fig. 2).[16] Dreamer's Bay, however, seems to be the only ancient site on Akrotiri Peninsula that contains the architectural remains of a harbor.

The Dreamer's Bay site covers an area of at least ten ha surrounding the small bay and includes an eastern necropolis, traces of an adjacent rock-cut roadbed, long rectangular foundations that probably represent seaside warehouses, at least one building on the summit of the ridge overlooking the bay, a western necropolis, the aforementioned surface scatter of pottery that interconnects all these areas, and within the bay itself the submerged remains of an ashlar-built breakwater (Figs. 4,5).

H. Heywood described the antiquities at Dreamer's Bay.[17] F. Haggerty, however, also a British ama-

12 Strabo 14.6.3.

13 *NH* 5.129-131.

14 Ptol. 5.14.1-7.

15 *Stadiasmos* 303; Müller 1855; On harbor terminology used in the historical sources, *cf.* Leonard 1997. On the date of the *Stadiasmos*, *cf.* Leonard 2004 forthcoming.

16 Heywood 1982, 162 [map], 174.

17 Heywood 1982, 169-71; *cf.* McGarr 1995.

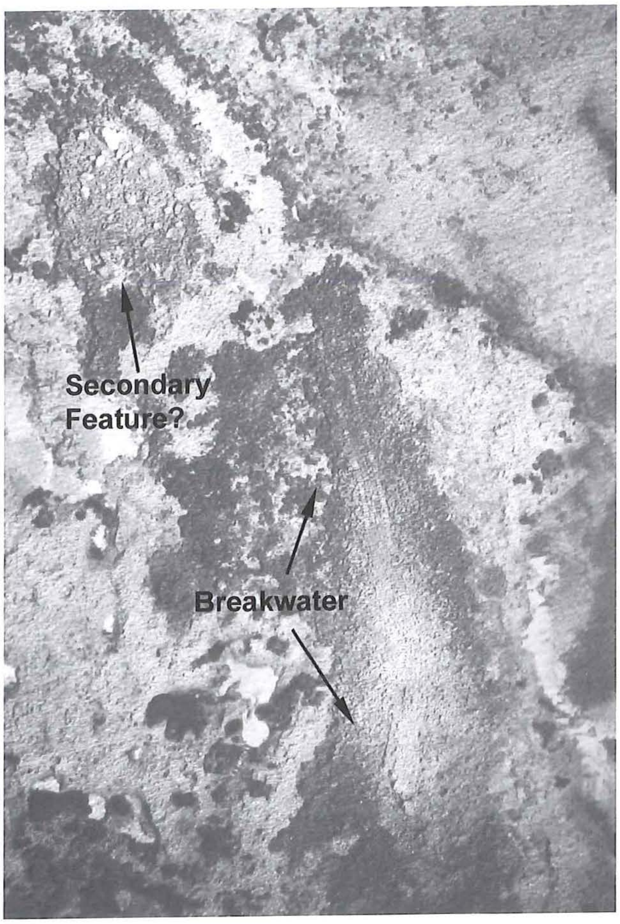

Fig. 5. Aerial photograph of ancient breakwater, Dreamer's Bay (F. Haggerty).

teur archaeologist, offers further significant details in his own unpublished, undated report. Haggerty examined various ancient sites on Akrotiri Peninsula but especially that at Dreamer's Bay, where he cleaned and recorded the submerged breakwater during the period from 1984 to 1989 (Fig. 6).

The protective harbor wall follows a NW-SE orientation with its northern preserved end *c.* 40 m offshore.[18] The alignment of the wall is not straight, but exhibits a slight SE-S-SE-S zig-zag in its seaward end. The masonry that comprises this manmade structure consists of alternating thick and thin courses of ashlar blocks,[19] which may have been laid on an existing natural reef.

The breakwater's preserved length is *c.* 165 m, while its width increases seawardly from *c.* 5 m near the shore to *c.* 10 m at its southern end.[20] The ashlar masonry underwater at Dreamer's Bay invokes

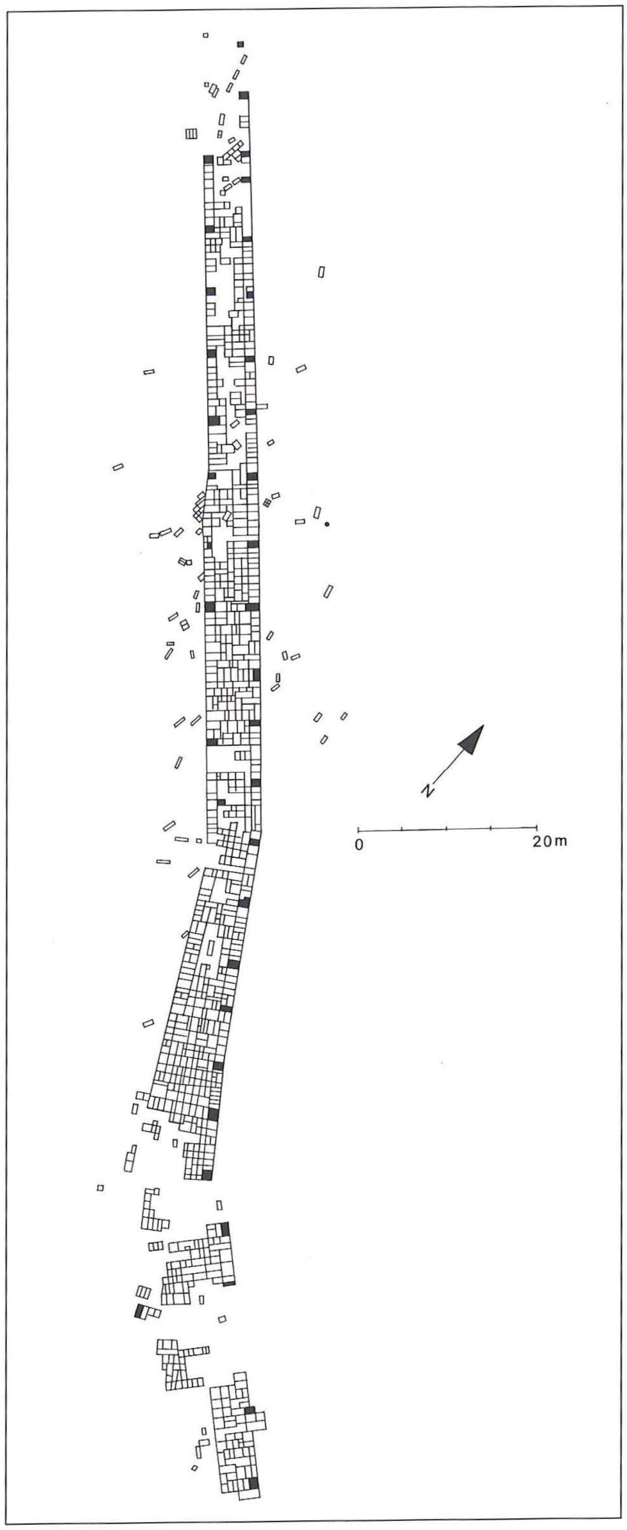

Fig. 6. Ancient breakwater, Dreamer's Bay, top plan (F. Haggerty, A. Hooton).

[18] Haggerty, 5, 27-28, and Appendix A, p. A-4.
[19] Haggerty, 28, 31.
[20] Haggerty, 27.

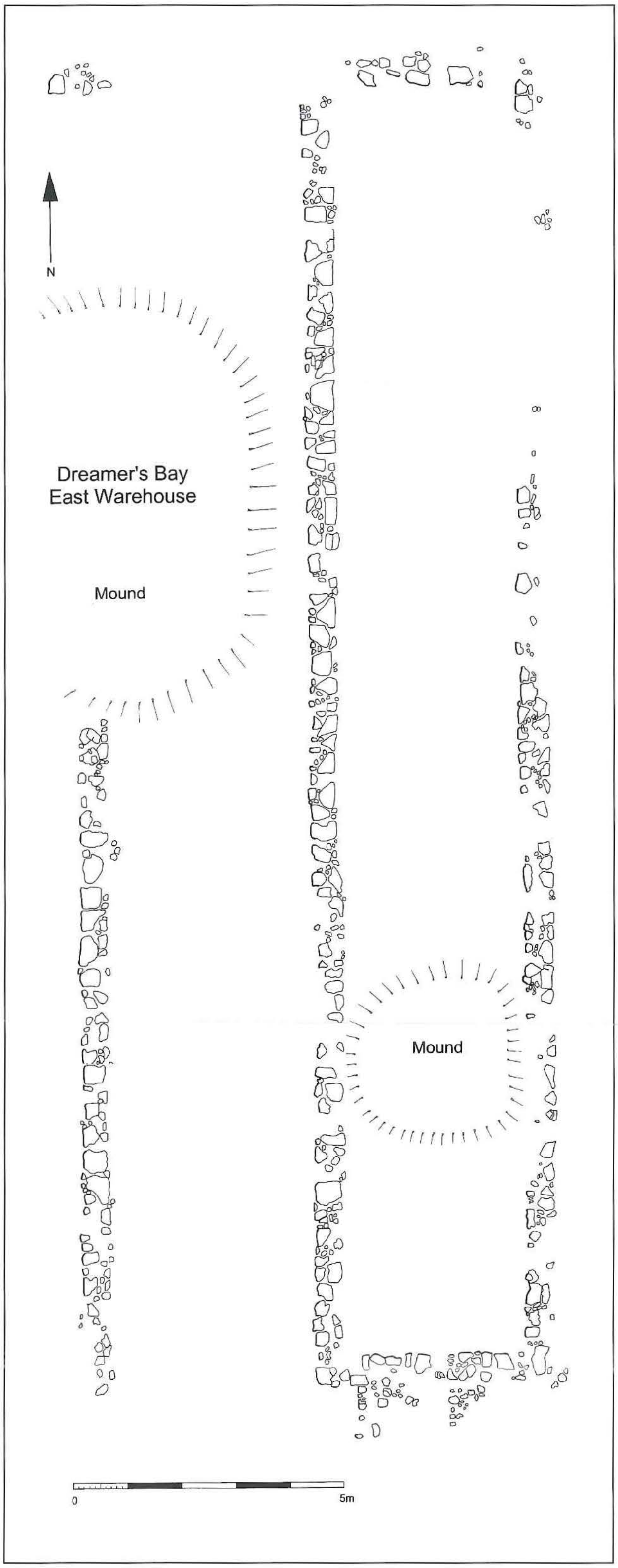

Fig. 7. East Warehouse, Dreamer's Bay, top plan (J.R. Leonard, A. Hooton).

the construction of the breakwaters at Nea Paphos, where header and stretcher blocks were originally employed by Hellenistic engineers during that port's foundation in the late fourth or early third century BC.[21] Haggerty also reports the existence of at least two column drums lying among the architectural debris around the delapidated breakwater at Dreamer's Bay, [22] which may indicate that the Dreamer's Bay harborworks, again like the breakwaters at Nea Paphos, were later adorned during Roman times with a colonnade. To the southwest of the breakwater, Haggerty recorded a cluster of fragmentary "Rhodian" amphorae that may attest to a shipwreck in the area, or at least to use of the bay during the Hellenistic era.[23]

On the western shore of Dreamer's Bay lie the low foundations of two long rectangular buildings, probably Roman *horrea*. These buildings, similar in size, are internally divided into a pair of narrow rooms by a central, longitudinal wall. The easternmost structure (Fig. 7), which is oriented generally N-S, extends 24.4 m long by 8.8 m wide, with walls *c.* 0.5 m thick.[24] The internal eastern and western rooms are 3.3 m and 3.7 m wide respectively. No doors or windows are evident in the remaining foundations, which are comprised of rough, lightly dressed stones. At least three other similarly constructed walls located further west on the shore may belong to additional seaside warehouses.[25]

[21] Leonard & Hohlfelder 1993; Hohlfelder & Leonard 1994; Hohlfelder 1995. Although the Dreamer's Bay breakwater beneath its thick coat of vegetation does appear to be comprised of ashlar blocks, the exact nature of its construction remains to be confirmed.

[22] Haggerty, 27-28.

[23] Haggerty (p. 19) is probably referring to the typical third-second centuries BC Rhodian amphora whose remains are so commonly encountered in Cypriot coastal waters. Haggerty related to Leonard that he also once observed "stacks of Roman plates" on the seabed near the ancient breakwater (Personal Communication, 1991), although JRL has since been unable to locate or confirm this remarkable find.

[24] The top plan included here as Figure 7 was originally drawn by JRL for the purposes of the Cyprus Coastal Survey with the assistance of G. Hennings & S. Demesticha.

[25] For Roman warehouses, especially two Hadrianic examples on the southern Anatolian coast that are roughly similar in their dimensions to the otherwise more humble Dreamer's Bay *horrea*, cf. Rickman 1971, 138-9, figs. 30-1.

The architectural remains on the crest of the northern ridge overlooking the bay constitute a square room whose rubble walls are preserved to a height of *c.* 1 m. Whether the structure represents a single construction or was once part of a complex of rooms, now obscured, remains unknown. Fragmentary ceramic roof tiles and Late Roman coarse-ware pottery litter the ground within and around the walls, which may belong to the "Late Roman villa or farmstead" with "marble floors" previously noted in the area.[26]

Poorly preserved rubble walls *in situ* along the southern cliffs opposite the breakwater indicate that this area was once home to seaside structures, possibly maritime villas, whose inhabitants gained access to the harbor below via a set of rock-cut steps still partly preserved on the steep cliff face. Of particular note are Haggerty's reported finds along the top of the cliff: Roman tableware, "fused glass", "pottery... showing evidence of great heat", and a rock-cut aqueduct channel running parallel to the cliff edge that contained the remains of a terra-cotta pipe.[27]

The eastern necropolis at Dreamer's Bay, which is more extensive than the western necropolis, extends eastward along the cliffs from the harbor area to a point beyond the collapsed late Palaeolithic or early Neolithic rock-shelter at Akrotiri-Aetokremnos ("Site E").[28] The graves within the eastern necropolis consist of rock-cut cists or *fossae* located along the top of the cliffs and similarly carved chamber tombs arranged in two tiers along the cliffs' vertical face.[29] Later quarrying of the eastern tomb area is evident, as are traces of a roadbed cut into the cliff-top east of Aetokremnos.[30] Further west, a distinct set of cart tracks also remain visible in the rock along the cliff-top northeast of the harbor breakwater.[31]

The western necropolis is located on rising ground west of the bay, beyond the British gunnery range. The necropolis contains more than 120 tombs, according to Heywood, which consist of an indiscriminate mix of rock-cut chamber tombs and *fossa* graves.[32]

D. Parks, in her doctoral dissertation on Roman Cypriot burial customs, has suggested that the necropoleis at Dreamer's Bay date to the Hellenistic and Roman periods, but adds that use of the site may have begun earlier.[33] The traditional published date of the Dreamer's Bay site, however, reflects the long-standing conclusion, apparently based on the examination of surface pottery, that the settlement belongs solely to the Late Roman period (especially the fifth and sixth centuries AD).[34] In contrast, our renewed study of the pottery discussed below confirms that the Dreamer's Bay site was also occupied prior to the Late Roman period and that its chronology must now be revised.

Alaminos-Latourou Chiftlik

The site of Alaminos-Latourou Chiftlik lies almost due south of Alaminos village (Fig. 1). The site is smaller than that at Dreamer's Bay, encompassing a maximum core area of perhaps three or four ha, and represents a small rural settlement or *villa rustica*. The topography of the site consists of an open, now-cultivated field beside the sea, in the midst of which rises a low mound *c.* 150 m from the shoreline (Fig. 8). The mound contains the architectural remains of ancient structures, as evidenced by the appearance of walls atop the mound's eroding summit. Roman coarse-ware pottery is also visible on the surface of the summit, although less so in the surrounding cultivated field.

The site of Alaminos-Latourou Chiftlik was, as mentioned above, first surveyed in 1959 by Catling, who also recorded a Cypro-Geometric necropolis just north of the mound and Hellenistic-Roman settlement.[35] No trace of the necropolis is evident

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26 Haggerty, 34.

27 Haggerty, 11, 17, 19, 34.

28 Simmons *et al.* 1999.

29 Parks 1999, 55.

30 *Cf.* Heywood 1982, 169-70; McGarr 1995, 11.

31 Heywood 1982, 169; McGarr 1995, 17-18.

32 Heywood 1982, 169; Parks 1999, 54-5; cf. also Haggerty, 13, sketch.

33 Parks 1999, 55.

34 Heywood 1982, 169-71.

35 Catling called this site *Latourou*, a toponym that is consistent with the local designation on the governmental 1:50,000 topographical map. The official 1:5,000 cadastral map, however, includes two toponyms for the area of the site: *Latourou Chiftlik* and *Latoura Chiftlik*, the latter appearing in a position →

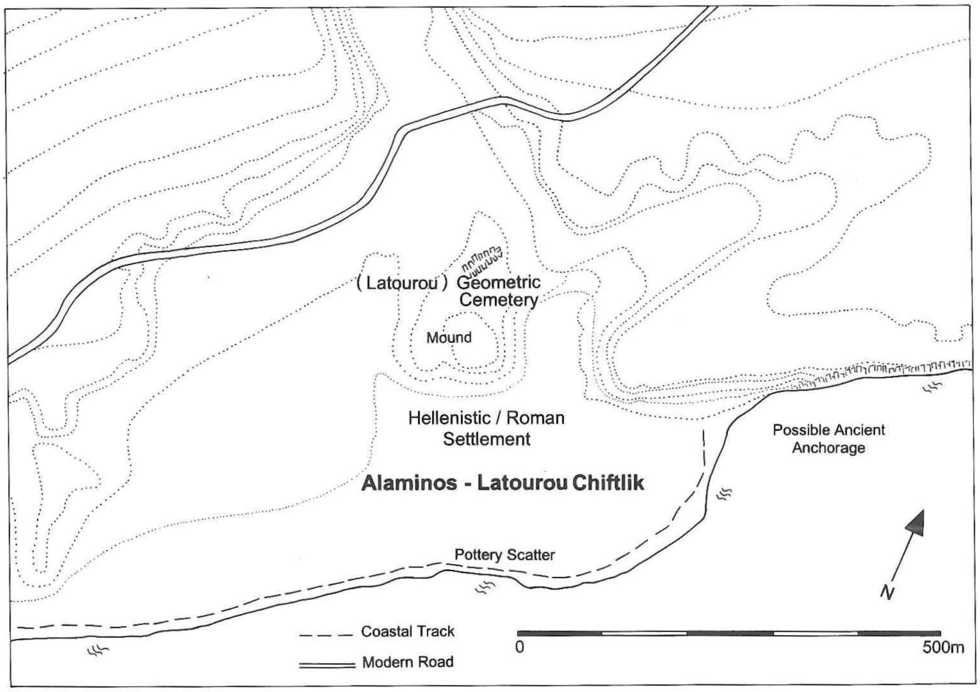


Fig. 8. Alaminos-Latourou Chiftlik, Cyprus, site plan (A. Hooton).

today north of the mound, although this area has recently undergone radical changes in its topography due to the construction of a paved, extensively embanked coastal highway.

Immediately along the shore, on the seaward side of a coastal dirt track and eroding from the scarp at the back of the beach, is a surface scatter of fragmentary LR1 transport amphorae homogeneous in fabric that includes rims, handles, body sherds, and bases. Unfortunately, this important, once-dense scatter of amphorae, which indicates that the shore was used in Late Antiquity for the loading and/or unloading of cargo ships, has been greatly disturbed and reduced in its visible extent over the past three or four years as a result of the modern commercial development of the site by the landowner. The development has included the construction of a small marina with massive enclosing harbor works and several long offshore breakwaters parallel to the coast.[36] The new marina has been built around a slight natural cove protected to the west by a small point of land (Fig. 9). This diminutive cove may also have served in Antiquity as a port or anchorage for the *villa rustica* at Latourou Chiftlik. The poorly preserved stump of a simple rubble jetty or breakwater extending from the small protective point attests to use of the cove in pre-modern times, probably for the purposes of local commerce.

→ closer to the shoreline. Goodwin 1985, 968 locates the feudal estate of "Latourou" (see below; clearly the origin of the local toponym) as being 3/4 of a mile inland. The existence on the cadastral plan of two adjacent, nearly identical toponyms only distinct from each other in their endings may be explained as a simple cartographic mistake or perhaps as a conscious attempt by the cartographers to distinguish between two areas of the site that were for some reason distinct. The official name of the site has recently been confirmed by the Cypriot Department of Antiquities as Alaminos-Latourou Chiftlik. N.B.: The Cypro-Geometric cemetery and Hellenistic-Roman settlement at Catling's "Latourou" are enumerated in the Department of Antiquities' survey book as sites 1066, 1067, respectively, while on the DOA's cadastral map they are designated by the numbers 1283, 1284, respectively.

[36] The Cypriot Department of Antiquities has recently (1999) taken action to prevent further destruction of the site's cores areas, especially the low mound where a bulldozer had cut an access road up one side and scraped its summit. Nevertheless, since commercial construction commenced five years ago, more than two meters of shoreline has been lost to erosion along a coast that previously had been relatively stable for at least 1500 years. The primary cause of the erosion appears to be the installation of offshore breakwaters running parallel to the coast, whose adverse affects on natural coastal processes have previously been demonstrated and decried in neighboring Limassol.

Fig. 9. The cove at Alaminos-Latourou Chiftlik, Cyprus (J.R. Leonard).

Although the site's Hellenistic component originally identified by Catling remains to be confirmed, the LR1 amphorae scattered along the shore at Latourou Chiftlik – first recorded by the Cyprus Coastal Survey[37] – clearly attest to an active phase of occupation in the Late Roman era. Whether or not the site was occupied during the intervening Early and Mid-Roman periods is presently unknown. The onset of the Arab raids in the mid seventh century AD was probably the impetus behind the decline of the exposed coastal settlement, since its residents almost certainly were inclined to flee inland, seeking greater security from sea attacks. J. Goodwin, however, notes that later during the Middle Ages, the site became part of a feudal estate "...owned by the Templars and given to the Hospitallers in 1313 AD".[38] He further relates that the area was probably once again abandoned around 1840, but until recent years continued to have at least one working well, citrus groves, and two sheepfolds.

The Ceramic Evidence

The rich surface scatters of pottery at Dreamer's Bay and Latourou Chiftlik represent important bodies of evidence, the analysis of which, although still underway, is already beginning to increase our understanding of these two coastal settlements and their respective economic roles in Hellenistic and Roman Cyprus. In the following section we will offer preliminary observations on the amphora samples collected at Dreamer's Bay and Alaminos-Latourou Chiftlik. Although our catalogue of finds remains to be completed and new finds surely will be added, we will for the moment present the main amphora types that we have so far recorded.

Dreamer's Bay

The occupation of the Dreamer's Bay settlement, as previously mentioned, has long been held to be Late Roman in date. It is therefore no surprise that the predominant amphora types found on the surface belong to that period. Before discussing the late amphorae, however, we should mention three earlier types, which, although so far few in number, are significant for the chronology of the site.

[37] Leonard 2004 forthcoming.
[38] Goodwin 1985, 968.

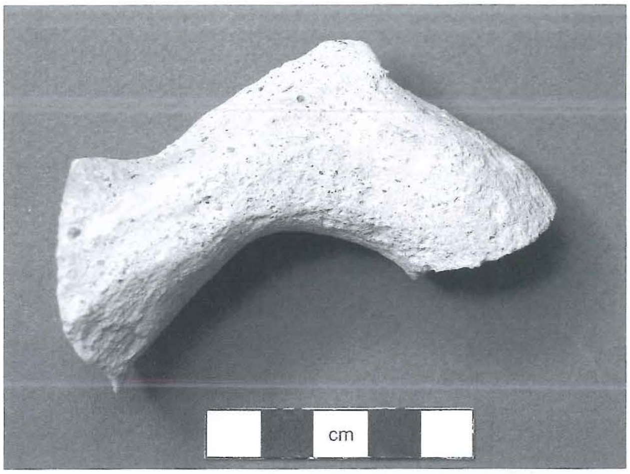


Fig. 10. Cretan amphora handle (Marangou-Lerat Type AC4, 1^{st}-3^{rd} centuries AD); Dreamer's Bay, Site 1 (J.R. Leonard).

Fig. 11. Pinched-handle amphorae (1^{st}-4^{th} centuries AD); Dreamer's Bay, Site 2 (J.R. Leonard).

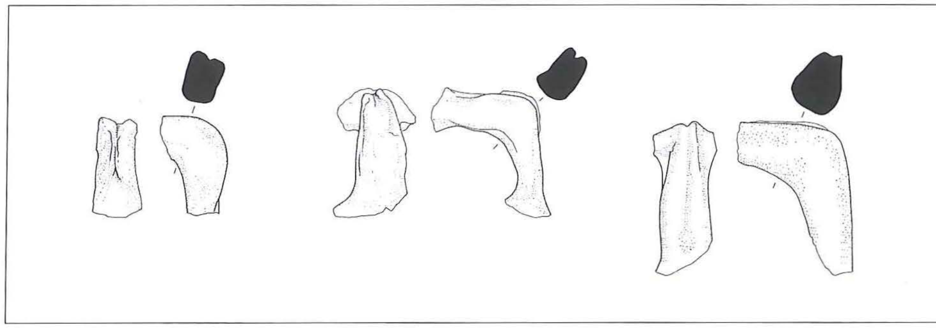
Fig. 12. Pinched-handle amphorae (1^{st}-4^{th} centuries AD); Dreamer's Bay, Site 2 (J.R. Leonard).

1) Amphora toe, probably belonging to a Thasian amphora or an imitation thereof, datable to the fourth century BC.[39]
2) Two partial amphora handles, belonging to Marangou-Lerat's Cretan type AC4, dated in the first to third century AD. The fabrics of these two handles are different from each other and do not appear similar to what Marangou-Lerat describes as the typical Cretan fabric of AC4 amphorae.[40] One handle is coarse, porous, and yellowish in color, while the other, perhaps a Cypriot imitation, is coarse and pinkish brown, and contains large volcanic inclusions and smaller light brown and white grits (Fig. 10).
3) Three partial amphora handles (Figs. 11-13), belonging to pinched-handle amphorae, dated from the first to the fourth century AD.[41] The fabrics consist of two main types: A) a fine, red-brown fabric (represented by two handles) containing fine silver mica; one of the handles contains visible lime inclusions and occasional brownish grits that are absent from the other fabrics; B) a second fabric (represented by one handle) that is completely different in character: coarse, beige, containing large and medium-sized red-brown grits, scarce lime inclusions, and very occasional fine, silver mica. These two main fabrics seem to correspond to the known areas of production for pinched-handle amphorae: Anemurium on the southern Anatolian coast for the micaceous fabrics;[42] and Cyprus for the coarse fabrics.[43]

The amphora types of Late Roman date so far identified at Dreamer's Bay are greater in number and variety. The LR1 amphorae constitute the most predominant form, represented on the site by an LR1 subtype of at least two different fabrics.[44] It should be noted that, since a paper on the types and fabrics of LR1 amphorae found in Cyprus has

[39] Cf. Garlan 1988, 13, figs. 12-13.
[40] Marangou-Lerat 1995, 84-89.
[41] Cf. Leonard 1995a, 144-145; Lund 2000b.
[42] Williams 1989, 91; Lund 2000b, 569.
[43] Hayes 1991, 91-92, no. 21.
[44] Cf. Riley 1979, 212-216.

Fig. 13. Pinched-handle amphorae (1st-4th centuries AD); Dreamer's Bay, Site 2. Left, Center: Fabric A. Right: Fabric B (A. Hooton).



recently been published,[45] we will refer in the following discussion to this recent typology without repeating the individual types' and fabrics' full, detailed descriptions.

The subtype into which all the LR1 amphorae at Dreamer's Bay so far appear to fall is Demesticha's LR1 Type 1, dated in the sixth century AD.[46] The typical characteristics of this LR1 subtype are the low quality of manufacture, the fact that the rim diameter is equal to or greater than the height of the neck, and the off-center, finger-made, double grooving along the handles. The LR1 Type 1 amphorae found at Dreamer's Bay exhibit two main fabrics: a) the "Workshop X" fabric, of probable Cypriot origin:[47] course, light brown, containing many small black inclusions and occasional lime particles. b) the "yellowish" fabric initially reported by Riley and since adopted by many other scholars.[48] The provenance of this fabric has not yet been securely identified, but probably lies among the known kilns of the Cilician coast.[49]

It is also worth noting that we so far have found no trace at Dreamer's Bay of the LR1 fabrics previously identified on the Cypriot south coast, including that of Paphos,[50] Zygi,[51] Amathous,[52] and the so-called "Workshop ZA".[53] What we did discover, however, were over-fired body sherds most probably belonging to LR1 amphorae. These sherds, in conjunction with the ceramic waster cited above,[54] made us suspect the existence of a nearby kiln, which, despite our redoubled efforts to locate additional evidence on the site's surface for amphora production, cannot yet be confirmed.

Late Roman amphorae from the Levant, LR3 and LR4/5 of Riley's typology, are poorly represented at Dreamer's Bay, whereas Egyptian LR6 amphorae appear to be more numerous.[55]

In a distinct western area ("Site 2") of the Dreamer's Bay site, within the fenced area of the gunnery range, we have recorded a large concentration of body sherds that most probably belong to the so-called "carrot-shaped" amphora of Kuzmanov Type IX (third-fourth centuries AD).[56] This type has many similarities with the late Sinopean amphora series,[57] and occasionally some scholars have considered Sinopean and Seleucian carrot-shaped amphorae as one type.[58]

The fabric of the Dreamer's Bay "carrot" amphorae is coarse, porous, red to brown in color, and contains small yellowish inclusions and occasional large brown grits. Since the Sinopean fabrics are completely different from that found at Dreamer's Bay, we can assume that the amphorae originate from the Seleucian area of production, although a fabric description of the amphorae produced in the Seleucian kilns has not yet been published.[59]

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45 Demesticha 2003.
46 Demesticha 2003, 471.
47 Demesticha 2003, 471.
48 Riley 1979, 215.
49 Empereur & Picon 1989, 241.
50 Demesticha & Michaelides 2001.
51 Manning *et al.* 2000.
52 Empereur & Picon 1989, 242.
53 Demesticha 2003, 471.
54 See note 5.
55 Riley 1979, 219-225.
56 Kuzmanov 1973, 14-23; also Empereur & Picon 1989, 232.
57 Garlan & Kassab Tezgor 1996, 331, fig. 11.
58 Opait 1996, 210; Sazanov 1997, 90.
59 *Cf.* Empereur & Picon 1989, 232.

Fig. 14. "Carrot-shaped" amphorae, (Kuzmanov Type IX, 3rd-4th centuries AD) body sherds; Dreamer's Bay, Site 2 (J.R. Leonard).

Fig. 16. LR1 amphorae (Demesticha Type 2, 6th-7th centuries AD); Alaminos-Latourou Chiftlik (J.R. Leonard).

Fig. 15. "Carrot-shaped" amphorae (Kuzmanov Type IX, 3rd-4th centuries AD), rim sherds; Dreamer's Bay, Site 2 (J.R. Leonard).

The body sherds of the Dreamer's Bay "carrot" amphorae carry horizontal grooves on their outer surfaces and oblique ridges on the inside (Fig. 14). The base or toe is most probably conical. We have found conical toes in the same fabric as the body sherds, as well as fragments of handles, oval in section, and flaring rims with vertical outer faces (Fig. 15). The rims do not exhibit the typical profile of the "carrot-shaped" Kuzmanov Type IX amphorae, but since their fabric is identical to that described above for the body sherds they may belong to a previously unknown subtype of the Type IX amphora series.

Alaminos-Latourou Chiftlik

At Alaminos-Latourou Chiftlik we have examined a large, previously unrecorded, surface concentration of LR1 amphorae sherds, which are homogeneous in fabric (Fig. 16). This fabric, pinkish in color, coarse, containing many small black and white inclusions, is not typical of LR1 fabrics already known from the southern Troodos area (including those of Paphos, Zygi, and Amathous), but, while different in color, it does resemble in composition the fabric of "Workshop X". Although it is tempting to conclude that Alaminos-Latourou Chiftlik represents another, previously unknown LR1 production center on the Cypriot south coast, the apparent lack of wasters on the site so far prevents such a conclusion. All the LR1 amphorae sherds we have observed to-date at Alaminos-Latourou Chiftlik belong to Demesticha's LR1 subtype Type 2, dated in the sixth and seventh centuries AD.[60]

Conclusions

Although our investigations of the Dreamer's Bay and Alaminos-Latourou Chiftlik sites and surface material are still in progress, we can offer some

[60] Demesticha 2003, 471, fig. 2.

preliminary concluding remarks based on the evidence, especially the amphorae, recorded to date. At Dreamer's Bay, the fourth-century BC Thasian amphora toe is much earlier in date than all the other surface finds so far recorded, yet it provides a significant clue to the site's early occupational history. Together, the Thasian toe and the Early to Mid-Roman Cretan and pinched-handle amphorae attest to, on the one hand, widespread trade connections with the Aegean, Crete and Cilicia, and, on the other, a life span for the Dreamer's Bay port that far exceeds the roughly three-and-a-half centuries of the Late Roman period, to which the site has previously been assigned.

The incidence of local amphorae at Dreamer's Bay appears very low, whereas abundant refuse of imported amphorae indicate a vital Late Roman regional trade with the Levant, Egypt, and Cilicia. The architectural remains of the long, seaside warehouses just west of the bay further attest to the site's regular involvement in maritime trade.

There is a small possibility, given the limited evidence of the waster and over-fired sherds, as well as the unconfirmed report by Haggerty of fused glass and heat-affected pottery sherds, that LR1 amphorae and other ceramic (and glass?) containers were manufactured at Dreamer's Bay. Yet, as mentioned above, indications of local amphorae are few. For the present, we can assert that the LR1 amphorae at Dreamer's Bay (Demesticha's Type 1) are different from those at Alaminos-Latourou Chiftlik (Demesticha's Type 2). The LR1 fabrics so far recorded at Dreamer's Bay are indicative of two main manufacturing sources: 1) Cilicia and 2) Cyprus itself, where the (southwestern Cypriot) "Workshop X" LR1 amphorae from Dreamer's Bay, combined with those previously recorded in great number at Amathous,[61] together suggest regular coastwise movement of trade goods.

At this early point in our analysis, then, we have good evidence for Cypriot coasting activity and should simply conclude that most of the trade goods moving through the Dreamer's Bay port were imports intended either for local consumption or further exchange, via *cabotage*, with other ports on the Cypriot south coast.

At Alaminos-Latourou Chiftlik, there is a similar possibility that this small, rural settlement was also involved in the production of LR1 amphorae, given the strict homogeneity of the LR1 fabric found there. We can be more certain, however, considering the agricultural setting, the remains of an apparent rural villa complex, and the clear indications of use of the immediate seafront, that the Late Roman residents of Alaminos-Latourou Chiftlik participated in local coasting trade by importing (and probably exporting) goods across their beach and perhaps through the diminutive cove on the eastern end of the strand.

If, as seems likely, Alaminos-Latourou Chiftlik produced agricultural goods such as olive oil or wine, the scale of this production would have been small and intended primarily for local, on-site consumption, while any surpluses would probably have been shipped out to larger neighboring towns including Amathous and Kition. The archaeological sites at Dreamer's Bay and Alaminos-Latourou Chiftlik offer unique, additional evidence to support the previously proposed Late Roman land use pattern, in which the island's population further expanded into the Cypriot countryside establishing numerous, small, rural settlements even in more marginal areas of the landscape.[62] However, both Dreamer's Bay and Alaminos-Latourou Chiftlik also appear to have had earlier phases of occupation, which would seem to indicate – at least from a coastal, maritime perspective – that remote, rural settlements of no great size already played significant, fundamental roles in the Cypriot economy long before the supposed Late Roman expansion. This conclusion is similarly supported by other coastal sites around Cyprus including the western anchorage at Dhrousha-Kioni, a small local port that also served a Late Roman settlement, Ayios Kononas, but which was exploited as well in the earlier Classical, Hellenistic, and Early to Mid-Roman periods.[63]

By filling in gaps left by the incomplete coastal descriptions of ancient authors, the Cyprus Coastal Survey has in recent years been able to demonstrate

[61] Also of Type 1; cf. Demesticha 2002.

[62] Cf., *inter alia*, Fejfer *et al.* 1995; Rautman 2000 and 2003.

[63] Leonard 1995a.

that the ancient Cypriot economy, especially that of Roman Cyprus, involved an active coasting trade conducted through a range of ports that was much more diverse than previously portrayed in the historical sources. This complex chain of large and small, urban and rural, natural and man-made havens, in which the local ports constituted fundamental links, is distinctly represented by coastal sites such as Paphos, Kourion, Dhrousha-Kioni, Dreamer's Bay, and Alaminos-Latourou Chiftlik. Of the latter two sites, Dreamer's Bay in particular appears to have been a busy maritime emporium. The ceramic assemblage so far recorded at Dreamer's Bay is also significant because the ancient site lies near the center of the island's southern coast. Lund has previously argued that in their respective economic orientations Western Cyprus looked, at least during the Roman period, to Egypt, Syria, and Cilicia, while South-eastern Cyprus was closely linked to North-western Syria.[64] Yet the port at Dreamer's Bay appears from its surface pottery to have had economic ties with (at least) Cilicia and Crete during the Roman period, and with the whole of the Eastern Mediterranean region in the Late Roman period. Unlike the small Cypriot anchorage at Dhrousha-Kioni on the island's extreme south-western coast, however, no evidence has yet been recorded at Dreamer's Bay for Roman-period commercial links to the Aegean or other areas in the West.[65]

Whether the port town at Dreamer's Bay was exporting (perhaps in locally produced LR1 amphorae) local agricultural products, which seems unlikely given the severely limited area available for agriculture on Akrotiri Peninsula during the Roman period, or served as some sort of a transshipment port (perhaps subordinate to neighboring Kourion) through which local and regional trade goods (many contained in amphorae) passed bound for other destinations and markets, cannot yet be determined.[66] Nevertheless, our understanding of the Dreamer's Bay site has greatly increased, perhaps even to the point of knowing the port town's ancient name. Archaeology, it seems, has finally been able to provide an answer to the identity of the mysterious Kourias of early Roman texts. While previously dated solely to the Late Roman period, Dreamer's Bay was too late to have been linked with Kourias, but now renewed ceramic analyses and our redating of the Dreamer's Bay site reveal that Kourias and Dreamer's Bay may very well have been one and the same place.

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[64] Lund 1999, 12.

[65] At Dhrousha-Kioni the rich ceramic assemblage, consisting primarily of amphorae, indicates commercial links during the Roman period with N. Africa and/or possibly southern Gaul, as well as perhaps Athens, Cilicia, other areas of the Eastern Mediterranean, and Cyprus itself: Leonard 1995a, 142-46.

[66] One intriguing possibility is that Dreamer's Bay became the primary port of Kourion following the catastrophic earthquake of ca. AD 365, when Kourion's own harbor facilities just below the acropolis must have been severely affected (like the rest of the city) perhaps even to the point of complete destruction: cf. Leonard 1995b, 239, figs. 9-10; *id.* 1997, 180, fig. 11.

Amphorae from a Late Hellenistic Cistern at Pantikapaion[1]

Georgiy Lomtadze & Denis Zhuravlev

In the course of the 2001 excavations at the Acropolis of Pantikapaion (modern Kertch) in the Crimea, Ukraine, two structures were comprehensively investigated: a water-supply channel, no. 265, and a water cistern, no. 245, both of which represent elements of the same hydrotechnical complex.

The water-supply channel, or drain, was discovered in trenches 207 and 239, and went directly from the northern wall of the cistern's opening. When discovered, the channel was covered with a stone slab. The channel itself was built with irregularly shaped limestone slabs, which formed its sidewalls. The bottom was paved with small stones, among which a complete profile of a Sinopean louterion was found. The width of the bed was 22-25 cm, and the width of the whole structure 51-76 cm. The preserved length of the channel, which ran from North to South, was 5.45 m from the edge of the cistern. It was apparently used to transport extra water out of the cistern, as it followed the natural surface of the landscape, its far end being 15 degrees lower than the upper one (the upper end next to the cistern was at level –3.45 m, while the far end of the drain was at level –4.15 m).

An interesting question arises: where did the drain lead? If one follows its direction, it ends up on the border of trenches 145 and 172. Here, directly in front of the stairs of the eastern entrance to the Early Classical Monumental Complex II, a drainage system has been excavated.[2] The fact that the water from the cistern ended up at this particular point was probably justified by the natural landscape of the area, which was certainly taken under consideration by the ancient engineers. It is interesting to note that another drain, no. 271 (unrelated to this complex), also led to this particular point.

Let us concentrate on the cistern (Fig. 1). The cistern has a circular opening (65 cm in diameter) surrounded by a small stonewall, whose uppermost stone is at level –3.44 m. The cavity of the cistern is circular and widens a little at the bottom. The cistern walls are covered on the inside by several layers of pink plaster. The bottom of the cistern, also covered with layers of plaster, is at level –7.27 m. Thus, the cistern's depth from the opening to the bottom is 4.27 m.

The southern side of the cistern was partially covered by wall no. 262, running from east to west. The preserved length of this wall is 3.85 m. Its maximal width is 1 m and its preserved height 85 cm. The northern face of the wall was built with irregular, rectangular blocks with a layer of small stones right behind. The wall has one peculiarity: at the point where it goes above the cistern there is a rectangular niche made of worked blocks, which goes around the cistern's mouth on the southern side. The width of this niche is 0.5 m, the depth 23 cm. The existence of this niche points to the fact that both the cistern and wall no. 262 were structurally and chronologically related. However, the poor state of preservation of the wall and lack of any traces of it to the west and east do not allow us to determine to which building the wall belonged.

When discovered, the mouth of the cistern was completely covered with small and medium rocks from wall no. 262, and also by stones from the foundation of wall no. 155, dated to the third century AD. Surprisingly, the cistern was not completely filled, but such fill as there was consisted of brown-

[1] We would like to thank Dr. Владимир Толстиков (Pushkin Museum, Moscow) for the possibility to publish this material. We are also very thankful to Dr. Сергей Внуков (Institute of Archaeology, Moscow), Dr. Юрий Зайцев (Institute of Archaeology, Simpheropol) and to Dr. Светлана Науменко (Tanais Archaeological Museum) for their friendly help and for providing new parallels to our amphorae.

[2] Толстиков *et al.* 2002, 233-238.

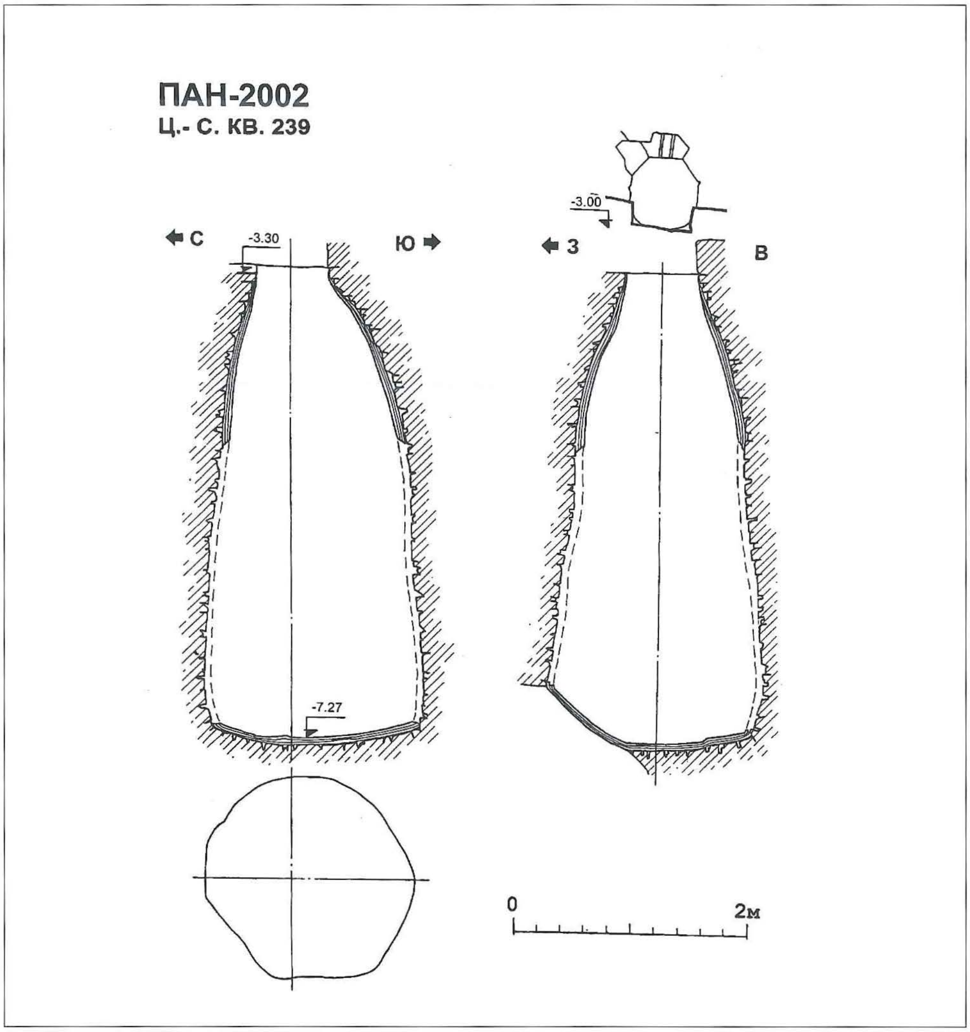


Fig. 1 Cistern no. 245 on the acropolis of Pantikapaion.

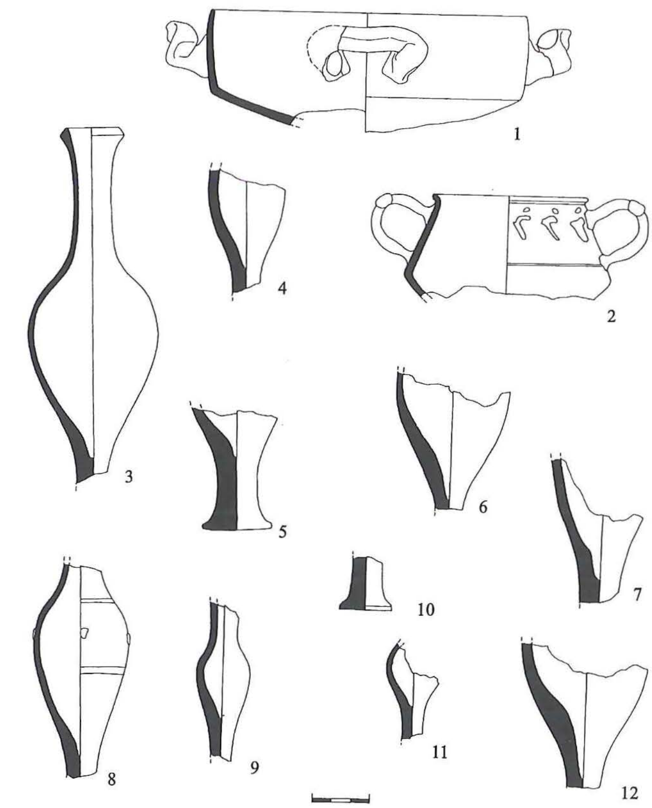
ish loamy soil of varying consistency with greenish clay, small rocks, empty mussel shells, animal bones and plaster fragments from the walls.

A complete analysis of the particularities of this hydrotechnical complex, stratigraphical peculiarities of the area where it was located, and the archaeological finds from the cistern, allow us to conclude that the cistern was constructed not later than the last quarter of the fourth century BC. The structure cut through the stratum above the remains of a "courtyard" of a building, which was destroyed in the first half of the fifth century BC. It seems that the cistern was connected with some contemporary structure, possibly a nymphaion, of which remains only a wall fragment. The cistern existed (with repairs) until the beginning or first half of the first century BC, and was afterwards filled up.

The cistern fill can be divided chronologically into two parts. The upper part (with a depth of approximately 1 m) is dated by fragments of amphorae with double-barrelled handles and Eastern Sigillata B cup-fragments to the late first century BC or early first century AD.[3] The soil character of the lower part and the objects found there differ considerably from those of the upper part. Almost complete amphorae and tableware, dating to the final stages of the use of the cistern, were found in this part of the filling.

[3] Hayes 1985, 53, Forma 1, Tav. XI.

Fig. 2 Red Slip pottery and unguentaria.



A pelike with fluted body is the most interesting example of red-slip ware found in the cistern (Fig. 3.6). Similar vessels were widespread in the Greek cities of the northern Pontic area, as well as in Sarmatian cemeteries of the first century BC.[4] Some fragments of Bosporan sigillata vessels are also dated to the first century BC (Fig. 3.5).[5] A red-slip plate and a series of unguentaria can be dated to the late second or first half of the first century BC (Fig. 2.3-12).[6] Some parallels for the cup with two handles (Fig. 2.1) are known from the level of the fire of the Southern Palace in Scythian Neapolis (137-135 BC).[7] However there are some vessels of the same shape from the context of the last quarter of the first century BC,[8] which means that this type of the pottery cannot be dated very closely. A large group of red-clay jugs was found. The most interesting is a jug with twisted handle (Fig. 3.1-4). We know some parallels for this vessel from contexts of the third[9] and second centuries,[10] as well as from the house of Khrysaliskos, destroyed in the late first century BC.[11]

[4] Žuravlev *et al.* 1997, 418-420 fig. 7, *1*; Алексеева 1986, 46, fig. 8; Мордвинцева 1993, fig. 2,*1*; Зубарь & Кубышев 1987, 250, fig. 1, *2*.

[5] Zhuravlev 2002, 248-249, fig. 6.

[6] Anderson-Stojanović 1987, Type D.

[7] Зайцев 1998, 53, 57, fig. 2.13.

[8] See for example Сокольский 1976, fig. 53.3-4; Ланцов & Труфанов 1999, 164, fig. 4.10-13.

[9] Абрамов & Сазонов 1992, 155-156, pl. XI,13-15.

[10] Максимова 1979, pl. II, 3.

[11] Сокольский 1976, fig. 531.

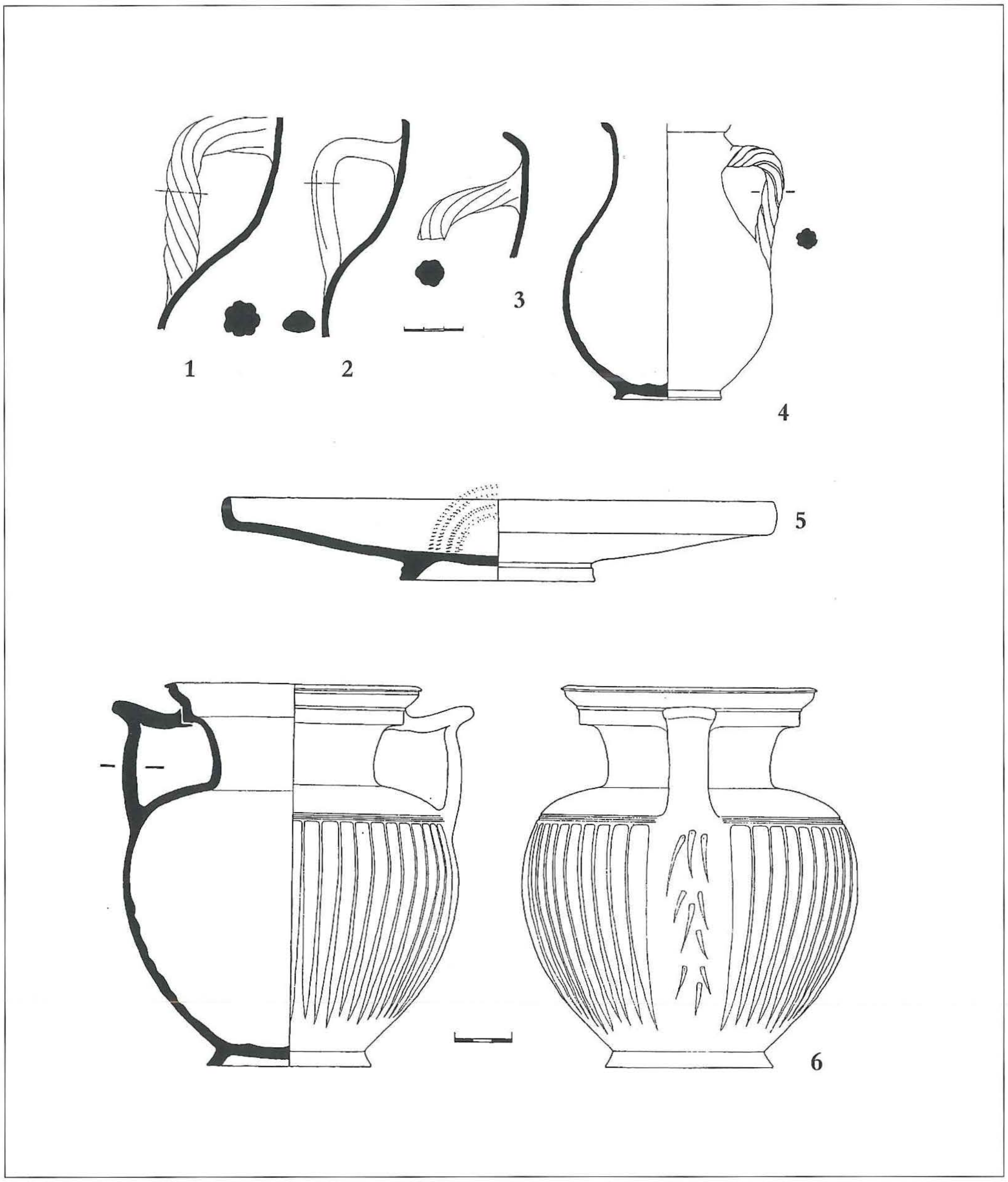


Fig. 3 Red Slip pottery and jugs with twisted handles.

Amphorae from the cistern fill belong to two centres of production:

no.	Centre of manufacture	Height (mm)	Receptacle depth (mm)	Maximum diameter (mm)	Fig.
1.	Sinope	715	671	277	4.1
2.	Sinope	-	-	277	4.3
3.	Sinope	454	416	176	4.2
4.	Heraclea	474	434	187	5.3
5.	Heraclea	-	-	196	5.1
6.	Heraclea	-	-	197	5.2

Sinopean amphorae

The Sinopean amphorae are both of standard dimensions and fractional, and there are rather evident differences in the morphology and the measurements. Two of them belong to a well-known type of Sinopean containers (Fig. 4.1.3), which appeared as early as the third century BC.[12] Sinopean amphorae of the second and first centuries BC stay outside any modern classification. At the same time, there is no reason to doubt that Sinope exported its goods in the Late Hellenistic and even Roman periods.[13]

Thus, the existence in the Late Hellenistic period of Sinopean amphorae of the type mentioned is attested by a vessel, discovered in North-West Crimea in 1988, dated to the period from 80 to 60 BC (Fig. 6.3). Such amphora fragments come from late second- to early first-century BC layers at Scythian Neapolis.[14] As for the third amphora of our assemblage, no parallels to it have been found (Fig. 4.2).

Heraclean amphorae

A set of three red-clay amphorae from the cistern is of a great interest (Fig. 5.1-3). Visually, their fabric composition does not differ from that of well-known Heraclea amphorae of the fourth and early

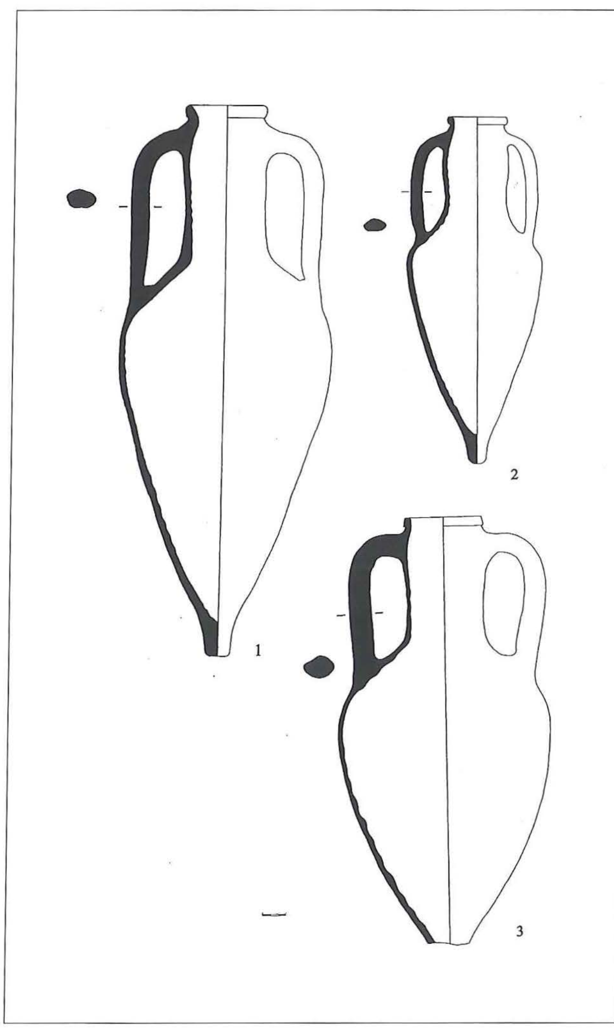


Fig. 4 Sinopean amphorae.

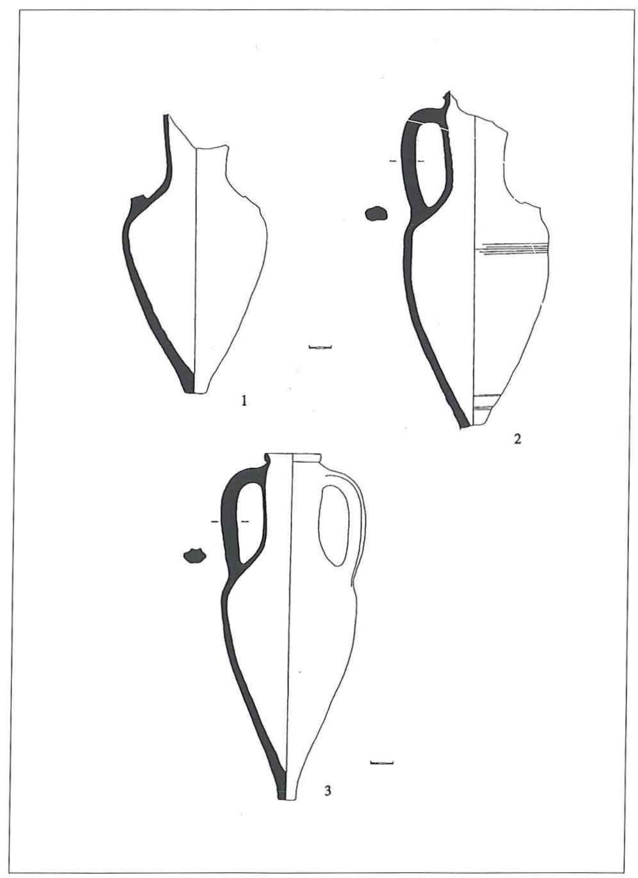


Fig. 5 Heraclean amphorae.

[12] Monakhov 1992, 176-179, pl. 10,11, no. 65-73, type III.
[13] Внуков 1988; Внуков 1993b.
[14] Зайцев & Пуздровский 1994, pl. 3.10.

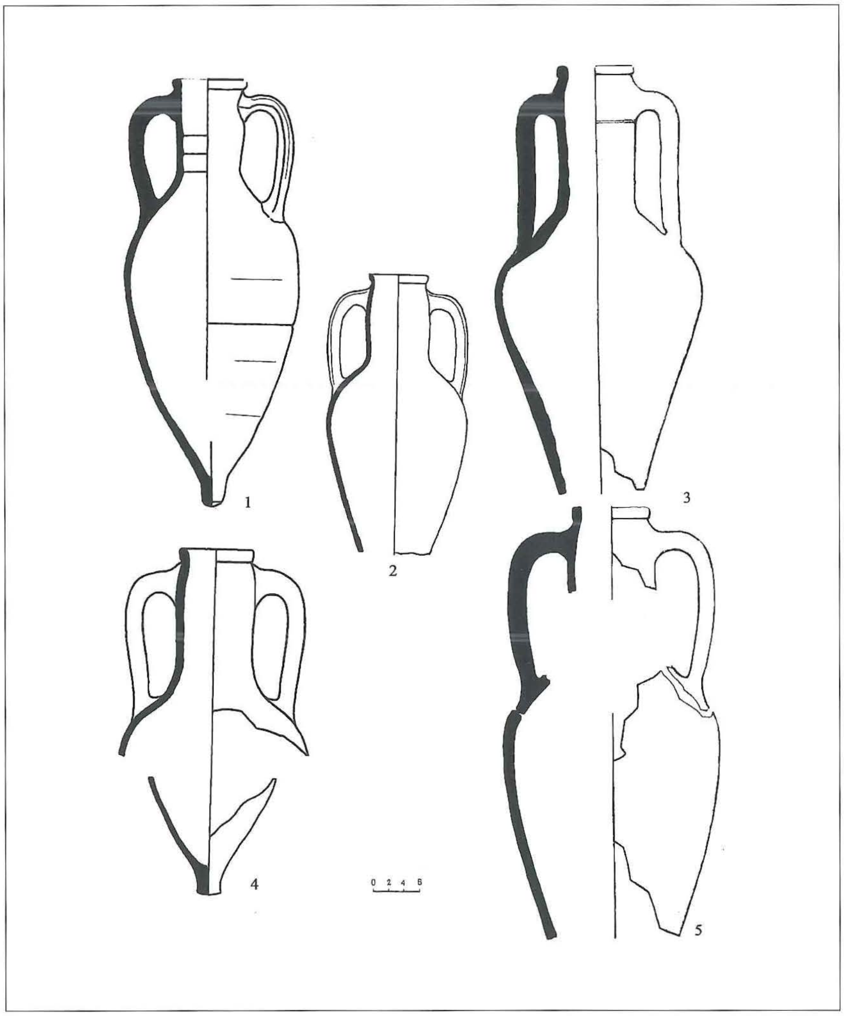


Fig. 6 Sinopean and Heraclean amphorae from Tanais, Belaus and Kara-Tobe site.

third centuries BC. Unfortunately, two of them were found smashed. The search of parallels to the well-preserved example has produced very interesting results. The assemblages from the northern Black Sea coast include only few examples of such amphorae. They have some specific features in their morphology: the general outline of the body is egg-shaped with slightly broadened neck and flat-bottomed conical toe, rim turned outside with the outer surface flattened. All those details are reminiscent of the Sinopean Hellenistic containers; we should also mention the similarity in measures between Heraclean amphorae and the Sinopean fractional vessel from the assemblage. Handles of some amphorae of that type, oval in section, bear two raised borders.

Such vessels have been encountered in the Tanais necropolis, at the sites of "Belyaus" and "Kara-Tobe". The main problem is to determine the chronology of the type. One of the Tanais amphorae dates to the late third or second century BC.[15] Unfortunately, the grave which the amphora comes from cannot be dated more precisely, since it contained no other objects. Based on a middle La Tène-period fibula, the later grave, cutting the first one, should be dated to the first century BC. The chronology of other similar amphorae, found in grave 19-1955 of the Tanais necropolis (Fig. 6.1), is rather wide: the second and first centuries BC.[16]

[15] Арсеньева 1977, 33, pl. XII,1.
[16] The amphora drawing was kindly provided by Светлана Науменко of the Tanais Archaeological Museum, who also doubts its Sinope origin.

Д.Б. Шелов argued for a Sinopean origin.[17] He indicated the lack of analogies for these amphorae and the similarity in fabric to those of Sinope.[18] Both Tanais vessels are larger than our examples.

A more similar amphora from the Kara-Tobe 1999 excavations was discovered in a complex with a Knidian stamp of 146-115 BC (Fig. 6.4).[19] A similar amphora body was brought to light in Scythian Neapolis.[20] Besides that, there are some more familiar examples, which have no precise chronological context (Fig. 6.2-5).

One should note that, with the exception of the 1955 amphora from the Tanais necropolis, all other vessels are made of the typical orange clay, very close to the Heraclean one as regards impurities. So it seems to be reasonable to argue that those amphorae were produced in Heraclea Pontica – one of the greatest wine exporters to the northern Black Sea region. They are probably the missing link in the evolution from the Late Classical and Early Hellenistic vessels[21] to the light clay Heraclean amphorae.[22] One more piece of indirect evidence of an origin from Heraclea Pontica for those amphorae is two amphorae of that centre, discovered at the Tarpantchi site.[23] Though they come from a layer of a considerably later period, these vessels are very close to ours in their morphology.[24] That they are product of Heraclea Pontica was established by petrographical analysis.

There can be no doubt that the ceramic context from the cistern dates to the end of the second or the first half of the first century BC. As regards a new type of Heraclean amphorae of the Hellenistic period, we would like to advance an, in our opinion, interesting hypothesis. The fact that these amphorae are morphologically close to Sinopean ones is possibly connected to the joining of Heraclea with the economical area of the vast Pontic state during the rule of Mithridates VI Eupator.

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17 1961, 14, pl. XIV,1.

18 Шелов 1961, 56-57.

19 Information and amphora drawing were given by Сергей Внуков.

20 Зайцев & Пуздровский 1994, pl. 3.11.

21 Зеест 1948; Брашинский 1984b; Монахов1999a.

22 Внуков 1988.

23 Внуков 1993b, 212, fig. 6.3.

24 Unfortunately, the article gives no information on the context the amphorae were found in. The only indication is that they come from the third-century BC layer. Certainly, that is not enough to date the vessels.

Oil on the Waters? Reflections on the Contents of Hellenistic Transport Amphorae from the Aegean.*

John Lund

Our knowledge about the typology and chronology of the transport amphorae of the ancient world has progressed greatly over the last decades, and research in fabrics and kilns has also made great strides. We are now in a position to map regional and inter-regional distribution of amphorae based on quantified contextual evidence that was not available to previous research.

Progress has, however, been less marked in other respects, and the purpose of this paper is to highlight one such case: the question of the contents of the amphorae. They were, after all, traded for their contents,[1] and if amphorae are to attain their full potential as a source of ancient trade and economics – it is crucial to determine which commodities they carried.

I wish to re-open the discussion by drawing attention to the limited archaeological evidence of long-distance trade in Aegean olive oil in Hellenistic transport amphorae. It is a curious situation, because historians routinely regard olive oil as one of the important agricultural commodities contained in the amphorae which were traded overseas in the Late Classical and Hellenistic periods.[2]

The overall picture

As is well known, excavations and surveys in the Aegean produce abundant amphora material, usually regional and imported specimens in varying proportions.

Until recently, research tended to focus on the stamped amphorae from the major production centres of inter-regional importance, but the often unstamped amphorae from local or regional production centres are now increasingly coming to the fore, and Mark Lawall has ascertained that regionally produced amphorae constitute about 42 per cent of all amphora finds at Ilion in Northwestern Asia Minor between *c.* 350 and 175 BC.[3]

It is however difficult to say, whether the pattern is typical of the Aegean as a whole. No regional amphora type has, for instance, been identified on Delos, although olive oil and wine certainly were produced on the island;[4] there is no clear evidence of locally produced amphorae of the fourth and third centuries BC from the Danish excavations of the Maussolleion of Halikarnassos, even if regional amphorae from Knidos and Kos are fairly common.[5] Still, there is no doubt that local and regional amphora types played a more important role than previously assumed.

* Kristina Winther Jacobsen used the first part of the title in a publication in Danish, and she kindly allowed me to re-use it.

[1] Inscriptions from Classical Athens document the selling of empty amphorae at public auction, *cf.* Amyx 1958, 174-178, but amphorae were apparently not systematically re-cycled for the long-distance trade, *cf.* Lawall 1995, 19 note 14; Garlan 2000, 179; Dupont 2001, 454. This is not to say that it could not happen occasionally, *cf.* Carlson 2003, 587-590. Herodotos III,6 is at times taken as evidence that empty Greek amphorae were collected and transported elsewhere for re-use, but he describes a situation motivated by special climatic and geographical conditions, and his opening statement: "I will now mention something of which few voyagers to Egypt are aware" presupposes a practice that was unfamiliar to a Greek audience.

[2] *Cf.* Rostovtzeff 1941, 1252-1254; Hopper 1979, 93-94; Mejer & Nijf 1992, 113; Casson 1994, 513; Shipley 2000, 28; Reger 2003, 337-338.

[3] Lawall 1999, 196 Table 1.

[4] Empereur, J.-Y. 1982b; Brunet 1998.

[5] *Cf.* Vaag *et al.* 2002, 56.

The contents of the amphorae

Means to determine the contents of the amphorae include: 1) analyses of residues by means of gas chromatography-mass spectrometry,[6] 2) the coating of the interiors of jars with resin or pitch,[7] 3) finds made inside sealed amphorae found in shipwrecks,[8] 4) indications from *graffiti*,[9] which may, however, be secondary,[10] 5) stamps,[11] and 6) other iconographic evidence, mainly coins,[12] and 7) ancient written sources.[13]

A *consensus* of sorts has emerged, formulated by Carolyn Koehler: "Wine has been nominated as the chief export in amphoras from a number of Greek cities, including Chios, Kerkyra, Knidos, Kos, Lesbos, Mende, Paros, Rhodes, Sinope (and other sites in the Black Sea) and Thasos".[14] True, Lawall refrained from speculating about the contents of the amphorae in his illuminating analyses of the amphora finds at Ilion,[15] presumably because he thinks that there is insufficient evidence from which to draw definite conclusions, but he considers the *graffiti* on amphorae from the Athenian Agora between about 430 and 400 BC as evidence of wine trade.[16]

Yvon Garlan and Pierre Dupont have also questioned whether Greek amphorae did indeed only carry one type of commodity, as was nearly always assumed hitherto,[17] but as pointed out by Koehler, there is no evidence in support of the hypothesis that Greek amphorae regularly held more than one kind of produce in their initial shipping.[18] Moreover, as far as stamped amphorae are concerned, Garlan has argued forcefully that the stamping was a public act, which was not carried out for the benefit of the consumers but for local controllers,[19] but it is difficult to see how such a control could have worked, if more than one commodity had been involved – especially products such as wine and oil, which were priced differently.[20]

The wine trade

Still, nobody has – as far as I am aware – raised serious doubts about the time-honoured identifications of the contents of the amphorae from the major Aegean production centres and, indeed, the commonly accepted identifications do seem entirely justified.

It is, for instance, difficult not to associate the well-known Koan amphora type with double-barrelled handles[21] with wine. Ancient literary sources praise wine from the island of Kos, and bespeak import of Koan wine in Italy in the first century BC.[22] By contrast, no ancient texts refer to olive oil produced in Kos.

But if all amphorae from Kos, Chios,[23] Knidos,[24] Crete,[25] Lesbos,[26] Mende,[27] Paros,[28] Rhodes,[29] Thasos,[30] and the Black Sea region[31] carried wine only, then it is hard to point to containers, which might have been used for inter-regional transportation of Aegean olive oil in the Hellenistic period.

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6 *Cf.* Biers & McGovern 1990.

7 Koehler 1986, 50-52.

8 *Cf.* Carlson 2003, 583 note 9.

9 *Cf.* Lawall 2000.

10 Will 2001.

11 *Cf.* Lund & Gabrielsen 2004.

12 *Cf.* Franke & Marathaki 1999; Papadopoulos & Paspalas 1999, 166-170.

13 Salviat 1986; Garlan 2000, 83-91.

14 Koehler 1996, 326. *Cf.* Whitbread 1995, 54 (Rhodos), 68 (Knidos), 82 (Kos), 138 (Chios), 155 (Lesbos), 166 (Thasos), 199 (Mende), 225 (Paros). *Cf.* also Salviat 1986, 145.

15 Lawall 1998b; *idem* 1999, 213-217.

16 Lawall 2000; *idem* 2001b.

17 Garlan 2000, 90-91; Dupont 2001, 455.

18 Koehler 1996, 326. Patrice Brun 1997, 402 suggested with reference to Theocritus (VII.147) that the contents of an amphora might be indicated on its stopper. However, Theocritus specifically uses the word πίθος, and preserved amphora stoppers from antiquity are marked with personal names, not information about the contents, *cf.* Sundelin 1996, 299.

19 Garlan 2000, 154-166.

20 *Cf.* Boardman 1988, 29; Bentz 2003, 113.

21 *Cf.* Sherwin-White 1978, 236-237 and Papuci-Władyka 1997.

22 Tchernia 1986a, 101-102.

23 Lawall 2000.

24 Koehler 1996, 331-333.

25 *Cf.* Marangou-Lerat 1995; Μυλοποταμιτάκη (ed.) 2002.

26 Clinkenbeard 1982.

27 *Cf.* Lawall 1999, 193 and Papadopoulos & Paspalas 1999, which also deals with wine production and export from other Chalkidian towns.

28 Empereur & Picon 1986b.

29 Rauh 1999 etc.

30 Garlan 1988, 1-5 and *idem* 1999a, 83.

31 Lund & Gabrielsen 2004.

That excludes the Italian amphorae from the Brindisi region, which began to be imported from the late second century BC onwards to the Eastern Mediterranean, especially to Alexandria and the south-eastern Levant.[32]

The role of Athens

The olive tree was held to be given to Athens by its patron-goddess Athena[33] and Athens was one of the relatively few Greek city states to depict an olive branch on her coinage. It is therefore particularly puzzling that there appears to be no archaeological evidence for inter-regional trade in Athenian olive oil in the Classical and Hellenistic periods, apart from the oil won by victors in the Panathenaic games, which could be resold at a considerable profit.[34]

The association between the olive tree and Attica has – it seems – generated a widespread assumption in modern scholarship: that Athens, at least in certain periods, was a major player on the olive oil market. Many scholars believe that the widely exported Attic SOS amphorae from the eight to the early sixth centuries BC contained oil,[35] without any convincing argument having been put forward.[36] There is in effect good evidence to the contrary: Dionysos carries such an amphora in the frieze of Peleus' and Thetis' wedding on the François vase,[37] and the occurrence of SOS amphorae in West-Phoenician settlements seems to be linked with that of Greek drinking vessels like Proto-Corinthian kotylae.[38] Moreover, an SOS amphora is depicted on a Proto-Attic oinochoe from the third quarter of the seventh century BC.[39] It is even more difficult to identify potential Attic transport amphorae used in inter-regional oil trade in the fifth and fourth centuries BC.[40] Had such a type existed in the Hellenistic period, it would surely have been familiar to us through the excavations of the Athenian Agora, the Kerameikos and many other sites in Attica.[41]

The problem has not escaped the notice of scholars working with the trade of Athens. Signe Isager and Mogens Herman Hansen observed: "it is remarkable that the olive export of Athens cannot be traced archaeologically",[42] and Moses Finley did not attach any significance to olive oil and wine as agricultural export commodities in fourth century BC Athens.[43]

The case of Delos

Still, there is no doubt that olive oil was traded in the Aegean. The island of Delos has yielded numerous inscriptions from the period of independence (314-167 BC), recording e.g. the prices paid for olive oil. Gary Reger, who analysed the indexed olive oil prices between 304 and 174 BC, concluded that "the spring and fall price adjustments are probably best seen as reflections of the exigencies of ancient transportation and of the seasonal cycles of the olive … Price rises may … reflect the final sales of depleted local stocks before the arrival of fresh shipments; consumers would be willing to pay higher prices in the face of immediate local but temporary 'shortages' and of uncertainty about prices of oil to come".[44]

Reger argued that the reason for the steady oil price seen after 279 BC was that the Delians were

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32 Cf. Will 1997, 123-129; Lund 2000a, 84-85 fig. 9 and Bezeczky 2001 and 2002.

33 Docter 1991, 45.

34 Bentz 1998, 23-27 and *passim* and *idem* 2003, 113.

35 *Cf.* Gras 1987, 46-50; Lawall 1995, 45 note 44; Bentz 1998,18 note 66; Cahn 2001; Brun 2003, 166.

36 *Cf.* Docter 1991, 45-46. The arguments concern 1) the drip-ring under the lip, which in time develops into a shape resembling that of the sixth century BC oil lekythos, and 2) the fact that shape of the Panathenaic amphorae resembles that of the "à la brosse" amphorae. It cannot be precluded that the latter, which succeded the SOS amphorae, were intended to carry olive oil. For the limited value of arguments based on the shape, *cf.* Garlan 2000, 84-85.

37 Strøm 1971, 112; Foxhall 1998, 302.

38 Niemeyer 1984, 216; Docter 1991, 47-48. An SOS amphora from Megara Hyblaea has the word "oxa" ("oxox" = vinegar) inscribed on its neck, *cf.* Gras 1987, 47 note 44.

39 Docter 1991, 48 fig. 3; Papadopoulos & Paspalas 1999, 170-172 fig. 22.

40 Lawall 1995, 34.

41 *Cf.* Lawall 1995, 45-47 and the discussion below about the legislation of Solon.

42 Isager & Hansen 1975, 36-38.

43 Finley 1973, 133

44 Reger 1994, 132-137.

increasingly provisioned with oil from the island's own orchards and those of nearby islands after 304 BC.[45] No olives grow on Delos today, but he suggested that they did in Antiquity, and Jean-Pierre Brun and Michèle Brunet subsequently published evidence for this.[46] They claimed that the local cultivation of olive trees played a rather limited role on the island and that the olives for the presses on Delos were largely supplied by olives from Mykonos and Tenos,[47] which more or less in line with Reger's theory of a local and/or regional source.

Finds of olive presses within the urban areas of Olynthos, Halies, Asine (and other places in the Argolid) suggest that most of the olive oil consumed at these sites was likewise produced locally or regionally in the Late Classical and Hellenistic periods.[48]

Literary evidence

It is beyond the scope of this paper to present a systematic analysis of the written sources testifying to a trade in olive oil in the first millennium BC, but it may be useful to comment on some of the most often quoted passages.

In Homer's Odyssey, oil is referred to as an expensive product, and in Hesiod's Works and Days (522), the production of olive oil is not included among agricultural activities.[49] According to Plutarch's Life of Solon (24.1), "of the products of the soil, he [i.e. Solon] allowed oil only to be sold abroad, but forbade the exportation of others", a passage which has been the subject of much discussion.[50] The text documents that Athens had previously exported olive oil, but it gives no clue to the scale of such a trade. It could not have involved the SOS amphorae if we are right in assuming that they were exclusively wine containers,[51] and Solon's ban accounts neatly for their near-disappearance in the early sixth century BC.[52]

The inscription IG II2 903 – as restored by Philippe Gautier[53] – informs us of a merchant who in 176/175 BC "having bought 1,500 metretai of oil in [...] which he planned to import into Pontus, taking on board there grain as a return cargo to bring to Piraeus, observed during his stay in our cities that there was a severe shortage of oil, due to harvest failure in our territory. And as he wanted to show his goodwill towards the people in every manner, he hastened to convey into our emporion the oil he had bought".[54] The name of the place where the merchant acquired the oil is not preserved, but Gautier interestingly suspected that he might have bought the oil in Libya or in the Occident.[55] It also gives pause for thought that he originally intended to sell the oil not in the Aegean but in the Black Sea region, parts of which are located outside the cultivation zone of olive trees, and which – according to Polybius (IV, 38, 5) – imported olive oil.

A possible alternative

The question is whether olive oil could have been transported overseas in other kinds of vessels than amphorae. This seems, in fact, to have been the case with the so-called unguentaria, a shape, which may have been invented in Athens in the second half of the fourth century BC.[56] Unguentaria were locally produced throughout the Hellenistic world, and it is commonly believed that they were used for scented oil and other perfumes.[57]

Unguentaria are normally only 10-15 cm high, but the so-called unguentaria with a dome-shaped mouth can attain 40 cm. They were probably manufactured in an unknown centre between Knidos and Nea Paphos in Cyprus, and were widely exported throughout the Eastern Mediterranean. Ulrich Dot-

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45 Reger 1997, 55 and *passim*.

46 Brun & Brunet 1997; Brun 1999.

47 Brun & Brunet 1997, 607; Brunet 1998, 691. *Cf.*, however, Étienne 1990, 223.

48 Jameson 2001; Cahill 2002, 239 and *passim*.

49 Adam-Veneni 2003, 153.

50 *Cf.* e.g. Gras 1987, 46-47; Descat 1993; Lawall 1995, 45-47; Foxhall 1998, 302; Garlan 2000, 89-90.

51 There is no archaeological evidence at all supporting the widely held notion that SOS amphorae were used to transport both oil and wine

52 Thus also Docter 1991 and Descat 1993, 159-160 but with slightly different implications, due to the authors' conviction that SOS amphorae were used to carry both oil and wine.

53 Gauthier 1982.

54 Meijer & Nijf 1992, 114.

55 Gautier 1982, 289.

56 Dotterweich 1999, 4; Camilli 1999, 37-43 fig. 24.

57 Dotterweich 1999, 3-4; Camilli 1999, 34-37.

terwich has suggested that "they were transport and storage vessels, from which the fragrances should not escape".[58] It is hard to say if exportation of filled unguentaria was the exception rather than the rule,[59] but such traffic can only have concerned relatively small quantities of oil.

It is also possible that olive oil could have been transported over long distances in other types of containers, for example in pithoi,[60] and there is certainly evidence of exportation of pithoi in the Black Sea region.[61] But such vessels are not particularly easy to move about in a filled state, and they are rarely found in ancient shipwrecks.[62] Hence, they are unlikely to be the solution to the problem.

Implications

Current archaeological evidence thus suggests that interregional trade in Aegean olive oil in the Hellenistic period was at a low level.[63] It is regrettably impossible to quantify other than by saying that it must have been many orders of magnitude smaller than the inter-regional wine trade. This is in itself not surprising, since large parts of ancient Greece were self-sufficient in olive oil, as Moses Finley observed with regard to the Athenian olive oil trade.[64]

A further explanation is encapsulated in James Whitley's observation that: "the production of olive oil does not seem to have been a major concern of the classical farmer. Olives, it seems, only became a cash crop in later times",[65] and also in Michael H. Jameson's conclusions about the situation in the southern Argolid in the Late Classical and Hellenistic periods: "oil is much more likely to have been an adornment of an elite style of life than a significant contribution to the diet of the majority".[66]

The inter-regional trade of the Aegean in the Hellenistic period was apparently mainly concerned with staples, luxuries, and semi-luxuries.[67] The theory that costly scented oil was transported in the dome-mouthed (and perhaps other kinds of) unguentaria fits well in this picture, and one wonders if not the prestige and fame attached to wine from the renowned producers was a decisive factor in the inter-regional wine trade.

Conclusion

It is not my intention to question the importance of olive oil to the economy of ancient Greece. That would be absurd in the face of the ample archaeological and literary evidence to the contrary.[68] Nor is there any reason to doubt that olive oil was from time to time traded inter-regionally,[69] for instance to communities hit by a bad olive harvest. I merely want to suggest that the main trade took place at regional and local levels. The amounts involved might have been comparatively small, and the oil could have been transported in animal skins,[70] or in amphora types with a regional distribution only, such as those identified by Lawall at Ilion.[71]

This conclusion will not come as a surprise to archaeologists specializing in Greek transport amphorae, who have always regarded them as principally wine containers. However, most scholars have, perhaps, contemplated the trees, i.e. the evidence of each individual type, rather than the whole forest, and it has hardly been recognized how little positive evidence we have for an inter-regional trade in Aegean olive oil in the Hellen-

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58 Dotterweich 1999, 63.

59 *Cf.* Hellström 1965, 24.

60 *Cf.* Garlan 1999a, 83 note 454.

61 Kovalenko 2001, 138 – three pithoi from Sinope found in a wine-making complex at Chaika in the Krimea.

62 Parker 1992, 220 no. 527. A pithos was used as a container of fine ware pottery in wreck 1A at la Poite Lequin dated about 500 BC, *cf.* Jubier 2003 fig. 1.

63 *Cf.* an archaeobotanical assessment for the beginning of the first millennium BC, Kroll 2000, 65.

64 Finley 1973, 133; Isager & Hansen 1975, 36-38.

65 Whitley 2001, 390-391.

66 Jameson 2001, 291; *cf.* also Dalby 1996, 49

67 Foxhall 1998, 306-307 for the term semi-luxuries; Boardman 1988, 32 uses the term "cheap" luxury.

68 *Cf.* e.g. Amouretti 1986; Isager & Skydsgaard 1992, 33-40; Brun 2003; Adam-Veleni 2003.

69 *Cf.* Garlan 1999a, 83 note 453.

70 Brun 2003, 164-165; *cf.* also Dupont 1998, 145 note 31. However, there is hardly any evidence predating the Roman period of such a practice in contrast to the transport of wine in skins, *cf.* Immerwahr 1992

71 At Klazomenai, amphorae were found "in significant numbers" in an Archaic olive oil factory, according to Gates 1996, 320. Unfortunately, their type is not stated.

istic period. Future finds may, of course, change that picture.[72]

In Roman times, things were clearly completely different.[73] The situation already began to change in the Hellenistic period,[74] and the shift was probably connected with the emergence of the first truly large cities,[75] which were unable to supply their inhabitants with goods from their own hinterlands.

[72] *Cf.* Reger 1997, 63: "In the end, we must remember the limitations of our data and our understandings. We do the best we can with what we have, but that is precious little; new insights, new inscriptions, new techniques may overthrow even the most apparently solidly founded interpretation".

[73] *Cf.* Mattingly 1988a, b and c; Hitchner 1993; Mattingly 1996 with references. For differences between Greek and Roman agriculture, *cf.* Skydsgaard 1987 and Foxhall 1993, 199.

[74] *Cf.* Will 1997, 123-129; Lund 2000a, 84-85 fig. 9 and Bezeczky 2001 and 2002.

[75] Nicolet 2000; *cf.* Reger 2003, 334-336.

Un dépôt d'amphores thasiennes du IV^{e} siècle av. J.-C. à Orgamé

Vasilica Lungu

La présente étude fait connaître un lot de 32 timbres amphoriques de Thasos, découverts dans une fosse cultuelle de la cité grecque d'Orgamé, une des colonies de Milet sur le littoral occidental de la mer Noire. Ils ont livré de nouvelles données permettant d'affiner la chronologie et la typologie des anciens éponymes du groupe F. La fréquence des noms attestés soulève la question du type du commerce à cette époque. En comparant les trouvailles d'Orgamé avec celles d'autres cités grecques, on a émis quelques suggestions sur la présence des amphores thasiennes dans le commerce pontique.

Les amphores thasiennes se retrouvent partout sur les sites pontiques, ce qui explique aujourd'hui l'évolution des recherches sur les exportations thasiennes en différents endroits de la mer Noire. De nouvelles données, concernant l'histoire de la typologie des amphores thasiennes et du timbrage ancien, ont été récemment mises en valeur par la magistrale étude d'Yvon Garlan.[1] On y a plus d'une fois reconnu l'importance que présentent les complexes fermés fournis par différents sites. Surtout, l'examen des timbres mis au jour dans ce genre de fouilles devient encore plus important pour leur classement chronologique. Pour le IVe siècle av. J.-C., toute une série de jalons supplémentaires est fournie par les dernières fouilles d'Orgamé et est ici soumise à l'attention des chercheurs.

Orgamé est une fondation gréco-ionienne, supposée de Milet. Elle se situe sur le promontoire calcaire de Capul Dolojman (comm. de Jurilovca, dépt. de Tulcea), à 40 km environ au nord d'Histria (fig. 1). L'habitat fortifié et ses nécropoles occupent une aire bordée au nord, à l'est et au sud par les eaux du lac de Razelm.

Les résultats des fouilles archéologiques que l'on y mène depuis 1928,[2] interrompues entre 1936 et 1965 et continuées depuis,[3] ont mis en relief l'occupation du site entre le milieu du VIIe s. av. J.-C. et le début du VIIe s. ap. J.-C. Des vases céramiques de la deuxième partie du VIIe s. av. J.-C., trouvés dans l'aire habitée et dans la nécropole,[4] témoignent de l'existence d'un niveau d'habitat antérieur au

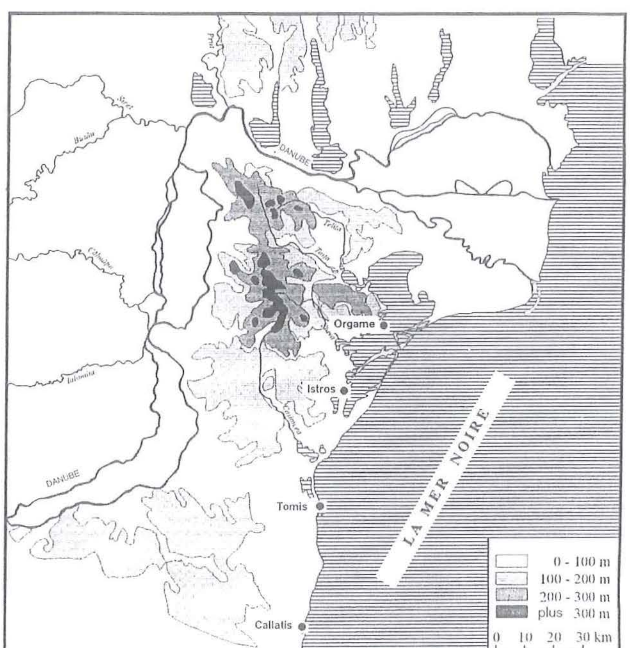

Fig. 1 L'emplacement des colonies grecques sur le littoral occidental de la mer Noire.

[1] Garlan 1999a.

[2] Nicorescu 1934, 95-101.

[3] Les fouilles de la cité ont été reprises par Maria Coja dès 1965 jusqu'en 1986: voir Coja 1971, 179-190; *eadem* 1972, 33-42; *eadem* 1990, 157-168; *eadem* 1996, 259-270, 179-190. Manucu-Adamesteanu 1992, 55-67; *eadem* 1996, 101-110; *eadem* 1999, 145-166.

[4] En 1990 ont commencé les excavations systématiques de la nécropole grecque. Voir Lungu 1995, 231-263; *eadem* 1999, 71-81; *eadem* 2000a, 101-118; *eadem* 2000b, 67-86; Lungu & Poenaru-Bordea 2000, 283-300.

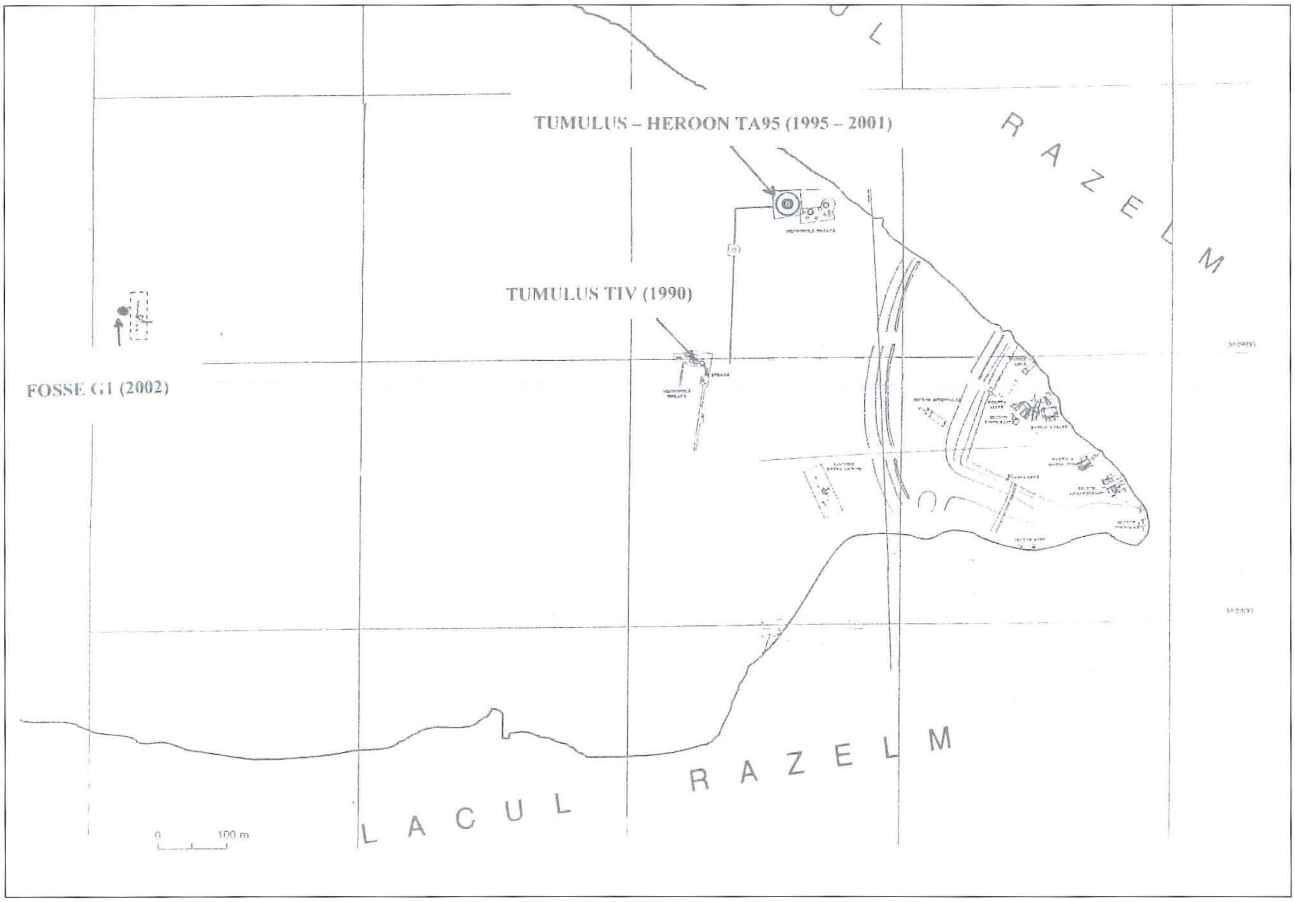

Fig. 2 Dépôts d'amphores thasiennes du Ive siècle av. J.-C., trouvés à Oregamé.

VIe s. av. J.-C., moment au la cité est mentionnée comme *polis* par Hécatée de Milet.[5] Les vestiges des époques suivantes, classique et hellénistique, sont encore mieux représentés. Parmi les trouvailles du site, les amphores thasiennes sont toujours parmi les plus fréquentes. Dans la nécropole, elles composent la majorité des mobiliers funéraires de la deuxième partie du IVe s. av. J.-C.[6]

Pour ce qui est de la présence des amphores thasiennes à Orgamé, nous avons déjà publié un premier lot de timbres amphoriques provenant d'anciennes fouilles sur la ville (1965-1990) (Fig. 2).[7] Les fouilles menées depuis 1990 dans la ville même ont livré beaucoup d'autres exemplaires, dont nous rédigerons plus tard le corpus. Les fouilles sur la nécropole grecque, effectuées entre 1990 et 2002, ont mis au jour quelques dépôts d'amphores thasiennes, parfois dotées de timbres. Un lot de 44 exemplaires appartient au mobilier funéraire de la tombe du tumulus T IV.[8] Il est déjà classé parmi les points de repère de la chronologie des timbres thasiens.[9] Un autre lot, plus nombreux, a été recueilli dans le tumulus-he-

[5] Οργαμη πόλις επι τω Ιστρω, *Hecatei Milesii fragmenta*, éd. G. Nenci, Firence 1984, frg. 183 = *Fr.Gr.Hist.* I, 28, fig. 172. À l'époque tardive, la cité d'Argamum (Orgamé) est mentionnée chez Procopius, *De Aedificiis* IV, 149, 113 (éd. Hauy) parmi les cités de la Scythie Mineure, fortifiées par Justinien.

[6] Nos recherches se développent depuis 1990 au cours de campagnes annuelles sur quatre secteurs de la nécropole grecque qui se trouve dans le voisinage Ouest de la cité, sur une vaste surface d'environ 100 ha du promontoire de Capul Dolojman.

[7] Lungu 1992, 69-99.

[8] Lungu 1995, 231-263; *eadem* 1999, 71-80

[9] Garlan 1999a.

Fig. 3 La coupe nord-sud de la fosse G1.

Fig. 4 L fosse G1: détail de fouille.

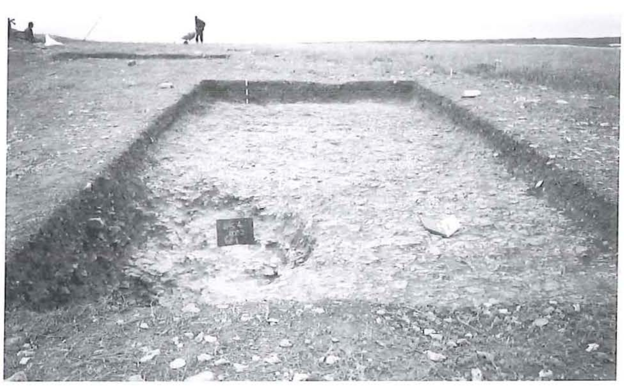

Fig. 5 La fosse G1 à la fin de fouilles.

rôon T A95[10]; celui-ci sera prochainement étudié et publié. Le troisième dépôt, trouvé en 2002 dans une fosse, fait l'objet de la présente étude (fig. 2).

En 2002, les fouilles ont été programmées sur la colline de Dolojman afin de localiser la limite ouest de la nécropole. Nous y avons été particulièrement incités par la présence dans cette zone de nombreux vestiges céramiques identifiés depuis 1994 par des recherches de surface et des fouilles de sauvetage. La plupart des tessons, recueillis au niveau du sol actuel sur une aire restreinte, sont composés de fragments d'amphores, parmi lesquels ont été inventoriées 12 anses timbrées d'amphores de Thasos, trouvées dans la couche végétale.[11] L'aire occupée par ces vestiges est celle qui a été fouillée en 2002. Après enlèvement de la couche végétale dans cette zone, on a pu voir clairement l'ouverture d'une fosse (notée G1), de 3,10 m de diamètre, creusée dans le rocher (fig. 3-5). Elle était en forme de cloche renversée, avec deux niveaux apparents sur les parois: le premier, enregistré à – 0,90 m, est marqué par une bordure; le deuxième se présente à une profondeur de – 1,30 m par rapport au niveau du sol récent, quand la fosse n'a plus que 0,40 m de diamètre. Le contenu se compose d'une couche de terre très fine, avec quelques petits fragments de charbons, mélangée à de nombreux fragments de céramiques et de pierres. Aucun objet n'a été trouvé entier. Les fragments d'amphores thasiennes sont dominants. Leur inventaire comprend 3893 fragments de panse, 264 d'anses, 127 de lèvres et 64 de pieds. Il y a encore une dizaine de fragments d'amphores de Chios (fig. 6a) et d'Héraclée Pontique du IVe s. av. J.-C., deux fragments d'un canthare attique à vernis noir, « à lèvre en corniche déversée fermée »[12] (fig. 6b), et 3

[10] Lungu 2000a and b. Le tumulus T A95 abrite une tombe d'époque archaïque. À l'extérieur, il est précédé d'un fossé sacré dans lequel des offrandes ont été pratiquées durant quatre siècles, dans le cadre d'un culte héroïque développé du VIIe s. av. J-C. au IIIe s. av. J-C. Parmi les céramiques, beaucoup d'anses d'amphores timbrées ont été identifiées.

[11] Ils sont enregistrés dans le catalogue avec l'année de découverte.

[12] Ce type est commun dans le troisième quart du IVe s. av. J.-C.: à Athènes (Sparkes & Talcott 1970, no 661); à Olynthe (Robinson 1950, no 504); à Thasos (Puits Valma, Blondé 1989, nos 53, 56,57, et page 499).

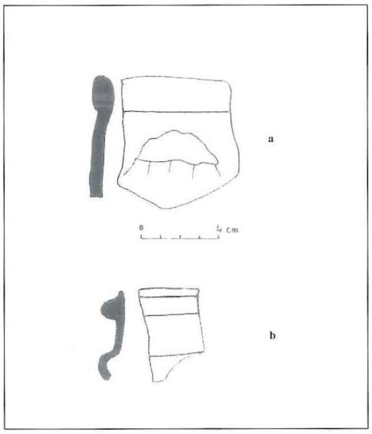

Fig. 6a. Fragment d'amphre de Chios; b. Fragment d'un canthare attique à vernis noir.

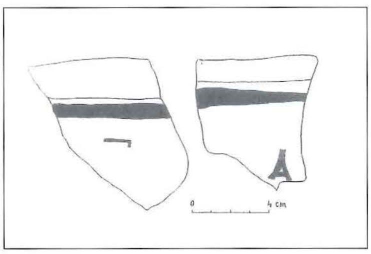

Fig. 7 *Dipinti* trouvés dans la fosse G1.

fragments d'un cratère à figures rouges de la même époque.[13] Deux fragments d'amphores portent des *dipinti* (fig. 7). Le mobilier céramique de la fosse s'avère riche en vases destinés à la consommation du vin. Il faut remarquer l'absence totale de vases de cuisine, de vases pour les produits cosmétiques et de vases alimentaires. Ce sont, à notre avis, des particularités importantes qui donnent des renseignements sur la fonction de la fosse.

Entre autres particularités, l'emplacement et le contenu éliminent l'hypothèse d'une fosse domestique. Nous lui donnerions plutôt une fonction cultuelle, attachée à un complexe sacré (*hieron*) situé en cet endroit. Joignons-y un indice tiré de la forme particulière de la fosse, dont la signification s'avère très importante: sa cavité centrale permettait, à notre avis, soit d'y inserer un pilier, un autel ou un hermès en bois, soit de recueillir des offrandes liquides. Mais il est difficile de choisir entre ces différentes possibilités: en faveur d'un hermès plaident l'emplacement de la fosse[14] et les données fournies par d'autres domaines de recherche, telle que l'iconographie céramique de la même époque.

La peinture attique des Ve et IVe siècles av. J.-C. montre un riche répertoire d'idoles représentées par des hermès. Ces images cultuelles sont des représentations faisant partie de différents cycles, consacrés à Apollon, à Athéna, Aphrodite, Hermès, Dionysos, et à d'autres divinités.[15] Il se peut donc que le culte développé autour de la fosse d'Orgamé s'adresse à l'hermès d'une divinité. Une identification à Dionysos ou à l'un de ses compagnons (Pan par exemple) apparaît comme la plus probable. Pour conforter cette proposition, on peut invoquer la nature du mobilier de la fosse: à savoir l'association d'amphores avec des *canthares* et des *cratères* traditionnellement attribués à Dionysos et à son domaine cultuel. La même association de vases se retrouve dans le mobilier funéraire de tombes qui ont reçu un culte héroïque, comme le tumulus T IV. L'emplacement de la fosse à la limite ouest de la nécropole impliquerait la liaison de Dionysos avec le monde des morts, en tant que divinité chthonienne.[16] Pour une image possible d'un hermès de Dionysos, on pourrait citer certaines compositions iconiques sur les vases contemporains à figures rouges, comme le cratère à colonnettes du Musée de Berlin[17] ou le cratère en cloche de Copenhague.[18]

Il y a certes des raisons d'approfondir nos investigations sur le rôle fonctionnel de la fosse, mais, à ce stade préliminaire de la recherche dans ce secteur, il nous paraît plus sage de nous en tenir à cette interprétation d'une fosse cultuelle pour la collecte des offrandes liquides. L'extension des fouilles dans ce secteur nous en apprendra davantage. Bornons-nous, pour le moment, à une analyse du contenu de la fosse.

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13 Les fragments sont de dimensions très réduites: un fragment provient de la partie inférieure de la lèvre avec le motif du laurier; deux autres petits fragments font partie de la panse, au-dessous des anses, de la partie couverte de vernis noire; un petit morceau garde le motif du méandre.

14 Une pélikè du Musée Vivenel à Bopiège 970 représente Pan ou un satyre tenant un gourdin, devant une idole de type hermaïque dressée sur un monticule ou sur une colline couverte de végétation. Voir Metzger 1965, pl. XXX/1, 78.

15 Metzger 1965, 77-91, chap. V. *Images de l'hermès dans la céramique attique tardive.*

16 Nilsson 1967, 118.

17 Beazley 1963, ARV2, 551/10: Peintre de Pan, daté du IVe siècle av. J.-C.

18 Beazley 1963, ARV2, 1156/11: manière du Peintre de Dinos.

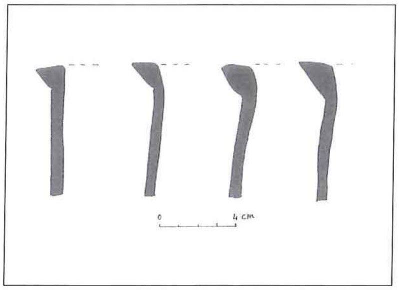


Fig. 8 Variations typologiques de la lèvre parmi les amphores de Thasos de la fosse G1.

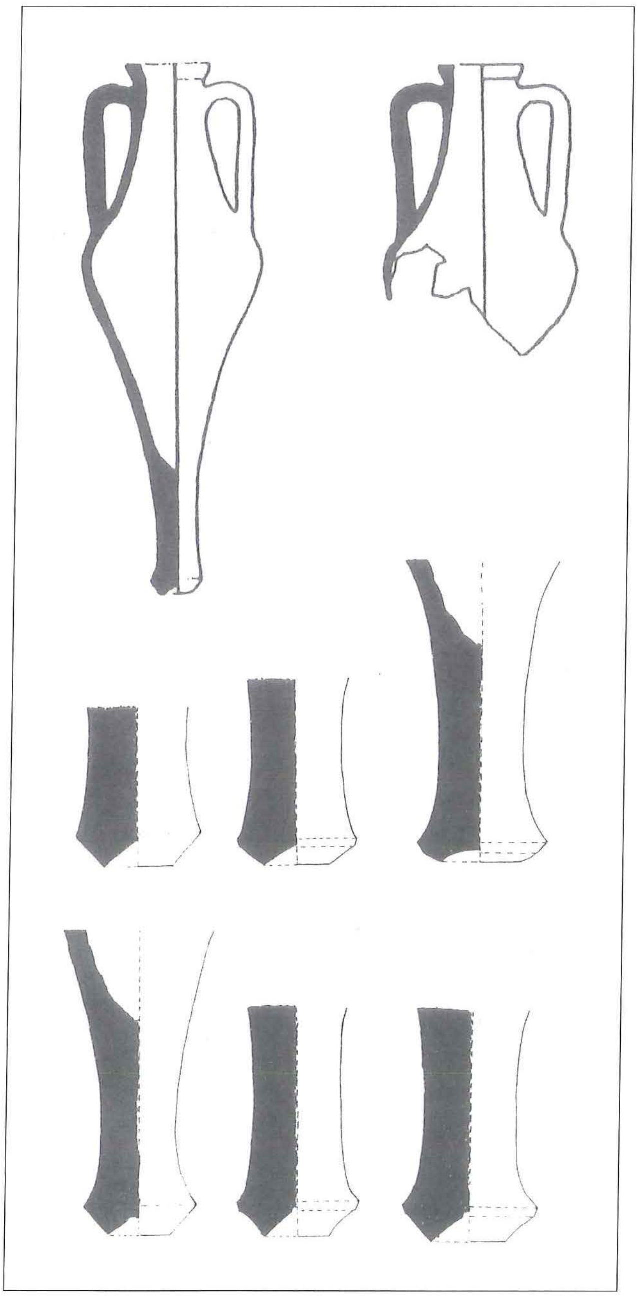


Fig. 9 La typologie des pieds d'amphores de *Kalliphôn*, au temps de *Philokratès*, et de *Pyladès*, au temps de *Mes* (--), établie sur les exemplaires de la fosse G1.

Cette fosse (G1) est d'autant plus importante qu'elle a livré un dépôt céramique pratiquement fermé. Notons d'abord la présence abondante des amphores de Thasos. Les fragments inventoriés correspondent à des récipients à panse biconique, à épaule bien marquée et élégante, à col allongé et cylindrique, lui-même couronné d'une lèvre de section triangulaire plus ou moins régulière (fig. 8). Cette lèvre s'allonge parfois sensiblement dans l'atelier de Pylades au Molos. La jonction entre la lèvre et le col est marquée parfois par une bande de peinture rouge. Les anses sont le plus souvent de section ovale, c. 4 x 2 cm, mais il en existe également une variante à section vaguement arrondie, c. 3,4 x 2,4 cm: elles décrivent une arche large et portent fréquemment une empreinte de doigt à l'attache inférieure. De son côte, le pied est représenté par des fragments de hauteur variable; le profil du sabot apparaît diversement caréné et pourvu en dessous d'une dépression plus ou moins profonde. Les pieds de forme renflée ont été apparemment réalisés en même temps que ceux de forme plus élancée.

Les particularités typologiques des fragments d'amphores inventoriés indiquent la présence de la forme "biconique", type I de Garlan,[19] comparable à certains des exemplaires découverts dans le contexte funéraire du tumulus T IV, qui ont permis une restauration complète (fig. 9). Selon les données de Garlan, la hauteur totale de ces amphores tourne autour de 65 à 75 cm, tandis que le diamètre de la panse est de 28 à 30 cm environ. Des exemples de la fosse G1 appartiennent à des récipients de taille légèrement moindre, qui présentent entre eux de minimes différences, notamment en ce qui concerne le profil du pied et de la lèvre. Les exemplaires complets de même genre nous renseignent également sur leur capacité qui devait être de l'ordre de 10 litres. Ces conteneurs sont surtout attestés sur les sites de la mer Noire et à Athènes. Leur diffusion généralisée dans ces régions contraste significativement avec leur rareté en beaucoup d'endroits de l'Égée.

On a pris ici en compte le lot complet des timbres thasiens, riche de 32 exemplaires. Les 20 anses timbrées découvertes en 2002 s'ajoutent au groupe

[19] Garlan 1999a, 65.

des 12 exemplaires trouvés en 1994 dans la couche qui recouvrait la fosse.

De tous les timbres amphoriques de la fosse G1, 30 sont bien lisibles et 2 illisibles (mais présentant des indices imputables à un des éponymes clairement identifiés). Le rapport, dans le comblement de la fosse, entre le lot des anses timbrées et le nombre des pieds (64 exemplaires) donne un coefficient d'environ 50% entre les amphores timbrées et non timbrées. Il semble identique à celui qui se rencontre généralement dans certains ateliers de Thasos: 50% à Vammvouri Ammoudia; 50% à Koukos; 45% à Kalonero ou 42 % à Keramidi.[20]

L'analyse des noms atteste la présence de deux éponymes, *Philokratès* et *Mes (--)*, retrouvés plusieurs fois en association avec les noms de divers fabricants, ainsi que celle, plutôt incertaine, de *Damastès*. Ces éponymes appartiennent au groupe F du timbrage ancien de Thasos. De leur distribution chronologiques, il résulte qu'ils composent un ensemble cohérent à placer entre 360 et 350/345 av. J.-C. En raison de cette chronologie assez serrée, il semble que la fosse ait été abandonnée très vite, ou qu'elle ait été successivement nettoyée avant d'être abandonnée sous ces éponymes.

Les timbres de *Mes (--)*, qui est associé au fabricant *Pyladès* (13 exemplaires), viennent du Molos.[21] Ils sont orientés soit vers la lèvre,[22] soit vers la courbure de l'anse.[23] À Orgamé ont été inventoriés jusqu'à présent 20 exemplaires de ce genre, soit 40% du total existant selon Garlan sur le littoral occidental de la mer Noire, où il est plus souvent attesté que celui du fabricant *Glaukôn*. Ce dernier se rencontre à Orgamé avec l'éponyme *Philokratès*, sur trois anses faites de la même argile dense, sans inclusion, de couleur rougeâtre. Un quatrième exemplaire est fait d'une argile différente, de couleur orangée, contenant plus de mica et des particules blanches ou noires qui lui donnent un aspect plus dur que dans les trois premiers cas. Elle se rapproche des pâtes utilisées par le fabricant *Pyladès* dans l'atelier du Molos. La forme des anses n'est pas non plus identique et trouve des parallèles parmi les amphores du même fabricant; dans les trois premiers cas, leur section est plus petite et légèrement arrondie, comme sur les anses timbrées au nom de *Mes (--)*. Il en résulte donc que le fabricant *Glaukôn* a changé sa source d'argile pendant l'année de *Philokratès*. On peut alors envisager la possibilité que ces deux fabricants ont utilisé la même argilière. On ne peut en outre qu'être frappé par la ressemblance morphologique des amphores, qui pourrait bien inciter à situer ces deux fabricants en un même endroit, probablement dans l'atelier du Molos. On peut supposer que la forme biconique du recipient s'est accentuée par suite de l'allongement du pied, aussi sensible sous *Philokratès* que sous *Mes (--)*. D'importants renseignements apparaissent ici, liés à l'existence de productions amphoriques apparentées, originaires d'ateliers voisins. Des différences d'argile permettent par ailleurs de distinguer les productions de différents fabricants au temps de *Philokratès*. C'est le cas avec *Aischriôn*, *Glaukôn, Théodotos* et *Kalliphôn,* dans une série stylistique attribuée par Garlan à un seul graveur, le même que celui de *Damastès* et *Panphaès*.[24] Nombre de ces types présents à Orgamé se situent de la même façon dans l'ensemble des importations thasiennes à Istros (voir le catalogue). Une nouvelle variante est fournie par le timbre n° 13 de *Kalliphôn* sous l'éponyme *Philokratès*, dont le cartouche est plus petit que les autres. Le timbre est imprimé en oblique sur l'anse.

Toutes les anses timbrées ont été recueillies dans un contexte stratifié à l'intérieur de la fosse. Les premières, dans l'ordre stratigraphique, sont celles de *Philokratès*, qui ont été trouvées presque au fond de la fosse (fig. 10). Cette distribution des anses peut influencer le classement des éponymes du groupe F. On entrevoit donc la possibilité de mieux fixer les positions de deux magistrats à l'intérieur du groupe. Garlan proposait d'intercaler *Mes (--)* et *Aristeidès*, entre *Philokratès* et *Damastès*.[25] Mais les contextes archéologiques d'Orgamé, livrés par la fosse G1 et le tumulus T IV, suggèrent plutôt d'établir une suc-

[20] Garlan 1986, 230-231; Garlan 1993, 157.

[21] Le fabricant *Pyladès* "a travaillé au Molos durant le quart de siècle qui a précédé la fin des timbres anciens", Garlan 1999a, 46.

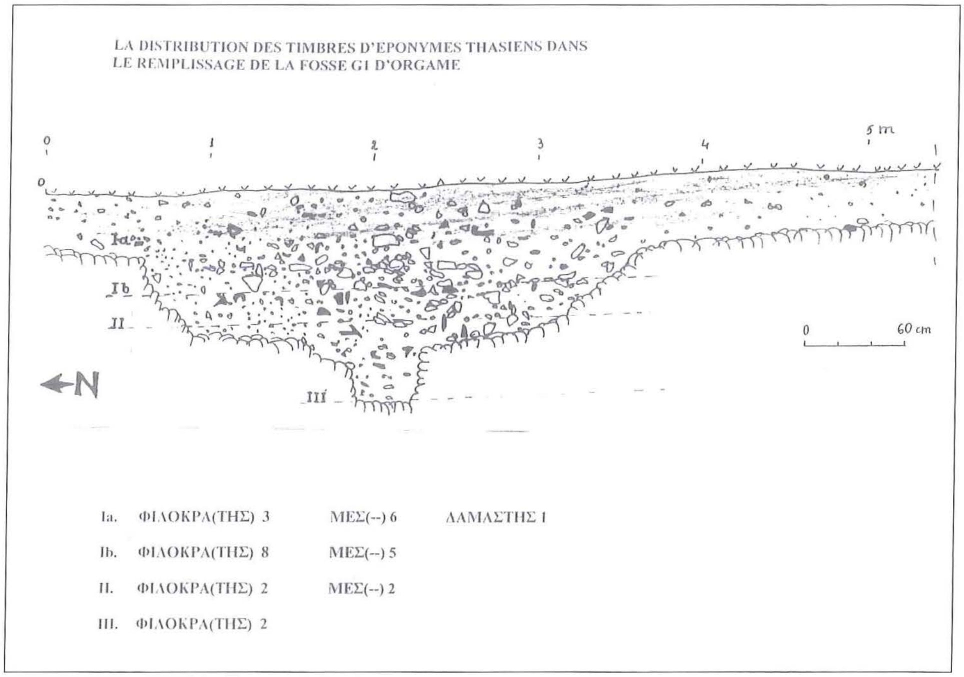
[22] (5 exemples: n° 44777, 44809, 45436, 45442, 45446).

[23] (7 exemples: n° 44772, 44810, 44811, 44811.1, 44811.2, 44912, 45441, 45449).

[24] Garlan 1999a, 234.

[25] Garlan 1999a, 47.

Fig. 10 La distribution stratigrafique des timbres d'eponymes thasiens dans la fosse G1.



cession directe entre *Mes (--)* et *Philokratès*: *Aristeidès* se plaçant avant eux, comme nous l'avons déjà proposé dans l'étude publiée en 1999.[26] L'absence d'*Aristeidès* dans la Fosse G1 conforte également sa position avant *Philokratès*. Il résulte donc que la distribution stratigraphique à l'intérieur de la fosse G1 confirme bien le regroupement révélé par le tumulus T IV.

Séquence des éponymes au sein du groupe F, d'apres le contexte de la Fosse G1 d'Orgamé:

1	*Philokratès*
2	*Mes (--)*
3	*Damastès*

En ce qui concerne les fabricants, le plus attesté est *Pyladès*, de l'atelier du Molos, avec 13 exemplaires: comme dans le tumulus T IV, où il est présent sur 9 exemplaires. Les nouveaux timbres ajoutent des informations supplémentaires sur les particularités de sa production amphorique. Les caractéristiques de l'argile sont les mêmes: homogène, très riche en mica et en sable. Les couleurs sont variables, du rouge foncé au beige clair. La lèvre de section triangulaire a tendance à s'incurver vers l'intérieur (détail déjà identifié dans le tumulus T IV); un autre type de lèvre est ici représenté, par quelques fragments de profil triangulaire très allongé, façonné en deux types d'argile, rouge foncé et beige clair. Le pied, en forme de manchon, est pourvu d'une semelle à cavité centrale qui présente quelques variantes: celles-ci se retrouvent dans les amphores de *Pyladès* et *Kalliphôn* contemporaines des éponymes *Mes (--)* et *Philokratès* (fig. 9). Quant aux fabricants de ce lot, on doit remarquer la fréquence de *Pyladès*, *Kalliphôn* et *Glaukôn*. Ils ont fonctionné de façon parallèle à l'époque du groupe F sur divers marchés de Grèce et de mer Noire. Les graphiques de Garlan en témoignent.[27]

[26] Lungu 1999, 75.
[27] Garlan 1999a, 90.

Fréquence des fabricants dans la fosse G1 d'Orgamé par rapport au tumulus T IV

No. crt	Fabricants	Nombre d'attestations
1	ΠΥΛΑΔΗΣ	13 ex. + 9 Tumulus IV + 7 *Mes (--)*; 1 *Megôn*; 1 *Philokratès*
2	ΚΑΛΛΙΦΩΝ	7 (9?) ex.
3	ΓΛΑΥΚΩΝ	4 ex. + 1 Tumulus IV + *Aristeidès*
4	ΑΙΣΧΡΙΩΝ	1 ex. + 1 Tumulus IV + *Aristeidès*
5	ΘΕΟΔΟΤΟΣ	1 ex. + 1 Tumulus IV + *Aristeidès*
6	ΛΥΣΙΚΛΗΣ	1 ex. + 2 Tumulus IV + *Mes (--)*
7	ΚΛΕΟΦΑΝΗΣ	1 ex.

Situation générale des éponymes et des fabricants dans la fosse G1 d'Orgamé

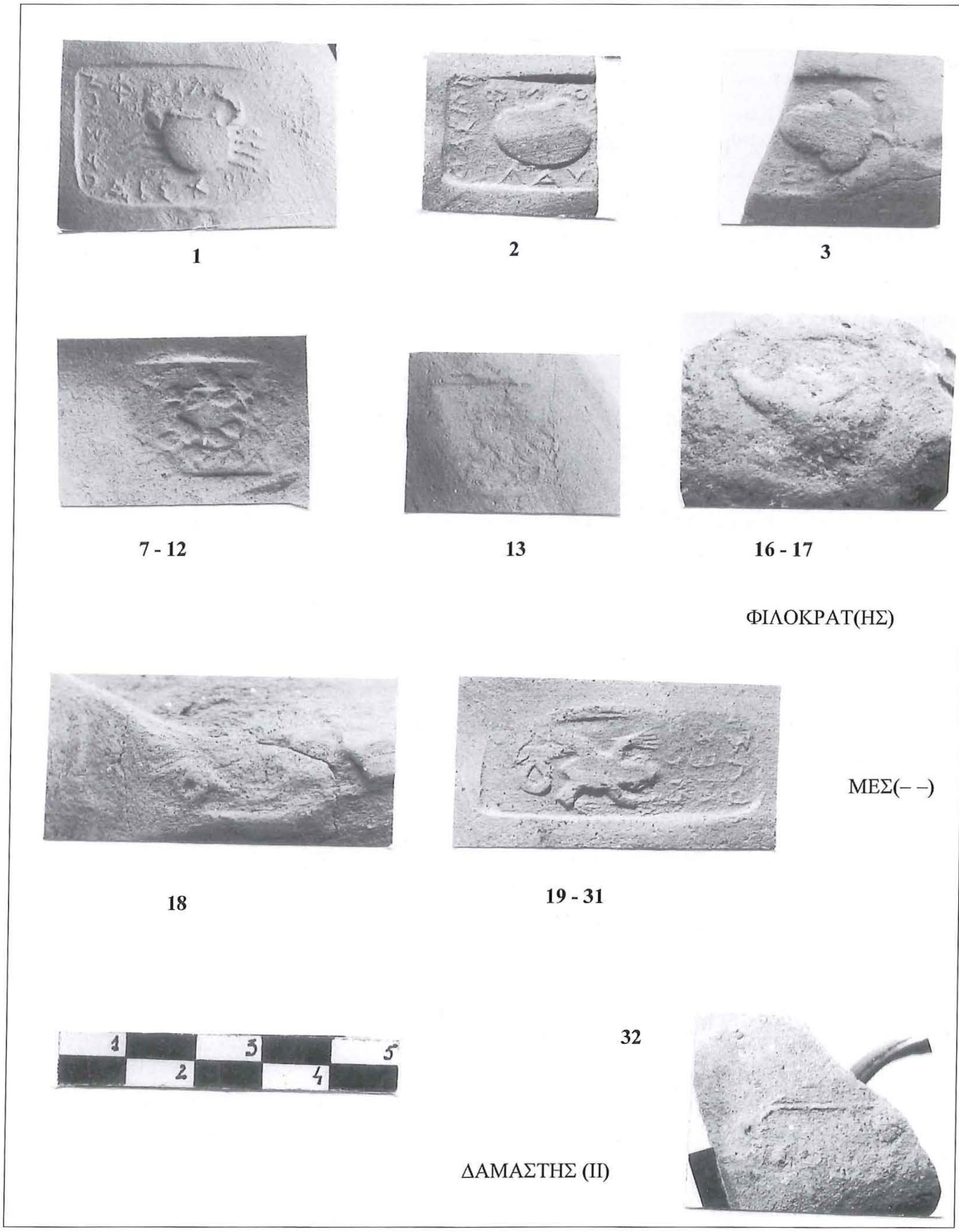
No. crt	Éponymes	Nombre d'attestations
1	**ΦΙΛΟΚΡΑ(ΤΗΣ) gr.F1**	**17 ex.:** 9 ex. avec Kalliphôn 4 ex. avec Glaukôn; 1 ex. avec Aischriôn 1 ex. avec Théodotos 1 ex. avec Lusiklès (atelier de Kéramidi)
2	**ΜΕΣ(ΣΟΚΛΗΣ) gr.F1**	**14 ex.:** 13 ex. avec Puladès (atelier du Molos) 1 ex. avec Glaukôn
3	**ΔΑΜΑΣΤΗΣ II gr.F2**	**1 ex.:** 1 ex. avec Kléophanès (atelier de Kéramidi)
TOTAL: 3 éponymes		**7 fabricants**

La fréquence des deux éponymes, *Philokratès* (17 exemplaires) et *Mes (--)* (14 exemplaires), fait de la fosse G1 d'Orgamé un des plus riches dépôts où apparaissent ces éponymes. Avec ses 20 anses de *Mes (--)* avec *Pyladès*, ornées des emblèmes du serpent et de la grenouille, Orgamé fournit la plus riche documentation sur ce type. Il faut aussi remarquer que les mêmes noms sont aussi parmi les plus fréquents dans le tumulus T IV. C'est une coïncidence qui soulève la question de leur chronologie ainsi que de la fréquence des amphores thasiennes sur le marché d'Orgamé vers le milieu du IVe s. av. J.-C. L'évaluation quantitative des deux complexes d'Orgamé présente d'ailleurs une concentration similaire à celle qui s'observe à la même époque à Athènes, au nord de l'Égée et à Odessos-Istros.[28] À Istros, Avram parle d'une augmentation considérable des importations thasiennes vers 355 av. J.-C., et d'un apogée entre 330 et 295 av. J.-C.[29] Ce n'est pas l'effet du hasard: rappelons la présence presque constante d'escadres athéniennes dans le port de Thasos entre 375 et 338 av. J.-C., qui pourraient avoir été responsables de l'accroissement des importations thasiennes à Athènes[30] et des exportations d'Athènes vers le nord de l'Égée et en mer Noire. Vers la même époque, les associations de vases attiques et d'amphores thasiennes dans les inventaires pontiques atteignent leur apogée.

Si l'on admet en général que le nombre des amphores identifiées sur un site de consommation est un des indices les plus importants pour l'étude des importations et par conséquent des fluctuations commerciales, il est alors clair que l'exportation du vin thasien à Orgamé a dû nettement culminer à l'époque de ces éponymes, c'est-à-dire dans le troisième quart du IVe siècle av. J.-C. Nous disposons en effet des indices quantitatifs fournis par deux importants complexes archéologiques, la fosse G1 et le tumulus T IV, qui signalent un pic des relations entre Orgamé et Thasos. Il s'accorde bien avec les données de certains textes littéraires. La principale source,

[28] Garlan 1999a, 84-92.
[29] Avram 1996, 41.
[30] Picard 1994, 41.

Fig. 11. Timbres thasiens de la fosse G1 d'Oregamé.



souvent invoquée,[31] est le discours *Contre Lacritos* du Ps.-Démosthène (935.35), qui parle généralement de la fréquence des transports de vin thasien vers le Pont à la même époque, c'est à dire de 355 à 340 av. J.-C.[32] À preuve également, les milliers d'amphores thasiennes identifiées dans le bassin pontique, dont font partie les trouvailles d'Orgamé.

Ce qui ressort surtout de l'abondance du matériel amphorique thasien à Orgamé, c'est l'idée d'un commerce régulier, effectué directement à partir de

[31] Salviat 1986, 166-167.

[32] Sur ce texte, voir le commentaire de Ziebarth 1929, 133, no 68.

son port par l'entremise d'agents importateurs installés sur le site même.[33] Il faut bien noter aussi que la documentation archéologique actuelle demeure muette sur l'existence d'une viticulture dans le Pont occidental. À plus forte raison, les régions voisines, occupées par les peuples indigènes, ne semblent pas avoir été grandes productrices de vin à cette époque, même si les sources littéraires y font par la suite allusion: Strabon nous apprend que les Gètes ont détruit leurs vignes à partir de l'époque de Burebista (Ier s. av. J.-C.), pour des raisons religieuses imposées par le grand prêtre Décénée.[34] Particulièrement intéressante à cet égard est la question de l'origine des vignes locales aux époques antérieures: on ne sait si elles tiennent à des influences grecques ou sont d'origine autochtone. L'existence d'une production locale du vin est indirectement suggérée, dans l'espace géto-dace, par l'apparition d'ateliers locaux qui ont copié pendant plus d'un siècle (du IIe s. av. J.-C. au Ier s. av. J.-C.) les amphores de Rhodes, de Cnide ou de Cos,[35] pour les remplir de vins autochtones (qui semblent cependant n'avoir pu, ni quantitativement ni qualitativement, éliminer les importations).

Parmi les amphores importées à partir du IVe s. av. J.-C., les amphores de Thasos sont présentes assez souvent sur les sites indigènes des Géto-daces.[36] À cet égard, il est important de noter le rôle de comptoir joué par la colonie d'Orgamé, à côté d'autres cités grecques de mer Noire. Dans cette zone, les amphores de Thasos forment souvent l'écrasante majorité des trouvailles amphoriques du IVe au IIIe s. av. J.-C.[37] Elles ont donc constitué l'essentiel du commerce du vin dans les villes grecques pontiques aussi bien que chez les populations indigènes installées dans des territoires plus ou moins éloignés (Thraces, Gètes, Scythes, etc.). Ce qui peut s'expliquer soit par une préférence pour un vin thasien de grande réputation,[38] soit par la faiblesse relative de son prix. À quoi s'ajoutent la proximité, la puissance économique et l'autonomie de ce centre de commerce – éléments toujours favorables au développement d'une liaison commerciale régulière. Le commerce de vin géré à cette époque par les comptoirs pontiques a bien pu stimuler par la suite l'apparition de productions locales chez les populations indigènes.

Catalogue des timbres thasiens de la fosse G1 d'Orgamé[39]

1. Orgamé: Fosse G1, 2002. N° inv. 45448.

Θάσιον | Φιλο[κρά(της)]

Crabe ↑

Αἰσχρί[ων]

Garlan 1999, n° 678; gr. F1.

EX. 4: Thasos 2 (Th 4189; puits Valma); Generalskoe; Phanagorie.

2 – 5. Orgamé: Fosse G1, 1994: 2 ex.: n° inv. 44778; 44780; 2002: n° inv. 45439; G1-1.

Total: 4 ex.

Θάσιον | Φιλο[κρά(της)]

Outre?

Γλαύ[κων]

Garlan 1999, n° 681; gr. F1.

EX. 4: Istros 3 (Bucarest, Inst. Arch. 30244; Canarache 1957 14); Avram 1996, n° 77: porc-épic?; Histria Pod, Avram 1996, n° 548 = Avram 1999, n° 13.

6. Orgamé: Fosse G1, 2002. n° inv. 45444.

[Θάσιον | Φιλ]οκ[ρά(της)]

Grappe →

Θεόδο[τος]

Garlan 1999, n° 686; gr. F1.

EX. 17 [18]: Thasos; Amphipolis; Istros 2; Orgamé (tumulus IV); Panticapée 2; Elisavetovskoe 3 (M. Azov, 71/6-21;Maison du marchand 3); Phanagorie 6; Gorgippia; ex-URSS.

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33 Le corpus des timbres amphoriques d'Orgamé sera publié par la suite.

34 Strabon VII.3.11: ...επείσθησαν γαρ εκκόψαι την άμπελον καιζην οίνου χωρίς.

35 Glodariu 1976, 74.

36 Parvan 1923; Tudor 1967; Sirbu 1983; Conovici 1988; Avram 1996.

37 Avram 1996; Lazarov 1980.

38 Salviat 1986, 145-195.

39 Les équivalences sont prises dans le catalogue de Garlan (1999a), pour mieux suivre dans le contexte pontique la circulation des types présents à Orgamé, dans la fosse G1.

7 – 12. Orgamé: Fosse G1, 2002. n° inv. 45432; 45437; 45438; 45440; 45435; 45434; 45445. **Total: 6 exemplaires.**

[Θάσιο]ν | Φιλ[οκρά(της)]

Couronne ←

Καλλ[ιφῶ(ν]

Garlan 1999, n° 689; gr. F1.

EX. 5 [7]: Orgamé (tumulus IV) 2; Nikonion (M. Odessa 86008); [Théodosie]; Kerč 2; [Phanagorie].

13. Orgamé: Fosse G1, 2002. n° inv. 45445.

[Θάσιον | Φ]ιλοκρά[(της)]

Couronne ←

[Κ]αλλιφ[ῶ(ν]

Incertaines:

14. Orgamé: Fosse G1, 1994, n° inv. 45433a.

[Θάσιον | Φιλοκρά(της)

Couronne ←

Καλλιφῶ(ν)]

15. Orgamé: Fosse G1, 1994, n° inv. 45433b.

[Θάσιον | Φιλοκρά(της)

Couronne ←

Καλλιφῶ(ν)]

16 – 17. Orgamé: Fosse G1, 1994: n° inv. 44784; 2002: n° inv.45447.

Total: **2 exemplaires**

[Θάσιον | Φι]λο[κρά(της)]

Casque ↑

←

[Λυσι]κλ[ῆς]

Bon 1122. Garlan 1999, n° 692; gr. F1.

EX. 3: Thasos 2 (Th 89; puits Valma); Istros.

18. Orgamé: Fosse G1, 2002: n° inv.45450.

[Θασι( )

Μεσ( )]

Serpent ← oiseau ←

↑

[Γλα(ύκων)]

Garlan 1999, n° 658; gr. F1.

EX. 9 [10]: Istros 3 ex. (Bucarest, Inst. Arch. 26011): Avram 1996, n° 103: 2 ex.; Nymphaion 2; Panticapée [2]; Ker ; ex-URSS 2.

19 – 31. Orgamé: Fosse G1, 1994: 6 ex: n° inv. 44772; 44777; 44809; 44810; 44811, 44811.1, 44811.2, 44912; 7 ex., en 2002: n° inv. 45441; 45442; 45449; 45446; 45436. Total: **13 exemplaires**

[Θασι( )

Μεσ( )

Πυλά(δης)

grenouille

serpent

Rétrograde. Bon 1509. Garlan 1986, n° 51, fig. 33/j, gr. F. Atelier Molos. Garlan 1999, n° 675.

EX. 37 [38]: Thasos 9 (at. Molos 3; puits Valma 5, dont un ex. sur l'anse d'un col: pl. 65); Strymè; Istros 3 ex., Avram 1996, n° 112; Orgamé T_{IV} 7 ex., (dont 3 sont sur l'anse de cols: p. 65), Lungu 1995, n^{os} 20 – 26; Panticapée 2; Kerč 5; Phanagorie 4 (Moscou, M. Pouchkine EF 23); Gorgippia 2; [Semibratnee]; ex-URSS; Nord-Ouest de la Turquie; Mytilène.

32. Orgamé: Fosse G1, 1994: n° inv. 44779.

[Θάσιον | Δαμάστης]

Puisoir ←

↓

[Κλε]οφά[νης]

Bon 523. Garlan 1999, n° 710; gr. F2.

EX. 20 [22]: Thasos 3 (puits Valma 2); Athènes 2 (Pnyx, période III); Kerkinitis;[Théodosie]; Kytaïon; Nymphaïon 4; Panticapée 2; Kerc 4; Generalskoe (Moscou. Inst. Arch. a. 1986/128); Phanagorie; Gorgippia [2].

Alexandria's Long-distance Trade in Late Antiquity – the Amphora Evidence

Grzegorz Majcherek

The "biggest emporium of the world", "*civitas opulenta*": these are only two of the many epithets that ancient writers used to bestow upon Alexandria. Even assuming a natural grandiloquence on the part of some of these writers, one can hardly put into doubt the importance of the city as a port and commercial centre – it was not only Egypt's window to the world, but also a place of exchange between East and West from Ptolemaic times until Late Antiquity.[1] First and foremost, however, Alexandria was, like any other great metropolis in Antiquity, a huge market for consumption. To meet the ever-growing demands of its population, large quantities of essential foodstuffs: grain, olive oil and wine had to be imported both from the Egyptian hinterland and from overseas. While it is fairly difficult to appraise the grain trade by the evidence in the archaeological record, the trade in oil and wine has left ubiquitous trail: discarded amphorae used for the transportation of these products. Unfortunately, despite being found in large quantities in excavations throughout the city, amphorae are rarely treated as a practical tool for research on the ancient trade exchange. There follows a long list of only too familiar secondary problems: confusing typologies, doubtful provenance, disputable or unknown content and, notably, the lack of quantified data. The hazards of interpretation notwithstanding, the weight of amphora evidence in research on the ancient trade patterns can hardly be overestimated.[2] While the need for such a study in Alexandria has been felt for some time, this brief overview hardly purports to fill in the gap. It is focused solely on the trade in oil and wine: two principal amphora-borne commodities, and such basic topics of discussion as the relative volume of exchange and its geographical distribution.[3]

Sadly enough, quantified figures from various digs throughout the city are only recently finding their way into publications.[4] Given the limitations, these preliminary remarks are based only on the finds from Polish excavations at the Kom el-Dikka site, which is located in the very centre of ancient Alexandria. Our investigations, which have now been going on for more than forty years, have yielded a substantial pottery assemblage, with amphorae apparently making for the bulk of recorded finds. The pottery from Kom el-Dikka comes from different areas of the site: from excavations in the area of the public buildings (theatre and auditoria), the private residences and the pottery dumps associated with the huge cisterns.[5] Consequently, they constitute fairly extensive and varied samples, seemingly sufficiently representative for some preliminary observations, based on relative frequency of amphora types, to be made.[6] Even so, the conclusions presented here should be treated with due caution, being merely an approximation that should be tested against a much wider background. Although tempting, it would be farfetched to generalise and to extend our conclusions over the entire city: other sites excavated throughout Alexandria might provide a different statistic distribution.

No less important an issue is the choice of quantification method. Of the three available: weight, EVE (estimated vessel equivalent) and sherd count, the last was selected. While frequently criticised for

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[1] For a brief account of Alexandrian commercial activities see Hass 1997, 33; *Cf.* also: Schwartz 1983, 41-46.

[2] *Cf.* Peacock 1982, 155; for the dissenting view *cf.* Arthur 1986, 656.

[3] For a brief discussion on the nature of Roman trade see: Peacock & Williams 1986, 55-59.

[4] Majcherek 1992, 81-117; Şenol 2001, 369-396.

[5] For site topography and chronology, see Rodziewicz 1984, 9-33; Kołątaj 1992, 35-56.

[6] *Cf.* disscusion of ceramic data for statistical analysis in: Tomber 1993, 148-157

Pottery	Context	Date	Total amphorae RBHS
W1N-III	Domestic quarter (occupation layers)	mid 5th – early 6th c.	3 233
W1N-II	Domestic quarter (occupation layers)	early 6th – late 6th c.	4 109
L-II	Cisterns (pottery dump)	early 6th – late 6th c.	1 796
M-I	Theatre (late fill)	late 6th c.	1 616
L-I	Cisterns (pottery dump)	late 6th – mid 7th c.	2 770
G-II	Auditorium (occupation layers)	late 6th – mid 7th c.	890
W1N-I	Domestic quarter (occupation layers)	early – late 7th c.	7 161
G-I	Auditorium (destruction layer)	mid – late 7th c.	914
	Total		**22 489**

Fig. 1. Summary of pottery groups.

being far from precise, the method has been proved by R. Tomber as capable of showing credible correlation for groups of finds of comparable contents.[7] The counting method (rims, bases, handles and sherds) was chosen because of its easy application, which need not be commented on, as well as because it provides the opportunity for direct comparisons with data from other centres studied in a similar way.

Eight groups of ceramic finds, totalling altogether more than 22,000 fragments of amphorae, were selected for the purposes of this brief survey, covering a period of some two hundred and fifty years from the mid fifth to the late seventh century.[8] None of the pottery groups discussed below comes from a sealed deposit; the groups are mostly made up of finds from several layers, explored within a single area that were later, based on accompanying dating evidence (coins, lamps and table wares) amalgamated into one assemblage in order to provide a larger sample (Fig. 1). The figures obtained for each group were summarised and the percentages for each of the types analysed to give a broad view of trends and frequency variations. Generally, some 76 to 94 per cent of the amphora sherds found during our excavations could be assigned to one of the known types. Amphorae grouped in tables under the heading "others" comprise sherds either apparently residual or not to be properly identifiable. The present study is limited to principal vessel types only, which reveal a large-scale production that can be assigned to a general source area. Morphological and capacity variants of certain type-forms were usually conflated to one class.[9]

Alexandria's trade was based primarily on sea transportation. Overseas amphorae constitute a sizeable group, making up – depending on period fluctuations – from 60 to 80 per cent of the total count of containers. The reason for this phenomenon lies not only in the specific structure of transportation costs for different means of transport, with marine trade being definitely the cheapest one, as indicated by the price list given in Diocletian's Edict.[10] The other, no less important economic phenomenon influencing the character of Alexandrian trade exchange was the very nature of agricultural economy in Antiquity, and the existence of huge surpluses in major production centres of the Mediterranean, surpluses that naturally had to be re-distributed beyond

[7] Tomber 1993, 149-150.

[8] On the problems of correlation between the ceramic sample and actual volume of exchange *cf.* Hodder & Orton 1975, 105-106, and Tchernia 1986b, 35.

[9] For the various forms of LRA1 *cf.* Pieri 1998b, 98-99: for LRA4 see Majcherek 1995, 163-178.

[10] *Cf.* the calculation of transportation costs in Antiquity: Duncan-Jones 1974, 366-368.

the borders of the region. The need for exchange in the Roman world was also driven by the high specialisation of production in certain regions resulting in local shortages alongside abundance. Egypt, for example, one of the largest suppliers of grain, suffered a shortage of olive oil that could be balanced only with imported goods.[11]

At the turn of the fourth century AD a new chapter opened in the political and social history of the Roman Empire. With the death of Theodosius the division of the Empire into the eastern and western parts was sealed,[12] something that obviously affected the economic life in many of the provinces. One consequence of the process was a weakening of trade contacts between Alexandria and the western provinces of the Empire, manifested at Kom el-Dikka in a declining share of amphorae from that part of the Empire. The fifth century ushered in a period of heavy domination of the eastern provinces in commerce, a domination that was to become even more pronounced in the following century. Amphorae from the eastern half of the Empire constitute a sizeable group, totalling some 58 to 60 per cent of the finds overall (group W1N-III, Fig.2). This index is four times as high as for Egyptian amphorae. The numerically small group of western amphorae includes primarily vessels from Africa (*spatheia*, Keay XXV) and a few Spanish products (Almagro 51B). The diminished import of oil from the West was compensated for by supplies from Cilicia, Cyprus and, presumably, the region of Antioch.[13] Amphorae from that corner of the Mediterranean (LRA1) constitute a group accounting for as much as about 18 per cent of the RBHS.[14]

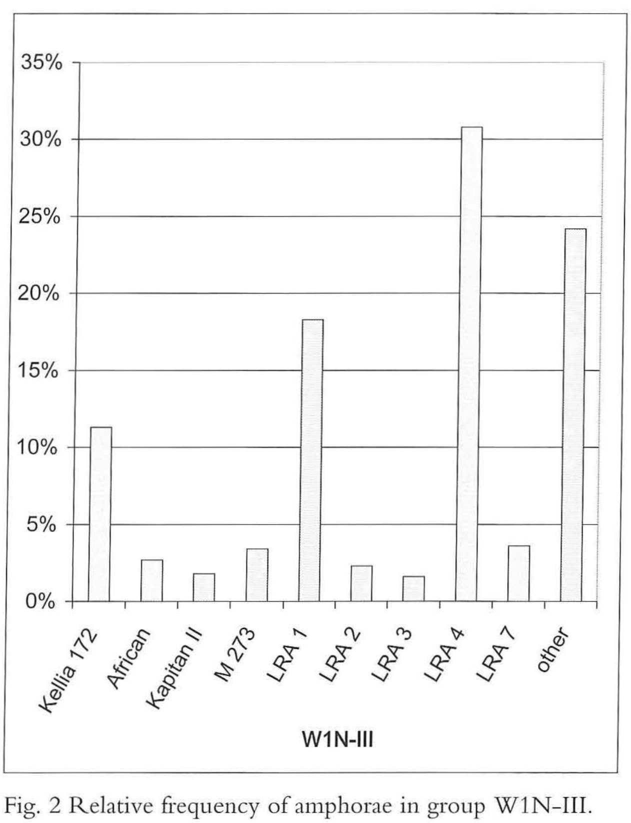


Fig. 2 Relative frequency of amphorae in group W1N-III.

The second and even more numerous group of vessels is composed of Palestinian amphorae. Wine was imported to Alexandria from Palestine on a large scale already in the Early Roman period, when Palestinian wines effectively pushed Aegean products out of the market.[15] The vessels from this region appear to be limited to amphorae produced in the Gaza area, and their share in the total RBHS count reaches even 30 to 31 per cent.[16] This remarkably high frequency indicates the special position of Palestine in Alexandrian commerce, and its importance was to grow as time progressed. Considered overall, the vessel fragments representing these two types combined (LRA1 and LRA4) constitute over 49 per cent of the amphorae finds from this period.

Interestingly, the sudden increase in the number of amphorae from *pars orientalis* corresponds to a drop in the figures for amphorae from the West, as well as those from Egypt. The share of locally produced vessels in Alexandria in the fifth century

[11] Most of the oil mentioned in papyri is vegetable-oil, *cf.* Bagnall 1993, 29-30.

[12] On the political and social history of the period see: Cameron 1993, 1-12, 28-32.

[13] Oil is widely believed to be a principal content of LRA1, although the areas where this amphorae class was produced are also known for thriving viticulture, *cf.* Pieri 1998b, 104-105.

[14] For areas of production of LRA1, see Empereur & Picon 1989, 223-248. The distinction between Cypriot and Cilician fabrics is still far from clear in field research. Therefore for purposes of this communication various LRA1 fabric-types are discussed jointly as a single group.

[15] For the earlier versions of Gazan amphorae *cf.* Majcherek 1995, 163-178.

[16] For a discussion of wine production in the Gaza region see: Mayerson 1985, 75-80; Glucker 1987, 93-95.

exhibits a dropping tendency, reaching a mere 15 per cent in this period.[17] (Fig. 2) The place of the hitherto prevalent vessels (AE 3 and AE 4), originating chiefly from the vicinity of Alexandria (Mareotic region) and which had all but disappeared in the late third century – presumably as a side effect of a crisis in local wine industry, was taken up by large quantities of new types of amphorae produced in the Nile Valley.[18] Those containers (Kellia 172 and LRA7) invariably made of conspicuous alluvial clays were manufactured in various centres scattered all over Egypt as evidenced by their morphological variability.[19]

It would be a simplification to assume that the sharp increase of imports from the East was due merely to the natural proximity of manufacturing centres and markets. As noted already, distance is hardly a factor of importance in maritime commerce. Therefore, the sources of this phenomenon should be looked for in a broader political and economic context. A key factor is surely the economic revival of the eastern provinces. Neither should one disregard the way in which the *annona* tax helped to stimulate trade relations.[20] From AD 330, instead of being sent to Rome, the Egyptian *annona* was diverted to Constantinople.[21] It was a radical shift of direction in economic ties on a macro scale and could not have remained without effect on the structure of Alexandrian imports.

Alexandria is not the only site where a growing influx of eastern amphorae can be observed in the fifth century. An increased frequency of this group of vessels was recorded at many other sites located in the western part of the Empire on a scale comparable with Alexandria.[22] In Rome, eastern products achieve 27 per cent of the total in early fifth-century deposits from *Schola Praeconum*.[23] The same frequency was recorded on the Palatine in deposits of the late fifth century.[24] In Naples, the group makes up close to 17 per cent of RBHS,[25] in Marseilles around 44 per cent of all late fifth-century amphorae.[26] In Carthage their share rises almost twofold in the British excavations, claiming as much as 25 to 27 per cent of the amphorae finds.[27] Even at Catalan sites eastern amphorae account for over 20 per cent.[28]

Another process, apparent at many western sites in the late fifth century in similarity to Alexandria, is a quantitative reduction of the African amphorae. At Kom el-Dikka, they appear to represent only 3 per cent of the sherds (Fig.2). In Rome, their share drops gradually from about 42.5 per cent of the finds in deposits of the early fifth century to about 31 per cent in the second half of the century.[29] An analogous process takes place in Naples, where the share of African amphorae is reduced by half, from 44 to 21 per cent of the finds.[30]

It is not mere coincidence that such a notable transformation of trade patterns comes at a time of fundamental changes on the political map of the western part of the Empire. The process of political disintegration was gaining momentum following a series of barbarian invasions. The new state organisms, which appeared in many regions, became independent or only formally dependent of Rome; suffice it to mention the Visigoth kingdom in Spain or that of the Vandals in Africa. The loosening of ties with Rome, which culminated in a renunciation of *annona*, is perhaps best illustrated by the low figures for African amphora types at the Italian sites quoted above.[31] The paradox is that the political dis-

[17] Interestingly enough, a similar percentage of locally produced amphorae is attested also in Carthage, which was like Alexandria another main port of export for agricultural products, *cf.* Panella 1983, 71.

[18] Wine production was an important aspect of rural economy of the Mareotic region. *Cf.* Rodziewicz, 1998, 27-36. For Mareotic amphorae *cf.* Empereur & Picon 1998, 76-91.

[19] *Cf.* Egloff 1977, 114. For the workshops producing LRA7 see: Ballet & Picon 1987, 17-48; Ballet *et al.* 1991, 129-143.

[20] Rickman 1980, 113-118 and 231-235.

[21] Garnsey 1983, 118-130. In consequence, North Africa became the main supplier of grain and oil to Rome. *Cf.* lengthy discussion on African *annona* in Keay 1984, 414-428.

[22] Keay 1984, 428-431.

[23] Whitehouse *et al.* 1982, 60.

[24] Panella 1986, 632, fig. 32.

[25] Arthur 1985, 252, fig. 16,2.

[26] Bonifay 1986, 297.

[27] Fulford & Peacock 1984, 258-260; similar figures were also obtained in University of Michigan excavations, *cf.* Riley 1981b, 118, fig. 11, and Riley 1982, 114, fig. 1.

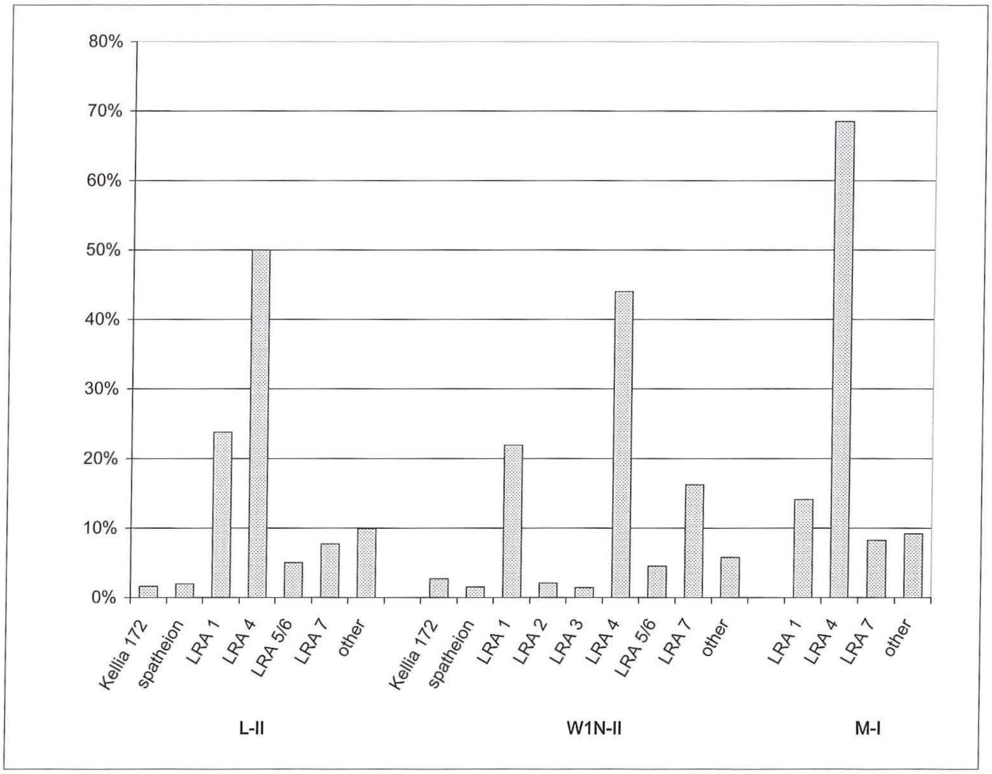
[28] Keay, 1984, 428.

[29] Panella 1986, 632, fig. 32.

[30] Arthur 1985, 252, fig. 16.2.

[31] To compensate for the lost Italian markets, agricultural surpluses of the African provinces were now exported mostly to Hispania Tarraconensis, *cf.* Keay 1984, 424-426.

Fig. 3 Relative frequency of amphorae in groups L-II, W1N-II and M-I.



integration of the West opened markets for eastern products. S. Keay argued that trade with the western regions of the Empire, where there was no central authority, and hence no tax obligations to speak of, was highly profitable financially for merchants from the East.[32]

The next stage of structural changes in Mediterranean long-distance commerce – observed in Alexandria as well as at other sites – began around the middle of the sixth century. Within a few dozen years, Justinian's "reconquest" brought some of the lost territories in the West back into the fold of centralised Imperial authority: Italy, Africa, the coast of Gaul and parts of Spain. These events resulted in at least a partial reconstruction of commercial ties between the two parts of the Empire.[33] Evidence of the process is the growing frequency of eastern amphorae in Carthage, reaching as much as 20 to 25 per cent of the finds in layers dated from AD 540 to 600.[34]

In Alexandria, the quantitative dominance of amphorae from the East is even more marked during this period. Vessels produced in this part of the Empire (except Egypt) constitute from 70 to 74 per cent of the RBHS (groups W1N-II and L-II respectively: Fig.3). An extreme example is the late sixth-century group M-I, for which the index grows to 83 per cent. Thus, it can safely be said that imports from the eastern provinces filled almost about two-thirds of its demand for oil and wine in this period.

LRA1 overall accounts for from 13 to 24 per cent of the RBHS. LRA4, at 44 to 50 per cent of the RBHS in groups L-II and W1N-II, and over 68 per cent in group M-I, became the unquestionably most numerous amphorae group (Fig. 3). A marked increase in the number of Gazan amphorae has been recorded at many other sites, but nowhere as much as in Alexandria. In Caesarea, relatively close to Gaza itself, it does not exceed 23 per cent

[32] Keay 1984, 423-424

[33] For the Eastern merchants in the West in the sixth century *cf.* Keay 1984, 426.

[34] Fulford & Peacock 1984, 260-61; in the University of Michigan excavations the relevant figure is smaller and does not exceed 14%, *cf.* Riley 1982, fig. 1.

in this period.[35] In Naples, it constitutes about 15 per cent of RBHS,[36] in Marseilles 7 to 14 per cent of the finds.[37] On the other hand, LRA4 indices at North African sites exhibit a dropping tendency in the late sixth century. In Carthage, their share is minimal, accounting for mot much more than 2 per cent,[38] at Benghazi they reach an all-time low, falling below 1.5 per cent.[39]

Amphorae from the Aegean and Asia Minor (LRA2 and LRA3, respectively) practically disappear at this time. These vessels make up merely 3.5 per cent of the RBHS (group W1N-II: Fig. 3). The end of the production of Asia Minor amphorae coincides with an apparent crisis in the manufacture and distribution of LRC ceramics, which is observed from about the middle of the sixth century AD all over the Mediterranean.[40] The correlation between amphora and tableware frequency is too manifest to be accidental and would suggest a serious economic crisis that afflicted western Asia Minor in this period.

The second half of the sixth century is marked by the lowest ever frequency of Egyptian amphorae in Alexandria. The share of local products falls to 8 per cent in group M-I, however, still reaching 15 per cent of the RBHS in L-II and 23 per cent in group W1N. Forms produced in the immediate region of Alexandria – LRA5/6 made in Abu Mina and the Mareotis region – now reappear after a long break, alongside products from the Nile Valley (LRA7), which previously had been prevalent.

Exports of Egyptian amphorae on a small scale have interestingly enough been noted for this period, not only in nearby Palestine (Caesarea and Tel Keisan, below 1 per cent),[41] but also at western sites such as Naples, Carthage and Marseilles, as well as at British sites.[42] The distribution of Egyptian amphorae to most of these centres agrees with the recorded geographical range of Egyptian Red Slip A-type tableware.[43]

The seventh century, which closes the period discussed in this paper, witnessed still more political and economic turmoil. The short-lived economic revival in the East during the reign of Heraclius was interrupted by the Persian raid and all attempts at reconstruction were ultimately brought to an end by the Arab invasion, as a result of which Egypt,

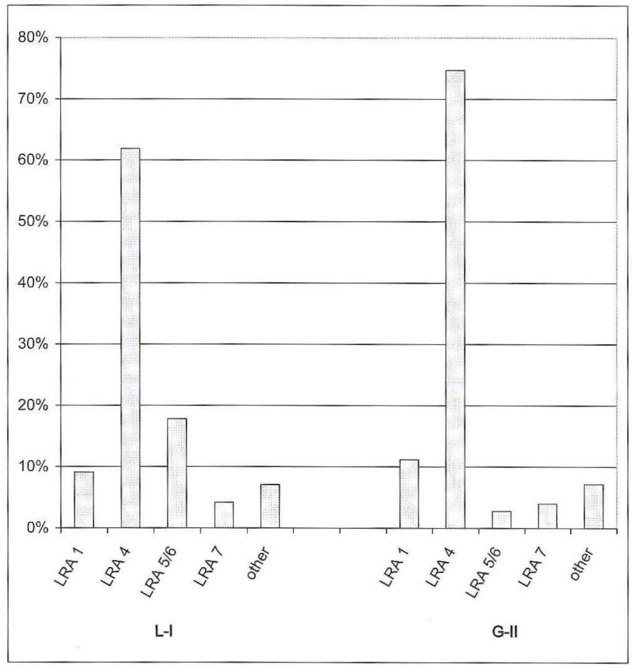


Fig. 4 Relative frequency of amphorae in groups L-I and G-II.

Syria, Palestine and North Africa were incorporated into the newly founded Islamic Empire.

In the late sixth and early seventh centuries Alexandria's dependence on the import of basic foodstuffs progressed. At Kom el-Dikka, amphorae from outside Egypt now form a group accounting for between 71 and 86 per cent of the RBHS (L-I and G-II: Fig. 4). It is made up almost exclusively of vessels from the eastern provinces of the Empire, with amphorae of western origin being represented by only a small number of North African *spatheia*.[44]

Gaza traditionally dominated the wine imports. LRA4 is definitely the most numerous group, its

[35] Riley 1975, 27.
[36] Arthur 1985, 255, fig. 16.3.
[37] Bonifay 1986, 292.
[38] Riley 1981, 116, fig.9.
[39] Riley 1979, 220, fig.45.
[40] Hayes 1972, 460, figs. 15-16; 464, figs. 33-34.
[41] Adan-Bayewitz 1983, 118; Landgraf 1980, 67.
[42] Tomber & Williams 2001, 41-54.
[43] Hayes 1972, figs 18 and 36.
[44] For dating and typology *cf.* Keay 1984, 212-219.

percentage standing at between 62 per cent (group L-I) and almost 75 per cent (group G-II) of the RBHS (Fig. 4). Oil imports from the north-eastern zone of the Mediterranean drop, but even so LRA1 continue to amount to about 9 per cent (group L-I) and 11 per cent (group G-II) of the RBHS. How many of them were coming from Cyprus as opposed to Cilicia is an issue that still needs to be resolved.

Egyptian amphorae continued to be exported even to the most distant regions of the Mediterranean. Beside areas traditionally included in the sphere of Alexandrian commerce, such as Cyprus and Palestine, Egyptian pottery also went to the West. The Church began to play an important rôle in the Mediterranean trade starting in the sixth century.[45] Church property, which was the source of the institution's financial prosperity, was also instrumental in shaping the structure of trade exchange. Numerous monasteries, located not only in Egypt, were maintained by grain, oil and wine production. Ships of the Alexandrian church's extensive commercial fleet even reached Britain.[46]

The Arab invasion apparently severed Alexandria's system of commercial ties, cutting off the city from some traditional markets (Asia Minor, Aegean) and seriously restricting the scale of long-distance trade exchange.[47] This isolation of sorts is reflected in the pottery assemblage from Kom el-Dikka. On the other hand, restrictions on the import stimulated the flow of goods from the Egyptian hinterland. It appears that the Arab invasion did not have an immediate negative impact on the rural economy in Egypt.

Egyptian amphorae gradually recovered the position lost during Byzantine times, becoming an ever growing and varied group. A dynamic, almost twice-over increase in the number of local products is recorded for both pottery groups of the second half of the seventh century. For group G-I, the share of Egyptian amphorae grows from 7 to 14 per cent of RBHS; for W1N-I the corresponding index is 43 per cent, as compared to 23 per cent at the end of the sixth century (Fig. 5). The repertoire becomes more and more varied, reflecting the development of new amphora-manufacturing centres. New forms, chiefly imitations of imported amphorae, were introduced beside the already functioning ones. Alluvial-fabric versions of bag-shaped (LRA5/6) and ovoid amphorae (Kellia 167) both made their debut around the middle of the seventh century.[48]

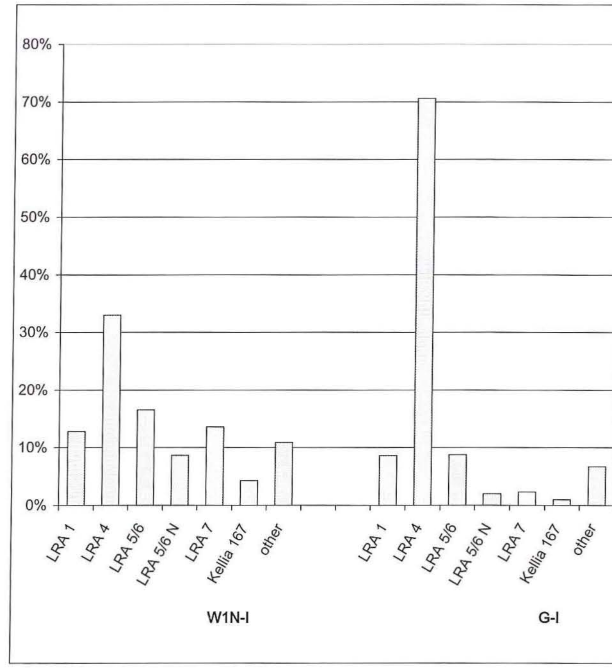


Fig. 5 Relative frequency of amphorae in groups W1N and G-I (LRA 5/6 N = Nile silt fabric).

Eastern amphorae, which were still a sizeable group in quantitative terms, dropped to about 46 per cent of the general count in group W1N-I, while in group G-I they still account for almost 80 per cent of the finds (Fig. 5). The reduction concerns mainly Gazan amphorae (LRA4), the number of which falls to about 33 per cent (group W1N-I). Oil imports from Cyprus and Cilicia are characterised by continued stability. LRA1 figures in both groups stayed at 9-13 per cent of the RBHS.

[45] Whittaker 1983, 167-169; on the role of Church in Alexandrian commerce *cf.* Hollerich 1982.

[46] Wipszycka 2002, 65-67.

[47] For the discussion on Late Antique economy and on the so-called "Pirenne thesis" see: Hodges & Whitehouse 1983; *cf.* also Barnish 1989.

[48] For a recently discovered kiln site of LRA5/6, *cf.* Ballet 1994, 381-393. Amphora Kellia 167, should perhaps be considered as an Egyptian variant of LRA2. *Cf.* Majcherek forthcoming.

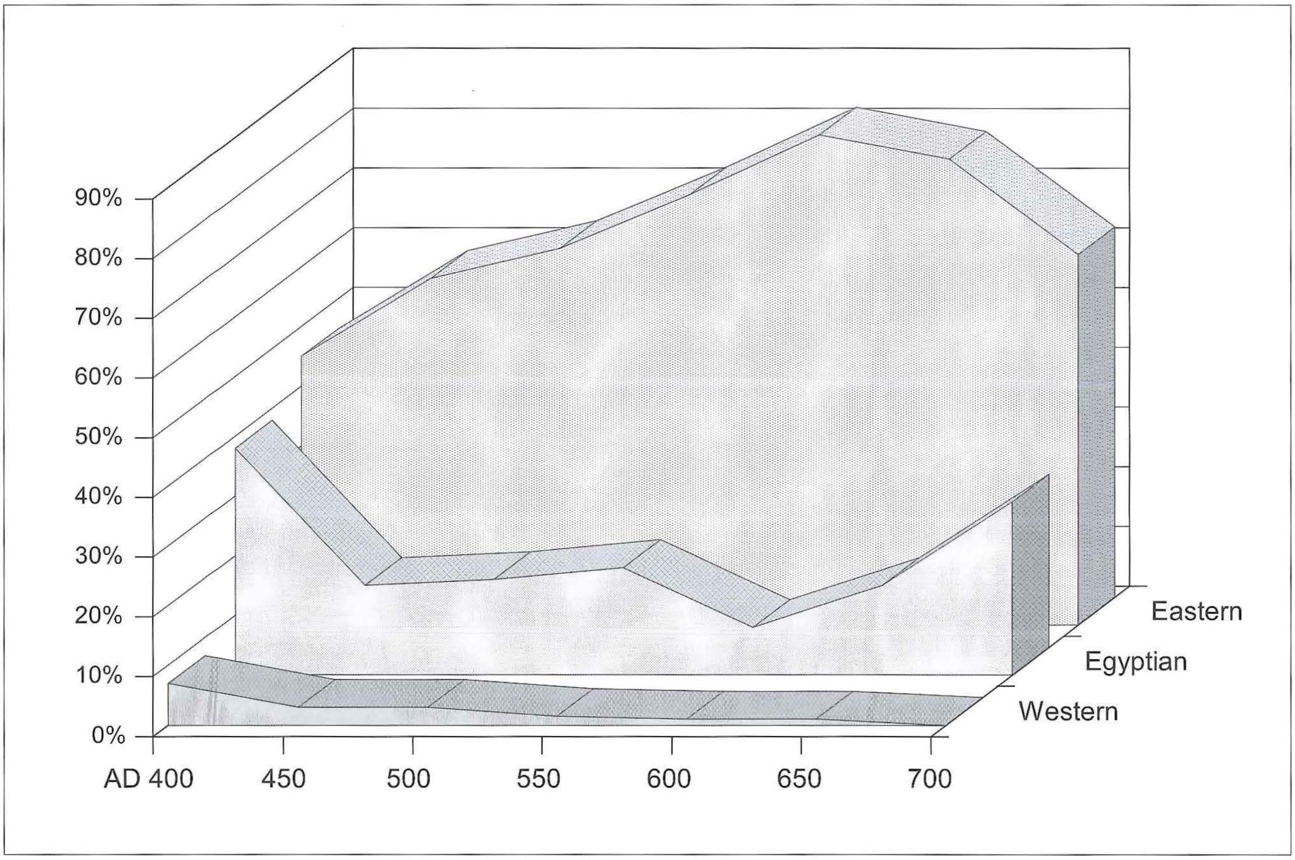


Fig. 6 Comparative percentages of Egyptian and foreign amphorae at Kom el-Dikka in the Late Roman period.

In conclusion, frequency variations interpreted as fluctuations in volume of goods imported to the city could be tied up to some well known phenomena: political disintegration in the west, economic revival of the eastern part of the Empire, Arab invasion etc. Generally, Alexandrian trade in Late Antiquity is characterised by a lack of balance between the consumption of Egyptian products and goods imported from other regions of the Mediterranean (Fig. 6). The changing ratio of local to imported amphorae is a reflection, not only of overseas trade patterns, but most probably also of the state of Egypt's agrarian economy. The high frequency of foreign amphorae, which is evidence of a marked dependence of local consumption on imported commodities, is a feature typical of large urban centres, unable to meet the demand for basic foodstuffs with supplies available from the local agricultural hinterland. With the share of western provinces being no more than marginal, the superiority of the eastern provinces, which are major producers of oil and wine in this period, is overwhelming.

The example of Alexandria clearly confirms a macroeconomic phenomenon of Late Antiquity that has also been observed in the west: the domination of the eastern part of the Empire in the production of staple food articles and their commercial distribution.

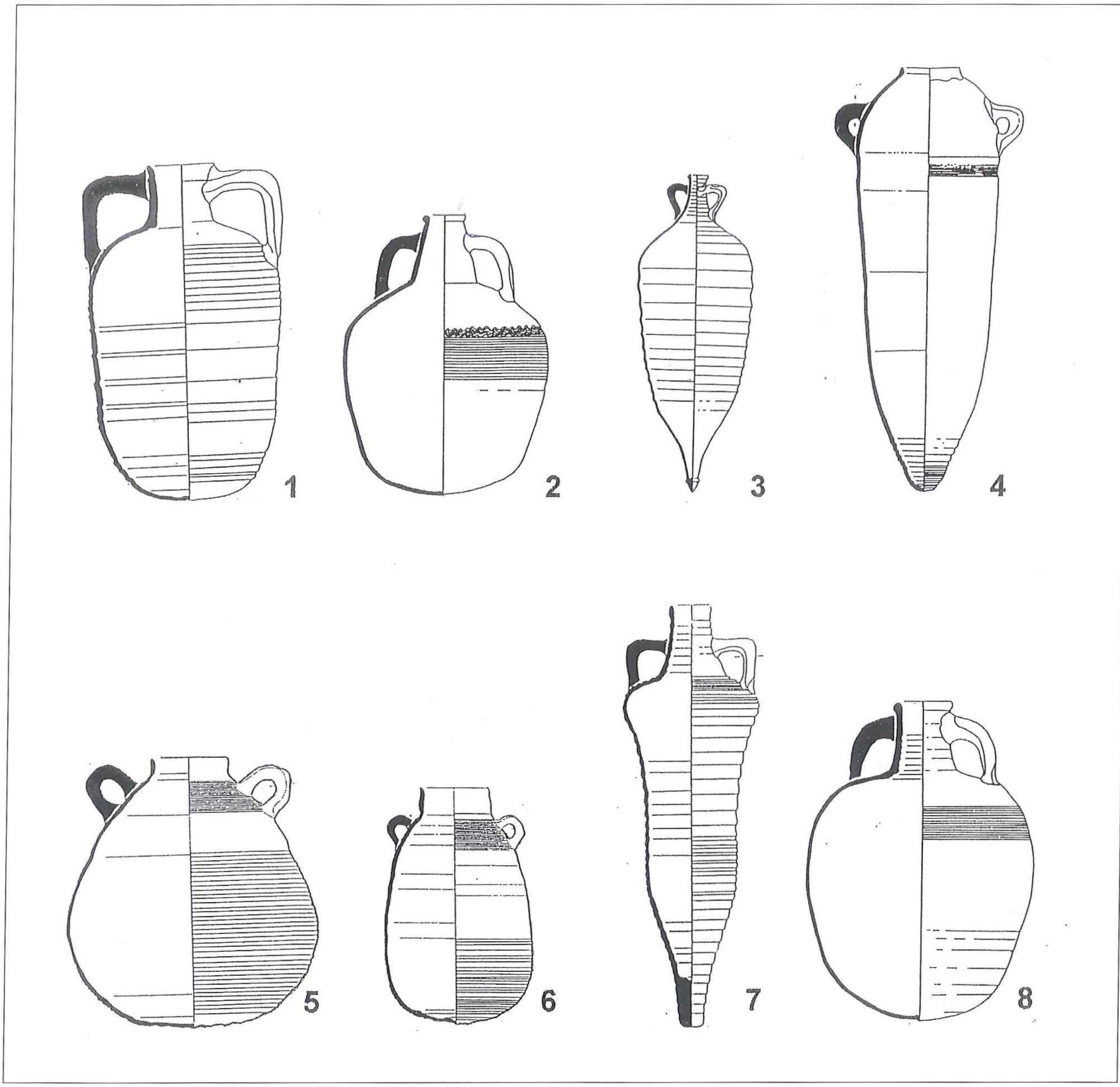


Fig. 7 Late Roman amphora types: 1 = LRA 1; 2= LRA 2; 3= LRA 3; 4= LRA 4; 5=LRA 5/6 produced in Mareotis; 6 = LRA 5/6 produced in the Nile valley; 7= LRA 7; 8= for Kellia 167 (not to scale).

Anfore e ceramiche fini da mensa orientali nella Sicilia tardo-ellenistica e romana: merci e genti tra Oriente ed Occidente[1]

Daniele Malfitana

"Un'intensa attività di ricognizione e di scavo, nonché lo studio di manufatti quali le anfore vinarie, forniscono ormai una consistente base documentaria per affrontare questioni di interesse economico e sociale di rilevanza generale. L'insoddisfazione per gli approcci tradizionali ha inoltre stimolato un proficuo dibattito tra storici ed archeologici, sempre più inclini all'archeologia comparativa ed alla teorizzazione archeologica, che ha condotto al riconoscimento dell'efficacia di modelli interpretativi – non di rado originariamente elaborati in ambiti estranei all'antichistica – per l'analisi delle dinamiche economiche dell'Impero romano e dei fenomeni intimamente connessi alla romanizzazione, intesa nella sua accezione più ampia".[2]

"*Ascendit classem quae Siciliam navigabat ... ingressus igitur Adriam*"; ed ancora, più avanti: "*ingressus autem Pachynum, promuntorium Siciliae, obtulit nauclero Evangelium pro subvectione sua... Porro recogitans, ne negotiatores de Oriente venientes se notum facerent, ad mediterranea fugit loca*". Con queste parole, Girolamo scrivendo intorno al 386 d.C.[3] la vita di Ilarione, un santo palestinese di Gaza, descrive lo stato d'ansia dell'eremita che per sfuggire all'assalto dei fedeli entusiasti dei miracoli che egli andava praticando aveva deciso di allontanarsi dalla Palestina, dove soggiornava già da molto tempo, per rifugiarsi in Occidente, in Sicilia, sull'altopiano ibleo a circa venti miglia dal mare.[4] Al di là del dato agiografico relativo alla vita del santo che ha certamente costituito per gli studiosi del settore un'imprescindibile tappa nella ricostruzione dei suoi spostamenti e dei suoi pellegrinaggi,[5] la notizia per l'archeologo che guarda al mondo antico, alle sue economie ed agli scambi commerciali con un'attenzione oggi ormai non più semplicemente limitata al dato materiale ma, al contrario, strettamente intrecciata a quello storico, costituisce un efficace quanto significativo punto di partenza per l'analisi di alcuni aspetti del fenomeno commerciale in senso lato.[6]

Gli *excerpta* della *Vita Hilarionis* appena ricordati permettono, in realtà, di mettere in evidenza alcuni dati che, come vedremo, torneranno utili più avanti: oltre a rendere note le modalità di trasferimento del santo in Occidente avvenuto su di una *classis*, una nave commerciale o forse un convoglio di navi che ospitava infatti *nautae* e *negotiatores,* innescano una serie di intriganti interrogativi ai quali cercheremo di offrire adeguate risposte.

Quali elementi di novità – ci si chiede – dal punto di vista dei contatti commerciali è possibile leggere in trasparenza dietro il trasferimento del santo in Occidente e, più in generale, dietro un intuibile vivace movimento di uomini, *negotiatores* perlopiù, che da Oriente si recano in Occidente e viceversa? Ed ancora, quale può essere stato il ruolo di questi

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[1] Desidero ringraziare gli amici John Lund e Jonas Eiring, organizzatori del Convegno, per avermi invitato a partecipare. Sono grato ancora, per le proficue discussioni, a Gérald Finkielsztein e Paul Reynolds. John W. Hayes e Roberta Tomber sono stati prodighi di segnalazioni di prodotti orientali dagli scavi inglesi a Campanaio (Montallegro, prov. di Agrigento – Sicilia: scavi Università di Edimburgo – Direttore Prof. R. J. Wilson). Sono grato, infine, a Stefanie Martin-Kilcher per gli utilissimi suggerimenti.

[2] Savino 2002, 34.

[3] Testo, traduzione e commento in Mohrmann 1975; vd. anche Millar 1993, 385.

[4] Vedi *supra* n. 3; inoltre: Opelt 1979, 145-177, in part. 170-172.

[5] Siniscalco 1982, 17-28; Opelt 1984, 305-314.; Rizzo 1988, 79-93; Uggeri 2002, 54.

[6] Sull'argomento si è soffermata, in più di un contributo, L. De Salvo: De Salvo 1997, 49-60; De Salvo 1999a, 85-105; De Salvo 1999b, 447-458. Inoltre, Manganaro 1999, 351-353.

negotiatores o ancora dei *mercatores, homines locupletes et honesti* così ricordati in alcuni passi ciceroniani[7] nella diffusione di certe merci? Ed infine, è possibile scoprire precise corrispondenze, combinazioni o relazioni tra aree di provenienza dei *negotiatores* ed aree di provenienza delle merci orientali che giungono in Occidente, in Sicilia nel caso particolare?

Sin dagli studi pionieristici di E. Dressel che per primo affrontò in maniera concreta e sistematica il rapporto tra fonte archeologica e documentazione scritta, mettendo insieme i dati dell'epigrafia dell'*instrumentum* con quelli del suo supporto[8] (forma, materiale, etc.) seguiti poi, dal tuttora insuperato lavoro di M. Rostovzeff[9] in cui le testimonianze letterarie contribuivano non poco alla ricostruzione dei fenomeni economici e sociali dell'antichità, il rapporto fra archeologia e storia è andato sempre più intrecciandosi diventando nesso imprescindibile di una metodologia di indagine indirizzata ad un completo recupero dei dati.[10] Ed è stato opportunamente riportato alla ribalta anche recentemente[11] quanto avevano sottolineato M. Bloch[12] e M. Wheeler[13] negli anni passati: "*l'oggetto della storia è per sua natura l'uomo*"; o ancora "*l'archeologo non scava cose, ma essere umani*".

Archeologia e storia, dunque, costituiscono le basi di partenza su cui si è andata costruendo la ricerca ed il caso di S. Ilarione e dei *negotiatores* orientali assunti come *exempla* di questo emblematico movimento di uomini tra Oriente ed Occidente può servire certamente per comprendere alcuni sofisticati meccanismi del fenomeno commerciale che, ben documentato per i secoli III e IV d.C.,[14] può aiutare certamente ad illuminare – come credo – anche le dinamiche di scambio delle fasi precedenti, dalla tarda età ellenistica in poi.

"The study of the long distance trade of the Roman East cannot depend on only one or two historical sources, but must take into account a wide variety of literary, archaeological, epigraphic and other material". Così ribadiva recentemente G. K. Young,[15] indagando le modalità dei rapporti tra Roma e l'Oriente;[16] e a questo facevano eco le considerazioni di S. Kingsley e M. Decker:[17] "The wide variety of tools which serve as an interface to examine the economy – historical texts, industrial and agricultural installations, inscriptions, papyri, pottery sherds, shipwrecks, and comparative sources – have been integrated in recent decades to forge a remarkably stimulating fields, where even the most phlegmatic individual can be caught expressing flashes of passion". E non era certo mancato chi, già un ventennio addietro,[18] aveva con forza insistito sulla necessità dell'avvio di uno studio interdisciplinare per la ricostruzione dell'economia e della società del mondo romano (e, in quel caso specifico, della Sicilia repubblicana, imperiale e tardo-antica) ribadendo, in particolare, l'esigenza di avviare stretti collegamenti tra lo storico e l'archeologo. In verità, le ricerche condotte in questi ultimi anni, più dagli storici dell' antichità[19] che dagli stessi archeologi, sebbene indirizzate ad un'attenta e minuziosa rilettura delle testimonianze storiche, epigrafiche e documentarie in genere, hanno però, in qualche caso, tralasciato o forse più propriamente sottovalutato l'importanza dei dati derivanti dalla lettura della coeva documentazione archeologica che, invece, se oculatamente combinati con i primi possono offrire fedeli ricostruzioni e giustificate contestualizzazioni.[20]

Nell'ottica, dunque, di superare questa *impasse*, è stato avviato, da qualche tempo, un primo riesame ed una riconsiderazione della documentazione let-

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[7] Cic., *Verr.* 2.5.154.

[8] Vedi su questo argomento i diversi contributi confluiti in *Epigrafia della produzione e della distribuzione*; Manacorda 2000, 298.

[9] Rostovtzeff 1957.

[10] Sull'argomento esiste una bibliografia sterminata: si veda, da ultimo, lo *status quaestionis* tracciato da D. Manacorda: Manacorda 2000, 296-305.

[11] Vedi *supra*, nota 8.

[12] Bloch 1969.

[13] Vedi discussione in: Manacorda 2000, 298.

[14] Da ultimo, vedi il contributo di Pieri 2002.

[15] Young 2001, 5.

[16] Sull'argomento esiste una sterminata bibliografia. Si vedano, almeno, i contributi di: Charlesworth 1926; Thorley 1969, 209-223; Raschke 1978, 604-137. Aspetti del problema in rapporto all'*evidence* archeologica sono stati trattati in: Riley 1981a, 69-78.

[17] Kingsley & Decker 2001, 1-27.

[18] Mazza 1980-81, 292-358.

[19] Si vedano, ad es., i lavori di: Salmeri 1992; Pinzone 1999, *passim*; o ancora, Molè 1999 (qui altra bibliografia).

[20] Vedi da ultimo il contributo di Papacostas 2001, 107-128, spec. 113-115.

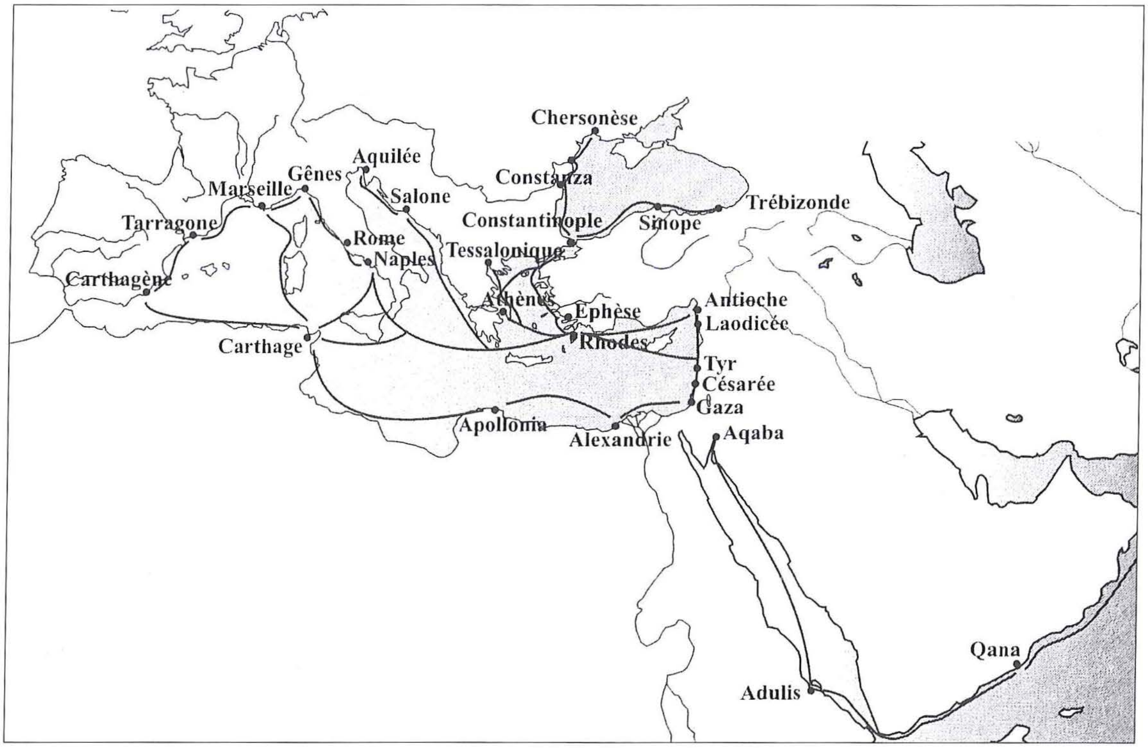

Fig. 1 Carta del Mediterraneo con indicazione di rotte commerciali e centri di potere (da Pieri 2002, 125, fig. 2).

teraria,[21] epigrafica[22] e numismatica[23] che dal tardo ellenismo alle soglie della tarda-antichità conosciamo per la Sicilia, l'isola del Mediterraneo che per più di una ragione detenne da sempre un posto di grande rilevanza nei rapporti con i più importanti centri commerciali del bacino del Mediterraneo rivestendo per più secoli un ruolo chiave di raccordo tra Oriente ed Occidente (Fig. 1).[24]

Lo stato della ricerca e l'impossibilità, purtroppo, di muovere ancora oggi verso ragionate e definite quantificazioni del materiale archeologico oggetto d'indagine non consentono – almeno alla situazione attuale – di offrire un quadro quantitativamente preciso delle diverse presenze: per questo motivo, soprattutto, è sembrato opportuno allora concentrare l'attenzione su una molteplice serie di informazioni che possono, almeno in questa prima fase, forse in maniera più eloquente del materiale archeologico stesso – di un'anfora o di un piatto in sigillata – porre le basi per una più adeguata comprensione delle dinamiche e delle modalità di certi contatti commerciali.[25] L. Robert,[26] anni addietro, analizzando, aspetti generali del fenomeno della circolazione monetaria giustamente osservava come il rinvenimento in una regione di monete straniere, di bronzo in particolare, non documentava uno scambio di mercanzie, ma piuttosto la circolazione di uomini, le relazioni di uomini, di viaggiatori, di commercianti, pellegrini, ambasciatori e simili.

[21] Si tratta di una rilettura della documentazione letteraria raccolta negli anni, in più di un contributo, da L. De Salvo e G. Manganaro (vedi bibliografia e note *infra*). Per la documentazione numismatica si veda il contributo di G. Guzzetta: Guzzetta 1995, 7-30.

[22] Vedi *supra* nota 19.

[23] Guzzetta 1995, *passim*.

[24] Sul ruolo della Sicilia in età imperiale, si veda almeno: Mazza 1980-81, spec. 297 ss.

[25] Per una prospettiva inversa relativa a ritrovamenti orientali di anfore fabbricate in Occidente, vedi Will 1989, *passim*.

[26] Robert 1951, 159 ss.; in part., 167-169. Le argomentazioni dello studioso francese sono state più volte riprese da: Manganaro 1989, 513-553; Manganaro 1999, *passim*.

Alla luce di queste prime considerazioni, veniamo, dunque, alla situazione storico-economica della Sicilia tardo-ellenistica e romana.

Gli indirizzi di politica economica e sociale proposti nel corso del III sec. a.C. da Gerone II, decisamente filoromani, se da un lato avevano sancito un totale asservimento della Sicilia greca a Roma, dall'altro avevano però segnato l'inizio di un'economia ampiamente proiettata in una prospettiva tutta mediterranea:[27] una sostenuta commercializzazione di prodotti affiancata da una innovativa riforma monetaria avevano determinato da questi anni in poi un forte flusso di gente di diversa estrazione che dalla Italia (ed in particolare dalla Sicilia, come vedremo), per esigenze commerciali principalmente, si era irradiata un po' in tutto il bacino del Mediterraneo, dall'Egitto ad Atene,[28] in Beozia,[29] in Macedonia,[30] a Rodi,[31] a Caunos,[32] a Chios, a Cos, a Delos,[33] in Asia minore,[34] fino a raggiungere, in qualche caso, il lontano Bosforo (Panticapeo).[35] Le numerose testimonianze epigrafiche note[36] ci restituiscono, infatti, i nomi di diversi personaggi, Συρακόσιοι, Ακραγαντῖνοι, Γηλοί, Τυνδαρείοι, e più in generale, Σικελοί, la cui attività appare ben documentata già dal terzo quarto del III sec. a.C. nelle diverse località, già sopra ricordate, del Mediterraneo orientale. Le isole di Rodi prima,[37] e Delo dopo,[38] devono aver certamente giocato un forte ruolo in questo vivace movimento: basti solo pensare, come ci riferiscono Polibio (V, 88) e Diodoro (XXVI, 8) alla determinatezza di Gerone II nel voler concedere l'ἀτέλεια ai rodioti favorendo in tal modo l'afflusso delle loro navi commerciali (che scaricavano vino e ripartivano carichi di grano) nel porto siracusano; o basti ancora pensare, ad es., all'attività imprenditoriale, intorno al II sec. a.C. a Delos, di un tal Timon, siracusano[39] o a quella del figlio Nymphodoros unito al tarantino Herakleidas.[40]

Ma la mobilità[41] di queste genti non deve essere intesa certo a senso unico: se in Oriente si spostano personaggi occidentali[42] (dalla Sicilia in particolare), nell'isola, di contro, giunge a partire dalla metà del III sec. a.C. una notevole quantità di anfore rodie il cui esame dei bolli ha permesso, almeno per alcune località,[43] di quantificare la portata di queste importazioni;[44] ed un quadro similare legato certamente ad un consistente arrivo di gente, quindi di

[27] Sugli indirizzi di politica economia attuati da Gerone II, vedi: De Sensi Sestito 1975-76, 187-252; De Sensi Sestito 1977.

[28] Utilissimo sull'argomento è Byrne 1996 ma un lavoro più aggiornato è Follet 2002, 79-88. Lo studioso, sulla base dell'onomastica distingue due gruppi: un primo gruppo proveniente dall'area magno greco e siceliota; un secondo gruppo, propriamente romano, ossia con provenienza dalla città di Roma. Per quanto riguarda la gente proveniente dall'area magno greca, si ricordano persone da Cuma, Turii, Sibari, Gela, *Leontinoi*, Catania, Messina. La loro presenza si distribuisce nell'arco di più di due secoli: dal V al III sec. a.C. Un ruolo particolare rivestono le genti provenienti dalla Sicilia: si distinguono, in particolare, uomini da Tindari (età imperiale), Kalè Aktè (I sec. a.C.), Lipari (datazione incerta). Dalla fine del II sec. a.C. le presenze si intensificano notevolmente. Sulla situazione dei traffici commerciali tra Magna Grecia e Oriente in età ellenistico-romana, vedi da ultimo: Morel 1996, 147-172; Aspetti generali del fenomeno, osservati dal punto di vista di un importante centro magno greco in età ellenistica, Taranto, sono stati trattati da ultimo in Morel 2002, 529-574; in part., 546-566 (ma limitato alle produzioni di IV-III sec. a.C.).

[29] Müller 2002, 89-100. Il momento di forte presenza italiana in Beozia cade tra il 50 a.C. e il 30 d.C. Il primo *negotiator* attestato a Tespie è un tal Titus Manlius già ricordato da Cicerone in una delle sue lettere (*Fam.* XIII, 22) datata tra il 46 e il 45 a.C.

[30] Rizakis 2002, 109-132. Utilissimo è anche Salomies 1996.

[31] Bresson 2002, 147-162. A Rodi sono attestati, in particolare, genti dalla Lucania, dalla Messapia, dal Bruttium, da Taranto,

[32] Supra, nota 26.

[33] Mavrojannis 2002, 163-179. Per una lista aggiornata degli italiani presenti a Delos, vedi: Ferrary *et al.* 2002, 183-239. In particolare, ibid., 236-239: complessivamente sono listati 91 personaggi, così suddivisi: 2 da Ancona; 1 da Canusium; 13 da Heraclea lucana; 2 da Locri; 2 da Metaponto; 19 da Napoli; 1 da Petelia; 21 da Taranto; 2 da Ugento; 18 da Velia; infine, 10 indefiniti.

[34] Ferrary 2002, 133-146.

[35] Un'accurata analisi del fenomeno con liste dei personaggi è in Manganaro 1964, 416 ss.; sull'argomento, lo studioso è tornato, con aggiornamenti, in Manganaro 1989, 514-515 ss.

[36] Manganaro 1964; Manganaro 1989, note 5 ss.

[37] Per la situazione di Rodi ed il rapporto con la Sicilia, si veda: Sacco 1980, 517-528; Cordano 1980, 255-270; Criscuolo 1982, 137-147; Kontorini 1983, 24-32; Berthold 1984; Marasco 1985, 137-150; Badalyantis 1986, 87-99; Gabrielsen 1993, 132-161; Manganaro 2000, 255-268; da ultimo, Rauh 1999, 162-186.

[38] Sul ruolo dell'isola nei commerci con l'Occidente, si veda l'ancora insostituibile lavoro di J. Hatzfeld (Hatzfeld 1919) che documenta le notevoli presenze di *negotiatores* italici nell'isola. Su alcuni aspetti e sul ruolo economico di Delos, si veda, almeno: Rauh 1993; Reger 1994. Sull'importanza dell'isola di Delos e sulle valutazioni economiche del suo porto franco in rapporto alla diffusione di certe merci (ad es., Sigillata Orientale A in Occidente), si veda, da ultimo: Malfitana *et al.* forthcoming. Sui rapporti tra Delos e l'Italia si vedano i numerosi contributi in: Coarelli *et al* (eds.) 1982.

[39] Étienne 2002, 6.

[40] *Ibid.*, 6.

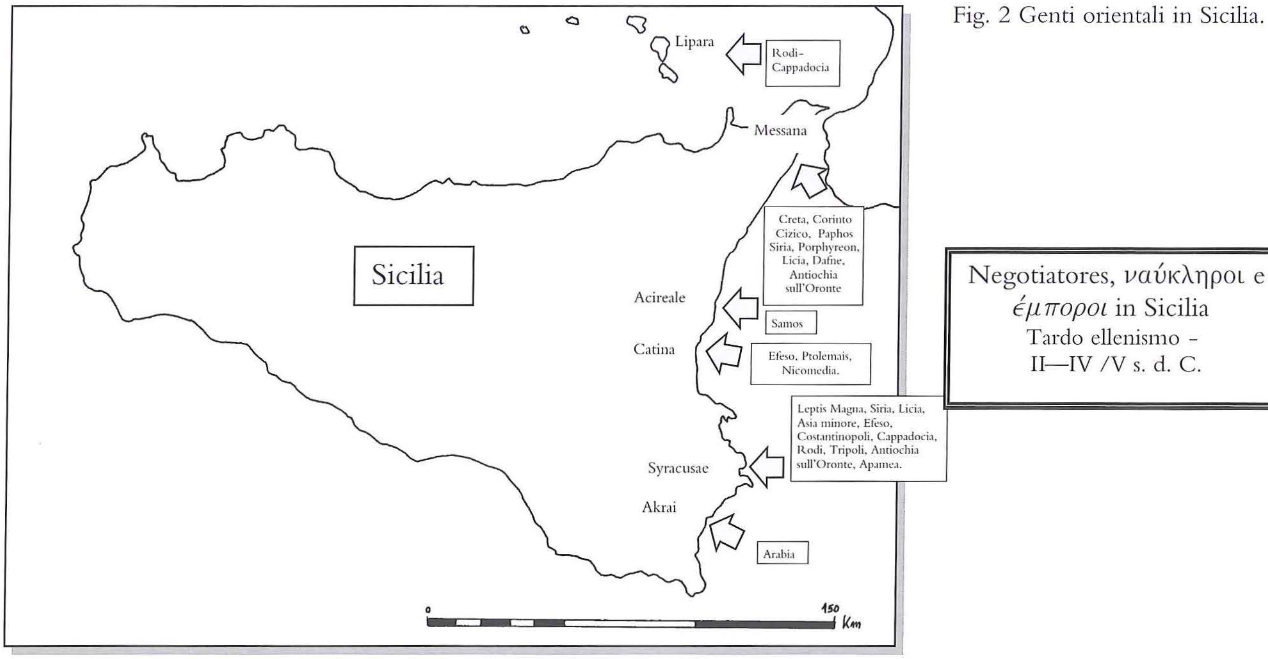

Fig. 2 Genti orientali in Sicilia.

merci, è ancora documentato dalle numerose monete bronzee registrate, proprio per i secoli III-I a.C., nel medagliere del museo di Siracusa dove sono attestati esemplari da Corcira, Pale di Cefallonia, dall'Etolia, dalla Tessaglia, dall'Acarnania; ed ancora da Atene, da Megara Nisea, Sicione; dalla Beozia, dalla Macedonia, da Magnesia sul Meandro, da Cnido, dal Chersoneso Tracio ed, infine, dalla Bitinia.[45] In questo contesto, degne di menzione appaiono certamente anche le buone quantità di prodotti orientali documentati nell'isola (specie lungo la sua costa orientale) riconducibili alla serie della cd. "Eastern Sigillata": ai pochi frammenti di Sigillata Orientale B provenienti dalle regioni d'Asia minore, si affianca, invece, un buon numero di prodotti in Sigillata Orientale A giunti in Occidente dalla regione siro-palestinese.[46]

Se dunque, per la piena e tarda età ellenistica, qui rapidamente presentata ma sulla quale ci siamo soffermati in altri lavori,[47] la Sicilia appare strettamente collegata al mondo greco, diciamo quello dell'area centrale del Mediterraneo (Grecia propria con appendici nelle isole di Rodi e Delo ed in quelle regioni in qualche modo legate a queste due importanti realtà) e dell'Egitto tolemaico, diversa e decisamente più variata, si presenta la situazione che si delinea per le ultime fasi dell'ellenismo e poi per tutta l'età romana.

Partiremo ancora una volta dalle persone che troviamo operanti in Occidente per giungere, solo in un secondo momento, alle merci. La riconsiderazione della documentazione letteraria ed epigrafica disponibile per questo periodo permette, infatti, di registrare la presenza in Sicilia di diversi personaggi provenienti, in gran parte, dalle diverse regioni del Mediterraneo orientale (Fig. 2); in alcuni casi più fortunati conosciamo anche la loro attività che oscilla talora da quella di semplice ναύκληρος,[48] il *nego-*

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[41] Sul problema della mobilità nel mondo romano si vedano le considerazioni espresse, da ultimo, in Moatti 2000, 925-958.

[42] Si veda Hatzfeld 1919 (con liste dei personaggi); Müller & Hasenohr (eds.) 2002 *passim*.

[43] Brugnone 1986, 19-113.

[44] Manganaro 1994, 261-294.

[45] Manganaro 1999, 353.

[46] Malfitana *et al.* forthcoming. Per la Sicilia sono stati registrati complessivamente, tra edito ed inedito, circa 87 esemplari di Sigillata Orientale A. In Italia, complessivamente 767. Per una quantificazione delle presenze, si rimanda ai grafici pubblicati nel contributo menzionato.

[47] Malfitana *et al.* forthcoming, *passim*.

[48] Sulla figura istituzionale del *naukleros* nel mondo romano, vedi: De Salvo 1992.

tiator romano'[49] a quella di armatore o, infine, di ἔμπορος. In appendice al lavoro, ordinate per città così da poter più agevolmente visualizzare le reali presenze, sono stati listati i nomi, la provenienza, l'attività e la cronologia (ovviamente, quando noti) delle diverse genti attestate: spicca, ad es., la presenza, nelle isole Eolie, a Lipari, di personaggi da Rodi e dalla Cappadocia (A 1-2); a Messina, uomini da Creta, da Corinto, da Cizico, da Paphos, dalla Siria, da *Porphyreon* in Fenicia, dalla Licia, da Dafne nell'area di Antiochia in Siria (B 1-9); ed ancora, a Catania ed *hinterland* (Acireale), gente da Efeso, da Tolemaide, da Nicomedia (C 1; D 1-3). Piuttosto ricco ed articolato, com'era da aspettarsi, è il quadro delle attestazioni nella romana Siracusa (E 1-22): ai pochi uomini da Leptis Magna, da Tripoli, si affiancano soprattutto genti dalla Siria, dalla Licia, da Efeso, da Costantinopoli, dalla Cappadocia, da Rodi, da Antiochia; ad Akrai, poi, nell'*hinterland* siracusano, le fonti ricordano un personaggio proveniente dalla lontana Arabia.[50] E lungo la stessa linea meritano certamente di essere inseriti anche i dati, utilissimi, che è possibile ricavare dall'indagine sugli aspetti ideologici della sfera religiosa i quali offrono risultati del tutto similari: l'introduzione di culti orientali in Sicilia sembra, [51] infatti, muoversi sulle medesime orme tracciate dai commercianti che negli stessi anni si recano in Occidente. Ai culti egizi, si affiancano, perlopiù quelli che giungono dalle regioni della Siria e dall'Asia minore: il culto della dea sira *Atagartis* assai venerata a Siracusa[52] il cui edificio cultuale potrebbe forse, secondo una suggestiva ipotesi di R.J.A. Wilson essere identificato nel cosiddetto *Gymnasium* un tempio teatro che sorgeva nel quartiere di Acradina;[53] o ancora, le ben note sculture rupresti di Akrai (nell'entroterra siracusano) opportunamente considerate "un parametro di riferimento ineludibile per il processo di diffusione in Occidente della figura e del culto della dea anatolica". [54]

Il vivace flusso documentato da questa moltitudine di persone copre, dunque, senza soluzione di continuità, gli anni che vanno dalla fine del I – II fino al pieno V – VI sec. d.C. e la loro presenza, come appare chiaramente tocca, quasi esclusivamente e, forse, non casualmente tutte le principali località della costa orientale che appaiono più e meglio di tutte le altre del resto dell'isola pienamente inserite all'interno di un ben organizzato circuito commerciale che le tiene saldamente legate ai maggiori centri commerciali dell'Oriente. Per la Sicilia meridionale ed occidentale, al contrario, non abbiamo a disposizione – ad eccezione di un'iscrizione che menziona un tal Pietro da Alessandria a Palermo[55] – dati relativi a personaggi di sicura provenienza orientale. Per questa porzione dell'isola, in ogni caso, i contatti rimangono maggiormente privilegiati con le regioni e le genti dell'Occidente.

Se ora dalla documentazione letteraria passiamo all'*evidence* archeologica, il quadro diventa allora più interessante ed allo stesso tempo molti elementi, in particolare quelli della cultura materiale su cui fonderemo la nostra discussione divengono ancora più chiari: la presenza di certi prodotti, in particolare di anfore da diversi centri di produzione come di ceramiche fini da mensa anch'esse da vari centri, risulta ora pienamente comprensibile: dietro quel vivace movimento di uomini è possibile individuare, dunque, un vivace commercio di beni che può certo consentire di identificare negli stessi personaggi sopra ricordati i loro vettori.

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[49] *Negotiator* come sinonimo di ναύκληρος: vedi De Salvo 1992, *passim*. La studiosa (ibid., 19) sottolinea che in età repubblicana i termini *negotiatores* e *mercatores* hanno una loro differenziazione semantica "indicando il primo un commerciante più modesto, il secondo non solo un grosso commerciante, ma, più in generale, un ricco uomo d'affari; a poco a poco però (a partire almeno dalla seconda metà del I sec. d.C.) essi tendono a diventare sinonimi e ad essere usati indifferentemente". Aspetti del ruolo e della figura del *negotiator* sono stati trattati in Baldacci 1967, 273-291; D'Arms 1981, 24-25; Kneissel 1983, 73-90. Da ultimo: Aubert 1994, 16-17 "Institor designates a merchant, a retailer, or a peddler. It is sometimes synonymous with negotiator, mercator and the likes, although it ordinarily refers to a lower social stratum"; in part., 135, 212; Colavitti 1999, 21 ss. Da ultimo riflessioni sul ruolo del *negotiator* in: Serrao 2000, spec. 36.

[50] Per gli scambi da queste regioni in direzione dell'Occidente, vedi: Schmitthenner 1979, 90-106; Sidebotham 1989, 195-223; Begley & De Puma (eds.) (vari contributi).

[51] Sfameni Gasparro 1999, 355-402; in part. 399, nota 88.

[52] Sfameni Gasparro 1973, 296-298. La notevole diffusione del culto sarebbe connessa, secondo la studiosa, alla presenza, nei latifondi siciliani di numerosi schiavi di origine siriana nonché al carattere cosmopolitico della città di Siracusa.

[53] Wilson 1990, 111; Sfameni Gasparro 1999, 379.

[54] Sfameni Gasparro 1973, 267.

[55] De Salvo 1999b, 450.

Solamente da qualche anno, in verità, ha preso avvio un progetto di ricerca interdisciplinare condotto da chi scrive con la collaborazione di altri colleghi specialisti delle diverse produzioni ceramiche, ellenistiche e romane, finalizzato all'elaborazione di un quadro aggiornato delle presenze delle produzioni, locali ed importate, attestate nell'isola dall'ellenismo al tardo-impero:[56] l'annunciata apertura del secondo piano del Museo Archeologico Regionale di Siracusa "P. Orsi" destinato all'esposizione dei manufatti di età ellenistica, romana e tardo-romana, potrà offrire finalmente l'opportunità di avere una più fondata documentazione sulle diverse presenze; alcuni dati nuovi, tuttavia, è possibile ricavare dai materiali esposti nelle vetrine dell'*antiquarium* della villa romana di Patti marina[57] aperto da un anno circa ed ancora da una mostra dedicata alla Sicilia centro-meridionale tra il II ed il VI sec. d.C. tenutasi a Caltanissetta nella seconda metà del 1997 il cui catalogo è stato recentemente edito.[58] Entrambi, offrono così uno spaccato assai sorprendente ed aggiornato delle presenze di ceramiche romane in Sicilia. Ma nel caso ultimo della mostra di Caltanissetta, come del resto ci aspettavamo, le presenze dall'Oriente spiccano solo marginalmente se non addirittura raramente di contro, invece, ad una massiccia e consolidata presenza di prodotti occidentali[59] (sigillate africane,[60] principalmente).

I dati che fino ad oggi stanno emergendo ci permettono di delineare un quadro che, come vedremo più avanti, registra una combinata e non casuale commistione di anfore e ceramiche fini da mensa romane provenienti da aree del Mediterraneo orientale regionalmente piuttosto omogenee. Ai dati provenienti dal territorio, è bene accostare quelli offerti dalla documentazione subacquea. Scorrendo l'accurato catalogo redatto dal Parker[61] è possibile, infatti, isolare tutta una serie di relitti che permettono di avere un'idea molto chiara non solo delle merci che giungono in Sicilia ma anche delle precise vie di rifornimento utilizzate.

L'analisi dei relitti[62] e la parallela analisi dei pochi dati editi (ahimè!) provenienti dalla ricerca sul terreno, consentono di intuire una duplice modalità di rifornimento dei mercati siciliani: in generale, lungo la costa orientale che da Messina giunge a Siracusa riscontriamo quasi esclusivamente relitti (Naxos,[63] Capo Taormina, Ognina, etc.) che restituiscono, quasi esclusivamente, merci orientali.[64]

Una recente conferma a questa considerazione sta emergendo anche dalle ricerche subacquee condotte lungo la costa orientale dell'isola, nella baia di Acicastello (Catania) dove di grande importanza sono i materiali provenienti dal carico di due relitti rinvenuti negli anni 1969-70.[65] Il primo di essi, databile alla metà del I sec. d.C., è costituito da anfore vi-

[56] Nell'ambito di questo ampio progetto chi scrive ha già presentato un primo contributo sulle presenze di sigillata italica timbrata (Malfitana forthcoming a) ed ha avviato, allo stesso tempo (v. supra), un ampio lavoro che passando in rassegna tutto il materiale edito (assai poco, in verità) e quello inedito (ove disponibile) aiuti a tracciare un primo quadro generale delle presenze di ceramiche ellenistiche e romane in Sicilia. Gli studi sull'argomento, a parte il breve riesame condotto da R.J. Wilson (Wilson 1990, 256-275), sono fermi alle considerazioni espresse ormai trenta anni fa da P. Pelagatti (Pelagatti 1969-70, 76-84) e necessitano senza dubbio di un notevole lavoro di aggiornamento e di revisione. Molti importanti contesti di scavo restano purtroppo, ancora dopo decenni di scavo, sostanzialmente inediti: basta solo menzionare, ad es., il materiale dal quartiere ellenistico romano di Agrigento; o quello dagli scavi nel teatro greco-romano di Catania. Entrambi, per la notevole quantità potranno certamente costituire un punto d'osservazione importante per gli studi di ceramologia ellenistica e romana in Sicilia.

[57] Qualche dato sulle presenze ceramiche da questo importante contesto possono ricavarsi da: Voza 1982, 202-209.

[58] Bonacasa Carra & Panvini (eds.), *passim*.

[59] La Sicilia occidentale appare strettamente collegata ad aree commerciali africane; tuttavia tra la fine del IV e gli inizi del V secolo fanno la loro timida comparsa in questa porzione dell' isola anche alcuni prodotti orientali. È il caso, ad es., dei circa 49 frammenti di anfore di piccole dimensioni del tipo Keay LIII prodotte in Siria o di alcuni frammenti di anfore Keay LIV e LXV di area siro-palestinese ritrovati in una necropoli agrigentina. Vedi Carra 1995, 239; 271.

[60] Vedi, in particolare, Bonacasa Carra & Panvini (eds.), *passim*.

[61] Parker 1992.

[62] De Salvo 1997. Per i relitti si veda Parker 1992: in particolare, relitti n. 256 (Capo Taormina); n. 443 (Giardini Naxos); n. 755 (Ognina); n. 522 (Isola delle Correnti); n. 670 (Marzamemi); nn. 671-672 (Marzamemi).

[63] Su Naxos in età romana, vedi, da ultimo: Lentini 2001 (vari contributi). In particolare, ibid., 20.

[64] Vedi le osservazioni in Reynolds 1995, 132-135.

[65] Le ricerche sono condotte da oltre un quinquennio dal Prof. E. Tortorici della cattedra di Topografia Antica dell'Università di Catania, che ringrazio per le segnalazioni di materiali provenienti da queste indagini. Una presentazione della ricerca è in: Siragusa – Tortorici 2000, 1-16; ma soprattutto, Tortorici 2002, 275-333.

narie del tipo Lamboglia 2 di probabile produzione siciliana, mentre del secondo facevano parte alcune anfore di età ellenistica e di produzione greco-orientale. La cronologia dei rinvenimenti anforari oscilla dal IV sec. a.C. al IV- VII sec. d.C.: tra i diversi tipi, accanto a quelli di accertata produzione occidentale (Magna Grecia, Italia centrale, Spagna Tarraconese), spiccano, al solito, numerosi esemplari di Kapitän II (dall'Egeo) (II-III sec. d.C.), Agora G 197 (da Creta), LR4 ma poi soprattutto per i secoli IV- VII d.C., LR4 dalla Palestina, Keay LII dal Mediterraneo orientale, LR3 dall'Asia minore, LR1, LR2, LR7, LR5, LR6.[66] Infine, il tratto costiero che va invece da Siracusa alla punta meridionale dell'isola e poi lungo tutta la costa sud i relitti documentano, invece, perlopiù prodotti di officine occidentali.[67] La città di Siracusa col suo florido porto viene a configurarsi come un centro che potremo certamente definire "intermedio" nel senso che esso accoglie merci sia occidentali che orientali.

Può, dunque, la documentazione letteraria ricordata in apertura ricevere conferma da quella archeologica *stricto sensu?* Quali sono, allora, le merci attestate? E che tipo di combinazioni è possibile osservare?

I dati editi finora noti (Figg. 3-4) fanno registrare in Sicilia, in generale ed assai uniformemente, elevate quantità di anfore egee del tipo Kapitän I e II;[68] a questi tipi, fin troppo noti, possiamo ora affiancare i recenti dati offerti dal relitto di Milazzo[69] nello spazio di mare tra le Eolie e la Sicilia, ormai ben noto agli specialisti, dove la notevole quantità di anfore *Knossos* 18, forse cretesi, di Agorà F 65-66 dall'Asia Minore, di Dressel 30 *similis* dall'area cilicia,[70] ed ancora di Agorà G 199, forse da Paphos, insieme a più di un esemplare di coppe/pissidi corinzie a rilievo[71] darebbero conferma della sicura provenienza (medio) orientale del carico.

Una situazione identica emerge se dal mare ci trasferiamo alla terraferma: per il I – II sec. d.C. sono ancora le città della costa orientale dell'isola a ricevere merci orientali (Lipari, Siracusa, Akrai, etc.): buone quantità di Sigillata Orientale A (Fig. 5),[72] di Sigillata Orientale B, qualche esemplare di ceramica a rilievo, cnidia e corinzia.[73] Ma ancora una volta, la fisionomia tutta orientale delle importazioni appare più chiara a partire dal III – IV sec. d.C. quando ritroviamo ben attestata in Sicilia, al solito principalmente lungo la porzione nord-orientale della costa Est, da Messina a Siracusa, produzioni quali la *Phocaean Red Slip Ware* (*Late Roman C*)[74] ben documentata a Siracusa, Naxos ed ora anche a Catania (dall'area del teatro romano – scavi inediti) e Messina (scavi nell'area dell'attuale centro urbano). Qualche sparuto frammento di *Cypriot Red Slip Ware*, infine, è documentato fra i materiali dal teatro romano di Catania (dato inedito); e qualche altro esemplare proviene dalle indagini subacquee nella baia di Acitrezza.[75]

La documentazione numismatica in questa sede più volte richiamata, indice essa stessa di commerci, aggiunge altri tasselli significativi a questo quadro. Sorprendentemente simili si presentano, infatti, i dati della circolazione monetaria nell'isola nel periodo compreso tra il IV e la fine del VII sec. d.C.:[76] a Naxos, ad es., monete dalla fine del III fino al primo trentennio del V appartengono prevalentemente alle città della *pars orientis*: Cyzicus, Nicomedia, Heraclea, Costantinopolis, Thessalonica e Alexandria; ed ancora, nella fascia costiera siracusana dalla nota

[66] Vedi le tabelle riassuntive con i tipi di anfore in: Siragusa & Tortorici 2000, 15; Tortorici 2002, 323, fig. 48.

[67] Vedi supra nota 60.

[68] La diffusione di anfore egee è un fenomeno assai costante nel Mediterraneo occidentale. Per la loro diffusione, vista in particolare, in alcuni contesti chiave (Ostia, ad es.) vedi Pacetti 1986; Panella 1986.

[69] Ollà 1997, 65-98.

[70] Proveniente dall'area cilicia merita di essere ricordato un bell' esemplare, frammentario, di "lead-glazed ware" ritrovato negli scavi di Castagna (Agrigento). Il centro di produzione di tale produzione è, infatti, da identificare nella località di Tarso: vedi Wilson 1996, 27, fig. 5.3.

[71] Su questa produzione, da ultimo: Malfitana 2000; Malfitana forthcoming b. e c.

[72] Malfitana *et al.* forthcoming.

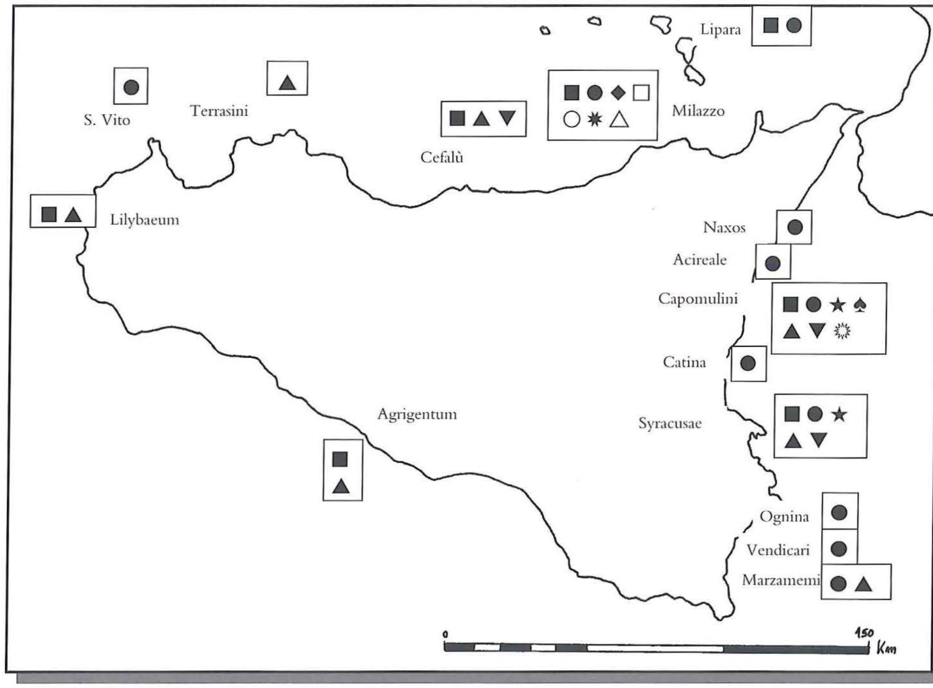
[73] Per le presenze di ceramica corinzia in Sicilia: Malfitana 2000, 186, fig. 4 (carta di distribuzione aggiornata) e Malfitana forthcoming, b and c. In particolare, esemplari di coppe corinzie sono presenti a Lipari (1), Milazzo (3), Messina (3), Catania (1), Ramacca (1), Siracusa (6), Mazzarrone (1), Agrigento (1). Tra parentesi è indicato il numero degli esemplari sinora noti e raccolti nel *corpus*.

[74] Per la diffusione della *Phocaean Red Slip Ware* in Italia vedi Martin 1998, 109-122; in part. 115-119, fig. 6.

[75] Tortorici 2002, 301, n. cat. 68, fig. 31.

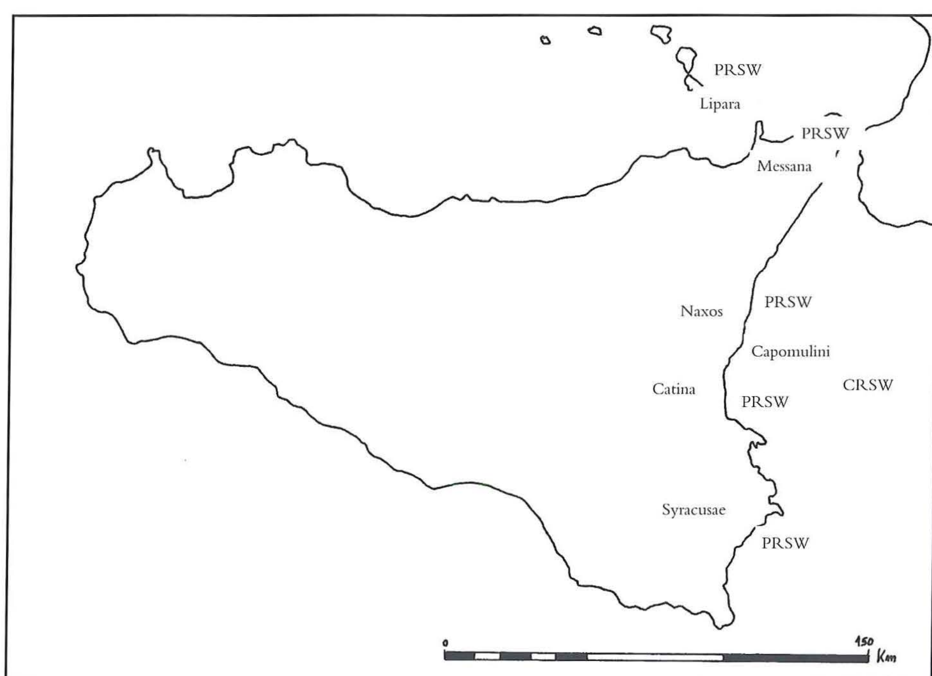
[76] Guzzetta 1995.

Fig. 3 -4 Anfore e ceramiche fini da mensa orientali in Sicilia.



Anfore di provenienza orientale

■ = LR2 (Egeo / Mar Nero);	◆ = Zemer 57 (Palestina) ;	● = Kapitän II (Egeo)
★ = MR3 (Asia minore);	▲ = LR1 (Cilicia);	▼ = LR3 (Asia minore)
□ = Knossos 18 (Creta);	○ = Agora F 65-66 (Asia m.);	✷ = Dressel 30 similis (Cilicia)
△ = Agora G 199 (Paphos) ;	✲ = Agora G 197 (Creta)	♠ = LR 4 (Palestina)
◇ = LR 5/6 (Palestina-Egitto)		



Produzioni fini da mensa tardo-romane
PRSW = Phocaean Red Slip ware; CRSW = Cypriot Red Slip Ware

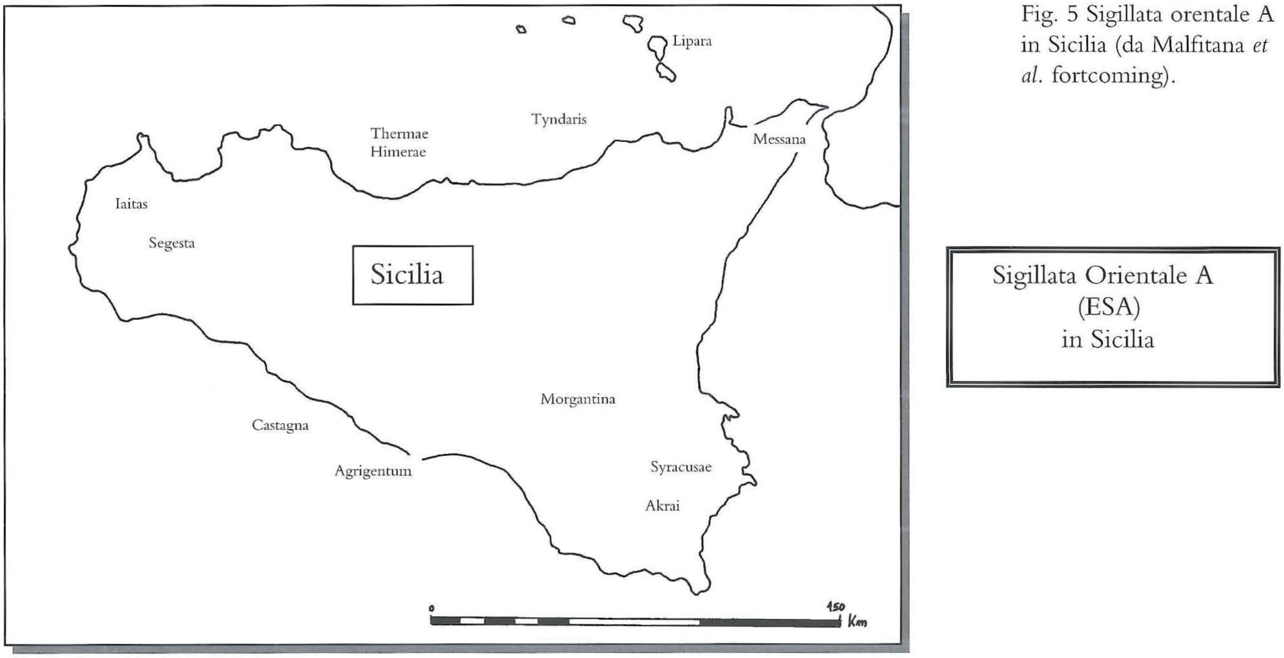


Fig. 5 Sigillata orentale A in Sicilia (da Malfitana *et al.* fortcoming).

villa del Tellaro[77] viene un tesoretto di 108 monete di bronzo provenienti da varie zecche, in particolare da Thessalonica, da Costantinopoli, da Cizico, da Antiochia, tutti della metà del IV sec. d.C.

I dati sin qui esposti non sembrano, per concludere, lasciare alcun dubbio sulla considerazione che un processo di accentuata e sostenuta commercializzazione tra Oriente ed Occidente e viceversa abbia investito la *provincia Sicilia* dal tardo ellenismo al tardo impero.[78] Genti e merci, storia e archeologia costituiscono così rispondenti binomi per comprendere dinamiche di scambio, circuiti di mercato e presenze di merci altrimenti destinati a restare nel buio. Studi futuri[79] miranti ad indagare le condizioni di funzionamento del mercato "Sicilia" e, più in particolare, il rapporto tra produzione e distribuzione di specifiche merci consentiranno di apprezzare più nettamente modelli e processi di scambio.

Addendum

Nelle more dell'edizione di questo contributo, nuovi dati sulla Sicilia sono stati presentati in un recente incontro di studi svoltosi a Catania (22-24 aprile 2004) organizzato dall'Istituto Beni Archeologici del C.N.R., dall'Università Cattolica di Leuven e dal Museo Nazionale di Copenhagen dal titolo "*Old Pottery in a New Century. Innovating Perspectives on Roman Pottery Studies*" i cui Atti sono ora in corso di stampa. In questa occasione, sono state offerte anche relazioni di aggiornamento su produzioni locali ed importate nella Sicilia romana. In attesa dell'edizione degli Atti, si vedano gli abstracts delle relazioni edite in: D. Malfitana, J. Poblome & J. Lund (eds.), *Old Pottery in a New Century. Innovating Perspectives on Roman Pottery Studies* forthcoming.

Appendice

La presente lista documenta i nomi, la provenienza e l'attività – ove noti – dei personaggi di origine orientale presenti in Occidente, dal tardo ellenismo al tardo-impero. La bibliografia segnalata si riferisce, in genere, al lavoro più recente o a quello nel quale il documento (letterario o epigrafico) appare discusso più analiticamente.

[77] Voza 1972-73, 192; Guzzetta 1995, 14, nota 46.
[78] Utilissime le considerazioni espresse da ultimo in Lo Cascio 2000 (vari contributi).
[79] Vedi *supra*, nota 56.

Lipara (Lipari)

	Nome del personaggio	Provenienza	Attività	Cronologia	Bibliografia
A 1	Διονύσις Ροδίου	Rodi	?	?	SEG 1982, 924; De Salvo 1999a, 94.
A 2	Γλάφυρος	Cappadocia	?	?	IG XIV 400

Messana (Messina)

	Nome del personaggio	Provenienza	Attività	Cronologia	Bibliografia
B 1	?	?	Ναύκληροι	età ellenistica	De Salvo 1979.
B 2	'Επαφρᾶς	Polyrrhenia (Creta)	?	?	IG XIV 406; De Salvo 1999a, 94.
B 3	M.'Αντόνιος Σκόρπος	Corinto	?	?	Manganaro 1988, 84.
B 4	Αὐρήλιος Εὐτύχης	Cizico	?	post metà II sec. d.C.	IG XIV 405; Manganaro 1988, 84; De Salvo 1999a, 92
B 5	Παφίανος	Paphos	κομωδός	II – III sec. d.C.	IG XIV 411; Manganaro 1988, 84
B 6	Φλάμμα	Siria	secutor	?	CIL X 7297; De Salvo 1999a, 452.
B 7	Σαλάτε πορφυρονίτες	Porphyreon (Fenicia)	?	?	De Salvo 1999a, 93
B 8	'Ανδρόβιος Λύκιος	Licia	ναύκληρος	III sec. d.C.	IG XIV 404; Manganaro 1988, 84.
B 9	Οὐλπίος Νικήφορος 'Αντιοχεὺς	Dafne – (Antiochia di Siria)	ἔμπορος Τυχαὶων	III sec. d.C.	IG XIV 419; De Salvo 1992, 62; Manganaro 1988, 84.

Acireale

	Nome del personaggio	Provenienza	Attività	Cronologia	Bibliografia
C 1	?	Samo	?	II – III sec. d.C.	De Salvo 1999b, 452, nota 33.

Catina (Catania)

	Nome del personaggio	Provenienza	Attività	Cronologia	Bibliografia
D 1	Αἴλις Αχιλλεύς	Efeso	?	?	IG XIV 466; Manganaro 1988, 84; De Salvo 1999a, 93
D 2	Κλουτοριάς	Tolemaide (Cirenaica)	?	?	Manganaro 1988, 84; De Salvo 1999a, 93
D 3	'Ανίκητος Νικο[μη]δεύς	Nicomedia	?	?	De Salvo 1999a, 94

Syracusae (Siracusa)

	Nome del personaggio	Provenienza	Attività	Cronologia	Bibliografia
E 1	Ἰθάλλας	Leptis Magna	armatore	II – III sec. d.C.	Manganaro 1988, 84
E 2	?	Siria	πανδόκια	II – III sec. d.C.	De Salvo 1999b, 451.
E 3	Θεόκτιστος ναύκληρος Λύκιος	Licia	ναύκληρος	II – III sec. d.C.	De Salvo 1999b, 451.
E 4	Ἡσύχις	?	λιμενάρχης	età precostantiniana	De Salvo 1999a, 92
E 5	?	?	?	?	De Salvo 1999a, 92
E 6	Ευστόχιος	Licia	?	IV sec. d. C	De Salvo 1999a, 92
E 7	?	Anatolia	*plumbarius* (?)	452 d.C.	
E 8	Χρισιάνη	Massua (Siria)	?	?	De Salvo 1999a, 93
E 9	Παῦλος Εφέσιος	Efeso	?	?	De Salvo 1999a, 93
E 10	Ἀρίστων Κωνσταντινοπολίτ(ης)	Costantinopoli	?	?	Manganaro 1988, 84; De Salvo 1999a, 93.
E 11	Φείδων ἀπὸ Τετραπυργίας	Tetrapurgia (Cappadocia)	?	?	De Salvo 1999a, 93
E 12	Ἀθανάσιος και Ἀλέξανδρος	?	?	?	IG XIV 72; De Salvo 1999b, 451, nota 33.
E 13	?	Rodi	?	?	IG XIV 165; De Salvo 1999b, 451, nota 33.
E 14	Ζόδωρος (opp. Διόδωρος) ἀπὸ Μάκρης κώμης	?	?	?	IG XIV 117
E 15	?	Tripoli	?	?	De Salvo 1999b, 451.
E 16	Ἰουλία Ἀντιοχιανή	Antiochia	?	?	SEG IV 9
E 17	?	Antiochia	?	?	De Salvo 1999b, 451.
E 18	Δεκομία Συρίσκα	Siria	πανδόκια	?	IG XIV 24; De Salvo 1999a, 92
E 19	Cornelio Magno (?)	Apamea	?	?	Manganaro 1988, 84.
E 20	Κολλύβας	Asia minore?	?	?	De Salvo 1979, 59.
E 21	Σὸλανος Σύρος	Siria	?	?	Manganaro 1988, 84
E 22	Ἰοὰννις Σύρος	Siria	?	?	Manganaro 1988, 84

Un dépôt de la deuxième moitié du I^{er} s. de notre ère à Kition-Kathari (Chypre)

Sandrine Marquié

À Chypre, les études céramologiques concernant l'époque romaine se sont surtout concentrées sur le sud-ouest de l'île, dans la région de Nea Paphos, qui connaît un développement économique important durant cette période. La partie plus orientale de l'île est, en revanche, moins bien connue. Aussi, le matériel des fouilles de Kition, situé sur la côte sud-est, est-il important pour compléter notre connaissance des relations économiques que Chypre entretient avec le reste du bassin méditerranéen (Fig. 1). La présente contribution s'intéresse au matériel issu du comblement d'une tranchée antique.

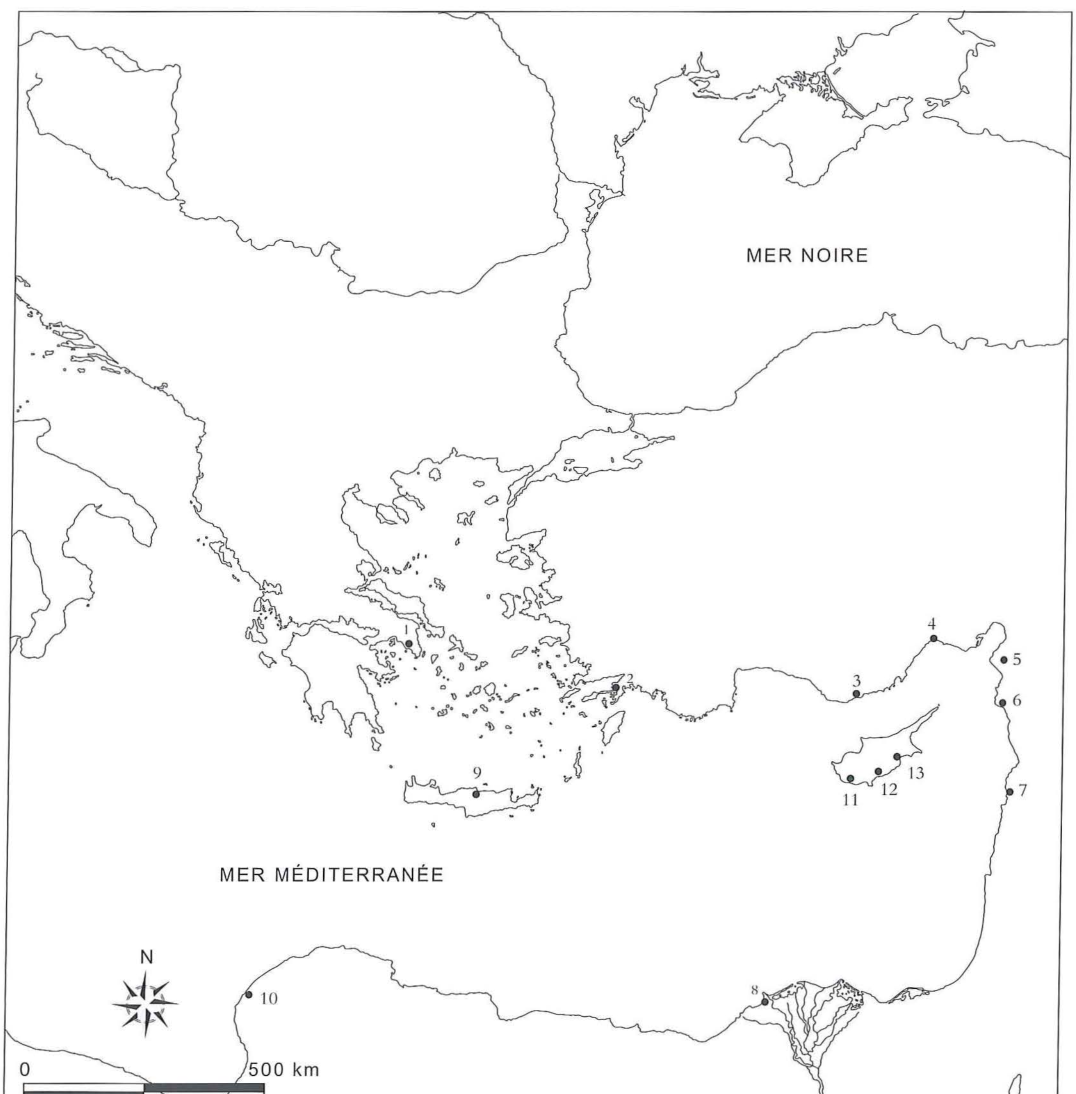


Fig. 1 Carte des sites mentionnés.

1 - Athènes
2 - Knide
3 - Anemurium
4 - Tarse
5 - Antioche
6 - Ras-el-Bassit
7 - Beyrouth
8 - Alexandrie
9 - Cnossos
10 - Benghazi
11 - Paphos
12 - Amathonte
13 - Kition

Analyse stratigraphique

Le Département des Antiquités de Chypre (dir. V. Karageorghis) a mené une fouille sur l'*area* II de Kition (au lieu-dit *Kathari*) de 1958 à 1979 (Fig. 2). Ce secteur correspond au quartier cultuel de Kition du Bronze Récent à l'époque phénicienne. Il est impossible de savoir si cette fonction est maintenue

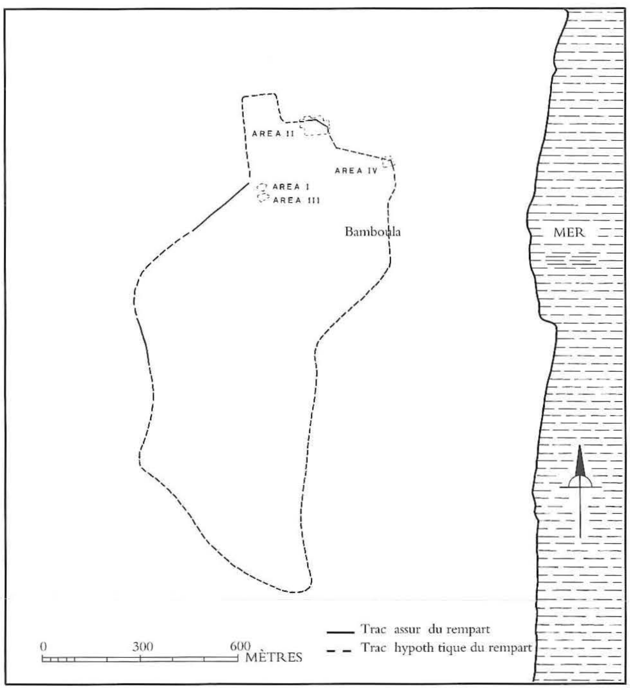


Fig. 2 Plan général de Kition avec la localisation des chantiers de fouille (Karageorghis & Demas 1985, pl.2).

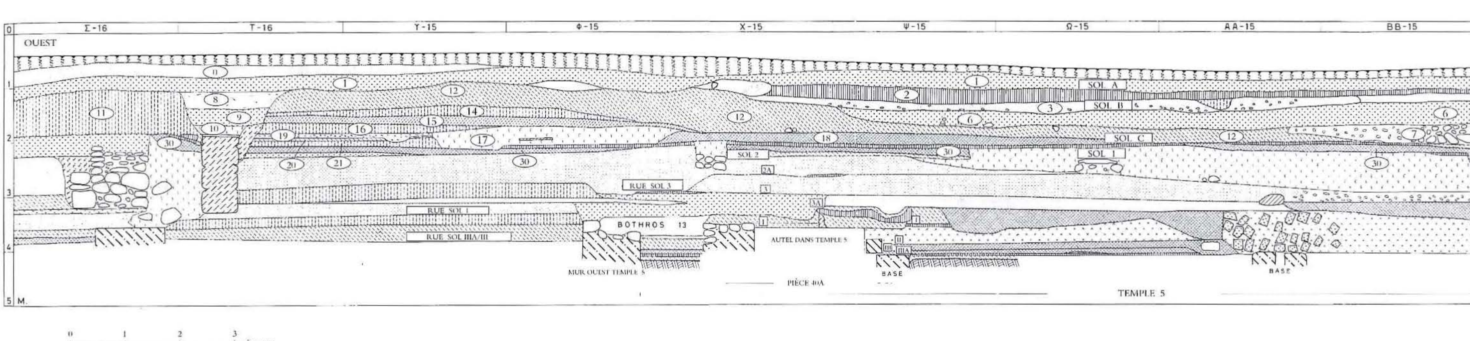
à l'époque romaine car les niveaux consistent en une succession de remblais, de sols et de fosses sans qu'aucune architecture ne leur soit associée.

Trois types de documentation stratigraphique sont aujourd'hui disponibles pour ce site: relevés en plan, coupes et indications écrites sur les caisses de céramique (carré de fouille, profondeurs et nature de la couche). La coupe stratigraphique (Fig. 3) montre l'existence d'un creusement dans le carré T16, entre les profondeurs de 1 m et 1,80 m, au-dessus d'un massif de pierre[1]. Aucun relevé en plan n'existe pour ce secteur du site, mais les indications écrites sur les caisses de céramique précisent que les carrés adjacents T14 et T15 présentent également un creusement aux mêmes altitudes. Ce dernier est donc interprété comme une tranchée de récupération des blocs du mur visible sur la coupe plutôt que comme une fosse.

Les fouilleurs ont distingué trois couches au moment de la fouille: US 8 à 10. L'étude céramologique a révélé l'existence de nombreux collages entre le matériel de ces trois couches y compris pour les formes qui se sont avérées être complètes après recollage. Un tel constat montre que le comblement de cette tranchée s'est mis en place en une seule fois. Ces observations stratigraphiques nous

[1] Les profondeurs ont été établies par rapport à un point 0, situé au sud du temple 5, et dont l'altitude absolue s'élève à 6,30 m audessus du niveau de la mer (Karageorghis & Demas 1985, 24)

Fig. 3 Kition-*Kathari*, coupe ouest-est du carré Σ16 au carré BB15 (d'après Karageorghis & Demas 1985, pl. 61, section C-C').



conduisent ici à présenter la céramique par production plutôt que par US, en distinguant les formes complètes (considérées comme vases en usage au moment de leur enfouissement) de celles qui sont fragmentaires. Cette distinction va également permettre de vérifier si ce dépôt est chronologiquement homogène.

Le matériel céramique

Le comblement de cette tranchée a livré 3.829 fragments de céramique, ce qui représente 248 vases en nombre minimum d'individus (NMI) dont 12 vases en service (VS): 5 céramiques fines, 1 céramique culinaire et 6 amphores (Fig. 4-7).

Catégorie	Production	NR	%NR	NMI	%NMI	VS
Céramique fine	*ES* A	32	7	5	6,5	2
	CS	11	2,5	4	5,5	2
	Sigillée italique	1	0,2			
	Paroi fine	15	3,5	1	1,3	1
	Color-coated ware (hellénistique)	63	16	14	18,1	
	Vernis noir (hellénistique)	1				
	Bol à relief (hellénistique)	6				
	Vernis noir (classique)	15	4	7	10,3	
	Divers PNI (classique)	2		1		
	White painted ware (archaïque)	179	66,3	30	58,3	
	Bichrome ware (archaïque)	17		1		
	Black-on-red ware (archaïque)	24		7		
	Black slip ware (archaïque)	25		3		
	Red slip ware (archaïque)	46		4		
	Divers PNI (archaïque)	1				
	Divers PNI	2	0,5			
	Total	**440**	**100**	**77**	**100**	**5**
Céramique commune	Céramique commune claire	698	55	95	67,4	
	Céramique culinaire	569	45	46	32,6	1
	Total	**1267**	**100**	**141**	**100**	**1**
Transport / stockage	Amphore	2075	97,8	28	93	6
	Pithos	47	2,2	2	7	
	Total	**2122**	**100**	**30**	**100**	**6**
	TOTAL	**3829**		**248**		**12**

NMI = nombre minimum d'individus (calculé à partir du nombre de lèvres déterminé après recollage).
NR = nombre de restes
VS = vase en service

Fig. 4: Tableau général de quantification.

Type	Bord	Fond	Anse	NTI	% NTI
Beirut 2	3	1	2	6	9,5
AC 2	1			1	1,6
Gazan amphora 1 (type V)	1			1	1,6
Tardo-Cnidienne	1			1	1,6
Amphore levantine non id.	1			1	1,6
Agora M54			1	1	1,6
Dressel 20		1	1	2	3
Dressel 2/4 orientale	2	1	3	6	9,5
"Rhodienne" (hellénistique)		1		1	1,6
"Samienne" (classique)	5			5	9,5
"Kouriote" (classique)			1	1	
Torpedo jar (archaïque)	4	1	2	7	22,4
Divers PNI (archaïque)	3	1	3	7	
Divers PNI	4	1	18	23	36,5
Total	**25**	**7**	**31**	**63**	**100**

Fig. 5 Tableau du nombre typologique d'individus (NTI) des amphores fragmentaires.

NTI = nombre typologique d'individus.
PAC = profil archéologiquement complet.
PNI = production non identifiée.

Production	Type	Bord	Fond	Panse	NTI
ES A	Atl. 37A	2		1	**3**
	Atl. 37B		1		**1**
	Atl. 42?	1			**1**
	Atl. 50A	1			**1**
Total		**4**	**1**	**1**	**6**
CS	P4B	1			**1**
Total		**1**			**1**
	Total	**5**	**1**	**1**	**7**

Fig. 6: Tableau du nombre typologique d'individus de la céramique fine fragmentaire d'époque impériale.

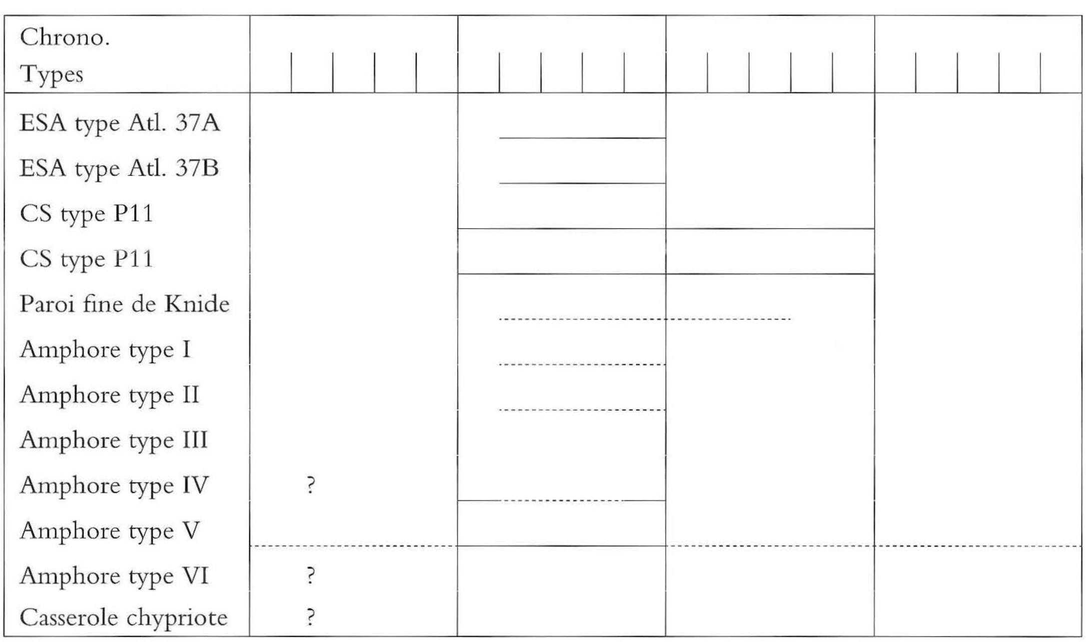


Fig. 7 Tableau typo-chronologique des vases en service (VS).

La céramique fine (Fig. 8, n° 1-5)

La céramique fine renferme cinq formes complètes dont les fragments s'éparpillent dans les US 8, 9 et 10: deux plats en ESA de type Atl. 37, deux autres en CS de type P11 et un gobelet à paroi fine originaire de Knide, dont il manque l'anse. Le plat en ESA de type Atl. 37B comporte une estampille *in planta pedis* sur le fond interne: EPMHC. Il s'agit d'une signature connue pour cette production.[2] Le deuxième plat en ESA se rapproche du type Atl. 37A car le bord ne comporte pas de bandeau, mais le fond, non biseauté, est identique au type Atl. 37B. Un exemplaire similaire provient de Samarie-Sébasté, il s'agit du type SAM 14b.[3] On considère traditionnellement que cette forme de plat à rebord droit apparaît à l'époque de Néron, dans les années 60, et qu'elle disparaît aux alentours de 100.[4] Ceux en CS de type P11 sont attestés dans des contextes qui s'échelonnent de la deuxième moitié du I[er] s. à la première moitié du II[e] s. de notre ère.[5] Enfin, des types proches de cette paroi fine se rencontrent, par exemple, à Nea Paphos, à Éphèse et à Cnossos dans des contextes qui datent de la fin du I[er] et du début du II[e] s. de notre ère,[6] mais ils ne sont pas strictement identiques. L'étude de ces vases en céramique fine fournit donc un *TPQ ca.* 60 de notre ère et un *TAQ* au tournant du II[e] s. de notre ère (Fig. 7).

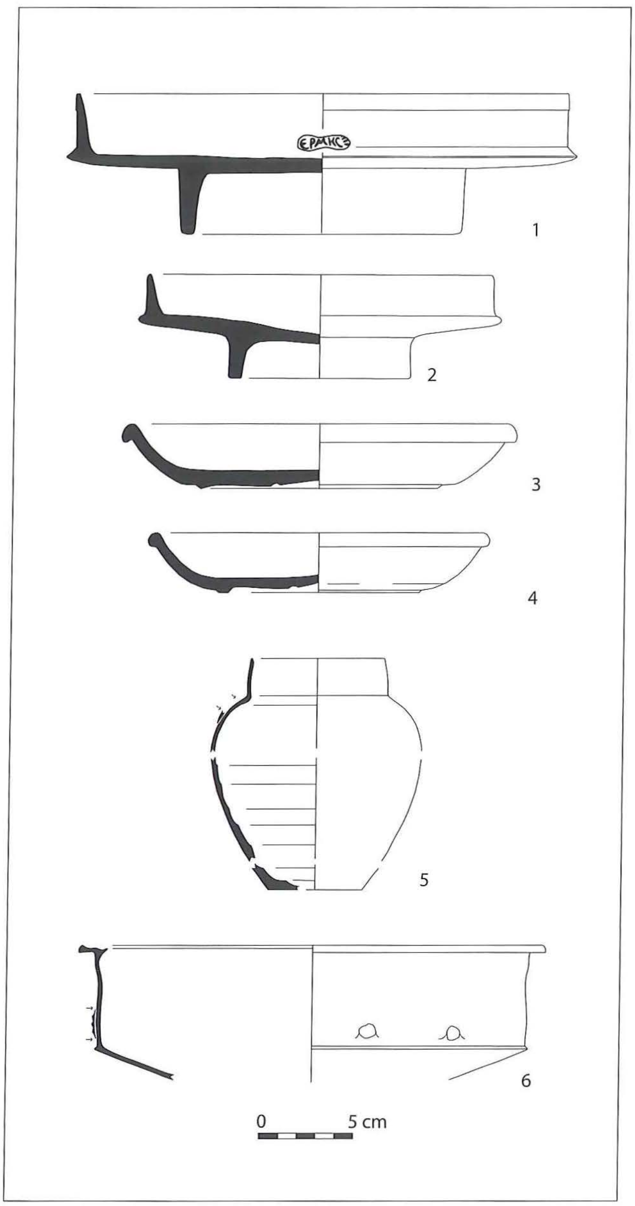


Fig. 8 Vases en service, ESA de type Atl. 37 (n°1-2), CS de type P11 (n°3-4), paroi fine de Knide (n°5), casserole chypriote (n°6).

La céramique culinaire (Fig. 8, n° 6)

Une casserole presque complète, de fabrication chypriote, provient également de ce dépôt. Elle possède un bord étalé et mouluré, une panse à collerette avec l'arrachement d'une anse horizontale. Le fond bombé est incomplet. La pâte est siliceuse et la paroi est très mince. Le profil des casseroles chypriotes découvertes sur le site de Nea Paphos diffère de celui de cet exemplaire.[7] Ce vase ne peut donc pas être daté avec précision, mais compte tenu de son état de conservation, il devrait être contemporain des céramiques fines.

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[2] Waagé 1948, 33, n° 426 (timbre *in planta pedis* sur type Atl. 37A), 35-36; Jones 1950, pl. 176, n° 903.

[3] Crowfoot 1957, 332, fig. 79, n° 20.

[4] Hayes 1985, 31.

[5] Hayes 1985, 82-83.

[6] Pour Nea Paphos: Hayes 1991, 189-190, n° 38, fig. LXVI (comblement du puits 4); pour Knossos: Sackett 1992, 222, n° 30, pl. 168 (dépôt F2, époque flavienne) et 225, n° 18, pl. 170 (dépôt T1, époque trajane); pour Éphèse: Meriç 2000, 95, abb. 6.1.

[7] Hayes 1991, p. 81-84.

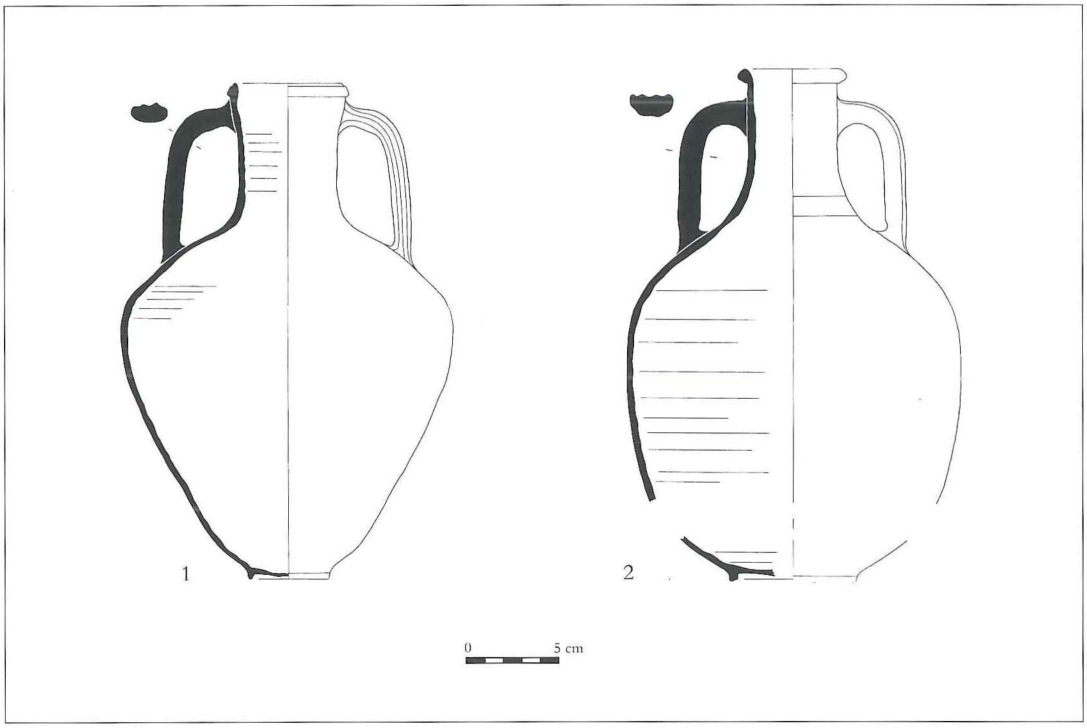

Fig. 9 Vases en service, amphores de type I (n°1) et II (n°2).

Les amphores (Fig. 9-11)

Le matériel amphorique comprend six formes presque complètes (types I à VI) dont les fragments se répartissent dans les trois couches distinguées au moment de la fouille (US 8-10).

La première amphore (type I) se caractérise par une pâte bien cuite et une paroi très peu épaisse (Fig. 9, n° 1). Elle présente une lèvre moulurée, un épaulement arrondi, une panse oblongue, deux anses à plusieurs sillons et un fond plat. La pâte de cette amphore est rouge et elle est identique à la famille 63B que Paul Reynolds a identifiée pour le matériel de Beyrouth.[8] Elle comporte ainsi des particules noires, de quartz et d'oxyde, et occasionnellement de larges fragments de quartz transparents. Il est possible qu'elle soit originaire de la région de Ras-el-Bassit comme le suppose cet auteur. Aucun parallèle à cette forme n'a été reconnu, bien que le profil se rapproche du type Knossos 42.[9] On note cependant que le bord de cette amphore est similaire à celui des amphores de Beirut 2b datés de la fin du Ier s. de notre ère.[10] Les niveaux kitiens datés du IIe et du IIIe s. de notre ère renferment de nombreuses amphores qui ont la même fabrique, mais des formes différentes. On peut donc supposer, en émettant toutefois certaines réserves, que ce type est antérieur au IIe s. Le contenu n'est pas connu, mais la petite taille et le fond plat de ce récipient font penser qu'il pourrait s'agir d'une « amphore de table » pour le vin.

La deuxième amphore (type II) est également une amphore à fond plat (Fig. 9, n° 2). La lèvre est en bourrelet externe, la panse globulaire et les deux anses possèdent trois larges sillons. La composition de la pâte rappelle fortement celle de la famille 63B de P. Reynolds, bien que les dégraissants soient de plus petite taille que ceux du type I. Il pourrait donc s'agir, là aussi, d'une amphore originaire de la région de Ras-el-Bassit. Il n'existe pas, à notre connaissance, de parallèle à cette forme. Pour les mêmes raisons que précédemment, il pourrait s'agit d'une amphore à vin.

8 Reynolds 1999, 90, note 2, 100, fig. 58-60 (fabric FAM 63B).

9 Hayes 1983, 156-157.

10 Je remercie P. Reynolds pour cette information.

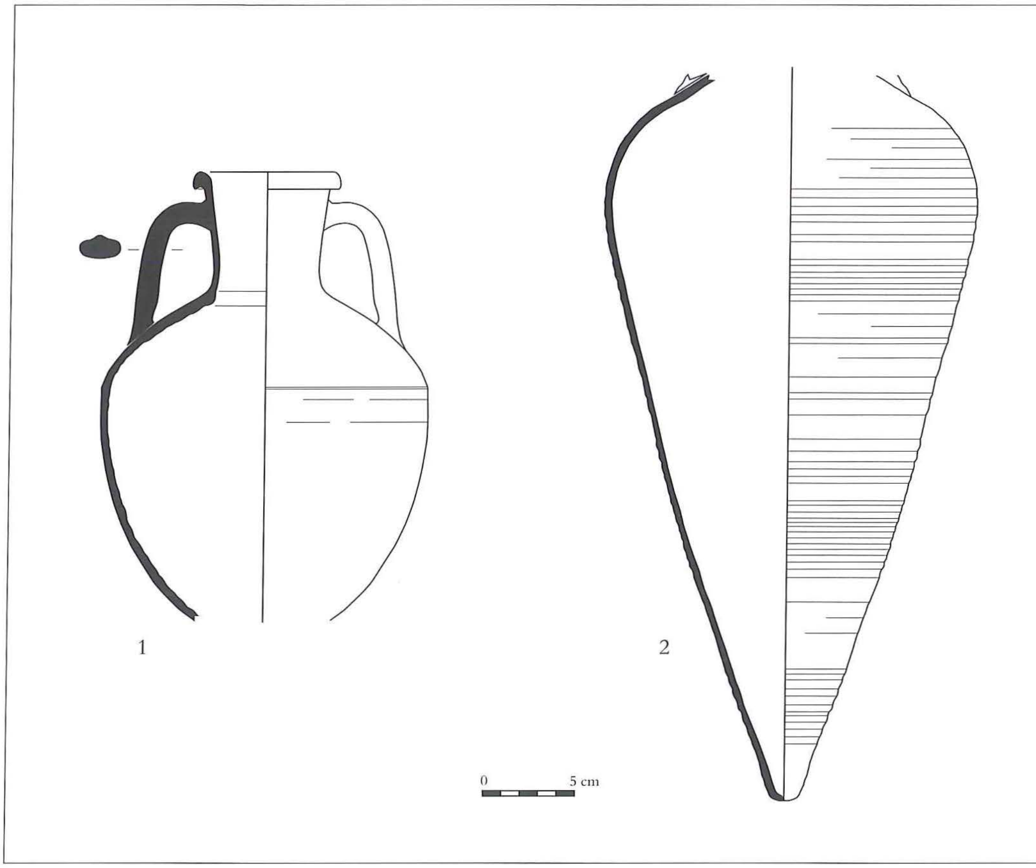

Fig. 10 Vases en service, amphores de type III (n°1) et IV (n°2).

La troisième amphore (type III) présente une lèvre repliée à l'extérieur, une panse ovoïde et deux anses en ruban (Fig. 10, n° 1). La base n'est pas conservée, mais à en croire l'existence de fragments épars, trop grands pour être rapprochés de cruches, il se pourrait qu'elle soit annulaire (Fig. 14, n° 5). La pâte est identique à celle qui caractérise la céramique commune claire et les *pithoi* découverts à Kition: de couleur beige, elle est poreuse et comporte un abondant dégraissant sableux et des particules de couleur crème. Il s'agit donc probablement d'une production régionale. Il n'existe aucun parallèle à cette amphore et il n'est pas certain qu'il s'agisse d'une amphore commerciale.

La quatrième amphore est originaire de Beyrouth (Fig. 10, n° 2). Elle est presque entière, mais il manque le col. Son épaulement est globulaire et il se rapproche du type Beirut 2 (daté du milieu du Ier s.), tandis que sa panse fuselée se termine en petite pointe et évoque déjà le type Beirut 3 (daté de la première moitié du IIe s.).[11] Il s'agit donc très certainement d'une forme de transition Beirut 2/3 qui pourrait dater, par conséquent, de la fin du Ier s. de notre ère. Un exemplaire complet découvert dans une tombe de Kition est exposé au musée de Larnaca: sa forme confirme notre hypothèse.[12]

La cinquième amphore est une *bag-shaped amphora* (type Zemer 36/*Gazan amphora* 1)[13] dont il manque le col (Fig. 11, n° 1). Sa pâte est rouge, bien cuite et elle présente de nombreux dégraissants. Elle est blanche en surface suite à une application d'eau de mer. De toute évidence, la pâte diffère des productions de Gaza, mais elle est attribuable au sud de la

[11] Reynolds 1999; Reynolds 2000 pour la typologie des amphores de Beyrouth.

[12] Le matériel de cette tombe est en cours d'étude par la mission française de Kition-Bamboula et il fera l'objet d'une publication très prochainement.

[13] Zemer 1978; Majcherek 1995, 166 (forme 1), pl. 3-4.

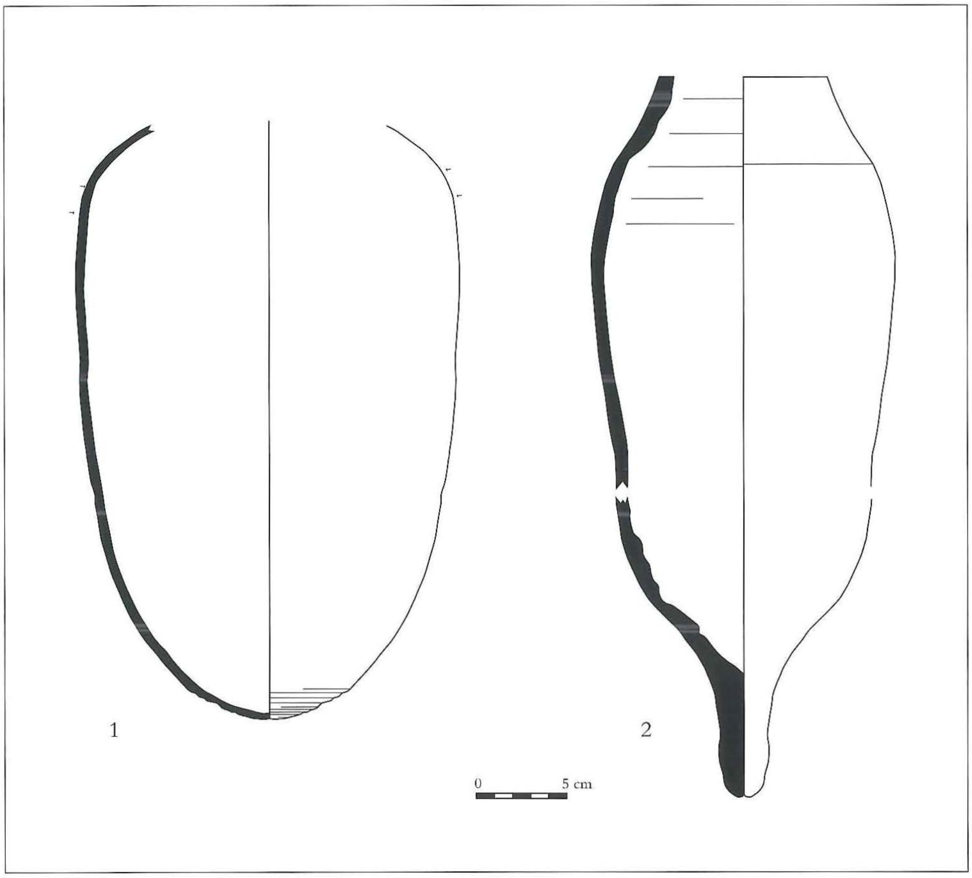

Fig. 11 Vases en service, amphores de type V (n°1) et VI (n°2).

Palestine. Ce type circule en Méditerranée du Ier s. au IIIe s. de notre ère. Il est attesté notamment sur le site de Kom-el-Dikka, à Alexandrie, au Ier s. de notre ère ainsi qu'à Rome dans les contextes d'époque flavienne.[14] On admet traditionnellement que ce type de conteneur transportait du vin blanc.

La dernière amphore, enfin, a été volontairement coupée au niveau du col dans l'Antiquité (type VI) (Fig. 11, n° 2). Le fond est pointu, la panse allongée et un sillon se place au niveau de l'épaulement. La pâte est chamois et elle comporte de nombreux dégraissants de couleur crème. La paroi externe est blanchâtre suite à une application d'eau de mer. Elle rappelle les productions de Bétique, mais nous n'avons pas pu l'identifier plus précisément. Elle est certainement antérieure à la constitution du dépôt, car le col sectionné montre qu'il s'agit d'une réutilisation.

Les éléments de datation sont peu précis, car la plupart de ces formes sont inédites. À Kition, les niveaux de remblaiement datés des IIe s. et IIIe s. renferment de nombreuses amphores de la région de Ras-el-Bassit et de Beyrouth, mais les formes sont différentes.[15] Il serait tentant de considérer, dès lors, que l'absence de ces types dans les niveaux datés des IIe et IIIe s. de notre ère à Kition est un argument supplémentaire pour placer ce dépôt dans le courant du Ier s. Mais un tel raisonnement est dangereux car on ne sait pas dans quelle mesure cet ensemble est représentatif ou non du vaisselier utilisé à l'époque flavienne. Seules les amphores de type II et IV permettent de proposer la fin du Ier s. comme date de mise en place de ce dépôt.

[14] *Ibid.*

[15] Marquié 2003; Marquié forthcoming.

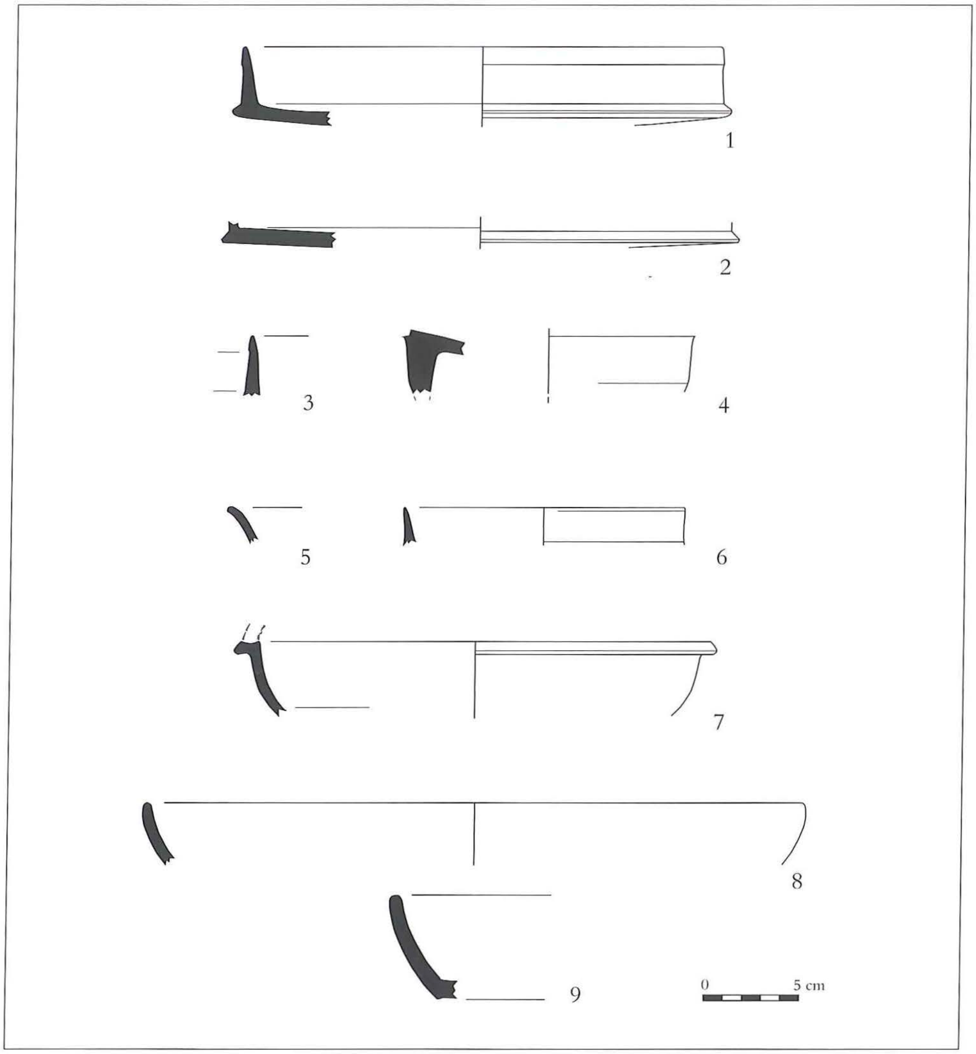

Fig. 12 Matériel fragmentaire, ESA de type Atl. 37 (n°1-4), Atl. 42 (n°5), Atl. 50 (n°6), CS de type P4B (n°7), VRP (n°8-9).

Le matériel fragmentaire

La céramique fine (Fig. 12, n° 1-7)

Les céramiques fines fragmentaires se composent, à plus de 86 %, de productions diverses d'époque archaïque à hellénistique qui sont résiduelles dans ce dépôt (Fig. 4). Les vases d'époque impériale sont peu nombreux puisqu'ils représentent un NTI de 7 (Fig. 6). On retrouve ainsi les mêmes types d'ESA (3 plats de type Atl. 37A et un autre de type Atl. 37B), ainsi qu'un bol de type Atl. 50A qui leur est contemporain (datables entre *ca.* 60 et 100) et peut-être un autre de type Atl. 42, plus ancien. Le bord de CS (type P4B) est aussi légèrement plus ancien (première moitié ou milieu du Ier s.).

La céramique commune (Fig. 12, n° 8-9)

La céramique commune claire (vases pour la préparation des aliments) et la céramique commune sombre (céramique culinaire) de fabrication chypriote sont nombreuses dans ce dépôt puisqu'elles représentent 33% du NR et plus de 56% du NMI. Elles sont très fragmentaires et il est impossible de distinguer les vases contemporains de la mise en place du comblement de ceux qui sont résiduels. En revanche, parmi la céramique culinaire se trouvent deux plats à vernis rouge pompéien (VRP) dont un profil complet. Le bord est arrondi et la panse légèrement rentrante, la base est légèrement évidée. La pâte renferme de nombreux dégraissants volcaniques qui suggèrent une origine campanienne. Cette forme

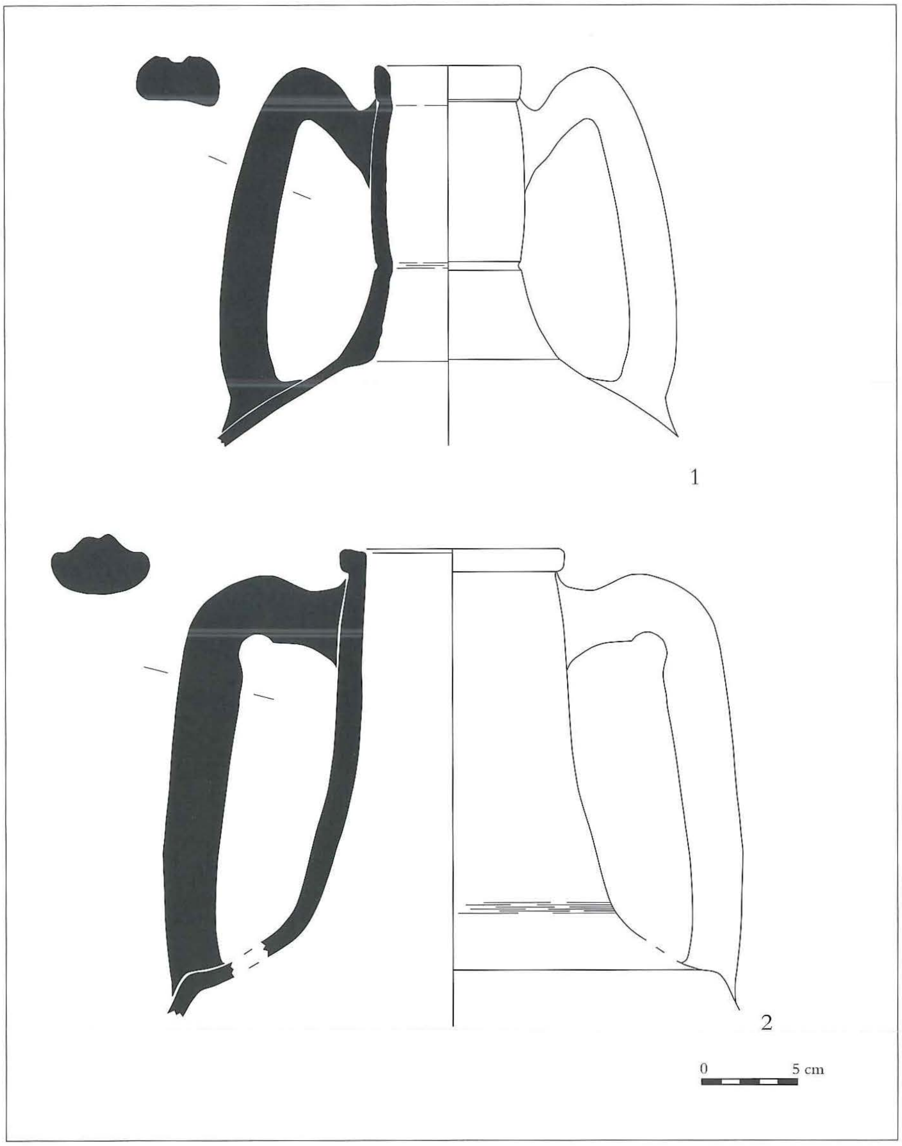

Fig. 13 Matériel fragmentaire, amphore de type AC2 (n°1), PNI (n°2).

est attestée en Méditerranée occidentale dès la fin du I^{er} s. av. notre ère et elle perdure jusqu'à la fin du II^{e} s./début du III^{e} s. de notre ère.[16]

Les amphores (Fig. 13-14)

Les amphores fragmentaires ont un NTI de 63 (Fig. 5). Les types sont variés, mais ils ne sont, la plupart du temps, représentés que par un seul individu. 20,5 % du NTI correspond à des amphores d'époque impériale, plus de 33,5 % à des productions résiduelles d'époque hellénistique et archaïque et 36,5 % sont classés en PNI. Il n'a pas été possible de dater les Dressel 2/4 orientales, car les tessons sont trop fragmentaires: ils peuvent être contemporains de l'époque hellénistique ou romain.

Les amphores d'époque romaine identifiables comprennent un col complet d'AC 2 (Fig. 13, n° 1), six fragments de type Beirut 2 (Fig. 14, n° 3), une anse de type Agora M 54, un bord de tardo-cnidienne et une *Gazan amphora* 1. Un fond d'amphore de type Dressel 20 de Bétique comporte une

[16] Bonifay *et al.* 1998, 87, n° 86-88.

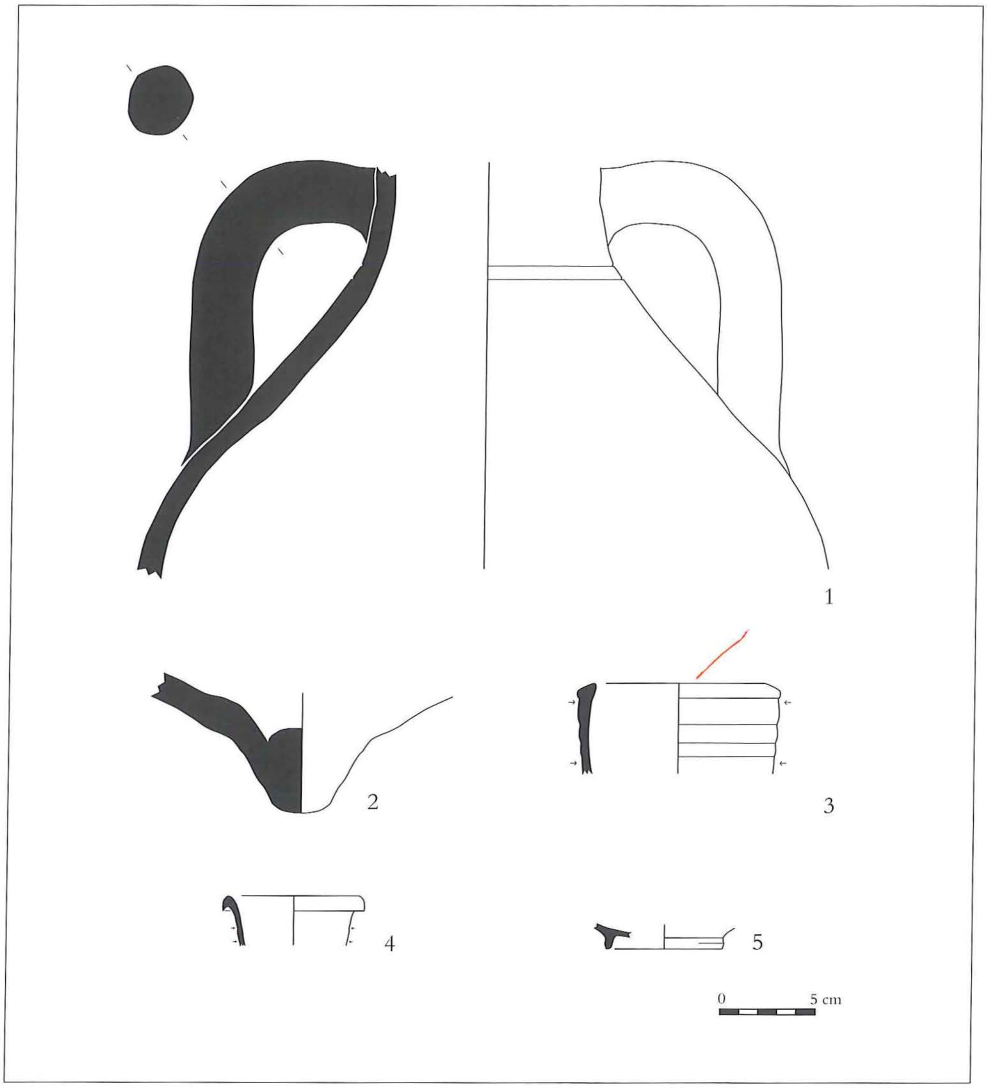

Fig. 14 Matériel fragmentaire, amphores de type Dr. 20 (n°1-2), Beirut 2b (n°3), type III (n°4-5).

marque incisée avant cuisson (Fig. 14, n° 2). Ce dépôt renferme également un épaulement avec un col souligné par deux sillons dont la forme se rapproche des Dressel 20 précoces (Fig. 14, n° 1), mais la pâte est inhabituelle: de couleur orange pâle, elle comporte de petits dégraissants rouges et bruns. La pâte est bien cuite et la cassure est nette. Tous ces récipients circulent en Méditerranée orientale dans le courant du I[er] s. de notre ère et leur date s'accorde parfaitement avec celle des vases en service. Il faut aussi mentionner la présence de deux fragments identiques au type III (Fig. 14, n° 4-5) et d'un col d'amphore dont la pâte évoque les productions levantines (Fig. 13, n° 2). Aucun parallèle à cette forme n'a été trouvé.

Conclusion

La date de ce dépôt repose uniquement sur l'étude des vases puisqu'aucune monnaie n'a été découverte dans ce remplissage. L'analyse typologique du matériel d'époque impériale montre que ce lot est homogène d'un point de vue chronologique et qu'il date de la deuxième moitié du I[er] s. de notre ère, malgré la présence de quelques vases résiduels.

Parmi les 12 vases en service reconnus, les plats en ESA fournissent un *TPQ* de l'époque de Néron et un *TAQ* des années 100. On peut légèrement resserrer cette date à l'époque flavienne d'après la morphologie des amphores type I et IV (Fig. 7). Les dates du matériel fragmentaire s'accordent parfaitement avec celles des vases en service.

Cet ensemble permet donc de faire connaître plusieurs types amphoriques qui étaient inédits et de compléter notre connaissance du répertoire morphologique des amphores chypriotes et levantines.

Amphorae in the Roman West: Discussion and Research since 1989

Stefanie Martin-Kilcher

As a participant from the West at the Athens conference, I had not prepared a talk. However, the organizers invited me to contribute a paper to the conference proceedings. It could well be interesting for specialists working in the Eastern Mediterranean to have some information on amphora research in the West conducted since the publication of the proceedings of the 1986 Siena congress, *Amphores romaines 1989*, by means of a selective bibliography for the second/first century BC to the sixth century AD, with short comments; the reader will find more references within the publications listed.[1] The following topics will be covered:

1 General subjects
2 Production areas and kiln sites
3 Comments on epigraphy (stamps, graffiti and, dipinti)
4 Shipping and new wrecks providing closed contexts
5 Selected regional studies and settlement contexts
6 East meets West
7 Amphorae and archaeological methodology in the Roman West: current debate
8 Amphorae and trade of the Roman West

1 General

An overview of Roman amphora types, especially in the West, was published in same year as the Siena congress by *Peacock & Williams 1986*. In Britain and Portugal, the P & W classification is commonly used; nevertheless, in the light of subsequent research some links need amending.[2] *Sciallano & Sibella 1991* provide a useful brief list with drawings of most amphora types, arranged by production areas and chronology. *Panella 2001*, the doyenne of amphora research in the western Mediterranean, presented a comprehensive overview of the present *Stand der Forschung*, with drawings of vessel-types and a large bibliography. Some of these titles are also found in this short review, though there are two aims: C. Panella gave us a current research statement, and I myself would like to provide the means by which one can access both different aspects of amphora research, and methodological discussions in the West.

New information is regularly given in the *SFECAG actes congrès* (primarily for Gaul but also for the North-Western provinces; in 1998 amphorae constituted the general theme for the SFECAG congress at Istres, and likewise for the 1998 Fautores congress at Ephesos: *ReiCretActa 2000* and recently *JRPotSt 10, 2002.*

2 Production areas and kiln sites

Many of these titles provide references relating to the economic and agricultural background.

Research on production areas and kiln sites in ITALY is summarised in *Panella 2001*; larger published excavations are still scarce. For petrological and chemical analyses of wine amphorae, see *Thierrin-Michael 1992*. Further information is available from ISTRIA, whose economy was closely connected with Italy, particularly in the first and

[1] Many thanks to Vivien Swan, York, for translating my text into English!

[2] E.g.: Class 6: even if Pascual 1 developed from Dressel 1, we must strike out the idea that they are equivalent to one another; Class 8: Dressel 6A needs to be distinguished from 6B; Class 13: the Richborough 527 are produced in Lipari (see 2); Class 16: the South Spanish and various Gaulish products need to be distinguished from one another, etc.

second centuries: *Bezeczky 1998* (on the Laekanii), and, with important new excavations at Loron (the products include those of Calvia Crispinilla), and a synthesis of the economy of Istria: *Tassaux et al. 2001.* The production at Lipari of Punic-influenced amphorae (Richb. 527), probably for exporting alum, was demonstrated by *Borgard 1994.* The Italian economic background is discussed by *Panella 2001, 192-196.*

For SPAIN and PORTUGAL the Roman provinces of Baetica, Lusitania and Tarraconensis, the most complete up-to-date statement of research is that provided by the four (!) volumes of the proceedings of the 1998 congress at Ecija and Seville. One can gain an impression of both the growth of archaeological evidence and of the specialisation in amphora studies by comparing *Ex Baetica amphorae 2000* from the 1998 Ecija/Seville congress, with *Amphores romaines 1989* following the 1986 Siena congress. Ten years earlier, *Alarcão & Mayet (eds.) 1990* constituted the first overview of Lusitanian amphorae, mostly for fish sauces, which, from the second century onwards, almost dominated Baetican (fish sauce) exports. On the other hand, in the late Republic and the earlier Empire, there were huge industries producing fish sauces and amphorae on the south coast, especially between Cádiz and Málaga; apart from *Ex Baetica Amphorae* 2000, other excavations and surveys have been published, e.g. by *Bernal Casasola 1998, García Vargas 1998, Lagóstena Barrios 2001* and also several papers in: *Rivet & Scialláno (eds.) 2002.*

The industries of the province of Tarraconensis, primarily wine, were the focus of a second colloquium at Badalona, edited by *Comas i Sola & Padros (eds.) 1998,* while *Miró 1988*; *Revilla Calvo 1995* pursued the same theme in monographs. In the southern part of Tarraconensis, around Valencia, research on the production of wine and fish sauce-amphorae has been summarised by *Aranegui & Gisbert 1992.* Several of the industries of the Balearics retained Punic traits down to the Roman Imperial period; *Ramón Torres 1995* details current research.

In SOUTHERN GAUL the earliest amphora manufacture is known at Marseilles: *Bertucchi 1992*; for some observations on distribution in the north-western provinces of the early Empire see *Desbat 1990.* Many publications on amphorae and amphora-production in Roman Gaul have been stimulated by Fanette Laubenheimer. Her excavations at the amphora workshop at Sallèlles d'Aude, in southern Gaul (where you can visit a good site-museum) were placed in their wider context in *Laubenheimer (ed.) 2001*; two publications of tables rondes provide an overview of Gaulish manufacture and its archaeological problems: *Laubenheimer (ed.) 1992, 1998.*

As a packaging industry, South Gaulish amphora production was linked to extensive agricultural productivity, firstly wine and then olives (moreover, it is still not known which containers would have been used for shipping South Gaulish olive oil): *Amouretti & Brun 1993; Brun 1987; Burnouf et al. (eds.) 1997; Favory & Fiches 1994; Leveau 1993.* On the coast, one finds fish-sauce production, e.g. the famous garum Antipolitanum praised by Martial: *Martin-Kilcher 1990; Laubenheimer (ed.) 1992, 1998.*

In Augustan times, production of a somewhat different character took place around Vienne/Lyons; the prototypes were Italian, Greek and Spanish amphorae *(Maza et al. 2002).* These containers were primarily used for the wine and fish sauces destined for markets in the North-Western provinces, as far as Britain and western Raetia. These Mediterranean comestibles were transported in bulk, in big containers (barrels, skin bags? or even dolia?) up to the trans-shipment point at Lyons, and then redistributed further North: *Martin-Kilcher 1994b, 473-561; Desbat (ed.) 1997; Ehmig 2001.*

CENTRAL AND NORTHERN GAUL, THE RHINE PROVINCES AND BRITAIN: During the earlier first century AD, the small-scale manufacture of just regionally distributed amphorae (very often simple copies of the classic Dressel 2-4) may reflect early minor local wine production in Gaul, the Rhineland and even in Britain: *Laubenheimer (ed.) 1992, 1998; Symonds 1993.* But further debate is needed on the apparent phenomenon of acculturation in the use of Roman-style wine containers for decanting wine, which had initially been transported in large barrels holding 800-1200 litres (vat-wine, probably of lower quality), or even for other alcoholic beverages (but not beer). In addition, we need to debate whether some regional and local two-handled and flat-bottomed 'amphorae' of the second/third century AD, could really have been transport vessels, or whether they were not basic storage-containers for liquid goods. On the other hand, some regional or local products of the second/third century AD seem to have used the Baetic amphora, Dressel 20, as a prototype; whether such vessels carried regional plant-oils is still open to debate (cf. *Ehmig 2000*).

To return to the Mediterranean, *Panella 2001, 207-211*, discusses the amphora industries of NORTH AFRICA (Tripolitania, Africa – Byzacena, Africa proconsularis, Mauretania Caesariensis). Tripolitanian amphorae of the first century BC have been studied by *Pascual Berlanga & Ribera i Lacomba 2002*. The development and survival, to the first/second century AD, of the Punic amphora, Maña C/Cintas 312 (for fish sauces), and the impact of Punic traditions on later industries, is discussed in *Martin-Kilcher 1999*. New evidence for production centres near Nabeul (Neapolis) and Salakta (Syllecthum) has been set out by *Bonifay et al. 2002*. For production in Late Antiquity, see *Saguì (ed.) 1998* (especially Simon Keay's contribution). The industry in the region of Lixus (present-day Morocco) is discussed in *Ex Baetica Amphorae III 2000*. A better understanding of the economy underlying the products exported in amphorae, particularly fish sauces, has complemented topographical research on the Tunisian coast. On the one hand, changes in the coastline have come to the fore, and on the other hand, the remains of extensive installations for the processing of fish and salt have become apparent, showing the importance of this industry from the Punic period onwards: *Ben Lazreg et al. 1996; Paskoff et al. 1991*. For our knowledge of other basic commodities transported in amphorae, such as olive oil, survey and excavation in the interior of the country have revealed cultivation systems (e.g. *Dietz et al. (eds.) 1995; Mattingly 1995*).

For the two products wine and fish sauce (including salt and protein), there is a choice of approaches which will advance our knowledge of production, and sometimes the manufacture and use of amphorae:

In the case of wine, the work of reference for ancient sources is still *Tchernia 1986a*. Archaeology, amphorae and viticulture as far as the Rhineland and northern Gaul: *Brun & Laubenheimer (eds.) 2001; Comas i Sola & Padros (eds.) 1998; Gilles (ed.) 1995; Meeks & Garcia (eds.) 1996;* despite the attractive book by *Tchernia & Brun 1999*.

On fish sauces in the Mediterranean region, *Curtis 1991* provides a discussion of ancient texts; subsequently, new documents and ideas are found in *Ørsted 1998; MEFRA 112, 2000*. For archaeology and production centres in the Iberian peninsula, see *Etienne & Mayet 1996; Etienne & Mayet 1998; MEFRA 112, 2000* and of course the 1998 congress proceedings, *Ex Baetica Amphorae 2000*. For other production see North Africa as well as Southern Gaul (2). For the northern coasts of Gaul, and even for Britain, see *Immerzeel 1990; Martin-Kilcher 1990*.

3 Comments on epigraphy, stamps, graffiti and dipinti

Nearly all the titles mentioned here contain sections on epigraphic aspects of amphorae. In the West, apart from RIB (The Roman Inscriptions of Britain), we still lack a well-illustrated medium for the publication of amphora inscriptions of all types (ante-cocturam graffiti, stamps, tituli picti – primary and secondary – and post-cocturam graffiti). Three corpora of stamps on Roman amphorae are in progress: at Aix-en-Provence: *Carre et al 1992; Blanc-Bijon et al. 1998* (with drawings of the actual amphorae, where available, as an important component of the archaeological data); the publications for the years 1987-1990 have already been recorded; the next volume is nearly ready. The second corpus is being prepared in Rome by Clementina Panella, see *Panella 2001, 185-86*; *Panella & Moizio (forthcoming)*. The third is being compiled in Barcelona, where José Remesal has founded a research group, CEIPAC (Centro para el Estudio de la Interdependencia Provincial en la Antigüedad Clásica; with a website *http://ceipac.edu/*).

For amphora epigraphy in the context of economic history (especially the stamps), and with contributions to the continuing debate on the interpretation of stamps on Roman amphorae, see *Cipriano & Mazzocchin 2000; Harris (ed.) 1993* (with contributions e.g. by D. Manacorda, C. Panella, A. Tchernia); *Paterson 1998.*

In the field of economic history, the epigraphic matter on Dressel 20 Baetican olive oil amphorae is the most numerous and likewise most frequently discussed type of evidence. In Rome, the Monte Testaccio assemblage constitutes the largest archive of stamps, ante-cocturam graffiti and painted inscriptions from the first to the third century AD. The excavations and publications by *Blázquez Martinez & Remesal Rodríguez (eds.) 1999*, and several contributions in *Ex Baetica Amphorae 2000* provide new research data (and a more detailed bibliography), following in the foot-steps of Heinrich Dressel and Emilio Rodríguez Almeida.

Another important group on the Iberian Peninsula, mainly with painted inscriptions, comprises the fish-sauce amphorae. Sometimes the names of traders and shippers on these are the same as on Dressel 20 amphorae. These inscriptions have acquired an enhanced interest, particularly in the wake of the readings by Bernard Liou, for example studies by *Curtis 1991; Ehmig 1996, 2002; Etienne & Mayet 1998; Liou 1993, 1998; Liou & Rodríguez Almeida 2000; Martin-Kilcher 2002.*

Apart from the epigraphy itself, the item carrying the inscription should also be taken into account. Whether as a complete vessel, or as an amphora fragment, the drawing of the profile, the form of the handle and its cross-section are as essential as the fabric description. These provide the archaeological basics that can be applied to the abundant amphorae lacking epigraphic components. In the more detailed study of trade from epigraphic data, one should take into account the fact that stamped amphorae generally make up only a (small) percentage of the total number of containers. Moreover, the practice of stamping was not consistently applied in the course of time, nor was it standard for all types of amphorae or their production areas.

4 Shipping and some new, or newly-published wrecks as closed contexts

Parker 1992 provided a gazetteer of wrecks;[3] *Gianfrotta & Pelagatti 1993; Gianfrotta 1998* and *Jurisič 2000* filled in the gaps for Italy and the *Adriatic sea, Liou 2000* listed the wrecks with Baetican amphorae, and *Carreras Monfort & Berni Millet 2002* the Laietanian ones. *Hackens & Miró (eds.) 1990* edited papers on the maritime commerce; *Pomey (ed.) 1997* provides a broad outline of ancient shipping; for inland navigation, with the most important arterial routes, apart from sea transport, see: *Arnold 1992; Bedon & Malissard (eds.) 2001; Leveau (ed.) 1999; Mees & Pferdehirt 2002.* Archaeonautica always contains much valuable information on wrecks and underwater archaeology in the West, but actually seems to be as much a 'sleeping beauty' as Cahiers d'Archéologie Subaquatique.

Tchernia 1990 challenges the value of wrecks ("Contre les épaves") in order to provoke a more searching, critical view of this resource. While supporting that, we value wrecks as closed assemblages and each as an individual trading 'event'. A series of contemporary wrecks will still provide us with more copious information on trade within a clearly defined date-span; moreover, it is worthwhile comparing wrecks with settlement assemblages. Evidence of the opposite kind has been appraised by *Liou & Sciallano 1989*: they have studied the sequence of amphorae arriving at the port of Fos, the most important southern port for goods transported along the Rhone valley. The authors have painted a picture of amphora-borne commodities and their sources in the passage of time.

SELECTED WRECKS:

- Late Republic: <u>Mahdia</u> (Tunisia): *Mahdia 1994.* <u>Skerki</u> (Italy): *McCann 2000.*

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[3] By positioning broad date-spans (eg. 'first to third century AD') on their central point (eg. 150), he invalidated his own Tables (cf. Martin-Kilcher 1998, fig. 10).

- Later first century BC to second century AD: La Tradelière (near Antibes, France): *Pollino 1986; Feugère & Lège 1989.* Comacchio (near Ravenna, Italy): *Berti 1990; García Bellido 1998.* Grand Ribaud D (near Marseilles, France): *Hesnard et al. 1988*; for wrecks of large storage vessels (dolia), cf *Gianfrotta 1998; Hesnard 1997.* Cala Culip IV (on the Tarraconensian coast of Spain): *Nieto Prieto (ed.) 1989; Nieto & Puig (eds.) 2001.* Guernsey (Britain): *Monaghan 1990.* Grado (Italy): *Auriemma 2000.* St-Gervais 3 (Fos, France): *Liou & Gassend 1990.*
- Third century to Late Antiquity: Cabrera III (the Balearics, Spain): *Bost et al. 1992.* Dramont E (near Marseilles, France): *Santamaria 1995.* Isis (near Skerki, Italy): *McCann & Freed (eds.) 1994.*

5 Selected regional studies and settlement contexts

Seeing the abundance of new evidence, it is difficult to make a choice. I will concentrate on works of synthesis and publications of the most important assemblages. These present, on the one hand, the range of amphorae and their chronology, and on the other hand, their contents and production-sources, and often some remarks up to consistent chapters on the trade. *Panella 2001* gives an overview of the production and distribution of several amphora-types and their contents in the areas of consumption.

ITALY: comprehensive *Panella 2001*, 192-96; for Late Antiquity especially *Sagui (ed.) 1998*, see also *Cipriano & Mazzocchin 2000; Rivet & Sciallano (eds.) 2002.* A *table ronde* discussed the "*vides sanitaires*" (including many examples from Italy) also from a methodological point of view: *Pesavento Mattioli (ed.) 1998.* For Rome: Monte Testaccio, see 3. New insights on Late Antique Rome (and amphorae up to the seventh century AD) have come from the excavations at Crypta Balbi: *Arena et al. (eds.) 2001.*

As for Dressel 1, the supreme Italian wine amphora of the second and first centuries BC in the West, I can only cite two recent works on the typology and chronology of the later forms: *Desbat 1998; Poux 1999.* In comparison with the Eastern Mediterranean, Lamboglia 2 amphorae, produced on the Adriatic coast, play a marginal role in the West, but are nevertheless present, when one looks carefully.

IBERIAN PENINSULA: *Panella 2001, 199-206. Ex Baetica Amphorae 2000. Berni Millet 1998; Carreras Monfort & Berni Millet 2002; Georges & Rodríguez Martín (eds.) 1999.*

GAUL AND THE RHINELAND: *Panella 2001, 196-99.* New information appears regularly in the acts of the SFECAG congresses.

SOUTHERN GAUL: *Laubenheimer (ed.) 1992, 1998; Siraudeau 1988.* For very useful contexts down to Late Antiquity, from Marseilles, see *Bonifay et al. (eds.) 1998*; for Late Antique amphora types, see: *Bonifay & Piéri 1995; Piéri 1998.* Lyons and the Rhône valley: *Dangréaux & Desbat 1988; Lemaître 1995, 2002; Silvino 2001.* Augst and modern Switzerland: *Dubuis et al. 1987; Haldimann 1998; Martin-Kilcher 1987, 1994* (Augst – Colonia Augusta Raurica and Late Roman Castrum Rauracense, a site study including the trade in those commodities found in the North-West). Northern Gaul and the Germanic provinces: *Baudoux 1996; Jeannin & Laubenheimer 1989; Olmer 1994; Remesal Rodríguez & Revilla Calvo 1991; Remesal & Schallmayer 1988; van der Werff 1986.* U. Ehmig's publication of the amphorae from Mainz has now been published (*Ehmig 2003*).

BRITAIN: *Arthur & Williams 1992; Carreras Montfort 2000; Dark (ed.) 1996 (for Late Antiquity); Tomber & Williams 2000.*

RAETIA, NORICUM AND THE WESTERN DANUBIAN REGIONS: In the province of Raetia, even now, very little research on amphorae has been undertaken. In Noricum, the best-known site (which had many commercial relationships with Aquileia) is the impressive Late Republican and Early Imperial town of Magdalensberg: *Bezeczky*

1994a; Maier-Maidl 1992, and for Late Antiquity in the Eastern Alpine Regions, see *Ladstätter 2000*. For Slovenian sites, see *Horvat 1999*. For Pannonia and further southeast, see: *Bjelajac 1996; Kelemen 1987, 1988, 1990*.

AFRICA: *Panella 2001, 207-11*. The site with the most numerous published, stratified contexts is still Carthage: *Hurst et al. 1994* (with contributions by M. Fulford, D. Peacock); *Martin-Kilcher 1993; Rakob (ed.) 1999* (with contributions by M. Mackensen, S. Martin-Kilcher, M. Vegas).

6 East meets West

What of the Eastern amphorae in the Roman West? It is obvious that, in the West, the contents of Eastern amphorae were often luxury goods. Nevertheless, they arrived during the whole of the period under discussion here. *Panella 1986* provided the first and still most important overview. Since then, studies of many Eastern Mediterranean amphora types have been in progress. Several articles deal with Eastern amphorae in the West in *Déroche & Spieser (eds.) 1989; Genu (ed.) 2001; Blondé & Ballet & Salles (eds.) 2002; Comas i Sola & Padros (eds.) 1998*, as well as in the *ReiCretActa 36* (2000). Late Antiquity in the Western Mediterranean was studied by *Reynolds 1995*. For new research in Gaul and the North-West, see: *Lemaître 2002; Vilvorder et al. 2000*, and for Late Antiquity, see *Piéri 1998*; for Britain, see *Tomber & Williams 2000*. For 'carrot' amphorae, see *Vipard 1995; Carreras Monfort & Williams 2002*. From Crete to the West, see *Chaniotis 1988; Marangou-Lerat 1995*.

Looking further back, in the West, one has to remind oneself that there was no genuine indigenous amphora type, with the probable exception of the flat-bottomed amphorae (Marseilles amphora, called Gaul 2, see 2), as this amphora was only 'invented' in the first century BC, and its prototype seems to have come from among the Late Republican large double-handled 'jugs' (fig. 1). For all the other forms, it was the East, which provided the models. These arrived in the West with the spread of colonisation during the Phoenician, Punic and Greek periods through the expedient of colonisers and their sea-trade, commerce which the Romans inherited and controlled permanently from 146 BC

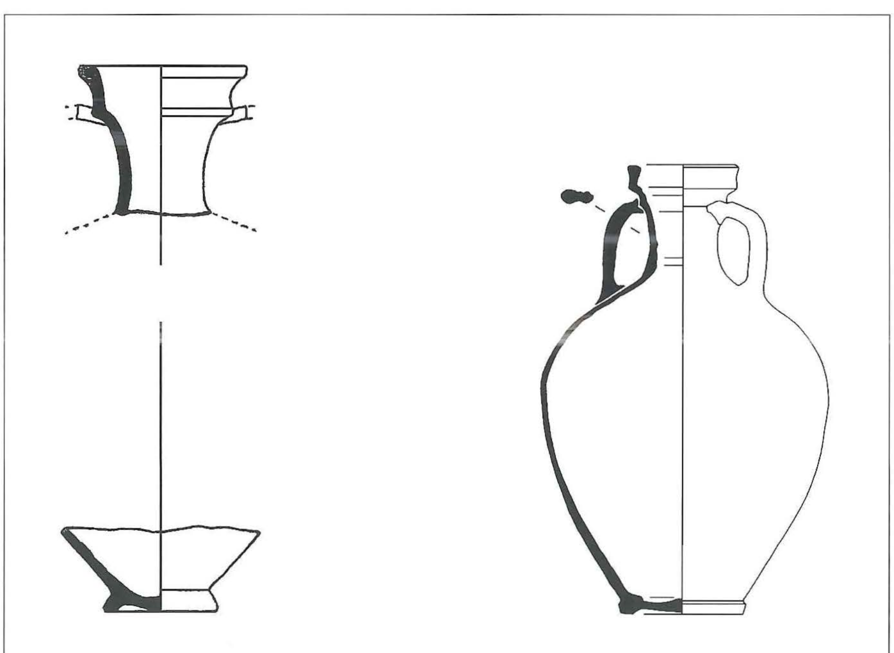


Fig. 1.
1. Late Republican large double-handed jug or amphora? From the wreck of Albenga (ca. 70 BC).
2. Amphora Gaul. 2 (production Marseille) (later first c. BC). 1:10. After *RStLig* 18 1952 and *Bertucchi 1992*.

following the fall of Carthage and Corinth. The amphorae themselves bear witness to the development of maritime trade and the influence of colonisation on the economy of those regions in contact or conquered. To be sure, the forms of all these containers whose production has been taken over in the West underwent their own evolution, without their original roots completely disappearing. In contrast, one can marvel at the conservatism evident in several forms from the South-Eastern Mediterranean: the bag-shaped and 'cigar-shaped' amphorae are the best examples.

7 Amphorae and archaeological approaches in the Roman West: current topics of debate

In the realm of methodological discussions, three important points relate to the manipulation of the material and its interpretation; *cf.* also 3.

The analysis of the archaeological evidence and the significance of contexts

The appraisal of the evidence embraces first of all the various impacts of human activity and natural processes on the formation of archaeological contexts (fig. 2). Between everyday life in Antiquity and surviving archaeological material, a certain number of constraints are in place, which generally exert a strong influence on the archaeological data: *Martin-Kilcher 2003; SFECAG, actes congrès Cognac 1991 (1991); Symonds 1998; Tomber 1993.* Because of these obstructions, an interpretation-model based on the simple equation that 'many amphorae' equal tied or institutional trade and 'few amphorae' equal private or civilian trade, is dangerous and could in most cases well be wrong. Another pitfall is embodied in the equation that 'many amphorae' equal prosperous times and that less or few amphorae equal lean times. Thus, a critical examination of the archaeological evidence – both the context and the material – is absolutely essential.

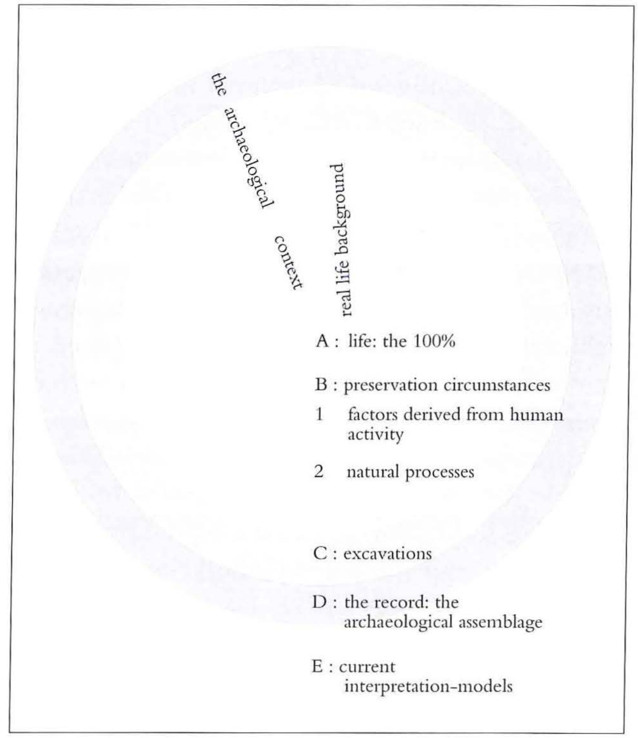


Fig. 2 Archaeological evidence and the signification of contexts. After *Martin-Kilcher 2003.*

Quantification

Different methods of quantification have been discussed on several occasions, lately in *Arcelin & Tuffreau-Libre (eds.) 1998*, and especially *Hesnard 1998*. Likewise, the relative quantities from different groups of archaeological material are revealing in the assessment of, for example, what proportion of a total assemblage is made up of amphorae. Weight and sherd count may be able to indicate the extent of sherd fragmentation (often reflecting the depositional origin of the context). The larger the surface area of an excavation, the more consistent will be the intra-site comparisons. One can study the first and most systematic example of these approaches in Michel Py's work on the ancient town of Lattes, in *Lattara 3 (1991).*

Relative and absolute chronology

The treatment of residual material in deposits has been discussed in *SFECAG, actes congrès Cognac 1991 (1991)*, and also in several regional syntheses (see 5). While a relative chronology can be established from stratigraphic analyses for certain periods, absolute dating is in the course of modification (at present particularly outside the Mediterranean). Although archaeologically generated dates can be linked to dates and events presented in the written sources, differences of ten to twenty years (or more) can be crucial factors in determining what interpretation is possible. For this reason, the publication of closed assemblages, whether from excavated stratified sequences, or from selected individual closed contexts (e.g. *Bonifay et al. (eds.) 1998; Davies et al. 1994*), is important, because it enables us to familiarise ourselves with typical associations and provides us with a medium of control.

8 Amphorae and trade in the Roman (North)-West

The two interdependent facets of the economy comprise production and consumption, with a third driving-force, the market, going hand in hand with them in the promotion of trade. Between *Rostovtzeff 1926* and *Finley 1973*, as well as for the time "after Finley", one could cite hundreds of works dealing with these subjects, summarised in reflections e.g. by *Jacobsen 1995*. Amphorae occupy each of the three facets. Of course, the manufacture of this packaging cannot be divorced from the goods packaged. Some syntheses, either within a regional or provincial framework, are therefore cited in section 2. In the West, especially in the North-West, one cannot discuss the trading (and the storage) of food-stuffs, particularly wine, but also of fish sauces, without alluding to barrels and tubs: *Desbat 1997; Jalmain 1990; Marlière 2001, 2002*.

In the West, much discussion devolves on the question of who consumed these imported goods and how much in the course of time.[4] The archaeological evidence, together with epigraphy and several ancient textual sources, indicates that trade in amphora-borne provisions was important. In the Roman West, the various amphora-borne commodities – firstly wine and salted foodstuffs, later olive oil – were profitable for the producers (especially the estate owners) and the merchants for centuries. In the provinces north of the Alps, it is clear that towards the middle of the first century BC, the range of imported amphora-borne products expanded rapidly alongside the wine; there were fish-sauces, and soon, olive oil (see 5). Lyons came into prominence as the trans-shipment point and the most important commercial centre (see 5).

The question has been asked as to what role *portoria* (a value added tax, not a frontier tax) could have played in the distribution of goods *(MünstBeitr 13, H.2, 1994)*;[5] it is apparent that the various customs-zones (for quadragesima Galliarum, see *de Laet 1949, France 2001*) had no influence on the spatial distribution of amphora-borne merchandise (fig. 3). For several products, it is well established that the natural topography of the distribution zones conditioned the courses of the freight routes, and hence the distribution of these commodities, well illustrated e.g. by the distribution of Istrian olive-oil amphorae or the distribution of fish-sauce amphorae from the middle Rhône valley (fig. 3, 2.3); see 5. Other products crossed all natural barriers, for example Cretan wine amphorae in the Roman world (fig. 4); for specialised items and luxury goods, neither the customs-dues nor inconvenient, long-distance routing mattered, provided that the merchant was guaranteed a profit.

Rome and the great urban centres of Italy and the provinces were the greatest importers and consumers; to these were added the length of the Rhine, and later Britain, both with permanent military garrisons (see 5). The provisioning of the army was an important economic factor, with greater opportunities for trade; see, lately, *Erdkamp (ed.) 2002* (with

[4] For the North-West, this discussion is set against a background of debate over barrels as packaging – which do not survive well in the ground – and the production of foodstuffs outside the Mediterranean.

[5] For future research, maps annotated with quantified data would be needed.

Fig. 3.1 Portoria and province boundaries. After de *Laet 1949; France 2001*.

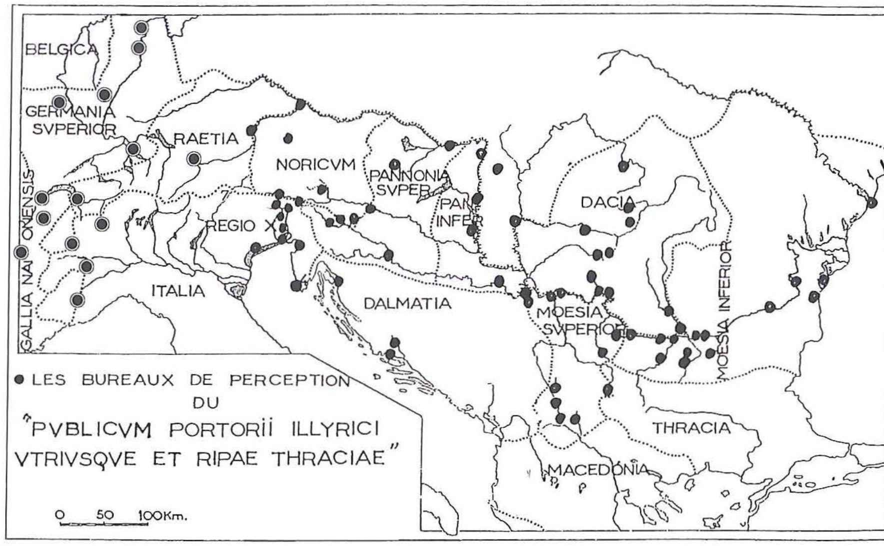
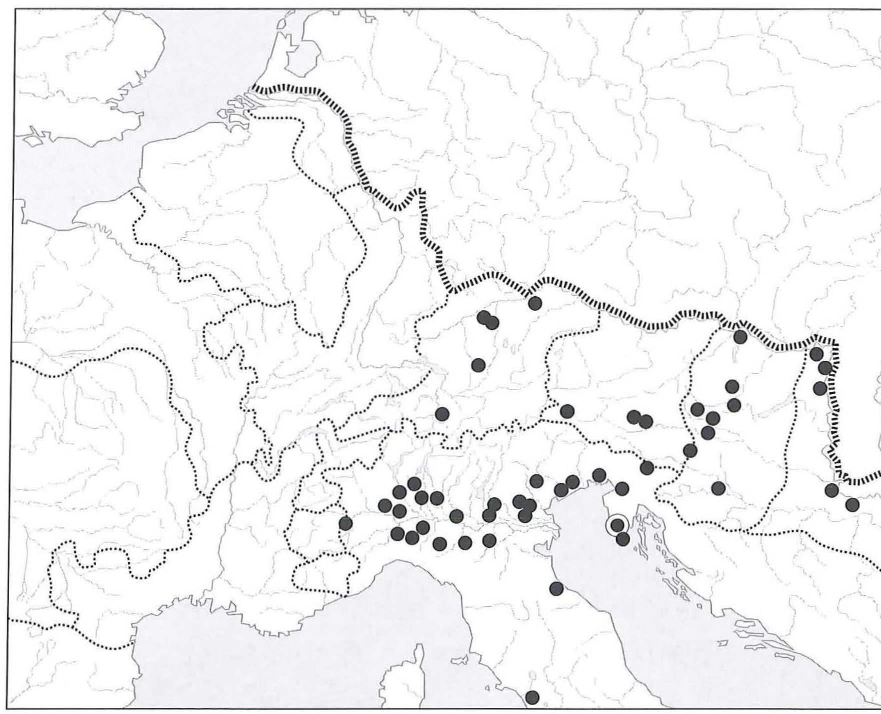


Fig. 3.2 Distribution of Istrian olive oil amphorae by the means of the frequent stamps of the Laekanii. First c. AD. The province boundaries are indicated.



other contributors including C. Carreras Monfort and J. Remesal). Nevertheless, a western perspective directed exclusively towards the army would risk excluding a whole gamut of customers. Civilian markets in the urban centres and capital cities (the populations of these urban centres in Gaul were many times more numerous than the troops in Gaul and on the Rhine) should not be underestimated, even though the situation did not correspond to a "free market economy" in current terms. Newer and vital contributions to the discussion after Finley include: *Temin 2001; Wierschowski 2001*, with comments by *Remesal 2002* (with only partly justified criticisms!) and *Tchernia 2002*. But the issue is how to integrate not only the written sources and the amphorae as such, but also our understanding of the archaeological contexts (see 5 and 7), as a basis for interpretation.

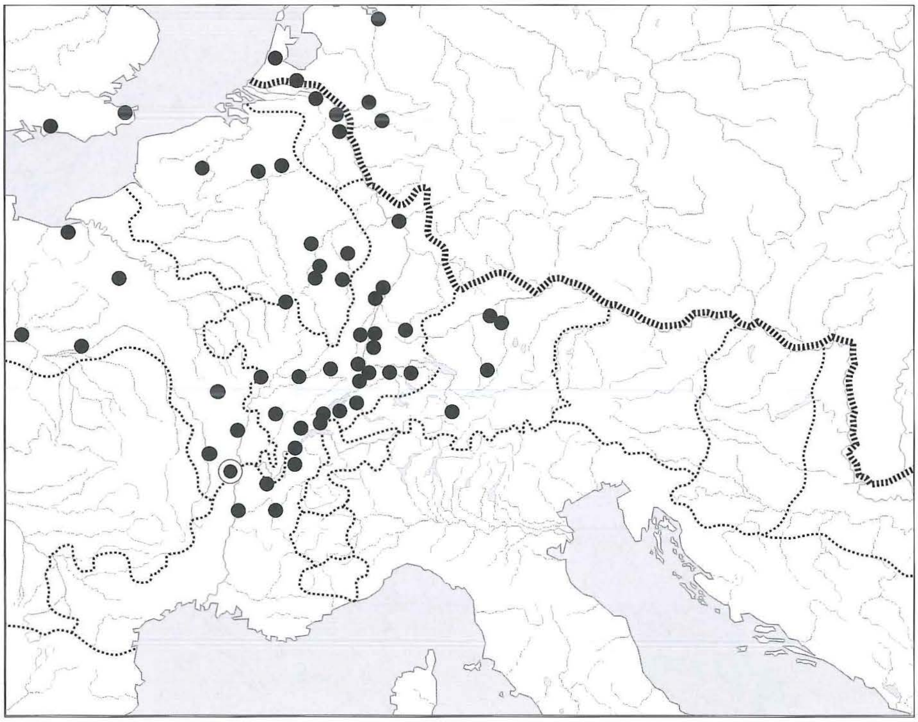


Fig. 3.3 Distribution of fish-sauce amphorae from the middle Rhône valley. First/beginning second c. AD. After *Martin-Kilcher 1994; Desbat (ed.) 1997; Bezeczky 1998.*

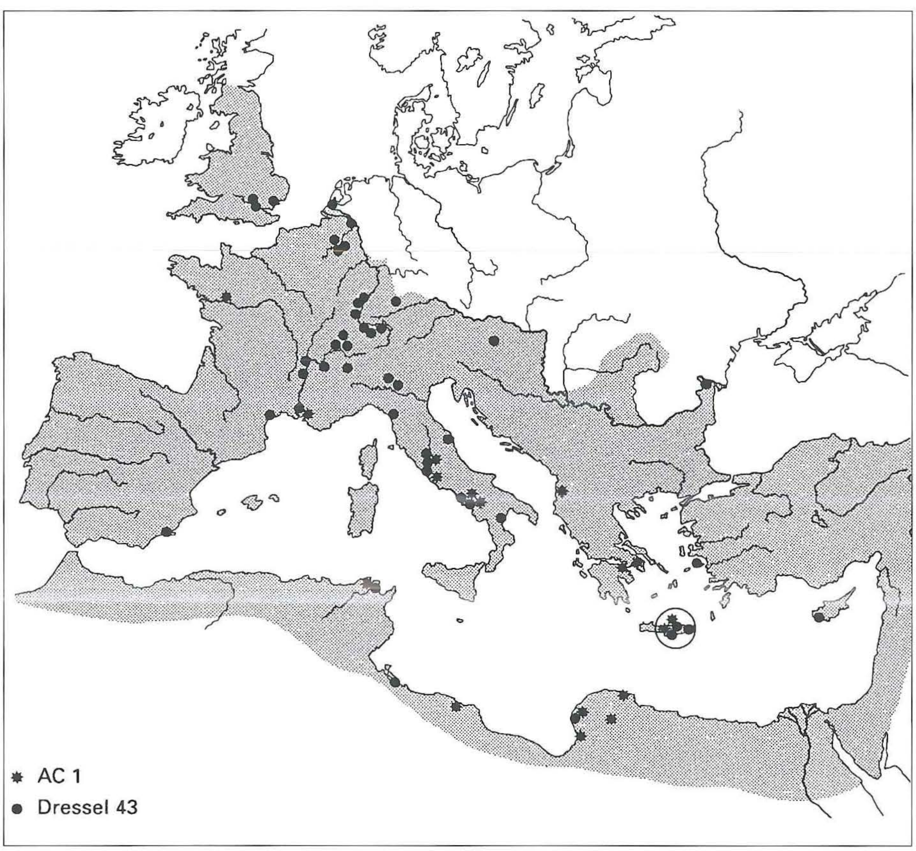


Fig. 4 Distribution of Cretan wine in the Roman Empire. After *Panella 1986* and *Martin-Kilcher 1994.*

Kouriaka again: Amphora Stamps from the Kourion Acropolis Excavations[1]

Henryk Meyza

Already thirty-five years ago, when Virginia Grace published a group of local amphora handles found at Kourion during the University of Pennsylvania excavations, it became evident that the Kourion amphorae were exported elsewhere in meagre quantities, in spite of their occurrence in the written records of the Zenon papyri.[2] The exports were directional, something made evident by a comparison of amphora stamps from Kition (with 27 stamped amphorae probably of Kouriote origin, a quantity not achieved elsewhere apart from Kourion) and Paphos (none). Recent excavations of the Department of Antiquities on the Kourion Acropolis, directed by Demos Christou, have yielded many finds of these locally produced, and evidently mostly locally used, amphorae. Some of the amphorae were found in good stratigraphical contexts. J.B. Connelly has published a single stamped amphora in an appendix to the report by D. Christou.[3] It was only in 1993-97 that substantial remains dating to the Late Classical and Hellenistic periods came to light beneath a Late Roman cistern at the north-eastern edge of the Acropolis plateau.[4] Dr. Christou has kindly given me the opportunity to study the pottery found in the area.

1. Kourion Acropolis Late Classical /Early Hellenistic fort, southern glacis wall.

The main architectural structure found was a glacis of a fort, similar to the Persian one at Byblos (Fig. 1).[5] The Kourion fortification is situated close to the summit of the Acropolis. The inside of the glacis has been little excavated: its eastern part is under the Late Roman cistern, while in the west only small pits were sunk and a huge dug-in cistern was cut into bedrock in later Antiquity, disturbing the area probably still within the defensive wall. Against its southeast corner further Late Classical or Early Hellenistic structures were uncovered around a courtyard with little-contaminated strata. Material also came from the fill of a cistern, built against the south face of the glacis wall, a rock-cut channel leading along the eastern side of the wall and layers of rubble outside the glacis foundations. The pot-

[1] Drawings, rubbings and photographs are made by the author, if not stated otherwise, dimensions in cm are of stamps, (HxW), H along the handle, W across.

[2] Grace 1979c, 179-180.

[3] Connelly 1983, 280 fig. 6.9, Pl. 47.9-10.

[4] Christou forthcoming.

[5] Parrot *et al.* 1975, 106, Fig. 110; Dunand 1970, 93-100.

Fig. 2. A wreath, (1,8x1,8), KA 95, UUVV 4-5.

Fig. 3. A wreath and a monogram AM, (2,4x1,6), KA 95, WWXX 9-10 Υψ. 80, 13.3.95.

tery is contemporary with the transitional phases of the French excavations at Larnaca.[6] It should be noted that, apart from imported, black-glazed late fourth century pottery, there are also a handle of early Rhodian amphora stamped ΔA/MO and large fragments of open lamps (*coupelle*).

It is in these contexts that examples of stamped handles on local amphorae were found. One of typical stamps of Kourion amphorae with a wreath was found on the level of the fifth foundation course of the podium wall in the fill outside the eastern side of the glacis (Fig. 2); the other two were found in the soil dumped over early structures below the south-eastern glacis corner (Fig. 3). Altogether 11 specimens of impressions of perhaps a single die were found, most probably always a combined device-monogram stamp. It reads AM, known from other combinations with devices, although only in half of the impressions any trace of the monogram is actually preserved. Larger quantities of Kouriote stamps were found in later contexts, the important ones being those in the Hellenistic strata. It is nevertheless not easy to decide when the Kourion amphorae with stamps went out of use. It is obvious that examples found together with Roman or Late Roman pottery are residual. As a result of the intense building activity during Imperial times, there are very few good Hellenistic groups preserved from the Kourion Acropolis. There are no clear Hellenistic *ante quem* criteria either, and we are limited to

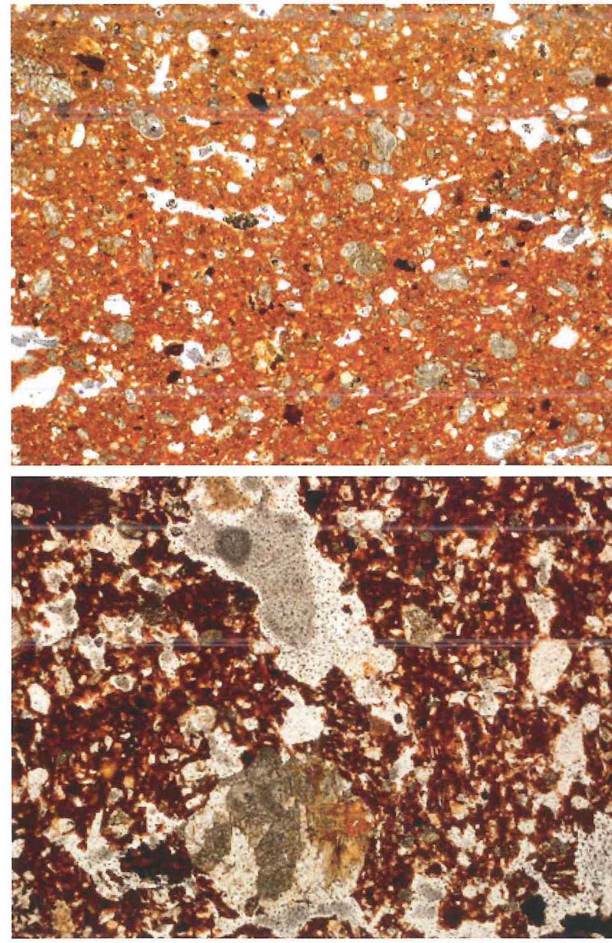


Fig. 4. Thin sections of samples of Kourion Ware samples from KA95, UUVV 8-9, Cistern.

4:1. Sample 8: amphora body sherd (x56) (Photograph A. Barczuk).

4:2. Sample 22: kitchen pot body sherd (x112) (Photograph A. Barczuk).

a simple listing of context co-occurrences. Such data as there is gives the impression that the stamps decline in popularity late in the Hellenistic period, but were in use at least in the third century.

Kourion amphorae are made of a very distinctive paste, rough and porous with macroscopic impurities, mainly of white lithoclastic grains of mostly organogenic limestone extruding on the surface, often in fine fraction, showing small fragments of molluscs. A preliminary qualitative petrographic analysis

[6] Meyza forthcoming.

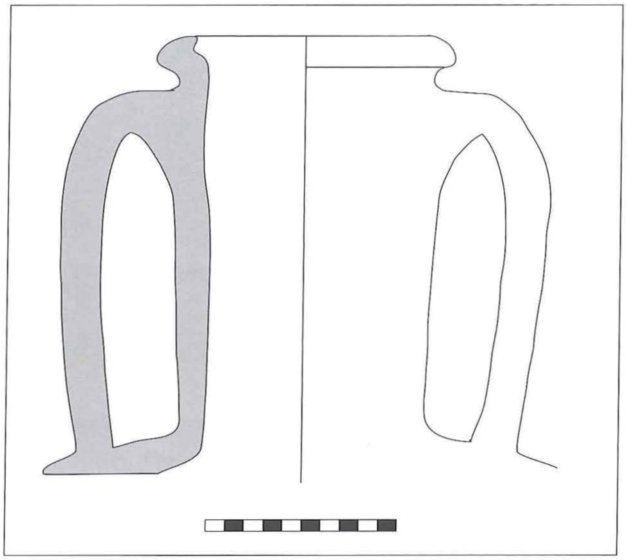


Fig. 5. Rim rounded with hollow inside (after Connelly 1983, fig.6: 9).

6. Standard Kouriote amphora, neck with handles; KA 92, QR 26/27 C.12, inv. 597 (P 1982-10).

was made by Andrzej Barczuk on a sample of 30 amphora- and cooking-ware fragments. The results showed that, within the limits of this method, the amphora ware is homogeneous and differs from the cooking pots, which in spite of superficial similarity contain no calcareous clasts (Fig. 4). This result puts the existence of generalised Kourion paste in doubt, at the same time confirming macroscopic observations concerning the amphorae made by V. Grace.[7] The paste shows irregularities in the firing process, with the resultant colour ranging from light beige to deep red or dark grey.

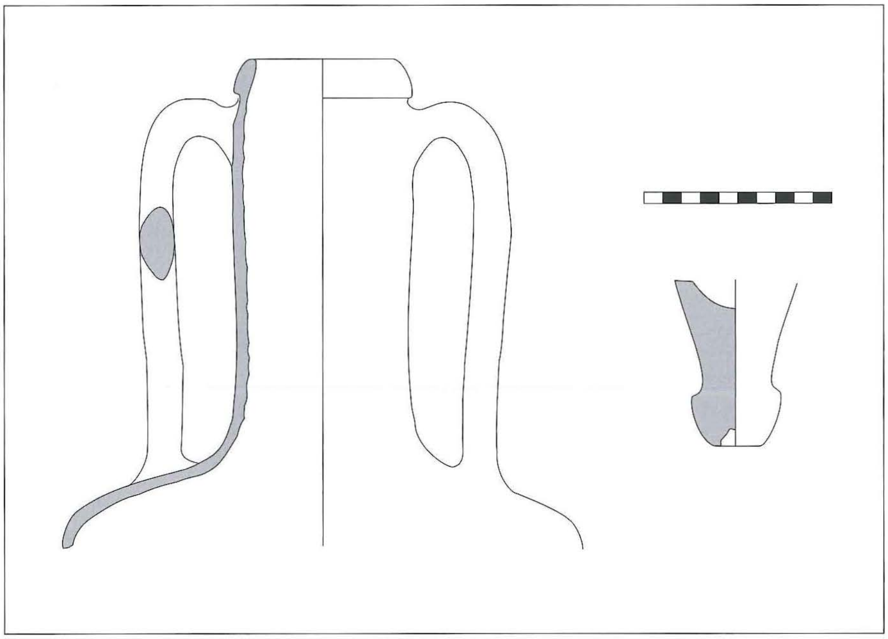
Whereas a major study has yet to be carried out on the formal development of the amphorae, the most typical are known from earlier publications by Deshayes, Zemer and Connelly.[8] It seems that the neck and rim from the Acropolis excavations published by the latter are the most typical for this group (Fig. 5, 6). The most characteristic feature is a rim, is hollowed inside with a rounded triangular torus outside. The handles link the cylindrical neck with the shoulders, whereas the toe is elongated with a mushroom knob and a shallow hollow at the end. The second most frequent variant has, as in examples published by Grace and Calvet, an out-turned sloping rim. It is rare in the Kourion Acropolis material. Two other forms, with a rounded knobbed rim or a double moulded one, occur as isolated specimens. Toes can also be simply rounded knobs with a groove above (Fig. 7-10). The handles are oval to lenticular in section, with slight ridges. It is not easy to estimate the frequency of stamp use. As usual, stamps are found almost exclusively on detached handles, and no statistics have yet been carried out on upper handle fragments without stamps. An estimate can only be offered, on the basis of better-preserved amphora examples, that about one in six of all carry stamps on the top of handle arch.

The Acropolis excavations have yielded over 100 new stamps. Many of the types were already known to V. Grace, but new types of stamps have also been added, in quite a number of cases variations on a known theme. The purpose of the present paper is simply to provide an overview of the material.

Besides the stamps with a wreath, the number of Kouriote stamp types with popular devices, appearing with subsidiary motifs and/or monograms is limited. They provide a most convincing use of

[7] Grace 1979c, 178.

[8] Deshayes 1963, 35, 210f, Pl. XX:4. LXVI: 1; *cf.* note 2; Zemer 1977, 40-42, Pl. 11; Grace 1979c, 179, Fig. 1, Pl. XXVIII:1,2 (note that no. 1 is not stamped); Calvet 1982, 43, Fig. 21; Connelly 1983, 280, Fig. 6:9; Calvet 1993, 73, Fig. 72.



7. Out-turned sloping rim and standard knob toe hollow underneath (after Deshayes 1963, pl. XX: 4).

non-glyptic stamps. Grace has published stamps with a tripod flanked by monograms, at the base of which there were various devices or another monogram. Two of the stamps from the Kourion Acropolis have well visible details of inscription right of the tripod. The ligature of A and Π is probably an abbreviation for 'Απ[όλλων. The subsidiary motifs repeated in the Acropolis collection were a lamp of

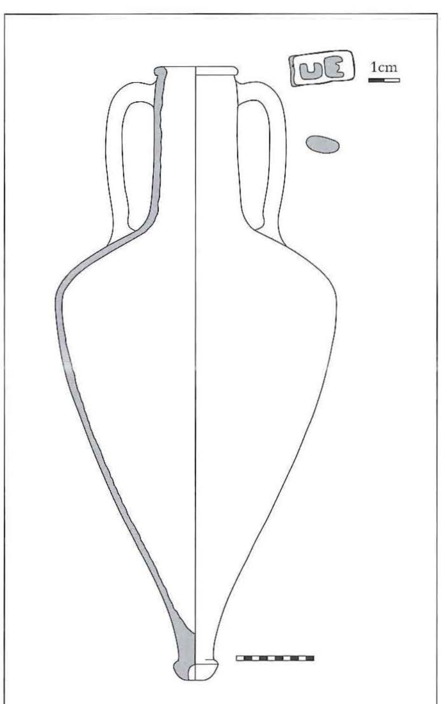


Fig. 8. Carrot amphora with knobbed rim (after Zemer 1977, pl. 11).

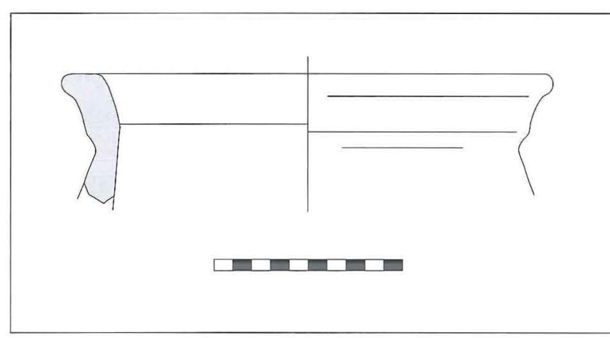


Fig. 9. Double moulded rim; found KA 95, UUVV 6-7.

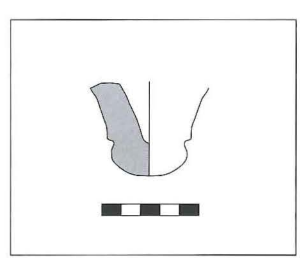


Fig. 10. Knob toe with groove; found KA 94, IIJJ 5-6.

Fig. 11. A tripod, on right ligature (?) AΠ, below a serpent (?); (2,7x preserved?W:1,3), found KA 82, UV 21-22 II.1.

Fig. 12. A tripod, on right A, under the tripod a hole on oval stamp (2,7x preserved W?:1,3), found KA 9?, QR 17-18.

Fig. 13. Silenus? with monogram AM, on oval stamp (2,7x1,7), found KA 94, IIJJ (+3)-(+4) group O.

Fig. 14. Lotus flower and a monogram AM with an o at base, on an ovoid stamp, placed right off axis (2,3x1,3), found KA 90, UV 29-30.

Fig. 15. Monogram ΔHO and a crab?; (2,4x1,2); found KA 96, UV 31-32.

the so-called Rhodian wheel-made type, seen from the side, and a double axe.[9] One of the stamps, unknown to Grace, consists of a coiled serpent (Fig. 11), occurring elsewhere together with tripod in the iconography of Apollo.[10] The serpent is found also by itself on Kourion stamps.[11] Grace has published a stamp with a monogram in this place, therefore another possibility, although less probable, is to read an *omikron*. Another stamp found at Akko-Ptolemais has shown that stamps of this group may be inscribed in two scripts at one stamp, both alphabetic (left and right from the tripod) and syllabic (a –na– under the tripod).[12] On this basis Finkielsztejn suggested that the alphabetic monogram should be read accordingly as Nα retrograde. Another mark found on the Kourion Acropolis under the tripod is a hole, which seems intentional (Fig. 12). It is an argument for interpretation of holes (and perhaps circles or semicircles) on handles as meaningful. There is little chance that the hole was made before the stamp was impressed, as the stamp impression would probably stop or at least tighten the hole (*cf. infra*). Especially interesting is a male head turned right, Silenus (?), with a monogram AM as in the stamps with wreath (Fig. 13).[13] This stamp was found in a context including much of Early Hellenistic pottery. Unfortunately some contamination from Roman and Late Roman strata has also occurred there.

Other alphabetic monograms combined with devices include one certain and other possible specimens with lotus flower and a variant of the same monogram, AM with an additional o at base, from a context, which seems not to be contaminated and contains two other Kouriote handles with incised signs (Fig. 14). The other piece from KA 94 UV 35-36, a Late Roman context, is fragmentary. The monogram differs from a similar monogram with lotus listed by Grace, which has Π instead of M. A poorly preserved stamp from Kition seems to be the same as the Acropolis piece.[14]

There are also other monograms composed vertically with some device in a frame, squared off at the monogram side and curved at the other end. Unfortunately the device is poorly preserved and difficult to interpret. It represents possibly a crab or an early Rhodian-style rose, but the monogram is legible, and should probably be read ΔHO; a reversed

[9] Grace 1979c, 180, Pl. XXVIII: 6, 7 (lamp), 3 (labrys).
[10] Simon 1984, 446, no. 499a; also on coins Palagia 1984, 208, no. 187; Lambrinudakis 1984, 215, no. 257, 259.
[11] Grace 1979c, 188, Pl. XXX: 34.
[12] Finkielsztejn 2000b, 211 pl. 110a.
[13] Grace 1979c, Pl.XXIX: 25, 26, 27.
[14] Grace 1979c, 182, 187, Pl.XXIX: 28; Calvet 1986, 511, no. 3, Fig. 4, 5; = Calvet 1993, 71, no. 98, Fig. 65.


16. A crab (?), faint traces of monogram? below; (preserved H:1,9x1,65), found KA 95, UUVV 4-5, Ht of 4th foundation course of glacis wall.


Fig. 17. Bethyl(?) on stamp (1,6 x preserved W:1,3), KA 90, A-B 13-14.


Fig. 18. Alphabetic Στασί/τιμος; (2,5x1,5); found KA 88, OP (-13)-(-14).


Fig. 19. Name stamp CT]ACI/T]IMOC, (preserved H:2,1x1,2), found KA 92, UV 23/24 II.1, inv. 655 (Photograph Dept. of Antiquities, Cyprus).


Fig. 20. Monogram ONA or OAN in small oval stamp (1,8x0,7); found KA 82, ST 29-30, II.1, inv. 644 (Photograph Dept. of Antiquities, Cyprus).


Fig. 21. Monogram AT in triangular stamp (1,2x1,2), found: KA 96, QR 29-30.

μ can be also seen (Fig. 15). A.-M. and A. Bon, supported by V. Grace suggest reading δημό[σιον]. The same monogram occurred at Samaria, and similar ones are found on tiles from Thasos and on the base of a "Megarian" bowl mould from Amorgos.[15] The mould monogram is resolved as one of names Διοτιμο or Διοδοτο, known at Hellenistic Amorgos and in the East. The handle was found in a context with a number of Late Classical or Early Hellenistic finds and some Late Roman intrusions. Another stamp, found in a context locally disturbed in third century AD, has a very poor impression possibly of a crab (but the groups of rayed strokes may well be thoese of a rayed head similar to Rhodian Helios), with a possible monogram below (Fig. 16).

A different pattern is followed in the case of a circular stamp, where the device resembles the triangular cult stone of the temple of Aphrodite in Kouklia (Paleapaphos) (Fig. 17),[16] but on a support (?), surrounded by poorly legible signs: to the right of the device there are perhaps a lunar sigma and a N.

Among the purely epigraphic stamps, the most interesting is the full name of CTACI/TIMOC (Fig. 18) in two rows within an irregular oval: unfortunately the two impressions from the Kourion Acropolis of the same die (the other is much worse preserved, Fig. 19) are from later contexts, but probably the same stamp from Kition-Kathari, reading CTAC[/TIMO[comes from a stratum dated to in the fourth to third century BC.[17] Two other Kouriote stamps from Kition, unfortunately from undatable fills, seem to be fragments of the same impression.[18] The name is composed of the typical Cypriot particle Στασι-, known from names such as Stasioikos, King of Marion, Stasagoras and Stasikupros, while -τιμος is less specific but popular in Cyprus. A Στασίτιμος is also known from a non-royal inscription, as the father of Philista, who dedicated a statue of her son Nymphias to Aphrodite Paphia.[19]

The presence of onomastic stamps relating to other popular Cypriot names beginning with Ὀνα[was noted by Grace.[20] Two versions of stamps with monograms thus readable are extant. In both monograms A is inserted in N (Fig. 20). One of them (not illustrated) is built of the ligature of O and N

[15] Grace 1979c, 182 n. 5; Reisner *et al.* 1924, 316, D12; Bon & Bon 1957, 500, no 2193; Finkielsztejn letter 24 September 1998; Παππά 1997, 356-358, n. 38, Pl. 259a, 260.

[16] Maier 1975, 70, Pl. XI: 1-2.

[17] K71 Ar II T9, 280-314.

[18] The first was shown to me by Sandrine Marquié to whom I would like to express my gratitude. I would also like to thank Y. Calvet for permission to mention the Kathari stamp. The latter two stamps were found at Bamboula: Calvet 1982, 44-45, nos. 123-124.

[19] Michaelidou-Nicolau 1976, 113; ICA X, 72, no. 11.

[20] Grace 1979c, 181 n. 4, Pl. XXIX: 14-16.

Fig. 22. A monogram – AN in oval stamp (1,6x2,2), found KA 82, QR 26/27 C.12, inv. 597 (P 1982-10).

Fig. 23. Abbreviation PΛ in a round stamp (1,3x1,5), found KA 82, UV 23-24 II.1 [1], inv.: 595/6; (Photograph Dept. of Antiquities, Cyprus).

Fig. 24. Abbreviation EP retrograde in oval stamp (1,3x1,8), found KA 90, UV 29-30.

Fig. 25. Alphabetic Γο(, (1,1x0,8), found: KA 82, ST 31-32, II.1 SE corner, inv. 658.

Fig. 26. Abbreviation TI (most probably) on stamp (1,15x1,1), found KA …, UV 31-32.

Fig. 27. Grooved sign, probably alphabetic Τι (or syllabic? Paphian -o- and a punctuation mark; found KA 90, UV 29-30.

Fig. 28. Monogram M or Σ (1,2x1,0), on unusual handle – round in section, found KA 90, UV 29-30.

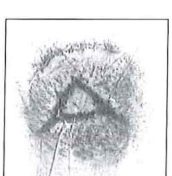


Fig.29. A monogram A in circular stamp (preserved H:1,5x1,7), found KA 91 WX 19-20.

and was found in a cistern dated in Early Hellenistic period.[21]

A large group of monograms and abbreviations consists of an A, either in combinations (AT, AN) or alone (5 pieces). The monograms put in doubt Grace's endorsement of the explanation that these stand for Apollo, expressed by Youngs for other data.[22] The AT ones and some of the A stamps are triangular in shape. One of the AT monograms (Fig. 21) is dated by co-occurrence with a Rhodian stamp of Aischylines, dated after 240 BC and before 216 BC.[23] The best-dated is however the upper part of an amphora published by Connelly with an oval stamp bearing the monogram AN (Fig. 22), found in an unfinished cistern.[24]

Among other abbreviations, the most popular are of the two letters P and Λ. Unfortunately, none of the four occurrences are dated by stratigraphy better than to Late Roman period, as in case of two such stamps found with LRC form 3E (Fig. 23). Stamps with an alphabetic EP retrograde originate from a similarly late context (Fig. 24), as is the case of other two-letter alphabetic abbreviations. The first is ΓO on a stamp (Fig. 25), which would seem to be an imprint of the same die as one in the Benaki collection.[25] The other is most probably alphabetic TI (Fig. 26) (of a die different from one published by Grace).[26] There is a narrow space between T and I in both cases and therefore the reading as syllabic -to- seems excluded. Similarly, the reading of a grooved (in wet clay) inscription on a handle, probably alphabetic Τι(, is doubtful (Fig. 27). The relative size of signs is similar to a stamp fig. 25, reading Γο. The grooved signs can be, with less likelihood, read as syllabic Paphian -o- and a punctuation mark (grooved top downwards) or, even less probably as -ya-ta- (grooved top left), cf. stamp fig. 11. There is no doubt that the following isolated signs are alphabetic, however, even if their reading is not unequivocal. This is the case of stamps with M or Σ

[21] KA 91, WX 15-16.

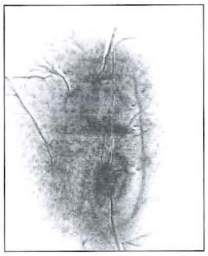
[22] Grace 1979c, 187.

[23] Calvet 1982, 17, no. 20; Finkielsztejn 2000b, 217.

[24] *Cf.* n. 3.

[25] Kou ABC 20; Grace 1979c, 181, 187, Pl. XXIX: 12.

[26] Grace 1979c, 181, 187, no. 17, Pl. XXIX:17.



30. Cypro-syllabic inscription?: possiwbly -to-mi- over a shield(?), (2,2x1,2), found: KA 82, UV 21-22 II.1.

Fig. 31. Cypro-syllabic inscription: -to-mi- backwards, (1,4x0,9), found: KA 75, UV 21-22 L.I (Photograph Dept. of Antiquities, Cyprus).

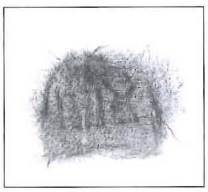


Fig. 32. Syllabic inscription (Paphian/common) -ko/ro-mo-, (preserved H:1,4x1,4), found KA 83 QR (-2)-(-3), inv. 712.

Fig. 33. Cypro-syllabic inscription: 3 signs, common /(Paphian):-?-wi/wa-lo/si(?)- (uncertain), (1,7x0,95), found: KA 96, UV 31-32.

Fig. 34. Syllabic inscription, 2 signs vertically, possibly upwards -ti-a- (Διᾳ – to Goddess), (1,3x0,9), found: KA 96, UV 29-30, floor.

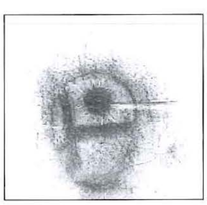


Fig. 35. Cypro-syllabic inscription, possibly -ya-ta-, (1,5x1,3), found: KA 91, WX 15-16, Cistern

and mirror N(?) (Fig. 28), as well as A in a round field, known already to Grace (Fig. 29).[27]

The preliminary account on Cypro-Syllabic inscriptions owes much to Dr Georgia Bazemore.[28] Both standard and Paphian syllabaries are present, and the problem is that they sometimes occur simultaneously in a single stamp. It is therefore better to regard some of the readings as ambiguous, due to difficulties of the syllabary, than to go too far in the conclusions. These are still very preliminary readings and should be supplemented by autopsy inspection of the stamped handles by a syllabary expert.

Almost all Cypro-syllabic stamps from the Acropolis at Kourion contain only text. In an exceptional piece there seem to exist a device (possibly a shield) and the signs -to-mi- above it. The imprint is weak, however, and the boss of the shield may be deceptive. This could be read as -ya- (Fig. 30). The same text -to-mi- written backwards is found on a small stamp found in upper layers (Fig. 31). Another probable stamp with syllabic text occurring together with a device may be one partially preserved, with the upper half of the impression with almost only text remaining. The stamp seems to be inverted (top down the handle) and reads as Paphian (left to right) -ko-mo- or common (right to left) -mo-ro- (Fig. 32). The tripod stamp with -na- from Akko would be the third case of composite device – syllabic text stamp.[29]

The longest Cypro-syllabic inscription, consists of three (?) signs (common/Paphian)?-wi/wa-lo/si(?). The best-preserved one is the sign in centre, which determines that the inscription has standard vertical orientation, i.e. top upwards. It does however not permit to decide what is the horizontal direction of signs. If a protrusion on the lower side of this sign is taken into account, then it is Paphian -wa-, otherwise it should be a common syllabary -wi-. The decision which syllabary variant it should be in most cases determines the direction of the reading,[30] which shows a point of the problem with differing syllabaries. Both left and right sign are problematic. The leftmost sign is impressed partly only and may be a ligature of -ya- with -ro- or Paphian -ko-. The right one is, although complete, difficult and the readings may range from a variant of the common -lo- to Paphian -si-, and other readings may be proposed (Fig. 33).

[27] *Cf.* Calvet 1993, 76-77, nos. 114, 117, fig. 81, 84; Grace 1979c, 187, Pl. XXIX: 19.

[28] While acknowledging Dr. Bazemore's help in preliminary reading of the syllabic texts on the basis of rubbings and some photographs, the writer is responsible for all blunders. The general references to texts, Masson 1971 and Bazemore 1998, are not refered to in notes, but form a basis of most readings.

[29] *Cf.* n. 11, possibly also Calvet 1993, 70, no. 93, Fig. 60.

[30] Masson 1971, 57-64.

Fig. 36. Syllabic inscription, possibly ligature ko/ro-ya, (2,1x1,0), KA 82 ST 27-28 inv. 637.

Fig. 37. Cypro-syllabic partial inscription: possibly -ta-na?-, (preserved H:2,0x1,2), found: KA 90, UV 31-32.

Fig. 38. Incised CSyll signs: possibly ligature –ta-na-, found: KA 82 ST 27-28 I2 inv.639.

Fig. 39. Cypro-Syllabic sign -na-, (1,4x0,95), found: KA 90, A-B 13-14.

Fig. 40. Cypro-syllabic sign? -ta-, rather than alphabetic T, (1,05x1,1), found: KA 90, UV 29-30.

Fig. 41. Syllabic sign, -lo- but possibly Paphian -ko-/-ro non-Paphian, stamp: (1,1x1,0), found: KA 82, QR 7-8 (Photograph Dept. of Antiquities, Cyprus).

Fig. 42. Monogram (?) syllabic -po- (?), (0,9x1,5), found: KA 94, inv?: 42 (Photograph Dept. of Antiquities, Cyprus).

Fig. 43. Syllabic: -sa- or alphabetic: Λ (inversed?), (1,1x1,1), found: KA 96, UV 33-34.

One of the most interesting pieces is a syllabic inscription, possibly read upwards (left to right) as -ti-a- ($\Delta\iota\alpha_{\iota}$) ("to the Goddess"), if the text is read downwards (right to left, as normal in common syllabary) it is -a-ti-, less amenable to interpretation (Fig. 34). There are two round stamps, possibly impressions of a single die, presenting probably two signs -ya(?)-ta-, the sizes of which differ considerably (Fig. 35). A small solid circle above -ta- may alternatively be read as a punctuation mark.[31] In such a case it would be almost equivalent to the stamp on fig. 40.[32] The direction and proportions of the larger sign preclude reading it simply as alphabetic T. The dot above it would in any case be difficult to explain if the inscription is read alphabetic, unless it is interpreted as an O.

Two other stamps, made using different dies, consist of ligatures of two signs: inside an oval of -ya- there is a loop of common -ro- or Paphian -ko-. The inscription can thus equally be read in both versions and both sequences ko/ro-ya and ya-ko/ro (Fig. 36). There is also a fragmentary stamp with other two signs, possibly ta-na- (Fig. 37). The ligature consisting of that pair of signs can also be read in a syllabic inscription incised in wet clay of a handle (Fig. 38).

Single signs are certainly the most popular ones and among them is a Cypro-Syllabic sign -na- found in three or four cases (Fig. 39), and already previously known from Kourion, Alexandria, Akko and Kition.[33] It is also found on the Acropolis in alphabetic script.[34] It is also worth noting that the same syllabic sign was incised.[35] Among other isolated signs is a Cypro-syllabic sign -ta- in a round stamp, a preferred interpretation to the alphabetic T (Fig. 40 cf. also stamp fig. 35).[36] A circular stamp, with a cross on deep background, may also be read as a syllabic inscription. Its direction and simplicity agrees with -lo- but perhaps also Paphian -ko-/non-Paphian -ro can be read here (Fig. 41). The presence of the stamp at Kourion confirms the hypothesis of Sztetyłło that these stamps are Cypriot, although it is

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[31] Masson 1979, 66.

[32] Grace 1979c, 182, n. 1, 187, Pl. XXIX: 22.

[33] Grace 1979c, 186, no. 9b, Calvet 1982, 43, no. 119.

[34] Calvet 1972, 54, nos. 105-106; Connelly 1983, 276, 280, Fig. 6: 9, Pl. XLVII: 9-10.

[35] Calvet 1993, 70, no. 94.

[36] Grace 1979c, 182, n. 1, 187, Pl. XXIX: 22.


Fig. 44. Inscribed (?), doubtful reading, (2,8x1,75), found: KA 94?, IIJJ (+3)(+4) group +.


Fig. 45. Syllabic? grooved sign: badly made number 21 or highly questionable -we-na-, found KA 90, UV 29-30.

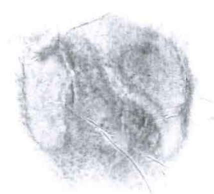
Fig. 46. Seated lion inv. 82/654, (1,7x2,1), found KA 82, UV 23-24 I.2.


Fig. 47. Striding figure with wings (?), (1,6x1,0), found: KA 96, UV 35-36; inv.:?10/96.


Fig. 48. Dolphin (Diam.>1,9x1,6), found: KA 96, no provenance.


Fig. 49. Standing herm (?) between two poles/standards, (2,3x1,25), found KA 97, RRQQ 10-11 S of S.2 below top of wall.

not certain that all of the stamps at Alexandria were made of Kouriote paste.[37] Another stamp is probably syllabic, but can as well represent some unrecognised device (e.g. hook?). It seems, however, that reading -po- has some plausibility, though there are no similar monograms known to me (Fig. 42).

Abbreviations and isolated signs are problematic, since they quite well can be interpreted as either Cypro-syllabic or alphabetic. The most frequent are three specimens with Λ or, probably, syllabic -sa- or -ko- (Fig. 43). The problem was discussed by Grace.[38] While there exists a corresponding alphabetic stamp Γo, which supports reading -ko-, the general practice to place stamps and signs in position with top up the handle makes the sameness of all *lambda*-like impressions doubtful, as they are directed at widely differing angles. The general rule of an upright direction of stamps is not without exceptions, but probably part of stamps, including the illustrated specimen, directed at 6h, are better read as a syllabic -sa-.

There is slight possibility that we have even a third script used in the Kourion stamps, namely Phoenician. On a flat parallelogram stamp there seems to be some writing, and this is most likely neither alphabetic Greek nor Cypro-syllabic, and presumably not Semitic either (Fig. 44). The stamp requires further study. The best reading, if it is syllabic, seems to be late Paphian cursive -so-we-; if it is Semitic it could be lś.[39] This can also be a doubly impressed single stamp.

Another kind of mark may probably be an isolated piece of evidence of numbers on amphorae at Kourion. Strictly speaking it is not a stamp, but an inscription incised before firing and is possibly syllabic (Fig. 45). It is either a number 21 or highly questionable -we-na-.[40]

Apart from inscribed stamps, Kouriote amphorae were quite often marked with stamps showing various devices, which can be divided into two groups. The first consists of larger stamps with flat background, dies of which may have been made for purpose of stamping amphora handles. It cannot be ruled out that some (all?) of them are impressions of particularly large ring bezels or gems. The other group includes small stamps made most probably with convex-faced gems. To the first group in the collection from the Kourion Acropolis belongs an

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[37] Sztetyłło 1990b, 207, nos. 149-150; Sztetyłło 1992, 176, nos. 49-50.

[38] Grace 1979c, 181, 182 n. 1, 187, nos. 21, Pl. XXIX: 21.

[39] Dr. Robert Allen, personal communication.

[40] ICS, 80.

Fig. 50. Herm torso (?)(preserved H:1,7x1,1), found KA95 WWXX 9-10, Height 80 (13.3.95).

Fig. 51. Disk "hanging" from a hook with rectangular base(?), (2,7x1,7-1,8); found KA 97, OOPP 9-10 N (temple?).

Fig. 52. Double axe, (1,9x1,2), found KA 97, OOPP 9-10 N; N of wall of the "temple".

Fig. 53. Owl (preserved H:1,2x1,3), found: KA 90, UV 29-30.

Fig. 54. Gem impression with Perseus or Hermes, (1,7x1,15), found KA 89, EF (-8)-(-9).

Fig. 55. Curled lion(?), (0,9x1,2), found KA ..., UV 31-32.

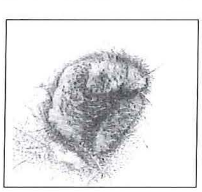

Fig. 56. Boukranion (?), (1,4x1,3), found: KA 95, WX 19-20.

Fig. 57. Vine grape bunch(?), also possible head, (1,4x1,2/1,3), found: KA 96, SSTT 13-14 by section B, layer 4.

Fig. 58. Impressed circle: syllabic sign? (1,2x0,9), KA 94?, no provenance.

Fig. 59. Half-circle stamp, (preserved H?:0,8x1,1), found: KA 90, UV 34-35.

impression depicting a seated lion, perhaps from a normal die or a signet ring with a large rectangular bezel with chamfered corners (Fig. 46),[41] and a striding figure (Fig. 47) on an oval stamp. The latter is poorly legible, and can also be an inscribed alphabetic AC /double underlined/ in retrograde. This type of impression occurs sometimes in more examples of the same representation, perhaps even the same die, as in the case of images of dolphins (three specimens, two possibly of a single circular die/signet, the other rectangular/oval – but this may be a *cornucopia*) (Fig. 48).[42] A figured stamp of a standing herm (?) between two poles (possibly the back one is a thyrsus (Fig. 49),[43] another probably similar herm with only the torso preserved (Fig. 50), are both impressions of rectangular flat stamps. The next device is by itself difficult: it can either be a monogram or a symbol. I cannot at present find a good interpretation of this object, which resembles a hook on a rectangular base, from which a circle is suspended (Fig. 51).[44]

Impressions with a concave background are most probably gem imprints. It seems that at least some gems were frequently used to mark amphora handles. The poor quality of the impressions, partly due to the rough fabric, makes it difficult to be sure, even if similar stamps are impressions of a single gem. The motif of *labrys*, already listed by Grace as a probable

[41] *Cf.* Richter 1968, 69, no. 190

[42] Grace 1979c, 184, 187, Pl. XXIX: 30.

[43] Bon & Bon 1957, 491, no. 2137.

[44] Bon & Bon 1957, 153, no. 455.

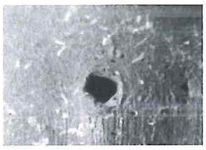

Fig. 60. Circular stamp deep hole – a sign?, (0,45x0,5), found: KA 96, UV 29-30, floor.

Fig. 61. Ring in relief, lower side flat = bezel?, (1,2x1,1), KA 96, no provenance.

gem imprint, is frequent as a stand-alone symbol in our material and occurs in seven specimens (Fig. 52).[45] Usually only isolated impressions of various gems are known in the Acropolis series. This is the case of an owl, (Fig. 53) or the gem probably representing the figure of Perseus or Hermes (Fig. 54),[46] while a tiny impression of a curled quadruped (lion?) is another (Fig. 55). Two other stamps are difficult: one, which can be a *boukranion* (?) (Fig. 56),[47] another probably a cluster of grapes (Fig. 57).

Another doubtful group consists of very simple and normally very deep impressed stamps: circles and dots (holes). This group includes seven examples of full circles, two of half-circles and one hole (dot) (Fig. 58-60). It is disputable if these are signs of some script or not. Mark Lawall has pointed out that among the Mendean handles from the Athenian Agora there are complete circles, frequently together with a half circle, placed on handles and on other parts of amphorae. His interpretation is that these are marks of a device for testing the consistency of the clay during drying. It is, at least at Kourion, perhaps not true. The first argument against his hypothesis is that two of the circle stamps have relief circles (the circles are convex), and one of them may even represent a ring with a bezel (Fig. 61). Occurrence of a hole instead of a normal subsidiary motif of a tripod stamp suggests that even simple holes may be meaningful (cf. fig. 12). It is perhaps easier, at least at Kourion, to interpret these marks as specific stamps.

[45] Grace 1979c, 184, 187, Pl. XXIX: 32.

[46] Hamburger 1968, 27, Pl. II: 26; Roccos 1994, 337, no. 80b.

[47] Bon & Bon 1957, 331, no. 1311.

Amphorae from Three Wells at the Maussolleion of Halikarnassos: Something to Add to the Typology of Mushroom Rims?

Vinnie Nørskov

During the Danish excavations at the Maussolleion of Halikarnassos from 1966 to 1976, three wells were found along the eastern terrace wall of the Maussolleion: Wells A and B in 1966, Well C in 1971.[1] The pottery found in the wells was published by the present author in cooperation with John Lund in 2002, and in the present article I take our results as point of departure.[2] After a short introduction to the contents of the wells I will focus on amphorae with mushroom rims, with special emphasis on typology and the identification of production centres. The mushroom-rim fragments from the Maussolleion were grouped in the publication partly as Solokha I and Koan amphorae, partly as unidentified and this paper will supplement, and partly adjust, some of the results.

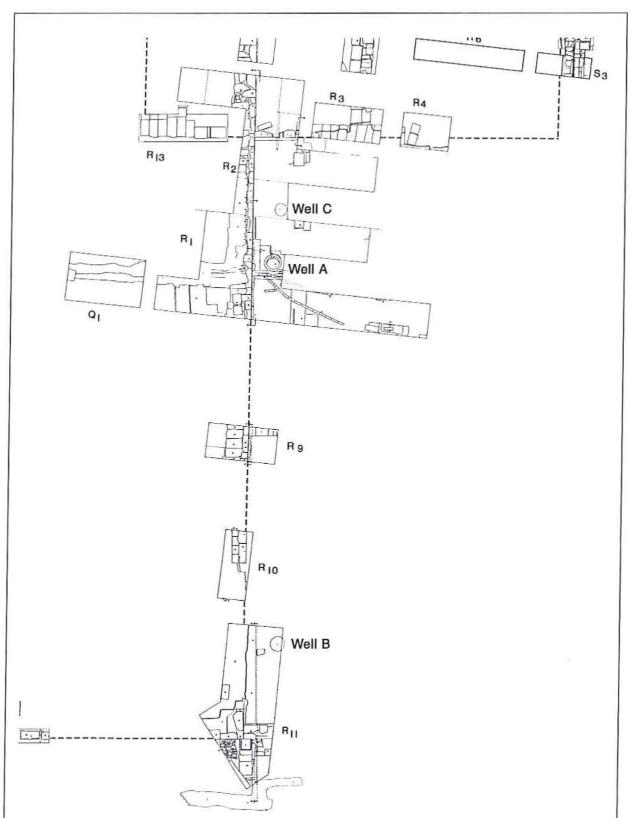

Fig. 1 Map of the south eastern corner of the Maussolleion terrace at Halikarnassos. Well A, B and C were found just east of the terrace wall.

All three wells were situated close to the terrace wall, only *c.* 1-1.5 m from the wall (Fig. 1). In the fill of all three wells were found chips of blue and white marble that most probably derived from the building materials of the Maussolleion. At first the excavators therefore believed that the wells had been filled because of and during the construction of the terrace. However, the first analysis of the pottery revealed several fragments belonging to the period after the deaths of Maussollos in 353 BC and his wife/sister Artemisia in 351 BC.[3] In his publication of the terrace wall, Poul Pedersen suggested that the wells were dug in the period of the building of the terrace shortly after the construction of the eastern terrace wall.[4] He argued that the wall dictated their location and that the foundations of the terrace had a positive effect on the flow of ground water in the area. Even at the time of excavation there was plenty of water: the wells had to be emptied every day before work began. If it is possible to date the digging of the wells simultaneously with the construction of the Maussolleion, one may conclude that their function was connected with the activities in the area. It may be suggested that their presence relies on the needs of water during the work.

[1] Pedersen 1991, vol. I, 62-63, vol. II, 7-8 (Well B), 15-18 (Well A), 21-24 (Well C).
[2] Vaag *et al.* 2002.
[3] Vaag *et al.* 2002, 72-73.
[4] Pedersen 1991, vol. I, 63.

Contents and chronology of the wells

Well A contained eight near-complete Chian and one Koan amphorae, all datable in the third quarter of the fourth century BC, and 19 Rhodian stamps, ten of them dated between 231 and 218 BC.[5] From the excavation report it is clear that the completely preserved amphorae were found in the lower part of the well and constitute a filling that ended the function of the well. The handles of the Rhodian amphorae were found in the upper layer of the well, and constitute part of a second filling, probably after the shrinking (?) of the first filling. The remaining ceramic material probably down-dates the second filling slightly, since fine-ware fragments could be dated into the beginning of the second century BC.

The contents of Well B could be dated in the same time span. Fragments of Thasian, Chian and Koan amphorae belong in the second half of the fourth century BC; other fragments of Rhodian and Knidian amphorae are dated in the third century BC.[6] Fragments of Hellenistic wares may be dated into the second century BC. The stratigraphy did not reveal any sequence as in the case of Well A.

The material from Well C delivered a much broader range of amphora shapes.[7] It was excavated in layers of 30 cm and, apart from the upper 1-1.3 m, the contents were very homogeneous and the filling thus seems to have been done in one action. The well contained very few fine-ware fragments (Fig. 2). The majority of finds were fragments of coarse-ware vessels, mostly jugs and amphorae, and transport amphorae (more than 90 %). The oldest fragments in the well go back to the fifth century BC, but the main body of the contents is datable around the middle and the third quarter of the fourth century BC. A group of coarse-ware jugs might, when compared with Athenian material, belong in the third century BC, but as no black-gloss and no amphora fragments can be dated that late, they are probably also from the fourth century BC.[8]

The lack of drinking vessels and plates, and the preponderance of containers of liquids, is striking and apparently relates the pottery with the function of the well, suggesting that the fill derives from the vicinity of the well. This is probably also the case with the two other wells, although the near-complete Chian amphorae in Well A have lead to speculations about whether a special occasion could explain such a large amount of – expensive – wine, for example the rituals performed at either Maussollos' or Artemisia's burial.[9] Chian wine was not uncommon at Halikarnassos (Fig. 3), but the most of the wine consumed came from the near region, Kos, Knidos and an as yet not identified production centre in the South Aegean. The third-century handles in Well A show an increasing amount of Rhodian wine import by that time, a tendency well-known in other cities.[10]

Class	Number
Fine-ware pottery	39
Plain-ware pottery (diagnostic)	180
Transport amphorae (diagnostic)	217
Plain ware & transport amphora body	445
Pithos fragments	2
Tile fragments	28
Loom weights	2
Astragaloi	3
Bone objects	1
Iron objects	3
In total	920

Fig. 2 Table of finds from Well C.

[5] Vaag *et al.* 2002, 158-159, 166-170: Chian *H33-H41*, Koan *H42*, Rhodian stamps *H45-H54* (with eponyms dated in period Ia and Ib (231-218 BC), *H55-H63* (with fabricants which worked in period I and II).

[6] Vaag *et al.* 2002, 175-182. Thasian *I33*, Chian *I35*, Koan *I38*, Rhodian *I42*, Knidian *I43*.

[7] Vaag *et al.* 2002, 130-156. The analysis of the content of Well C could include all finds, except for the upper layer where only the most significant fragments were put aside by the excavators.

[8] Vaag *et al.* 2002, 133.

[9] Vaag *et al.* 2002, 159-160.

[10] Vaag *et al.* 2002, 76.

	Well A	Well B	Well C	Pre-Maussolan Contexts	***In Total***
Thasos	2			1	***3***
Northern Greece			20		***20***
Mende		1		3	***4***
Chios	4	9	17	6	***36***
Solokha I			11	2	***13***
Koan Solokha I			13		***13***
Kos	3	3	42	3	***51***
Knidos	1	3	14	1	***19***
South Aegean, Knidos?			40		***40***
Rhodos	3	23	1		***27***
Lesbos			1		***1***
Unidentified	3	2	55	17	***77***
In total	16	41	214	33	

Fig. 3 Table of amphora fragments found in Well A, B, C and the pre-Maussollan contexts.

Amphorae with Mushroom Rims

Amphora fragments with the so-called mushroom rim constitute a significant group from the wells. The mushroom rim was common on amphorae produced in various workshops from the late fifth to the third century BC and continued on the so-called Graeco-Italic amphorae until the first century BC.[11] The question arose whether it would be possible to differentiate the mushroom-shaped rims typologically.

A first attempt to do so was made by И.Б. Зеест in her 1960 publication of the amphorae in the Bosporan area, where she divided the Solokha I shape (as it is known in Russian literature) into seven different types (Fig. 4).[12] Solokha I has short handles, broad rather than round in section, a neck spreading to the shoulders, a round body and knob toe. When Virginia Grace discussed the Samian amphorae in her 1971 article, she questioned whether Зеест's Solokha I shapes could really belong to one type of amphora, and called for further morphological study of the group.[13] Based on fragments with mushroom rim and stamped handles from the Haviaras collection she concluded that it "is clear that amphoras with mushroom rim, broad short-topped handles, and necks tapering to a well-defined shoulder-articulation were made in Samos latish in the 4th century BC".[14] This is, however, a slightly different shape, because the neck tapers to the body, whereas Зеест's Solokha I clearly spreads to the shoulder. Grace compared the Samos type with two finds from the Kyreneia shipwreck, of Type X and XI, suggesting that they could be Samian as well.[15]

In his work on the amphorae from the Athenian Agora, Mark Lawall has divided the mushroom rims into eight typological groups (Fig. 4):[16]

1 Rim with sharp upper edge, worked underside: to the late fourth century BC.
2 Rim rounded over the top with thick rounded outer edge: to the late fourth century BC.
3 Rim with upright interior profile and similar length of upper and lower surfaces: to the late fourth century BC.
4 Everted rim with long lower surface: to the late fourth century BC.
5 Heavy upwards-oriented rim: *c.* 300 BC into the third century BC.
6 Rim with broad curving upper surface, narrow outer edge: throughout the later fourth century BC.

[11] Will 1982 suggests (341 note 4) that the Aegean fourth century amphorae with mushroom rims should also belong to the group of Greco-Italic amphorae, but the hollow peg toe is a significant characteristic of the earliest type of the group that does not occur in any of the Aegean types, also not the early Rhodian types.
[12] Зеест 1960, 150-152. Vaag *et al.* 2002, 61 fig. 20.
[13] Grace 1971, 79 note 68.
[14] Grace 1971, 67.
[15] Grace 1971, 79 note. 68.
[16] Lawall forthcoming. I am grateful to Mark Lawall for sending me the article before publication.

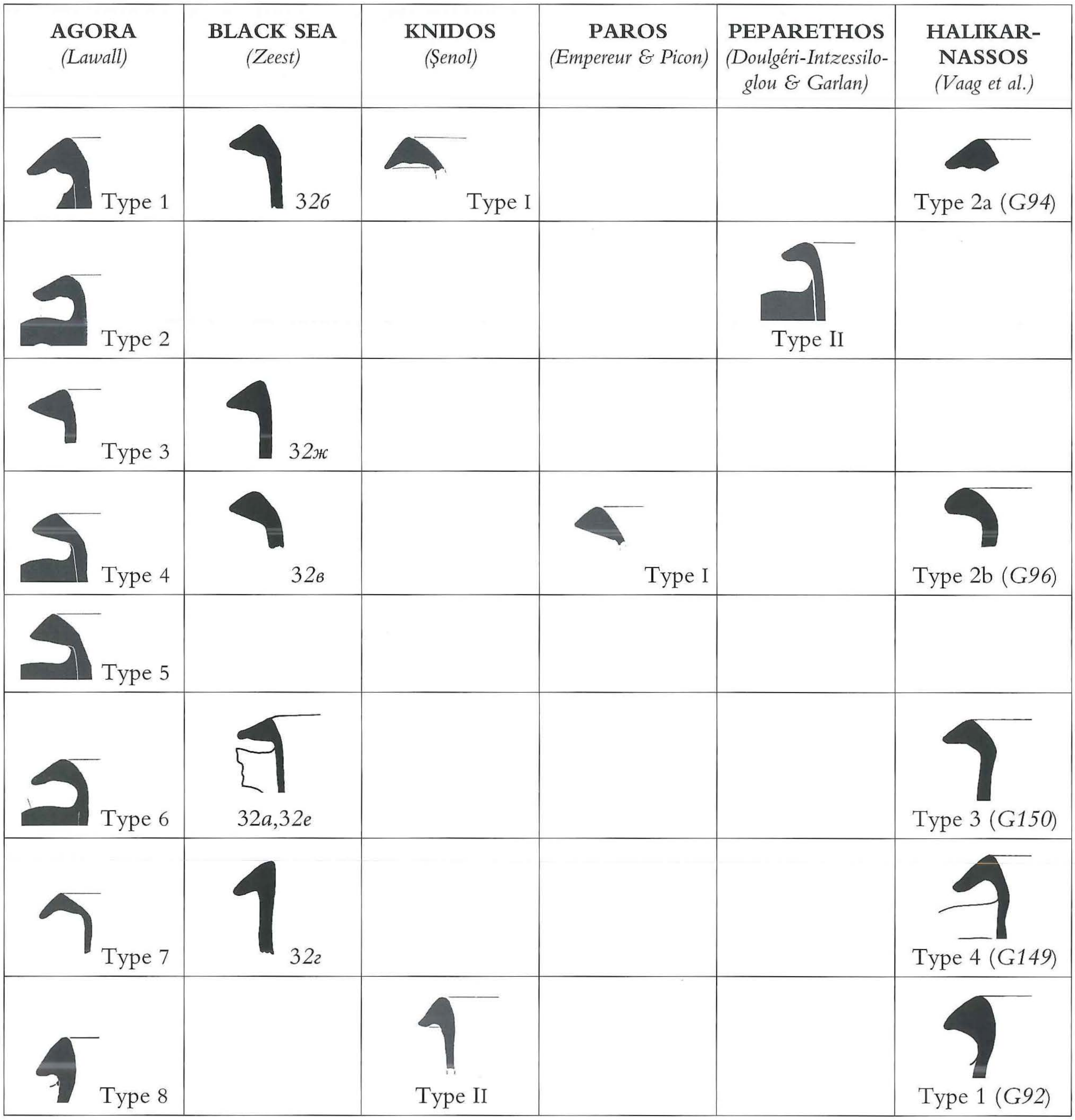

Fig. 4 Typology of mushroom rims.

7 Thin-walled drooping rim: *c.* 300 BC.
8 Heavy triangular profile rim: from *c.* 325 BC developing through the third century BC.

Based on the Agora find contexts, Lawall defines a general trend in the typological development towards an increasingly down-sloping surface through the fourth century BC.[17] He does not suggest any place of origin.

[17] Lawall forthcoming.

Workshops or Production Centres

There are rather few published finds of workshops producing amphorae with mushroom rims. Most productive have been the investigations by the French archaeologists in the Datça peninsula and on the Greek islands. Other determinants for identification are stamps and fabric analysis. The following begins with the recognised workshops and discusses the evidence for other production centres.

Kos: The Kos-Meropis workshop was active in the fifth century BC until 412 BC and again from the end of the fifth century BC until 366 BC, when the building was replaced by a new one as part of the new city created by synoecism.[18] Another workshop is identified at Kardamaina.[19] Both workshops produced amphorae with short handles, round in section, and a mushroom rim, similar to Agora Type 3. They only differ from the "classical" Koan amphorae by not having double-barrelled handles.[20]

Knidian peninsula: The Reşadiye-Kiliseyani workshop active from *c.* 325 BC produced mushroom rims of two different types.[21] One is similar to Agora Type 1, the other resembles the Agora Type 8 rims in Lawall's article.[22] It has an upright interior profile, rounded over the top and is taller than broad, with a concave, worked underside.[23] Reportedly, prow-stamped amphorae with mushroom rims have been found there, but no profiles have been published.[24]

Ionia: At a kiln site at Clazomenae dated to the third quarter of the fourth century BC fragments of mushroom rims were found during Turkish excavations but no profile drawings have been published.[25]

Paros: At a workshop at Ampelas functioning in the Hellenistic period (fourth to second century BC), apparently the oldest of the Parian workshops, fragments of Agora Type 5 and perhaps Agora Type 6 were found.[26] The shape (Type I of Parian amphorae) has relatively long handles with pressure marks on the interior of the rim, where the handles were attached, and a bevelled knob toe. Parian clay has been described by Grace as fine, light red to light brown, pinkish or reddish buff in colour, often micaceous and with a thin cream slip surface.[27] According to Empereur and Tuna it is calcareous, but the precise composition of the clay differs from workshop to workshop.[28]

Skopelos, ancient Peparethos: The so-called Panormos workshop was active in the first half of the fourth century BC and mushroom rims of the same type as Agora Type 2 were found there.[29] The clay is described as reddish orange, and Doulgeri-Intzessiloglou and Garlan express certain doubts in assigning the Peripethian amphorae to the Solokha I class, because the Russian examples have yellow clay, but this is hardly a deciding factor, since the Solokha I amphorae were made in several different fabrics. They thus suggest Peparethos as production centre of the Solokha I amphora, but with certain precautions because of missing fabric analysis and a certain insecurity in the definition of the group and its typology.[30] Typologically, the fragment found at the Panormos workshop has a neck tapering at the shoulder, similarly to the Koan amphora shapes.[31]

Rhodes: Empereur and Picon have identified about 20 workshops on Rhodes, but still very little is known of the Rhodian amphorae in the fourth century BC, and no workshops have yielded mushroom rims. The most impressive bulk of material derives from the Kyreneia shipwreck that is dated in the

[18] Papuci-Władyka 1997; Kantzia 1994, 323-354.

[19] Γεωργοπούλου 2001, 107-114.

[20] They are not Solokha I type amphorae as we defined them in the publication of the Maussolleion, Vaag *et al.* 2002, 60-64, because the neck tapers to the shoulder.

[21] Empereur *et al.* 1999, 109-110. Şenol 1995.

[22] Lawall forthcoming,

[23] Şenol 1995, Pl. 1.

[24] Empereur *et al.* 1999, 109-110.

[25] Doğer 1986.

[26] Empereur & Picon 1986b, 504-550.

[27] Whitbread 1995, 227. His analysis is based on four fragments and very insecure, see p. 229.

[28] Empereur & Picon 1986, 498-501.

[29] Doulgéri-Intzessiloglou & Garlan 1990, 369-371, 376 and 386-388. *ADelt* 1988 Chronika I, 238.

[30] Doulgéri-Intzessiloglou & Garlan 1990, 386.

[31] Doulgéri-Intzessiloglou & Garlan (1990, 387 fig.) show five shapes found at the Black Sea region, one from Chersonessos, one from Elizavetovskoe and three from the Solokha kurgan, reproduced from Зеест 1960, but one of the Зеест reproductions has a tapering neck, and this cannot be seen on the one in Зеест which it should reproduce. None of the examples from Зеест shows this feature: they all have spreading necks, and this should be one of the characteristic features of the shape.

third quarter of the fourth century BC.[32] One rim fragment of a similar type was found during excavations of the shipsheds of the Mandraki Harbour.[33]

Samos: No workshops producing mushroom rims have been found on Samos. However, based on fragments with stamps with lion masks identified as Samian, there seems to be no doubt that the rim shape was produced on the island.[34] Grace has attributed two shapes with mushroom rims from the Kyrenia shipwreck as Samian, Type X and XI.[35] One example of Type X has been analysed by Ian Whitbread, who concluded that it is "compatible in fabric with the Samian jars from the Athenian Agora and the Samos Heraion".[36]

The material from the Maussolleion

In our publication of the material from the Maussolleion we included 15 rim fragments of mushroom shape. Of these nine belong to amphorae produced on Kos. There are three distinct rim shapes among the Koan material:

1. Out-turned rim with a broad curving upper surface, a rounded outer edge and a concave wall.[37]
2. Sharp upper edge and drooping rim with concave wall.[38]
3. Thick rim with rounded interior profile and similar length of upper and lower surface.[39]

The double-barrelled handles appear on all shapes. The thick rim also appears on fragments with round handles and in these cases the attribution was based on fabric comparisons. The shapes can all be compared with the ones found at the Kos-Meropis and the Kardameina workshops.

The six remaining rims are all of different shapes:

Maussolleion Type 1 (*G92*) is similar to Agora type 8 rims found at the Reşadiye-Kiliseyani workshop.[40] The typology of Knidian amphorae in the fourth century BC has been revised by Сергей Монахов in a recent article, where he analyses the material from the Black Sea region.[41] He identifies two main types, one "with a tall cylindrical neck and mushroom-shaped rim"[42] and a second type "with conic neck and cube-shaped toe".[43] The mushroom-shaped rim type is known in four different types, the earliest belonging to the 370s BC, the latest towards 320 BC. The rim does not differ significantly in the four groups. The shape is thus limited to about 50 years of production, but these years include the period of Maussollos' reign in Halikarnassos. The fragment found in Well C can best be compared with the so-called ΡΑΘ-amphorae, the third of Monakhovs groups, dated in the third quarter of the fourth century BC.

Maussolleion Type 2a with sharp upper and outer edge (*G94*) is similar to Agora Type 1 rims. This shape is usually described as Samian, after the paper by Virginia Grace from 1971. A number of the groups she identified as Samian have now been securely placed on Knidos, for example the prow-stamp amphorae.[44] The shape is also very similar to fragments found at the Reşadiye-Kiliseyani workshop.[45] The fabric is fine, hard, reddish yellow clay with rare inclusions and golden and silvery mica on the surface.

Maussolleion Type 2b with rounded upper and outer edge (*G96*) is similar to Agora Type 4. Rims of similar shape have been found at the workshop on Skopelos, at the so-called Panormos workshop active in the first half of the fourth century BC.[46] The clay is described as reddish orange.

Maussolleion type 4 (*G149*) is similar to Lawall's thin-walled dropping rim, Agora Type 7. The fragment is very micaceous and contains many lime

[32] Bass & Katzev 1968.
[33] Yiannikouri 1996.
[34] Grace 1971, 67.
[35] Grace 1971, 78-79, note. 68.
[36] Whitebread 1995, 130.
[37] Vaag *et al.* 2002, 147 *G105*, *G107*, 181 *I38*.
[38] Vaag *et al.* 2002, 127 *F34*, 147 *G106*.
[39] Vaag *et al.* 2002, 146-147 *G99-G101*, 167 *H43*.
[40] Şenol 1995, pl. 1.2.
[41] Монахов 1999c.
[42] Монахов 1999c, 162.
[43] Монахов 1999c, 164.
[44] Монахов 1999c, 164-165; Avram 1989.
[45] Şenol 1995, pl. 1.2.
[46] Doulgéri-Intzessiloglou & Garlan 1990, 369-371, 376 and 386-388.

inclusions. There are no similar finds published. It has, however, some similarity with the fifth fragment (*G148*), a large neck with handles and large dropping rim. This rim is perhaps from an early Rhodian amphora.[47]

The last of the fifteen fragments (*G150*), Maussolleion Type 3, is similar to Agora Type 6, although the outer edge is not that prolonged. The clay is reddish yellow clay with plenty of mica.

Only two Solokha 1 fragments were found in the Pre-Maussollan contexts: a toe in the *bothros*, which was closed by the beginning of the construction of the Maussolleion, *c.* 365 BC and a rim from the original terrace fill, meaning the late 350s BC.[48] The remaining fragments were found in Well C. Remarkably, most of the finds from well C derive from the uppermost layer, thus not providing any chronological evidence. The lowest fragment found in the context was a Maussolleion Type 1 (*G92*) comparable to an example of the so-called ΠΑΘ amphorae dated to the third quarter of the fourth century BC.[49]

Conclusions

The results of this analysis on the typology of the mushroom rims can only be preliminary, since scientific analyses of both workshop finds and finds from other regions are needed to get any further. However, it is also that the clays from Rhodes, Knidos, Kos and Samos are often distinctly similar, thus making such analyses less profitable.[50] It seems clear, also, that one workshop would often produce different rim shapes. From the finds in the Knidian peninsula we can conclude that at least two mushroom rim types were produced by the same workshop. The Type 1 rim has been found in several places, the Agora, the Black Sea area and in Halikarnassos. It has also been found in certain numbers on Samos and was for long considered Samian.[51]

The other rim type from Knidos seems to be absent in the Agora material. The quantities of Knidian wine imported to Athens in the Hellenistic period were rather large, especially in the late second and first century BC.[52] The Solokha I amphorae occur in Athens in contexts from the third quarter of the fifth century to the fourth century BC and some of the later examples may originate from Knidos.[53] The only workshop hitherto known to have produced the mushroom rim shape in the late fifth to early fourth century BC is the Kos-Meropis workshop. The other workshops began producing the shape only in the second half of the fourth century (Paros, Clazomenae, Knidos). This may partly be explained by a development over time. The Knidian Type 2 rim may in fact be the earliest. In Halikarnassos, the same shape (Maussolleion Type 1) was found in a Pre-Maussollan context and the one of the lowest levels of Well C. This could suggest that this rim type should be placed in the first half of the fourth century BC.

Another significant characteristic of the mushroom rim is the fact that these amphorae did not seem to have the quality of a 'brand', making the consumer able to recognise the origin of the wine on the shape of the jar, like for instance the Chian amphorae shapes. Did the rim have any functional meaning? Virginia Grace suggested that the mushroom rim of the Samian amphorae was borrowed from the Athenians because the Attic series shows the development of the rim from the fifth to the fourth century BC.[54] Because the shape was used on Samos, where oil was the main agricultural produce, she concluded that the mushroom-shaped amphorae were used to transport olive oil and not wine.[55] This would also explain why these amphorae types are not present in very large numbers in the Athenian material, as it would be surprising if Athens being a large olive oil producer would import large amounts of oil. The question of the relationship between shape and content is still a problem for future amphora studies.[56]

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47 I am indebted to Mark Lawall for this information. He has informed me that the fragments has close similarity to the amphorae from the Kyrenia shipwreck, which he is going to publish in the near future.

48 Vaag *et al.* 2002, 96 (*A89*) and 127 (*F34*).

49 Монахов 1999c, fig. 3.3.

50 *Cf.* for example Whitebread 1995, 129.

51 Tölle-Kastenbein 1974; Isler 1978.

52 Matheson & Koehler *s.d.*; Grace 1979b.

53 Lawall 1995, 220.

54 Grace 1971, 74.

55 Grace 1971, 80.

56 See the article by John Lund in this volume.

The Eastern Mediterranean Amphorae in the Province of Scythia

Andrei Opaiţ

The amphora is one of the most common ceramic forms at the Roman and Byzantine sites of the Dobrudja. A careful observation of their typology, pattern of distribution and frequency can shed light not only on the chronology and on function/status of the sites, but also on the economic network in which the ancient settlements were involved.

Ancient Dobrudja was, because of its geographical position, an important bulwark of the Empire against numerous threats from the North and East. When Diocletian created the new province of *Scythia*, he took its strategic position into account, which makes it well protected by the Danube on the western and northern flanks, and by the Black Sea to the East. It was one of the garrisoned, frontier provinces of the Roman Empire that was put under the direct command of a military commander a '*dux limitis provinciae Scythiae*'. Its role increased considerably when Constantinople became the new capital of the Roman Empire. Diocletian, Constantine and his sons, Anastasius and Justinian, built more than 40 large and small fortresses in the province. According to the *Notitia Dignitatum*, the province of Scythia was defended by two legions, eight *auxilia* and seven *cunei*, estimated by some scholars at *c.* 9,500 soldiers,[1] by others at 10,000-15,000 troops,[2] an impressive army for a relatively small province. Economically, the province was not important, and the *Expositio totius mundi et gentium* mentions only Dacia and Moesia as provinces able to supply themselves.[3] A law of AD 377 tells us that, due to the difficult situation of the provinces of Moesia and Scythia, the levy in clothing was charged at two-thirds the rate applied to the rest of the Thracian diocese.[4] Still, we have no reason to believe that this province was a *terra deserta*. Until the middle of the fifth century, the countryside was studded with villages as well as farms, and only in the second half of the fifth and the sixth centuries was the settlement pattern changed, with the local population living in fortified cities or in their surrounding areas, defended by ditches and earthen walls. The population was able to work the arable lands and vineyards, and many *horrea* with *dolia* have been discovered in the cities and villages. There was also a flourishing wine production, as the many table amphorae, present in almost every house, testify. The workshop discovered at Telita-Amza produced amphorae for exporting the local wine, probably a wine of a certain quality that deserved to be sent much farther than to the local market.[5] However, the local production could not satisfy the taste and necessity of the officers, the local bureaucracy and the clerics. They had to be supplied with luxury products either by the government or by merchants. Amphora analysis provides us with a tool for better understanding how the system worked. The analysis is by no means exhaustive, as the commodities traded in amphorae represent only a small part of the commerce, but it will indicate the main trends and the nature of the ancient trade.

Amphorae in the province of Scythia

Archaeologists, in their struggle to improve their methods, have borrowed a large variety of techniques and ideas from other fields, such as biology, economics and geography, and in some cases with good results. Their efforts have, however, sometimes resulted in a mechanical adoption of those methods, forgetting that archaeology, as a social science, has

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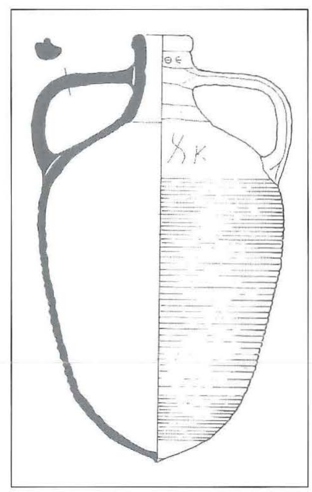
1 Treadgold 1995, 52, table 1.
2 Barnea 1991, 218-219.
3 Rougé 1966.
4 Jones 1964, 433, 456.
5 Baumann 1995.

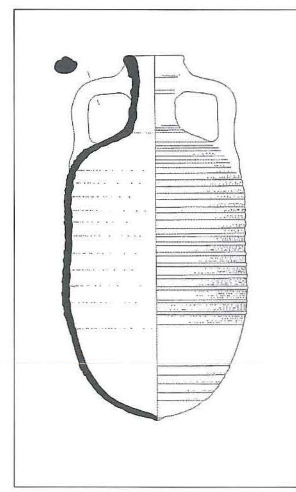
to deal with human, not with animal behaviour, and with human, not animal populations. In dealing with pottery, the use of statistical analysis of ceramic data is a great help. There are many techniques and they are being refined every day, but numerous archaeologists forget that a basic principle of the statistics is that the sample data must be sufficiently large and must accord each member of a population equal importance. Can we consider the statistical results obtained from an excavation made in a small area of a large city as representative of the whole city? Sometimes excavations made in two different areas of a city can provide us with contradictory results. For example, different ethnic groups, Syrians, Greeks, Jews and Italians, inhabited different quarters of large and cosmopolite cities like Alexandria. Each group had its own diet habits, tastes and trading connections. Could we say that the ceramics discovered in one of these areas are representative of the whole city? One would have to excavate 15-20 sectors of a large city, using the same type-series, and to calculate an average of those data before any tentative judgements could be made on the economy of the site. The situation is of course different if the site is minor and its layers undisturbed: the smaller the site, the greater the reliability of the ceramic statistics. Consequently, for a clear and brief presentation of the huge quantities of amphorae discovered in Dobrudja, I divided them into more and less frequent amphora types. In the former category, I have included LRA1, LRA2, and the Seleucia Pieria carrot-amphora types, which are present at almost all sites during the Late Roman period. In the latter category, I have incorporated amphorae that are not present in very impressive quantities, but in a large variety of types. These containers are constantly discovered in levels dated mainly in the fourth and fifth centuries AD.

The amphora types presented here are far from indicative of all Eastern Mediterranean types that arrived in Dobrudja. I have selected only a few, simply to illustrate the large variety of types that occur in our excavations. Their presentation will not be exhaustive, as some amphora types are very well known. However, other types, less known, will receive more attention.

The most frequent amphora types: LRA1, LRA2 and carrot type

These amphora types are well known in the Roman ceramic literature, and little can be added.[6] **LRA1** is one of the most popular amphorae occurring not only in Scythia, but in many other provinces of the Roman Empire (Figs. 1-4). Its fame made the mosaicists depict it on the mosaic floor of the Great Palace in Constantinople.[7] It is not present in Dobrudja from its first occurrence in the fourth century AD, but only from the beginning of the fifth century, and its evolution can be followed until the end of the sixth century. LRA1 capacities vary between 5 and 26 litres. A survey of the north-eastern Mediterranean (Cilicia, Antioch, Cyprus, Rhodes) has





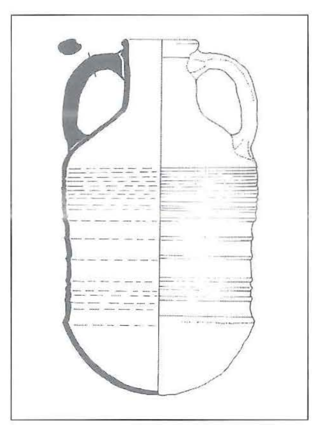


Fig. 1 Topraichioi-first half of the 5th c. AD.

Fig. 2 Iatrus-second half of the 5th c. AD.

Fig. 3 Tomi-6th c. AD.

[6] Riley 1979; *id.* 1981; Opaiţ 1984; *id.* 1996; Keay 1984; Peacock & Williams 1986.
[7] Dunbabin 1999, fig. 243.

Fig. 4 Histria-6th c. AD.

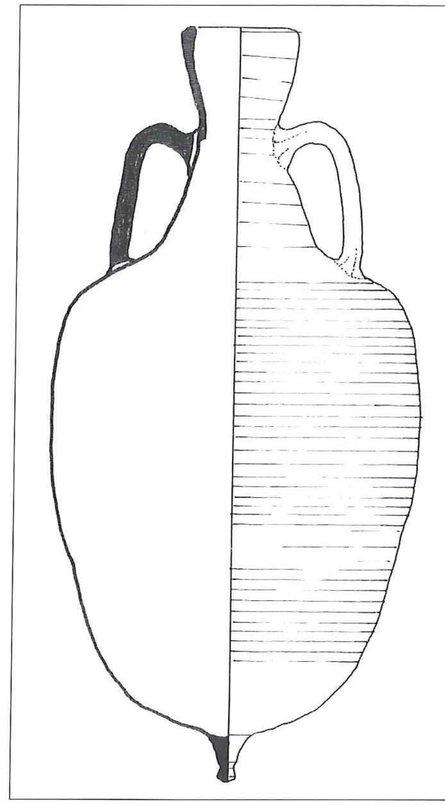


Fig. 6 Chenorichens'kij-second half of the 2nd c. AD.

identified possible workshops.[8] We are still waiting for careful archaeological excavations of kiln sites to secure the information.

Regarding the area of production, I would like to point out the discovery of an amphora fragment at Histria. It bears a round stamp with a monogram, read by Popescu as a personal name: Κωρυκου.[9] We should not forget that Korikos is also the name of two cities, one in Cilicia and the other one in Pamphylia, but the evidence for the latter is equivocal.[10] This stamp could prove an important confirmation of the location of certain workshops on the coast of Cilicia, an area that can be petrologically included into the region that produced LRA1.

The **LRA2** amphora (Figs. 6-10) has, in my opinion, a development beginning earlier than what is usually accepted.[11] The first sketch of the evolution of this type has been shown by Scorpan,[12] and it was later enhanced by us.[13] According to this sketch, it is present in Dobrudja from the second century AD, being one of the most numerous amphora types discovered at Troesmis, the camp of *Legio V Macedonica*.[14] However, in the North Pontic area, it is well known from the first century AD, at Eupatoria and Kalos Limen.[15] Its evolution can be traced over the following centuries: the body evolving from an ovoid one to a more globular shape; its capacity also diminishing from 80-90 litres in the second and

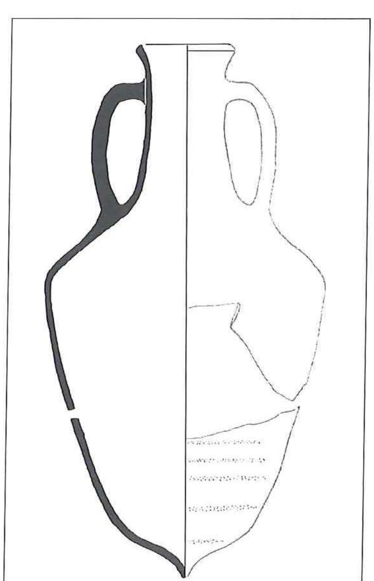


Fig. 5 Eupatoria-beginning of the 1st c.AD.

[8] Empereur & Picon 1989, 236-243.

[9] Popescu 1976, 170, no. 151.

[10] RE XI, 2, coll. 1451-1452; Jones 1971, 104, 131, 199; Trombley 1987; Cohen 1995, 52, 337-338.

[11] Some authors (Riley 1979, 219) deny a date so early for the beginning of this amphora type, stressing the different colour of the paste. However, these variations in colour are also present in Early Roman times.

[12] Scorpan 1977.

[13] Opaiţ 1984.

[14] Opaiţ 1980, 296.

[15] Užencev & Juročkin 1998.

third centuries to 40-45 litres in the fourth to sixth centuries, when it is known as LRA2.[16]

Recent discoveries of kilns, specialised in this amphora production, have been made in Chios,[17] the Argolid (Kounoupi),[18] and Cnidus.[19] There are some indications of manufacturing amphorae of the Nikandros group, Hellenistic amphorae with strong morphological affinities with so-called LRA2, not only around Ephesus, but also on the island of Chios.[20] However, the Nikandros group is only one of the subtypes developed in this area. Lawall suggests labelling this large class of amphoras as "Southeast Aegean Mushroom rim".[21] The subtype is indicated by the jars discovered at a workshop excavated at Erythrai. This workshop produced amphoras with cup-shaped rims.[22] Therefore I think that a large productive area of this type, from Argolid to Chios and perhaps even the eastern coasts of Turkey, is not excluded.

[16] Opaiţ 1984.
[17] Tsaravopoulos 1986, figs. 36 and 37.
[18] Zimmerman Munn 1985, 342-343.
[19] Tuna *et al.* 1987, 49.
[20] Personal communication V. Lungu.
[21] M. Lawall,"An Addendum to Joehrens AM 1999, on the amphoras of Erythrai" a draft distributed to the participants of the amphora colloquium in Athens.
[22] Özyigit 1989, 125-146.

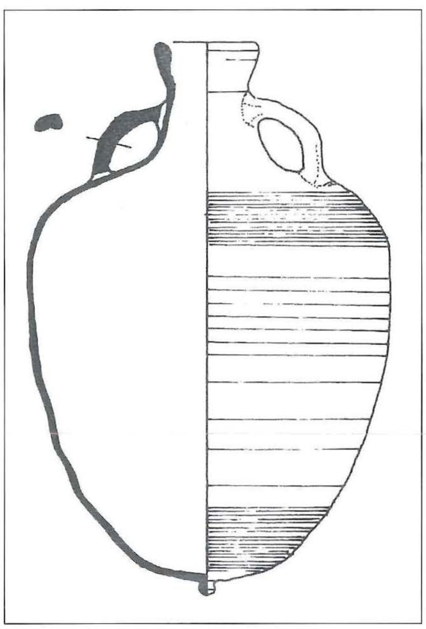


Fig. 7 Novae-beginning of the 4th c. AD.

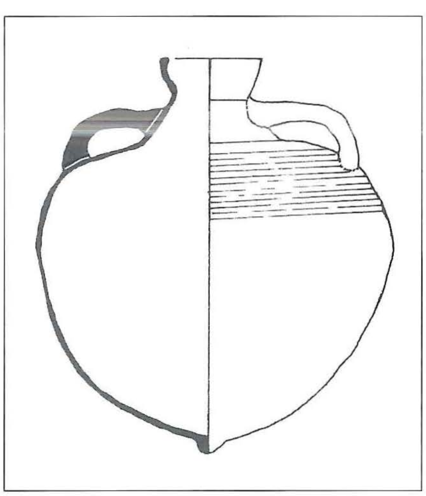


Fig. 8 Aegyssus-beginning of the 5th c. AD..

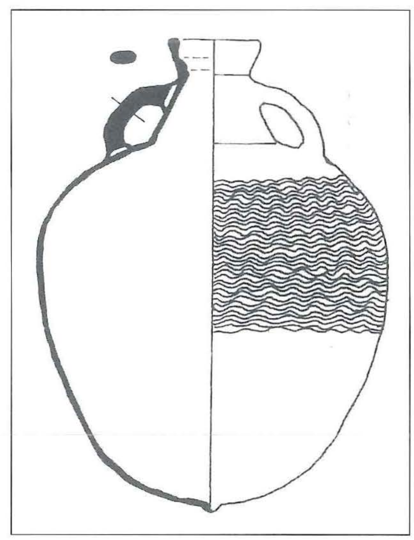


Fig. 9 Murighiol-middle of the 6th c. AD.

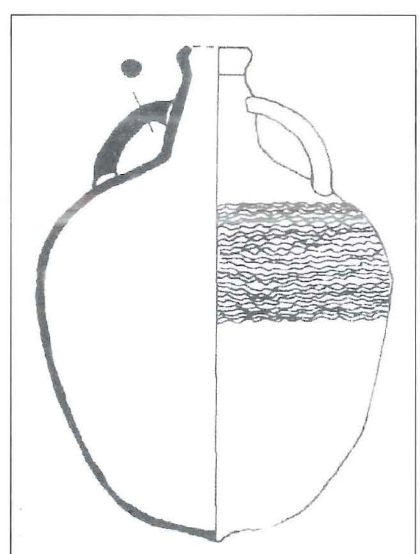


Fig. 10 Murighiol-end of the 6th c. AD.

Carrot amphora of the Seleucia Pieria type

The fabric of this type is brick red with a lot of iron oxide, very hard, with whitish-pink or self-slip (Fig. 11). The mouth is narrow with a diameter of only six to eight cm. The body of one completely preserved example is slightly ridged with a small constriction in the middle; its height is 57 cm, and its maximum diameter is 18.5 cm.[23] A marked decrease in the production of this type can be seen towards the middle of the fifth century at Topraichioi. The capacity of the type is small, varying between four and seven litres. I would like to point out that the morphological characteristics are almost identical with those of another common amphora type discovered in Dobrudja, a conical amphora made at Sinope. However, the fabric of those Pontic amphorae has plenty of pyroxene and a self-slip.

It is a well-known type at the Lower Danube, occurring at Topraichioi between the end of the fourth century and middle of the fifth century in a percentage which oscillates between ten and fourteen per cent. Further south, it appears at Athens,[24] Ephesus,[25] Tarsus,[26] in Lebanon,[27] at Bodrum, Adana, Ras el Bassit and in Egypt.[28] An amphora workshop discovered at Seleucia Pieria indicates a Syrian origin for this type of amphora.[29] We do not believe that the end of production of this type coincides with the beginning of the production of Carthage LR1, since these two types coexist at least during the first half of the fifth century. It seems rather that wine exports in LRA1 were supplemented by wine exported in these conic amphorae. However, this is speculation and it will remain so until further work has been carried out in that production area.

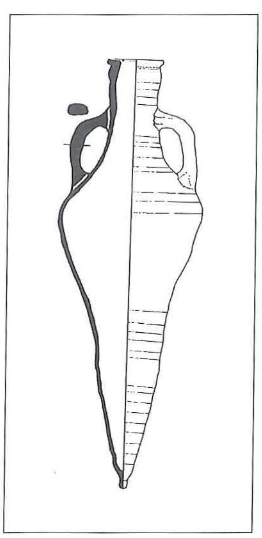


Fig. 11 Topraichioi-end of the 4th c. AD.

The contents of LRA1, LRA2 and carrot-type amphorae

The question of what these amphorae contained is quite controversial: some scholars believe wine to have been the main liquid carried by LRA1 and olive oil for LRA2; or vice versa; or both products by both amphora types. For the period from the fourth to the sixth century, I suggest wine for LRA1 and olive oil for LRA2, and I do that for several reasons.

Firstly, we should take into account the suitability of these two different amphora shapes for manipulating their contents, for storing and transporting a particular liquid. As Karagiorgou rightly pointed out, LRA2, with its funnel-shape mouth covered by a lid, could facilitate multiple use of the olive oil, while LR1 had to be emptied soon after the amphora was opened.[30]

Secondly, we must pay attention not only to the morphological characteristics, but also to the crystalline structure of the amphora walls. Usually, the walls of LRA2 are very hard and compact, while this is not the case with the walls of LRA1. The walls of this amphora type, when it is discovered in a humid environment, as is the case at Marseilles,[31] Carthage,[32] and Yassi Ada,[33] are still lined with resin. That was not the case with the olive-oil amphorae because, as indicated by the ancient

[23] Opaiţ 1991b, 219, pl. 25/1.
[24] Böttger 1992, 350, fig. 3/14; pl. 102/4.
[25] Personal observations.
[26] Jones 1950, 278, no. 831, pl. 166.
[27] Zemer 1977, 49, no. 40.
[28] Empereur & Picon 1989, 232, note 22.
[29] Empereur & Picon 1989, 232.
[30] Karagiorgou 2001, 149.
[31] Bonifay 1986.
[32] Opaiţ 1998a.
[33] van Alfen 1996, 203.

literary sources,[34] the ethnographic evidence[35] and laboratory analysis,[36] the contents effectively seal the walls. Consequently, it is difficult to accept that an amphora that was used for olive oil can be reused, since the oil absorbed into the walls of these containers turned rancid after the amphorae were emptied. On the other hand, an amphora that was used for carrying wine could be reused after the pitch was replaced before a new refilling.[37] However, Pliny notes that it is less harmful to transfer wine into vessels that once contained vinegar than into those used for sweet wine or mead.[38] That morphologic distinction was probably no longer respected from the seventh century. With respect to the contents of LRA2, we may note a fragment that belongs to the second-century subtype, discovered at Romula, which bears the dipinto *oleum*.[39]

Thirdly, as the capacity of LRA2 is four times bigger than that of LRA1, it seems logical to use the larger container for a lighter liquid,[40] and the smaller for a heavier one. The carrot amphora was by its morphology (high neck, ovoid body, conic base) designed for wine. Traces of coating on the inner side of the wall make me consider the type as a wine amphora.

Less frequent amphora types

Included into this category are eastern Mediterranean amphorae, seldom presented in quantitative terms, and occurring mainly during the fourth and fifth centuries and, rarely, in the sixth century. The most famous amphora of this second group is **LRA3**, a type constantly present in Dobrudja from the second until the sixth century. Its long evolution has been described by many scholars.[41] The different fabrics and some peculiarities in the design of its body suggest that the type was manufactured by many workshops,[42] and its typology still awaits a better definition. In any case, the discoveries made at Topraichioi confirm the appearance of the second handle towards the end of the fourth century AD.

It is worth noting that these amphorae have pitch on the inside in Dobrudja, Caesarea,[43] and in Marseilles.[44] That points towards wine as their main contents. If the largest size varies between six and eight litres, the small module varies between one and two litres.[45]

Fig. 12 Ballana and Qustul-6th c. AD.

This amphora may originate in western Asia Minor, especially in the Hermos Valley (Aphrodisias), or in a wider region, between Ephesus and Sardis.[46] The occurrence of a bronze amphora at Ballana,[47] and considered by Hautumm as a Σύμβολον of an Egyptian productive centre is interesting (Fig. 12).[48]

Kapitän 2/Robinson M237 is most frequent in the second and third centuries but occurs sporadically also in the fourth century. Its dimensions decrease from the second century AD, when it reaches 75 to 80 cm, to only 43 cm in the fifth

[34] Columella *De Re Rustica* 12.49.11.
[35] Henrickson & McDonald 1983, 633.
[36] Heron & Pollard 1988, 430.
[37] Winlock & Crum 1926, 79.
[38] *N.H.*, 14. 126-130.
[39] Popilian 1976, 40.
[40] The weight of oil is 9/10 that of water or wine.
[41] Lang 1955; Robinson 1959; Hautumm 1982; Peacock & Williams 1986; Pieri 1998a.
[42] Compare for example Robinson 1959, M275, 276 with M277 or M270-282.
[43] Oleson 1994, fig.34/A61.
[44] Bonifay 1986.
[45] Outschar 1998.
[46] Pieri 1989, 101.
[47] Emery & Kirwan 1938, 355, pl. 93B.
[48] Hautumm 1981, 161-162.

century.[49] The traces of pitch usually found on the inside of the examples discovered at Topraichioi, Murighiol/Halmyris and Caesarea seem to indicate wine as contents.[50] The origin of this type is probably Aegean.[51]

Opaiţ VIII/Scorpan IV (Fig. 13) begins its evolution very early and ends, probably, in the very late fourth century. A fine beige-reddish fabric, slightly micaceous with a whitish slip is characteristic for the type. Its main features are an ovoid body that ends in a solid spike. The earlier subtype (OpaiţVIII) has a funnel-shaped mouth, a long truncated conical neck, with handles that are attached directly to the mouth and the lower part of the neck. The fragile design was perhaps the reason why many examples have been found either without the mouth or without the spike. The earliest example has been discovered in an amphora depot at Aegyssus dated to the end of the first century BC or the beginning of the first century AD.[52] It occurs at Vişina, also without a mouth, dated perhaps to Early Roman times; some examples have been discovered at Troesmis where it is dated in the second and third century AD.[53] The only complete example comes from a necropolis, Sovhoz 10, in the neighbourhood of the Tauric Chersonesos.[54]

The second subtype (Fig. 14) first appears, perhaps, in the fourth century. It keeps the same body and solid spike, but the mouth is narrowed with the rim bevelled on the external side, and the neck is bulbous; the handles are small and attached to the bulbous zone of the neck and to the shoulder. Quite a few examples have been discovered in Scythia at Nifon,[55] Beroe,[56] Medgidia, Axiopolis, Sacidava[57] and Tomi.[58] It occurs also at Odessos, in Moesia Secunda,[59] and in Chersonesos.[60]

The dimensions of the type decrease in time. The maximum diameter is 28 cm (Aegyssus), 23 cm (Chersonesos-Sovhoz 10), 21 cm (Troesmis), and in the fourth century, its maximum diameter is between 14 and 17 cm. The height of the Early Roman subtype is known only for the amphora discovered at Sovhoz 10: 86 cm, while the height for the Late Roman subtype varies between 35 and 45 cm. Calculation indicates a capacity of 17.862 litres for the amphora discovered at Aegyssus, a capacity of 14.9 litres for Sovhoz 10, a capacity of 7.87 litres for Troesmis, and a capacity of 1.891 litres for that found at Beroe, while only 1.537 litres for the Tomitan amphora. It may be that the standard capacity used for this amphora was that of a *xestes* of 0.728 l., i.e. 25, 20, 10, 2.5 and 2 *xestai*. There is every reason to suppose that this type was used for carrying wine, since the internal surface of the amphora discovered at Troesmis was lined.

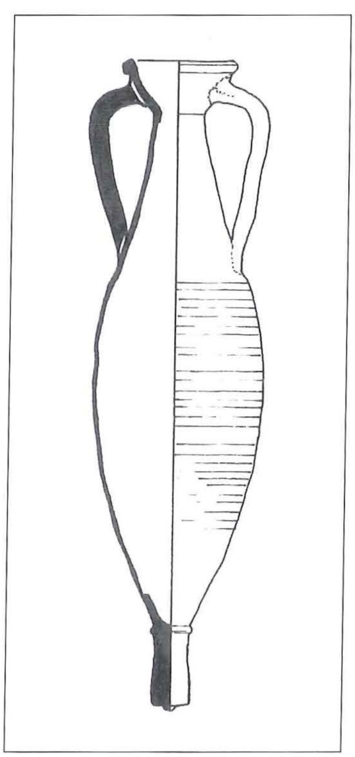


Fig. 13 Sovhoz 10-1st c. AD.

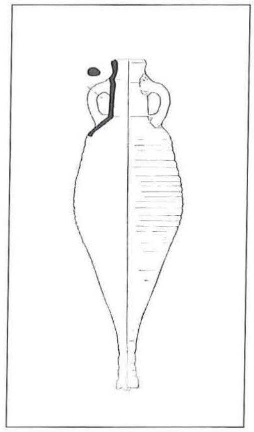


Fig. 14 Beroe-4th c. AD (not to scale).

[49] Robinson 1959, K113, L33, M237, M274, M303; Williams & Zervos 1982, 22-26, pl. 10/70.

[50] Oleson 1994, 17, nos. A25, A27, fig. 4; 108, no. A62, fig. 34.

[51] Riley 1979, 192; Hayes 1983, 155.

[52] Opaiţ 1987, fig. 6/1.

[53] Opaiţ 1980, 306, type VIII, fig. 8/3-4.

[54] Высотская 2000, 83-84, pl. 1/1.

[55] Opaiţ 1980, pl. VIII/5.

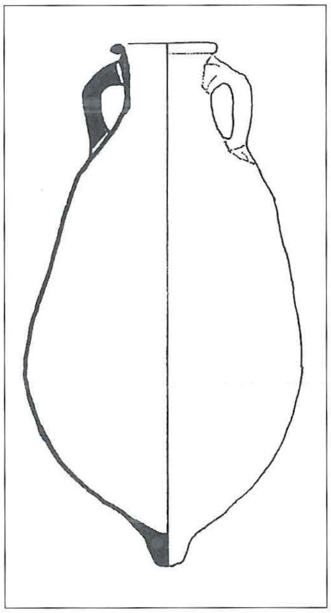
[56] Paraschiv 2001.

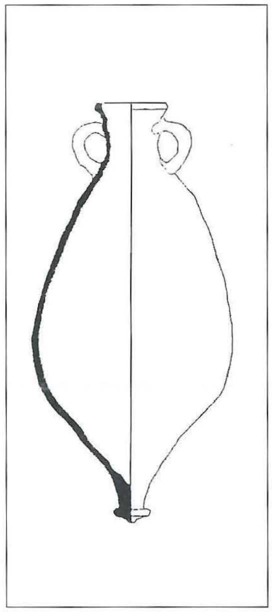
[57] Scorpan 1975, 271, pl. 2/5.

[58] Scorpan 1977, 272, fig. 6/3,4; fig. 39/6.

[59] Kuzmanov 1985, pl. 5/A43.

[60] Романчук *et al.* 1995, pl. 17, 37, class 17, no. 73.





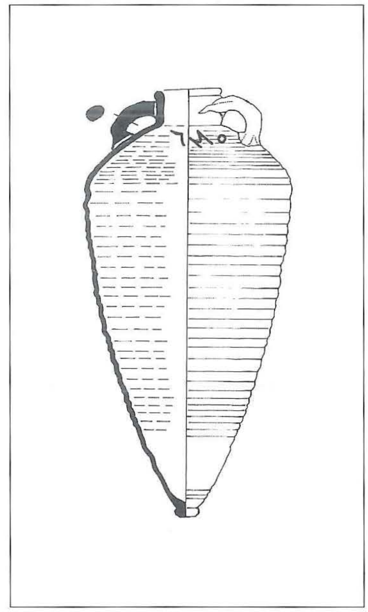


Fig. 15 Tomi-5th c. AD.

Fig. 16 Illychovka-5th or 6th c. AD (not to scale).

Fig. 17 Topraichioi-last quarter 4th c. AD.

Late Cnidian type?: The fabric is reddish-brown, moderately hard, sandy, self-slip. An amphora discovered at Tomi has a height of 70 cm, the mouth diameter is 14 cm, and its maximum diameter is 37 cm (Fig. 15). I have previously considered this type being a late variant of Robinson M273.[61] Now it seems to me that it should rather be considered as a late variant of a well-known Cnidian type. Its main characteristics are the egg-shaped body and ring around the toe, which is, however, not always present. It seems to be one of the last links of the evolutionary chain suggested by V. Grace.[62] An amphora discovered at Illychovka, and dated by the author to the third quarter of the sixth century AD, still preserves the ring around the toe (Fig. 16).[63] Surprisingly, this amphora is found north of the Danube at Ciresanu.[64] Calculation indicates *c.* 35 litres for the amphora discovered at Tomi.

Opaiţ E-III: The fabric is beige or pinkish, with black inclusions (pyroxene?), iron oxide, limestone, which has occasionally left small holes in the texture, rare gold mica, soft when the fabric is beige but hard when the fabric is pinkish, yellowish slip outside. It has a bead rim and short neck, which becomes slightly bulging towards the middle of the fifth century; the body is conical, very ridged. The mouth diameter varies between 8.5 and 10.5/11 cm. The examples of a smaller capacity have a slender body (Fig. 17). It occurs in Scythia at Murighiol/Halmyris and Topraichioi, especially during the second half of the fourth century and the first half of the fifth century.[65] The type occurs also at Niculiţel in a destruction level of 378.[66] Its fabric matches some fragments discovered at Berenice/Benghazi[67] and Caesarea.[68] Two other fragments, discovered at Chios[69] and Corinth,[70] match the shape, but the fabric is slightly different. An upper part of such an amphora also has been discovered in Spain.[71] Various *dipinti* appear on the shoulders of some examples from Topraichioi and Murighiol/Halmyris indicating variable capacities (between 16 and 24 *sextarii*). An

[61] Opaiţ 1996, 62.
[62] Grace 1979b, fig. 64.
[63] Sazanov 1997, fig. 1/10.
[64] Teodorescu 1984, fig. 19.30.
[65] Opaiţ 1991a, 148, type E-III, pl. 20.120; *id.* 1991b, 220, type E-III, pl. 26.1-3, 5.
[66] Baumann 1991, 123, pl. 4.
[67] Riley 1979, fig. 95, no. D390.
[68] Oleson 1994, fig. 42/A88.
[69] Boardman 1989, 109, no. 239, fig. 38.
[70] Slane 2000, 304, fig. 6b.
[71] Vegas 1973, fig. 51/4.

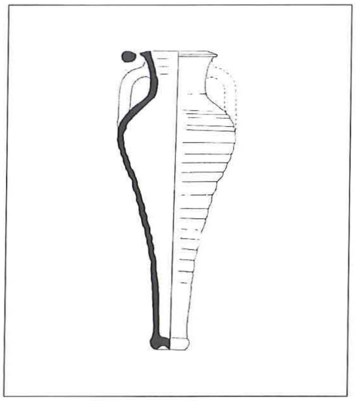
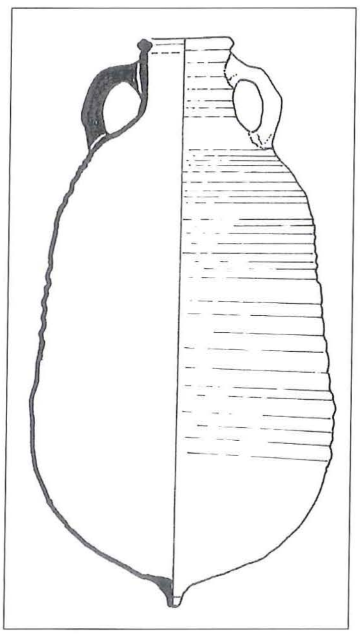
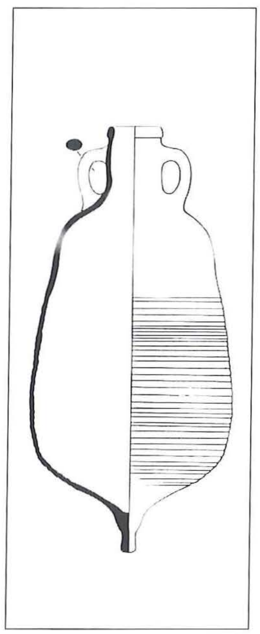


Fig. 18 Beroe-4th c. AD (not to scale).

origin in the Eastern Mediterranean cannot be excluded. The traces of pitch on the inside of the walls suggest wine as the main contents.

Aegean carrot amphorae (?): The fabric is beige with small, greyish, rounded quartz and self-slip. The truncated conical neck ends with a bevelled rim towards the exterior. The body is conical and ends in a long, hollow foot and a ring base (Fig. 18). The type is not found very frequently in Scythia. There are only three fragmentary pieces discovered at Beroe,[72] and one at Dinogetia.[73] To the South it occurs at Odessos,[74] and to the North, at Tyras.[75] It seems to be in use until the beginning of the seventh century: one amphora discovered at Yassi Ada displays similar morphological characteristics, but ends in a tubular foot.[76] The maximum diameter varies between 13 and 16 cm and the height between 33 and 43 cm, indicating different capacities. The completely preserved example from Beroe contained *c.* one litre while the example discovered at Dinogetia is larger.





Torone VII/Opaiţ C-I: The fabric is beige to pale brown, soft of very fine and dense clay with some black and white impurities, white mica, and rarely dull red iron ore. A large, thick, rounded rim is set on a cylindrical neck. The body is bag-shaped and ends in a spike (Figs. 19-21). The earliest subtype, with a much taller and elongated body, but with a non-micaceous fabric, occurs at Paphos in the second century.[77] A Late Roman (fourth century?) subtype occurs at Cripta Balbi,[78] only half of its body being wheel-ridged, and dated perhaps around the middle or in the second half of the fourth century.[79] The amphora varies between 1.3 and 1.7 per cent during the first half of the fifth century at Topraichioi.[80] It occurs at some other sites like Murighiol/

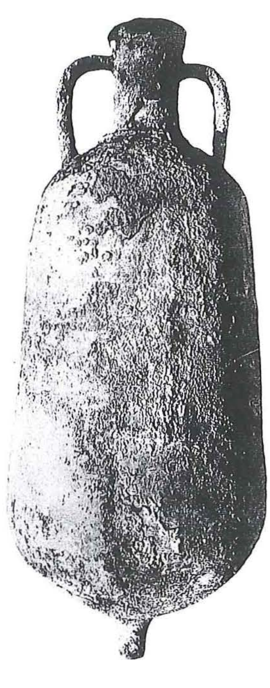


Fig. 19 Dinogetia-4th-beginning of the 5th c. AD.

Fig. 20 Torone-mid 4th c. AD.(?)

Fig. 21 Ballana and Qustul-4th c. AD.(?)

[72] Personal communication D. Paraschiv.

[73] Ştefan 1937-1940, 412, fig. 17/2.

[74] A. Minčev, 1983, 11-12, pl. I/3, V/1.

[75] Bortoli-Kazanski & Kazanski, 1987, 441, fig. 2/2.

[76] Bass & Doorninck 1982, 186, no. P 81, fig. 8-20.

[77] Hayes 1991, 91, pl. 24.1.

[78] Personal observations.

[79] Papadopoulos 1989, 98-100, fig. 17.

[80] Opaiţ 1991b, 216, pl. 17/2-6.

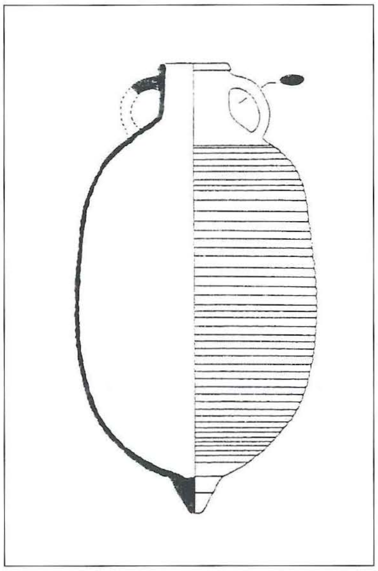


Fig. 22 Novae-beginning of the 4th c. AD.

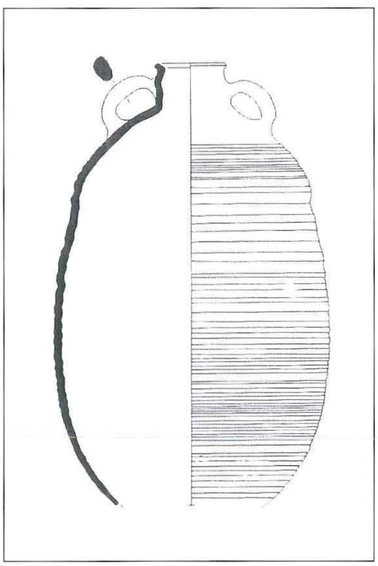


Fig. 23 Torone-4th c. AD.

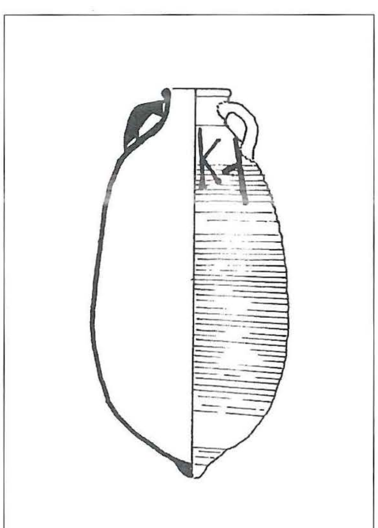


Fig. 24 Tomi-second half of the 4th c. AD. or beginning of the 5th c. AD.

Halmyris,[81] Dinogetia[82] and Iatrus.[83] Some examples are present at Marseilles.[84] The capacity of the Dinogetia amphora is *c.* 52 litres, while that of the Torone amphora is *c.* 17 litres. The traces of pitch on the inside of the walls suggest wine as possible contents. A bronze amphora with a height of 55 cm has been discovered at Ballana.[85] This amphora has also caught Hautumm's attention, but he considered it to be a bronze imitation of a North African amphora.[86]

Torone III/Opaiţ CIII-1: The fabric is pinkish to brick red or grey with pyroxene, rare gold mica, and iron inclusions. The rim is either slightly thickened outside and inside or only bevelled outside; the neck is short, the body is ridged and thin-walled, ending in a short spike. It is ovoid at Novae in the beginning of the fourth century,[87] Torone,[88] and later becomes bag-shaped (Figs. 22-23). The distinction between neck and shoulder disappears in the fifth century. An earlier variant, also discovered at Tomi (Fig. 24), bears a dipinto on the shoulder: KA (21 *sextarii*).

Opaiţ C-II occurs at Topraichioi and is slightly different from Torone III/Opait CIII-1. It also has a short neck, but the rim is bevelled on the exterior (Fig. 25).[89] It quite frequently carries Greek graffiti and *dipinti*, indicating capacities between 22 and 32 litres. An example discovered at Topraichioi has the stamp *EYT (yche)*.[90] Taken together, these elements point towards an area of production in the Aegean. A fragment discovered at Elée seems to belong to this type, but the authors do not describe the fabric.[91] The traces of pitch on the inner side of the walls suggest wine as contents.

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[81] Opaiţ 1991a, 144, pl. 16/93; Topoleanu 2000, 143, pl. 45/365.
[82] Al. Barnea, personal communication.
[83] Böttger 1982, 43, type I-3, pl. 19/112.
[84] Bonifay & Villedieu 1989, 36, fig. 14.16.17.
[85] Emery & Kirwan 1938, 355, pl. 93 C, room 1 of tomb 95.
[86] Hautumm 1981, 104.
[87] Gacuta & Sarnowski 1981, fig. 54.2.
[88] Papadopoulos 1989, fig. 13a.
[89] Opaiţ 1991b, 216, pl. 18; 19/1,3.
[90] Opaiţ 1991b, pl. 18/1.
[91] Empereur & Picon 1986c, 14, fig. 2.

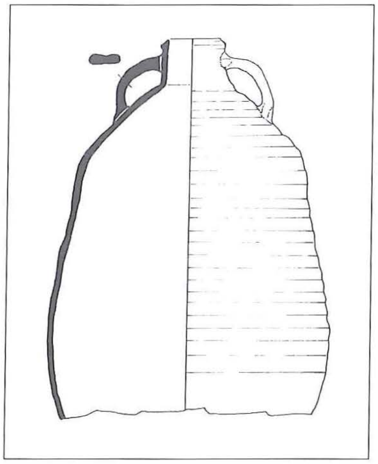

Fig. 25 Topraichioi-first half of the 5th c. AD.

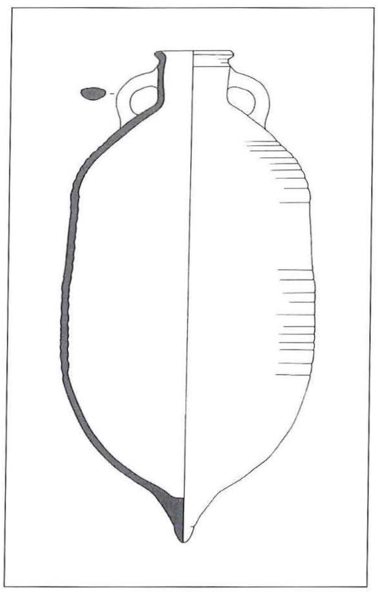

Fig. 26 Shikmona (Israel)-beginning of the 4th c. AD.(?)

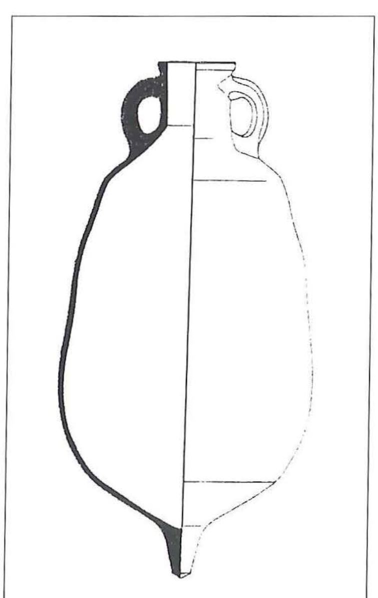

Fig. 27 Thasos-4th c. AD.

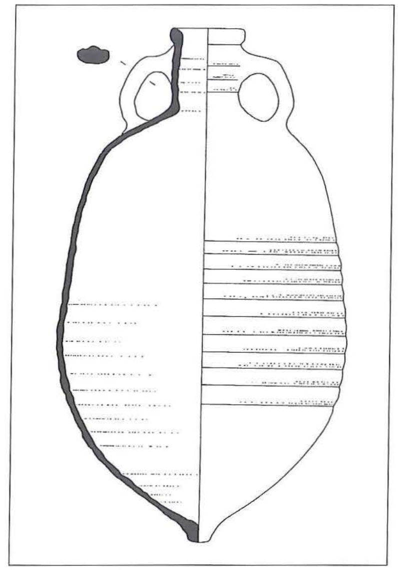

Fig. 28 Iatrus-5th c. AD.(?)

Robinson M273?/Opaiţ C III-1: The fabric is either brown to dull red, hard, or beige-brown, sandy and quite soft, suggesting at least two production centres. This type of amphora suffers the same transformations as the previous two: an ovoid body at Corinth in the second half of the third and in the fourth century,[92] modified to a bag-shaped form in the fifth century AD (Figs. 26-28). It occurs in the second half of the fourth century and beginning of the fifth century at Callatis,[93] Tomi,[94] Topraichioi[95] and Murighiol/Halmyris.[96] At Marseilles, these amphorae have pitch on the inner side of the walls, implying wine as the main contents.[97] *Graffiti* quite frequently appear, probably indicating different capacities, as in the case of Topraichioi, where figures of 35, 38, 47 *sextarii* occur.[98] Similar *graffiti* occur at Thasos.[99] However, the capacity of the amphora discovered at Thasos is calculated at *c.* 30 litres,[100] whereas the amphorae discovered on the Yassi Ada shipwreck have capacities of 37 to 40 litres.[101]

[92] Williams II & Zervos 1983, 15, no. 28, pl. 7/28.
[93] Preda 1980, pl. 73. M208.2.
[94] Rădulescu 1976, pl. VII.2.
[95] Opaiţ 1991b, pl. 19/5.
[96] Opaiţ 1991a, pl. 16.97, 98.
[97] Bonifay 1986, 284, fig. 9/38.
[98] Opaiţ 1991b, 216-17.
[99] Abadie-Reynal & Sodini 1989, 59, nos. CC 344-346.
[100] Abadie-Reynal & Sodini 1989, fig. 26, CC 344.
[101] Bass & Doorninck 1971, 34, type I, pl. 2/8.

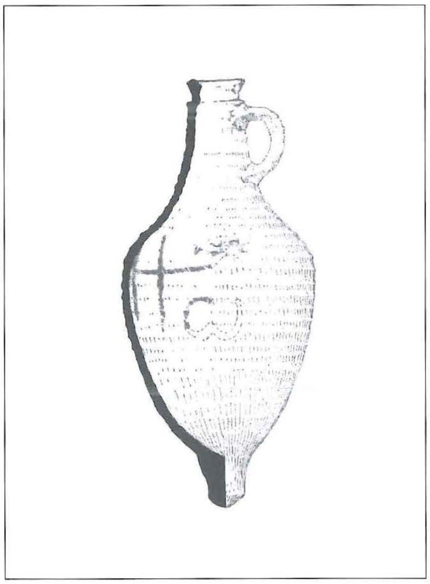

Fig. 29 Histria-6th c. AD (not to scale).

Fig. 30 Chersonesos-end of the 6th c. AD

Fig. 31 Chersonesos-end of the 6th-beginning of the 7th c. AD.

Sardis type?: A small amphora has been discovered at Histria, and summarily published by E. Popescu because of its *dipinti* (a cross having on both sides ά and ώ). We are informed that the container has a height of 28 cm, and, probably, a maximum diameter of *c.* 12 cm (Fig. 29). The amphora is dated in the fifth or sixth century AD.[102] Another example has been discovered at Capidava.[103] I decided to call this amphora "Sardis type", because it could be classified in the same group as the amphorae with a micaceous, pink to red fabric and cream slip on the exterior, which were discovered at Sardis in the Byzantine shops, destroyed in the first quarter of the seventh century AD.[104] It has a thickened, vertical lip inset from the conical neck. The body is ovoid and ends in a spike; its upper part is ribbed. The single handle is characteristic, attached beneath the lip and to a point at the start of the shoulder. The maximum diameter varies between 16 and 21 cm. These examples seem to have a bigger capacity than the Histrian example. We can see, in the shape of this amphora, some influences of the earlier subtype of the famous LRA3, which probably was made in the vicinity. Therefore, it should not be excluded that this type was made in or near Sardis.

Imitations of frequent amphora types

Another phenomenon to be pointed out is the imitation of the main amphora types, LRA1 and LRA2, which became obvious in the sixth century and continued at least until the ninth century (Figs. 30-35). Even if imitations do not occur frequently in the province of Scythia, since the heyday of the practice happened only by the time the province was abandoned by the Empire, it is worth mentioning as evidence that these amphora types had achieved a special status as a standard shape and capacity. The distinction of specific contents for specific amphorae had probably disappeared at that time. It is the only

[102] Popescu 1994, 389, no. 9, fig. 103.
[103] I. Opriş, personal communication.
[104] Crawford 1990, fig. 245, 484, 532.

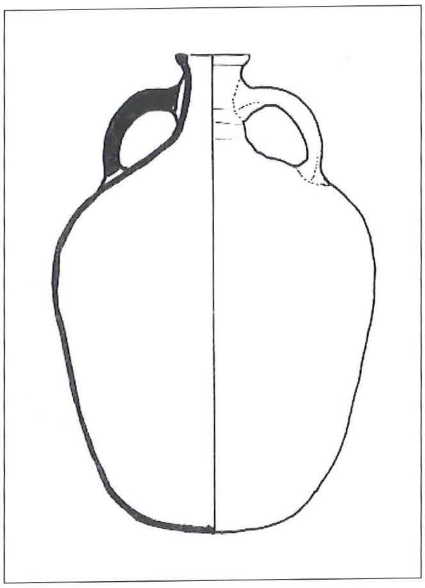

Fig. 32 Chersonesos-9th c. AD.

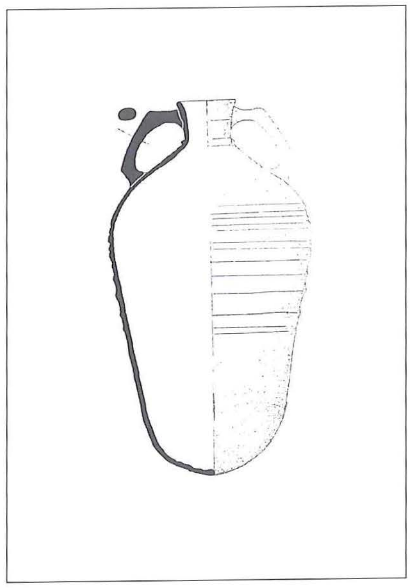

Fig. 35 Chersonesos-end of the 6th-beginning of the 7th c. AD

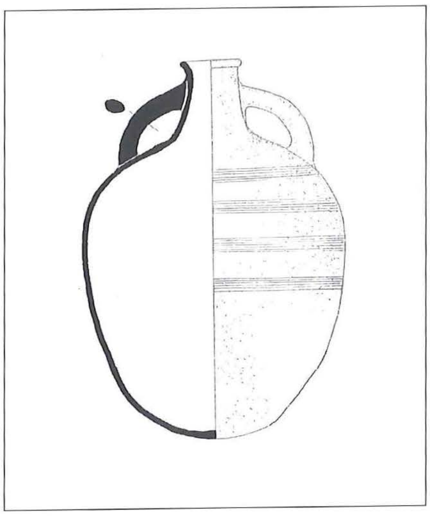

Fig. 33 Chersonesos-beginning of the 7th c. AD.

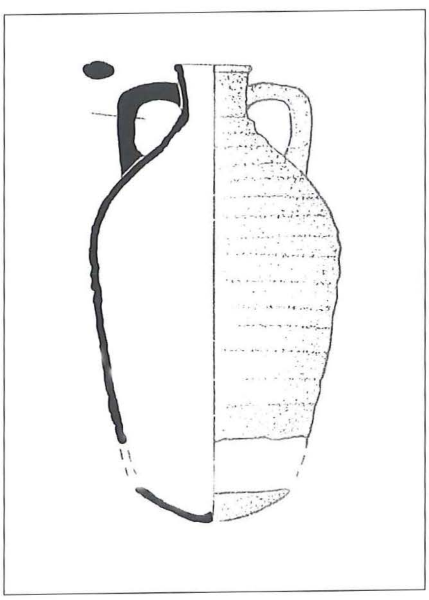

Fig. 34 Chersonesos-9th c. AD.

explanation I can find of the fact that LRA1 and LRA2 were imitated until the ninth century in the Crimea, a region that did not produce olive oil.[105]

Concluding remarks

The study of the Roman amphorae discovered in Scythia, a remote province of the Empire, reveals not only some problems for our research, but also sheds light on some major economic issues. It is increasingly clear that a major drawback is the lack of workshop excavations in the Eastern Mediterranean, which is a reason for our incomplete knowledge of amphora typologies. We have to secure our information on amphora workshops discovered by surveys with very careful excavations. I totally agree with Simon Keay: "Amphora specialists need to select and address particular questions... to begin to create models on a regional basis."[106] He obviously had the Western Mediterranean in mind, but in the Eastern Mediterranean we are quite at the beginning of our research, due to the lack of pottery workshop exca-

[105] Романчук *et al.* 1995, pls. 14, 20-23.
[106] Keay 1992, 360.

vations, and of detailed typologies. I would say that, if we consider the amphora workshops excavated at Sinope, in Dobrudja and in the Crimea, we are at a more advanced stage in the Black Sea than in the Eastern Mediterranean. We need specially designed projects that can deal only with amphora workshops, since amphora studies have so far been carried out only for the sake of dating the sites. New projects would allow us to construct complete typologies with good fabric descriptions. It is increasingly clear that in order to define an amphora type we need more than a fabric examination, even if this is done by the most sophisticated laboratory analysis. We have to take into account the local cultural tradition that determined certain stability in modelling the shape of an amphora, in the clay source, and in a continuity of manufacturing techniques used by potters that endured for generations. We can improve our typologies that usually record only chronological developments, by devoting more attention to the study of certain morphological details, like handle attachments, the treatment of the exterior surface, or the type of base.[107] The physical effects of use must also be taken into account. Patterns of fracture, spalling and breakage can provide us with valuable classificatory criteria in defining a certain amphora type. In addition, we should not forget that some geographical areas display a relatively uniform sedimentary geology and we have situations where many kilns are located on similar geological deposits, and add the same inclusions to the fabric, as is the case with Tunisian amphorae. These typologies will become a more useful tool for the archaeologists on excavations, helping them to assign their sherds to certain types on the spot, without waiting for costly and time-consuming laboratory analyses.

Another weakness of our ceramic analysis is the persistence of a certain mentality that makes us treat these jars simply as pottery, forgetting that they have been made for a particular function of storing and transporting alimentary products. Therefore, a step forward will be to consider them from a quantitative and qualitative point of view, transforming the figures, establishing an average volume for each type, and assigning a certain quality and value to that product. We will never be able to know the total quantities of wine or olive oil that were distributed on the market of a certain site, but a quantitative and qualitative approach to amphorae will definitely change and enlarge our views of ancient societies.

A further important question is that of the high frequency of LRA1 and LRA2 on the market of the province of Scythia. As I have mentioned above, the accumulated evidence suggests the presence of two complimentary products, wine and olive oil, carried by these containers until, at least, the second half of the sixth century AD. To these two amphora types I think that it is reasonable to add those carrot amphorae made at Seleucia in Pieria occurring at Dobrudja between the middle of the fourth and the middle of the fifth centuries.[108] They overlap with LRA1 during the first third of the fifth century and disappear after that. The chronological succession and common origin of these two amphora types give me a strong reason to suppose that this region was involved in supplying the province of Scythia with wine at least from the middle of the fourth century, if not earlier.

The amassed information suggests olive oil as the main contents of LRA2. In addition to the physical properties, the lack of lining on the inside of the walls, and *dipinti* that belong to this amphora type, we have to take into account that the province could not produce olive oil. The advance of the Empire towards the northern Balkans and the Danube Delta created a market with a large population, which maintained a Mediterranean diet and, subsequently, a great demand for olive oil, for food, personal hygiene and lamps. Probably starting in the second half of the first century and growing at the beginning of the second century, the Roman government embarked on a new policy of stimulating a certain specialisation of some regions such as Spain, North Africa,[109] and perhaps some areas of the Aegean and the east coast of Turkey. Therefore, if the typological evolution that has been sketched for LRA2 will prove to be correct, we can expect to see an earlier

[107] Vandiver & Koehler 1986 provides us with an excellent exemplification of this type of amphora analysis.

[108] Opaiţ 1991a, 148; Opaiţ 1991b, 219-220; Topoleanu 2000, 141.

[109] Mattingly 1988a; 1988b; 1988c.

involvement of the Roman authorities in changing the economic pattern of the Eastern Mediterranean. For that reason, the trade patterns that have been identified for the Late Roman and Early Byzantine periods could have earlier roots.[110] The olive oil that had previously been sent to the Greek colonies of the west coast of the Black Sea was not sufficient for the growing population of large provinces as Moesia Inferior, Moesia Superior and Dacia, and the most suited container for this product was the earlier subtype of LRA2. In all likelihood the olive oil was not the top quality (*oleum floris*), which according to the *Edictum Diocletiani et collegarum de pretiis rerum venalium* was sold at 40 *denarii* per *Italicus sextarius*. Presumably, it was *oleum cibarium* (food oil) or *oleum sequentis* (second grade oil), both valued at 24 *denarii communes* per *Italicus sextarius* in the Latin texts, while *oleum cibarium* was valued at only 12 *denarii communes* in the Greek text.[111] In addition, Amouretti pointed out that in the Latin version of the Edict, the number of pressings gives the quality of the olive oil, whereas in the Greek translation this quality is indicated by its taste.[112] Thus, the last category, *cibaria*, can be translated as common, ordinary olive oil, and also as oil that went flat or stale when kept for too long.

The existence of a certain degree of typological standardisation in types LRA1 and LRA2 suggests a centralised production and the high frequency of their occurrence in a frontier province as *Scythia* suggests a tied exchange under a firm governmental control. There is little doubt that the Church, the only institution that could compete economically with the state, was also involved in this commercial activity, but it is at present difficult to say with confidence what proportion of the total trade was under the Church control. In this context, it is worth mentioning the frequent occurrence of religious *dipinti* on many LRA1.

Per contra, the large diversity of other Eastern Mediterranean amphorae in capacity and shape suggests a multiplicity of sources that did not have anything in common with government control. If we assume that the smaller the recipient, the more valuable its contents, we can deduce that the wine carried by LRA3 was more valuable than that held by LRA1. In addition, due to the incipient stage of our research, we do not know if some small amphorae, such as the so-called Aegean-carrot or Opaiţ E-III, represent a fractional size or just a general decrease of these amphorae (arrived at their final evolution), as is the case with type Kapitän 2 amphora. In addition, it is worth mentioning the occurrence of this mixture of amphorae especially from the second to the fifth centuries. Their presence is severely diminished during the sixth century, replaced, nonetheless, by the increased number of LRA1 and LRA2. In addition to these two amphora types, LRA4 are also in great demand on the Scythian market.

Undoubtedly, the two phenomena outlined above deserve further study, but two different commercial trends seem to emerge from the presence of Eastern Mediterranean amphorae on the Scythian market. A tied, controlled trade attested by the high frequency and standardisation of LRA1 and LRA2, and a free trade indicated by the multitude of amphora types that only when considered together could eventually counterbalance the first amphora category. It is worth noting that ancient Dobrudja had continuous commercial contacts with the Eastern Mediterranean from the Archaic period and that the presence of these products on the Scythian market during the Late Roman period represents only a normal and logical continuation of these long-lasting trade connections. The meagre free trade in the economy of the ravaged province of Scythia during the sixth century led the Imperial government to create a hybrid administrative unit in AD 536: *Quaestura exercitus*, a combination of the two Danubian provinces Moesia II and Scythia with Caria, the Cyclades and Cyprus. This palliative perhaps saved the situation only temporarily, as the economic and political situation of the Empire became more difficult by the end of the sixth and beginning of the seventh century. The period coincides with the frequent imitations of LRA1 and LRA2, and from that time on it becomes difficult to say which was used for

[110] Ward-Perkins 2000; Ward-Perkins 2001.

[111] Giacchero 1974, 140-141; Durliat 1990, 509-512; Peña 1999, 28.

[112] Amouretti 1986, 181.

wine and which for olive oil. I would not exclude that a lack of specialised craftsmen could also be a possible cause for the massive reuse of amphorae, simultaneously with the disappearance of the old tradition of assigning a certain product to a certain container.

My sketchy presentation of the Eastern Mediterranean amphorae discovered in Dobrudja is only intended to draw attention to the incipient stage of our studies, and to the need for a more organised and specialised approach to the potential of this very complex material.

Forlimpopoli Amphorae at Tanais in the Second and Third Centuries AD

Karolina Paczyńska & Svetlana A. Naumenko

The article presents a group of *Forlimpopoli* amphorae and their fragments found at Tanais (Russia) in the light of their production and distribution in the Mediterranean in the second and third centuries AD (Fig. 1).

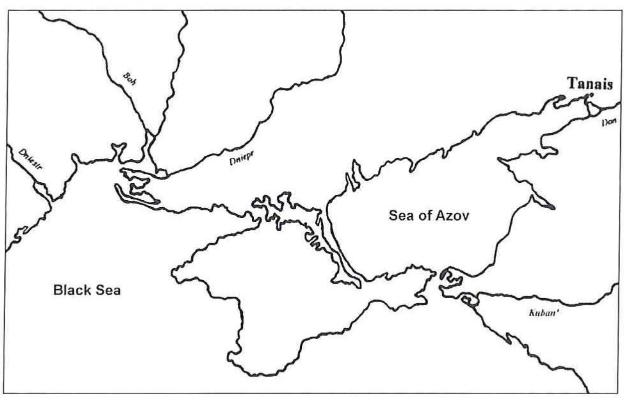

Fig. 1 Northern coast of the Black Sea region: location of Tanais. Drawing K. Paczyńska.

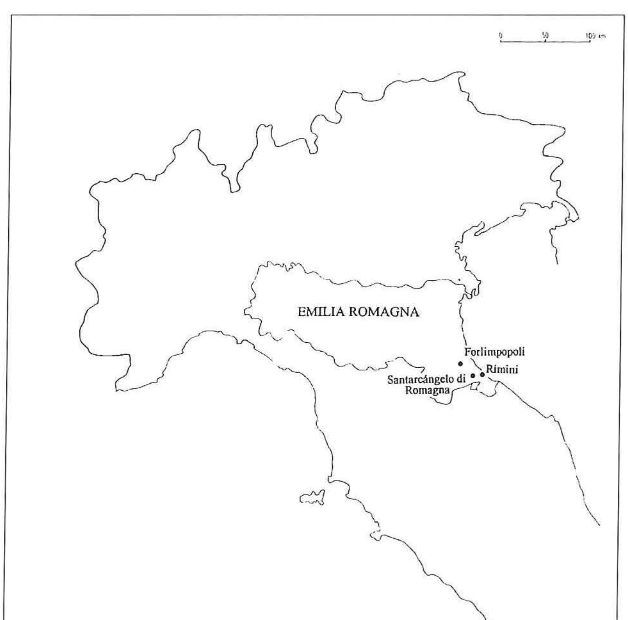

Fig. 2 The Emilia-Romagna region and centres of *Forlimpopoli* amphora production. Drawing P. Jaworski.

Origin and Distinctive Features of *Forlimpopoli* Amphorae

Amphorae of this type are named after the site of production at Forlimpopoli (Roman *Forum Popili*) in the region of Emilia-Romagna in Northern Italy (Fig. 2), where remains of kilns accompanied by complete amphorae and their fragments were uncovered.[1] *Forlimpopoli* jars are also designated as Robinson K114, Riley MR13, Hayes 7, Peacock-Williams 42, Beltrán 75, Ostia I, 451, Ostia IV, 440-441, Bjelajac III, Opaiţ VII and Dyczek 5.

Forlimpopoli containers belong to a wider family of ceramic production, developed in the *VIII Regio Italica*. Finds of flat-based amphorae, and kilns used for their production, are concentrated mostly at Rimini and its surroundings (Santarcángelo di Romagna and S. Ermete), and at Forlimpopoli.[2] On the basis of rim shape it is possible to distinguish two variants of flat-based amphorae manufactured along the Adriatic coast of Emilia-Romagna. Whereas rims of jars produced at Forlimpopoli are round in section, amphorae manufactured at Rimini and its surroundings have ribbon-like rims, usually rectangular in section.[3] They all have cylindrical necks, handles slightly curved towards the top, oval-shaped thin-walled bodies. In both cases clay is fine in texture and yellow, pinkish beige or pinkish brown in colour. It should be noted that *Forlimpopoli* amphorae are repeatedly designated as Dressel 29 or simply as amphorae "*italiche al fondo piatto*"; sometimes they have been referred to as other classes of amphorae.[4]

[1] Aldini 1978, 236-245, pls. 89-91.
[2] Maioli & Stoppioni 1989, 574.
[3] Maioli & Stoppioni 1989, 574.
[4] Cacciaguerra 1991, 21, n. 2.

Typology and Date Range

On the basis of finds from excavations at Forlimpopoli, T. Aldini divided the class into four categories, which are referred to as forms A, B, C and D (Fig. 3).[5] B and C correspond to Ostia IV, 440-441, while form D is identical to Ostia I, 451.[6] *Forlimpopoli* amphorae were produced from the last quarter of the first century AD until the middle or third quarter of the third century AD.[7] The morphological characteristics of this class of jars did not change considerably over time. This is one of the reasons why it is difficult to establish chronological limits for different variants of these amphorae and, in consequence, to date their fragments accurately.

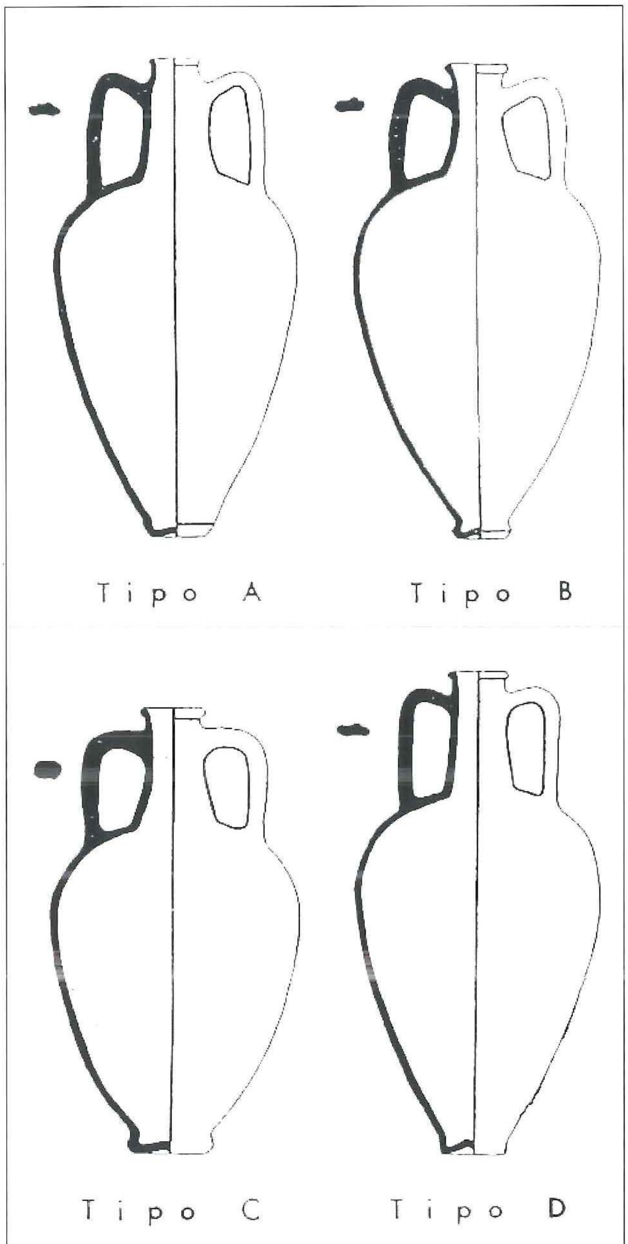

Fig. 3 Typology of *Forlimpopoli* amphorae: four variants referred to as A, B, C, D types. After Aldini 1978, 238, fig. 2.

Contents

There are neither stamps nor graffiti or painted inscriptions on *Forlimpopoli* amphorae. This fact makes it difficult to say for what products they were intended.[8] On the basis of shapes, and microscopic analysis of the remains of contents, L. Cacciaguerra concluded that *Forlimpopoli* amphorae of type C might have contained wine, while types A and D could have been used as *garum* jars.[9] At present, both amphorae manufactured at Forlimpopoli and at Rimini with its surrounding area are treated as wine containers.[10] The evidence consists of some examples of resin-coated inner surfaces on *Forlimpopoli* amphorae from Aquileia[11] and *Singidunum* and *Viminacium* in Upper Moesia.[12]

Distribution

Forlimpopoli amphorae have been found throughout the Mediterranean in contexts from the second and third centuries AD (Fig. 4). They are represented at **Ostia**,[13] **Forlì**[14] and in the eastern part of the Veneto, where they have been found at **Oderzo**, **Altino**, **Adria**, **Caorle**, **Concordia Sagittaria**,

[5] Aldini 1978, 241-242, fig. 2, 3; 1981, 41, fig. 24; Sciallano & Sibella 1991, 39; Dyczek 2001, 78.
[6] Panella 1989, 148.
[7] Aldini 1978, 245; 1981, 43; Maioli & Stoppioni 1989, 574; Panella 1989, 153; Cacciaguerra 1996, 31; Cipriano & Carre 1989, 88.
[8] Aldini 1978, 244-245; Cacciaguerra 1991, 30.
[9] Cacciaguerra 1990, 13-14, fig. 40; 1991, 30, 33-34.
[10] Maioli & Stoppioni 1989, 575; Panella 1989, 154-156; Sciallano & Sibella 1991, 38; Dyczek 2001, 80.
[11] Carre 1985, 231.
[12] Bjelajac 1996, 23.
[13] Manacorda 1977, 371-72, pl. 54 440-42; pl. 84, 632-34; Panella 1989, 146-56.
[14] *Cf.* Panella 1989, 150, n. 35.

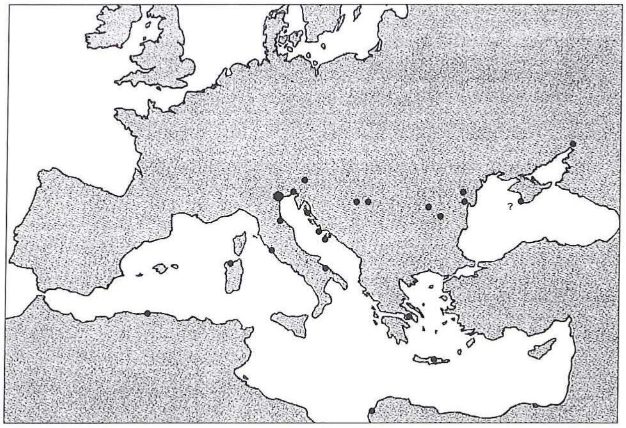

Fig. 4 Distribution of *Forlimpopoli* amphorae. By K. Paczyńska.

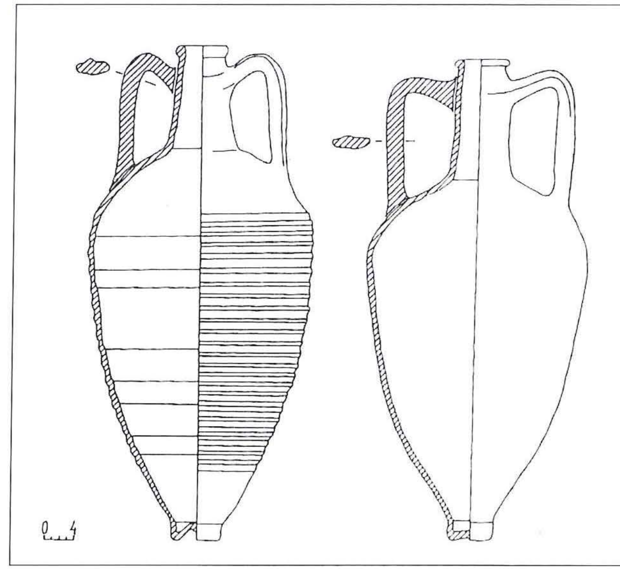

Fig. 5 *Forlimpopoli* amphorae from Tanais. Drawings S.A. Naumenko.

Protgruaro,[15] **Torcello**[16] and **Lio Piccolo**.[17] They also occur at **Aquileia**,[18] near **Grado**,[19] at **Virunum**, **Magdalensberg**,[20] and in shipwrecks at **Ilovik**, **Mlin** (between the islands of Čiovo and Šolta) and **Krava** (near the port of Vis), Croatia.[21] They are represented at **Berenice/Sidi Khrebish**,[22] **Athens**,[23] **Knossos**,[24] **Porto Tórres** in Sardinia,[25] **Tipasa**, **El Djem** and **Leptis**.[26] This type of wine containers is also attested at **Faras** and **Meroe** in Nubia.[27] *Forlimpopoli* jars have further been found in **Pannonia**,[28] **Upper Moesia**[29] and in **Lower Moesia**, where they are represented at **Histria** and **Troesmis**.[30] They are also attested at **Romula** on the other side of the Danube.[31] Seven examples come from a shipwreck identified in 1973 near the village of **Batin** in northern Bulgaria.[32]

Imports to Tanais

The assemblage of *Forlimpopoli* amphorae at Tanais consists of six almost complete amphorae as well as 20 rims, 13 necks, 30 handles and 19 bases. They were all found in closed deposits dated, on the basis of coins and other types of amphorae,[33] in the first half of the third century AD. The possibility that they occurred at Tanais as early as in the second century AD is, however, not excluded. Taking under consideration little differences in the shape of these jars, it is possible to distinguish two variants, which differ in the shape of rims, handles, bases

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15 Cacciaguerra 1990, 12-13; 1991, 21-36.

16 Modrzewska 2000, 61; Leciejewicz *et al.* 1977, 84, 34, 38.

17 Modrzewska 2000, 50.

18 Carre 1985, 228-31, fig. 5; Cipriano & Carre 1987, 486, fig. 17; Verzár-Bass 1994, 383-89.

19 Dell'Amico 1997, 109, fig. 39, a-b.

20 Modrzewska 1999, 106.

21 Matejčić 1976, 351-352; Orlić 1982, 153-54; Cambi 1989, 323-26; Parker 1992, 215, no. 513; 230, no. 558; 277-78, no. 702.

22 Riley 1979, 197, MR 13, fig. 85, 256.

23 Robinson 1959, 69, K114, pl. 15.

24 Hayes 1983, 145, type 7.

25 Villedieu 1984, 195.

26 Panella 1989, 150, n. 37.

27 According to the information given by Ms. D. Bagińska one *Forlimpopoli* amphora was found at the cemetery in Faras (tomb no. 2984) and two such jars were unearthed at the cemetery in Meroe (tomb BEG no. 18 of a queen Amanikhatashan). The first of the tombs is dated to the 2nd and 3rd centuries AD, and the second one to the 1st and 2nd centuries AD. These *Forlimpopoli* amphorae will be discussed in the PhD thesis: "Amfory z terenów Nubii od II w. p.n.e. do XIV w. n.e. Studium nad typologią naczyń i kontaktami handlowymi Nubii od ze światem śródziemnomorskim", prepared by Dobiesława Bagińska at the Institute of Archeology of the University.

28 Plesničar-Gec 1977, pl. 8; Brukner 1981, pls. 165-67.

29 Bjelajac 1996, 22-25, fig. IV.

30 Opaiţ 1980, 304; Suceveanu 1982, 104, pl. 10.

31 Popilian 1976, 46, pl. XVI, 208-13; *cf.* Dyczek 2001, 80.

32 Dyczek 2001, 80, fig. 39.

33 Zeest 72, 75, 79, 84; Arseneva & Naumenko 1994, 61-113

and in the presence or absence of grooves on the body. Morphological characteristics of the amphorae from Tanais, first of all fine texture and colour of clay (pinkish beige or pinkish brown), allow us to state that they were not produced locally as imitations of Italic jars.

The *Forlimpopoli* amphorae constitute the largest group of this type of amphorae at Tanais, and are the first attested on the northern coasts of the Black Sea. We should, however, emphasise the formal similarities between *Forlimpopoli* amphorae and vessels of Zeest's 91-94 group, found in the Bosporus Kingdom. Since it is very probable that many amphorae of the discussed type remain unrecognised or incorrectly classified, more thorough study of amphora finds from archaeological sites in the northern Black Sea region should be undertaken.[34]

[34] *Forlimpopoli* amphorae imports at Tanais will also be discussed in the forthcoming publication of Greek and Roman amphorae from this site prepared by S. A. Naumenko, and they were presented by Naumenko & Paczynska 2001.

Greek Amphorae from the Polish-Ukrainian Excavations at Koshary, Odessa District (Fourth and Third Centuries BC): a First Presentation

Ewdoksia Papuci-Władyka & Tatiana N. Kokorzhitskaia

Introduction

Recent years have seen great and continually increasing interest among foreign – also Polish – students in the Greek colonies of the Black Sea coast. Several expeditions have been organized, involving scholars from Poland and other countries in cooperation with Ukrainian researchers. One of these is the joint Cracow-Odessa expedition, created in 1998, based on two agreements signed by the Institute of Archaeology at the Jagiellonian University: one with the Archaeological Museum at the Ukrainian National Academy of Sciences in Odessa and the other with the Department of Historical Preservation at the District Administration of Odessa.

The Cracow-Odessa expedition, directed by Ewdoksia Papuci-Władyka and Евгения Ф. Редина,[1] investigates the ancient site located near the modern village of Koshary, some 40 km east of Odessa, about 700 m from the shore of the Black Sea on the right bank of the Tiligul coastal salt lake (Tiligulskij

[1] Other scholars also took part in excavations. From the Institute of Archaeology at the Jagiellonian University, J. Chochorowski directed the Polish part of the necropolis excavations during the seasons from 1998 to 2000, J. Bodzek worked in the years 1998-2001 and W. Machowski during all the campaigns. From the Archaeological Museum in Odessa Л.В. Носова, Т.Н. Кокоржицька and В.Г. Петренко took part in the years 1998-2001. Students from both Cracow and Odessa Universities have participated during every season.

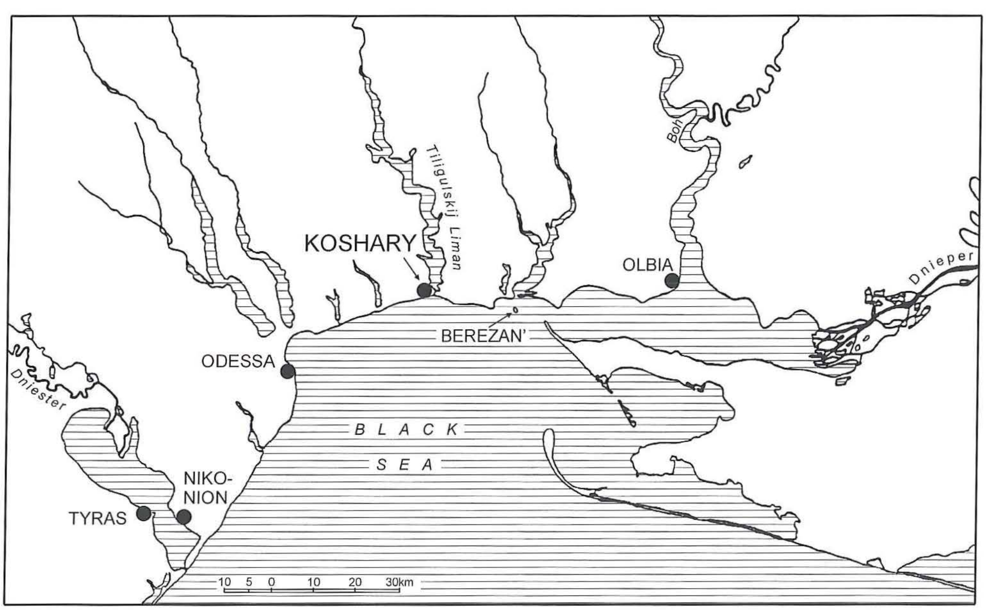

Fig. 1 Koshary: the location of the site on the northern shores of the Black Sea.

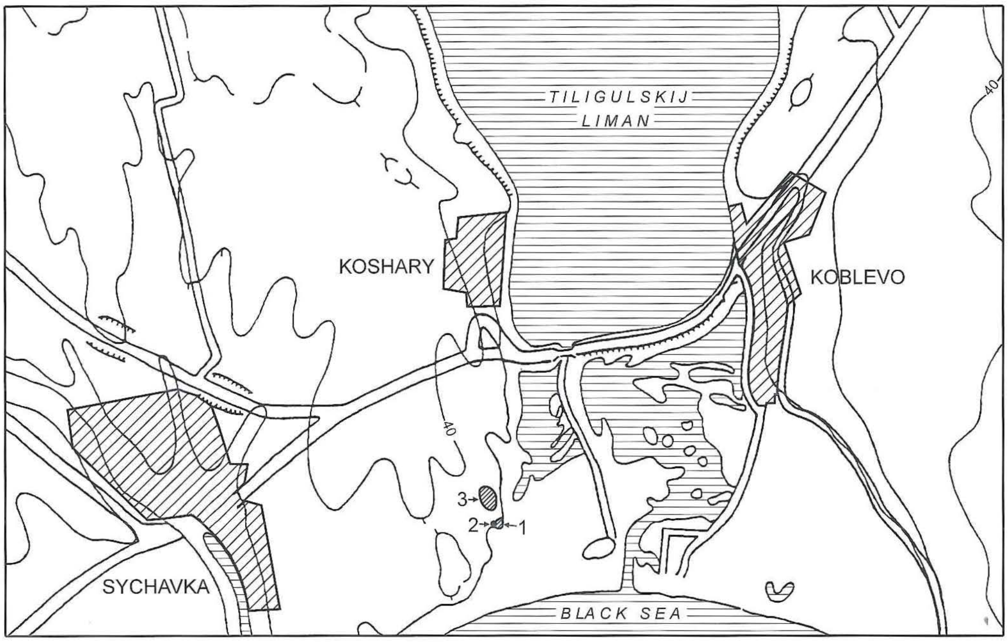

Fig. 2 Koshary: the modern village and ancient sites. 1. Settlement; 2. Eschara; 3. Necropolis.

Liman), the ancient Axiakos (Fig. 1).[2] The Koshary site, uncovered in 1950 by Л.М.Славин, had been explored to a limited extent during several earlier seasons by Э.А. Сымонович, Е.И. Диамант, Е.А. Левина and Е.Ф. Редина.[3] It is a complex composed of an ancient settlement and its accompanying necropolis (used also by local aboriginal tribes) dated from the end of the fifth to the middle of the third century BC (Fig. 2). The material culture, the burial rites and the plan and structures of the settlement are similar to those of Olbia and its *chora*, providing the basis for a hypothesis that the Koshary site belonged to the Olbian state. What makes this site especially interesting is the hypothesis, advanced several years ago, that the Koshary complex may be identified with the ancient Odessos, located by ancient authors at the mouth of the Axiakos (i.e., a second Odessos, other than the famous site identified with the modern Varna in Bulgaria).[4]

The aims of new Polish-Ukrainian excavations are twofold: to determine the character and rank of the Koshary complex and its position within the Olbian *chora* and the structure of the polis of Olbia, and to define the character of the relations between the Greeks on the Black Sea and the aboriginal tribes, such as the Scythians, the Getae and others.

The investigations in the settlement were concentrated to the northeast, near the edge of the promontory on which the site is located (Fig. 3), within the three trenches III, IV and VI. As a result, part of the settlement has been uncovered, which consisted of dwellings, streets (mainly in the Liman direction), a series of household pits, hearths and other objects. The architectural remains exposed within trench III (*c.* 200 m²) were arranged on the terraces. Three building phases can probably be traced: the first from the end of the fifth and beginning of the fourth centuries BC, the second from the first half and third quarter of the fourth century, and the third phase from the last quarter of the fourth and first half of the third centuries BC.

Within trench IV (*c.* 450 m²), only the two last building phases were found, and the remains belong mainly to the third phase (Fig. 4). Two narrow streets were exposed with adjacent buildings, probably dwellings (Houses I and II). The walls were

[2] Chochorowski & Papuci-Władyka 1999, 10-12; Chochorowski *et al.* 1999, 55-63; Редина *et al.* 1999, 19-24; Chochorowski *et al.* 2000, 185-202; Chochorowski *et al.* 2001, 148-150; Редина & Чочоровский 2001, 139-54; Papuci-Władyka *et al.* 2002, 13-17.

[3] For previous literature see: Chochorowski *et al.* 1999, 57, note 2.

[4] Сымонович 1954, 146-150.

Fig. Fig. 3 Koshary: the view of the promontory on which the settlement and eschara (in the foreground) are located.

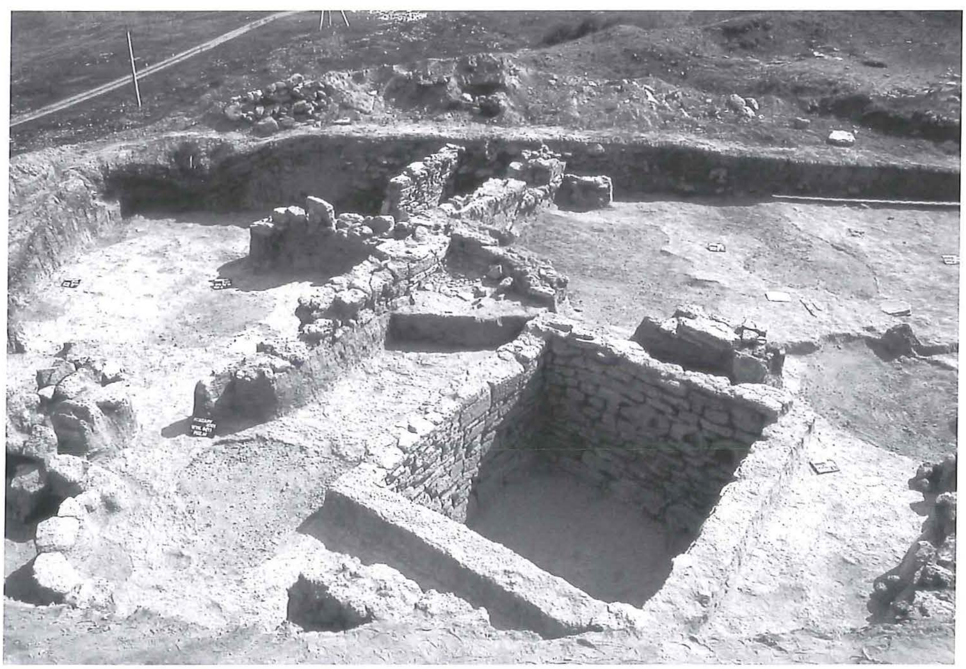

Fig. 4 Koshary: trench IV in the settlement with the cellar in the foreground.

made of irregular stones of varying dimensions, laid with a sort of clay-earth mortar; the slits between the stones were filled with earth and stone. Some parts of the walls were made of larger, worked stone blocks. In House II the remains of the second building phase were uncovered as a very well preserved cellar, almost square in plan with excellent walls (Fig. 4). In trench IV, about 50 pits were also investigated, most of them of household character.

The abundant pottery was accompanied by many animal bones, objects made of different metals, bone objects, shell pendants, bronze coins from Olbia, mainly of the so-called Borysthenes type dated generally in the period 330-250 BC, and other artefacts.

At the south end of the promontory, an eschara was uncovered (Fig. 3). It had the form of a burrow, formed by the remains of sacrifices (burnt and

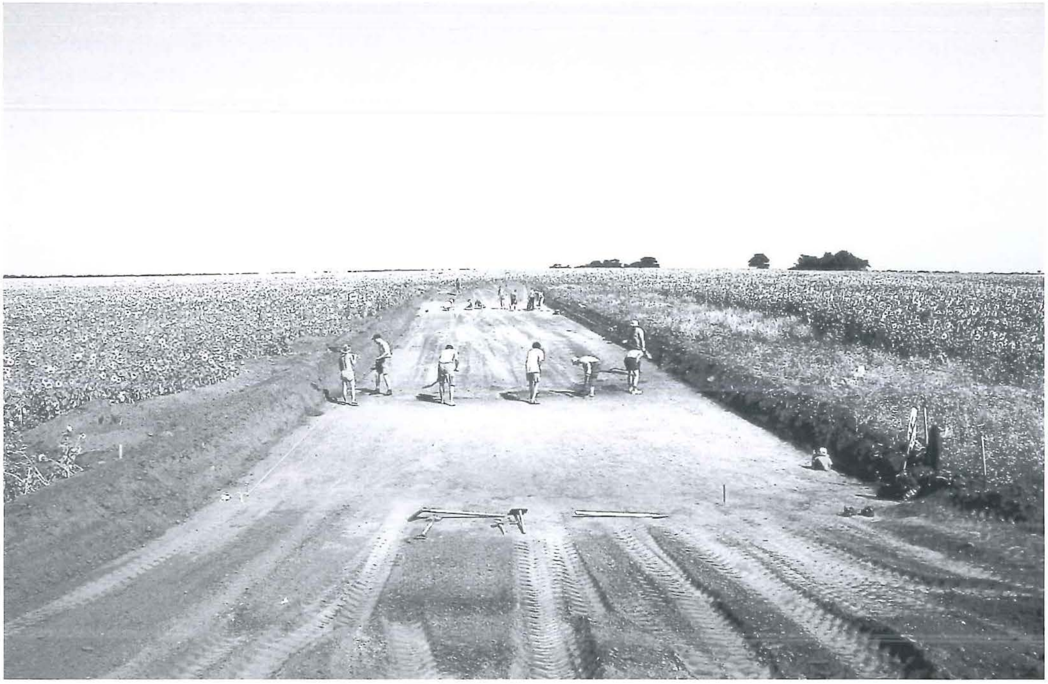

Fig. 5 Koshary: general view of the works on the necropolis in the 2001 excavation season.

libations) conducted in the same place during long time. Its dimensions are about 20 by 30 m and the maximum preserved high is 2.5 m.

At the necropolis north of the settlement, an area of *c.* 5000 m^2 was investigated, containing more than 200 graves and other features (Fig. 5). Most of the tombs had unfortunately already been robbed in Antiquity. The most popular type of burial is a niche tomb, usually marked on the surface by a gravestone (pillar, slab). The east-west orientation dominates in the arrangement of the skeletons; there are also tombs with west-east orientation, typical of Scythian culture. The second, rarer type, is a simple pit grave and the third, also rare, is a large chamber tomb, the so-called catacomb. During the 2001 season the first cist grave in Koshary came to light, built up with big stone slabs. The grave inventories of unrobbed tombs contained elements typical for the ancient world: pottery (usually an amphora and a black-glazed kylix or kantharos, a squat palmette lekythos, a grey-ware jug), weaponry, jewellery, terracottas, objects of every day use etc. On the other hand we also found Scythian elements (e.g. small bronze arrowheads with muff).

Amphorae

The Koshary excavations have yielded many pottery fragments and a few whole vessels. Wheel-made pottery makes up more than 80 per cent, but we also have many hand-made vessels, representing the local, mainly Scythian, tradition. The imported pottery consists mainly of Attic black-glaze, a few red-figured fragments, and pottery presumably made in Olbia. The Olbian production embraces a large group of grey-ware vessels (mostly plates, bowls and jugs), and a smaller group of vessels made of red clay. Additionally, we have wheel-made kitchen pottery, probably from Olbia. Amphorae are without doubt the biggest group of our pottery.

Statistics

For technical reasons it was unfortunately not possible to make statistic calculations for the whole ceramic material, but we can say that amphorae make up 70-80 per cent of the whole ceramic material, and in some contexts in the settlement even more. More detailed calculations were made for the eschara material. In the campaign of 1999, 68 per cent of more than 6000 sherds came from amphorae, and in the campaign of 2000 amphora sherds accounted for more than 70 per cent.

Centres

The amphorae come from many different places, but Black Sea production centres, such as Heraclea, Sinope and Chersonesos are, with Thasos in the Aegean, definitely predominant.[5] The completely preserved containers were found mainly in the necropolis, especially in unplundered tombs, but sometimes also in the settlement in pits or cellars. Fourteen completely preserved amphorae have been uncovered until today (twelve in the necropolis and two in the settlement): of those eight are from Heraclea, three from Thasos, one from Chersonesos and two from unidentified centres.

The largest group comes from Heraclea, which became the largest exporter of wine in the Black Sea region in the beginning of the fourth century. Amphorae from Heraclea were much more common in contexts from the beginning of that century than those from such well-known centres as Chios and Thasos. The emergence of wine production at Heraclea is well documented by the fact that stamping began here as early as at Thasos,[6] and the majority of the amphorae were stamped. Among amphorae of type I, 80 per cent are stamped on the neck with the name of the producer, and from the second half of the nineties also with that of magistrates. Starting from the last third of the fourth century, the amount of amphorae imported from Heraclea to the north coast of the Black Sea diminishes, and by the end of the century such imports cease altogether.[7]

The amphorae from Heraclea found at Koshary represent almost all the known types and the dates cover the entire fourth century. The oldest one, found in grave 46, belongs to type I and has quite a high modulus (0.463), which is characteristic for this type (Fig. 6: 1).[8] The described amphora carries a stamp of the producer Διονύσιος on the neck. He is probably Dionysios I, one of the earliest Heraclean producers, belonging to the first chronological group of Heraclea stamps from 400-385/380 BC.[9] Кац had postulated in 1997 that the first fabricant stamps of Heraclea could be dated 415-400 BC, but Монахов did not agree with his opinion and dated the first Heraclean stamps traditionally.[10] The workshop of Dionysios I started in the 390s and was active until the end of the 380s.[11] The date is confirmed by an Attic black-glaze cup-skyphos of the so-called heavy-wall type of *c.* 380 BC (Fig. 6: 2).[12]

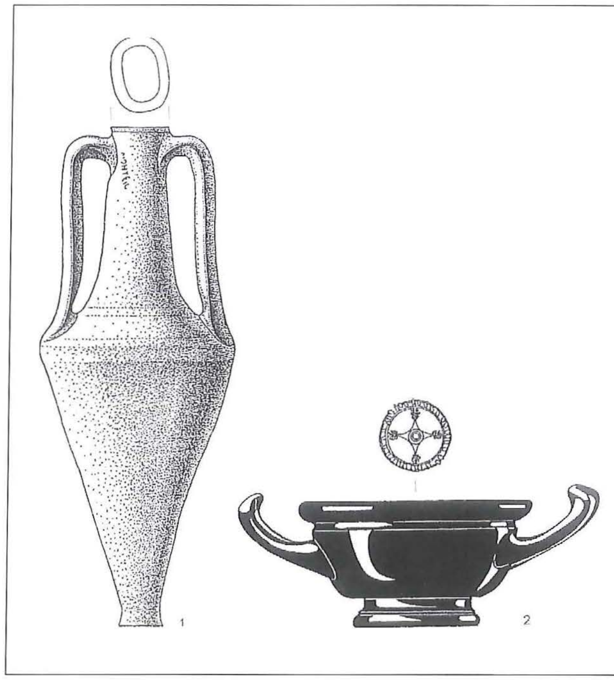

Fig. 6 1. Amphora, Heraclea type I (h.: 67 cm), producer Dionysios I, *c.* 380 BC; 2. Athenian black-glaze cup-skyphos of the so-called heavy-wall type, *c.* 380 BC.

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[5] Extremely useful for general problematic of amphorae and amphorae stamps is Garlan 2000 with rich bibliography.

[6] Монахов 1999a, 161; Pavlichenko 1999, 13-19; Балабанов (2002, 107) has postulated that "englyphic" stamps were produced not in Heraclea, but in Apollonia.

[7] Монахов 1999a, 248; see also Туровский *et al.* 2001, 30.

[8] For modulus i.e. Diam./Ho where Diam. = diameter and Ho = the depth of the vessel, see Монахов & Рогов 1990, pl. 7; for type I see: Monakhov & Rogov 1990, 130, pl. 1: 1-7.

[9] Балабанов 1982, 14; Брашинский 1980, 39 dates this group to the first and beginnings of the second quarter of 4th century BC.

[10] Кац 1997, 212ff; Монахов 1999a, 158 note 2.

[11] Монахов 1999a, 160, 167, 174f., 186-187, 197, 202.

[12] Sparkes & Talcott 1970, 280 no. 622, pl. 27, 55.

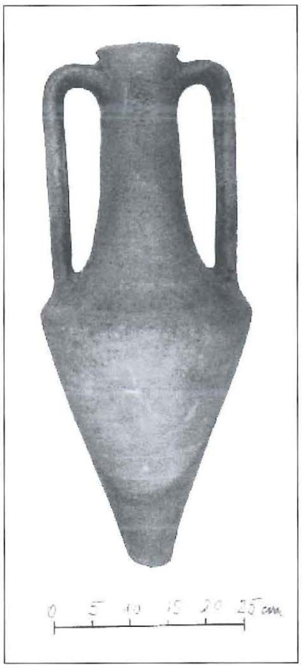

Fig. 7 Amphora, Heraclea type IA (h.: 46 cm), *c.* 380-370 BC(?).

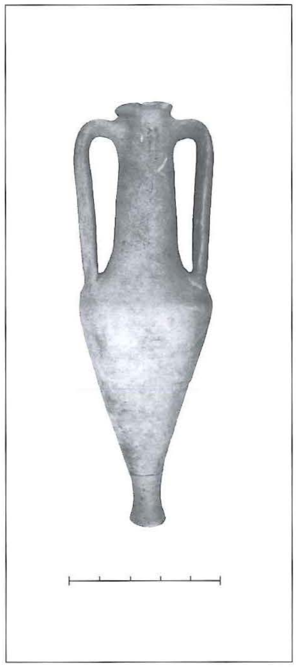

Fig. 8 Amphora, Heraclea type I A (?), producer Eurydamos, magistrate Ly(-), *c.* 370-350 BC (?).

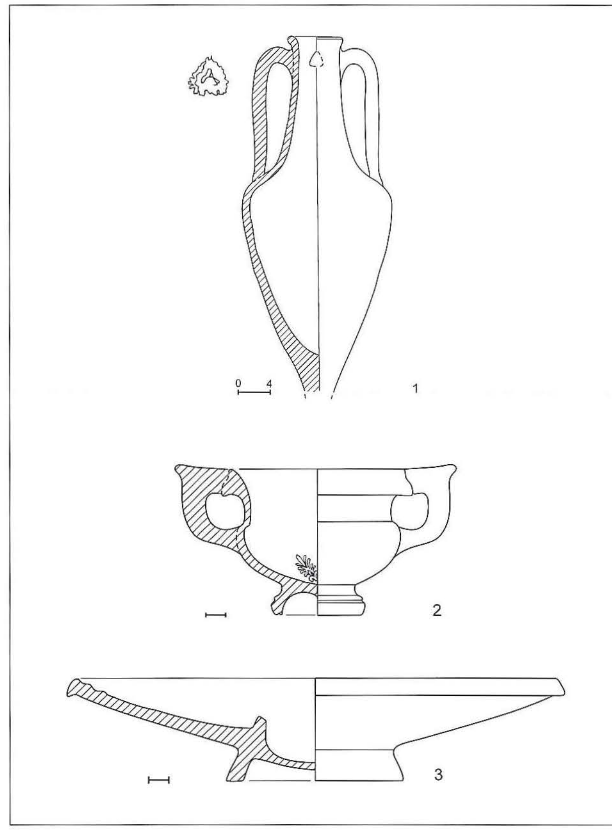

Fig. 9 1. Amphora, close to Heraclea type I A (H.: 46 cm), producer Ariston, magistrate Karakides, *c.* 360-350 BC; 2. Athenian black-glaze kantharos with moulded rim, *c.* 375-350 BC; 3. Grey-ware fish plate probably from an Olbia workshop.

The next two amphorae represent type IA, which appears in the second quarter of the fourth century BC.[13] The first (from grave 85, Fig. 7) has a modulus of 0.400. In comparison with the previous one, it has a very high neck (32 cm) and a smaller body diameter (24.8 cm). The well-preserved rhomboidal stamp on the neck, M | NA | ΠΑΥ, can be dated in the beginning of the second period.[14] The first letter could alternatively be interpreted as Σ. A similar, but worse preserved, stamp was found during the excavations of the Lusanovka settlement and first published by A.C. Коцевалов.[15] В. А. Васіленко has dated the stamp to the beginning of the second period and corrected some statements of Коцевалов, but due to its bad state of preservation, his reading of the stamp was still not correct.[16] Our amphora, with its much better state of preservation, makes it possible to read also the stamp from Lusanovka.

A second amphora (from grave 100), presumably of type IA, has an even smaller body diameter (20 cm) and a height of 54.5 cm (Fig. 8). The rectangular stamp on the neck has a two-line inscription most probably of the producer Ευρυδάμος and a magistrate Λυ(-). The two letters were possibly followed by other letters or a symbol; otherwise the stamp is not very well made. Balabanov, who has published a similar stamp, writes that stamps with two names, of which one is in a strongly abbreviated form, belong to the second group dated generally *c.* 385/380-305 BC.[17] Our amphora, probably of type I A, can preliminary be dated *c.* 370-350 BC.

The next amphora (from grave 119, found together with kantharos and fish plate), is close to type IA, with a quite well preserved triangular stamp:

[13] Брашинский 1980, 24; Монахов & Рогов 1990, pl. 2; Монахов 1999a, pl. 111: 1.

[14] Васіленко 1972, 88, no. 5.

[15] Коцевалов, 161, no. 21.

[16] Васіленко 1972, 90 fig. 1, no. 6.

[17] Балабанов 1982, 14, 26, tabl. 4 and 28, tabl. 6.

ΑΡΙ[ΣΤΟΝ]ΕΠΙ[Κ]ΑΡΑΚΥ[ΔΕ]ΟΣ and a grape in the centre (Fig. 9). The magistrate Καρακύδης was active at the end of the 360s and beginning of the 350s.[18]

Three amphorae represent type II. This type appears in contexts of the 370s and 360s and became very popular in the second half of fourth century along with type IIA.[19] They are slimmer than those of the previous type and have a taller foot. The amphora from grave 137 has a modulus of 0.371, the height is 65.5 cm and the body diameter 23.5 cm (Fig. 10). The stamp ΑΠΟΛΛΟ |caduceus|ΣΠΙΝΘΑΡΟ (caduceus to the right) belongs to the second group.[20] The magistrate Σπίνθαρος is known from stamps in the Hermitage and Odessa collections and can be dated to the third quarter of the fourth century BC.[21]

The stamp on the next amphora (from grave 108) cannot be read, but the preposition επι places it within the second chronological group of Heraclea stamps.[22] The body diameter is 24.5 cm and the height is 60 cm. The amphora discovered in 2001 (grave 147) represents type II-1 and is the only completely preserved Heraclean amphora without a stamp from our excavations. The last well-preserved example (grave 30, 1980, inv. 91204, Fig. 11) belongs to type IIA and has a modulus 0.405. In spite of the fact that the stamp is hardly readable we can read the name of the producer Φιλίσκος, whose workshop was active from the 340s to the 320s or 310s.[23]

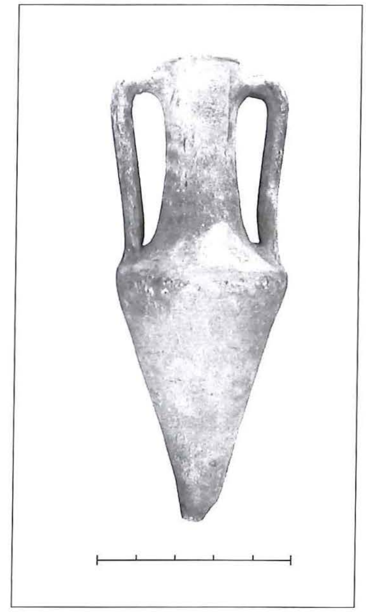

Fig. 11 Amphora of Heraclea, type II A, producer Filiskos, *c.* 340-320/310 BC.

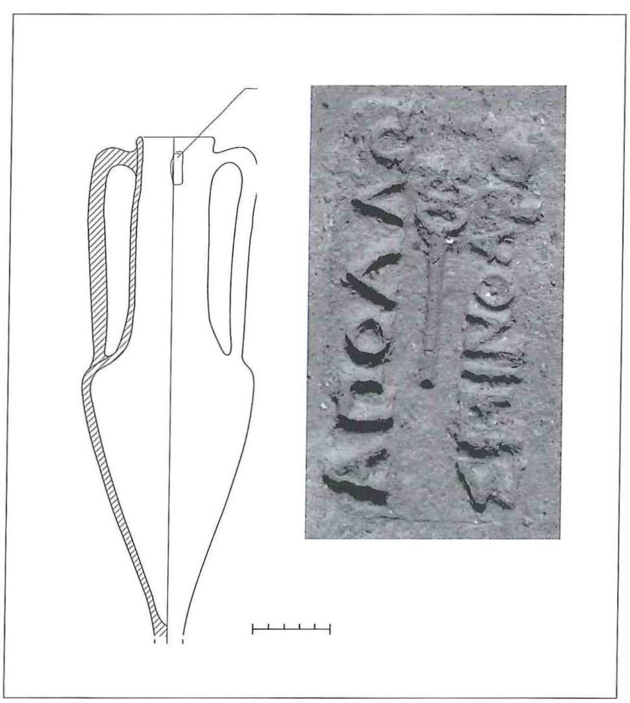

Fig. 10 Amphora, Heraclea type II (h.: 65,5 cm), producer Apollo, magistrate Spintharos, third quarter of the 4th century BC.

Other Black Sea centres to have supplied Koshary with large amounts of amphorae are Sinope and Chersonesos. Sinope became one of the largest Greek centres of production and trade in the fourth century, and as it is situated in the only region of the Black Sea coast where olive trees grew in Antiquity, its amphorae were probably not only destined for wine but also for olive oil. The fabric of Sinopean amphorae is very characteristic: like that of Heraclean amphorae it contains pyroxene and sand par-

[18] Монахов 1999a, 159, 282, 326-328; the same stamp: Брашинский 1980, 171 nos. 399-403.

[19] See e.g. Монахов & Рогов 1990, tab. 3. 20; Монахов 1999a, pl. 144: 2.

[20] Above note 17.

[21] Придик 1917, 122 no. 64; Васіленко 1972, 89 no. 9 with the fabricant Mys.

[22] Above note 17; about the preposition ΕΠΙ on Heraclea stamps see Павличенко 1992,138-147.

[23] Монахов 1999a, 440.

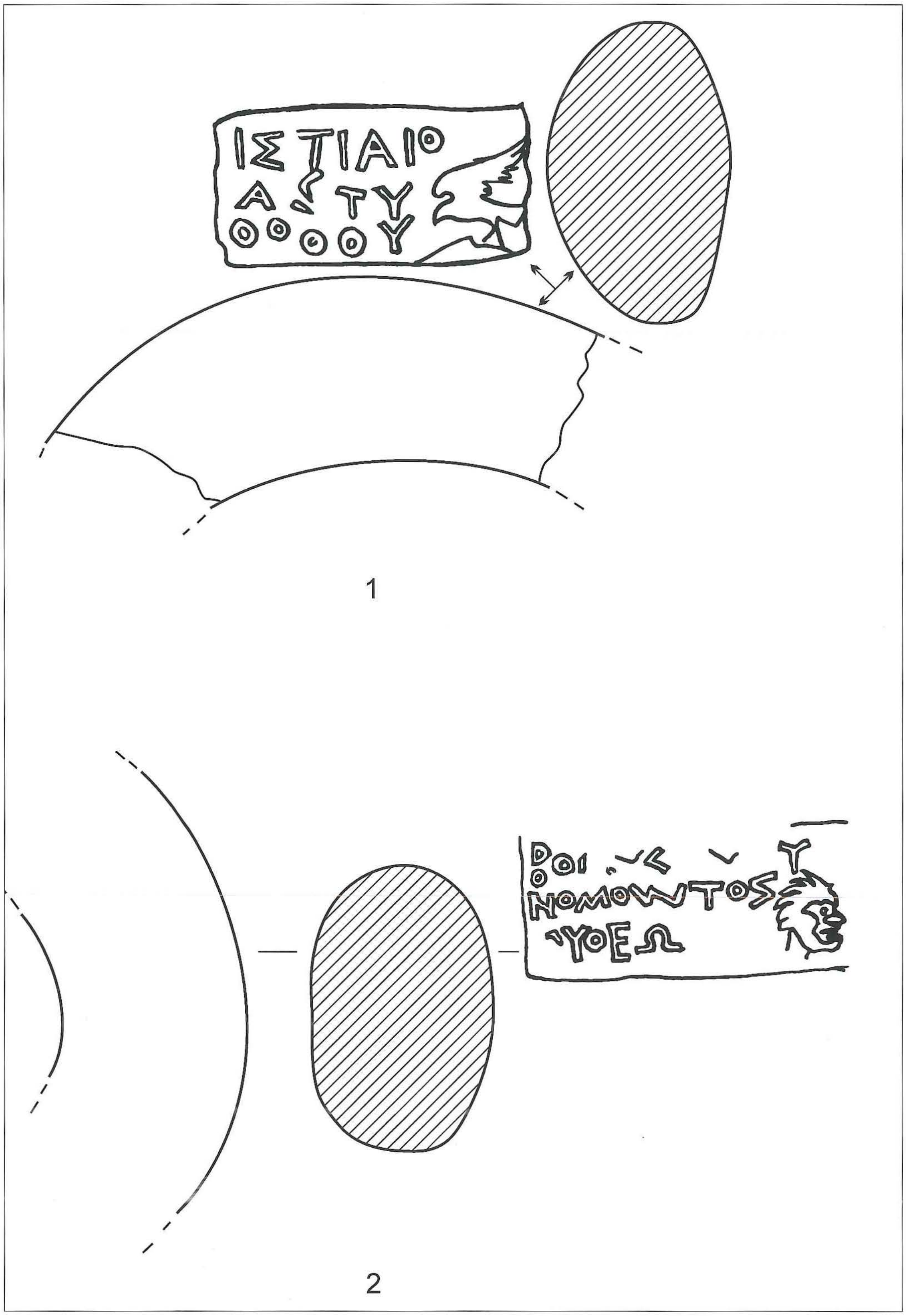

Fig. 12 Stamps of Sinope amphorae: 1. astynomos Histiaios I and producer Orthos, *c.* 348-339 BC?; 2. Astynomos Boryos I and producer Pytheos, *c.* 300-280 BC.

ticles, but the sherd in fraction has a distinctive grey tint.[24] The shape is very conservative, but Монахов has nevertheless been able to establish a typology.[25] Many bear stamps and the stamping continues for more than 150 years, starting probably in the 360s.[26]

[24] Whitbread 1995, 234-44.

[25] Монахов 1992, 163-204.

[26] The chronology of stamps of Sinope is much discussed, see: Федосеев 1993; id. 1994; id. 1999; Туровский 1997; Conovici 1998, 21ff; Conovici 1999, 49 note 1; see also Garlan 2000, 197 for other bibliography.

To begin with the stamps carried only the name of the producer, and later the name of the controlling magistrate – astynomos – was added. The stamped amphora handles from Sinope form one of the most widespread groups of dating material in the Greek colonies of the northern Black Sea coast, and Koshary is no exception.

A whole Sinopean amphora is yet to be found at Koshary, but fragments and stamps allow us to say that the imports had a long duration. The oldest stamp came from the eschara (trench V, field 17/1999, Fig. 12:1) and is very well preserved. It is rectangular with a three-line inscription: ΙΣΤΙΑΙΟ | ΑΣΤΥ | ΟΡΘΟΥ and, to the right of the legend, the emblem of the state: an eagle on dolphin to the left. The stamp is of the magistrate Histiaios 1, with the abbreviation αστυ(-) for αστυνόμος and the name of the producer Orthos. According to Федосеев, the magistrate belongs to the second group, dated 371-362 BC, although Туровский has proposed the date 348-339 BC.[27] Conovici places Histiaios I in the sub-group 1c of the first period of Sinopean stamps.[28]

The second interesting stamp, also from the eschara (trench V, field no.62/1999, Fig. 12:2), has a three-line inscription: ΒΟΡΥΟΣ | ΑΣΤΥ | ΝΟΜΟΥΝΤΟΣ | ΠΥΘΕΩ and to the right of inscription the head of a satyr in profile. The astynomos Boryos 1 is dated by Федосеев to *c.* 306 BC, i.e. group 7 of 306-284 BC. According to Туровский, this group should be dated 283-261 BC, and Conovici places the astynomos within sub-group IIId, dated in the first two decades of the third century BC.[29]

Among the Sinopean fragments we have feet of type I and II according to Монахов's classification.[30] Type I, with variants, was produced mainly in the fourth century and type II appeared in the second quarter of the fourth century continuing – with many variants – until the third quarter of the third century BC. Sometimes the amphorae from Sinope carry dipinti, as for example a shoulder and neck fragment found in trench IV in 1998, where one can see the letter A in red paint.

Amphorae from Chersonesos in Crimea (today Sevastopol) constitute the third large group from Black Sea production centres. Its production in the Hellenistic period is well known thanks to Монахов.[31] The majority of the amphorae carry stamps with the names of the controlling magistrates: astynomoi and, rarely, agoranomoi.[32] The earliest specimens of variant IA without slip are from the middle and third quarter of the fourth century. From the last quarter of the century they always carry a light slip.

Among the completely preserved amphorae at Koshary, only one comes from Chersonesos, but numerous fragments and stamps complete the picture. The whole amphora was found in one of the pits in the settlement (Trench IV pit 9, Fig. 13) and represents type IB according to Монахов's classification, and is one of the most popular types of Chersonesian amphorae. Many examples of the type had stamps and all were slipped. The type was produced from the end of the fourth to the mid-third century BC. Our amphora has two very well preserved stamps: on one handle there is the stamp of the magistrate Apollas, son of Choreios, and on the other the monogram HP retrograde. The magistrate Apollas belongs to group 2A in Кац' classification of magistrate stamps dated to the years 285-272 BC.[33] Our stamp was not made from any of the dies published by Кац and has mistakes: two Π in the word Apollas, two P and O (?) between them in the name Choreiou, and two T in the word astynomos. The monogram HP belongs to group A of unofficial stamps – "producers' stamps" – and appears with the magistrates of chronological groups 1B,C and 2A.[34]

Other stamps of Chersonesian amphorae were also found. In 1999 in trench IV/3 (layer C-D, field

[27] Федосеев 1994, 189; Туровский 1997, 220.
[28] Conovici 1998, 23, 53 no. 4 with fabricant Nimaktos; see also Брашинский 1980, 180 no. 553 with producer Poseidonios.
[29] Федосеев 1994, 189; Туровский 1997, 220; Conovici 1998, 33ff., pl. IV: 57,58, Pl. V: 59-62; Conovici 1999, 55 note 47; see also: Цехмистренко 1958, 1 fig. 12 (Pantikapaion); Брашинский 1980, 183 no 579 (Elizavetovskoe), without head, III group dated to 3rd century BC (id., 42); Фатеев 2002, 177, 14; for producer Pytheos see Conovici 1999, 55f.
[30] Монахов 1992.
[31] Монахов 1989; see also Whitbread 1995, 13-19.
[32] Кац 1985.
[33] Кац 1994, 48, 58, pl. VI:1-11, 1-7; Монахов 1999a, 503, 516.
[34] Кац 1994, 49, 54, 120, pl. CII: 2A-16,4.

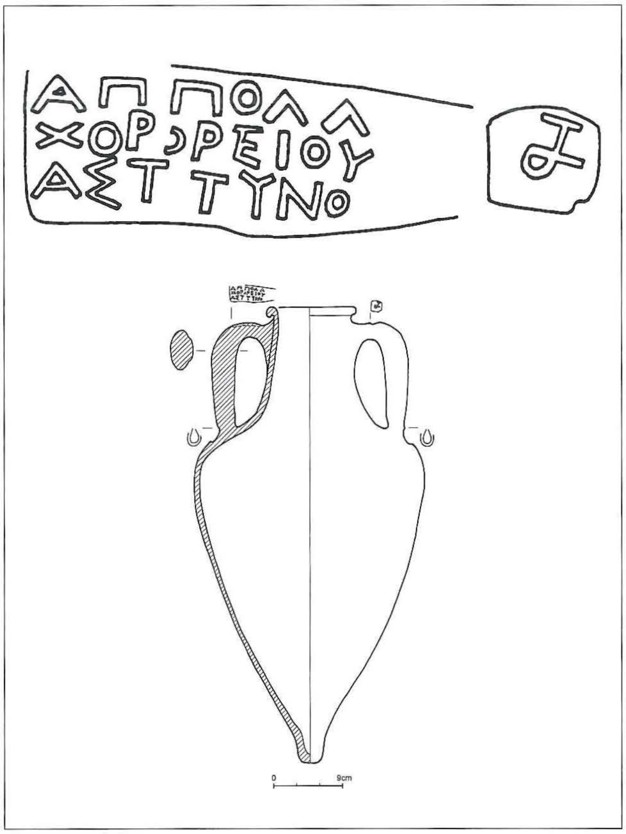

Fig. 13 Amphora, Chersonesos type I-B, magistrate Apollas son of Choreios, *c.* 285-272 BC.

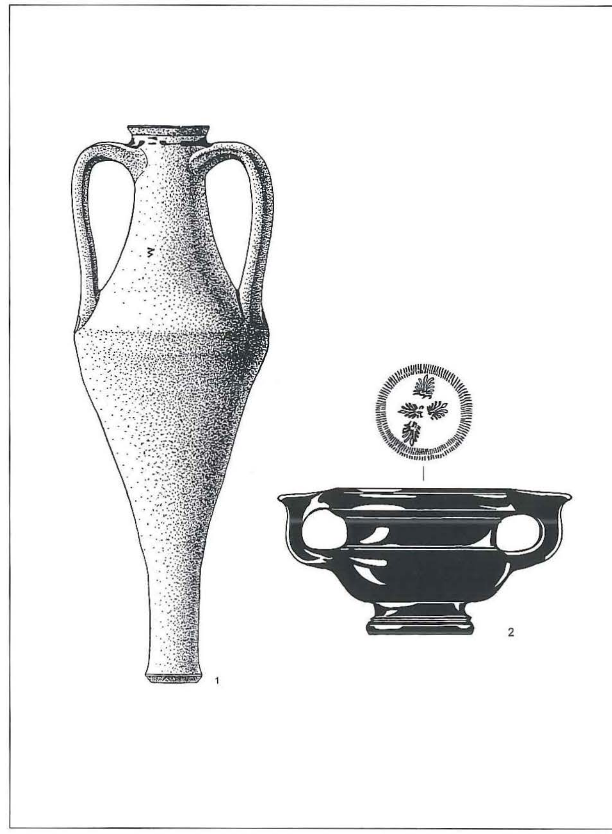

Fig. 14 1. Thasos amphora of biconical type (h.: 48 cm); 2. Athenian black-glaze kantharos with moulded rim, *c.* 375-350 BC.

no. 3) a rectangular stamp was for example discovered with a partly preserved inscription in two lines, probably ΒΑ[ΘΥΛΛΟΥ] | ΑΣ[ΥΝΟΜΟΥ], dated to the years 325-315 BC.[35] Another stamp, also rectangular came to light in 2001 (trench IV/14, layer A-B, field no 1). It has a two-line inscription, probably Π[ΑΣΙΩΝΟΣ] | ΑΣ[ΤΥΝΟΜΟΥ], which can be placed in the years 300-285 BC.[36]

The Chersonesos amphorae at Koshary generally belong to the third building period: the last quarter of the fourth and the first half of the third century BC.

Many amphorae from Thasos reached Koshary in the fourth century BC. Of three whole Thasos amphorae, the first (from grave 57, Fig. 14) represents the developed biconical type (height 74 cm, diameter 24 cm). This type appears by the end of the first quarter of the fourth century.[37] On the neck one can see a dipinto Σ in red. A black-glazed Attic kantharos with moulded rim, found in the same grave, can be dated in the second quarter of the fourth century and provides a good date for the complex.[38] Our second Thasian amphora, from the cellar in Trench III (room 34), represents a late variant of the biconical type popular in the second half of the fourth century BC: it is very slim and has a tall profiled foot.[39] The warrior's grave (No 107, Fig. 15) produced another type of Thasian amphora. It is of the conical

[35] Брашинский 1980, 197 no. 734; Кац 1994, 76, 91 chronological group 1A, pl. XIII.

[36] Кац 1994, 76, 108 chronological group 1C, pl. XXXVIII-XXXIX.

[37] Брашинский 1980, 110 nos. 35-35a, tab. II, VIII: 35 [erroneously: 34]; Монахов 1999a, pl. 111: 9, 113: 1, 115: 2, 117-120.

[38] Sparkes & Talcott 1970, nos. 698-699 dated to 375-350 BC.

[39] Монахов 1999a, pl. 175: 1.

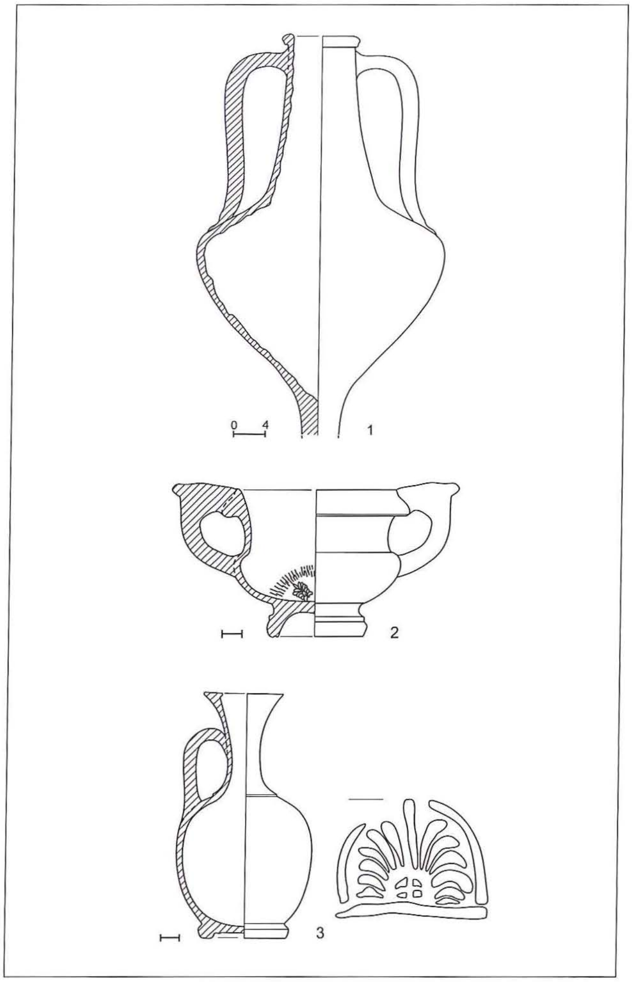

Fig. 15 1. Thasos amphora of developed conical type (h.: 48 cm); 2. Athenian black-glaze kantharos with moulded rim, *c.* 375-350 BC; 3. Athenian squat palmette lekythos, *c.* 375-350 BC.

Fig. 16 Stamp of Thasos amphora: magistrate Deinopas, *c.* 316-295 BC.

type (foot broken in Antiquity) with a red dipinto ΘΣ on the neck. The type appeared already in the previous century, but on the Black Sea coast it is found in the first half of the fourth century only. There is no doubt that the type was produced along with the biconical type; the examples referred to by Монахов come from contexts dated in the 370s and 360s.[40] A black-glazed Attic kantharos with moulded rim and a red-figure palmette lekythos were found together with the amphora. The first vessel is similar to the above-mentioned kantharos from grave 57 and can also be dated in the second quarter of the fourth century BC.[41] The palmette lekythos has parallels for example at Olynthus and can be dated in the same period.[42]

We found stamps in the fragmentary material from Thasos; a good example is a stamp of the magistrate Deinopas (Fig. 16) belonging to the group of so-called "late" magistrates (stamps with one name only and the *ethnikon*). Besides the name of the magistrate we see the representation of a human hand to the right and, in the lower line, the *ethnikon*: ΔΕΙΝΩΠ[ΑΣ] | hand | ΘΑΣΙΩΝ. This stamp, found in the fill of the cellar in Trench IV (House II, Fig. 4), can be dated to the years 316-295 BC.[43]

Other production centres, represented less numerously at Koshary, are Chios, Mende, Peparetos, Cos, Cnidus, Acanthus and Rhodes, and also amphorae of type Solokha I. Additionally we have two completely preserved amphorae and some amount of fragments from unidentified centres.

Stamps

More than 80 stamps have altogether been collected at Koshary. The stamps found in the settlement before 1998 (i.e. before the joint Cracow-Odessa project started) were preliminarily published by E.A. Левина.[44] 28 stamps were considered in her very

[40] Монахов 1999a, pl. 124: 2, 131: 3.

[41] Note 38 above.

[42] Robinson 1950, 147-148.

[43] Avram 1996, no. 331, pl. XXV; Монахов 1999a, 437, note 29, 481f.

[44] Левина 1993, 78-79.

short article and Y. Garlan published one stamp.[45] In the final publication of the Koshary excavations we will republish all that material together with the stamps found later.

In the entire material Heraclea accounts for 20 stamps, Sinope 20, Chersonesos 11, Thasos 12, Chios 1, Rhodes 1 and Acanthus 1 stamp. The remainder are from unidentified centres or are in too bad a condition to allow identification. The preserved stamps confirm the statements made before that the greatest part of our amphorae come from the Black Sea (Heraclea, Sinope and Chersonesos) and Thasos.

Conclusions

The results of the joint Cracow-Odessa Expedition at Koshary in the years 1998-2002 are very interesting and have shown that the site was a rather large and important centre within the Olbia city-state and had large trade connections. The amphora material is very rich and, not unexpectedly, comes mainly from Black Sea centres, as at other Greek cities and settlements in the northern Black Sea region. But the Mediterranean centres are also represented: first of all Thasos, along with Chios, Mende, Peparetos, Cos, Cnidus, Acanthus, Rhodes and others.

[45] Garlan 1999a, 213 no. 578: the bird (eagle?) ethnikon ΘΑΣΙΩΝ, group F, sub-group F 1, 360-350 BC.

On the Clay Provenance of Rhodian Transport Amphorae

Kaare L. Rasmussen & John Lund

We have analysed samples of 216 stamped Rhodian transport amphorae for their clay provenance in order to examine the degree of variation within a large and representative body of material of stamped Rhodian amphora handles.

The Material

The stamped amphora handles submitted to analysis form part of the Collection of Classical and Near Eastern Antiquities in the National Museum of Denmark. They were found at Lindos in Rhodes by the Danish Expedition to Rhodes between 1902 and 1914. At the close of the project, about 13% of the stamped Rhodian handles found by the expedition – 404 specimens to be exact – entered the National Museum as part of the finds sent to Denmark. The remaining 87% of the amphora handles, which were left in Rhodes, are now apparently lost, but Nilsson's sketches of them are preserved in the archives of the Danish National Museum. They were all published in 1909 by M.P. Nilsson in his groundbreaking work *Timbres amphoriques de Lindos.*

The 404 handles in the National Museum were not chosen at random. On the contrary, it is clear that considerable care was taken to select one stamp of as many of the individual Helios priests and fabricants named on the amphora handles as possible. However, in some cases more than one stamp naming the same person was selected, and the total number of individuals represented in the National Museum is about 250. It is difficult to state a more exact number due to the fragmentary state of some of the stamps. Hence, the amphora handles in Copenhagen are representative of the Rhodian amphora production as such with regard to the individuals named, and they cover the full chronological range of production of stamped amphorae in the island.

The handles in Copenhagen comprise approximately even numbers of stamps naming fabricants and Helios priests. The latter could have been associated with all of the fabricants, who happened to be active in the year when the priest officiated. Stamps naming a fabricant are on the other hand definitely tied to one particular individual who, moreover, presumably was in some way or other associated with kilns in one or more specific geographic locations. It is true that there is no general agreement as to the role of the so-called fabricant, but that discussion is outside the scope of the present investigation.

The Analytical Method[1]

Small samples (0.01-0.1 g) were chipped off and dried at 120°C for 24 hours. The magnetic susceptibility of the samples was then measured. Thereafter the samples were lightly crushed and the size fraction 100-300 μm was used for thermoluminescence sensitivity (TL-sensitivity). The measuring was carried out by heating the sample to 400°C, followed by an irradiation of 60 seconds under a 1.5 GBq beta source. This well-defined, artificial signal was then read off the samples by an annealing at 200°C, followed by a slow heating to 400°C. The TL-signal was then integrated from 202-235°C and normalized to 10 mg sample weight, to yield the TL-sensitivity. Four replicas were run of each sample and averaged in order to reduce noise. The data is presented in a log-log plot: magnetic susceptibility *versus* TL-sensitivity. Experience from more than 50 earlier studies

[1] Rasmussen 2001.

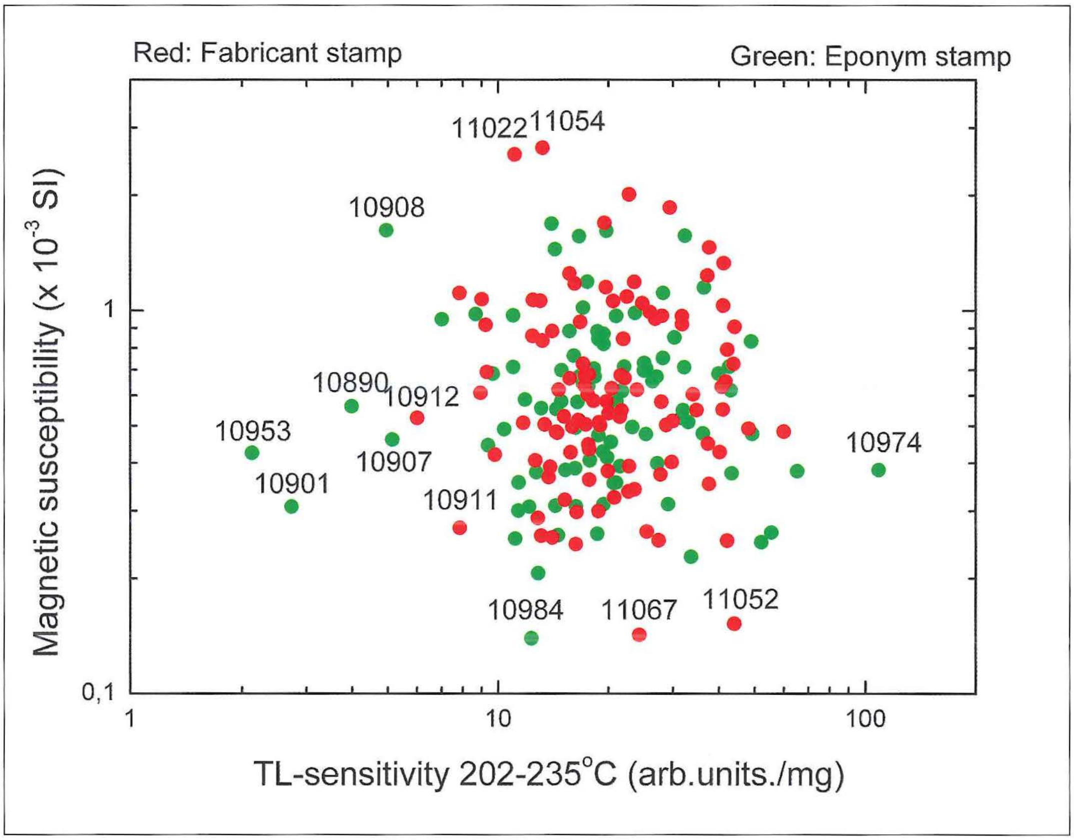

Fig. 1.

indicates that clay from different provenances show up in this plot as distinct groups. The method is described in detail in Rasmussen (2001).

Results

In figure 1 all 216 measured samples are shown. It can be seen that the majority of samples cluster tightly in the diagram and therefore probably are from the same clay source, no doubt Rhodes.[2]

The data from samples of amphora handles with a fabricant stamp are marked red in the diagram, whereas data from amphorae with eponym stamps are marked green. It is seen that there is no statistical discrepancy between those with fabricant stamps and those with eponym priest stamps.

Thirteen samples may be from a foreign clay source and are marked with their sample number from the National Museum of Denmark. There is, however, the possibility that these samples are afflicted by a haphazard odd mineral composition, which causes their data points to fall outside the tight cluster. In our experience the difference between these samples and the cluster is not very significant. On the other hand they might also be of another provenance (Fig. 1).

Six of the thirteen atypical samples were taken from amphorae naming fabricants. These individuals are involved: Ἀπολλοφάνες, Ἀπολλωνίδας, Ἑρμίας, Θηεόφιλος, Θεσμόκριτος and Ἰάσων. May this be an indication that these individuals were active somewhere in the Rhodian peraea, like Hieroteles, whose kiln has been discovered on the Knidian peninsula?[3] For clarification, further testing on replica samples taken elsewhere on the amphora handle should be carried out.

[2] Whitbread 1995, 51-67.

[3] Empereur & Tuna, 1989; see further the paper by Gonca Cankardas Şenol, Ahmet Kaan Şenol and Ersin Doğer in this volume.

Conclusions

Of the 404 samples in the collection of the National Museum of Denmark 216 have been tested for clay provenance. Approximately half of the amphora handles carried fabricant stamps, the others eponym priest stamps. As was to be expected the samples with fabricant stamps are generally of the same clay provenance as that of eponym priest stamps. All the samples appear to come from the same clay source (supposedly local Rhodian), except perhaps 13 samples, as shown in the diagram above, although they may be artificially removed from the main cluster due to a haphazard odd mineral composition in the tiny samples. On the other hand they could be genuinely different and hint at a production of Rhodian amphorae outside the island, somewhere in the peraea on the mainland.

Pirated Knock-offs: Cilician Imitations of Internationally Traded Amphoras

Nicholas K. Rauh

The purpose of this paper is to call attention to the work of the *Rough Cilicia Archaeological Survey Project* as it pertains to amphora studies. In addition, I will make some brief observations regarding evidence for the production of imitations of internationally traded transport jars in western Rough Cilicia and the significance this bears on the economy of the Roman world. Since many of our discoveries have appeared in recent publications, I need to rely on prior knowledge of these in order to devote particular space to the question of imitative ceramic production in Roman times.[1]

Rough Cilicia enjoyed certain advantages that lent themselves to amphora production: a warm, sun-lit climate, abundant timber from mountains situated close to the shore, and a karst (limestone) environment with abundant underground water that carried clay sediments to estuaries and to maritime caves such as the Biçkici. Most of all, Rough Cilicia straddled one of the most important maritime sea-lanes of the ancient world. Although its rugged topography limited regional population size to a cluster of relatively small settlements, its mountainous terrain, limestone topsoils, aquifers, sunshine, and good drainage all proved suitable to the production of wine and oil.

With this in mind, the survey team has identified two (perhaps three) separate kiln sites in the research area. It should be stressed that no kiln structures have been found at any of the sites in question. The identification of kilns is based primarily on the discovery of significant concentrations of a limited number of forms exhibiting a common fabric, usually with accompanying evidence of misfired pieces, wasters, and burnt lumps of clay, which we interpret as kiln lining.

The Syedra kiln site appears to have produced Pamphylian amphoras (first to third century AD); a fractional form of the pinched handle amphora (Robinson's Agora V, M 239, third to fourth century AD), loom weights, and certain coarse-ware basins.

Syedra Fabric Pamphylian and M 239 Amphora Sherds

FABRIC DESCRIPTION: The basins, the loom weights, and the amphoras seem to share a fine, reddish yellow fabric (5YR 6/6, 6/8) with abundant, minute white inclusions and many tiny irregular voids; sparse angular or splintery white grains are also present and the surface is micaceous. To the touch, the fabric is soft, soapy, micaceous, with some small white inclusions. The biscuit is fired a single color throughout its thickness. Preliminary petrological analysis by Martina Dalinghaus indicates that the clay of the Syedra forms exhibits metamorphic inclusions, mainly pieces of schist, "meta-quartz" (quartz that has weathered from metamorphic rocks) and phyllitic inclusions. Micromass is optically active, red-brown in XP and dark brown in PPL. Larger inclusions consist of quartz mica schist, muscovite, chlorite (blue green micaceous inclusions), chert with radiolara.

Pamphylian amphoras are indicated by the presence of large bowing handlers resembling V. Grace's form 13.[2] The handles are large, oval in section (4.4 cm wide), and slightly ridged at center (Fig. 1). They bow downward from the neck; one or two are coated with a whitish residue probably resulting from "seawater wetslip". The rims are rolled and slightly thickened, but fashioned underneath to exhibit a slight profile (Fig. 2). Toes are short

[1] Rauh & Slane 2000; Rauh & Will 2002; Will 2000b.

[2] Grace 1973.

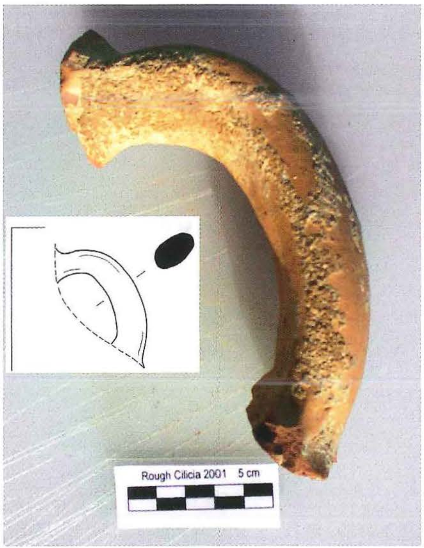

Fig. 1 Possible Pamphylian amphora handle, Study Collection no. 184B, found at the Syedra Kiln Site.

Fig. 2 Possible Pamphylian amphora rim, Study Collection no. 184A, found at Antiochia ad Cragum.

Fig. 3 Pamphylian amphora toe, Study Collection no. 184G, found at the Syedra Kiln Site.

Fig. 4 1) Top portion of a locally produced M 239 amphora, Study Collection no. 186B, found at a village site near Kestros (Site 28-c-2-a-1). 2) M 239 amphora handles and shoulder from the Syedra Kiln Site.

and thick and taper to a rounded button (Fig. 3). With respect to the M 239's, the form presents a fractional version of the pinched-handle amphora to be mentioned below (Fig. 4). The wall is 1-1.5 cm thick; the join of neck to shoulder is rounded and the body is tapering and wheel ridged. These are soapy in texture and have a gray core.[3] A coin discovered at the Syedra kiln site in 2003, and dated by the Emperor Maximinus Daia II to *c.* 305-310 AD, accords well with the known chronologies of these amphora forms.

Perhaps our best example of a Rough Cilician Kiln Site is furnished by the Biçkici Site at the end of the Biçkici or "Woodcutters' River". In this instance the uniformity of fabric and a misfired toe reinforce the likelihood of amphora production. The promontory looming over the field is extraordinarily cavernous. In and around the caves are clay beds and subterranean springs of potable water. This site seems to have furnished two kinds of amphoras: a Koan-style amphora with double rolled handles, possibly resembling a Dressel 4, and a pinched handle amphora (Zemer 41).

[3] For more detailed descriptions see Rauh & Slane 2000.

Biçkici Koan-style and Pinched-handle Amphora Sherds

FABRIC DESCRIPTIONS: The fabric of both types is the same: very fine light red (5 YR 6/6 or 6/8) usually with a buff surface. With a hand lens fresh breaks are micaceous and still very fine: a moderate or sparse number of rounded red and black grits just on the edge of visibility. The pinched handles tend to have more variable fabrics with one coarser example, and both have very pale brown examples with no visible inclusions. The mushroom toe in Fig. 8 exhibits a cream colored "seawater slip". Some examples of the Koan-style handles are light red (2.5 YR 6/6 or 5/6). Preliminary petrological analysis by Dalinghaus indicates that the Biçkici fabric is fine with no inclusions greater than 1 mm. Micromass is optically active, orange brown in XP, light golden brown in PPL. Fabric has common clay pellets with fine quartz inclusions, phyllitic inclusions, fine white mica (muscovite) laths, monocrystalline quartz, calcite, and polycrystalline quartz/sandstones with mica/red clay cement.

The Koan style amphora rim appears to be small and beveled; the neck narrow and cylindrical (Fig. 5). The form's double-rolled handles are straight and tall (15-18 cm) with an angular bend at the top (Fig. 6). The pinched handle amphora rims tend to be rolled or knob rims with varying degree of finish (Fig. 7). The few neck and shoulder fragments show a sharp angle between the neck and the flat sloping shoulder. The handles exhibit an angular bend pinched together with a vertical height of 9-11 cm. Most of the collected toes exhibit a smooth spike ending in a mushroom cap (Fig. 8). A few survive

Fig. 7 Upper portion of a "fine fabric" pinched handle amphora, Study Collection no. 185A, found at Laertes.

Fig. 8 Pinched handle amphora toe, Study Collection no. 185F, found at the Biçkici Kiln Site.

Fig. 5 Koan-style amphora rim with handle attachment, Study Collection no. 183F, found at the Biçkici Kiln Site.

Fig. 6 Koan-style amphora handle fragments, Study Collection nos. 183B&C, found at the Biçkici Kiln Site.

Fig. 9 Pinched-handle amphora toe, Study Collection no. 185F, found at the Biçkici Kiln Site.

Fig. 11 Pinched-handle amphora shoulder fragment with handle still attached and rising to a pinched turn at its broken peak. Study Collection no. 185H, found at the so-called "Church Site" (Site 28-C-3-d-5).

Fig. 10 Pinched-handle amphora rim and wall with handle attachement, Study Collection no. 185L, found at Antioch.

Fig. 12 Rim and neck fragment with handle attachment of the so-called "Syedra" amphora. Study Collection no. 187A, found at the Syedra Kiln Site.

as faintly spiraled spikes, some 9 cm long, ending in button toes (Fig. 9).

A third kiln site possibly exists at Antiochia ad Cragum, amid rubble near the schoolhouse of Güney village. This site appears to have produced pinch-handled amphoras (Fig. 10) and coarseware basins.

Antioch Fabric Pinched-handle Amphora Toe

FABRIC DESCRIPTIONS: Munsell coloration, 2.5 YR 4/8; fine grained, coarse breaking, medium soft. Many large red and white inclusions, some very small micaceous and white inclusions. Dalinghaus' petrological analysis indicates similarities with the Syedra fabric: quartz, mica schist, phyllite, highly optically active, yellow gold.

In all, some six fabrics of pinched handle (Zemer 41) amphoras have been identified in the survey zone, including the white-ware version shown here (Fig. 11).[4] In addition, what appears to be a variation on the form has been noted in three fabrics, including Syedra and whiteware. This so-called Syedra amphora exhibits a thickened knob rim with convex upper surface and a wide groove around the mouth to accommodate a seal (Fig. 12).

[4] There are also a fine fabric, a micaceous fabric, and a yellowish fabric from Kestros.

Syedra Amphora Rims, 187A and 187c

FABRIC DESCRIPTION: (187A) Syedra fabric, 2.5 YR 6/8, soft muddy micaceous, slightly grainy orange/brown fabric. Small white inclusions visible on surface. Whiteware, (187C), 2.5YR 8/3; medium grained, few small white grey and red inclusions. Form 187b (5 YR 7/6) has soft fairly fine light brown clay with large white lime and other colored inclusions, micaceous.

These discoveries lead to some interesting observations regarding the imitation of internationally traded amphoras and their contents. Production of Pamphylian amphoras in Syedra is not all that surprising given that Syedra existed within the boundaries of the Roman province of Pamphylia at least until the era of Vespasian. Nor is production of Koan-style amphoras all that unusual, in view of the enormous popularity of Koan forms throughout the Mediterranean.[5] The pinched-handle amphora, as we have tried to point out in our publications, appears to have been a local product of the regions of Cilicia and Cyprus, and more specifically, a container used to transport popular exports of Cilician raisin wine.[6]

What is striking is the way in which local amphora producers appear to have imitated some relatively exotic forms as well. For example, our survey team has encountered a number of rims of Tripolitanian amphoras in the survey area. The rim displayed in Fig. 13 is presumably that of an actual Tripolitanian type 1 amphora, since it matches the general description of the form furnished by Peacock and Williams.[7] According to these scholars the Tripolitanian fabric is coarse, hard, and brick red (2.5 YR 6/6), sometimes with a black surface, and frequently with white outer skin. It contains numerous small inclusions of white limestone.

Fig. 13 Tripolitanian amphora rim, Study Collection no. 174A, found at the so-called "Church Site" (Site 28-C-3-d-5).

Tripolitanian Amphora Rim, SC 174a

FABRIC DESCRIPTION: coarse orange fabric with very small white specks. Lime green seawater slip on exterior; ext. "slip", 5 Y 8/2; int. fabric, 2.5 YR 5/6.

Most of the rims of this type bear no slip and exhibit the soft, orange-brown fabric as shown here (Fig. 14). Working at our headquarters during the 2000 Season, Dr. Elizabeth L. Will called this peculiarity to my attention with the observation that the orange-color rims, although unmistakably of Tripolitian profile, appear to arise from local fabric production.

Fig. 14 "Imitation" Tripolitanian amphora rims: 1) Study Collection no. 174D, found at Laertes; 2) Study Collection no. 174B, found at Govan Asari; 3) Study Collection no. 174E, found at Laertes; and 4) Tripolitanian amphora rim, also found at Govan Asari (not in Study Collection).

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[5] See A. Hesnard 1986; Empereur 1986; Empereur & Picon 1989; Peacock & Williams 1986; Finkielsztejn 2002b; Will's discussion in this volume.

[6] Most recently, Rauh & Will 2000. See as well Lund 2000b.

[7] Peacock & Williams 1986, Class 36, p. 166.

Tripolitanian Amphora Rim, SC 174e (Fig. 14.3)

FABRIC DESCRIPTION: pink brown exterior, orange brown interior (2.5 YR 6/6); medium grained, soft. Very few medium-sized white and red inclusions; some small red inclusions; some small black and white grits; some very small micaceous inclusions. In her preliminary petrological analysis, Dalinghaus noted that the clay appears to be fossiliferous and very well-sorted, with fine calcite and quartz. Very tentatively, she suggests a relationship to the Biçkici fabric.

This observation has provoked a reassessment of a number of sherds that team specialists originally presumed to have been imported, including the African II Grande sherd with almond shaped rim shown here (Fig. 15).[8] Despite its imported-looking form, this sherd exhibits a grainy, micaceous, orange/brown fabric (2.5 YR 5/8) with large white inclusions. It must be stressed that we are awaiting the results of petrological analysis, and that our observations at this point are merely tentative. That having been said, we would appear to be encountering an unusual phenomenon of local Cilician imitation of a number of internationally traded transport jars. Unlike the local production of Pamphylian and Koan-style jars, no obvious association with Cilicia can be made for these North African typologies.

At this point we should consider the question of ceramic imitations from a broader perspective. While I cannot speak for other regions, Rough Cilicia appears to have enjoyed access to a significant variety of imitations of commercially circulating wares. For example, the survey team has encountered numerous imitations of fine wares in the survey area, particularly imitations of Cypriot Sigillata forms. Fig. 16.4 displays a CS P-40 krater fragment that we believe to be genuine; whereas, Figs. 16.1-3 display examples of CS P-40 imitations of the kind typically encountered in the survey area. I would even go so far as to say that fragments of CS imitations are more frequently encountered than those of genuine Cypriot Sigillata wares. While we have no reason to believe in this instance that the imitations were produced locally, the wide variety of CS krater imitations has compelled us to incorporate several into our typologies as "CS P-40 variants". Imitations of other Early Roman fine-ware forms also exist.

In other words, imitations of widely circulated ceramic wares appear to have been fairly commonplace in the region during the Early Roman era. Artisans intent on "cashing in" on the popularity of internationally popular forms fabricated deliberate "knock-offs" of lesser quality in Cyprus as well as in Cilicia. The local imitation of distantly produced

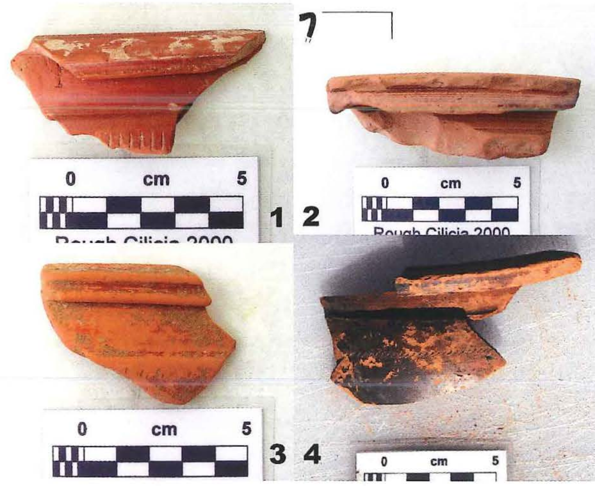

Fig. 16 CS P-40 Krater rims. 1) Study Collection no. 82B; 2) Study Collection no. 83A; 3) Study Collection no. 82A. All three were found at Antiochia ad Cragum; 4) Study Collection no. 83C, found at Goçuk Asari.

Fig. 15 "Imitation" of almond-shaped African Grande amphora rim, Study Collection no. 175, found at Nephelion.

[8] Peacock & Williams 1986, 155 Class 34; the fabric is similar to the Tripolitanian 1.

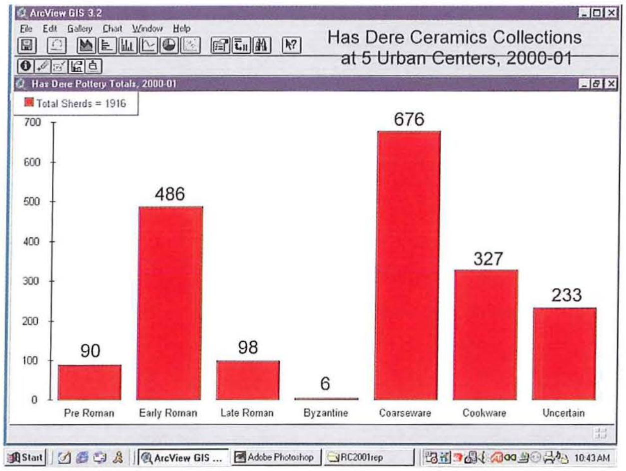

Fig. 17 Pottery totals of chronologically identifiable sherds from the Rough Cilicia Survey in the Hasdere Canyon, 2000-2001. Totals include sherds processed at five urban sites (Asar Tepe, Lamos, Govan Asari, Tomak Asari, and Goçuk Asari).

forms such as Tripolitanian and African Grande amphoras does seem extraordinary in this regard. However, it is possibly explained by a surplus wine production in Cilicia, and by the desire of wine producers to take advantage of a local demand for internationally traded wines such as those of North Africa, by producing cheap facsimiles of the same. They not only imitated the Tripolitanian amphora form, but possibly doctored the taste of the wine itself to resemble in some manner the contents of the widely circulated African jars.

Naturally, as pottery specialists we tend to grow frustrated by the welter of imitations that occurred at the height of the Roman era. In his *Social and Economic History of the Roman Empire*, Michael Rostovtzeff perhaps best expressed a frustration felt by many. As he notes, "Every province of the empire and every provincial district endeavoured as far as possible to compete with the imported goods by replacing them with cheap local imitations..."[9] and "The sense of beauty, which had been dominant in the industry of the Hellenistic period, and still prevailed in the first century AD, gradually died out in the second. No new forms were created, no new ornamental principles introduced. The same sterility reigned in the domain of technique."[10]

It strikes me that by his criticism of Roman imitations, Rostovtzeff expresses a discernible bias for the 'museum quality' of a given artifact as opposed to its importance as an indicator of economic well-being. When one approaches the question of imitations from the perspective the material record, for example, the significant volume of ceramic objects that survive in the Roman landscape become striking. As the accompanying table (Fig. 17) of chronologically identified sherds from recent surface collections in the Hasdere Canyon demonstrate, the Roman-era inhabitants of western Rough Cilicia possessed vastly larger quantities of material possessions than did their predecessors. One could even go so far as to say that the inhabitants enjoyed their highest level of material prosperity during the Roman era, regardless of the relative "quality" of their possessions.

Rostovtzeff ascribed the phenomenon of ceramic imitations to a production system oriented toward consumption by the Roman underclass. As he complained: "The general demand... in the cities and in the country was not for the better products of industry. The demand for these was confined to the circles of the richer town bourgeoisie. The mass of the population asked for cheap things, the cheaper the better...the purchasing power of the country population and the lower classes of the city residents was very small. But their numbers were large. The existence of such conditions was bound to give rise to mass production and factory work."[11]

Again, it seems to me that his comments fail to recognize the benefit derived by all from the explosion of material crafts production, either with respect to the quantity or to the variety that occurred during the Early Roman era. In Rough Cilicia this seems particularly true, especially when compared to the extremely limited finds of Hellenistic remains, and the nearly total absence of anything earlier. Where for the Hellenistic era our survey team identifies very little outside the coastal urban centers, for the Roman era we encounter CS P-40 Variants and imitated amphoras at virtually every site, large or small, coastal or hinterland. The mass production of cheap imitation pottery appears to have affected

[9] Rostovtzeff 1957, 173.
[10] Rostovtzeff 1957, 175.
[11] Rostovtzeff 1957, 177.

Fig. 18 View of Walmart Superstore and its wares in Lafayette Indiana.

the broadest possible spectrum of Cilician demographics and seems to reflect a larger trend during the Roman era toward quantity rather than quality. Our survey evidence would seem to indicate, for example, that wealthier elements in Rough Cilicia took advantage of the abundance of cheap products every bit as much as the poor, since the imitated forms are present virtually everywhere.

In some respects, what some would call the *koine* production of the Early Roman era seems reminiscent of the worldwide commerce in cheap household wares visible today. One of the most successful examples of a mass-market distributor is the Walmart chain in the United States (Fig. 18). Inside their walls one can find quantities of low grade, decidedly imitative products. The commodities are generally produced in areas of East Asia where cheap labor is combined with the latest in robotic industrial technology and efficient computerized distribution networks to offer international consumers remarkably inexpensive utensils for everyday life. Although my example comes from my own town in Indiana, I could just as easily have shown scenes from the marketplaces in modern day Gazipasha, Turkey, where virtually the same products are marketed at relatively the same inexpensive prices. Basically the same products are distributed worldwide, finding a niche in global distribution precisely because of their inexpensive price relative to the convenience they furnish to everyday life.

One interesting feature of this form of consumption is that the inexpensive character of *koine* products tends to attract consumers from all economic "wage-brackets", that is high- as well as low-income consumers. People at various earning levels today prefer to spend as little money as possible on the basic necessities of life, such as mixing-bowls and storage containers, in order to devote more of their disposable income to more expensive goods, such as video equipment, computers, and automobiles. Much like in the period of the Early Roman Empire, people in many parts of the contemporary world are accumulating significant quantities of cheaply made household wares. While these items will never be displayed in modern art museums, their popularity seems undeniable. As such, they offer an important indicator for the "sameness" of the material culture that is rapidly sweeping the globe. Deriding the allure of American consumerism, the Red Hot Chili Peppers, contemporary musicians, satirize the global demand for low-grade, inexpensive commodities with lyrics reminiscent of Juvenal: "*tidal waves cannot save the world from Californication*". In contrast to that attitude, archaeologists and historians should bear in mind the needs of everyday people during the Roman Empire. We must ask ourselves whether they, like Rostovtzeff, complained about the quality of the crafts materials they acquired or, rather, focused on the creature comforts that the seeming abundance of cheap imitation pottery provided.

The Phoenician Transport Amphora

Dalit Regev

What is a "Phoenician amphora"?[1] What do we know about Phoenician pottery in general? Is Canaanite not Phoenician? What is the difference between these two ethnic categories? And what is Syro-Palestinian? Is Phoenician included in the latter?

Most of these questions cannot be dealt with in the present context. Some were addressed by Eugenia Aubet and Patricia Bikai,[2] relating to the Bronze and Iron ages, and by Ze'ev Herzog, who dealt with the Iron age and the Persian period.[3] All three agree, as did the Phoenician themselves when calling themselves by a collective name, that the Phoenicians where Canaanites.

The equivalence of terms can be seen in the first century AD, when Mark (7.26) and Matthew (15.22) mentioned a woman met by Jesus and his friends; Mark calls her 'Greek woman, a Syro-Phoenician by birth', whereas Matthew calls her 'Canaanite'.

Not all Canaanites, on the other hand, where Phoenicians. But when we come to examine the features of the Canaanite jar of the Late Bronze age and its distribution, it is quite clear that, at least in this case, we are dealing with Canaanites who were Phoenicians. As a matter of fact, Avner Raban has traced this jar type in the Levant from the Middle Bronze age (MBIIa) in the third millennium BC,[4] but it seems it was first distributed outside the Levant in the Late Bronze Age.

The Bronze Age

It seems that the Phoenician amphora made its first appearance outside the Levant as the so- called "Canaanite jar" (Fig. 1) at the beginning of the Late Bronze Age (seventeenth century BC). In 1956, Virginia Grace identified the slender, flat- shouldered transport amphora of the Late Bronze Age as "Canaanite",[5] i.e. made in Canaan – a large area including the Syrian coast, Phoenicia and Israel. The type correlates with Amiran types II B:11 and 12.[6] The term Canaan identifies the political and economical model of a city-state in the Levant in the second millennium BC, more than it defines an area.[7] Not all the Canaanite city-states were engaged in overseas trade and, as many, including Grace, have already concluded, one or only a few of the Phoenician city-states manufactured and distributed the "Canaanite" jars.[8]

On the Levantine coast, the most common type of the Late Bronze II period was an amphora with a low knob-base and carinated shoulders,[9] found at Tel Kazal, Ugarit and Tarsus.[10] The Canaanite jar has been found in all parts of the Aegean, as well as in Cyprus and Egypt.[11] It was found in houses and tombs at Thebes, Mycenae, Pylos, Argos, Asine; at Kommos and Knossos in Crete, and at Athens on the Agora and in Koukaki.[12] It has mostly been

[1] I wish to thank Susan Rotroff and Jonathan Price for reading this article and providing helpful notes and corrections. All remaining mistakes, however, are my own.

[2] Aubet 1993; Bikai 1990, 67-75.

[3] Herzog 1997.

[4] Raban 1980, 62-73.

[5] According to Grace (1956b, 81-82), the earliest examples of the Canaanite jar date to the Early Mycanaean period, and in Egypt it was dated by Petrie in the 18th – 19th dynasties (1550-1200 BC).

[6] Amiran 1969; French 1999, 158.

[7] Ne'eman 1982, 131-132.

[8] Grace 1956b, 94; French 1999, 157.

[9] The terms "jar" and "amphora" are both used here for the same form of the Phoenician/Canaanite amphora, as both are used in the scholarly research. Usually, all "local" transport and storage large vessels found in the Levant are called jars, while imported vessels of similar shape are called amphorae. There is also tendency to call earlier vessels jars whereas later ones are referred to as amphorae. A unified terminology is needed, and the term amphora seems to be the best choice, but I find it somewhat odd to call Grace's "Canaanite jar" an amphora, hence the use of both terms in this paper.

[10] Badre & Gubel 1999-2000, 172-174.

[11] Grace 1956b, 82; Arnott 1999, 156.

[12] French 1999, 157.

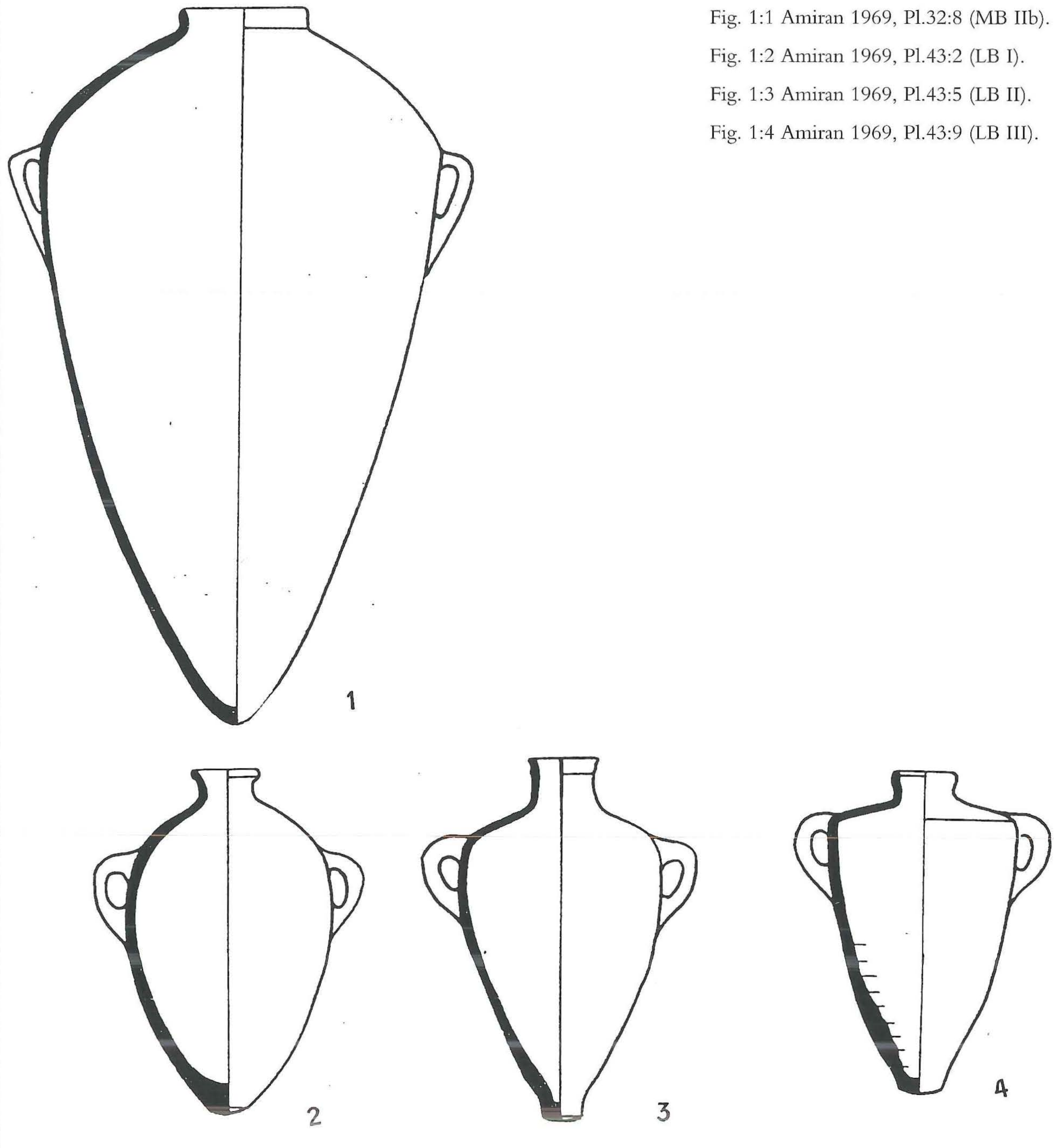

Fig. 1:1 Amiran 1969, Pl.32:8 (MB IIb).
Fig. 1:2 Amiran 1969, Pl.43:2 (LB I).
Fig. 1:3 Amiran 1969, Pl.43:5 (LB II).
Fig. 1:4 Amiran 1969, Pl.43:9 (LB III).

found in Greece in LH IIIB contexts (*c.* 1340-1250 BC),[13] but the earliest find comes from a fifteenth-century BC context on Thera. Fragments of a Canaanite amphora have been found off Pseira on the northern coast of East Crete in an LMIB context of the sixteenth century BC.[14]

[13] Arnott 1999, 156.
[14] Bernal 1991, 492.

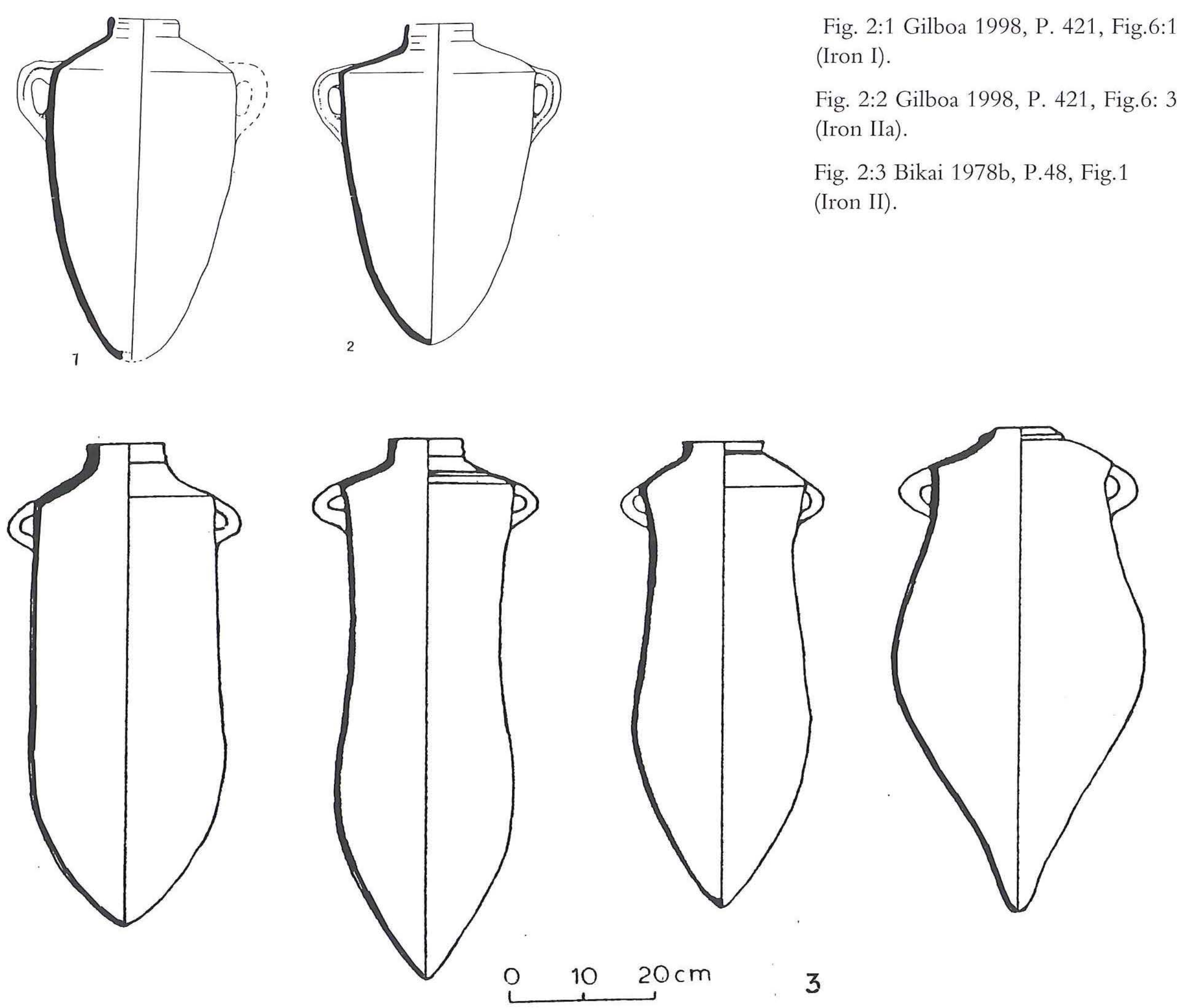

Fig. 2:1 Gilboa 1998, P. 421, Fig.6:1 (Iron I).

Fig. 2:2 Gilboa 1998, P. 421, Fig.6: 3 (Iron IIa).

Fig. 2:3 Bikai 1978b, P.48, Fig.1 (Iron II).

The sphere of distribution correlates with our knowledge of the extent of the Phoenician trade routes during the period. The cargo of the Ulu Burun shipwreck of the late fourteenth century BC, which included at least 149 Canaanite jars,[15] has added significantly to our knowledge of the type and its diversity in usage for different types of commodities. It also illustrated the importance of Phoenician products on the international market, reflected by the Canaanite jar's distribution pattern. Bernal is therefore apparently correct in saying that the Canaanite jars are the clearest archaeological indicator of Levantine economic penetration into the Aegean during the period.[16]

The Iron Age

Despite a terminological break between the "Canaanite" amphora of the Late Bronze period and the "Phoenician" amphora of the Iron Age II seems to reflect the reluctance to observe the continuity in the distribution of these amphorae in the Mediterranean (Fig. 2). There is lately a growing consensus that direct contact between the Levant and the Eastern Mediterranean, including pottery exchange, never ceased after the end of the Bronze Age. There

[15] Pulak 1997, 240.

[16] Bernal 1991, 491.

is a continuous presence of Canaanite amphorae in Cyprus from LC IIIA to CG I (1200-950 BC).[17] This continuity exists in Crete as well, and chemical analyses of Phoenician imports at Kommos have shown that the best comparanda are supplied by chemical Group A of "Canaanite" amphorae from Maa-Paleokastro in Cyprus.[18] Both groups were said to originate from the central Levant. The amphorae at Kommos were found in a context of 925-880 BC, and the general date range of this Phoenician type, which probably originated in Sarepta, is between *c.* 1050 and 750 BC.[19]

Phoenician amphorae are at present known only in the Levant, Cyprus and Crete during Iron Age I (eleventh to tenth centuries BC: Fig. 2,1), whereas in the following period, Iron Age II (ninth to seventh centuries), their distribution covers the entire Mediterranean, with the exception of Greece and the Aegean (Fig. 2,2). The reason why these Iron Age I Phoenician amphorae are not widely recorded in the Mediterranean is, in Bikai's words, "the evidence takes the less-than-spectacular form and it is not being recognised". At Kommos, she said, the amphorae "are so insignificant [not in numbers but in shape], in fact, that it is a credit to the excavators that they were recognised at all", and believes it is now only a matter of time before such coarse pottery is found in the Iberian Peninsula.[20]

As became even more evident in later periods, the Iron Age II witnessed two main types of Phoenician amphora: a rounded and an elongated version. The latter (Fig. 2,3) was from the very beginning the preferred one on Phoenician sites in the Western Mediterranean. Tracking the occurrence of the type around the Mediterranean, we find the following evidence for its distribution: Current recorded data of the Phoenician amphora in the Western Mediterranean suggest its presence from the eighth century BC onwards.

Both Phoenician amphorae and local imitations of the type have been found at Cerro Macareno in Seville, in seventh-century contexts.[21] Catalan dates parallels from Motya, Carthage, Rachgoun and Andalusia from the seventh to the third century BC.

The Phoenician amphorae of the seventh and sixth centuries BC at Lixus in North Africa are very similar to the forms common in southern Spanish settlements, says Maass-Lindemann. These types have been found at Mogador and probably at Rachgoun, but are very rare at Carthage. They have also been found in Sardinia.[22] Phoenician amphorae of the second half of the eighth century BC have also been found at Pithekoussai.[23]

In Cyprus Canaanite amphorae appear in Palaepaphos-Skales from the beginning of the Iron Age and continue with only minor variations until they are replaced by a somewhat smaller version with a very low rim. These appear at about the same time as the crisp ware Torpedo Jars around the beginning of eighth century BC.[24] The same date was assigned to the Canaanite jar from the Phoenician cemetery at Kition.[25] At Amathous, the type was dated in the CA I-II period (750-480 BC) and some versions were classified as White Painted IV.[26]

The Phoenician amphorae at Tyre are dated in the late eighth century BC,[27] but, as mentioned above, Bikai attributes the earlier types found at Kommos and dated in the tenth to ninth centuries to Sarepta.[28] At Sukas the type begins as early as the ninth century BC.[29] The excavations at Tell 'Arqa in Lebanon have provided late eighth-century dates for the Phoenician amphora,[30] but recent excavations at Tel Kazal in Syria have unearthed evidence for continuity of the type from the Late Bronze Age until Iron Age II.[31]

In Israel Phoenician amphorae of the Iron Age replaced the Canaanite jars of the Late Bronze period. The Phoenician amphorae existed from the tenth century BC onwards, but flourished in par-

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17 Gilboa 1998, 423.
18 Jones 2000, 332; Jones & Vaughan 1988.
19 Bikai 2000, 310.
20 Bikai 2000, 310-311.
21 Catalan 1982, 386-388.
22 Maass-Lindemann 1992, 175, 178; fig. 1a.
23 Buchner 1982, fig. 4c-d.
24 Crisp ware Torpedo Jars is a term coined by Bikai, 1983: 396; fig. 1: T.44:134; T.80:46; T.83:40.
25 Hadjisavvas 2000, 1023-1024.
26 Nicolaou 1985, 272, 274-275.
27 Bikai 1978a, pl. 1,16; pl.7: str. II-III:4.
28 Bikai 2000.
29 Buhl 1983, 11-13, nos. 34-38; 13-15, no. 44.
30 Thalmann 1983, 217-221.
31 Badre & Gubel 1999-2000, 129, 152, 172.

ticular from the late eighth until the late seventh century BC. Phoenician amphorae (of a type similar in shape to the Byzantine Gaza jar) were found in Dan in a context dated at the end of the tenth or in the early ninth century BC.[32] They have also been found at Tel Bira in a late eighth- or early seventh-century BC context.[33] These amphorae were correlated by Yardena Alexandre with amphorae found throughout the north of Israel and on the Phoenician coast, in Samaria, Megiddo, Hazor, H. Rosh Zayit and Sarepta.

According to the Akhziv survey, the Phoenician amphora does not appear in northern Israel until Iron Age II. It is characterised by a conical body, pronounced shoulder, straight rim and twisted handles.[34] In Samaria, the Phoenician amphora has been dated in the seventh and sixth centuries BC,[35] and in Dor it is represented by the "Sausage" and "Waisted" commercial amphorae of the eighth and seventh centuries.[36] Approximately the same date has been given to such amphorae in Amman.[37] Phoenician amphorae have been found in late eighth-century contexts at Mezad Hashavyahu.[38] At Tel Ira in Southern Israel, where Phoenician amphorae are quite rare, they also occur in an eighth-century context, as well as in other southern sites such as Beer-Sheva and Tel Haror, all in the Negev.[39] Heracleopolis Magna in Egypt has also provided a relatively early date for the Phoenician amphora, in the tenth to eighth centuries BC.[40]

The above evidence reveals the wide distribution of the Phoenician amphora during the Iron Age. The different distribution circles in Iron Age I and II: a narrow circle with the Levant, Egypt, Cyprus and Crete, versus a wide circle that included practically all of the Mediterranean, are repeated in later periods. There are ups and downs in the extent of production and distribution, but there is continuity in both parameters.

The Persian Period

The Persian period presents a distribution map similar to that of the Iron Age, but the emphasis is different (Figs. 3-4). While the Phoenician amphora by now was prevailing in the Levant, in the West – the Iberian Peninsula, North Africa and the Mediterranean islands – the Phoenician tradition is preserved mainly through local imitations of the Iron Age form. Once again, Phoenician amphorae were apparently absent from Greece and the Aegean islands. Large numbers of Phoenician transport amphorae have been found along the coast of Phoenicia and Cyprus. One version known as the "Torpedo jar" was widespread in the Persian period between the sixth and fourth centuries in Mesopotamia, Syria, Phoenicia and especially Cyprus, as well as throughout Israel.

Petrographic examination conducted on the yellow-red ware on Phoenician amphorae from the Persian period at Tel Michal has shown that they were produced in the Carmel coastal plain. A similar analysis made at Apollonia showed that the type was produced in the coastal plain (Taqiya formation), while the analysis of Tell el-Hesi' vessels pointed to Lebanon as the origin of production.[41]

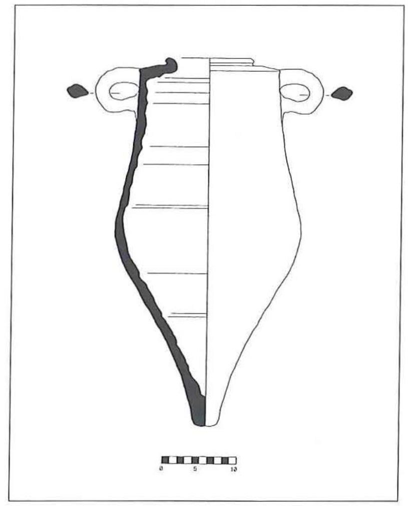
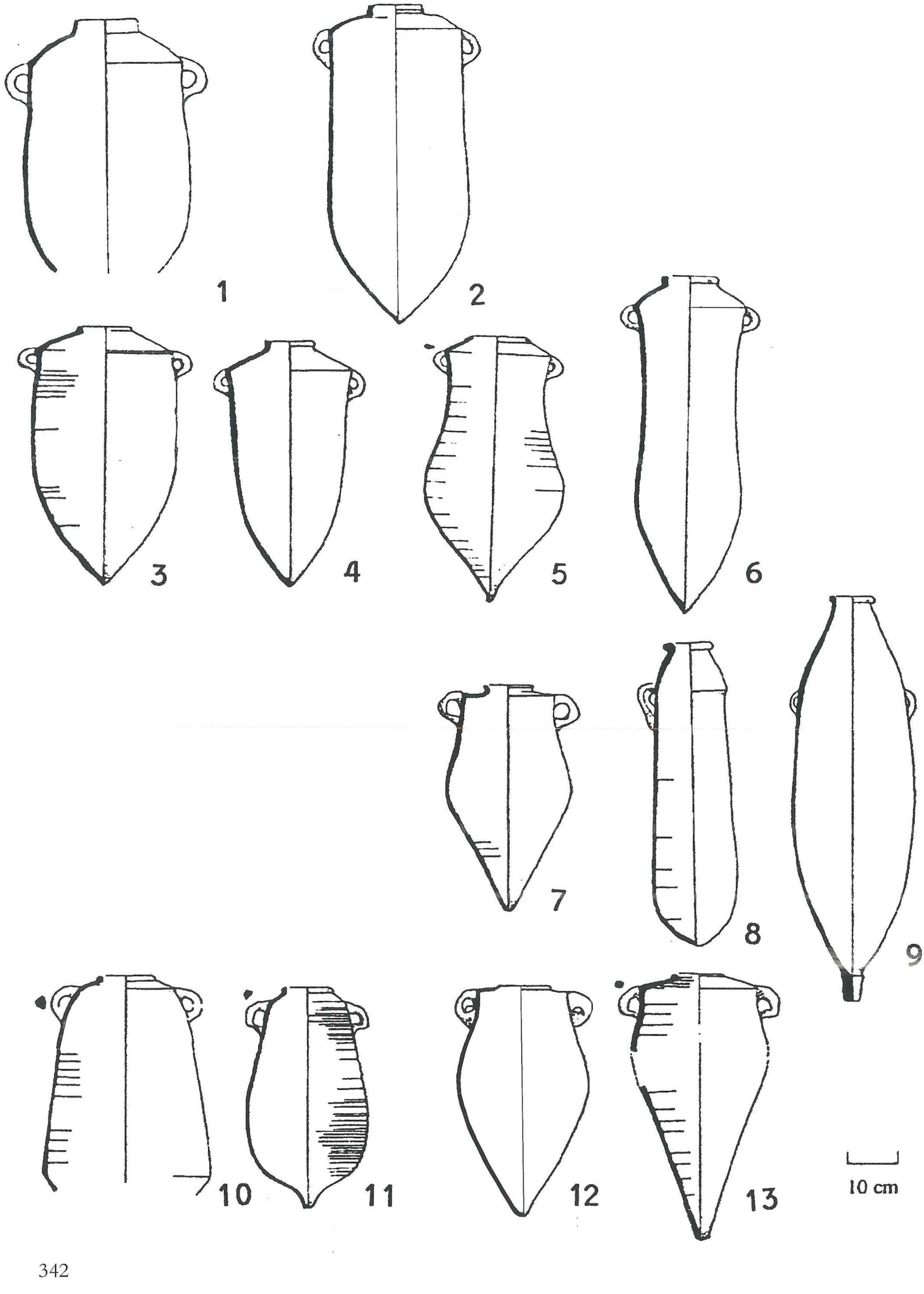


Fig. 3 Bennett and Blakly 1989, P.208, Fig.170 (Typical Lebanese Transport Jar).

[32] Biran 1981, 38, fig. 26; 33.
[33] Alexandre & Stern 2001, 187, 191; fig. 4,4-9.
[34] Frankel & Getzov 1997, 32*, figs. 2.142.9:19, 2.142.10:1.
[35] Kenyon 1957.
[36] Gilboa 1995, 13; fig. 1.8:28 – SJ 13[a].
[37] Koutsoukou 1997, 62; pl. on p. 104:88.
[38] Fantalkin 2001, 63-64, type SJ 1; fig.25.9.
[39] Beit-Arieh 1999, 211, fig. 6.75:4.
[40] Padro 1991, 1104-1105.
[41] Fantalkin 2001, 63 n. 40.



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There may or may not have been one workshop that produced the Phoenician amphorae and other Phoenician vessels made of the same ware, but several analyses in different locations have pointed to the Taqiya formation as the source of their typical yellow-red ware. The Taqiya formation is situated on the coast from the bay of Acco-Ptoleamis and northwards.[42] In its coastal form, the Taqiya formation is thus found in southern and northern Phoenicia, and vessels made of clay from this formation could have been produced anywhere from Acco-Ptolemais to El-Mina.

In an extensive, recent study E. Bettles has shown that during the Persian period, about half of the Phoenician amphoras described by her as "carinated-shoulder amphorae" were made at Sarepta.[43] Most of the remaining amphoras of this type originated in southern Phoenicia, i.e. the northern coast of Israel. These conclusions fit the above-mentioned boundary well. However, of two small groups of Bettles' fabric classes (2B and 2D) that together constitute about 7% of this type, the former seems to have originated in the coastal northern Negev in Israel (that is, between Gaza and Ashkelon), and the latter in either the northern Levantine coast or in Cyprus.[44] This pattern of one significant production centre within the heartland of Phoenicia, few production centres within the immediate Phoenician periphery, and more production centres within the Phoenician sphere of influence, seems to represent the Phoenician pottery production mode at least since the Iron Age and continuing into the Hellenistic period and probably beyond.

Both the rounded and elongated Phoenician amphora types continue during the Persian Period (Fig. 4) and Lehmann noted the continuity in the use of the type with the carinated horizontal shoulders and twisted handles, in all of the period's assemblages from 700 to 300 BC.[45] By the fourth century BC new types of Phoenician amphorae appeared with very short shoulders and a knob base (Fig. 4,11). There was apparently no clear break in pottery traditions between the late Achaemenid and Early Hellenistic periods, and several types from the fourth century continue into the Hellenistic period.

While Lehmann refrained from naming the Persian period amphorae "Phoenician", Stern included the very same amphora types in his account of the Persian period and described their distribution throughout the Mediterranean.[46] Stern mentioned two main types of Phoenician amphorae: type H6 with biconical body and type H8 with sack-shaped body. The same two versions – one narrow and pointed and one rounded – were to be repeated in the Late Roman period. During the Persian period the types were found at all Levantine and inland Israeli sites. He emphasised the presence of these types on Punic sites and said that the amphorae were the predominant container in the widespread Phoenician marine trade. It seems that the identification of this type of amphora as Phoenician is now well established, as thoroughly described, analysed and categorised by Bettles.[47] The Phoenician amphora is the most common vessel on the Phoenician cemetery in Atlit, found in every tomb shaft.[48] In the area of Akhziv, the Phoenician amphora in its Persian

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Fig. 4:1 Lehmann 1998, Fig.3:24 (750-700).

Fig. 4:2 Lehmann 1998, Fig.3:25 (750-700).

Fig. 4:3 Lehmann 1998, Fig.6:31 (700-580).

Fig. 4:4 Lehmann 1998, Fig.6:32 (700-580).

Fig. 4:5 Lehmann 1998, Fig.6:34 (700-580).

Fig. 4:6 Lehmann 1998, Fig.6:35 (700-580).

Fig. 4:7 Lehmann 1998, Fig.10:1 (540-360).

Fig. 4:8 Lehmann 1998, Fig.10:2 (540-360).

Fig. 4:9 Lehmann 1998, Fig.10:3 (540-360).

Fig. 4:10 Lehmann 1998, Fig.12:2 (360-300).

Fig. 4:11 Lehmann 1998, Fig.12:3 (360-300).

Fig. 4:12 Lehmann 1998, Fig.12:4 (360-300).

Fig. 4:13 Lehmann 1998, Fig.12:5 (360-300).

42 For more data on the Taqiya formation see for example Bentor 1966: 72-73. I thank Amir Gorzalczany for the information.
43 Bettles 2003.
44 Bettles 2003, 180, 189.
45 Lehmann 1998, 17, 21.
46 Stern 1995, 58, 62; figs. 2.7-2.9.
47 Bettles 2003.
48 Johns 1933, 50, fig. 3, a-e.

phase is one of the two most common vessels of the period, made now of better clay.[49]

The Phoenician amphora continued to be used during the period in Cyprus as well. It has been found in the Archaic necropolis at Ayios Theodoros, in the district of Larnaca, dated in the Cypro-Archaic II period (late sixth to early fifth century BC).[50] It has also been found at Palaepaphos-Kouklia, dated there in the Cypro-Classical period,[51] and at Amathus in tomb 423 II, also dated in the Cypro-Classical period.[52] Gjerstad called these amphorae "Torpedo jars" of types IV-VII; he dated them to 700-325 BC and ascribed their origin to Syria. He described two variants present in Cyprus; the narrow long one and the wide and shorter one. Both these varieties were made only in Plain White Ware and formed "two parallel lines of style in the typological series".[53]

The Hellenistic Period

The Phoenician amphora has not been widely reported from Hellenistic contexts (Fig. 5). According to available documentation, it seems that its distribution declined dramatically and was restricted to the Levantine coastal area and the northern part of Israel. The wide rounded amphora of Phoenician tradition was recently, however, observed in Cyprus, at the Tombs of the Kings at Paphos.[54] Stamped handles of the rounded amphora type with Phoenician and Greek impressions were also recorded at Tyre and Alexandria.[55]

The Hellenistic Phoenician amphora has been identified at Tel Anafa as the "Semi Fine Baggy jar (PW 480-483)", there dated after 125 BC.[56] One of these jars was sampled by Rautman and classified as "Phoenician semi fine".[57] Gunneweg and Yellin concluded that the semi-fine ware was probably brought to Anafa from a production site on the northern coast of Israel or in Lebanon.[58] This type has recently been reported from Beirut in contexts of the late second century BC; Paul Reynolds believes it was imported from Tyre.[59]

The Phoenician rounded amphora was the most common type of amphora at Acco-Ptolemais and other northern and coastal sites in Israel during the

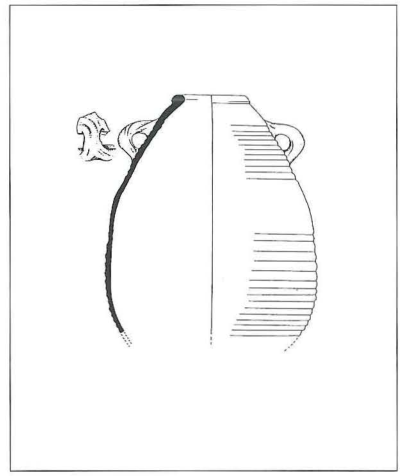


Fig. 5 Regev 2000, Pl.113 (Hellenistic).

Hellenistic period.[60] Almost all amphorae of this type were made of yellow-red Phoenician ware from the Taqiya formation, and often found on the Acco plain in the Zevulun Valley. This amphora type maintained the Phoenician shape of earlier periods, as did the contemporary Phoenician amphorae in Ibiza. Some formal basic elements are kept in all of the Hellenistic types: the neck-less mouth, thickened rounded rim, horizontally ridged body and twisted

[49] Frankel & Getzov 1997, 33*; figs. 2.77.7:5-8, 2.142.10:2, 2.159.6:16.

[50] Flourentzos 1990, 115; pls. 19: 36; 20:43; 21:71.

[51] I wish to thank F.G. Maier and his staff from Zurich University for their generosity and for allowing me to examine the Cypro-Classical period pottery from this excavation.

[52] Nicolaou 1985, 265-269.

[53] Gjerstad 1960, 113, fig. 6.

[54] Lately I was able to examine some of the material from these tombs at Paphos Museum, courtesy of the Cypriot Antiquities Department and the Australian Expedition to Paphos under the auspices of Richard Green and Craig Barker of Sydney University.

[55] Finkielsztejn 1998b, 86.

[56] Berlin 1997, 155-156. Berlin also reported another orange ware type, with a short flat shoulder and ribbed body. It was dated *c.* 300-250 BC, although only one fragment was found in situ, while the other jar types were found by the dozen (Berlin 1997, 156). It is hence possible that this "Orange Shouldered jar" actually belongs to the Persian period type described above.

[57] Rautman 1997, 223, sample 8.

[58] Gunneweg & Yellin 1997, 241.

[59] Reynolds 1997-1998, 42-43, figs. 212-213..

[60] Regev 2000, 222.

handles.[61] Similar amphorae of the fourth and third centuries were found at Carthage and referred to as "Punic amphorae".[62]

At Hellenistic Dor, the Phoenician amphora appeared as a continuation of the Persian-period tradition. Guz-Zilberstein claimed that jar with carinated shouldered, similar to jar of the Persian period,[63] continued at Dor from the end of the fourth to the third century BC, while the rounded type is dated there in the second and first centuries BC. The latter type continued into the Roman period, when it became one of the most common containers for storage and transportation.[64] Contrary to the evidence presented at Dor and Tel Anafa, the Acco evidence has a third-century context with the type.

The importance of the Phoenician amphora remained undiminished in the area of Akhziv.[65] Frankel and Getzov observed that the rim was now thicker and the characteristic carinated shoulder of the Persian period occasionally replaced by a protruding ridge. As in previous periods, the amphora is equipped with a pair of twisted handles.

The elongated narrow Phoenician amphora of this period has recently been identified by Reynolds as the "Beirut amphora", which made its appearance in the middle of the first century BC.[66] As observed in Acco, a heavy, small and narrow amphoriskos that was popular around the Mediterranean was made in the Phoenician coarse ware[67] of the Hellenistic period (Fig. 6).[68] This type may be the forerunner of the Beirut type, as well as the missing link between the elongated types of the Persian and Roman periods. The coexistence of the round-shouldered and the narrow elongated types in the Hellenistic period resembles a similar phenomenon during the Byzantine period (see below). Another possible pairing of two contemporary Phoenician amphora types may be the Levantine Phoenician rounded and the Western/Punic elongated narrow types. The absence of a Levantine Phoenician amphora of the elongated form in the Hellenistic period suggests a close, even joint, commercial effort by the Phoenicians of the West and those of the East. As many have pointed out, the use of two different amphora types simultaneously may indicate two different types of products.[69] If this is correct, and as the rounded amphora was produced only in the East while the elongated amphora was produced only in the West, these two types may have been conceived by the Phoenicians as part of the same tradition. It was thus unnecessary for the Phoenicians in the East to produce a vessel already made by other Phoenicians in the West. In any case, the western Punic amphorae are quite common during the period in the Levant, including sites where Levantine Phoenician coarse ware is absent, like Marisa.

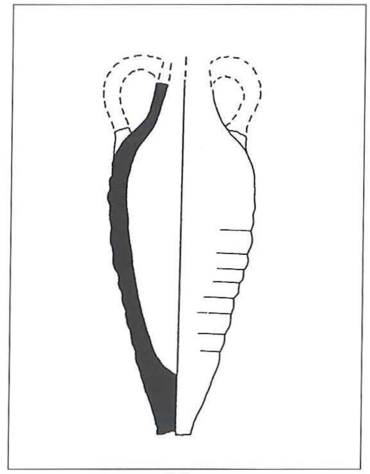


Fig. 6 Regev 2000, Pl.114b (Hellenistic) (1:4).

The Roman Period

Major changes in form and distribution of the Phoenician amphora occurred during the Roman period, from the late first century BC to the early

[61] Ramon 1991, 104-09, fig. 20: PE-12.E; fig. 21: PE-13.E; figs. 22-28: PE-14.E; figs. 29-30: PE-15.E.

[62] Holst 1990, fig. 12: 83.

[63] Guz-Zilberstein 1995, fig. 6.38:1-6.

[64] Guz-Zilberstein 1995, 312; fig. 6.38.

[65] Frankel & Getzov 1997, 34*; figs. 2.34:13-16, 2.77.7:9,10, 2.142.10:3,4.

[66] Reynolds 1997-1998, 59, fig. 220.

[67] I.e. the yellow-red ware, Reynolds 'Tyrian ware' *FAM 10*, Tel-Anafa's 'semi-fine'.

[68] Regev 2000, 223, pl. 114,b. The report on the Hellenistic pottery from Acco, including discussions on the Phoenician coarse ware, was submitted to the Israel Antiquities Authority in December 1994.

[69] See below the discussion on the "Gaza jar" of the Byzantine period.

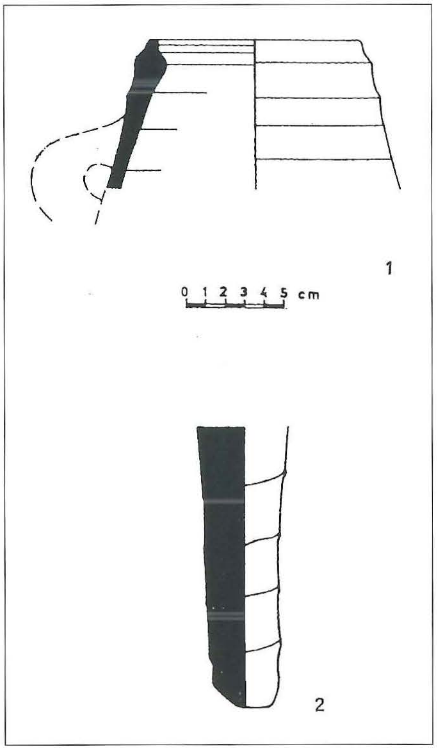


Fig. 7:1 Elgavish 1977, Pl.V:24 (Roman) (1:4).

Fig. 7:2 Elgavish 1977, Pl.V:28 (Roman) (1:4).

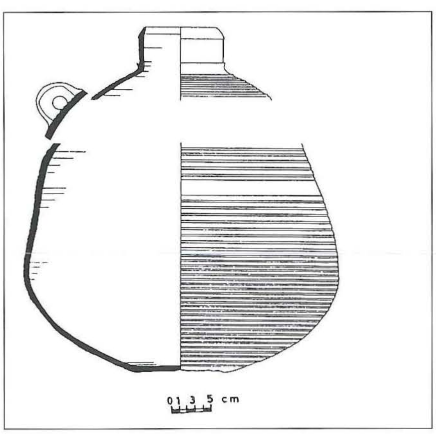


Fig. 8 Elgavish 1977, Pl.V:31 (Roman).

fourth century AD. Phoenician amphorae of that period have been found all over Israel, not only on the coast. The amphora began to take the shape, which would become so popular and widespread during the following period. Two main types are found: one narrow and elongated (Fig. 7,1-2), the other rounded (Fig. 8). The elongated amphorae are predominant in coastal sites, while the rounded are more frequent inland. The Hellenistic rounded type seems to have been influenced by the western Phoenician conical amphora types,[70] resulting in the creation of a new Phoenician amphora type in the Roman period;[71] during the Roman period this type was still made of the same yellow-red coarse ware, originating from the Phoenician coast.

Like its Hellenistic predecessor, the Roman Phoenician amphora was neck-less and ribbed, with the usual twisted handles, but the shoulder sloped sharply, creating a cone-shaped amphora. According to the Akhziv survey, Phoenician amphorae were the most prominent group of amphorae, apparently in use throughout the Roman period.[72] The type was also found on the coastal site of Shiqmona near Mt. Carmel.[73] Another elongated type of the period is the "Beirut amphora", which according to Reynolds first appeared in the first century BC and continued throughout the Roman period. The type was exported to Cyprus, Egypt and Carthage.[74] The rounded Phoenician amphora of this period was, however, influenced by the Judean amphora tradition of a sack-shaped body, loop handles and a short neck. Combined with the Phoenician ribbing,[75] it was found at both coastal and inland sites. The rounded amphora appeared at Shiqmona,[76] and has been found at Samaria in contexts ranging from the late first century BC to the fourth century AD.[77]

The Late Roman/Byzantine Period

The dominating amphora type of the Byzantine period in the Levant – and throughout the Mediterranean – was undoubtedly the Gaza amphora

70 See Ramon 1991.

71 As observed in Acco and in Akhziv area, it seems that the Hellenistic Phoenician amphora continue at least until the first century AD, with a thicker rim perhaps. There is not enough evidence yet to detect the date of change from the Hellenistic tradition into the later one that continued and dominated the Byzantine period.

72 Frankel & Getzov 1997, 35*; figs. 2.77.7:14, 2.134.21:11,12, 2.142.10:5,6, 2.169.3:11-13.

73 Elgavish 1977, pl. 5, 24,28.

74 Reynolds 1997-1998, 59-63

75 Typical to most of its types through the ages, see below.

76 Elgavish 1977, pl. 5, 31.

77 At Samaria, Roman 1a dated between 11 BC and 16 AD, Roman 3a dated to the third century AD and Roman 4 to early fourth century AD. Kenyon 1957, 289-300, 302, 304; figs. 69:12; 71:1; 72:1,2.

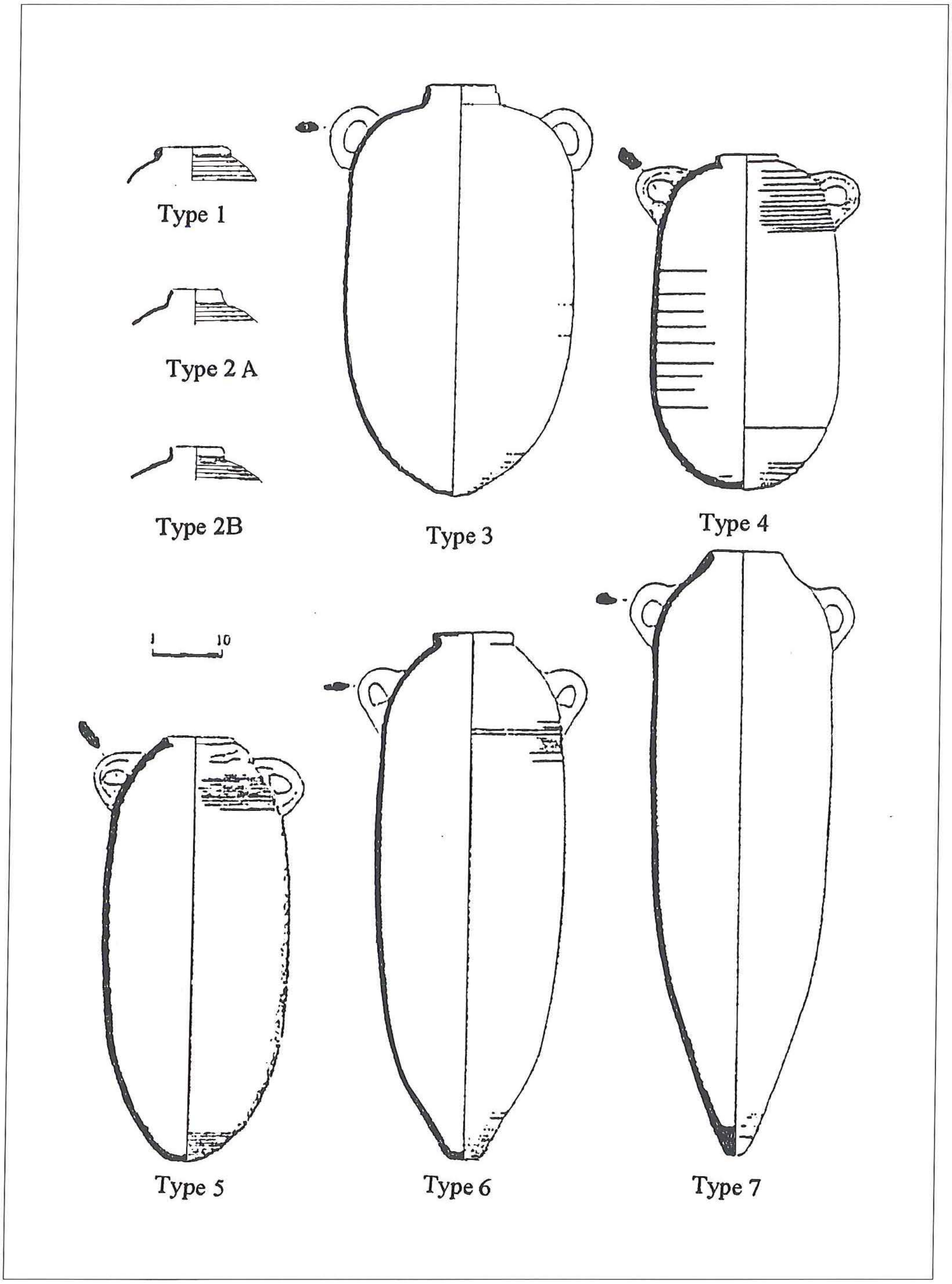


Fig. 9 Oked 2001, P.233, Pl.1 (Late Roman/Byzantine).

(Fig. 9).[78] From the fifth century AD onwards its use increased, for unclear reasons, to become the major amphora in Mediterranean trade. It was common in all areas of the Byzantine Empire and beyond, mainly on the shores of the Eastern Medi-

[78] Since Riley's research in 1975 many scholars have faced the issue of the Gaza jar. To name a few: Zemer 1977, 61-64; Landgraf 1980, 82 (Tel Keisan); Tubb 1986, 51-55 (Tel el Far'ah); Adan-Bayewitz 1986, 97-99, Blakely 1987, 1988, Magness 1992, 1994, Oleson *et al.* 1994 (Caeasarea); Israel 1995, 2001 (Ashkelon); Johnson & Stager 1995 (Ashkelon); →

terranean. It is also regularly found in smaller quantities in the Western Mediterranean, the Black Sea and the Aegean.[79]

Based on petrographic analysis, Riley concluded that this type of amphora originated in the southern coastal region of Israel.[80] Petrographic analysis of Gaza amphorae was repeated, and Riley's results reconfirmed, by Y. Goren.[81] The discovery of several kilns containing these amphorae *in situ* in the area of the northern Negev and southern coastal plain of Israel settled the issue, and there is no more doubt regarding the origin of this amphora.

During the Byzantine period, the Phoenician amphora retained all of its major characteristics: it was made in the two traditional forms, an elongated pointed amphora and a rounded one, both with ribbed body, twisted handles and a neck-less rim. The continuation of the Phoenician pottery tradition, although produced in a different region than earlier Phoenician amphorae and made of a different ware, may point to the identity of the makers of the amphorae. True, this Byzantine version of the Phoenician amphora may have been an imitation, influenced by the long Levantine local tradition and produced by local inhabitants other than Phoenicians. But the fact that this type appeared only when the earlier type, made of the Phoenician yellow-red ware of the north, disappeared completely from its traditional location in the north, suggests that the entire pottery industry of the northern coast shifted southwards. The reason for this may have been connected to the wine industry, but which change came first is unclear. We do know, however, that Phoenicians had had a substantial hold over the southern coast from the Persian period, for example at Ashkelon, which became the centre of the "Gaza" amphora production. It is thus possible to observe continuity in the Phoenician community on the southern coast of Israel from at least the fifth century BC until the seventh century AD.

In Carthage, Riley analysed amphora distribution from the Eastern Mediterranean from the fourth to the seventh century AD. According to the finds from Carthage, LR4, LR5, LR6 and LR7, which exhibit characteristics of the Phoenician tradition, were imported from western Anatolia and the Levant from the end of the fourth century onwards.[82] Majcherek agreed with Scorpan that the form of the Byzantine Gaza amphorae had developed indirectly from the Punic amphora of the sixth century BC (Mana 6), through modification of the Italian amphorae Dressel 10-11.[83]

However, several studies have been published lately in Israel, results of excavations and surveys, which have revealed the kilns and the production centres of the Gaza amphora, scattered from as far south as Sheikh Zuwayat in northern Sinai, to Ashdod in the north.[84] These finds indicate that the "Gaza" amphora developed out of the Levantine Phoenician tradition without the mediation of the Punic or Italian traditions, themselves influenced by the Phoenician tradition.

The excavation of Third Mile Farm near Ashkelon in 1995 uncovered a large workshop for Gaza amphorae located near several large wine presses.[85] The production centres for these amphorae served the farms and villages of the wine-producing southern coastal plain. Although the amphorae were uniform in shape, they were found in a large number of different production centres over a considerable area. Fabian and Goren suggest that the uniformity is not coincidental, and imply the existence of agencies involved in the scrutiny of the wine's quality and the standardisation of amphorae.[86]

Recently, a comprehensive study of the Gaza amphora by Sarit Oked has demonstrated the continuity of the shape from the Hellenistic period to the end of the seventh century AD. Oked presented

→ Oked 2001 (North Sinai); Majcherek 1995 (Alexandria). This jar was dealt with also in many sites along the Mediterranean coasts: in Istanbul, Hayes 1992, 64; in Berenike – Libya, Riley 1979, 219; in Carthage, Riley 1981b, 115. It is classified in Berenike as LR amphora 3, in Carthage as LR amphora 4 (both by Riley), and in the western Mediterranean as Amphora Class 48/49 by Peacock & Williams 1986, 198.

79 Oked 2001, 245.

80 Riley 1975, 30.

81 Oked 2001, 229.

82 Riley 1981b, 117.

83 Majcherek 1995, 163 n. 3.

84 Oked 2001, XIII.

85 Israel 1995.

86 Fabian & Goren 2001, 215, 218.

the different forms of this amphora – rounded and elongated – and discussed their significance. In Y. Israel's opinion, there was a functional difference between the types: the rounded type (Oked Type 4) was used for oil, while the elongated type (Oked Types 6 and 7) was used for wine, but, on the basis of organic remains in the amphorae, Oked ruled out Israel's suggestion. Killebrew[87] classified the Gaza amphorae into two main types: the elongated type A (Oked Types 6 and 7), and the rounded type B (Oked Types 3-5). Johnson and Stager classified these types geographically, suggesting that type A originated from Ashkelon while type B came from Gaza.[88] This division contradicts, in Oked's opinion, the reality of the situation as revealed in the excavations of kilns, which have demonstrated that both types were produced in the same kiln.[89] It seemed to her that the reason behind the difference in types was chronological and not geographical, as has also been suggested by Majcherek, based on finds from Alexandria.[90] In his opinion, the rounded amphora is early, first and second centuries AD, and the elongated type is divided into three sub-types and dates from the end of the fourth to the early seventh century AD.[91]

Oked, however, divided the Gaza amphora into seven types:[92]

Type 1, found on North Sinai sites and dated from the third to the first century BC.

Type 2, found in North Sinai and in Syene, Egypt, dated in the first century BC.

Type 3 (Majcherek 1995, Form 1), found in Ashdod, North Sinai, Alexandria and Rome, dated in the first and second centuries AD.

Type 4 (Zemer 1977 type 53), found at Tel Qasile, Qasarweth and Ostracina in North Sinai and at Kourion in Cyprus, dated from the second to the fourth century AD.

Type 5 (Zemer 1977 type 52; Majcherek 1995, Form 2), found at Qasarweth and Ostracina in North Sinai and at Alexandria, dated in the fourth and fifth centuries AD.

Type 6 (Zemer 1977 type 49; Majcherek 1995, Form 3), found at Ostracina, Alexandria, Corinth and Berenice, dated to the end of the fifth and the sixth centuries AD.

Type 7 (Majcherek 1995, Form 4), found at Shave-Zion, Caesarea, Ostracina, Alexandria, Pella, Corinth and Istanbul, and dated from the end of the sixth to the end of the seventh century AD.

It now seems that, in addition to these known Gaza amphorae, a contemporary Phoenician amphora continued to be used in northern Phoenicia. Reynolds' "Beirut amphora" of the elongated pointed type was manufactured there in the Byzantine period and exported to Cyprus, Egypt and North Africa.[93] Samples have also been found at Caesarea, south of Mt. Carmel.

In light of this evidence, it seems that there may have been at least two main production centres for the Phoenician amphora. One of these was probably at Tyre, manufacturing yellow-red amphorae (and other pottery) from at least the eighth century BC until the Roman period.[94] This centre may have relocated its production to the Ashkelon area in the third or fourth century AD. Another production centre may have operated in Beirut, perhaps from the second century BC to the seventh century AD,[95] but little is currently known about Beirut and its local ware.

[87] Unpublished, mentioned by Oked.

[88] Johnson & Stager 1995, 96.

[89] Israel 1995, 127.

[90] Majcherek 1995.

[91] Oked 2001, 233, 235.

[92] Oked 2001, 235-238.

[93] Reynolds 1997-1998, 63.

[94] From the current available evidence it seems that this centre continued to produce pottery until the second century AD or a little later.

[95] It is possible that this centre produced the "white ware" pottery known at Acco (Regev 2000); in this case it would probably be a much earlier production centre.

Characteristics shared by all Phoenician amphora types

1. **Dual Types**. In most periods, in the East and West alike, there are two main types of amphorae: a) an elongated slender amphora with pointed base, and b) a globular neck-less amphora with thickened rounded rim. In the East the elongated narrow type prevailed from the Late Bronze Age to the Persian period, and made a comeback during the Byzantine period. The globular neck-less type dominated in the Hellenistic and Roman periods.
2. **Feature elements**. Beginning in Iron Age II, the Levantine Phoenician amphorae usually feature a horizontally ridged body and twisted handles, as well as a neck-less mouth and thickened rounded rim. They also have a pointed toe or a knob at the base when the body shape is rounded.
3. **Wares**. From Iron Age II onwards, Levantine Phoenician amphorae were produced in the same ware for long periods, thus linking shape and ware to a unified identity. As a result, the type is easily traceable. From Iron Age II until the Roman period, the Phoenician amphora was made of the same yellow-red ware with occasional red inclusions, originating from the Phoenician coast.[96] As testified by Bikai, "shards [were] determined Phoenician on the basis of ware. The majority were the characteristically soft fabric of the Phoenician coast, 68% had noticeable soft red ferrous inclusions, a marker of coastal Phoenician pottery".[97] However, from the very beginning of the Byzantine period onwards, these amphorae were made of a coarse brown ware, originating in the southern Levantine coast, as the many kilns found there testify. This shift from one ware to the other seems to represent the change of the location of the production centres, but not of the producers, as the tradition of Phoenician amphora manufacture continued with all the features which had characterised the earlier types made of yellow-red ware. Furthermore, although the location has changed, it is not coincidental that the new region was still one that had been within the Phoenician domain from the Persian period onwards.
4. **Identifying marks**. As early as the Late Bronze Age, Levantine Phoenician amphorae occasionally bear marks, inscriptions and impressions on one of their handles, and sometimes on the shoulder. This custom of marking amphorae doubtless reflects an extensive trade system and a central organisation. The organisation reflected in marking amphorae had characterised Phoenician trade long before such a system was used elsewhere. In Grace's opinion the marking on handles was a Levantine practice, not found in mainland Greece.[98] It is not impossible that the practice of inscribing and stamping amphorae on their handles was introduced to the Greeks by the Phoenicians, as signatures on Greek vases were a rare phenomenon before 580 BC.[99] Inscribed handles from Iron Age I on Phoenician amphorae were found in Kommos and in Paleapaphos-Skales.[100] During the Hellenistic period, Phoenician and Greek stamps bearing Phoenician and Hellenised names occasionally occurred on Phoenician amphora handles, as well as on other amphora types in Phoenicia. These stamped handles have been found at Tyre, Akko, Sha'ar HaAmakim and other northern and coastal sites.[101] Local coarse versions of the Phoenician amphora type were found in Tel Anafa and Dan with Greek graffiti above the handles.[102]

[96] Slane 1994, Regev 2000.
[97] Bikai 2000, 302, regarding the Iron Age.
[98] Grace 1956b, 88.
[99] Johnston 1991, 212, 218. Few letters or numbers, or a "logo" of some kind first appeared in Greece in the late seventh century BC, reached its peak of use around 500 BC, and gradually faded out in the fifth and fourth centuries.
[100] Bikai 2000, 308.
[101] Naveh 1987, Naveh 1995, Naveh 1997; Finkielsztejn 1998b, fig. 2.
[102] Berlin 1997, 156; PW 486.

Summary

Although the Canaanite jars of the Late Bronze Age were made in various wares and in at least two different shapes, they have always been treated in research as a single group with a shared origin.[103] Phoenician expansion occurred several hundred years later, between the tenth and the seventh centuries BC, at first to the south and north, and later to the near West (i.e. mainly Cyprus, but also Crete and the Aegean) and to the far West (North Africa, the Iberian Peninsula and the islands of the central Mediterranean). In addition to known finds from Enkomi,[104] we have in recent years started hearing of Phoenician amphorae in the Early Iron Age (eleventh to ninth century) west of the Levant: at Palaepaphos-Skales in Cyprus and at Kommos in Crete. Not surprisingly, these reports were written by Patricia Bikai, a scholar who was trained in Phoenician pottery and was able to identify its coarse ware. However, no Phoenician or Canaanite amphorae from the Iron Age have been reported from mainland Greece or the Aegean, although Virginia Grace was aware of the type.[105]

Did the Phoenicians stop exporting wine and oil to those areas? Did they stop distributing agricultural products or delivering luxury goods? In the light of the vast evidence of Phoenician trade in the East and the West, it does not seem to be the case. During the tenth to the seventh centuries BC we are dealing with the sensitive and loaded question of the beginning of colonisation, Greek and Phoenician. Which one preceded the other? Which one affected the West most? Which brought culture to Europe?

Although it always displayed certain characteristic features, the Phoenician amphora did not remain unchanged through the ages; at some time during the Iron Age a split occurred into a western and an eastern line of development. But even then, although there are differences, in certain periods the two lines appear to be very similar. In the West, the Phoenician tradition appears in the Punic amphorae of the Classical and Early Hellenistic periods, with a very similar shape continuing into the Late Hellenistic and Early Roman periods in Italy. It is also visible in the Iberian amphorae from the seventh or sixth century BC, until at least the Early Roman period. Sharing the same origin, amphorae of both East and West look very much alike by the Early Roman period. Grace was the first to say that it was unclear why the western jars were called "Punic" amphorae, since she saw this group as a direct continuation of the Canaanite jar of the Iron Age.[106] It was later restated by Bikai, who claimed that "a whole group of Punic jars evolved from the Phoenician jars",[107] and by Antonio Sagona, who included the entire group under the title "Canaanite".[108]

In the East, the Late Bronze Phoenician tradition continued with the Iron Age "Sarepta" and "Tyrian" jars, to the "Torpedo Jar" of the Persian/Classical period. During the Hellenistic and Early Roman periods this amphora appeared as the Levantine yellow-red ware coastal amphora, and the tradition continued into the Late Roman period with the "Gaza Jar".

Significant information regarding the trade and use of the Phoenician amphora during the Persian period is provided by an Aramaic text recorded in a tax list collected from Ionian (YWNY) and Phoenician ships carrying goods to and from Egypt (probably Memphis), in the year 475 BC.[109] According to this document the Phoenician ships carried Sidonian wine, cedar wood, metals and clay. Sidonian wine must have thus been shipped in Phoenician amphorae and this evidence clearly provides a rare testimony of amphorae that were the product of the Phoenician people.

Several chronological ranges have been proposed by different scholars for the continuous development of the Phoenician amphora. Raban (1980) described the evolution of the Levantine transport amphora from at least the Middle Bronze Age (nineteenth century BC) until the end of the Persian period (end of fourth century BC). Bernal (1991) suggested

[103] Tzedakis (ed.) 1999.
[104] Raban 1980, 87-88.
[105] Grace 1956b, 94, 96.
[106] Grace 1956b, 96.
[107] Bikai 1978b, 54.
[108] Sagona 1982, 73.
[109] Yardeni 1994, 67, 70. I wish to thank Ada Yardeni for her helpful notes and clarifications on the document.

the sixteenth to sixth centuries BC; Grace (1957) thought of the fourteenth to the early second century BC; Bikai (2000) talked about Phoenician amphorae between the eleventh and seventh centuries BC; Sagona (1982) composed a development line of Phoenician and Punic amphorae, all of which he identified as Canaanite; in Spain Catalan (1982) dated the Phoenician amphorae between the seventh and third centuries BC. In Cyprus Nicolaou (1985) suggested that this type ranges from the late eighth to the fifth century BC. The Phoenician amphora is considered by Fantalkin (2001) one of the predominant storage jars occurring in Israel from the eighth century to the Early Hellenistic period. Frankel and Getzov (1997) in the Akhziv survey date this type from the eighth century BC until the end of third century AD. Kenyon in Samaria (1957) stated that these types of jars developed steadily into those found in the Hellenistic period, with no sharp division between them. Lehmann (1998) also dated this amphora type from 750 to 300 BC in his assemblages nos. 3-8. Guz-Zilberstein (1995) dated this type from the sixth century BC to the Roman period.

Bear in mind the two consistent main types of the Phoenician amphora, the characteristic handles, ribbing and neck-less rim, and the occasionally repeated base knob; the tendency to mark the amphora handle epigraphically; the inclination on one hand to use one specific ware for centuries, but on the other hand the ability to substitute another ware and keep the characteristic forms; the distribution pattern of this amphora and the pattern of local imitations; all of the above portray the biography of the Phoenician amphora from the Middle Bronze Age in the seventeenth century BC to the Byzantine period in the seventh century AD.

The same extensive tradition with its manufacturing centres, distribution and imitation patterns, which for two thousand years was concentrated in the Phoenician city states on the Levantine coast – Ugarit, Byblos, Sarepta, Ashkelon – and in the Phoenician trading posts and settlements around the Mediterranean – Cyprus, Crete, Carthage, The Iberian peninsula, Sicily, Sardinia – clearly illuminates its "*Sitz im Leben*". The tradition was inherent in Phoenician culture and was sustained and conveyed by Phoenician potters in their homeland and in the Phoenician posts around the Mediterranean. It was, therefore, a Phoenician transport amphora.

Amphora Production in the Rhodian Peraea in the Hellenistic Period

Gonca Cankardas Şenol, Ahmet Kaan Şenol & Ersin Doğer

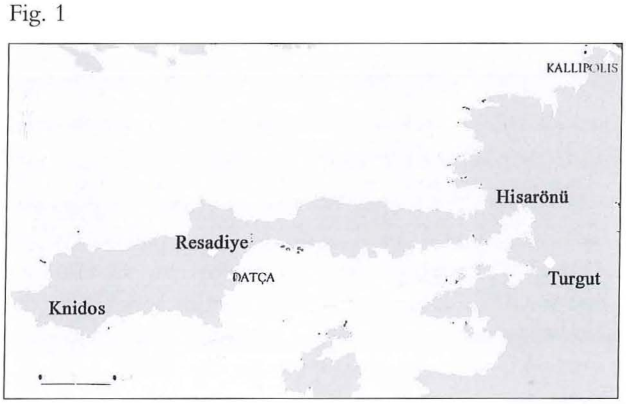
Increasing numbers of Rhodian stamped amphora handles found at various sites have forced us to differentiate between amphorae produced in the Peraea of Rhodes and on the island itself in the Early Hellenistic period. Some of the handles found in the Peraea are different than those from the island, mainly in their clay features. They are more reddish, sometimes not well fired and calcareous, and they lack, for the most part, any slip. Although administratively subjected to Rhodes, the Peraea differs from the island in terms of clay sources, vineyards and climate. The amphora producers of the Peraea faced different advantages and problems than the fabricants of the island and this could have affected the amount and the quality of their production as well as the economic power of the Peraea. We do not know how much fabricants' practices differed between the island and the Peraea,[1] but it is certain that the production and the activities in the Peraea were somewhat different from those of the island.[2]

The production of Hieroteles in the Peraea has been known since the late 1980s, following the discovery of his workshop and amphora deposits,[3] near the village of Hisarönü between Marmaris and Datça/Knidos (Fig. 1). Excavations began in 1990 and have continued intermittently until today. A very important point of departure for the early periods of Rhodian stamp chronology, Hieroteles' considerable production capacity has been proved both by the remarkable deposits found at the site and his stamped amphorae scattered over a large area from the Black Sea to the Eastern Mediterranean.[4] His fame does not only depend on his well-distributed production but also the long duration of his career, which has been suggested to have begun in the early second quarter of the third century BC and lasted to *c.* 230/225 BC (Fig. 2).

This long period of activity may direct us to suggest that "Hieroteles" was not only the name of one fabricant but of a company, in which several potters produced amphorae under the name of "Hieroteles". Excavations at the site have also revealed that a certain number of other amphora producers, contemporary with or later than Hieroteles, were active in the area.

Hieroteles is one of the pioneers, probably the first fabricant, who began to use month-names in their full form in rectangular stamps next to the

Fig. 1



[1] Although we have some information about vineyards towards 200 BC in the Peraea (see Salviat 1993, 151-161), it is strange that there is no record in the ancient sources on the procedure of the official stamping.

[2] Şenol 2000, 38.

[3] Empereur & Tuna 1989, 277-299.

[4] For some stamps naming him or the eponyms dating him on button type stamps see Vasileva 1982, 109, nos. 88-89, 97, tabl. 111; Sztetyllo 1975, 165, nos. 2, 4-6; Sztetyllo 1978, 266, no. 4 (with a rosette symbol); Sztetyllo 1990b, 167, no. 2; Schkorpil 1934, 30, no. 5; Römer 1983, 266, no. 2; Rădulescu et al. 1987, 69, no. 129, pl. I, no. 10; Melaerts 1994, 337, no. 4; Muşeteanu et al. 1978, 182, nos. 32-33; Levi 1965-1966, 557, no. 36; Halpern-Zylberstein 1980, 244, nos. 4-5; Grace 1934, 233, nos. 70.

Fig. 2

Fig. 3

main stamps on his amphorae (Fig. 3).[5] Perhaps the appearance of month-names on his amphorae was the result of an obligation required by the island authorities on the production in the Peraea.[6] If so, the purpose of the procedure should have been, not to prevent his activity and production, but to bring his exportation under the control of the island, and perhaps to protect the rights of other fabricants, who produced amphorae on the island in the same period. As we know, this procedure was also applied by the Rhodian fabricants such as Axios and Zenon I in the main stamp with a monogram or ligatured letters which represent month-names. It is also notable that the other fabricants, like Anaxilas, Dionysios and Herakleitos I, who were active at Hisarönü at about the same time or after the appearance of month-names, did not use month-names on their production. The reason behind Hieroteles' use of month-names as additional stamps rather than on the main stamp, is probably his reluctance to change the form of his well-reputed stamps, which had already been in use for nearly 30 years and were familiar to the consumers. We have noted during our excavations that the stamps naming some of the eponyms never appear in the area, although their association has been recorded with the fabricant through the seals found at other centres. These eponyms are Philonidas, Kallikrates I, Philokrates, Polykrates and Onasandros.[7] Among these eponyms, the seals of Kallikrates I[8] and Philonidas[9] are associated with month-names. The other eponyms appearing with month-names on button-type stamps of Hieroteles are Timokleidas,[10] Eukles II, Xenaretos, Hagesippos,[11] Pausanias I and Sochares.[12] The only find with a month-name from the deposit of Hieroteles is a stamp that carries the name of the eponym Pausanias I. The handles bearing the names of Timokleidas and Eukles II at the site do not have an additional stamp with a month-name. We have not attested any stamps bearing the names of Xenaretos, Hagesippos or Sochares.

The absence of stamps of the eponyms, especially of those whose names appear with month-names in the deposits, suggests that the fabricant might have produced amphorae somewhere else in the Peraea during the period when month-names first appeared on the stamps.[13] During the years of these eponyms we also see Dionysios II,[14] who began to produce amphorae in the Peraea. This period has been suggested to be after the earthquake in *c.* 229-227 BC in Rhodes.[15] The eponym-names on his amphorae have shown that their production overlapped for at least two years, in the years of Polykrates, and Phi-

[5] Not always very close to the main stamp but sometimes rather far from it, at the lower part of curving point of the handle. A stamp found in the excavations made by CEA (Centre d'études alexandrines) in the garden of the former British Consulate in Alexandria, names the fabricant Theudoros whose activity was placed in c. 235-204 BC. A secondary stamp, in oval form with two letters probably refering to a month-name beginning with alpha, is impressed (Şenol 2000, 309, no. 55, Inv. Alex. 190) very close to the main stamp.

[6] Şenol 2000, 37-38. This is also suggested by Finkielsztejn 2001a, 182, note 77.

[7] Doğer 1996, 248-249.

[8] In the Benaki Collection, ABC 921. 37 and 41.

[9] Finkielsztejn 2001a, 105. The name of the eponym Philondas appears on the stamps of Hieroteles at Hisarönü but without a month-name. A complete amphora of the fabricant in the year of Philondas without a month-name has been also attested. See Grace 1963, 328, note 20.

[10] In the Benaki Collection, ABC 921. 27

[11] Finkielsztejn 2001a, 105.

[12] In the Benaki Collection, ABC 922. 38 and ABC 922. 11.

[13] We suppose that his other workshop was also located in the Peraea as we do not know any amphora by him which could be produced with clay of any other centre.

[14] During our researches in the Benaki Collection in July 2002, we have identified at least five different fabricants named Dionysios who produced Rhodian amphorae in different periods of Rhodian chronology. After this observation, the fabricant Dionysios of the Peraea can be considered as the second of the homonyms.

[15] For the date of the earthquake, see Nachtergael 1978, 19, no. 11.

Fig. 4

Fig. 5

Fig. 6

Fig. 7

lonidas.[16] We may perhaps suggest that Hieroteles was not in his workshop when the month-names began to appear on the stamps. But a stamp bearing the name of the eponym Pausanias I with the month-name found in the excavations, stamps naming the eponyms Eukles II[17] and Timokleidas[18] again with a month-name known from elsewhere and their stamps without a month-name at Hisarönü are difficult to explain.[19] But the stamps naming these eponyms support our suggestion for his production in these years at Hisarönü.

Our excavations of the workshops at Hisarönü have revealed that the earliest potter of stamped amphorae in the area is Astos (Fig. 4), who used rectangular stamps, which may be associated with the stamps of the eponym Antileon.[20]

Stamps bearing the names mentioned above have also been found among the material in the Koroni Peninsula.[21] V. Grace dated the eponyms Agrios, Khry(sostratos) and Antileon to *c.* 273/271 BC.[22] Among these three eponyms, after Khrysostratos and Antileon, both of whom probably date the fabricant Astos, Agrios is the last eponym of the series but the first and the earliest eponym dating the production of Hieroteles in the Peraea (Fig. 5). The association of the eponym Agrios with the fabricant Hieroteles confirms the beginning of his career in that period.[23] According to the contexts at Hisarönü, the early eponyms after Agrios, are Aristion (Fig. 6) and Kleonymos. The following eponyms are suggested according to the development of the rim forms of the amphorae and the style of the button type stamps as Daemon, Hagemon, Hippostratos and Nikon.[24]

During the activity of Hieroteles at Hisarönü, we have evidence of some other certain fabricants who produced stamped amphorae in the vicinity. Fragments of their amphorae have been found together in the excavations of the deposits. Nikolaos is one of these potters, whose stamps are very rarely attested. His name appears on two different types of stamps. The first is rectangular with the name in nominative; the only probable association of this type of stamp is with the eponym Phyles (?),[25] whose name does not appear in the list of the eponyms.[26] The other stamp of Nikolaos, in genitive, is circular with a rose symbol in the centre,[27] a completely new type in the Peraea (Fig. 7). Circular stamps with a rose in the centre and the eponym Phyles have also been

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[16] It seems that Hieroteles was not producing amphorae at his known workshop in the Peraea in these two years, but somewhere else (?). So most probably his workshop was used by Dionysios II after the activity of Hieroteles had ended at Hisarönü.

[17] Finkielsztejn 2001a, 104, table 3. Can we be sure that the stamp naming Eukles II with the month-name belongs to the production of Hieroteles or someone else using the same style of stamps on his amphorae?

[18] In the Benaki Collection, ABC 921. 7.

[19] It should be noted that month-names sometimes were impressed on the handle that bear the stamp of the fabricant Hieroteles as seen on some samples from the Benaki Collection in Alexandria.

[20] The stamps bearing the name of the eponym Antileon were also found at Hisarönü deposits.

[21] Doğer 1996, 243; Vanderpool *et al.* 1962, 41, no. 64 (Antileon) and 51, no. 109 (Astos); Grace 1963, 320. On p. 333, under no. 5, Grace mentions the possible association of Astos with the eponym Khry(sostratos).

[22] Grace 1974, 197 and 200.

[23] The stamps of Agrios, Aristion and of Hieroteles are circular with a rosette in the centre and the inscription is between two concentric circles around the rosette. For double-named stamp bearing the names of Agrios and Kleitophon found in the excavations see Doğer 1994, 212, no. 14.

[24] Doğer 1994, 205.

[25] Empereur & Tuna 1989, 297-298, no. 21, fig. 17.

[26] The name of the eponym Phyles also exsists on button type stamps of Hieroteles at Hisarönü.

[27] Doğer 1996, 245. For a stamp naming Nikolaos see Finkielsztejn 2001a, 249, pl. XII, no. 214.

Fig. 8

Fig. 9

Fig. 10

Fig. 11

attested in the excavations. Although the evidence of his association with an eponym is not enough to understand the duration of the activity of the potter Nikolaos, he might have produced amphorae between *c.* 260 and 250 BC.[28]

The other potter of Hisarönü is Anaxilas, whose stamps have been attested more frequently than those of Nikolaos and Dionysios II.[29] His association with the eponyms has been assured by the excavations at Hisarönü. The potter used circular-type stamps with a rose symbol in the centre and with his name in genitive form (Fig. 8). The stamps from the deposit have shown that his activity was in the years of the eponyms Hagesippos, Onasandros and Eukles II, who all dated the production of Hieroteles as well.[30] He has been suggested to have produced amphorae for at least three years between 250 and 240 BC.[31]

We have noted that Dionysios II, during his twelve years of production in the workshops at Hisarönü,[32] used three different symbols on his stamps and on the stamps of eponyms with the preposition 'επί. The symbols appearing on his stamps are a rose (Fig. 9), a bunch of grapes (or grape cluster with leaves) and a *cornucopia* (Fig. 10) placed at the centre of circular stamps.[33] We have also noticed that the fabricant used more than ten different types of dies with those symbols. After his activity between 230/225 and 220/215 BC, the results derived from the excavations have shown that his last production year, the year of the eponym Euphranor, was the first year of the fabricant Herakleitos I.[34] Probably in association with three eponyms, Euphranor, Kallikratidas I (?) and Aischyleinos, the fabricant Herakleitos I used rectangular stamps without any symbol (Fig. 11).[35] We have suggested that his activity might have begun just before or at the very beginning of the Pergamon deposit. Rectangular stamps naming Herakleitos and double-named stamps with the names Timakrates and Herakleitos with the conjunction καί, found in the Pergamon complex, are notable.[36]

The stamped amphora production at Hisarönü workshops ceased for a while until the appearance of late Rhodian amphorae in the late first century BC.[37] After the destruction of a Hellenistic tower in the excavation area, the entrance was closed by rubble from the firing-chambers of amphora kilns (Fig. 12). This zone, then, was filled at the beginning of the second century BC with the production waste of various producers of the third century BC.

[28] Doğer 1996, 245.

[29] Sztetyłło 1975, 167, no. 12 (which should be restored as Anaxilas); Finkielsztejn 2001a, 249, pl. XII, no. 213; Six handles in the Benaki Collection (ABC 315. 23, 25, 26, 27, 28, 30).

[30] The button type stamps of the eponyms Hagesippos and Eukles II are accompanied with month-names. The association of these eponyms with the fabricant Anaxilas points out that he was active when the month-names began to appear on the stamp. But he never used month-names neither on nor next to his stamps like the fabricant Dionysios II.

[31] Doğer 1996, 244.

[32] For the list of the eponyms appearing on the production of Dionysios II, see Doğer 1996, 249. In addition to these eponyms, we have attested the combination of the eponyms Pausanias II (?) and Harmosilas with the fabricant through the material coming from the excavations after 1996.

[33] Doğer 1996, 245-246. His rectangular die with his name inscribed in one line without a device is also notable.

[34] For Herakleitos II, see Jöhrens 2001, 377, Abb. 7. 1 and 419, nos. 201-202.

[35] Doğer 1996, 246.

[36] Börker & Burow 1998, 47, nos. 455-456, 51, nos. 514-515. See also 51, no. 513, for the single-named stamp of Timakrates. All these handles and the stamped handles of Herakleitos I at Hisarönü should be studied to identify if they were the production of the same workshop or not.

[37] For typology, production and distribution of these amphorae, see Şenol 1996, 165-172.

Fig. 12

It is clear from the archaeological material that the usage of kilns ended at the end of the third century BC. To create an empty area at the beginning of the second century BC, the various deposits were collected and used to fill this ruin. So the stratigraphy attested there is mostly a reversed one, which causes us the problem of interpretation of the chronology of stamped amphora production.

We still have problems in solving the production in the Peraea by the potter Hieroteles and the other fabricants with button-type stamps. So far, we only know the site of the workshop of Hieroteles, who used very distinguishable button type stamps. Generally, nearly all button stamps are attributed him, but our studies in the Peraea, in Asia Minor and in Alexandria, have demonstrated that button-type stamps were also imitated by other fabricants, who were most probably contemporary with Hieroteles or his successors, and produced stamped amphorae in modest quantities. This is confirmed by the eponym button-type stamps, which have never been attested in the deposit of the potter but elsewhere in the Mediterranean centres[38] and the fabricant button-type stamps naming Phaiskos, Hieronymos, Soteridas, Dikaios, Diandros, Sthennidas, etc. in the Benaki Collection and elsewhere.[39]

Surveys in the Peraea have revealed that production of amphorae in the Hellenistic Period is not limited to Hisarönü. Amphora deposits to the north of Marmaris, on a small plain called Gelibolu (Kallipolis), were made known by J.-Y. Empereur and M. Picon (Fig. 13). They have noted a production of amphorae from the end of the fourth century BC (with mushroom lipped amphorae) to the first century AD (with very sharp, pointed handled amphorae). To the south of Hisarönü, near the village of Turgut, another amphora deposit from a workshop was found, which produced mushroom-lipped amphorae with rectangular formed stamps[40]. The deposits at Kallipolis are on the way to the Island of Kedrai and closer to the sea. Our surveys, on the same road, but nearer the village of Çamli, revealed deposits of the so-called proto-Rhodian amphorae, with vertical-banded and mushroom rims.[41] Two

[38] In addition to the eponyms given above see also Doğer & Şenol 1997, 33, no. 1. This button-type stamp naming the eponym Aretakles with the preposition 'ἐπί is considered to belong to another fabricant using same type of stamps, and most probably his production was in the Peraea. On the other hand, we already know that this eponym also dates the production of the potter Hieroteles. But, as it is known, the names of the eponyms appearing on button stamps of Hieroteles have never been seen with the preposition 'ἐπί.

In the Benaki Collection, the stamps naming the eponym Polycharmos (ABC 922. 47 and 50) with the preposition are probably the production of another fabricant who used botton type stamps. The association of the eponym with the fabricant Hieroteles is already known.

Other samples are the eponyms Thrasydamos and Harmosilas appearing on button type stamps in the Benaki Collection (ABC 922. 14 and ABC 925. 26). It is known that they were in charge after the activity of the fabricant Hieroteles and these eponyms date the production of Dionysios II who was active in the Peraea just after Hieroteles, but producing amphorae at the same or nearby workshops at least two years simultaneously.

The other eponyms are Agloukritos and Aischyleinos whose associations are not attested with the fabricant Hieroteles but their names appear on button -type stamps (ABC 925. 3, 4, 9, 22, 32, 35 and ABC 925. 13, 15, 34, 41).

[39] Phaiskos, ABC 921. 37; Hieronymos, ABC 922. 49, 52, 55; Soteridas, ABC 922. 20; Dikaios, ABC 925. 18,, 19, 20, 21, 37, 43, 44, 50; Diandros, ABC 925. 45, 46; Sthennidas, ABC 922, 9. In the rich collection of the Greco-Roman Museum in Alexandria we have also recorded the button-type stamps of the fabricants Mikythos (I?), Agathon (ABC 311. 22 and 23, probably produced in Period I in the Peraea regarding the profile and clay of the handle), Archokrates (ABC 325. 28 and 30, Period II, probably in the Peraea), Aphrodisios, Demetrios and Hermaios. The fabricant Nikasikrates used botton type stamps as seen on an example held in the Benaki Collection in Alexandria (ABC 392. 1).

[40] Empeur & Picon 1986a, 116; Empereur & Tuna 1989, 289.

[41] Comparable with proto-Rhodian amphorae published in Grace 1963, 323, figs. 1-5.

Fig. 13

Fig. 14

Fig. 15

Fig. 16

Fig. 17

Fig. 18

Fig. 19

Fig. 20

types of amphora bases were found, one of which resembles the foot style of the amphorae of Hieroteles,[42] and the other a knobbed toe with a pointed base. The rectangular stamps attested there bear the monograms ΙΠ[in 5 samples (Fig. 14) and ΝΙ[in 10 samples (Fig. 15). A rectangular stamp naming the eponym Epicharmos ('Επίχαρμος), in abbreviation, was also found (Fig. 16).[43] This eponym also appears on the button-type stamps of Hieroteles and was dated 273/271 to 260 BC.[44] The ΙΠ[-monograms appearing on the stamps could be attributed to the eponym Hippostratos, whose name also seen on the stamps of Hieroteles. The ΝΙ[-monograms may represent either a fabricant's name[45] or, more tentatively, an eponym's name that we do not know. The only one we know during the period of Hieroteles whose name begins with Νι[is Nikon. Comparing the rims and bases to the forms of the amphorae of Hieroteles and the amphorae from the Koroni Peninsula we can date the amphorae here to the second quarter of the third century BC.

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42 Doğer 1994, 198-200.

43 Doğer & Şenol 1996, 61-66, figs. 3-9, 71, nos. 1-4, pl. XIV-XV, figs. 17-20.

44 Doğer 1994, 213, no. 18, pl. LIII, 18 and Doğer & Şenol 1996, 62; Grace 1953, 123, no. 76; Jöhrens 1986, 499 note. 7.

45 For example Nikolaos, in the workshops at Hisarönü. Note his rectangular type stamps besides his circular ones; Nikasikrates, (with a button type (ABC 392. 1) and a rectangular type stamps (ABC 392. 1) in the Benaki Collection), see also in Finkielsztejn 2001a, 75 note 50. Besides these samples, the stamp may bear the name of any fabricant whose name is not yet known to us.

The other amphora deposit in the Peraea is located to the south of the village of Çamli, in the area called Karaca-Naltas. The amphora fragments found there have rolled and banded rims and the bases are very similar to those of the amphorae of Hieroteles. The rectangular stamped handles bear the eponym Timokles I,[46] with the preposition 'ἐπί, whose year of office has been given in the period before month-names appeared on the stamps (Fig. 17). The name also appears on button-type stamps of Hieroteles.[47] Other stamps found at the site bear the name of the fabricant Apollonidas I (Fig. 18).[48] It is noted that the rolled rim, as seen in the production of Hieroteles, is also preserved.[49] The deposits attested at the site seem to belong to the workshop of Apollonidas I, whose association with the eponym Timokles I and the characteristics of his amphorae, confirm that his period of activity was just before the appearance of month-names on the amphorae.

Some stamps naming Boethos (Βόηθ(ος)) in rectangular form have been found during the surveys near Sögüt-Naldöken in the Peraea (Fig. 19).[50] Identical stamps have also been attested in Alexandria[51] and Tanis, and have been dated to *c.* 270 BC following Grace's association of him with the eponym Antileon.[52] The name most probably appears on ligatured circular type stamps as well (Fig. 20).[53] Identical stamps have been recorded in the Benaki Collection,[54] and the fabric of both abbreviated and ligatured types are very similar to those found in the Peraea. His probable association with the eponym Antileon points out that there was production in the Peraea made by Boethos at the same time as Astos,[55] in the year of Antileon just before the fabricant Hieroteles, but in different workshops.

The Benaki Collection holds both the circular button-type stamp of Boiskos (Βοΐσκος) without a dot in the middle, and rectangular stamps. On both types he used the preposition παρά.[56] The clay features of the samples in the Benaki Collection are similar to amphorae produced in the Peraea. But their production in the Peraea will remain a hypothesis until the deposits or workshops are discovered.

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[46] Doğer & Şenol 1996, 66-67, fig. 10, 71-72, no. 5, and. XV, fig. 21.

[47] Doğer 1996, 248.

[48] Doğer & Şenol 1996, 68, fig. 11, 72, nos. 6-8 and pl. XV, figs. 22-24. Two samples naming him in the Benaki Collection, one of which is the production of the Peraea, Apollonidas I in two lined rectangular stamp (ABC 319. 32), and the other in circular form with a rose symbol in the centre which belongs to Period III (ABC 319. 31). For a stamp of Apollonidas II, see Börker & Burow 1998, 44, no. 403.

[49] Doğer & Şenol 1996, 66-71, figs. 10-14 (the stamp of the eponym Timokles I is on an amphora with a rolled rim) and *cf.* Doğer 1994, 198, figs. 6-7.

[50] Doğer & Şenol 1997, 40-41, nos. 9-10.

[51] In the Benaki Collection, ABC 918. 2; in the rescue excavations made by CEA in the Cricket site in Alexandria, Inv. Alex. 161 and 170, see in Şenol 2000, 474-475, nos. 125-126.

[52] Le Roy 1984, 310-311, no. 11.

[53] Henninger 1976, 130, no. 174, tafel XXIX, 10 (probably in the genitive form).

[54] ABC 918. 3-14, ABC 336. 41.

[55] See above on Astos as being the first fabricant at Hisarönü and his association with the eponyms Khry(sostratos) and Antileon.

[56] ABC 335. 20 (button type, preposition and the abbreviated name); ABC 335. 11 (retrograde two-lined rectangular, identical to the one published in Grace 1963, 333, no. 4b associated with the eponym Agrios) and another stamp (inv. no. illegible, two-lined).

Amphoras – Used and Reused – at Corinth

Kathleen Warner Slane

The subject of this paper is a deposit of amphoras from Building 7 east of the Theater at Corinth that dates to the second half of the third century after Christ. I will describe the stratigraphic and functional context in which the deposit was found, present an overview of the amphoras in the deposit, and briefly discuss what is known of these types. The most interesting aspects of the deposit are the particular types present, the variety of local types, and the fact that they were found in a secondary use context, which is uncommon.

The four buildings beside the Theater were built on terraces up the hillside and were destroyed by earthquakes (Fig. 1);[1] the two southern buildings were built early in the second century and destroyed early in the fourth. Deep fills produced by the collapse of their walls covered the buildings and protected many whole vessels which had clearly been used within them.

The excellent preservation of the most southerly of the excavated buildings, 7, allows an unusually complete view of its history.[2] It originally consisted of two parallel rows of rooms perpendicular to the street, which communicated by a doorway between Rooms 1 and 4. This doorway was soon blocked and the two rows were isolated from each other at an early stage: henceforth they were independent. The southern Rooms 4 and 5 were decorated with wall paintings consisting of birds on white panels and of half-life-size figures of gods and goddesses. Marble columns lying in the debris of Room 5 suggest to the excavator that the suite was entered from the east and that Room 5 was an anteroom for the larger, more elaborately decorated Room 4. He imagines that the building may have been the cult room of a *collegium*. At a later time Room 4 was converted into a storage room by setting five pithoi along the north wall and blocking the door between Rooms 4 and 5; after this the room must have been entered from East Theater Street. Removal of a baulk in the southwest corner of Room 4 in the summer of 2002 exposed an industrial installation contemporary with the pithoi (Fig. 2); its function is uncertain but it had floors on at least two levels, a series of channels leading from one level to another as well as through the wall out to the street, and flues on the east side. It was used in both the pithos phase and the next phase of the room. Room 4 was remodelled in the third century and its function changed again. The three western pithoi were removed (probably to be reinstalled elsewhere) and the upper half of the fourth was cut away. Amphoras were dumped into the holes left by the removal of the pithoi; then earth was dumped over the amphoras to form a new floor.[3] One pithos remained in the corner, and a small hearth was constructed against the east wall. Building 7 thus retained its industrial character until it was abandoned in the early

[1] Excavations were reported in *Hesperia* by Williams II and Zervos annually from 1982 to 1989. Study of the pottery has been ongoing and the conclusions presented here supercede these preliminary reports.

[2] I thank Charles Williams for discussions of the building's phases and for allowing me to discuss the new industrial complex. Preliminary reports on Building 7 are Williams II & Zervos 1987, 26-27, fig. 8 (plan on p. 24); Williams II & Zervos 1988, 124-131, fig. 17 (plan on p. 121), pls. 39b and 42 top; the room numbers used here are those in the preliminary reports. The paintings in Rooms 4 and 5 were discussed in Gadbery 1993 and the paintings and figurines from Building 7 in Williams II forthcoming; I discussed the pottery from the upper destruction of the building in "Corinth: Deposits of ca. AD 200 and AD 300 from East of the Theater" at a colloquium "Roman Pottery in the Context of Excavation", AIA Annual Meeting, December, 1989 (abstract: *AJA* 94 1990, 334-335); the pottery discussed here had not been excavated at that time and comes from the previous phase of Building 7.

[3] Of the 39 more or less complete vessels listed here, all but two were found primarily in the lowest levels of the dump (baskets 60 and 64). Only C-1990-66, one of the Niederbieber 77 amphoras, C-1990-74, a Forlimpopuli(?) amphora, and C-1990-80, a bowl modified for use as a funnel, had joins to the baskets immediately below the floor surface; the upper half of the funnel was found in the half pithos dismantled to floor level, and it seems likely that the half pithos was filled in when the floor was laid.

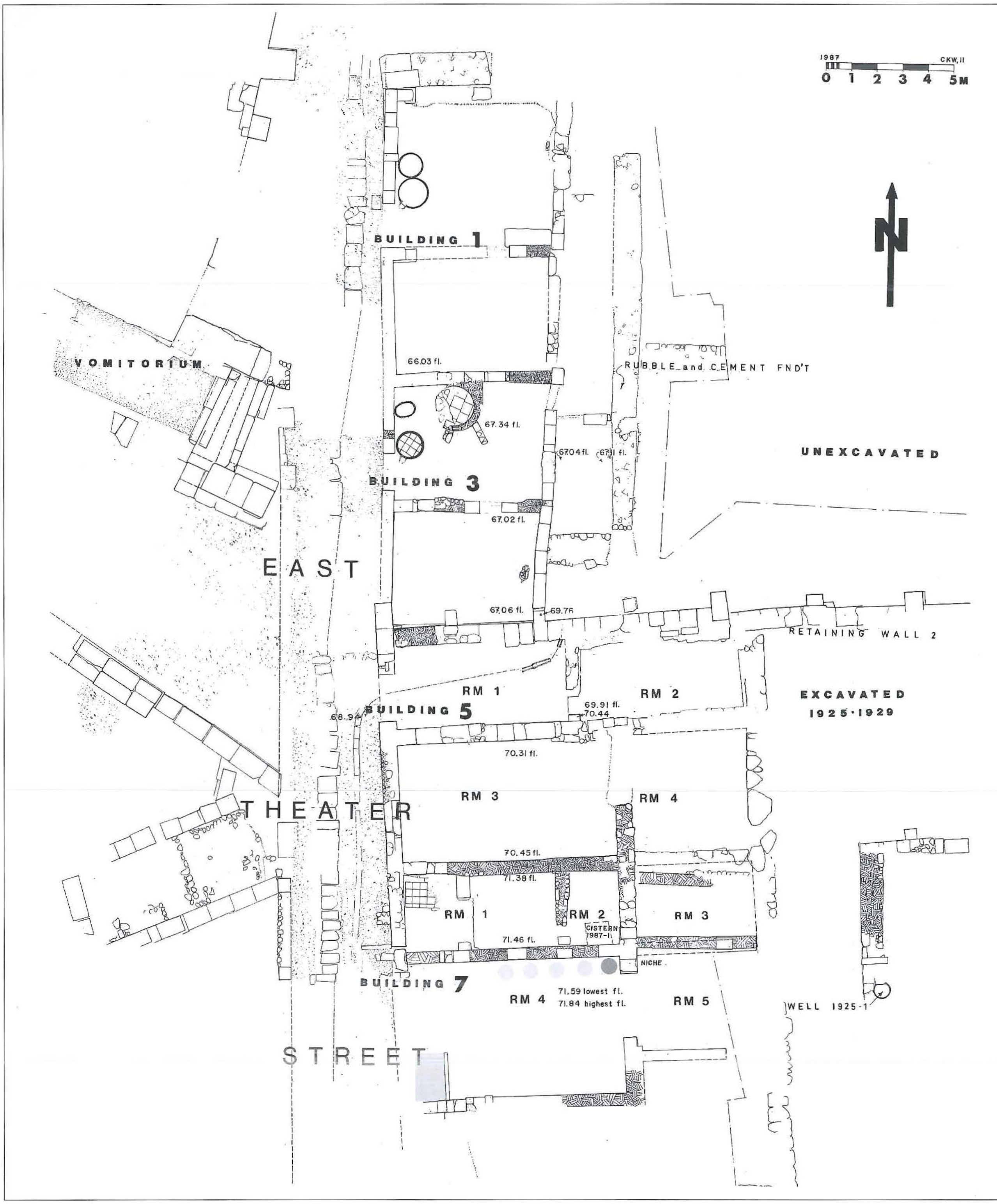
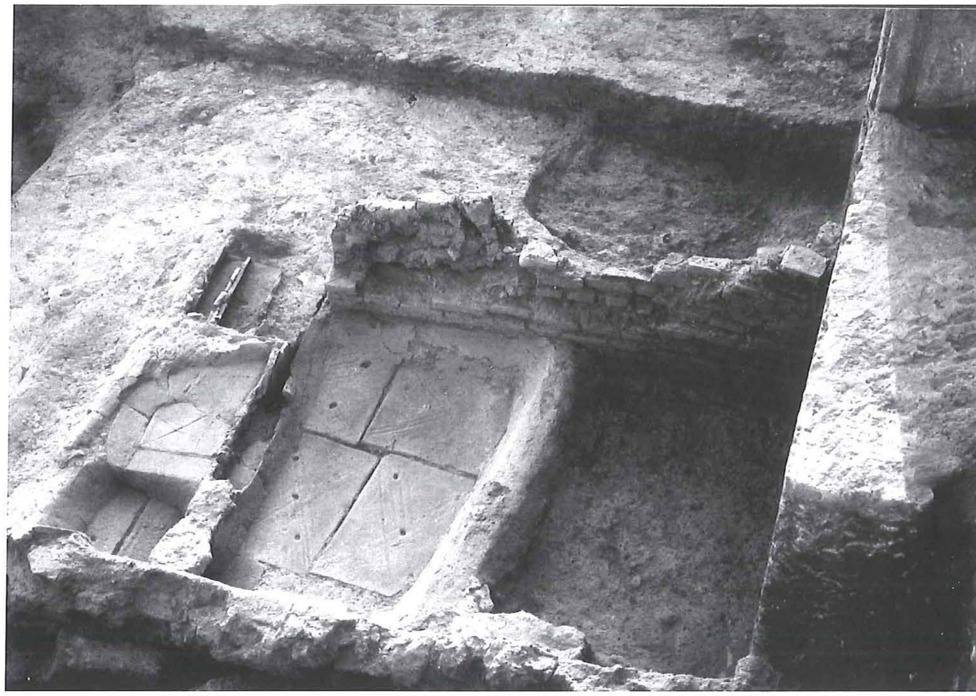


Fig. 1 Plan of the terraced buildings east of the Theater; location of the pithoi and industrial area in Building 7 shaded (Corinth Excavations, adapted by KWS).

Fig. 2 View of the new industrial installation in Room 4 (Corinth Excavations).



fourth century, leaving whole pots on the floors and the wall paintings still *in situ* or fallen on top of the collapsed tile roof.

The deposit along the north wall consisted almost entirely of 26 large amphoras and 13 other vessels.[4] The other vessels are a fine-ware plate and a Corinthian relief bowl; one shallow cooking pot; two jugs, a pitcher and a jar; a stopper; two funnels; and three Corinthian lamps. There are eight nearly complete Niederbieber 77 amphoras, two amphoras with pinched handles (G199/Zemer 41), a large and a small Rhodian Imperial amphora and three pseudo-Rhodian amphoras of Cretan type, one or two amphoras from the Adriatic coast of Italy, and at least two (possibly five or more) Corinthian amphoras.

Room use

From the circumstances of dumping it seems that the whole vessels in the amphora dump were in use together; in this sense they are contemporary with each other and they offer a rare glimpse of amphoras in their situation of use rather than of transit. The pithoi would have held either liquid or dry goods in bulk. The funnels and the jugs found in the deposit show this room was where the contents of large containers were transferred to smaller ones and suggest those contents were liquid. The obvious conclusion is that in this phase Room 4 was a shop, but the elaborately flued complex in the southwestern corner of the room shows that something was also manufactured or cooked here.

Chronology

The latest pottery with the deposit is five sherds of third to fourth century African Red Slip ware (AfRS) and a fragment of an unglazed Attic lamp; these are all single sherds found immediately below the latest floor of the room and above most of the

[4] Weighing 90.6460 and 4.1880 k., respectively. In addition to the 39 more or less complete vessels the dump contained 1032 miscellaneous preRoman sherds (15.0690 k.) and 1337 single Roman sherds (11.3635 k. of fine and common wares and about 30 k. of amphoras), which are essentially irrelevant.

amphora fragments.[5] The AfRS sherds are very thin and fine, with a pinkish red slip. This is the principal fabric found in mid-third century destruction debris at Dura Europos and in Athens; its earliest appearance seems to be after 220 or 240. The Central Tunisian centers producing it continued to be active, however, at least to the end of the fourth century and our sherds might be dated anywhere within this span, although their thinness suggests an earlier rather than a later date.[6] Unglazed Attic lamps are also characteristic of the same Herulian debris in Athens, and Binder considers the earliest may have been made before 250;[7] they were gradually replaced by glazed lamps *c.* 325. Taken together, the six pieces indicate a date between 250 and 325 for the dump.

The complete vessels also point to a date in this period. Corinthian unglazed lamps with raised rim patterns and the Corinthian relief bowl found with the amphoras would be comfortably placed between 250 and 300 or perhaps a little earlier.[8] The amphoras could suggest an earlier date. Several are second-century types: the sub-Rhodian, Forlimpopuli, and Zemer 41 amphoras have good parallels in the main destruction level of the Villa Dionysos at Knossos (*c.* 170-180). Of course, that does not preclude them being contemporary with the third century materials here. The most likely date for discarding the amphoras is c. 280, and they are unlikely to have been discarded before c. 250.

Amphoras

Like the fine wares and lamps, Niederbieber 77 amphoras date chiefly to the third and fourth centuries (Fig. 3). This is the widely known red amphora with tubular toe and spiralling grooves on the neck, and it is characteristic of the Middle Imperial period on many eastern sites;[9] the necks were frequently reused either as drainpipes or in bellows.[10] Unless it was made in eastern Sicily, it is most likely an eastern or northeastern Aegean type.[11] This amphora dump is the earliest context in which we find such amphoras at Corinth, and the pieces share characteristics not found in later contexts. Most obvious is a distinct bulge in the neck, which is shared by all the examples.[12] Most also have a plumper body and a distinctly rounded shoulder, and the mouths tend to be oval. Handles have a thicker section than later examples, and they are usually attached askew from the

[5] While it is possible that these sherds were trampled into the floor surface between the time it was laid and the destruction at the beginning of the fourth century, I think that the fact all are contemporary and that they could easily be contemporary with the amphoras and fine wares in the amphora deposit supports the conclusion that they were sealed under the floor.

[6] This is the ware called "C" in many classifications, which is typical of Hayes forms 48-50. See Hayes 1972, 288-290 and Reynolds 1995, 6, both with extensive references to other literature.

[7] Again it is possible that they were trampled into the floor during the final phase of the room, which ends in the early fourth century. There seems to be little if any development in the pottery types found above and below the floor and the groups should be dated relatively close in time.

[8] L-1990-10 to -12 are two Corinthian vine-and-ray lamps and one with tendrils on the rim. On the importance of the former in recognizing third-century contexts at Corinth, see Slane 1990, 16. Two elements show that the lamps are not early: C-1990-11 comes from a worn (plaster) mold, and on C-1990-12, the groove which defines the base lies inside the resting surface rather than at the base of the wall. Both would therefore be comfortably dated in the second half of the third century or a little earlier. The Corinthian relief bowl, C-1990-25, is decorated with ritual scenes. Although such bowls were originally dated 150-300 by Spitzer (1942) and 200-250 by Hayes (1972: 412), this is the earliest context for any of the 50 examples so far identified east of the Theater. A local fine-ware plate (C-1990-84), perhaps an imitation of AfRS form 48, is not as well dated but is probably third or early fourth century.

[9] Robinson 1959, 69, K 113, also listing examples from group L and group M, layers VII-X; distributions are collected in Riley 1979, 189-193, MR Amphora 7; Hayes 1983, 155, Type 37; Panella 1986, footnote 36; Peacock & Williams 1986, 193-195, class 47; Alpözen *et al.* 1995, 100.

[10] In my opinion this is the explanation of the "Fehlbrande" from the excavations at Ephesos, which were once proposed as local products (Outschar 1993).

[11] The examples I know are all of one fabric, although not all appear to be slipped. They occur in shipwrecks near Syracuse (Kapitän 1961 and 1972). Grace long ago suggested that the type stems from the east Aegean because its tubular toe so closely resembles that of the micaceous water jars that she connected with ESB (1971, footnote 51; such jars are now known in several fabrics). Keay (1984, 137) related the fabric to Hellenistic Koan amphoras, but to me it more closely resembles that of the massive third-century Pontic (?) amphoras like K115. A suggestion by Barbara Johnson (*pers. comm.* 1974) that it might be Attic, because it appears relatively early and in quantity in the Athenian agora, has not been followed up.

[12] *Cf.* Lemaitre 2000, fig. 8.5-7.

Fig. 3 Four of the nearly complete Niederbieber 77 amphoras from the deposit: from left to right C-1990-65, L90-123:8, L90-123:9, and C-1990-66 (Corinth Excavations).

axis of the vessel. Toes may taper or flare. All measurable examples were 65 to 66 cm high from toe to rim except for one (C-1990-66), which like a late third century example from the Demeter Sanctuary measures about 70 cm.[13] I have not identified other examples of this height from publications, and I am unsure whether the shorter amphoras would hold less or whether the plumper body compensates for the difference in height; certainly the putative fifth century examples of this form are always smaller.[14] I want to emphasize that these early Niederbieber 77 amphoras are in a third-century rather than a late second-century context.[15]

Zemer 41/Benghazi MR Amphora 4 with square shoulder and short, pinched handles (here in a moderately gritty red fabric with white wash on the surface) is another relatively well-known type (Fig. 4, two examples).[16] It occurs in either two or three different fabrics and perhaps in two sizes (if the small-size vessel like Robinson 1959, G 199 is not a completely separate type). The place of manufacture is Cilicia (Anamur to Gazipasha) and probably also Cyprus. Note the squared off toe in Fig. 4, right; this resembles the toes of the small third- to fourth-century amphoras like G 199, rather than the

[13] Slane 1990, 116-117, no. 254, fig. 29, pl. 15 (H. 70.7 cm). C-1990-66 has also been published in Slane 2000, fig. 14f.

[14] Keay (1984, 137) gives H. 80, D. rim 7.1 cm for his type XII, and Riley reported H. 72.5, D. rim 6.5 cm for MR Amphora 7 (Riley 1979, D 243). C-1990-65 and C-1990-66 are the extremes of the six amphoras with completely preserved heights in this deposit: the range is H. 65.4, D. rim 5.5, D. shoulder 25.2 cm to H. 69.7, D. rim 6.0, D. shoulder 25.2 cm, respectively. All of the examples in Robinson 1959 are broken at top and bottom, but K113, L33 and M237 have D. shoulder about 23.4 cm, while the two latest, M274 and M303, are certainly smaller, with D. shoulder about 15.4 cm.

[15] In light of revisions to the chronology of second- and third-century Corinthian and Attic lamps and of Eastern Sigillata B that have taken place in the past ten years, contexts of Niederbieber 77 amphoras demand reconsideration; is there any context earlier than the Capo Ognina wreck of AD 210/215 (Kapitän 1974)? Certainly no context should be dated to the late 2nd c. **because** it contains Niederbieber 77 amphoras.

[16] Zemer 1978, type 41; Riley 1979, 186-187, MR Amphora 4. The type is common on the south coast of Turkey (Williams 1989, 91-95, cf. type A but with a different toe; Rauh & Slane 2000, 328), and I have seen it in a fabric more nearly resembling Cypriot Red Slip from surveys on Cyprus and at Corinth.

Fig. 4 Zemer 41/Benghazi MR amphora 4: C-1990-68 and L90-123:16b (Corinth Excavations).

heavy knob toe of Zemer 41. I estimate these two amphoras were about 60 cm high.[17]

The identification, the chronology, and the contents of Rhodian amphoras of Imperial date are problematic. Finkielsztejn has recently shown that some Rhodian amphoras continued to be stamped in the Augustan period. Twenty-five years ago Peacock

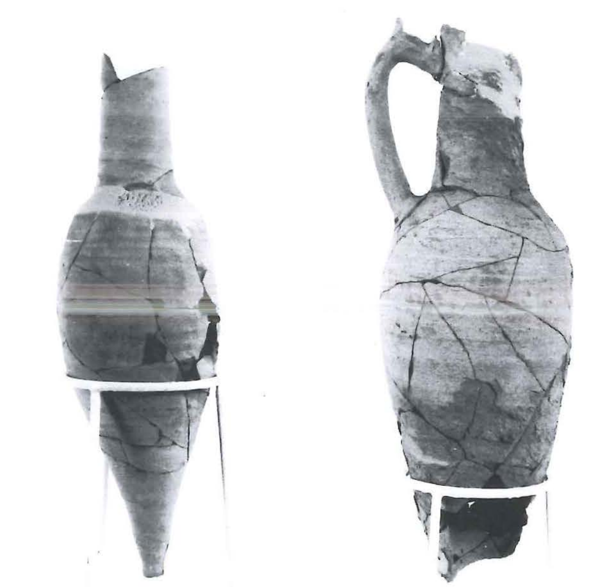


Fig. 5 Two Rhodian amphoras: L90-123:14 and L90-123:15 (Corinth Excavations).

(1977a) discussed Rhodian-class amphoras found on certain post-Conquest British sites (after AD 43) and showed that many of them match the fabric of stamped Hellenistic jars from the Athenian agora; he listed examples from Claudian-Flavian contexts in Italy and Germany as well. At Benghazi, Riley dated the "horned handle" amphoras from Augustan (late first century BC) through the third quarter of the first century.[18] The connection, if any, with a later series of jars is not clear: torpedo-shaped jars have been found in first half of the second-century contexts in the Athenian agora, at Corinth, at Ostia, and at Caesarea.[19] However, the two examples in this Corinthian deposit (Fig. 5) have their best parallels at Lyon in the first half of the third century.[20] They are of two different sizes (Fig. 5, P. H. 67.0 and 70.5 cm respectively) and, like Peacock's examples from Britain, they are characterized by spalding fabric, narrow bodies with rounded shoulder, and broad wheel ridging from neck to toe. The contents of Rhodian amphoras are usually assumed to have been wine, perhaps for medicinal purposes because Rhodian wine was made with seawater. But pieces from a Claudian wreck contained fig seeds, and Virginia Grace long ago pointed out a third-century BC papyrus which speaks of dried figs from Rhodes carried in clay jars.[21]

Three jars in this deposit are considerably smaller than the Rhodian jars (50 cm rather than 70 cm) (Fig. 8, 6 and 7). This shape, until recently termed "sub-Rhodian", is now identified as Cretan (Marangou-Lerat 1995: AC4); unfortunately it has frequently been lumped with the true Rhodian Imperial amphoras in publication. The examples in the Corinthian deposit differ from others I found illus-

[17] Zemer estimated that his example from Atlit, which was 75.5 cm high, held 53 liters.

[18] Riley 1979, 147-149, ER Amphora 3.

[19] Athens: Grace 1979b, fig. 62 right; at Corinth: C-1983-93; Carandini & Panella (eds.) 1973, form LXV, 555-559; Zemer 1978, type 38, p. H. 85.5 cm, volume estimated to be 20 liters. For the size cf. those from Ayios Hermoyenis (Cyprus) published in McFadden 1946, nos. 56-63 and Alpözen *et al.* 1995, 95, H. 84 cm but volume estimated to be 14.4 liters.

[20] Lemaitre 2000, 468-9. See also Vilvorder *et al.* 2000, 478, fig. 2:1.

[21] Peacock & Williams, 103; Joncheray 1973, 27.

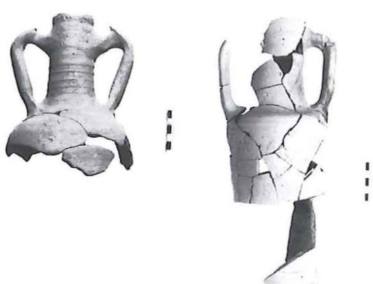


Fig. 6 and 7 AC4 amphoras or imitations: C-1990-67, L90-123:6 and 7 (Corinth Excavations).

Fig. 8 Late Forlimpopuli amphora: C-1990-71 (Corinth Excavations).

trated in having a cylindrical (rather than a swollen) neck, in the slope of the shoulder, and because the horns terminate below, rather than above, the rim;[22] it seems probable that these are not from Crete (and they may be local imitations). There has also been a tendency to assume that, because the shape appears in the late first century at Pompeii and Ostia, all examples are early Imperial, but parallels of the first half of the third century come from Lyon, from Belgium, and from London. In studying the Cretan amphoras, Marangou-Lerat pointed out that the type is always small, occurring only as half amphoras and quarter amphoras; quarter amphoras are 49 cm high (like these) and contained 5-6 liters.

One complete amphora is a late Forlimpopuli type from northeastern Italy (H. 64.7 cm) (Fig. 8).[23] Such amphoras have a distinctive faceted base scraped and hollowed out on the underside (leaving a central button), a tapering neck with rolled lip, and may be relatively thick walled; most can stand without support, at least when empty.[24] With its wheel-ridged surface, this example is more carelessly finished than most. There are several fabrics and at least two or three variants, which I suppose come from other northeast Italian sites.[25] The Forlimpopuli amphora begins by the middle of the second century but is well-known from mid-third century contexts in Athens and Knossos.[26]

For various reasons I identify five or six different amphora shapes as locally made;[27] they form perhaps

[22] Cf. Marangou-Lerat 1995; Portale & Romero 2000, 419, fig. 1.12-13; Lemaitre 2000, fig. 6:4-7 and 8-11; Vilvorder *et al.* 2000, 478-480, fig. 2:2.

[23] Aldini 1978; Maioli and Stoppioni 1989; Panella 1989, especially 147-156.

[24] Note that it is not the method of forming the base which is distinctive but only the thick wall and the shape. The same method of hollowing out the base leaving a central button was frequently used for pitchers, cf. the early and late trefoil-mouth pitchers as Slane 1990, 102-104, nos. 214-216, fig. 25 and Hayes 1983, 105-106, type 1, which are almost certainly Asia Minor products, and several series from Corinth, e.g. Slane 2003, fig. 19.5:e-g and Slane 1990, 107, nos. 224-227, fig. 27 and pl. 13. Robinson (1959, pl. 73, [M101]) used the term "moulded foot" to describe such bases on pitchers and I have called it a "false ring foot".

[25] A second vessel, C-1990-74, has a similar fabric and upper body; its oval mouth is characteristic.

[26] Robinson 1959, 69, K114, pl. 15, H. 66 cm; Hayes 1983, 145, A 33-35, type 7, fig. 21 (noting an example on Malta H. 61.5 cm). For other examples at Corinth see Slane 1990, 116, nos. 251-252, fig. 29.

[27] Slane 2003, fig. 19.5.

Fig. 9 Various Corinthian amphoras: C-1990-70, C-1990-73, and C-1990-69, which is painted and grooved (Corinth Excavations).

one quarter of the deposit, and each is a singleton (Fig. 9, three examples). Does that mean all had different contents? Like the small Imperial Rhodian and the imitation Cretan amphoras these are fractionals: where preserved, the heights are 43 to 45 cm and their capacities can not have been more than a half amphora (their diameters seem to be about twice that of the "Cretan" jars). The neck flange, round section through the handle, and the shape of the toe of C-1990-73 (Fig. 9 center) suggest that it is a late version of a Corinthian A amphora.

Conclusions

Since I first processed this deposit in 1990 I have changed my mind about it several times. Initially I dated some of the amphoras to the middle of the second century and others to the very beginning of the third. It seems unlikely, however, that some vessels could be two generations older than others; at a minimum we can be sure that all of the amphoras were in use together, and probably also that the time represented is quite short (days or months rather than half a century).[28] Now I date them all to the second quarter of the third century, which has important consequences for the chronology of the Niederbieber 77 amphora type.

The fact that these amphoras almost all originated from eastern sources is a noteworthy change from earlier deposits at Corinth, although it may be of little significance in this room, where their use is clearly secondary.[29] That each of the amphora types is present in multiple examples and that most have been said to be for wine, in combination with the funnels, suggested their contents were being decanted for sale. But further investigation has shown that identification of the contents as wine is an assumption (based on the shared feature of a long neck) rather than a fact documented by graffiti or contents analysis. Furthermore, although the types are of different sizes, each group but the Rhodian is internally of a single size. All of the pieces, including the Niederbieber 77 amphoras, may be fraction-

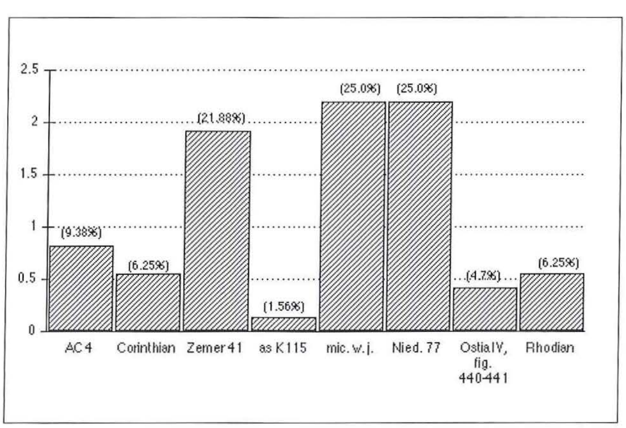
[28] My primary reason for thinking this is that, while complete, the amphoras had each broken into more than 100 pieces before dumping – which means they were broken where they were dumped. And if the amphoras were broken together, they must have been in use at the same time rather than some earlier and some later over a period of 50 or 100 years. I also think that their discarding signals a modification in the use of the room: not only was the pottery discarded but three intact pithoi were removed for use elsewhere and only one remained to be used with the hearth and the modified industrial area.

[29] The apparent exception is the Forlimpopuli amphoras also found in this deposit. It seems clear, however, that the northern Adriatic was the western end of an eastern trade route in the second century, only later becoming heavily dependent on western markets. See Vidrih Perko & Pavletić 2000, Istenic & Schneider 2000, Maggi & Starac 2000, and Mandruzzato *et al.* 2000.

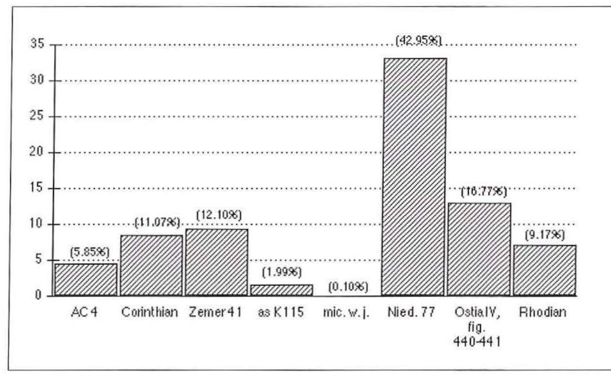
als. It now seems more likely to me therefore that they were simply a collection of various sized containers, selected for their size rather than for their contents. In that case, I would assume the liquid or liquids poured into them were local products, stored but not necessarily made in the pithoi. Apparently whatever liquid was distributed from the pithoi was manufactured or at least heated in the complex in the southwestern corner of the room. Perhaps the shop operated like those of 20 years ago in Greece, filling containers supplied by customers who wanted small amounts and keeping a few containers around for those who came without one. This explanation does not fully account for the other pottery found with the amphoras and elsewhere in Building 7, but it is the best I can do at present.

Appendix

The third-century deposit reported here is part of my quantified study of the Roman pottery from east of the Theater at Corinth. From the moment that the pottery was mended and it became apparent that the 39 mendable vessels formed the bulk of the deposit (62% by weight, 2% of the count), it was clear that it presented a different pattern than the majority of strata in the analysis, and it later emerged that it also distorted the figures for the later third century.[30] It therefore seemed useful to present the data in the graphs below.



The first graph shows the RBHS for the eight main amphora types in the deposit as a percentage of all amphora sherds identified as Roman. Of course the same pattern emerges if the miscellaneous unidentified sherds are ignored, but the percentage of the deposit that these eight types represent changes; I have noted those percentages above each bar. This pattern may be said to represent the inventory of the shop.



The second graph shows the RBHS weights for the same eight amphora types as a percentage of total weight of Roman amphoras in the deposit. Niederbieber 77 amphoras are still clearly the dominant type, and the single toe like K115 is insignificant. The relative percentage of most of the other types has shifted slightly compared to the graph based on counts, depending on how breakable the type is (i.e. relatively thick-walled types have a higher percentage by weight while those which shatter into smaller pieces have a higher percentage by count despite my effort to count each vessel only once). That this premise is correct is demonstrated by the dramatic difference in the percent of micaceous water jars: there are as many pieces as there are Niederbieber 77 amphoras but the type is very thin walled and light in weight and there were no complete or nearly complete pieces in this deposit.[31]

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[30] Slane 2003, n. 41.

[31] The best preserved is C-1990-45 a and b, two mended fragments from opposite(?) shoulders with graffiti letters; other non-joining sherds in lots 90-123 and 90-122 (total wt. 0.1422). Its fabric is unusual, perhaps fabric 2: hard, thin, reddish yellow ware with abundant small sand, moderate, medium-sized shell, and small vitreous black grains; surface micaceous below crackled black slip (5YR 3.5/1).

Dichin (Bulgaria) and the Supply of Amphorae to the Lower Danube in the Late Roman-Early Byzantine Period[1]

Vivien G. Swan

The late Roman military site at Gradishte, near Dichin, in north central Bulgaria, is situated on a low hill, some 11 km west of the Roman town of *Nicopolis ad Istrum*,[2] and at a considerable distance from the nearest Roman road.[3] It lies on the south bank of the River Rositsa, a tributary of the Yantra, which flows into the River Danube about 45 km to the north, at a location marked by the late Roman fort of *Iatrus*.[4] Between 1996 and 2001, large-scale excavations were conducted at Dichin by the University of Nottingham, the Institute of Archaeology of the Bulgarian Academy of Sciences (Sofia), and the Museum of nearby Veliko Tarnovo. I am particularly grateful to the British co-director Dr Andrew Poulter for encouraging me to write this paper and for much helpful discussion. As the full quantification of the pottery is still at a relatively early stage,[5] and no petrological work has yet been undertaken, this account must be seen as a preliminary statement.

The fortified supply-base of Dichin was first established on a virgin site in *c.* AD 400. It had a defensive curtain-wall, an outer wall (*proteichisma*), watch-towers and gateways. Its less formally planned interior contained numerous mud-brick store-buildings, some with an upper floor serving as living quarters. Other more granary-like structures possessed raised timber floors.[6] When the whole site was destroyed by enemy action, probably some time between 476 and 480, the contents of the burning storerooms dropped through the raised wooden floors into the cavities below. These stockpiled provisions comprised massive quantities of wheat, barley, rye, chickpeas, beans and lentils,[7] military equipment and millstones, as well as large numbers of amphorae and lidded storage-jars.

Within a few weeks or months of the devastation, Dichin was re-occupied. The old *proteichisma* was demolished, and the ruinous buildings were levelled up, their mud-brick walls sometimes pushed inwards, sealing the destruction deposits. Many of the replacement buildings were now of a more flimsy character, often of wattle and daub, and sometimes utilising the earlier mud-brick walls as foundations. Finally in *c.* AD 585 (or within a decade), the site was again destroyed by fire and not reoccupied thereafter.

From the first phase, there are large quantities of pottery including many amphorae, mainly stratified in the *in situ* destruction deposits inside the devastated buildings, but also in the burnt layers evidently re-deposited very soon afterwards. The second phase contains significantly smaller assemblages, but several

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[1] Warmest thanks are due to Andrew Poulter, Roberta Tomber, Paul Reynolds and Andrei Opaiţ for much helpful discussion, and to David Taylor, Ray McBride and Caroline Jamfrey for the final drawings (some based on originals by Daniel van den Toorn, Joanne Foster and Ray McBride). I am also grateful to the staff of the following libraries for their guidance: Durham University library, the Brotherton library of Leeds University, the Institute of Classical Studies Library (London) and the library of the American Academy in Rome. The award of a British Academy Eastern European Exchange Scholarship in 2002 greatly facilitated my research in Bulgaria, and enabled me to read in the library of the Academia Bulgarski (Sophia), and I wish to acknowledge the kind help of the staff of this last institution.

[2] Poulter 1995; 1999a.

[3] Poulter 1999b; 158-78; 2000, fig. 5, 353-355.

[4] Böttger 1982; 1991; 1995b.

[5] The processing of the pottery from the Dichin excavations and from an intensive field-walking programme on sites in the hinterland of *Nicopolis ad Istrum*, (both part of Dr Poulter's 'Transition to Late Antiquity' research programme) is being undertaken by Ray McBride, Philip Mills, Barbara Hurman and the author.

[6] Poulter 1999b, fig. 19.

[7] Grinter 2002.

of the late sixth-century ceramic groups do appear to be virtually uncontaminated by fifth-century residual material. A major problem throughout is that much of the pottery had been heavily burnt (some to the point of vitrification), and then subsequently encrusted with lime through water-percolation, often making fabric identification extremely difficult. The total assemblage (some 68,000 sherds; 1250 kg) is being quantified selectively, by sherd-count, sherd-weight and EVEs (i.e. equivalent vessel estimate). Of the total assemblage, amphorae comprise approximately 36 per cent by weight, and 18 per cent by sherd numbers; fine wares only 1 per cent either by weight or numbers. The remainder consists mainly of utilitarian vessels, most in the gritty fabrics probably local to that region, and dominated by lid-seated jars, often quite large. At the time of the first destruction, many of these last had clearly been used for storage alongside the amphorae and other transit vessels.

In the late fifth-century destruction deposits, the dominant amphorae are Late Roman 1 and Late Roman 2, the latter being slightly more common (quantification to date indicates about 48 to 36 per cent by weight and 52 to 23 per cent by sherd count). The LRA 1 containers (usually associated with sources in Seleucia, Cilicia, Cyprus, Rhodes and Caria) mostly appear to comprise the standard large semi-barrel-shaped form, with a rim slightly dished externally, in both the characteristic brownish-pink and in the paler yellowish fabrics (Fig. 1).

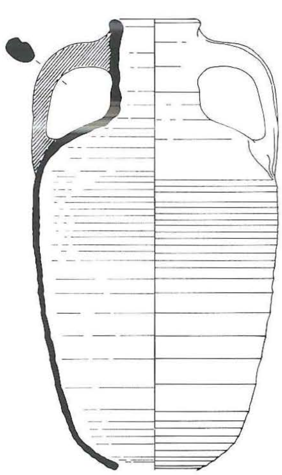

Fig. 1 Late Roman 1 wine amphora, from destruction of AD 476/80. Scale: 1:10.

Internal pitching suggests that at least some had carried wine, and a range of *dipinti* is currently being studied by Dr. Roger Tomlin (Wolfson College, Oxford).

Also in a light-coloured granular ware, similarly tempered with black sand, and superficially very close to the LRA 1 pale fabric in colour, texture and general appearance, is a small group of amphorae with an inturned, gently cupped mouth (LRA1 *similis*; Figs. 2 and 3). Apart from the different rim form and a lack of a groove in the handle, only a marginally more dense fabric and a faintly 'soapy' surface, serve to distinguish these vessels from standard Late Roman 1 containers. Body sherds are, for the most part, indistinguishable. This type, present in the 476/480 contexts at Dichin, occurs elsewhere on the Lower Danube *limes*,[8] and also in fifth-century deposits in Beirut;[9] it may perhaps emanate from an area similar or close to those producing the Late Roman 1 containers.

The Late Roman 2 amphorae (generally thought to emanate from Chios and the Argolid), which were abundant in the destruction deposits of *c.* 476/80, all have the characteristic deep horizontal stylus-grooving, and sometimes have lids (Figs. 4 and 5). However, the rims are not uniform, some being cupped while others are straight and splayed. In any other stratigraphic circumstances, these variations might be interpreted as different stages in the typological evolution, but clearly all the forms were being held in the store-buildings at the same time, so they may represent the output of several estates in the same general region.

Various other globular amphorae, apparently inspired by, or related to, the Late Roman 2 vessels, occur in smaller quantities in the 476/480 deposits. Most have fine pale, micaceous, lime-tempered fabrics, in traditions close to those used for the standard Late Roman 2 containers, and could emanate from the same general regions of production, but the rim-profiles are different (though clearly related), and the combing is always much shallower, more close-spaced, and sometimes there are zones on the

[8] Murighiol: Opaiţ 1991a, 150-151, pl. 22, no. 130.

[9] Thanks are due to Paul Reynolds for this information.

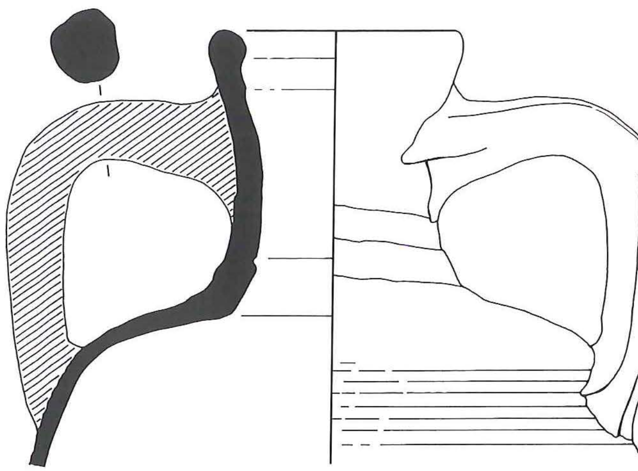

Fig. 2 LRA1 *similis*, AD 476/480. Scale: 1:4.

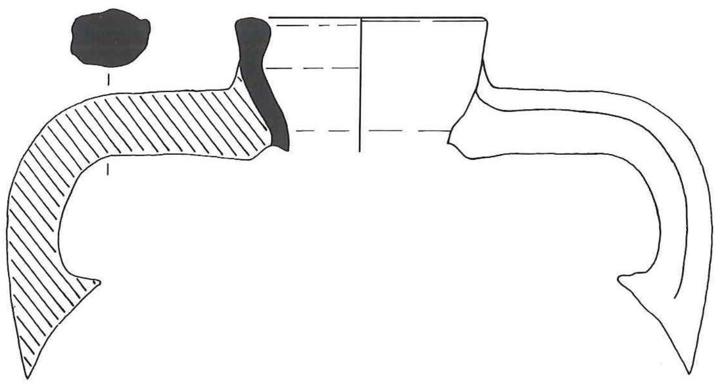

Fig. 3 LRA1 *similis*, AD 476/480. Scale: 1:4.

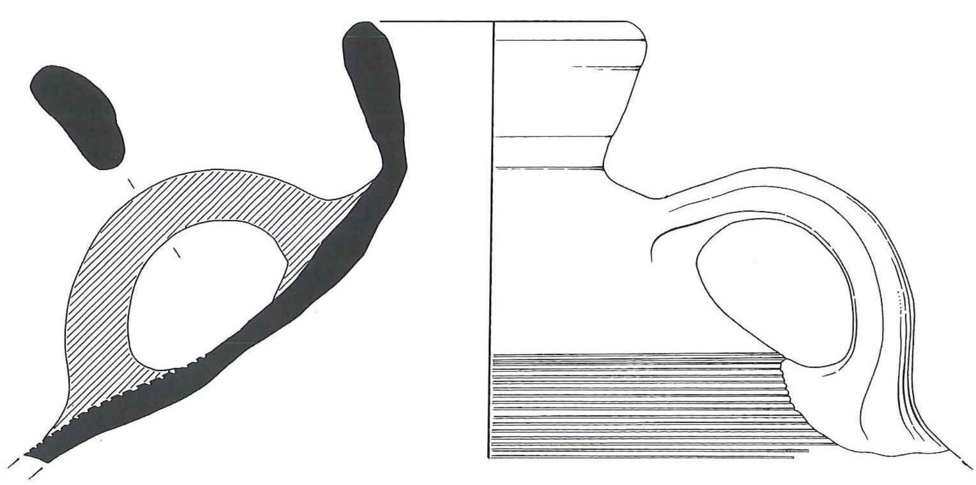

Fig. 4 LRA2, AD 476/480. Scale: 1:4.

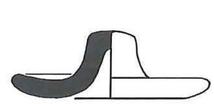

Fig. 5 LRA2 amphora lid, 5th century. Scale: 1:4.

Fig. 6 LRA2 *similis* with fine, light combing, AD 476/480. Scale: 1:10.

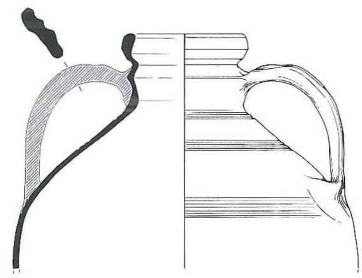

Fig. 7 LRA2 allied amphora, 5th century. Scale: 1:10.

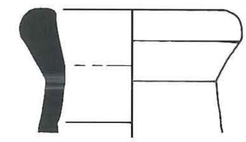

Fig. 8 Possible Cretan amphora, 5th century. Scale: 1:4.

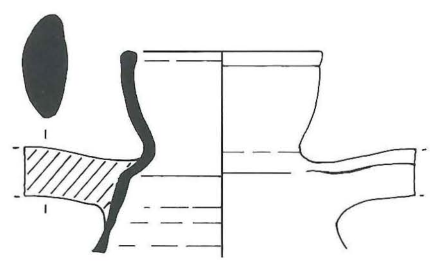

Fig. 9 *Amphorette*, LRA2-related, in fine micaceous brownish fabric, 5th century. Scale: 1:4.

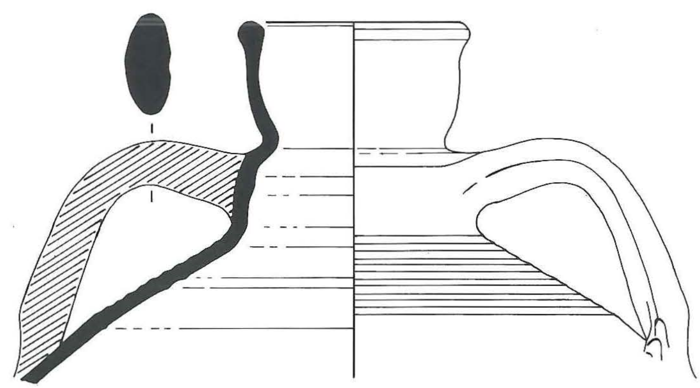

Fig. 10 *Amphorette*, LRA2-related, in fine orange sandy fabric, 5th century. Scale: 1:4.

girth as well as on the shoulder (LRA2 *similis*: Fig. 6; LRA2 allied: Fig. 7). In a similar fine pale fabric, and probably within the same familial traditions, though of less heavy construction, is an amphora with a splayed thickened rim, slightly cupped internally (Fig. 8);[10] this seems likely to have emanated from Crete.[11]

Also stylistically similar to LRA 2 vessels, and presumably having a 'cousinly' relationship, are several much smaller, thin-walled globular *amphorettes* with cupped rims, generally reminiscent of Late Roman 2 forms, and a pronounced outward bulge in the neck at the springing-point for the handles. These late fifth-century containers occur in two fabrics: a fine very micaceous, brownish-buff, almost bronze-coloured ware (associated with a plain rim: Fig. 9), and a less fine, more sandy, mid-orange fabric (occurring on forms with a more beaded rim: Fig. 10); both are of unknown origin.

The destruction deposits also contain modest quantities of vessels, which are almost certainly the immediate predecessors of the sixth-century 'Samos cistern amphora-type'.[12] Occasionally pitch-lined,

[10] *Cf.* Opaiţ 1991a, 140, pl. 9, no. 60.

[11] I am grateful to Paul Reynolds for this attribution.

[12] Isler 1969, taf. 85-88; Arthur 1990; 1998, 167-168.

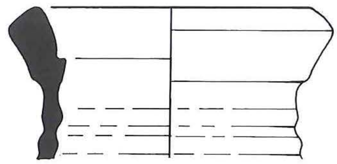

Fig. 11 Pre-'Samos-cistern-type' amphora; 5th century. Scale: 1:4.

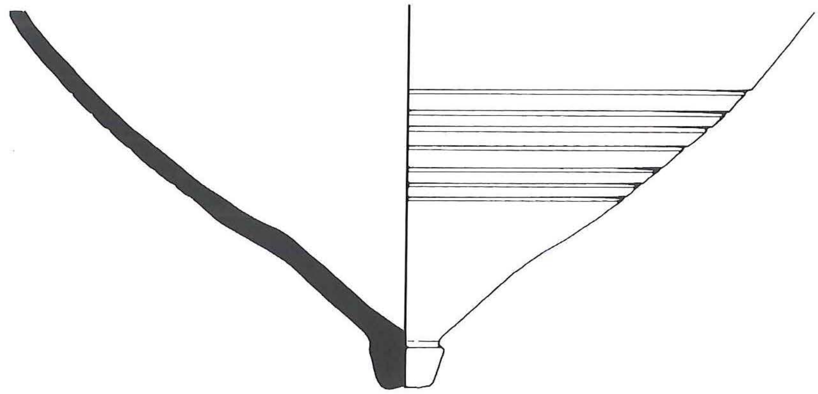

Fig. 13 Base of probable Samos amphora, reused for grain-storage, AD 476/480. Scale: 1:4.

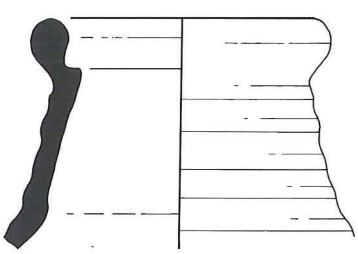

Fig. 12 Pre-'Samos-cistern-type' amphora; 5th century. Scale: 1:4.

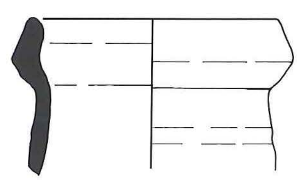

Fig. 14 Possible North Palestinian amphora, 5th century. Scale: 1:4.

and typologically somewhat variable,[13] the Dichin examples are characterised by a gently expanded rim with a pronounced internal lid-seating, rilling on the neck and cylindrical body (generally similar to Robinson 1959 form M 273), and a beige-orange gritty fabric containing coarse sand including red inclusions, and lime particles (Figs. 11 and 12). Probably Samos products, these occur regularly along the Lower Danube, as well as around the Mediterranean. The lower portion of a coarse lime-tempered amphora (Fig. 13), also likely to have emanated from Samos,[14] was found set in the ground inside a building (Area D, Building 2), where it had almost certainly been re-used to store grain (one of several containers similarly positioned when the site was sacked in 476/8).

Not dissimilar in fabric and form, with a gently curved, slightly inward-leaning but almost upright rim, is a container most probably from the Eastern Mediterranean and possibly from North Palestine (Fig. 14);[15] only minute quantities were reaching Dichin in 476/80, but military sites in the Dobrudja were also regular customers.[16] A small range of North African products are present (Figs. 17-20), but are far from common;[17] they include the forms Keay 1984 LXIIq, LXIV, LXI/LXII, and XXV, LV or LIX, most of which probably carried oil.

[13] *Cf.* Bonifay & Villedieu 1989, 35, fig. 11, no. 13; Bonifay & Pieri 1995, 114, fig. 11.

[14] Paul Reynolds kindly suggested this as a possible source.

[15] On the basis of a drawing, Paul Reynolds advised North Palestine as a possible production-source.

[16] Opaiţ 1996, type II-2, 210, pl. 13, no. 2A.

[17] Even African red slip ware is notably absent.

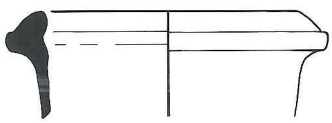

Fig. 15 Syro-Palestinian amphora, possibly for dates, 5th century. Scale: 1:4.

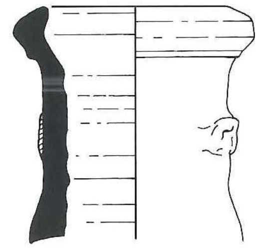

Fig. 16 Syro-Palestinian amphora, possibly for dates, 5th century. Scale: 1:4.

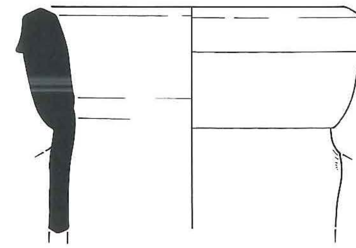

Fig. 17 Tunisian oil amphora, Keay 1984 LXIIq, 5th century. Scale: 1:4.

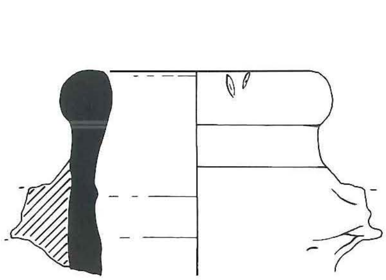

Fig. 18 Tunisian oil amphora, Keay 1984 LXIV, 5th century. Scale: 1:4.

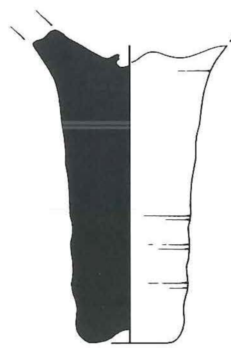

Fig. 19 North African amphora base, possibly Keay 1984 LXI or LXII, 5th century. Scale: 1:4.

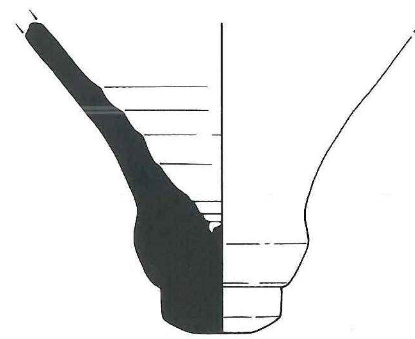

Fig. 20 North African amphora base, Keay 1984 XXV or LIX, 5th century. Scale: 1:4.

Wine and oil were not the only commodities represented in the fifth-century destruction layers. A distinctive amphora (Figs. 15-16) with an angular or triangular rim, cylindrical neck and conical body with rilling (Robinson 1959 form M 334) has recently been suggested as a probable transit-container for dates from *Syria Palaestina*, and most probably the successor of the widespread first- and second-century carrot amphorae.[18] The pale orange, sometimes yellow-tinged fabric of the Dichin examples, with its visible tempering of lime and fine quartz (including small red grits), accords well with the fabric-description of similar late fourth- to late fifth-century forms from Jalame (near Haifa, Palestine), which were considered to be of Palestinian origin.[19] Work in progress on Dichin's environmental samples has distinguished an olive stone, and quantities of grape-pips from the 476/480 destruction deposits inside several store-buildings.[20] This presumably implies that whole olives, and dried raisins or preserved vine products were among the stockpiled provisions. Some of the smaller containers would have been very appropriate for the transport of such food-stuffs, and the presence of *in situ* grape-pips in the bottom of a small amphora of Opaiţ Type B (see below) adds weight to this possibility.

[18] Carreras Monfort & Williams 2002.

[19] Johnson 1988, 209, fig. 7-49, nos. 720-727, especially no. 726.

[20] I am grateful to Pam Grinter, archaeobotanist to the project, for supplying this information.

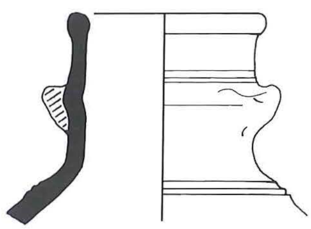

Fig. 21 *Amphorette*: source unknown, 5th century. Scale: 1:4.

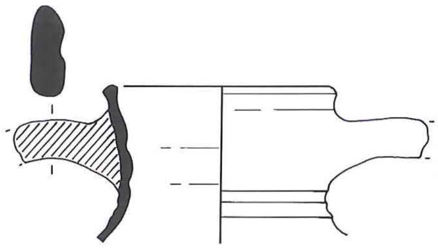

Fig. 22 *Amphorette*: source unknown, 5th century. Scale: 1:4.

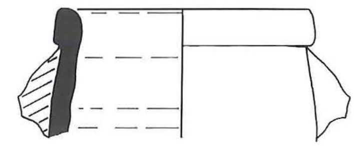

Fig. 23 Amphora, source unknown, 5th-century. Scale: 1:4.

The precise sources of a number of other large amphorae and *amphorettes* still remain to be identified (Figs. 21-23), but few appear to be in local fabrics. Chronologically, this is in marked contrast to the evidence for second and third-century amphora supply in the region. Although olive oil always had to be imported to the region (olives will not grow north of the modern boundary of Greece and Bulgaria), non-local transit-containers were not strongly represented at the nearby town of *Nicopolis* in the second, third and fourth centuries.[21] This was probably because for the second, third and perhaps early fourth centuries, quantities of amphorae (presumably packaging for indigenous local produce such as wine) were being manufactured in fine mostly red-coated fabrics (alongside the better known red-slipped tablewares), by a group of related potteries centred on Pavlikeni, Butovo and Hotnitsa, near *Nicopolis*,[22] and may well have been exported as widely.[23] Production of these amphorae, however, does not appear to have continued much after the early fourth century,[24] and there were very few local successors in any other fabrics (none typologically related).[25] It is thus, not impossible, that by the time Dichin was established in *c.* 400, the viability of viticulture in the neighbouring countryside had already been significantly diminished by centuries of barbarian incursions.[26]

Although containers of moderately large capacity predominated in the late fifth-century stores at Dichin, there were, nevertheless, significant numbers of smaller elongated amphorae from a variety of sources, mostly unknown. Most were probably for wine or vine products, as some have surviving

[21] Poulter 1999a, 38, 43. *Nicopolis* seems to have been able to supply most of its agricultural and other needs from its own territory, certainly in at least the second and third centuries, and possibly later, *ibid.*, 47).

[22] Soultov 1985, Tabl. XXXIV, XLIX.

[23] The red-slipped tablewares reached the legionary fortresses of *Novae* and *Oescus* in significant quantities, and travelled across the Danube into *Dacia*, and down-river to sites in the Dobrudja: Poulter 1999a, 38-39, n. 48-50, with references.

[24] A critical overview of Falkner's (1999) ceramic type-series for *Nicopolis* shows that of the local amphorae, at least 10 distinct types were made in the red-slipped ware and two in the same ware (unslipped). Production of most began in the early/mid second century, and none later than the early/mid third; there is little evidence of typological evolution, and no exclusively fourth-century forms. None of the known kilns sites were active after the early fourth century. However, in the first phase of *Iatrus* fort (founded under the Tetrachy), red-slipped amphorae apparently in the same tradition occur in very small quantities: Böttger 1982, taf. 21, no. 14; cf. Falkner 1999, types 916-917; these presumably derive from an unknown production-centre working in the same traditions.

[25] For the fourth and fifth centuries at *Nicopolis*, the only amphorae of relatively local origin (in the grey, so-called 'foederati ware') comprise just three basic types (none related to previous local forms), including one imitating LRA2; all are very much less common than amphorae in preceding centuries. For Bulgaria in general, the range of amphora-types in 'foederati ware' is very limited (they are far out-numbered by smaller flagons/jugs; Vagalinski 2002, 152-158).

[26] Poulter 1999a, 47. This is not to suggest that all agriculture in the region had ceased. Nevertheless, vines destroyed by barbarian incursions would require time, investment, long-term care and a background of stability over years to reach productive maturity, whereas most other local staple crops, grown on an annual cycle, could be re-sown immediately following a raid, – in fact, as soon as the soil could be ploughed. The suggested decline in the production of wine in this region is complemented by similar evidence from sites further down the Danube in Scythia: Opaiţ 1996, 259-263. It seems unlikely that the military would have imported wine and other comestibles that were available locally.

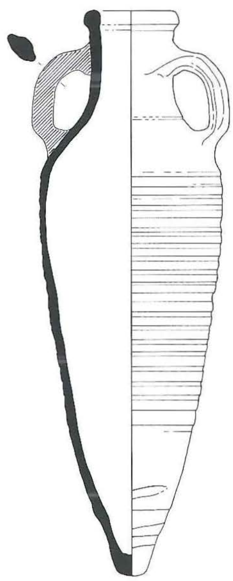

Fig. 24 Probable Black-Sea amphora, possibly from the Crimea or Sinope, AD 476/480. Scale: 1:10.

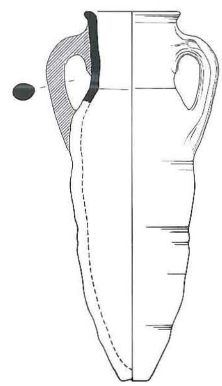

Fig. 25 Unusual small amphora with pale skin, perhaps from Asia Minor or the Black Sea, AD 476/480. Scale: 1:10.

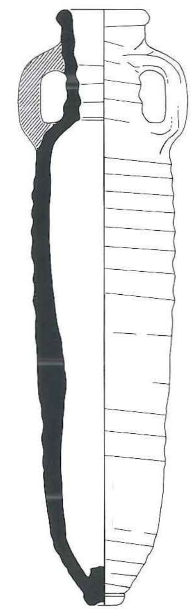

Fig. 26 Common Black-Sea amphora (Opaiţ Type B), found with residue of pine-pitch and grape-pips, from destruction of AD 476/480. Scale: 1:10.

pitching, but whether their modest size reflects set ratios of capacity, or more expensive vintages, is unknown. These include a red-brown conical form with a round rim, semi-pointed base and rilled body (Fig. 24), most probably from the Black Sea region, perhaps from the Crimea or Sinope.[27] Of unknown origin, perhaps from western Asia Minor,[28] or the Black Sea littoral, is an unusually small conical amphora, proportionally wide-mouthed and blunt-footed with a gently undulating body and a reddish-brown fabric (Fig. 25). Apparently the only example of its type at Dichin, it had probably fallen intact from the upper storey of a burning building in 476/480, and could well have been the personal possession of a soldier living in the barracks there.

The most frequent by far among these small containers, is a cylindrical amphora,[29] often pitch-lined, with rilling on both neck and body, and a knob-foot, in a very thick bright brownish-red fabric with abundant black inclusions, and a yellowish-cream skin, possibly indicative of the use of salt water in the clay preparation (Fig. 26). It seems to be largely absent from the Eastern Mediterranean. However, it is very well-represented on the Lower Danube, particularly on military sites, and also around the Black Sea, and its production source may well lie in the latter region. One example was found intact near the east gate of Dichin, where it was being re-used to store grain when the supply-base was destroyed in the late fifth century. Analysis of the residue in its base revealed the additional presence of grape-pips and pine-resin, so its original content had presumably been wine or vine products.

Of particular interest is the absence at Dichin of the so-called hollow-foot amphora (Kapitän II/Niederbiber 77/Peacock and Williams 1986 47). Generally assumed to be of Aegean or Eastern Mediterranean origin and for wine, it is relatively frequent on third- and fourth-century sites around the Black Sea and in the Lower Danube, particularly at mili-

[27] Amphorae with generally similar conical profiles were produced at Sinope until at least the fourth century AD and possibly later: Kassab-Tezgör 1994; 1999.

[28] I owe this suggestion to Andrei Opaiţ.

[29] Opaiţ 1996, Type B, 215, Pl. 19, no. 2.

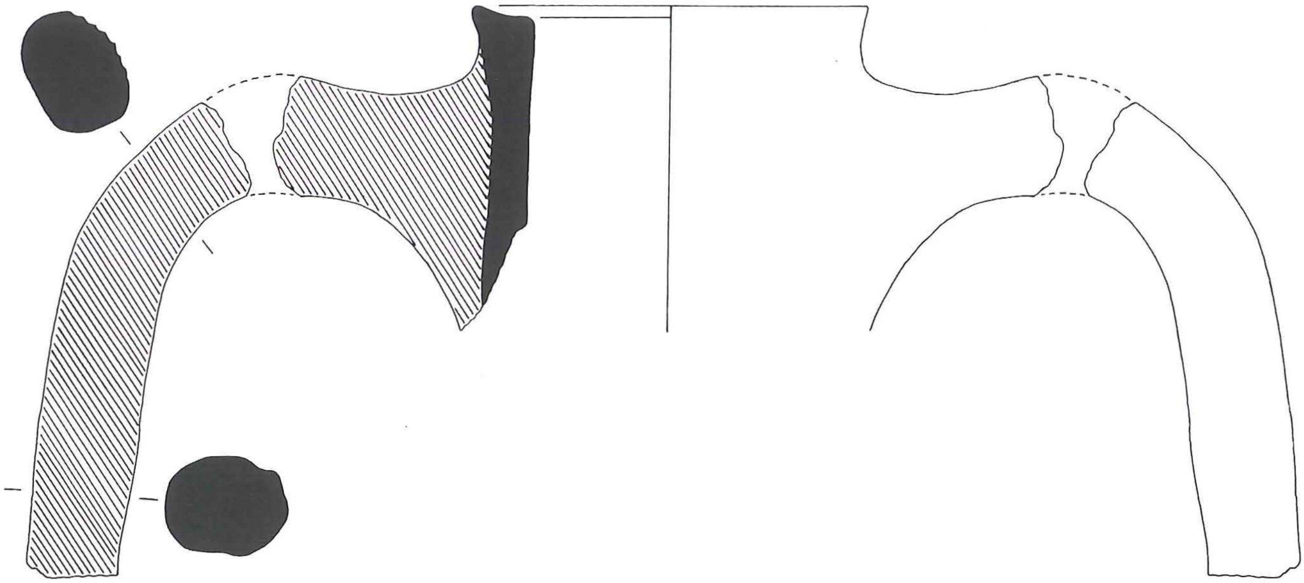

Fig. 27 Large late version of Zeest 80 wine amphora, possibly a Black Sea product, AD 476/480. Scale: 1:4.

tary establishments.[30] The reason for its non-appearance at Dichin may be chronological, since the site was not established until *c.* AD 400. However, it does raise the issue of why a product so successful in that region (and indeed, widespread in the Mediterranean and beyond) in the late second, third and fourth centuries,[31] had apparently ceased to be marketed by the beginning of the fifth century, a period when trade from most centres in the Orient was burgeoning. One very tentative possibility is that its contents (probably wine) had begun to travel in different packaging.

Present in the destruction deposits of 476/80 are relatively small numbers of the very latest version of a very large wine container, generally referred to as Zeest 80 (Fig. 27).[32] Made in a very coarse brownish-red fabric, sometimes with a pale grey core, and with white and grey-black inclusions, and a massive capacity (at least 60-80 and sometimes over 100 litres), this late version, sometimes pitched on the interior, has a wide neck, a simple expanded rim, flattened or dished on the top, heavy handles, a pear-shaped body with a zone of coarse furrowing on the shoulder and another on the lower body, and a marked step at the girth, where the upper and lower parts of the body were joined during its manufacture. As Opai has shown,[33] the typologically earlier second- and third-century versions of Zeest 80 (Riley Middle Roman 5), were smaller, and had one or more deep grooves immediately below the flat rim.[34] These early MRA5 were distributed in small to moderate numbers in the regions bordering on the Mediterranean (particularly in the Eastern Mediterranean and the Aegean), but slightly more frequently in the Lower Danube, as far as Singidunum (Belgrade). However, by the late fourth or early fifth century, the massive later versions of Zeest 80 were virtually absent in the Mediterranean, but

[30] Empereur & Picon 1989, 233.

[31] For evidence of its wide distribution, including the Rhine-Danube *limes*, and as far as the Britain, see Riley 1979, 189-193; Pacetti 1986, fig. 2; Bezeczky 1994b, 119 fig. 3.

[32] Zeest 1960, Tab XXXIII.80.

[33] Opaiţ 1987a, 247-248, fig. 3.

[34] Riley 1979, 188-189.

regularly present in the forts of the Lower Danube, on the Black Sea littoral,[35] and sparsely at Constantinople;[36] they are especially common at the port of Varna (*Odessos*).[37] Presumably these later markets lay closer to the production-source, so a Black Sea origin seems a distinct possibility.

Of particular relevance is that at a x20 magnification, the fabric of late Zeest 80s looks rather like a much coarser textured version of the fabric of hollow-foot amphorae, and seems to have similar basic inclusions. Moreover, the possibility of a link between the two is further suggested by the character of the handles of late Zeest 80s, which are disproportionately massive, more or less rounded in section, and have coarse grooving on the upper side. Similar distinctive and unusual characteristics are also intrinsic to the handles of hollow-foot amphorae, but apparently absent elsewhere. Could these two amphora types have both originated in the same general region? The late fourth century was a period when medium-large amphorae (such as LRA1 and LRA2) predominated in that region, and it may be that the huge capacity of Zeest 80 was seen as more economic than the much smaller hollow-foot form, particularly for bulk-shipments to the garrisons on the Danube frontier, a region becoming increasingly dependent on imported commodities. These possibilities must clearly be confirmed or disproved through petrology.

To return to Dichin: by the time of its final destruction and abandonment in 588 or soon after, the nature of its supply had changed significantly, with a marked shrinkage in both the quantity and the diversity of amphora imports. The latest deposits contain less than six types of amphorae, apparently in very limited quantities. These include LRA2, no longer with earlier-style horizontal stylus-rilling, but all now with **slightly** undulating combed lines on the shoulder, the comb often being tilted in the manufacturing process.[38] LRA1 had apparently ceased to be imported, but there are Nile Valley containers (LRA7/Peacock and Williams 1986 52A: Fig. 28),[39] late versions of LRA5 wine amphorae from Palestine (Fig. 29) and miniature *spatheia* (Fig. 30-31), perhaps containing olive oil.[40] The pale granular ware of the latter is texturally very close to the standard pale LRA1 fabric, but notably lacks the characteristic black sand tempering, though similar limestone inclusions are present. This is not a fabric typical of North African *spatheia* (orange is normal), and its origin is uncertain, though sources in North Africa, Sicily and further east have been mooted.[41] Small *spatheia* in pale fabrics with the same out-splayed rim, moulded on the exterior, were regular components of sixth-century contexts on the Lower Danube *limes*,[42] as well as in Rome and on much of the Mediterranean littoral. The origin and precise form of several other small Dichin amphorae (probably sixth century) remain uncertain at present.

So how should Dichin's supply changes be seen in the wider historical context? The provisioning of the Danube frontier garrisons had long been of particular concern to the central military authorities, particularly from the late third-century.[43] At the two legionary fortresses on the Lower Danube, *Oescus* and *Novae*, there are five inscriptions (one of the late third century and four of the fourth century), which mention altogether *seven primi pilares* in *Legiones V Macedonica and I Italica*.[44] In this late period, the position of *primus pilus* was no longer that of the chief centurion in a legion, as had been traditional in previous centuries. *Primi pilares* in the

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35 Opaiţ 1996, 213-214, pl. 18, no. 6; 1991a, pl. 13.

36 An interesting example from Saraçhane, Istanbul (Hayes 1992, fig. 47, no. 158) already lacks the earlier rim-grooves, but the rim forms a distinct angle with the neck (not just a gradual expansion), and seems typologically earlier than the Zeest 80s found in the Dichin destruction deposits of 476-480; it most probably dates to the late fourth or early fifth century.

37 I am grateful to Dr A. Minchev (Varna Museum) for permission to examine the amphorae in the Varna Museum store, and to his colleague Dr M. Doncheva for showing me this material in 2001.

38 *Cf.* Scorpan 1976, pl. vii, type vii.4, pl. xxi. 6.

39 The presence of these could well be linked to the probable shipment of Egyptian grain to the military zone.

40 Tudor 1965, 119, pl iv.4.

41 Arthur 1989, 82; Mackensen 1992, 245-251.

42 E.g. Opaiţ 1998b, pl. 15, 42-3.

43 In the first and second centuries AD, the region had probably been growing sufficient agricultural produce for the needs of its garrisons (except for olive oil); in fact, under Nero, surplus grain had been shipped from Thrace to Rome (I.L.S. 986).

44 Gerov 1989, Nos. 8, 9; 10; Kolendo & Bozilova 1997, nos. 177, 178; I am grateful to Andrew Poulter for drawing my attention to those two references; Bresson *et al.* 1995.

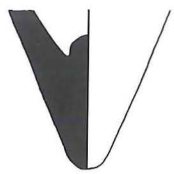

Fig. 28 Base of Egyptian amphora (probably LRA7), from 6[th]-century context. Scale: 1:4.

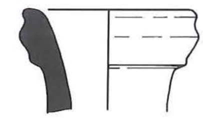

Fig. 30 Miniature spatheion in pale fabric, from mid/late 6[th]-century context. Scale: 1:4.

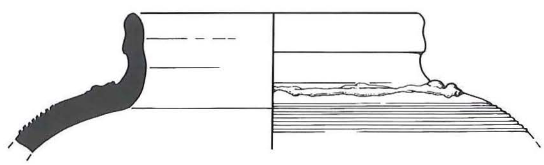

Fig. 29 Palestinian amphora (LRA5), from destruction of c.580. Scale: 1:4.

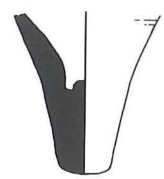

Fig. 31 Miniature spatheion base in pale fabric, from 6[th]-century context. Scale: 1:4.

late third and fourth centuries were soldiers (generally near retirement), attached to a legion with the quasi-civilian function of ensuring the supply to the frontier garrisons of provisions derived from their home regions, particularly from those prosperous provinces, which were not supporting a resident garrison.[45] The origins of these seven *primi pilares* attached to *Oescus* and *Novae* were particularly apposite, for they included Ephesus in Syria, *Syria Palaestina*, the region of *Phocaea*, the Cyclades and the Hellespont. These were precisely the regions from which Dichin and the other frontier garrisons of Lower Moesia and Scythia were drawing many of their amphora-borne provisions in the fourth, fifth and sixth centuries.

The role of Late Roman 2 amphorae from the mid fourth century onwards, as containers for the *annona militaris* on the Danubian limes, has recently been well discussed by Karagiorgou (2001). Presumably LRA1, and most of the other Eastern Mediterranean and Black Sea amphorae, reached Dichin and the other military installations on the Lower Danube by similar state-organised supply-mechanisms.[46] Indeed, from the evidence published so far, there seems to be a significant unity in the supply-sources of amphora-borne food-stuffs and other items shipped to the forts of Scythia and Lower Moesia. Clearly, the long-distance trading contacts set up by the late third- and fourth-century *primi pilares*, which were long-standing by the time of Dichin's foundation in about AD 400, continued to be of official concern well into the sixth century. In the year 537, following persistent barbarian incursions, a new command was created, the *quaestura exercitus,* which united the provinces of Lower Moesia and Scythia, with Caria, the Cyclades and Cyprus.[47] This superficially strange union was specifically designed to facilitate the supply of the *annona militaris* to the Lower Danube frontier garrisons. Moreover,

[45] Mócsy 1966; Carrié 1979.

[46] The amphorae may well have arrived in tandem with the grain supplies, since the low levels of fifth- and sixth-century coin loss recorded at *Iatrus* fort and in the early Byzantine city of *Nicopolis* suggest that the army was not receiving regular payments in coin; this must surely indicate that the *annona militaris* was being distributed to the troops in the form of food-stuffs and other basic essentials. The very limited coinage reaching the military in this area was dominated by issues from Eastern mints (in marked contrast with the evidence from further up the Danube; Poulter 1999a, 41-42). This too, may therefore have shared shipping costs with amphorae from the same regions.

[47] Justinian *Novellae* 41.536.

it embraced precisely those regions whence LRA1, LRA2 and other amphora-borne commodities had long been shipped. The timing is unlikely to have been purely fortuitous. Indeed, the indications at Dichin of a marked contraction in the range of supply-sources in the latter part of the sixth century should not be viewed as an isolated phenomenon, but more probably represents an advanced stage of a more widespread and long-term trend.[48] In tandem with the similar evidence from the eastern Mediterranean, it strongly suggests that the establishment of the post of *quaestura* must have been a timed response to problems already abundantly manifest over an extensive region.[49] In other words, by AD 537, the sources and mechanisms of provisioning the Danube frontier garrisons from outside those provinces, which had been secured in the late third and fourth centuries, and maintained throughout most of the fifth, were now facing such difficulties (e.g. too many consumers vying for produce from the same sources), that Emperor Justinian himself was obliged to intervene with a new, powerful, wide-embracing and very focussed command.

[48] *Cf.* for example, the ceramic picture from Tell Keisan in Palestine: Landgraf 1980, 61-67. The evidence from Scythia also shows a reduction in the capacity and overall quantity of Black Sea amphorae: Opaiţ 1996, 254, 258.

[49] There had been a decline in the output of olive oil in North African by at least the late fifth century. Subsequently, many purchasers, in the western Mediterranean in particular, compensated by significantly increasing their importation of amphora-borne products from the Eastern Mediterranean, particularly from beyond the Aegean (for the evidence from North Africa, Spain, southern France and Italy, see: Fulford 1984, 258-261; Reynolds 1995, 81-83; Pieri 1998, 105; Arthur 1998, 174-178). *Inter alia,* this had probably exerted pressure on the eastern producers either to increase their output (not always possible), or to divert supplies from their usual destinations (such as the Danube *limes*). If such provisions constituted institutionally purchased annona rather than tax contributions in kind, western consumers may have been able to pay higher prices than those set by the state.

Amphorae from Excavations at Pompeii by the University of Reading[1]

Jane Timby

On the 24th August AD 79, Vesuvius erupted depositing vast quantities of volcanic ash, pumice and mud over the Campanian countryside and burying the towns of Pompeii, Herculaneum and the nearby coastal resort of Stabiae. The sites of the towns remained lost until the eighteenth century, when well diggers first rediscovered the remains at Herculaneum in 1709, followed in 1748 by Pompeii. Initial explorations were haphazard and destructive, and much material was looted to fill the palaces and museums of Europe. It was not until the appointment of Giuseppe Fiorelli (1860-75) that some form of more systematic excavation was attempted. He introduced the nomenclature still in use today, where buildings can be located in terms of their region, insula and the serial number of the street entrance.

In the past, much of the work carried out at Pompeii has focused on fairly ad-hoc excavations or clearance of more and more houses, usually only to the AD 79 eruption levels. Portable items of interest have been placed in stores but very little has been published and most of the earlier reports are by and large inventories of the more valuable finds.

There has, in recent years, been a renewed interest in Pompeii and some of the previously held beliefs in terms of the town's origins and development have been questioned. There has, for example, been greater recent emphasis on the study of the standing structures with detailed recording, which has produced notable results. Surprisingly, there has been very little stratigraphic excavation below the AD 79 levels; the exception being a series of small investigations in three main areas, undertaken by Maiuri between 1926 and 1942.[2] From the end of the Second World War to 1988 there have only been a handful of explorations below the AD 79 levels, and excavations have been explicitly excluded from the remit of foreign projects. Until very recently, therefore, there have been no proper stratigraphic excavations with modern techniques of excavation and recording, neither of the AD 79 levels nor of those beneath. Recently, however, a number of significant projects have been undertaken, both by Italians and by teams from other countries. In collaboration with the *Soprintendenza di Pompei* and the British School at Rome, the Department of Archaeology of the University of Reading undertook an excavation at Pompeii between 1995 and 1999.[3]

The Reading/BSR project started in 1994 with the survey of the standing remains in the south-eastern quarter of Insula 9. The work identified two properties, Houses 11 and 12, as having considerable potential for further study (Fig. 1). The standing remains were in poor condition with limited surviving wall-plaster. Excavation was possible within extensive open areas, particularly in the garden of House 11. Most of the rooms only had low grade flooring, and the original excavations of 1952-3 had been rushed and incomplete, so not all the areas had been cleared of the volcanic debris. The houses thus had the potential to illustrate the urban development, including the detailed chronology as well as the state of Pompeii at the time of the eruption. Detailed research was carried out to trace back the assemblages of the houses from the earlier inventories and photographic archives made in the 1950s.[4]

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1 I am grateful to Professor Michael Fulford for allowing me to publish the above note on the amphorae prior to the finalising of his excavation report and for permission to use figures 1-5. The *Soprintendenza di Pompei* is thanked for Figure 4. I would also like to thank Dr David Williams for undertaking petrological analyses of a selection of material and Dr John Hayes for reading and commenting on the original amphorae report.

2 Maiuri 1973.

3 Fulford & Wallace-Hadrill 1998a; 1998b; 1999.

4 Berry 1997.

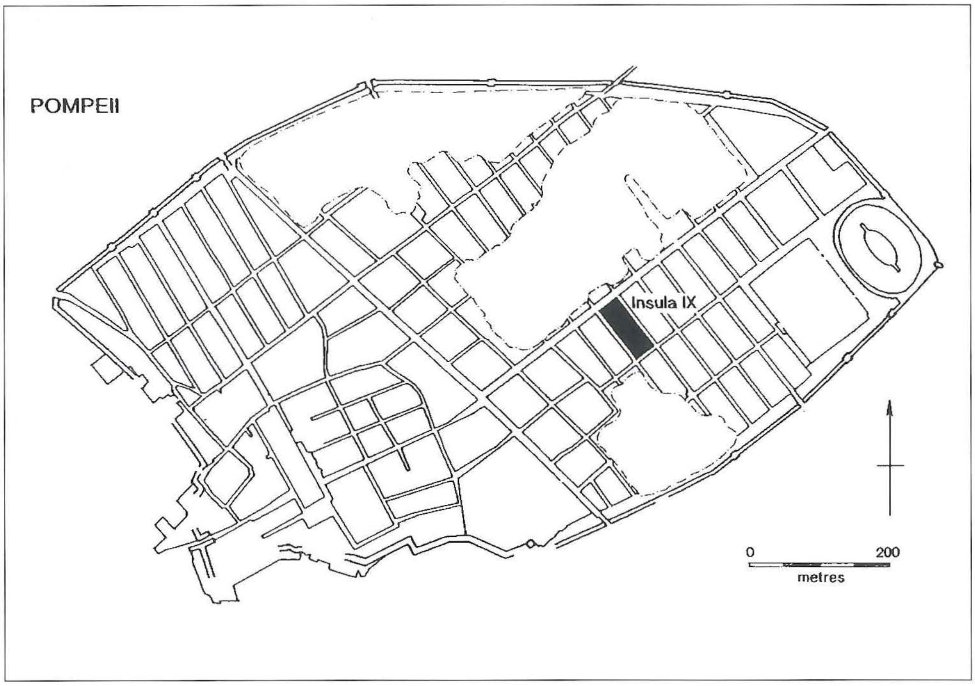

Figure 1 Pompeii: location of Regio I, Insula 9.

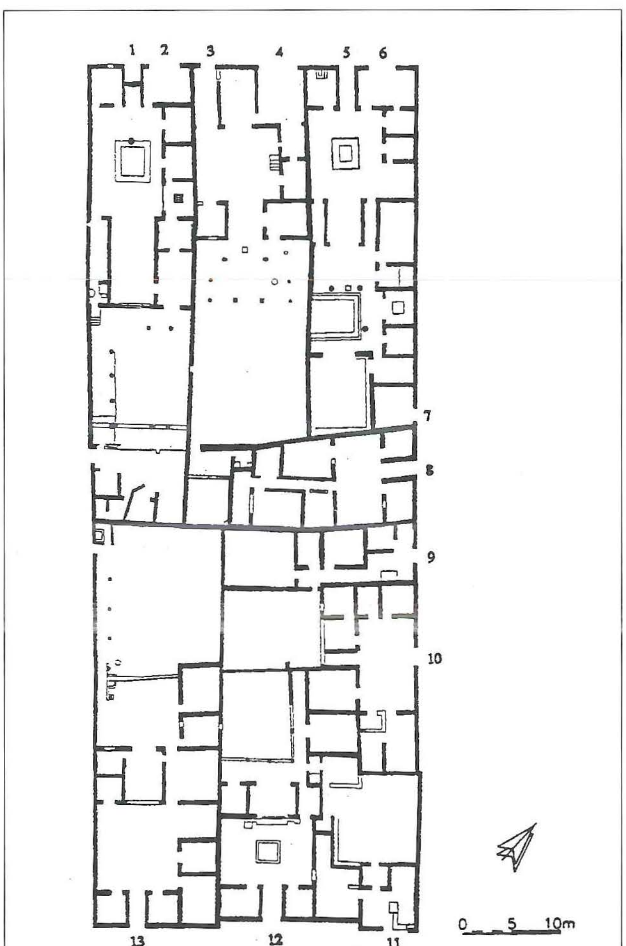

Figure 2 Insula 9, location of Houses 11 and 12.

Insula 9 fronts onto the *Via dell'Abbondanza*, one of the most important streets of the town (Fig. 2). The houses that front onto this street (1, 3 and 5) all have shops in their façades (2, 4 and 6). The houses behind the shops show many signs of prosperity in size, richness of decoration and wealth of finds. Along the side street are much smaller properties sparsely decorated with signs of craft activities (8, 9 and 10). No. 9 was a decorator's workshop. The land slopes down from the main road and the houses at the bottom (11, 12 and 13), show several signs of having become run down by AD 79. Nos. 11 and 12, known as the House of Amarantus, functioned as a wine shop in its final years. House 13 is the only one in the insula with no signs of commercial or craft activity and was a private residence, richly decorated in the first century BC.

Houses 11 and 12 were first uncovered in 1952-53 and then effectively abandoned. The complex consists of two units, which seem to have been connected via a doorway established at some point in their later development (Fig. 3). The street entrance to House 11 leads directly to a shop counter or bar, decorated with pieces of coloured marble. Behind the bar are two service rooms leading to a large garden area, partly surrounded by the blocked-in brick columns of a peristyle.

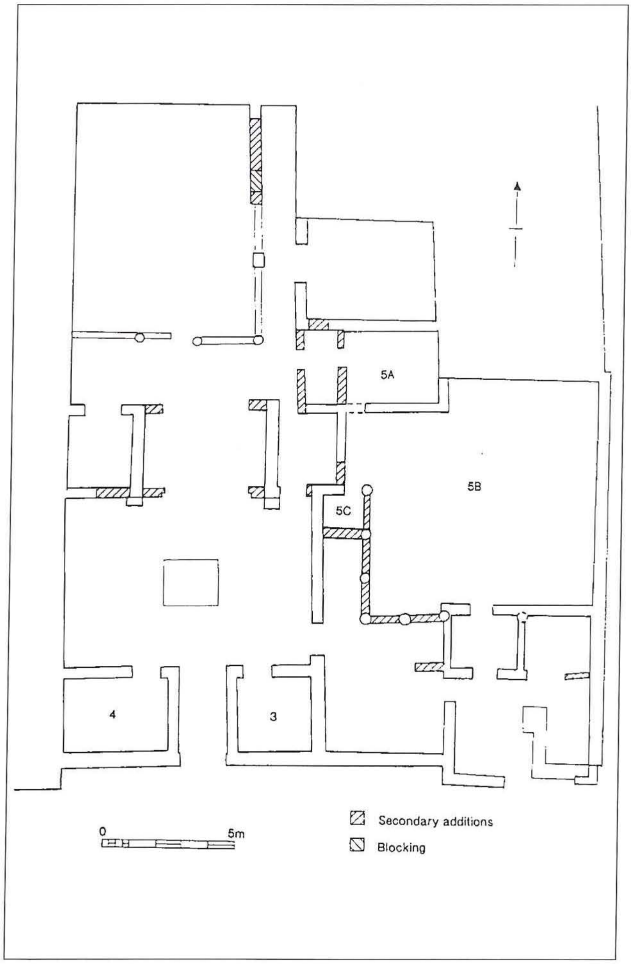

Figure 3 Plan of Houses 11 and 12, Insula 9.

The entranceway to House 12 led to what should be residential quarters, a standard arrangement of a narrow entrance leading to a central atrium with a tablinium (5) linking to the peristyle garden at the back. Around the peristyle are the only decorated rooms, the tablinum itself, a bedroom (7) and the triclinium (10). Room 4 at the time of the eruption had been used as a stable. The remains of a donkey with a dog at its feet were found collapsed against a manger during the recent excavations.

In the atrium of House 12 there were the remains of dozens of amphorae, arranged in tidy rows in an upright position, as can be seen in the archive picture taken in the 1950s (Fig. 4). Most of these were Cretan wine amphorae, and at least 75 individual vessels can be recognised. Further amphorae of mixed origin were found in the pseudo-impluvium in the foreground. In addition to the Cretan vessels, examples of Italian and Aegean Dressel 2-4 (Koan), Dressel 5, probably from the island of Kos, and other types can be discerned. The manner of their disposition suggests that they were full.

When the Reading team started work to remove the volcanic debris, the remains of these once complete amphorae were found largely as bases (Fig. 5). A record was made as far as was possible of each

Figure 4 Archive photograph of the atrium of House 12 (Soprintendenza di Pompeii).

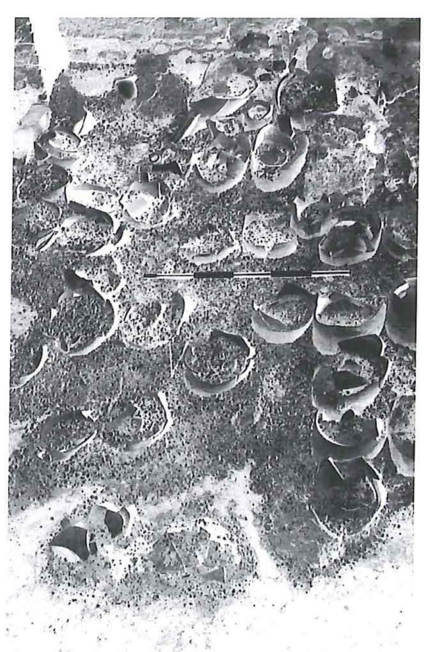

Figure 5 Photograph of the atrium of House 12 at the beginning of the recent excavations (M. G. Fulford).

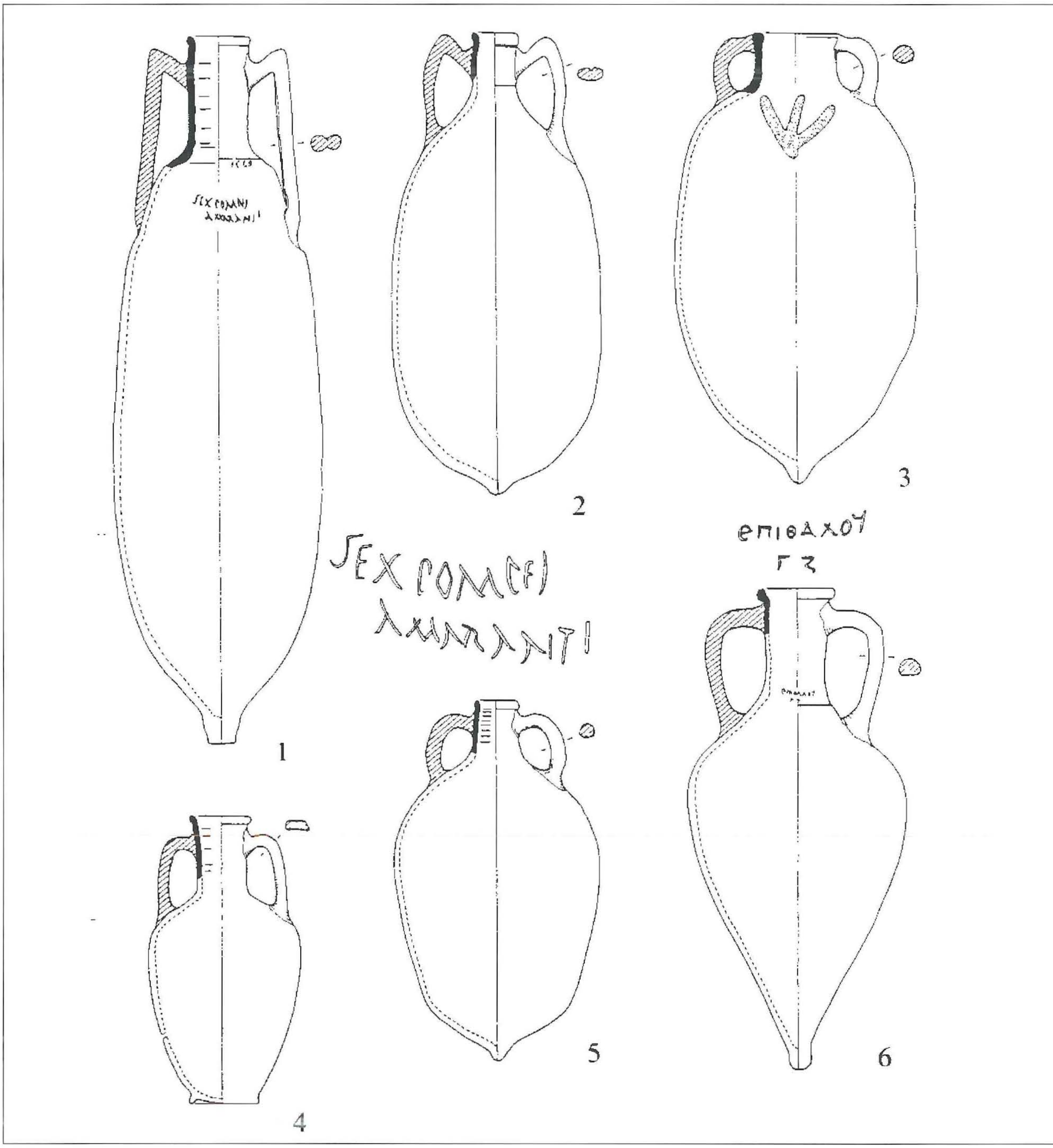

Figure 6 Amphorae recovered from the AD 79 levels.

individually recorded vessel and a representative sample drawn of each of the main complete types (Figs. 6-7). Many of the vessels had black ink *tituli picti*, which rapidly faded on exposure. Forty-eight amphorae were recorded from the AD 79 levels in House 12 from the Reading excavations. These included thirty-three Cretan type AC1 (Fig. 6.5), two AC2 (Fig. 6.2),[5] five Italian Dressel 2-4, three of unclassified form (Fig. 6.3), which resemble a type

[5] Marangou 1997.

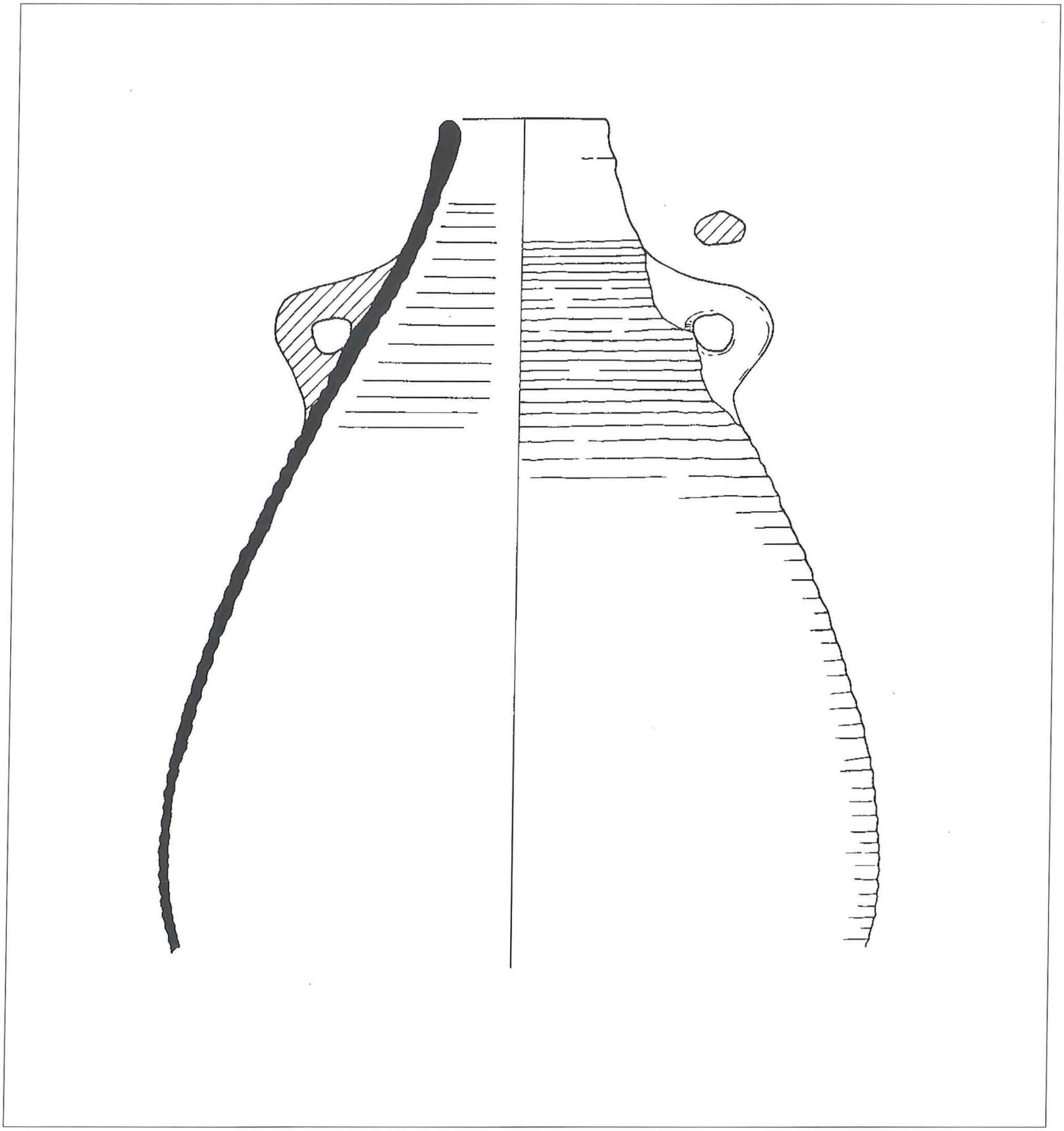

Figure 7 Ribbed 'Tyrhennian' amphora from the AD 79 levels, House 12.

made at Brindisi and may be Apulian, and two small flat bottomed table amphora, or jugs, of Campanian origin (Fig. 6.4). The archive photographs also suggest that there was at least one example of a Dressel 21-22 in the group, another type thought to have a Campanian origin.

The atrium of House 12 thus seems to have been a storage area for the wine served at the bar of House 11. Communication between the two properties was via a doorway next to Room 3. In the garden of House 11 were more amphorae, this time stacked upside down and therefore presumably empty. In total, 39 complete or semi-complete amphorae were recorded from House 11. These included five AC1, four AC2, one Aegean Koan (Fig. 6.1), eighteen Italian Dressel 2-4, two further examples of the globular form possibly from Apulia (as Fig. 6.3), a tapered form with a Greek *titulus pictus* (Fig. 6.6), presumably of Aegean origin and similar to a form referred to as a Kapitän I from Ostia,[6] a ribbed form whose origin probably lies in the Levant near Tyre (Fig. 7),[7] and eight other Aegean types. Seventeen of these had *tituli picti*. Three of the amphorae, all Aegean Dressel 2-4, were marked with the same name, Sex Pomp(eii) Amaran(ti) (cf. Fig. 6.1). The name matches with a record from the street façade of House 11, suggesting that he was the proprietor.

Very little other complete pottery was recovered from the AD 79 levels from the Reading excavations. Exceptions include a frying pan with a broken handle and a Greek name on the base and thus probably an import, an upturned dolium, a broken Italian sigillata stamped dish, a lamp, a thin-walled cup, a flask and a red earthenware vessel with a square top perhaps used as a planter. The archive photos also show a large *mortarium* in the southern area of the garden.

Several blocks of Sarno limestone and other evidence of building materials such as tegulae and amphora bases filled with mortar and *cocciopesto*, might suggest that there was some ongoing restoration work at the time of the eruption. The garden produced root voids set in two or three parallel rows suggesting vines or fruit trees. The inventories revealed that thirty-nine amphorae had been removed from House 11 along with three amphorae, one table amphora, one bowl and one dolium from House 12. It is thought that the 1950 excavations were abandoned here because nothing of interest was found. Some items, such as mortaria, were not recorded at all.

The situation was very different in House 13, possibly the only residence of note in the insula. According to the inventories, the house produced 91 ceramic vessels, among which were 18 amphorae, a number of tableware vessels, including 24 jugs and 14 sigillata bowls, and various other forms. All this seems to emphasise the non-domestic status of Houses 11 and 12 at the time of the eruption and their use as commercial premises to serve wine. The range of amphorae demonstrate the extent of the wine trade at the time: it would seem that at least some of the occupants of Pompeii preferred Cretan wine over the local Campanian wine. Alternatively, in a commercial situation such as a bar, foreign wines were perhaps more likely to be sold in preference to the local wines more readily available in the household.

Cretan wine amphorae are quite well documented from Pompeii (Pompeii type X) and Marangou recorded 178 examples of Cretan AC1 and 173 examples of AC2 from the stores. AC1 appears to be the oldest of the Cretan forms in the Roman period, and its presence is certainly attested in first-century AD levels (see below). With a capacity of 20-25 litres, the stock in Houses 11-12 represents a minimum of some 2150 litres of Cretan wine. A kiln producing this type is known at Keratokambos in southern Crete,[8] but other sources are likely.[9] Thin-sectioning of examples of AC1 and AC2 by David Williams shows a fairly clean matrix with rare ill-sorted quartz, some shreds of mica, small pieces of limestone or voids with reaction-rims that once contained limestone, calcite, a few small pieces of metamorphic rock and opaque iron oxide. The island of Crete contains a mixture of geological formations comprising Jurassic and Cretaceous limestones, areas of sandstones, marls and metamorphic rocks and lesser igneous areas and the petrology of the samples fits easily with a Cretan source. Their presence at Pompeii shows them to be well in circulation by AD 79 and the variants identified have consular dates of AD 52, 57, 74 and 78.[10] The earliest examples at Benghazi are recorded from deposits dating to the Augustan period,[11] and there would similarly appear to be examples of the same fabric in the Augustan levels and possibly earlier from Pompeii. Cretan amphorae were apparently present in Rome by 64 BC.[12]

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6 Panella 1986.

7 P. Reynolds, pers. comm.

8 Peacock & Williams 1986, 177.

9 Cf. Marangou 1997; Markoulaki *et al.* 1989.

10 Panella 1976, 155-58.

11 Riley 1979, 181.

12 Marangou 1997, 67.

The unclassified amphora (Fig 6.3) with an ovoid body, vertical neck, slightly beaded rim and two small handles linking the rim to the shoulder, carried a red painted *titulus pictus* in the form of an inverted three-pronged arrow. The fabric is fine-textured pale buff, with few visible inclusions. Morphologically the form is not dissimilar to a type known to be produced at Brindisi,[13] the main difference being the position of the handle.

The other amphora type from the AD 79 levels of particular note was a partially complete, thin-walled ribbed amphora with a bag-shaped body and two small looped handles (Fig. 7). The type has previously been recognised at Pompeii (Mau type XIV) where it is described as local. Thin-sectioning shows a lime-rich, fairly fine clay matrix containing frequent small, well-rounded pieces of microcrystalline limestone, together with small fragments of fossil shell and foraminifera. Also present are rare grains of quartz and some well rounded argillaceous material. The fabric has similarities with the Gaza/Askelon amphora type, although it lacks the fairly high content of quartz grains usually associated with the latter form.[14] The form seems to have been made at a number of centres within the Gaza/Askelon region which might account for the fabric differences.[15] Recent work by Paul Reynolds suggests that similar types to the Pompeian example may also be originating from a source around Tyre in the Levant.[16] The sherds first appear in the Augustan levels from the Reading excavations. The form has also been recognised from first-century levels at Ephesus.[17]

Below the AD 79 levels

Once the AD 79 levels had been cleared, the excavations continued down in the area of the garden in House 11 and in smaller areas in House 12, eventually reaching levels predating the construction of the houses. The style of architecture used in the construction comprised a mixture of *opus quadratum* (Sarno stone ashlar blocks) for the exterior and Sarno framework for the interior. The former would traditionally be dated to the fourth century BC. The excavations proved that the houses in their present form were constructed in the later first century BC. Occupation on the site eventually went back to the sixth or fifth century BC, contrary to expectations that there was unlikely to be any earlier occupation in this area of the town.[18]

Much material was recovered, especially from the garden of House 11, where large quantities of soil had been imported to build up the levels at various times. In total 31.500 sherds, weighing 558 kg, were processed, of which 76 per cent came from House 11 and 24 per cent from House 12, excluding the AD 79 levels. Many potsherds had probably arrived at the site in the imported soil.

The pottery can be separated into four groups: amphorae (vessels used for transportation and storage of comestibles and other commodities), fine wares (vessels primarily designed for table use, eating and drinking), table wares (connected with serving or storage including jugs, flagons, bowls, lids and handled jars distinguished from coarse wares by the use of slip or finer pale fabrics) and coarse cooking wares (vessels used for food preparation). A fabric series was created and the material quantified by sherd count, weight and estimated vessel equivalent for the excavated layers. The amphorae were quantified alongside the other pottery. The only exceptions, apart from the AD 79 examples noted above, were complete Dressel 1 amphorae, which had been employed to seal disused wells to prevent collapse.

Amphorae from House 11 accounted for 18.5 per cent of the assemblage by sherd count and 49 per cent by weight, with similar ratios from House 12. Although Pompeii has produced a vast number of complete amphorae, to my knowledge nobody has attempted an analysis of the proportions of different types from a single site. Until this is carried out at a number of sites we cannot say whether the assemblage from Houses 11 and 12 is typical or atypical, and how reflective it might be of general economic patterns in respect of pottery operating in the first century BC and the first century AD.

13 Cipriano & Carre 1989, fig 7; Palazzo 1989, type 3.

14 Peacock & Williams 1986, Class 49.

15 Kingsley 2002.

16 P. Reynolds, pers. comm.

17 T. Bezeczky, pers. comm.

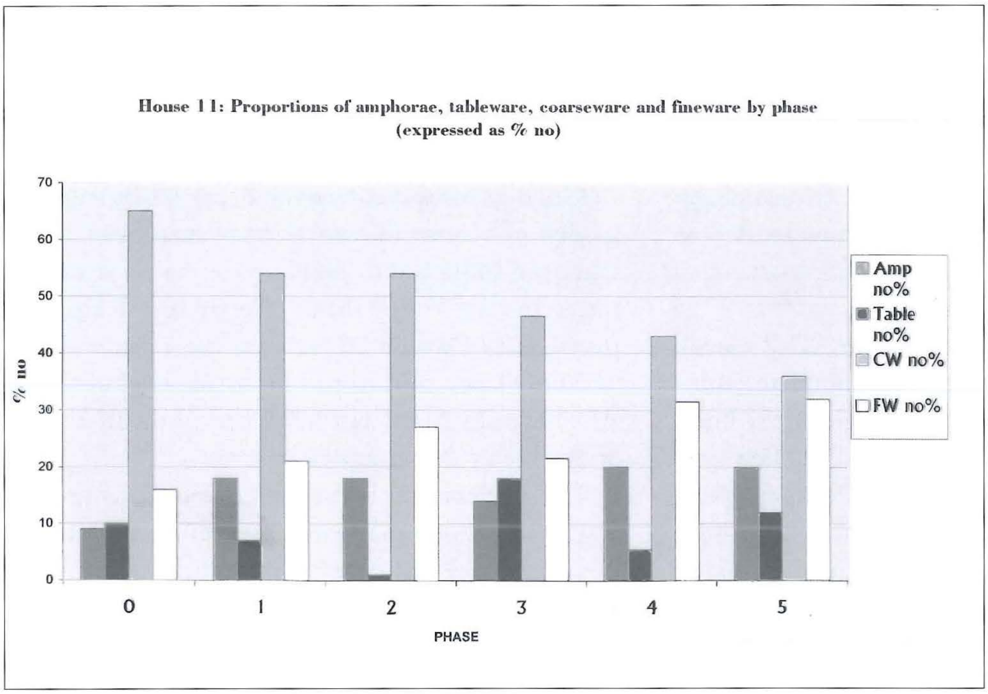

Figure 8 Relative proportions of the various classes of 'pottery' from House 11.

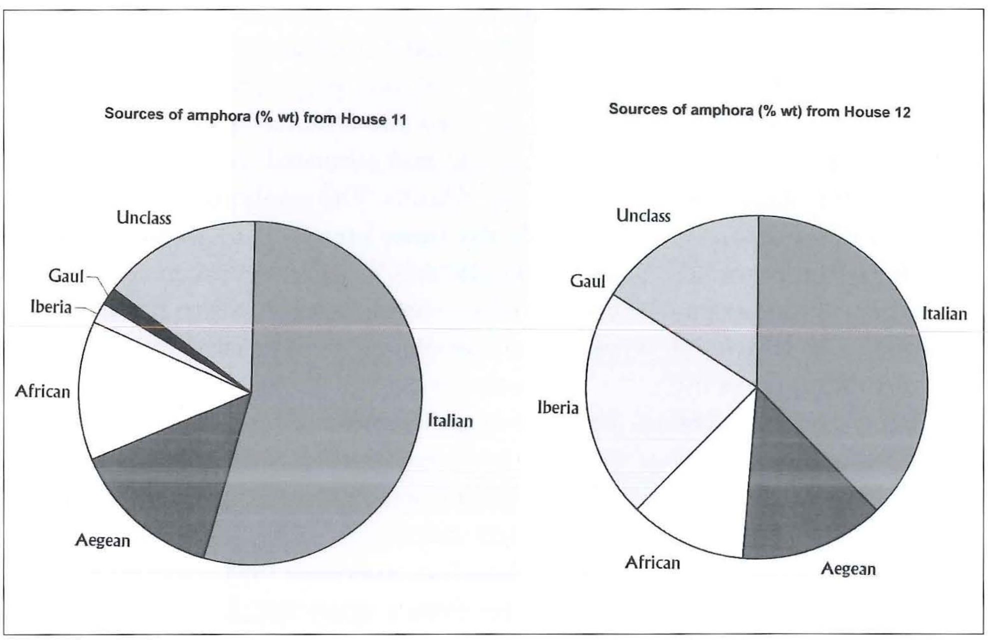

Figure 9 Sources of amphora from Houses 11 and 12 (piecharts).

Figure 8 shows the relative proportions of the four ceramic groups by phase from House 11. In both Houses 11 and 12 there seems to be a decrease in cooking wares over time with a concomitant increase in fine wares. Amphorae and table wares remain fairly consistent.

A large amount of amphorae was recovered from all levels of the site, not just the AD 79 levels. These have as far as possible been grouped according to source. The main sources represented in Houses 11 and 12 are identified in Figure 9a-b. As would be expected Italian amphorae dominate but a significant number of other sources are present: African, Iberian, Aegean and a small number of Gaulish examples. That the European production centres were only beginning to establish themselves in the market at the time is obvious from the low numbers.

Not surprisingly, amphorae attributed to local and Italian sources account for over half the recorded assemblage by weight. Among the earliest types is the Graeco-Italian form, dating from the fourth to the first century BC. Only three rims of the type were recognised, one of which was stamped. The Dressel 1 form is traditionally accepted to date from around 130 BC and it appears to be present in pits from the earlier horizons, which were presumably still accumulating material into the second century BC. The Dressel 2-4 form was introduced in the Augustan period. Although most of the examples appear in Italian fabrics probably typical of the Campano-Latian areas, other types are also present, probably mainly from sources in the Aegean. Also present are Dressel 6 (Lamboglia 2),[19] generally considered to have developed in Apulia in the second and first centuries BC.

Vessels thought to originate from southern Crete and other sites in mainland Greece dominated the Aegean amphorae. The two most common types are AC1[20] and AC2[21] (see above). Other types identified in the assemblage include Corinthian type A (fourth-third centuries BC); Rhodian-types dating from the late fourth century BC to the first century AD;[22] AC4 (Dressel 43); Agora type 137/ British BIV – a distinctive thin walled, single handled amphora with a highly micaceous fabric probably from a source in western Asia Minor,[23] Dressel 5 (Agora 198) and a Kapitän I, similar to an example documented at Ostia.[24] Thin-sectioning of the Dressel 5 fabric by David Williams shows a clay matrix containing frequent inclusions of generally well-rounded cryptocrystalline limestone and irregular-shaped pieces of reddish-brown serpentine. Also present are some grains of quartz, calcite, a little foraminifera, some discrete grains of pyroxene and plagioclase felspar, a few fragments of lava and a little chert. The petrology might suggest a source from northern Syria and the amphora may have been carrying Laodicean wine, known to have been widely exported in the first century AD.

African amphorae account for around 13 per cent by weight of the total amphorae recorded from Houses 11 and 12. Recognisable types include Mana type C,[25] and Keay types 7-8.[26] Type 7 was probably made at a number of sites in North Africa between the third and first centuries BC whilst type 8 broadly dates to the first half of the second century BC to the end of the first century BC. No examples of African amphora featured amongst the material from the AD 79 levels. Also present were examples of Keay type 16 (Tripolitana I) of the first century AD date.

Among western European types present are examples from Cadiz,[27] Beltran type 1; sherds of Dressel 1-Pascual 1 or Dressel 2-4 in the distinctive Catalan fabric, Baetican Dressel 20 and Haltern type 70; a few sherds of Massaliote amphora from South Gaul and a possible flat-bottomed, later South Gaulish type were also noted.

It has long been recognised that the distribution of transport amphora around the Mediterranean and beyond and the interrelationships between the different types gives great insight into the organisation of the Roman economy, particularly during the late Republic and the early Empire. Although there are numerous papers dealing with the subject, the general lack of integrated statements on the complete pottery assemblage from the Mediterranean and the small number of sites for which quantified data is available hinder direct inter-site comparisons. There are thus few quantified contemporary sites with which to compare the Pompeii data. The exceptions include Carthage, Sabratha, and Berenice. Figure 10 compares the broad sources of amphora supplying Carthage, Pompeii and Berenice in the Augustan and early first century AD. Not surprisingly, each site is dominated by local products,

18 Cf. Fulford & Wallace-Hadrill 1999.

19 Peacock & Williams 1986, class 8.

20 Peacock & Williams 1986, class 41, Benghazi MR amphora 2, Agora G197, Pompeii X.

21 Dressel 36, Pompeii VIII and X.

22 Peacock & Williams 1986, class 9.

23 Peacock & Williams 1986, class 45.

24 Panella 1986.

25 Peacock & Williams 1986, class 32; Dressel 18.

26 Keay 1989.

27 Peacock & Williams 1986, class 16/17.

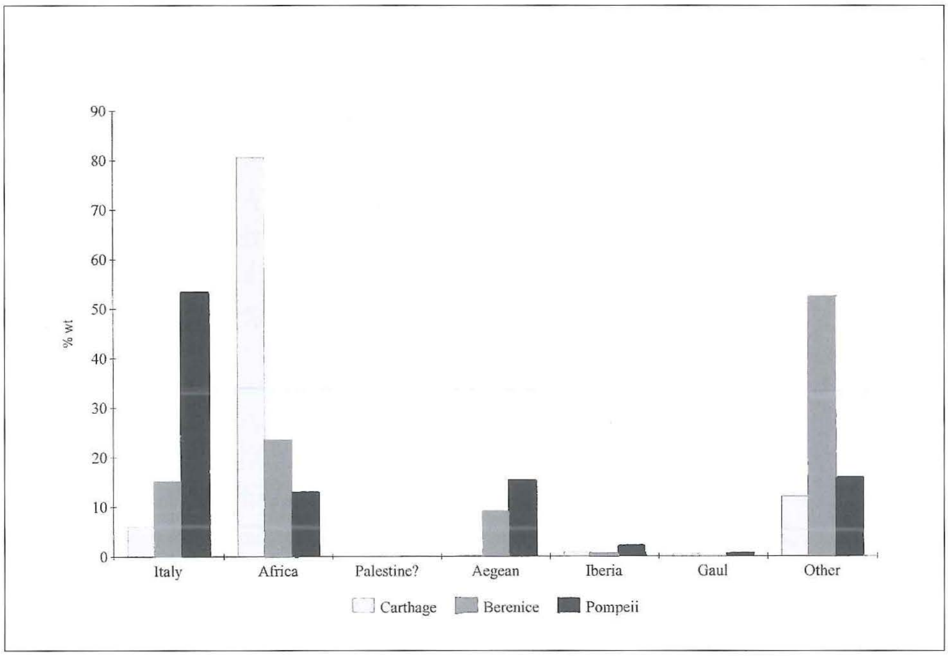

Figure 10 Comparison of amphorae sources in first centuries BC-AD (Pompeii, Benghazi and Carthage).

Pompeii with 52 per cent Italian types, Carthage 80.5 per cent African types and Berenice with 23.5 per cent African ware. On the basis of this analysis Pompeii was receiving approximately 13 per cent of its amphora from Africa and conversely Berenice was receiving about 15 per cent of its supplies from Italy. At Carthage the percentage is considerably lower at 6 per cent, possibly a reflection of the local production sources to the site. The third most significant supplier of amphorae/commodities to both Pompeii and Berenice was the Aegean. All three sites were receiving small amounts from Iberia, and Carthage and Pompeii even smaller amounts from southern Gaul.

Amphorae from the Red Sea and Their Contribution to the Interpretation of Late Roman Trade beyond the Empire

Roberta Tomber

Introduction: The Red Sea and Indo-Roman Trade

The Red Sea ports were uniquely located, for not only did they provide links with regions immediately bordering their waters, but they were also positioned to facilitate the routes to East Africa, and to India via the Gulf of Aden and Indian Ocean (Fig. 1).[1] The Egyptian ports were particularly important as tran-

[1] This research was generously funded by the Arts and Humanities Research Board (UK) as part of a larger programme on Indo-Roman trade undertaken with Professor David Peacock. I thank Steve Sidebotham and Willeke Wendrich (Berenice) and David Peacock (Myos Hormos) for the opportunity to participate in their fieldwork, and Tom Parker for his invitation to examine the imported amphorae and handmade wares from Aqaba. I am also grateful to B. Dolinka, S. Gupta, P. Reynolds, V. Shinde, and Wilfried van Rengen for providing information prior to publication.

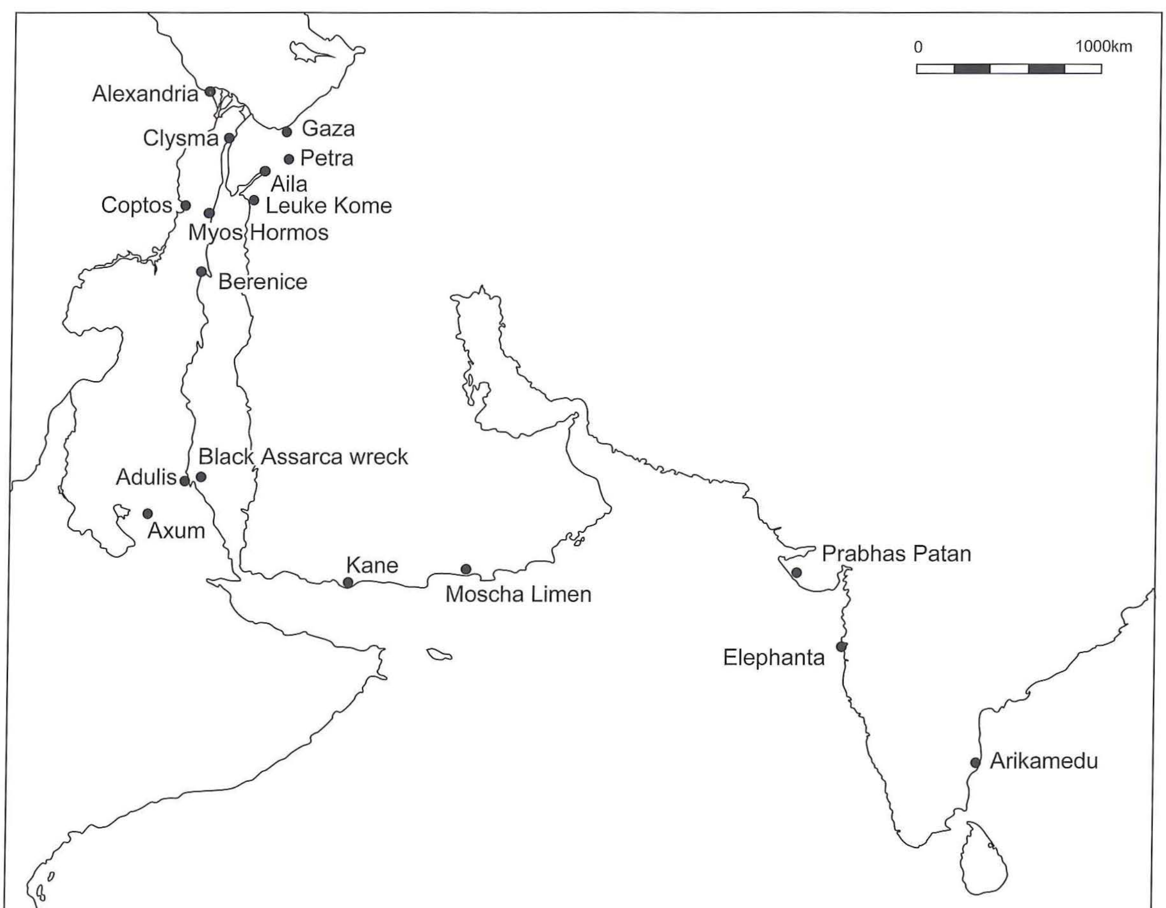

Fig. 1 Location map of sites mentioned in the text (P. Copeland).

shipment centres bridging the long-distance trade to the Nile, leading eventually to Alexandria where goods joined the Mediterranean world, while Aila in Jordan was linked to the Mediterranean via Gaza. There can be no question that the *raison d'être* of the Red Sea ports was to facilitate long-distance trade.

Until the 1990s, which marked an explosion of excavations on the Red Sea, our knowledge of Indo-Roman trade derived from two main sources. Firstly, from the site of Arikamedu on the Coromandel Coast of India, excavated by Sir Mortimer Wheeler in 1945,[2] and secondly from published silver and gold Roman coinage from the sub-continent.[3] Both of these sources primarily elucidated contact between the regions during the Early Roman period.

This concentration on the Early Roman period was reinforced by the exceptional historical context provided by the mid-first century AD Egyptian merchants guide, the *Periplus Maris Erythraei*,[4] as well as shipping receipts of generally the same period found at both Coptos on the Nile[5] and more recently at Berenice on the Red Sea.[6] These documents provide detailed evidence on the harbours, routes and goods involved in the trade from the Egyptian viewpoint and, in conjunction with archaeological evidence from the Indian Ocean and India itself, indicate that the period between the mid-first century BC and the mid-first century AD was the most intense period of trade.

While later documents exist, none is as detailed or as explicitly concerned with trade as the *Periplus*. The *Christian topography* perhaps comes closest to it. Here an Egyptian merchant "Cosmas Indicopleutes" from Alexandria, writing in the mid-sixth century, describes his travels to the Mediterranean, the Nile Valley, the Persian Gulf, the Levant and Ethiopia; of India and Sri Lanka he appears to have only second-hand knowledge.[7] Despite his fascinating accounts, the primary interest of Cosmas Indicopleutes was theological and therefore geographical and economic information is less detailed than in the *Periplus*. Other references to contact between these regions during the Late Roman period are normally brief. Some can be inferred: the *Codex Theodosianus*,[8] for example, refers to a regulation of Constantius II in AD 356/7, warning those sent to the Axumites and Homerites not to linger in Alexandria for more than a year. Christian documents form another sporadic but useful source and a few are cited here. In the early fourth century the use of Aila as a port for India is recorded by Eusebius of Caesarea,[9] while the eleventh-century text of Peter the Deacon credits Egregia the nun with this description of Clysma in the late fourth century: "nowhere else on the Roman soil but there (at Clysma) are ships from India admitted".[10] Later, in *c.* AD 570, the martyr Antoninus Placentius mentions the arrival of Indian ships loaded with spices to both Clysma[11] and Aila.[12]

Therefore, the past emphasis on Early Roman activity has been justified, but a growing recognition of Late Roman (particularly fourth and fifth centuries) coinage in India[13] and Sri Lanka,[14] as well as a growing body of new evidence, demonstrates a greater importance of late Indo-Roman trade than previously considered. This paper will investigate the evidence for late trade from the Red Sea ports by contrasting the situation between the early and late periods, and will also briefly assess the evidence from the Indian Ocean and India. In this context, "Early" Roman will generally be regarded as late first century BC to the third century AD, and "Late" Roman as fourth to sixth centuries, acknowledging that simplification on this level will mask more detailed patterns. Equally, the emphasis here is on amphorae, with space permitting only glimpses of the evidence available from other important categories of finds (particularly coinage). A more detailed study incorporating all the evidence is reserved for the future.

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2 Wheeler *et al.* 1946.
3 E.g. Turner 1989.
4 Casson 1989.
5 Tait 1930, 220-304; Fuks 1951.
6 Bagnall *et al.* 2000.
7 Kirwan 1972; Wolska-Conus 1968.
8 12.2.2; Pharr 1952, 380.
9 *Onomastikon* 6.17-21.
10 *Itinerarium Egeriae* 6.4.7, *CCSL* 175, 101; Vasiliev 1950, 364; contra Mayerson 1996, 124-125.
11 *Itinerarium* 40, *CCSL* 175, 149.
12 *Itinerarium* 41, *CCSL* 175, 150-151.
13 Krishnamurthy 1994; Ray 1991.
14 Bopearachchi 1992.

The Red Sea Sites

This section is restricted to a summary of those sites for which firm archaeological evidence exists during the Roman period (Fig. 2).

Clysma/Arsinoë/Cleopatris (Suez), Egypt

The port of Clysma is not included in the *Periplus*, but is listed by Claudius Ptolemy in the second century AD.[15] Excavated by the French in the 1930s, it has a long sequence with Ptolemaic foundations and occupation continuing into the Byzantine period. Pottery illustrations support this date range, although in most cases these unfortunately exist as crude sketches and only one type relevant to this discussion has been identified from them.[16] The coinage indicates that the occupation was most intensive during the Late Roman period.[17] Its longevity has been attributed to various factors, one of which is its proximity to the nearby Nile-Red Sea canal terminating at Babylon that provided a waterborne route between Alexandria and Clysma.[18]

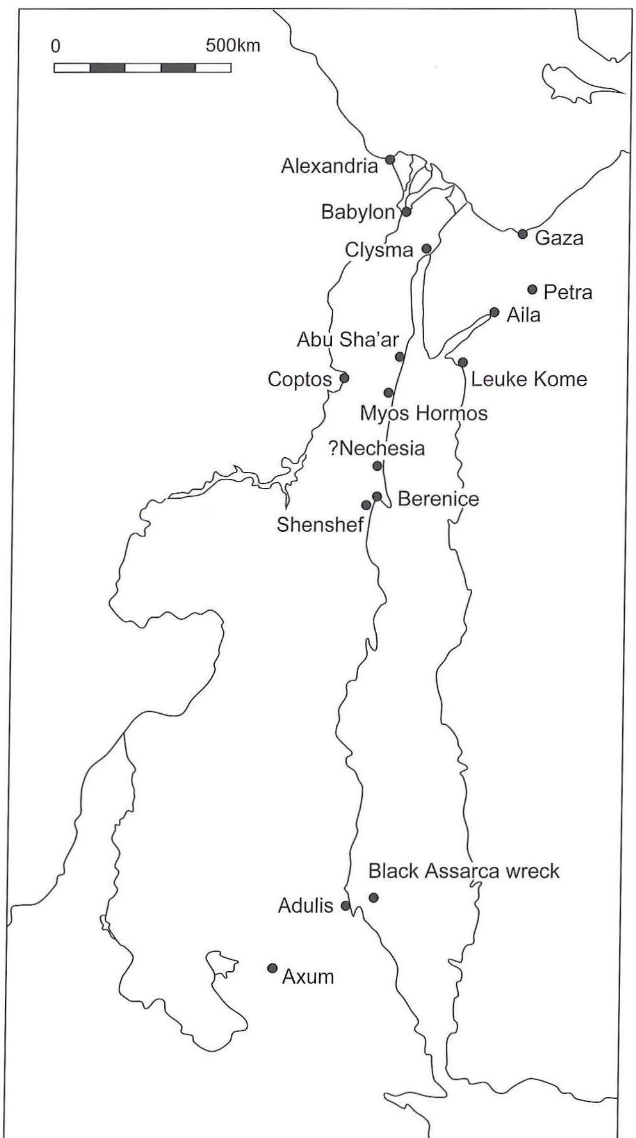

Fig. 2 Detailed map of the Red Sea indicating sites mentioned in the text (P.Copeland).

Myos Hormos (Quseir al-Qadim), Egypt

This site is Myos Hormos of the *Periplus*.[19] Excavated in the late 1970s and early 1980s by the University of Chicago, Whitcomb and Johnson revealed Early Roman and Mamluk sequences.[20] A recent five-year excavation campaign undertaken by the University of Southampton has verified this main chronological framework, but within the Early Roman period has refined the dating of the occupation from the late first century BC through at least the mid-third century AD.[21] Whitcomb and Johnson's results hinted at some Ptolemaic occupation[22] and rare sherds of Ptolemaic pottery and a coin[23] recovered residually in late Augustan deposits since 1999 reinforce the possibility of an earlier foundation for the site.

[15] *Geography* 4.5.14.

[16] Bruyère 1966, *passim* and pls. XX, XXIV, XXV, XXVI, XXIX.

[17] For a summary see Young 2001, 86.

[18] Sidebotham 1991b, 15-16; Young *ibid.*

[19] Casson 1989, *PME 1.*

[20] Whitcomb & Johnson 1979, 1982; for the pottery see Johnson 1979, Whitcomb 1982.

[21] Peacock *et al.* 1999, 2000, 2001, 2002; for the Roman pottery see Tomber 2000, 2002.

[22] Sidebotham 1991b, n. 44.

[23] Tomber 2001, 43.

?Nechesia (Marsa Nakari), Egypt

Marsa Nakari is not mentioned in the *Periplus*, but it may be equated with Claudius Ptolemy's Nechesia,[24] although there is as yet no supporting textual evidence from the site itself. Excavation was conducted by Northern Arizona University in 1999 and 2002.[25] A sequence from at least the late first (*c.* AD 69/70) to the late fourth century (*c.* AD 361) is indicated by the coins.[26] Although the pottery remains to be systematically studied, Seeger describes Early Roman material,[27] while later sherds, which would indicate occupation during the fifth century, have also been noted.[28]

Berenice, Egypt

This site is Berenice of the *Periplus*.[29] A total of eight excavation seasons to date has confirmed an occupation sequence from the mid-third century BC through the early sixth century AD.[30] Although some ceramics can be identified, material evidence in general for the mid or late second century to some time in the fourth suggests a decrease in activity; thereafter the occupation is particularly intense for the remainder of the sequence.

Shenshef, Egypt

Approximately 21 kilometres south-southwest of Berenice is the inland site of Shenshef[31] where Early Roman pottery has been noted from the hilltop fort.[32] The excavations, however, restricted to middens from the wadi settlement were essentially fifth century in date possibly containing rare sherds of earlier material, that may have originated from the hilltop fort.[33] Occupation appears to be restricted to the Late Roman period, from the mid/late fourth century (on the basis of LRA 3, which is common at Berenice during this period), but primarily equating to the final phase of Berenice, fifth into the sixth century. Its function remains enigmatic, but it is likely to be a satellite of Berenice, possibly used as a retreat during fallow periods on the Red Sea.

Aila (Aqaba), Jordan

The site of Aila[34] is known not from the *Periplus* but Strabo's *Geography*,[35] written in the early first century AD, notes that the region is also inhabited by the Nabataean Arabians. Excavation by North Carolina State University, over six seasons since 1994,[36] has confirmed its Nabataean foundation in the first century BC. After a discontinuity in occupation around the turn of the second century, possibly related to its annexation as *Arabia* in AD 106, Aila flourished throughout the Byzantine and Islamic periods.[37]

Leuke Kome ('Aynunah), Saudi Arabia

Located in Nabataea, this cluster of seven settlements at 'Aynunah, less than five kilometres from the coast in the Northern Hijaz, is likely to be the port of Leuke Kome[38] identified in the *Periplus*.[39] Known solely from surface survey, Nabatean/Roman pottery has been reported.[40] It is unclear who controlled the site, for despite the presence of a tax collector

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24 *Geography* 4.5.8; see also Seeger 2001, 77.
25 Seeger 2001.
26 *Ibid.* 2001, 84-85.
27 *Ibid.*, 79-84.
28 S. Sidebotham, personal communication.
29 Casson 1989, *PME* 1.
30 Sidebotham & Wendrich 1995, 1996, 1998, 1999, 2000; for the Roman pottery see Hayes 1995, 1996; Tomber 1998, 1999.
31 Gould 1999.
32 Sidebotham 1996, 393.
33 Tomber 1998, 170-179; Tomber 1999, 146-150, see also Gould 1999, 379.
34 Spelling follows that agreed upon by Parker and Whitcomb, so that Aila refers to pre-Islamic Aqaba and Ayla to Islamic Aqaba (Parker 1996, 232). The amphorae produced during both periods are described here as Aqaba amphorae.
35 16.4.18
36 Parker 1996, 1997, 1998, 2000, 2002; each includes a summary of the pottery.
37 Parker forthcoming; for the Islamic period see Whitcomb 1994.
38 Ingraham *et al.* 1981, 76-78.
39 Casson 1989, *PME* 1.
40 *Ibid.*, pls. 82, 86.

and a centurion at the time of the *Periplus*, both officials may have been Nabataean rather than Roman.[41] The sparse published finds indicate that regardless of its official status, culturally it was Nabataean. Its abandonment would seem to have occurred in the Early Roman period, and is likely to be related to the reduction of the overland Nabataean routes, due to the rise of the maritime ones. A reference to Leuke Kome in the *Monumentum Adulitatum*, an inscription recorded by Cosmas Indicopleutes, is thought to describe events in the mid-third century AD, implying it was still active at that date.[42]

Adulis and the Black Assarca wreck, Eritrea

Adulis of the *Periplus*[43] is the port for the Axumite capital of Axomites. Approximately four kilometres from the coast, it was excavated by Paribeni in the early twentieth century, who published a four-phase sequence spanning a period equivalent in date from pre-Ptolemaic to Late Roman or Byzantine.[44] Of Roman period finds, Paribeni illustrated primarily Late Roman material, which can be independently dated to at least the fifth century AD. The recent find of a shipwreck off the coast of Eritrea at Black Assarca Island, between Dahlak Kabir and the Eritrean coastline, recorded ceramic types similar to those found at Adulis and supports a date of the fifth and sixth centuries.[45]

Axomites (Axum), Ethiopia

According to the *Periplus*, Axomites (hereafter Axum) is approximately eight days from Adulis.[46] The site has been extensively excavated, first by Chittick in 1972 to 1974,[47] and between 1993 and 1997 by Phillipson.[48] Work in the Bieta Giyorgis region of Axum has been in progress since the late 1970s.[49] The *floruit* of the Axumite Kingdom, between the fourth and sixth centuries, is witnessed from intense occupation at Axum and its international stature is reflected by the presence of Roman artefacts. However, earlier occupation with limited Roman finds is also known, particularly from Bieta Giyorgis,[50] and indicates contacts with the Roman world from at least the Early-Axumite period.

'Abu Sha'ar, Egypt

Although a coastal site on the Egyptian Red Sea, this site differs from the others in that it was established as a fort rather than a port.[51] Founded in the early fourth century with a gate inscription to Constantine I, another inscription may be reconstructed as "*ad usum mercatorum*", indicating that the fort protected merchants.[52] Its role in international trade, as well as monitoring local nomadic groups which could have disrupted this activity,[53] make the site integral to the trading network despite its non-port status. The site was occupied into the early seventh century.

Red Sea culture

The relationship between the Red Sea ports is best explored by comparing their ceramic assemblages, particularly but not solely amphorae. The single amphora type produced on the Red Sea, at Aqaba, provides the most visual display of the changing relationships in the region (Fig. 3). Donald Whitcomb first identified this type from the seventh century kilns at Ayla, and also drew attention to its long-distance distribution at Adulis, Axum and further east at Kane.[54] Since then stratigraphic sequences have allowed the dating of this type to be refined,

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41 Sidebotham 1986, 106-107; Young 2001, 95-96; Young 1997.
42 Munro-Hay 1991, 79-80.
43 Casson 1989, *PME* 4.
44 Paribeni 1907.
45 Pedersen 2000, and *idem s.d.*
46 Casson 1989, *PME* 4.
47 Munro-Hay 1989b; for the pottery see Wilding 1989.
48 Phillipson 2000; for the pottery see Phillips 2000.
49 E.g. Bard *et al.* 1997.
50 *Ibid.*
51 Sidebotham 1994, 1991a; Sidebotham *et al.* 1989; for the pottery see Riley 1989; Riley & Tomber forthcoming.
52 Bagnall & Sheridan 1994, 162.
53 Sidebotham 1994, 156.
54 Melkawi *et al.* 1994.

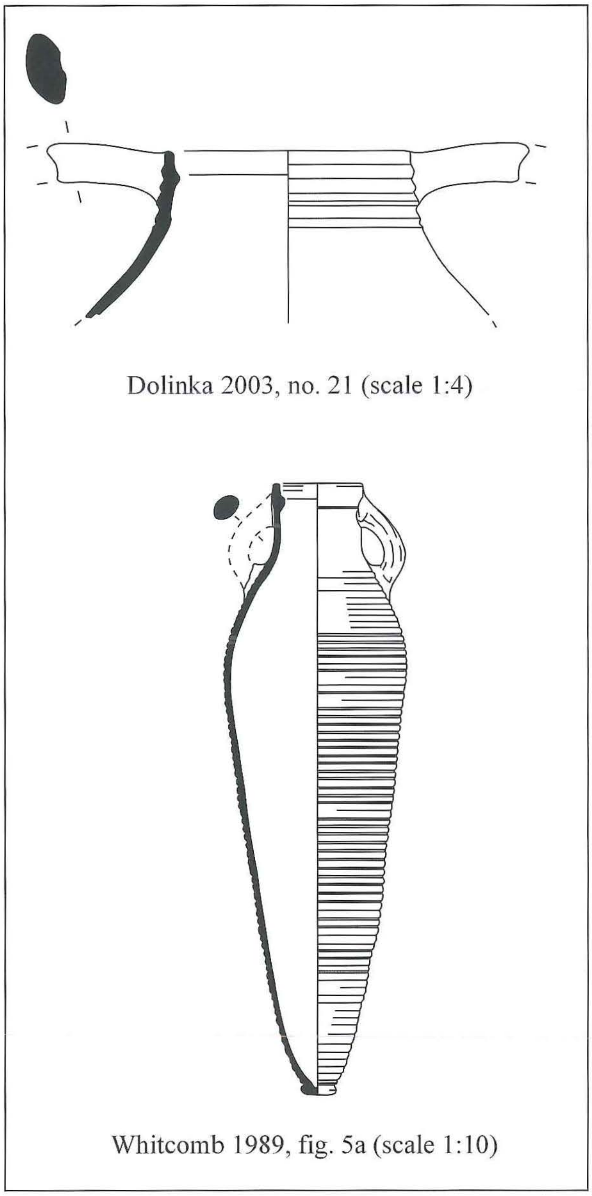

Fig. 3 Early (after Dolinka 2003) and late Aqaba (after Whitcomb 1989) amphorae.

for at Berenice it is first recorded from fourth century levels,[55] continuing into the fifth century; at 'Abu Sha'ar, and Aila it occurs from at least the fifth century. Typologically it is distinguished by a tapered, ribbed body, knob toe, upright lid-seat rim and loop handles.

Despite a lack of complete examples, a seemingly related vessel has now been recognised from Nabataean layers at Aila.[56] Kilns are not known from this period, but there is significant kiln debris that supports its local production above and beyond the form and fabric similarity noted between the two types.[57] It would therefore seem that the Aila product of the first and early second century is likely to be the predecessor of the later Aila and Ayla vessel. Unlike the later vessel type, it has at present a more restricted distribution (essentially Nabataean) and appears to have been manufactured at centres other than Aila in the early period, as evidenced by the presence of the form in different fabrics at Wadi Faynan in southern Jordan.[58]

Both the early and late vessels are pale and off-white in colour, frequently with a pink or green core. The fabric is characterised by angular granitic fragments and, particularly, large gold mica flakes easily visible in the hand specimen. While the early vessels are fairly thin-walled and appear low-fired, the late ones have very thick walls and are exceptionally hard-fired.

As for their contents, little is known. Many of the late vessels bear Christian monograms. Only a single inscription relating to contents is recorded: this is on a sherd from Berenice reading *oinos*. However, as the vessels are uniformly without pitch, they are unlikely to be wine containers and the Berenice inscription may be related to reuse. Whitcomb suggested that the late vessels were used for Palestinian agricultural products brought to Ayla,[59] while more recently Parker has suggested that the Byzantine vessels may have been containers for *garum* made from Red Sea fish identified in the region,[60] and that this *garum* may have been produced either at Aila or further afield. For the early vessels, Dolinka[61] has suggested that as well as *garum*, dates and/or date wine may have been carried. In addition to the Aqaba amphorae, other pottery types that provide useful complementary evidence are introduced below.

55 Hayes 1996, Table 6-10.
56 Dolinka 2003, 80.
57 Parker 1998, 37; Parker 2000, 375.
58 Tomber forthcoming c.
59 Melkawi *et al.* 1994, 463.
60 Parker 1998, 390-391; 2000, 380; e.g. at Petra: Studer 1994.
61 Dolinka 2003, 95-96.

Early Red Sea culture

Clyma, Myos Hormos, Nechesia, Berenice, Aila, Leuke Kome, Adulis and Axum were active during the Early Roman period, although no Early Roman pottery from Adulis has been published to date. The sites represent three cultural zones. Within the Hellenised tradition, the Egyptian sites are Roman ports, while Aila and Leuke Kome fall within the Nabataean realm. Further south, sites in Eritrea and Ethiopia are firmly outside the Graeco-Roman world. Comparing their ceramic assemblages, it is clear that separate patterns exist for each of these three cultural groups. In addition to Aqaba amphorae, Nabataean fine wares produced in the region of Petra are a useful indicator.[62]

Firstly, Aila and Leuke Kome are both culturally if not entirely Nabatean, and this is reflected by the pottery at both sites. At Aila fine wares and the early Aqaba amphorae are plentiful. Aila has few Mediterranean amphorae and, of imported types, Gaza is the most common followed by Egyptian sources. It looks very much to the Levant and supply appears to be dominated by overland routes, not only for the Gaza amphorae, but probably for Egyptian and Mediterranean ones as well, which could have come via Clysma. Although amphorae are not published from Leuke Kome, Nabataean wares indicate that it too was primarily supplied by overland rather than sea routes. *PME 19*[63] states that the port was two or three runs from Myos Hormos and provided access to the overland route to Petra, and that it also facilitated small craft from Arabia.

Further south on the Red Sea, at Berenice and Myos Hormos, Mediterranean amphorae are common, rivalled only by local Egyptian ones. The sparse Early Roman sherds reported from Nechesia do not contradict this pattern.[64] Essentially, the vessels from Berenice and Myos Hormos reflect all imports available at Alexandria, albeit in reduced numbers. Rare Nabataean fine-ware vessels are present at Myos Hormos and Berenice (*c.* two at each site), and an early Aqaba amphora sherd has been identified from Berenice. Non-ceramic evidence of interaction with the Nabataean world is more plentiful in Egypt, and numerous inscriptions and graffiti from the Eastern Desert, dating until *c.* AD 266, hint at their involvement with the Romans in matters of trade.[65]

Finally, outside the Roman Empire sparse Early Roman pottery is identified from Axum, although only a stamped Gauloise 4 amphora is specified to type.[66] The stamp of MATVR, for Maturus, is a common name in the production region of *Gallia Narbonensis*, although more frequently associated with the Gauloise 1 form.[67] No Nabataean pottery has been identified from this region. Axum, therefore, appears to have interacted with Berenice/Myos Hormos, but a lack of Nabataean pottery implies that generally Axum and Nabatean spheres did not intersect. Interaction between Axum and Berenice/Myos Hormos is further indicated by finds of early Axumite-style pottery at both Roman sites and an *ostracon* from Myos Hormos (O. 543) referring to the Troglydites, the people of the coastal region of Eritrea.

Late Red Sea culture

Sites active during the Late Roman period include Clysma, 'Abu Sha'ar, Nechesia, Berenice/Shenshef, Aila, Adulis/Black Assarca wreck and Axum. The foundation of 'Abu Sha'ar and resurgence of activity at Berenice and Aila during the fourth century demonstrate vigorous activity in the region. By the fourth century Myos Hormos was abandoned and in terms of size alone it would appear that Berenice rather than Nechesia was responsible for the greater volume of trade in this area of the Red Sea. Clysma too was undoubtedly important, but its pottery is difficult to assess by the published evidence.

Late Aqaba amphorae are plentiful from Berenice/Shenshef[68] and 'Abu Sha'ar[69] and, although less

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62 E.g. 'Amr & al-Momani 1999.

63 Casson 1989.

64 Seeger 2001 and S. Sidebotham personal communication.

65 Littman & Meredith 1953, 1954; see Sidebotham 1986, 94 for a summary.

66 Fattovich & Bard 1995.

67 Laubenheimer 1990, 101.

68 Hayes 1996, fig. 6-13, no. 13; Tomber 1998, fig. 6-7, no. 80, fig. 6-8, no. 84.

69 Riley 1989, fig. 17, nos. 20, 24.

frequent, at Adulis,[70] Axum[71] and the Black Assarca wreck,[72] they are the most commonly identified imported amphora type in the Axumite Kingdom. The evidence from Clysma and Nechesia is not full enough to make the absence of this type meaningful.

Similarity between sites is reinforced when other pottery types are compared. The Late Roman Amphora 1 from Cyprus/Cilicia is particularly diagnostic.[73] It is present in excavated deposits from all our sites: Clysma,[74] Aila, Nechesia,[75] Berenice/Shenshef,[76] 'Abu Sha'ar,[77] Axum[78] and the Black Assarca wreck,[79] while sherds have been identified from the surface at Adulis.[80]

However, in cases where the LRA 1 can be quantitatively assessed, differences still exist between the sites. LRA 1 is abundant at Berenice and Shenshef, frequently accounting for more than 50 per cent of the assemblage, and surpassing the Egyptian Nile Valley vessels,[81] particularly in the later fifth century onwards. At 'Abu 'Sha'ar it is also common,[82] but not in the quantities seen at the ports. Although present at Aila, LRA 1 is not quantitatively significant and, instead, the amphora assemblage is dominated by Egyptian types followed by Gaza (showing the pattern to be reversed from the Early Roman period). In contrast, at Berenice, Gaza amphorae are rare. LRA 1 vessels have been excavated from Axum, but here too they are rare.

In addition, handmade Axumite wares are found in relatively small numbers at Berenice and Aila. The apparent absence of these wares at Shenshef and 'Abu Sha'ar, two non-port sites, is significant and will be developed below, although the possibility exists that Axumite vessels were represented by undiagnostic sherds but not identified. A coin of the Akumite king Aphilas (*c.* 270/90 to before 330 AD) was also recorded from Berenice.[83]

To a certain extent the three patterns identified for the Early Roman period are respected: Aila still looks towards the Levant and probably depends on the overland route from Clysma; there are substantially more Roman artefacts at Axum during this period than earlier, but they are numerically small and the site still maintains its own culture; Berenice still has a strong Mediterranean aspect. Significantly, though, in comparison to the Early Roman period, these sites now belong to a more unified Red Sea culture.

Indian finds from the Red Sea

Evidence for Indian finds on the Red Sea is plentiful and growing, from both Myos Hormos[84] and Berenice.[85] For the Early Roman period a range of material is well attested at both sites and includes pottery, textiles and archaeobotanical remains (particularly pepper and coconut); beads of this period are also present at Berenice. Finds from Late Roman contexts are more difficult to identify securely because of problems of residuality. Nevertheless, a range of Indian material from late contexts at Berenice includes textiles, beads, archaeobotanical material and possibly pottery, as well as a coin of the late fourth century Indian king from western India, Rudrasena III.[86] At Shenshef – where residuality is not a factor – pepper and Indian and/or Sri Lankan beads firmly demonstrate continuation of trade in the fifth century.

[70] Paribeni 1907, figs. 2, 58; Munro-Hay 1989a, pl. Vc.
[71] Wilding 1989, figs. 16.468-470; Philippson 2000, figs. 283a, 283c, 343a.
[72] Pedersen 2000, figs. 3, 8, 9.
[73] Peacock & Williams 1986 Class 44.
[74] Bruyère 1966, pl. XXIV, 28.
[75] S. Sidebotham personal communication.
[76] Hayes 1995, 1996; Tomber 1998, fig. 6-7, nos. 75-61; Tomber 1999, pl. 5-12.
[77] Riley 1989, fig. 16, no. 13; Riley & Tomber forthcoming.
[78] de Contesen 1963, pl. XIIIc; Williams 2000, 494.
[79] Pedersen 2000, fig. 8.
[80] D. Peacock and D. Williams, personal communication.
[81] Tomber 1999, Table 5-11.
[82] Riley 1989, Tomber & Riley forthcoming.
[83] Sidebotham & Wendrich 2001, 41.
[84] See various papers in Peacock *et al.* 2000, 2001, 2002.
[85] See various papers in Sidebotham & Wendrich 1996, 1998, 1999, 2000.
[86] Sidebotham & Wendrich 2001, 29, 41.

Beyond the Red Sea

Mediterranean finds in the East

As a whole, amphora assemblages found in the East look to the Mediterranean rather than to the Levant. Since the importance and level of long-distance trade between the Red Sea and the East is well known for the Early Roman period, and the variety of Mediterranean amphora types have already been summarised from South Arabia and India, only the selected markers are discussed here.[87]

South Arabia

Early Aqaba amphorae are at present unknown from this region, but Nabatean fine wares have been recorded from Kane[88] and Moscha Limen of the *Periplus*.[89] Since there is a trail of Nabataean fine wares recorded on inland sites in South Arabia between Nabataea and the coast,[90] the possibility remains that these sherds reached Kane and Moscha Limen via overland routes rather than by sea, although the presence of Mediterranean amphorae at both sites, which almost certainly arrived by, sea may argue against this. During the Late Roman period, Aqaba amphorae are known from Kane.[91] In this case the overall assemblage and comparison with the surrounding sites, indicates that the amphorae are objects of sea-borne commerce. In addition to Aqaba amphorae, LRA 1 and Axumite handmade wares are both recorded from Kane.[92]

Roman finds in India

There are to date no published examples of early Aqaba amphorae or Nabataean fine wares from India. Late Roman finds are, apart from coinage (see above), generally sparse. Although Arikamedu was occupied during what is here considered the Late Roman period,[93] only two published amphorae are late: these are handles from North African[94] and Gaza/Palestinian vessels.[95] Nevertheless, the body of data is growing, and the recent publication of pottery from Elephanta Island south of Mumbai on the Konkan coast of western India may provide the first example of the late Aqaba amphora in India.[96] A vessel of LRA 1, Egloff 169[97] variant dated to the late fourth or early fifth century, was identified by this writer from another site on the Konkan coast, collected by V. Shinde from Prabas Patan.

Summary

The above evidence demonstrates activity in the Red Sea throughout the entire Roman era, but illustrates a clear difference between the early and late periods. During the Early Roman period three micro-patterns exist, with the long-distance trade dominated by the Mediterranean. While these three micro-patterns and the importance of Mediterranean trade persist to a certain extent during the Late Roman period, more importantly a Red Sea culture emerges.

This unification of the Red Sea is seen clearly through the three selected markers for the Late Roman period: Aqaba amphorae, LRA 1 and handmade Axumite wares. Apart from the examples cited above, the only known occurrence of the Late Roman Aqaba amphora outside Transjordan (where it is distributed) is from the Iskandil Burnu wreck off Turkey, in a context of the first half of the seventh century.[98] Therefore, in terms of long-distance distribution, the Aqaba amphora is at present essentially associated with the Late Roman Red Sea and

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87 See Tomber forthcoming a.
88 Casson 1989, *PME 27*; Sedov 1997.
89 Casson 1989, *PME 32*; Yule & Kervan 1993.
90 E.g. Schmitt-Korte 1984, 10.
91 Sedov 1992.
92 *Ibid.*
93 Begley 1996, 30-31.
94 Will 1996, 349, fig. 6.78.
95 *Ibid.*, fig. 6.80. The handle could be Early Roman, although the distribution of these amphorae is much wider during the Late Roman period than the Early Roman period.
96 Shinde *et al.* 2002, ELP 00.15, probably also ELP 00.10.
97 Egloff 1977.
98 P. Reynolds, personal communication, Lloyd 1985.

trade beyond the Roman Empire. Kane's inclusion in this sphere is not surprising as during the fifth and sixth centuries there was "continuous" contact between the Axumites and the Himyarites.[99] Sedov also emphasises this point, suggesting that at least in the sixth century the population of Kane comprised those who had "direct and permanent connections" with East Africa.[100] The absence of all three markers at Moscha Limen may be primarily chronological (the site was not occupied past the late fourth or early fifth century),[101] but it may also be beyond the limits of the Red Sea culture. It would seem that Kane marks the eastern extent of this network and possibly a final stopping-off point before the voyage to India.

Unification of the Red Sea during the Late Roman period is due to a variety of factors. No doubt the annexation of Nabataea resulted in greater communication and interaction between the northern and central Red Sea, and the ascendancy of the Axumite Kingdom fostered links between the Roman and non-Roman Red Sea, aided by shared culture through the spread of Christianity.[102] Additionally, the resurgence of trade during the Late Roman period must remain an important factor and, at the risk of circularity, an increase in occupation at sites placed to facilitate long-distance trade with the East is in itself an argument for the continuation of Late Roman trade. In this context, it is significant that Axumite handmade wares are seemingly absent from the two sites not explicitly involved in trade, 'Abu Sha'ar and Shenshef. Recent work in India and the Indian Ocean suggests that much more evidence for the Late Roman period will emerge and no doubt enlarge and challenge the patterns presented here.

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99 Munro-Hay 1991, 55.
100 Sedov 1996, 28.
101 Sedov & Benvenuti 2002.
102 Tomber forthcoming b.

Stamped Handles from Ramla-Israel

Anna de Vincenz

When talking about stamped amphora handles, it is still a common practice among scholars to think of Hellenistic amphorae with Greek stamps on their handles. The Roman stamped jar handles have only recently been added to the corpus. Another group, which has been forgotten and, alas, widely neglected by scholars and "amphorologists", is that of jars, or rather pithoi, dated to the Umayyad/ 'Abbasid periods, with different stamps on their handles. Here and there in excavation reports one can find mention of stamped Islamic handles, but no attempt of classification and publication of types has ever been made. Usually, only the stamp is shown and a whole jar has never been published. The purpose of this paper is not to provide a list of stamps or a classification of this class, but rather to show for the first time the type of vessel to which these stamps belong.

Many stamps have been found in the Islamic city of Ramla, situated on the sand dunes of the Judean coastal plain.[1] The excavations have revealed the architectural remains of various industrial complexes (a dyeing complex located about 800 m from the White Mosque), hydraulic installations (such as pools and subterranean reservoirs, cisterns for public and private use) and additional private and public buildings.[2] Abundant ceramic finds have been made, with more than three hundred boxes of pottery which are stored in the IAA storerooms.[3] Small finds include glass, coins, metal and bone objects.[4] Twenty-five handles with various stamps have been found during the excavations in Ramla.[5]

The stamps can be divided into two groups: those with inscriptions and those with designs. The stamps are written in Arabic script in a round depressed circle. They are usually positioned on the lower part of the handle (Fig. 1), and are almost invisible; only one jar has the stamp on the upper part of the handle (Fig. 2). They are sometimes written retrograde. In some cases the handle is stamped twice, probably because the first stamp was not clear. Among the inscriptions are those, which carry the name of the production place. Worth mentioning is the stamp which says "from the monastery of Dayr Samwil". Among the stamps from Ramla three have this inscription. During the excavation at the site near the mosque (or monastery?) of Nabi Samwil not far from Jerusalem, several pottery kilns have been excavated. In and near one of the kilns many jar handles with the stamp in Arabic script mentioning the monastery of Samu'el have been found.[6] Handles made in Nebi Samuel (this is the modern name for the place) have also been found in Jerusalem at the Ophel.[7] hy were these jars found far from the monastery of Samu'el? And what did they contain? The stamps do not give an answer to these questions and this will have to be further investigated.

Stamps with geometric designs include stars, concentric circles and other more complicated designs. The star is a common design during the Late Byzantine and Umayyad periods and has been found on coins from Syria and glass weights from Egypt. It appears in different variations: a simple six-pointed star or with an additional six-pointed star at its centre. Sometimes the star is decorated with dots or small circles between its arms. Another geometric design is the concentric circle. An additional decoration is the rosette. Sometimes two stamps with different

[1] The excavations were conducted by the Israel Antiquities Authority during the years 1992-1995 under the direction of Don Glik and Deborah Gammil.

[2] The final report of these excavations has not been published and the files are available in the archives of the IAA.

[3] A typology of Early Islamic pottery from these excavations has been prepared by the author and awaits publication.

[4] These reports are being prepared by various scholars.

[5] The stamped handles have been studied by Nitzan Amitai-Preiss and the report awaits publication. I wish to thank her for the useful comments and suggestions. The drawings 1-2 are by Fadi Amirah, and 3-4 by Helena Bitan.

[6] Magen & Dadon 1999, 67.

[7] Hamilton 1940, 16, note 1.

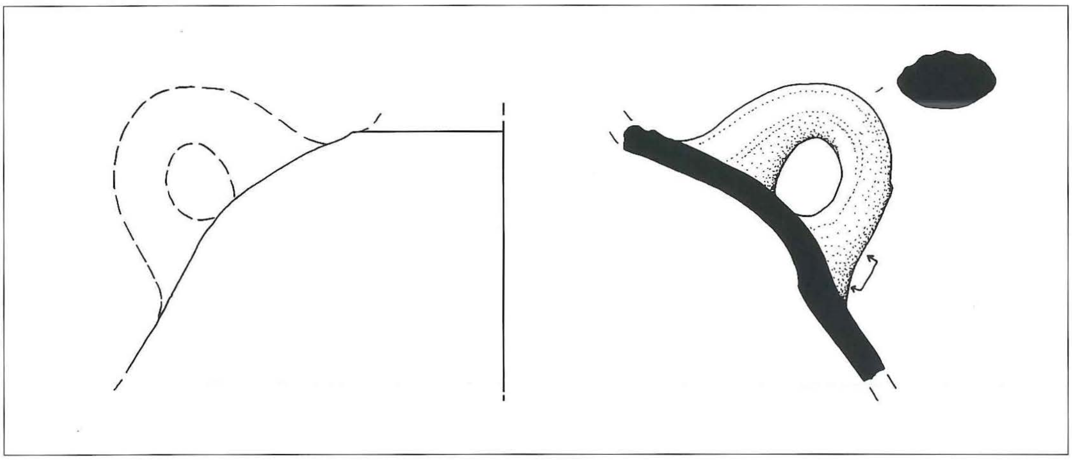

Fig. 1. Jar from Ramla with Stamp on lower part of handle (scale 1:10).

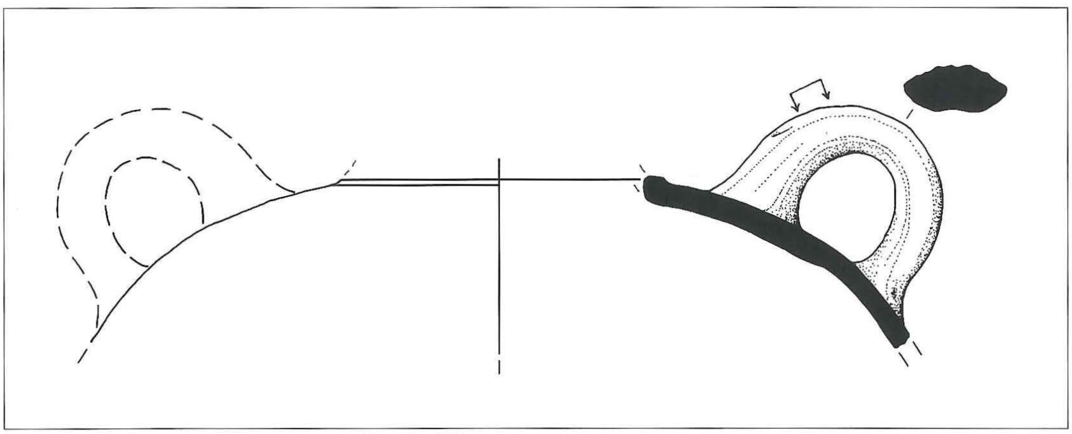

Fig. 2. Store jar from Ramla with stamp on upper part of handle (scale 1:10).

designs appear on the handle. What was the meaning of these geometric stamps? Were they potters' marks? We do not know.

The stamps do not usually bear any dates, and thus their dating has to be made by other means. The Ramla handles do not come from well-stratified contexts and thus complicate further the matter. But the pottery and other finds suggest a dating in the Late Umayyad and 'Abbasid periods. The handles found in the kiln in Nebi Samuel have been dated by the excavators to the 'Abassid period.[8] Another factor is the script on the stamps, which could give some indication for the dating. As Amitai-Preiss states, the stamps are written in a rounded script, but lacking the Umayyad and also the 'Abbasid characteristics. She proposes a dating to the end of the Umayyad and the beginning of the 'Abbasid periods.

Finally the question of the purpose of stamping of handles during the Early Islamic period has to be asked. The geometric stamps could have been potters' marks. Sometimes they indicate a fabrication place like the handles with "Dayr Samwil" and sometimes they have names of persons (the potter?). It is still not possible to see a pattern in the stamping. Were not all handles stamped? And if not, what were the criteria for stamping? Were they stamped as a tax payment procedure? All these questions are still open and require further study.

As has been said before, Islamic stamps have not been properly published. Moreover, usually only the stamp is shown on a photograph and/or drawing. The jars to which these handles belong have never been shown together with the stamps. The handles are very thick (3 to 3.5 cm in diameter) and certainly belonged to very large jars or pithoi. Three complete pithoi have been found during a

[8] Magen & Dadon 1999, 67.

recent rescue excavation in Tiberias.[9] They were found under the floors of houses and were filled with bronze vessels.[10] Two of them are very large (over one metre high) and a third one is smaller. Characteristic of these pithoi is the number of handles and the decoration on the shoulder. One of the large ones has four handles positioned symmetrically on the upper part of the shoulder (Fig. 3), a thick rim and a flat base. The smaller one has two handles (Fig. 4),

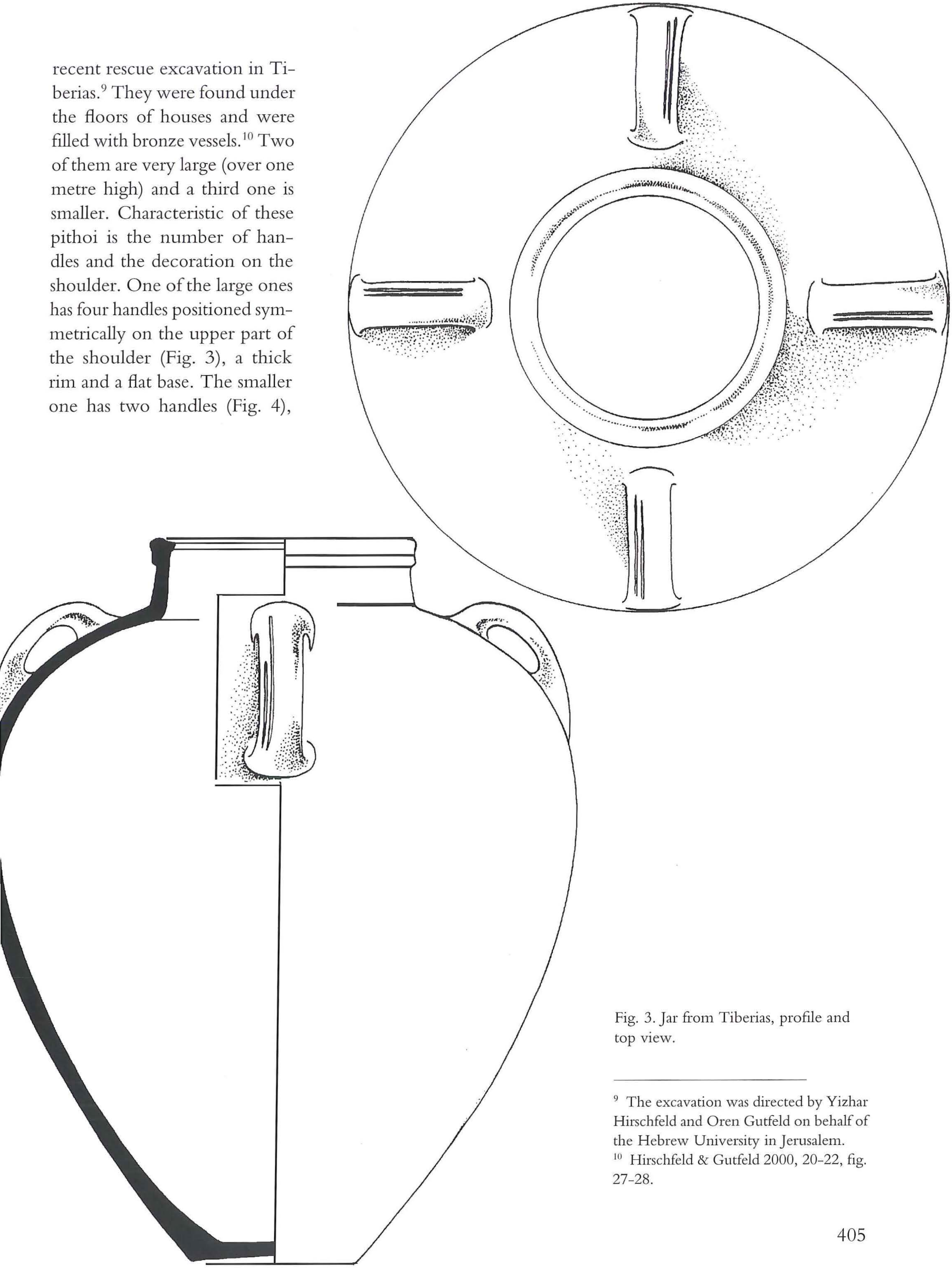

Fig. 3. Jar from Tiberias, profile and top view.

[9] The excavation was directed by Yizhar Hirschfeld and Oren Gutfeld on behalf of the Hebrew University in Jerusalem.
[10] Hirschfeld & Gutfeld 2000, 20-22, fig. 27-28.

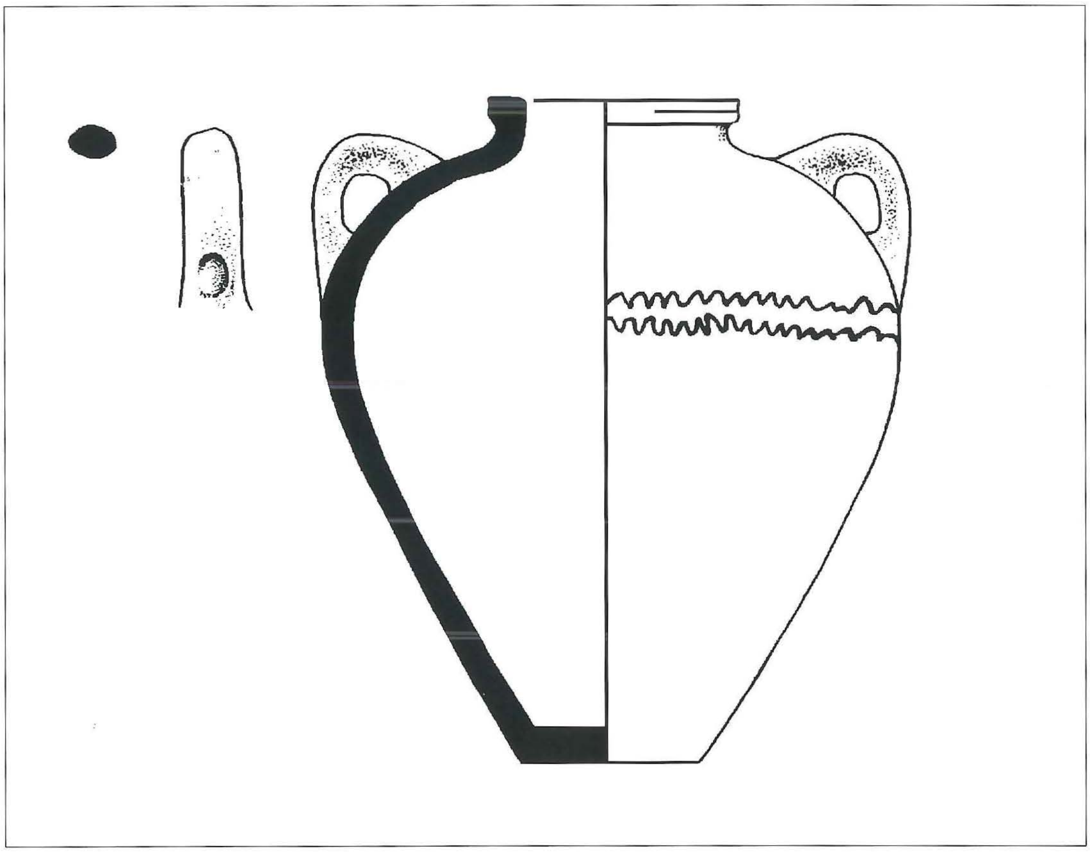

Fig. 4. Jar from Tiberias.

and again the thick rim and the flat base. Below the handles on the body of the jar there is a combed wavy decoration. The third one has four handles positioned in couples on the upper part of the shoulder and its rim has been cut off, probably to make it possible to fit the bronze vessels into it. Its base is a button base and the upper shoulder close to the rim is decorated with combed wavy lines.[11] It is true that these pithoi do not have any stamps on their handles, but it seems to me that the type of jar with stamps must have been like the two jars with the flat bases (Fig. 3-4). Judging by the dimensions of the handles and the size of the vessel, the Ramla handles probably belonged to a jar similar to the smaller jar from Tiberias (Fig. 4). Unfortunately, no complete vessel has been recovered in Ramla and no rim can so far be assigned to the handles.

[11] The ceramic report from this excavation has been prepared by the author and awaits publication.

Pan-Roman Amphora Types Produced in the Black Sea Region

Sergey Yu. Vnukov

Amphorae were produced in the Black Sea region from the end of the Classical period. After the Romans appeared on the Black Sea coast, some traditional amphora producers stopped their activity or began manufacturing new amphora forms that had not previously been produced in the region. On the other hand, amphora manufacturing in late Republican and Imperial times is characterized by a certain standardization of vessel forms produced at different centres. Such amphorae have a general shape in common and differ in details. A similar phenomenon is known from earlier periods in limited areas. In the first century BC, almost the whole of the ancient world appeared to be involved in the development of pan-Roman container forms.

Usually the prototypes of amphorae of pan-Roman forms were the tare of the most popular winemaking centres of the Eastern Mediterranean (Corinth, Cos, Rhodes and others). The produce contained in these vessels was well known in Italy and always in much demand. The first imitations of Greek (Corinthian) amphorae, as well as of their contents, appeared in Italy in Republican times (*Graeco-Italic* type). The further diffusion of Roman imitations of Greek containers occurred in parallel with the growth of the Roman Empire. It was probably not a mere geographical broadening of the production region of certain amphora forms. The evidence of this process is a recipe by Cato of "Coan" or "Greek" wine for production in the Western Mediterranean.[1] This "Coan" wine was, because of the addition of seawater, rather cheap, but popular. Possibly vessels of a similar shape were used for transportation of goods (wine in particular) produced in different centres according to the same recipe (at least in the first century BC). Therefore, amphorae of the same pan-Roman morphological class have a common prototype and main morphological features, but differ in details of shape, technology and fabric. In that case, a general container form testified not the origin of wine, but its quality and some characteristics. In other words, the amphora shape indicated the sort of goods (as it was before), but did not guarantee its authenticity any longer.

The amphorae of pan-Roman classes make up a considerable fraction of the containers found in the Pontus since the second half of the first century BC. Recent studies show that the Black Sea region was also a production area of amphorae of pan-Roman forms.[2] Results of petrological analyses allowed linking such vessels of "untypical shape" for the Pontic region with certain production centres in the area.[3] These containers belong to a few amphora classes, which are widely spread across the whole ancient world. Several dozens of production centres from Britannia to Pontus and the Near East manufactured vessels of such classes.

Different pseudo-Coan (or Dressel 2-4) containers were the most popular amphorae in the Early Roman Empire.[4] This was also the case in the Black Sea area. Vessels of this class were produced in Heraclea Pontica, Sinope and in one unknown, possibly, Western Pontic centre.[5] All three types belong to one eastern morphological group of the pseudo-Coan amphorae. They have a spindle-shaped body, discrete ring-shaped rim, double-barrel handles and a toe with a divided ending formed like an acorn. This toe is similar to the ending of Coan containers dated in the second and first centuries BC.[6] All these pseudo-Coan amphorae were produced from the middle of the first century BC to the early second

[1] Cato 112.1-3.

[2] Внуков 2000.

[3] Внуков 1993а; Внуков 1994; Vnukov 1995.

[4] Peacock & Williams 1986, 106; Абрамов 1993а, 7.

[5] Внуков 2000.

[6] Зеест 1960, tabl. XXIV, fig. 52в; Внуков 2000, fig. 1,5.

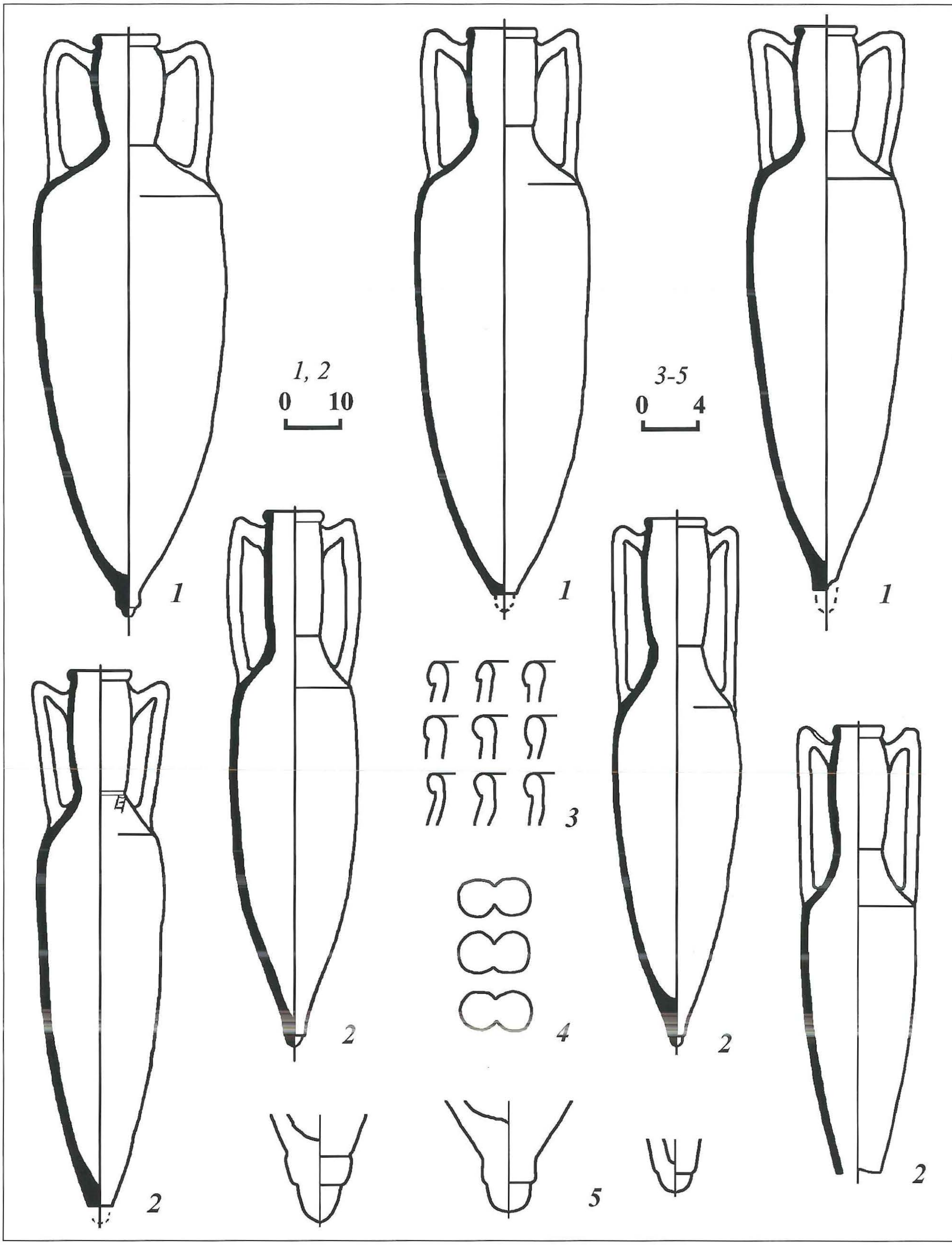

Fig. 1. Late Heraclean amphorae, type S I. 1: variant S Ia, 2: variant S Ib, 3: rim sections, 4: handle sections, 5: main toe varieties.

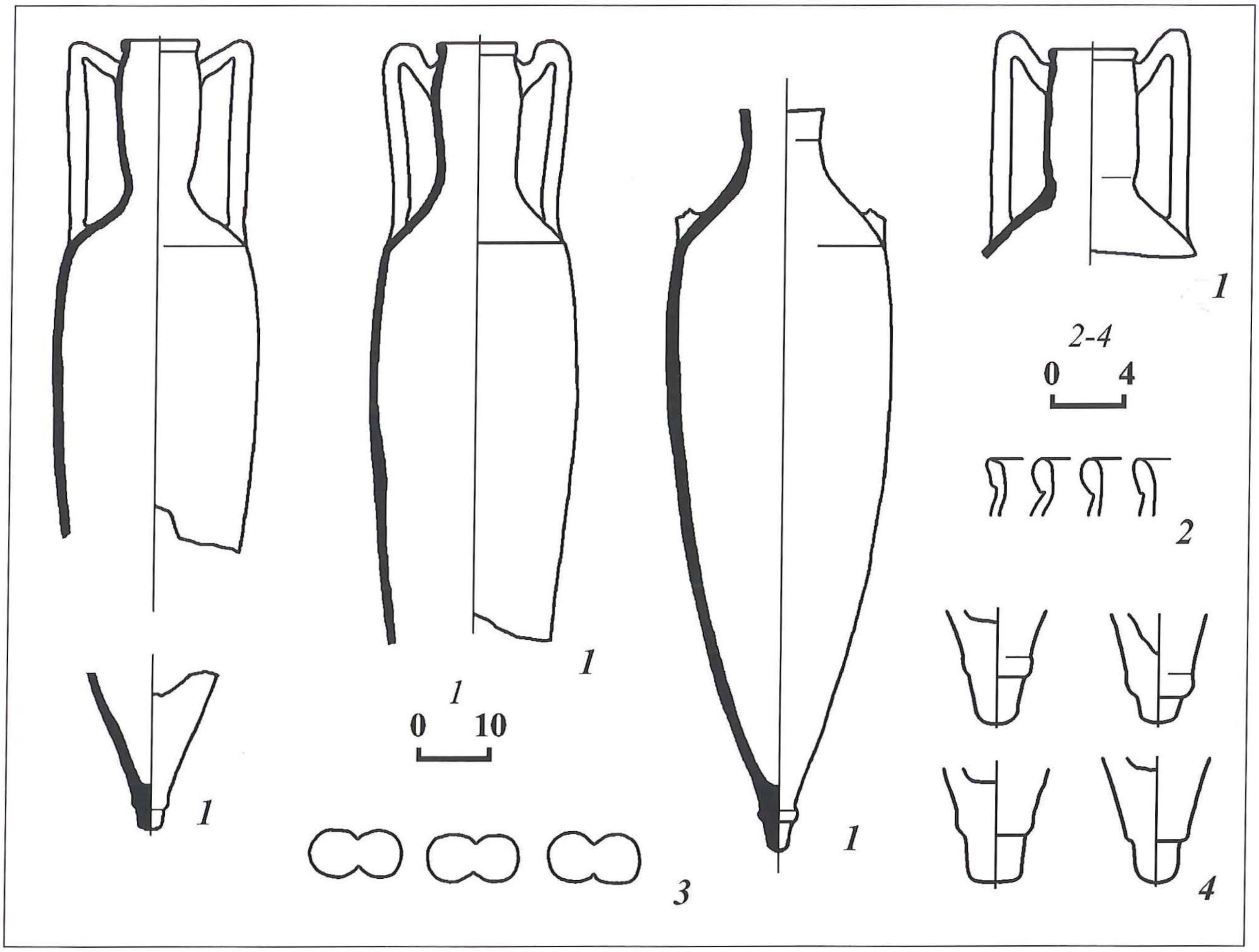

Fig. 2. Sinopean amphorae, type Sin III. 1: fragmented vessels, 2: rim sections, 3: handle sections, 4: main toe varieties.

century AD. They (the Heraclean type S[7] I in particular) were widely distributed all over the northern, northeastern[8] and western[9] Black Sea regions. Unfortunately, there is no reliable information from the southern Black Sea area. All these amphora types are practically unknown in the Mediterranean.

The Heraclean (type S I) and Sinopean (type Sin III) pseudo-Coan vessels are very similar in a shape (Figs. 1, 2), so most scholars do not distinguish between them. They differ in small details and in fabric. Specific features of these amphorae (apart from those mentioned above) are a stretched body and a plump neck. It would be impossible to describe here all morphological details of rims, handles and toes of the containers, which allow us to distinguish between the Heraclean and Sinopean productions.[10]

Heraclean amphorae can also be separated into two chronological variants (early variant S Ia and late variant S Ib – Figs. 1.1 and 2), which differ in details of shape, in size and capacity.[11]

Differences in clay composition and fabric in most cases made it possible also to recognize *de visu* the origin of Sinopean and Heraclean containers. The same is true not only of pseudo-Coan amphorae, but of the entire ceramic production of the two centres.

[7] From Russian *светлоглиняные* (*svetloglinianye*) – "light clay" according to traditional terminology.

[8] Зеест 1960, 29, 30; Внуков 1988; Абрамов 1993a, 7.

[9] Лазаров 1973, 44; Capitanu 1976, fig. 35; Opaiţ 1987b, 151-153.

[10] Внуков 2000, 57, 58.

[11] Внуков 1999.

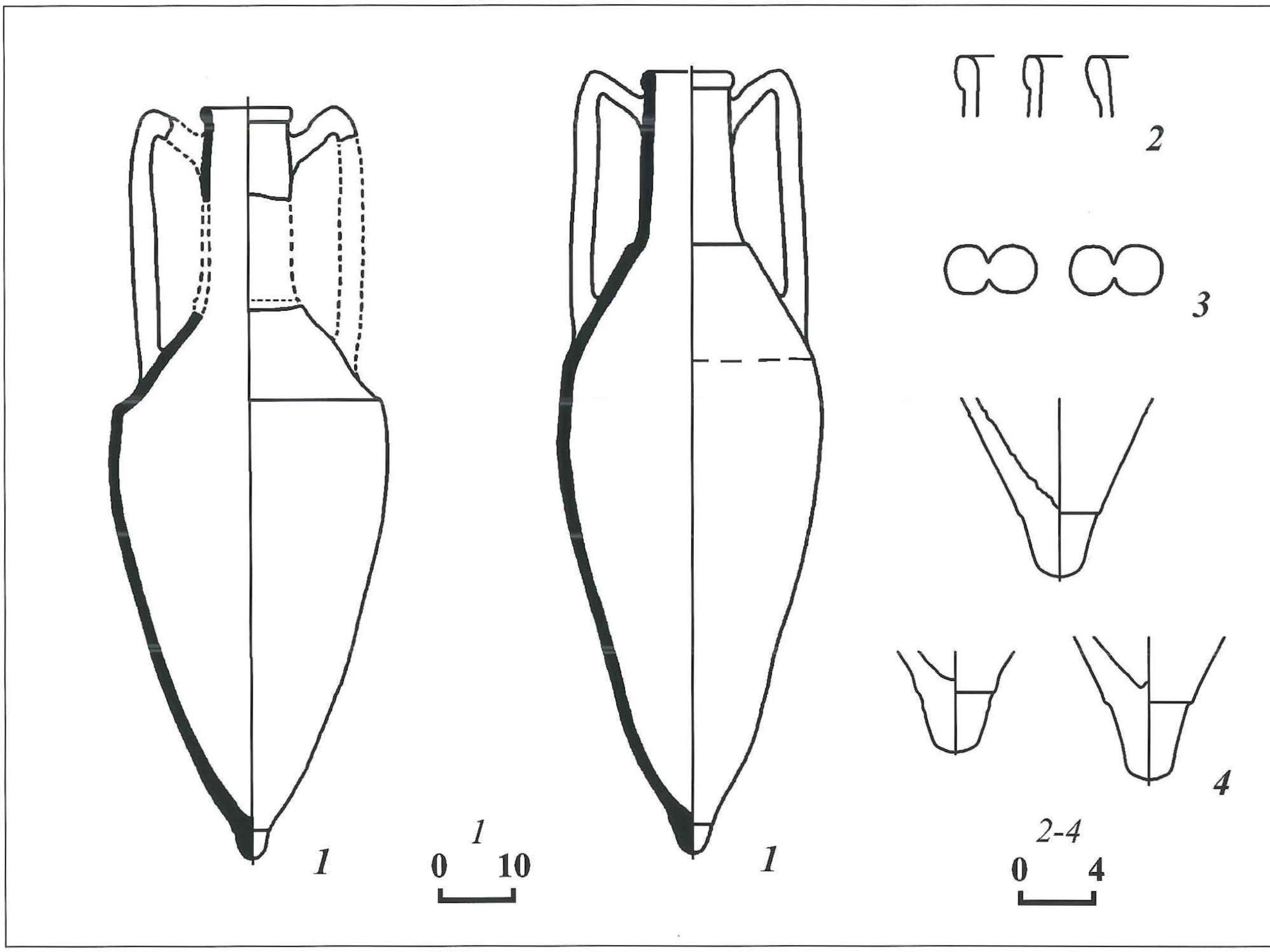

Fig. 3. Pseudo-Coan Pontic amphorae of unknown origin. 1: vessels, 2: rim sections, 3: handle sections, 4: toes.

Heraclean amphorae of the Roman period have the same fabric as Hellenistic Heraclean vessels but differ in colour (so-called "light clay" in Russian tradition). The colour of the late Heraclean amphorae is very light and similar to white (yellowish, greyish or pale greenish in some cases). It can vary to orange or greyish orange on the same vessel depending on the firing conditions, which were very unstable in the Roman period. The clay mass is full of pelitomorphic calcite and contains a large amount of brown and black inclusions. They consist of grains of quartz, sedimentary rocks (as natural inclusions) and of andesite sand as an artificial temper (crystals of pyroxene, hornblende, plagioclase and pieces of groundmass). The ratio of natural and artificial additions in the clay allows us to distinguish between two different Heraclean fabrics.[12]

The structure of Sinopean fabric is usually harder, but its colour is very variable. In the Roman period, the colour varied widely from pale grey through yellowish, greenish and bluish tints to violet, and orange and brownish red on the surface. Depending on the firing conditions, we can see all these colour changes on the same vessel or only two or three general colours. Pale greyish green, greyish blue and violet tints are especially typical for Sinopean wares of the Roman period, in particular at the centre of the sherd. Basalt sand is the main mineral addition in Sinopean fabrics. It consists of a large amount of black brilliant grains of pyroxene, rare crystals of plagioclase and pieces

[12] Внуков 1993a; Vnukov 1995, 188.

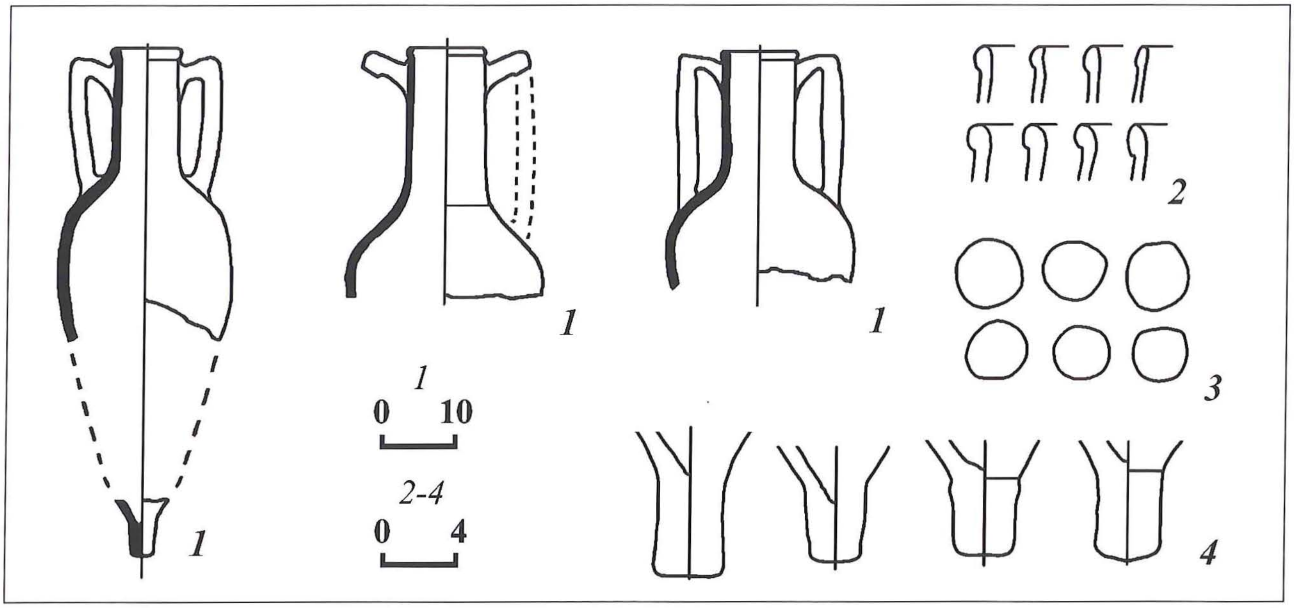

Fig. 4. Late Heraclean amphorae, type S II. 1: fragmented vessels, 2: rim sections, 3: handle sections, 4: main toe varieties.

of groundmass. Rounded quartz and rare mica are also present.[13]

The exact origin of the third type of the Black Sea pseudo-Coan amphorae is unknown. It may hypothetically be related to the production of one of the western or south-western Pontic centres, which belonged to the Roman Empire and where viticulture and winemaking were developed. The shape and fabric of these vessels differ significantly from the South Pontic pseudo-Coan amphorae. They have a cylindrical neck and a clearly discrete, not very tall body (Fig. 3.1). Specific details of the rim, handles and toe may also be noted (Fig. 3.2-4). At the same time, all features of the eastern morphological group of the pseudo-Coan amphorae (see above) are present here as well.[14] The fabric of the described vessels is also specific. It is well fired but rather porous, brown or reddish brown with a small amount of dark inclusions. Small white or pale yellow inclusions with a cavity in the middle are the most characteristic ones, and appeared as a result of the destruction of small grains of calcite.

Pseudo-Rhodian amphorae, manufactured in Heraclea (type S II – Fig. 4), were not very common. They have an ovoid body, cylindrical or slightly plump neck, rounded handles and cylindrical or conical toe.[15] Handles of Heraclean pseudo-Rhodian amphorae never have "horns" like those from the Mediterranean.[16] Heraclean S II amphorae are dated from the mid-first century BC to the early first century AD. Similar containers were possibly produced in Sinope too. Rounded handles of Sinopean fabric are rarely found, but we know nothing about the shape of these amphorae.[17]

The next class of pan-Roman amphorae consists of vessels with a cup-shaped mouth (type Mau XXIX).[18] Only one type of such vessels can be hypothetically attributed to the Heraclean fabric. They are very rare light clay amphorae, described by И.Б. Зеест as type 90.[19] There is only one published sketch drawing of a complete vessel, and several fragments (type S V; Fig. 5). These amphorae are rather

[13] Внуков 1994; Vnukov 1995, 188.
[14] Внуков 2000, 61.
[15] Внуков 1988, 202, 203.
[16] Зеест 1960, 111, tabl. XXIX, 67; Grace 1979b, fig. 62; Jurišić 2000, 14, fig. 5, *2, 3*.
[17] Внуков 1993b, 212.
[18] Peacock & Williams 1986, 182, 183, class 43; Уженцев & Юрочкин 1998.
[19] Зеест 1960, 117, tabl. XXXVII, 90.

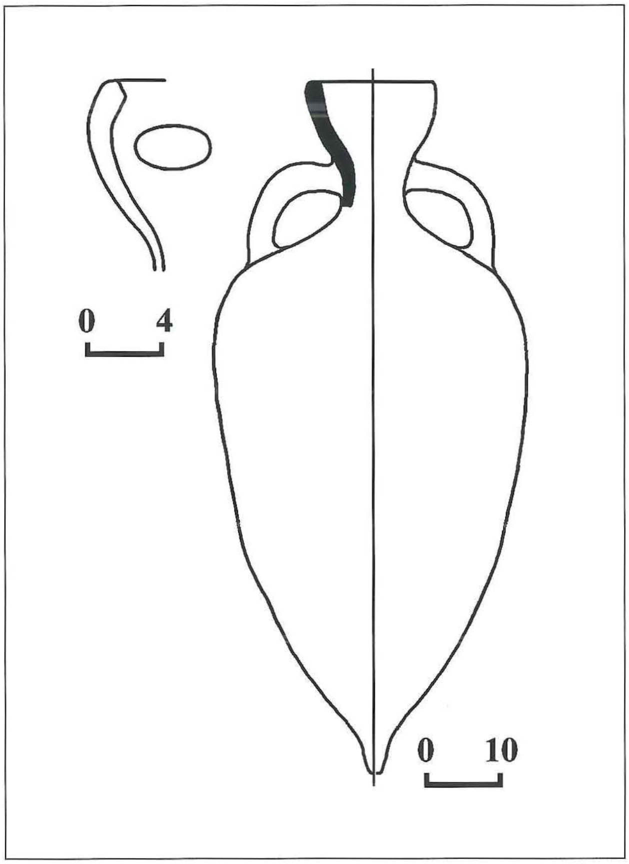

Fig. 5. Late Heraclean amphorae, type S V (after Зеест 1960, tabl. XXXVII, 90).

large with an ovoid body, conical toe, short handles oval in section, and a cup-shaped mouth. The broad mouth and the comparatively narrow and short neck are characteristic features. They were produced on a small scale in the third century AD.

Flat-based vessels with grooved handles also occur in many regions of Roman world, usually called *amphores gauloises*.[20] The class is not homogeneous, and the amphorae differ both in general shape and in details, particularly in the form of the rim. Flat-based vessels with grooved handles and composite or collar-shaped rim were produced in Sinope from the early first to the late third century AD (type Sin IV – Fig. 6.1-2). These vessels probably belong to the same class as the amphorae defined in different places by D. Peacock, D. Williams, G. Bertucchi and others (Dressel 28 or *Gauloise* 3).[21]

It is possible to distinguish between two chronological variants of Sin IV amphorae of one morphological type. The earlier variant Sin IVa is dated between the early first and early second century AD. The vessels of this variety are comparatively small (the capacity is about 8 l). They have rather narrow and tall neck, a composite rim with additional flange below, a low base ring, marked on the surface with a cut and clear grooved handles (Fig. 6.1).[22] The rim is very specific and unusual for amphorae. It has two rollers. The upper one in section looks like a low but relatively wide triangle. The lower roller has a shape of flat horizontal or inclined flange (Fig. 6.1b).

The later Sin IVb vessels are larger (Fig. 6.2.a). They have a tall body and a short neck. The shape of the rim is simplified, while its diameter larger. The triangular roller and the flange have merged into a rather high "collar" with deep cut below and with curved external contour (Fig. 6.2.b). The handles are oval in section usually with a rudimental grooving and are loop-shaped (Fig. 6.2.c). The base ring is slightly smaller in diameter and in height but did not transform into a toe as the Heraclean amphorae did (see below). The variant Sin IVb is dated in the third century AD. Unfortunately, vessels of the same type, dated in the second and fourth centuries AD respectively, cannot yet be distinguished from them, and the described evolution may therefore be hypothetical. If the proposed development proves to be right, it is remarkable that the vessels of Sin IV type kept their characteristic features for 250 years.

It is worth mentioning that various flat-based amphorae were widespread from the first century AD. Sometimes there are two subtypes of a similar form, which differ in their base only. In particular, such variations are known among pseudo-Coan amphorae,[23] vessels with cup-shaped mouth,[24] and some others.

In that connection, flat-based narrow-necked Heraclean amphorae with grooved handles (type

[20] Laubenheimer 1985; Laubenheimer 1989.

[21] Peacock & Williams 1986, 146, 147, 149, 150, classes 29 and 31; Bertucchi 1992, fig. 2, types 6, 7.

[22] Внуков 1993b, 209-221.

[23] Panella & Fano 1977, fig. 25, 26.

[24] Арсеньева & Науменко 1992, figs. 30; 41, *2*.

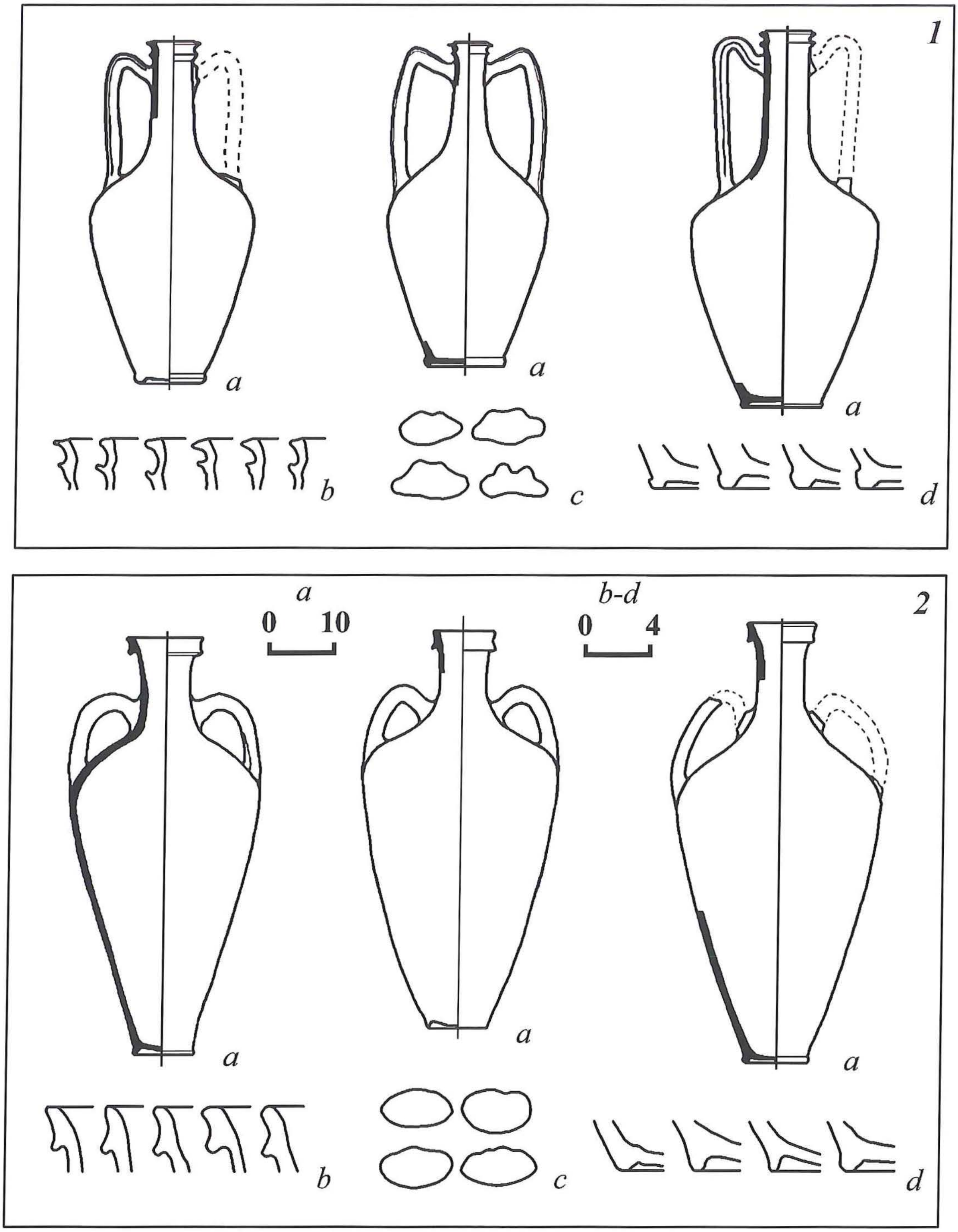

Fig. 6. Sinopean amphorae, type Sin IV. 1: variant Sin IVa; 2: variant Sin IVb, *a* vessels, *b* rim sections, *c* handle sections, *d* base-ring sections.

S IV) are of special interest. Evidently, they have specific origin and belong to another class in spite of some features shared with the Sin IV type. However, pan-Roman forms, such as Dressel 29, Mau XIX or *Gauloise*, also exerted influence upon them. This is a clear example of external influence on the local Pontic amphorae. An early variety of these vessels (S IVA_1) is undoubtedly connected with the wide-necked spike-based Heraclean amphorae with grooved handles (type S III), which were the latest

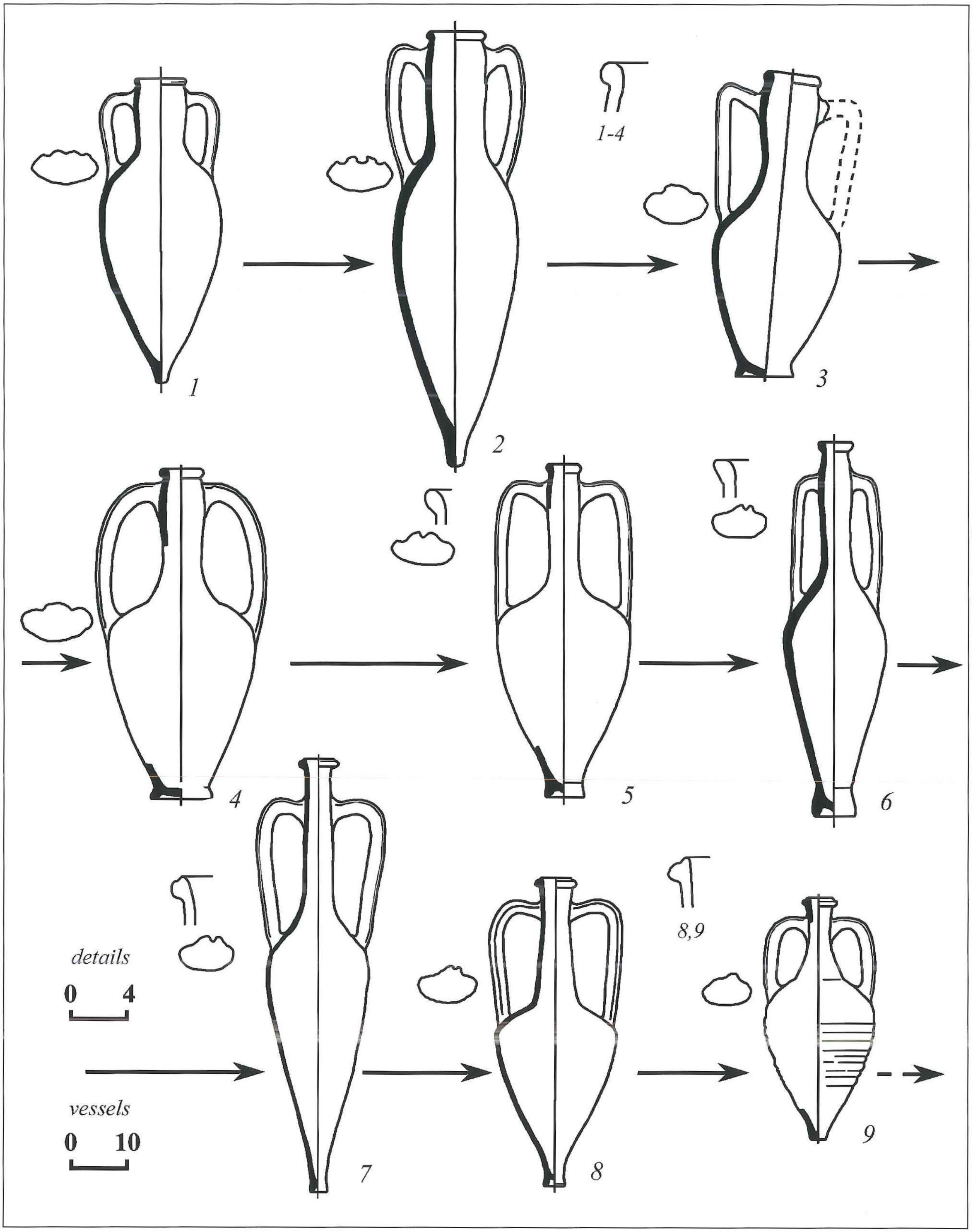

Fig. 7. Evolution of Heraclean amphorae with grooved handles (types S III and S IV) from the first century BC to the third century AD. 1: variant S IIIa, 2: variant S IIIb, 3: S III – S IV transitional variety, 4: subvariant S IVA$_1$, 5, 6: subvariant S IV$_2$, 7: variant S IVB, 8: variant S IVC, 9: variant S IVD.

form of traditional Heraclean containers (Fig. 7.1, 2).[25] The earliest examples of such amphorae have a wide neck and differ from the S III amphorae with a wide footring only, occurring in the early first century AD (Fig. 7.3). In the second quarter of the same century the neck of these containers became narrow (Fig. 7.4) and S IVA_1 amphorae replaced the spike-based variety for unknown reasons.

Decreasing base ring diameter was one of the tendencies of the further development of S IV amphorae, finally turning the foot into a toe (Fig. 7.7-9). Consequently, a base ring is not necessarily a distinguishing feature of the type. Thus, S IV amphorae originated from the S III type, but the flat base, narrow neck and grooved handles reflect the influence of pan-Roman forms.[26] The development of these amphorae (variants S IVB – S IVF) was studied in detail by И.С. Каменецкий, Д.В. Деопик and Д.Б. Шелов.[27]

Different chronological varieties of S IV amphorae "with narrow neck" were produced in Heraclea from the second quarter of the first century AD until late Antiquity. In the second and third centuries AD they were the most popular container type in the Black Sea area up to the southern regions of the forest zone,[28] and were exported on a small scale to the Mediterranean.[29]

It is clear that some areas of the Black Sea coast were included into the zone of application of standardized winemaking recipes and manufacture of pan-Roman amphora forms. It is remarkable that most of such vessels have Sinopean or Heraclean origin. The earliest pan-Roman types appeared in the middle of the first century BC after the southern Pontic coast had been incorporated into the Roman Empire and Roman colonies had been established at the two centres.[30]

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[25] Внуков 1988, 203, 204.

[26] P. Dyczek offered another origin and way of evolution of these amphorae from small Rhodian vessels with double-barreled handles dated from 2nd century BC (Dyczek 1999, 219, fig. 237). This reconstruction looks very fantastic.

[27] Каменецкий 1963; Деопик & Круг 1972; Шелов 1978; Šelov 1986.

[28] Кропоткин & Кропоткин 1988, fig. 1.

[29] Hayes 1983, 147, fig. 21, *32*; Panella 1986, 628.

[30] Strabo 12.3.6, 11.

New Evidence of Wine Production in East Crete in the Hellenistic Period[1]

Natalia Vogeikoff-Brogan & Stavroula Apostolakou

"We know almost nothing concerning the wine amphorae of Crete during the Archaic, Classical and Hellenistic periods" commented Marangou in 1999.[2] While true at the time, new studies were taking aim at the last period in question. At the Sixth Scientific Meeting for Hellenistic Pottery, Jonas Eiring and Natalia Vogeikoff-Brogan presented new evidence of the production of wine amphoras in East and Central Crete during the Late Hellenistic period.[3] Petrographic analysis confirmed the Cretan origin of the amphoras from Mochlos and Pyrgos Myrtos in East Crete and from Knossos in Central Crete.[4] Further analysis of the shapes indicated several types of transport amphoras that were produced in these areas, some of which were local imitations of imported Coan and Rhodian shapes.

This evidence challenged previous arguments that the production and trade of the Cretan wine did not begin until the second half of the first century BC with the advent of the Romans.[5] Although a small number of Hellenistic stamped amphora handles from Hierapytna had been found in Alexandria, historians had dismissed the material as evidence for substantial off-island trade of Cretan wine.[6] We suspected, however, that the absence of evidence for Hellenistic Cretan amphora production was more a problem of recognition than a historical reality, particularly given the paucity of published Hellenistic deposits from Crete.

In order to explore this hypothesis, two more sites in East Crete were selected: Trypetos in Siteia and Agios Nikolaos. Both have earlier Hellenistic material, which could supplement the finds from Mochlos and Pyrgos-Myrtos. This presentation highlights two promising developments from this new study. First there is substantial evidence of a significant production of local transport amphoras in East Crete from the third century BC. At the same time, the variety of imported amphoras at these sites provides an opportunity to place East Crete within the framework of the Hellenistic wine trade as a stepping-stone in a commercial route that originated in the southeast Aegean (Rhodes, Cos, Cnidus) and ended in Egypt.

The Case of Mochlos and Pyrgos Myrtos

The amphoras from Mochlos having been the focal point of previous presentations, we will here refer to them only briefly. Recent archaeological work at Mochlos, a site in Northeast Crete, has brought to light several buildings dated in the late second and early first centuries BC (Fig. 1).[7]

The majority of the pottery found in the settlement is made of a soft, sandy, yellow or pale green fabric used for both transport amphoras and tableware. The same fabric also appears in the small Hellenistic occupation of Myrtos-Pyrgos, west of Hierapetra, on the south coast of Crete (Fig. 1). A recent petrographic analysis of the fabric at the Fitch Laboratory of the British School of Archaeology

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[1] *In memory of Nikos Papadakis, Ephor of East Crete and excavator of Trypetos.* We would like to thank the following people for facilitating our work: Director Tom Brogan, conservators Stefania Chlouveraki and Cathy Hall, artists Antonia Stamos and Mary Schumacher, and photographer Chronis Papanikolopoulos from the INSTAP Study Center for East Crete at Pacheia Ammos; and archaeologists Vasso Zographaki, Maria Hatzipanayioti, Yiorgos Haroulis, and Maria Kyriakaki, conservators Alekos Nikakis and Yiannis Gerontis,and artist Chrysoula Chronaki from the 24th Ephoreia of Prehistoric and Classical Antiquities.

[2] Marangou 1999, 270.

[3] Vogeikoff-Brogan *et al.*, forthcoming; Eiring *et al.* 2002, 59-65.

[4] Boileau 1999.

[5] Chaniotis 1999, 184; Marangou 1999, 270.

[6] Chaniotis 1988, 71-72.

[7] Soles & Davaras 1996, 222-230.

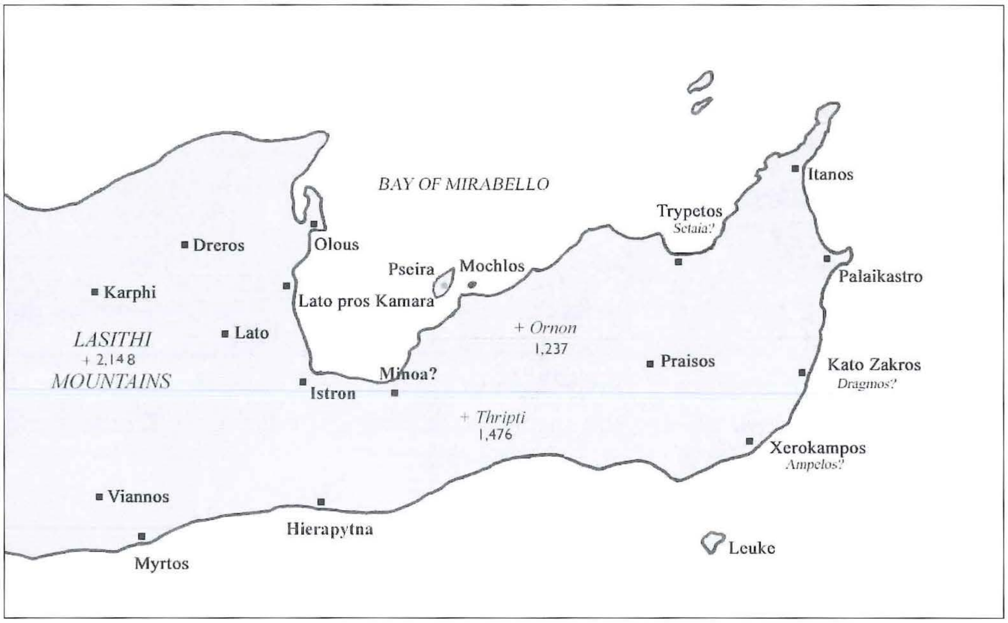


Fig. 1 Classical and Hellenistic sites in East Crete.

in Athens argues that the source of the clay is near or in the area of the Myrtos valley, approximately 15km west of ancient Hierapytna. With the help of the petrographic analysis, Jonas Eiring and Natalia Vogeikoff-Brogan have distinguished at least three local types of transport amphoras at Mochlos and Pyrgos-Myrtos, which were apparently products of one or several workshops in the vicinity of ancient Hierapytna. All three types were made of the same fabric, labeled East Cretan Cream Ware (ECCW) by the author.[8]

East Cretan Type 1 Amphora displays a folded rim, short cylindrical neck, long ovoid body, piriform, short handles of elliptical section. This type appears in several examples at Mochlos (Fig. 8).

East Cretan Type 2 Amphora is a local imitation of Rhodian amphoras. Only two stamped amphora handles survive of this type.

East Cretan Type 3 Amphora is a local imitation of Coan amphoras.[9]

The Case of Agios Nikolaos

Kamara or Lato pros Kamara served as the port of ancient Lato (Fig. 1). It is located under the modern town of Agios Nikolaos and rescue excavations have brought to light remains of buildings, sculpture, inscriptions and cemeteries, which suggest that Kamara was already settled in the third century BC.[10]

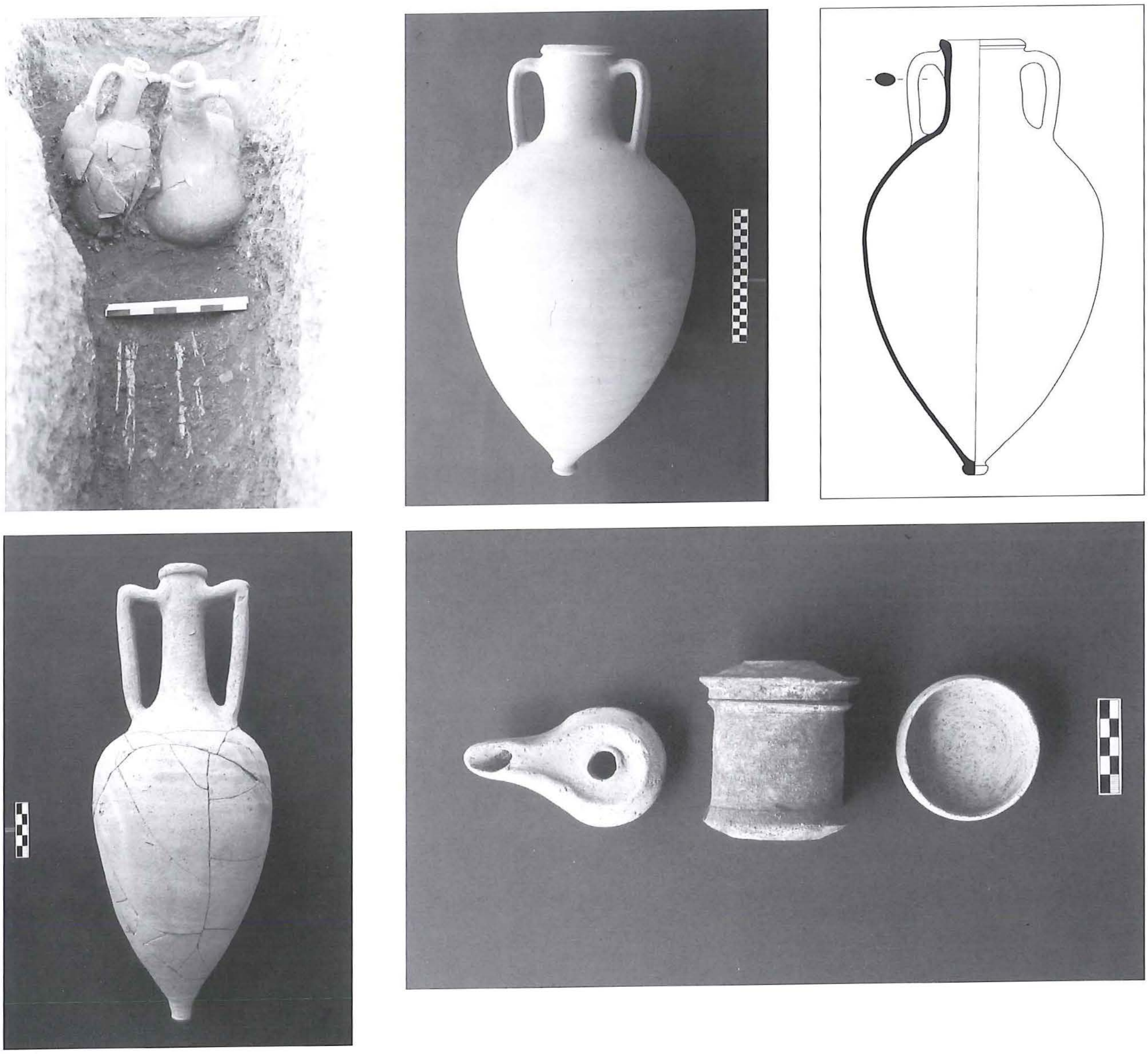
The 24[th] Ephorate in East Crete has conducted extensive rescue excavations in three cemeteries of ancient Kamara (Kazarma, Potamos, and Stavros), and already more than 300 graves have come to light dating from the third century BC to the second century AD.[11] The majority of the graves belong to either of two types: the tile-covered and the simple pit. It is almost the rule that these burials contain one or two transport amphoras or a transport amphora and a jug near the feet of the deceased (Fig. 2a,

[8] Vogeikoff-Brogan *et al.*, forthcoming.

[9] For the typology, see Vogeikoff-Brogan *et al.*, forthcoming.

[10] Inscriptions and ancient literary sources refer to the polis simply as "Kamara". For inscriptions, *IC* I, xvi, 19 and most recently Martínez Fernández & Zographaki 2002. For ancient literary sources Ptolemaeus, *Γεωγραφίας Υφήγησις* III, 154; Hierocles, *Συνέκδημος* 650, 1; *Σταδιασμός της Μεγάλης Θαλάσσης*, 351ff; Stephanus Byzantinus, *Εθνικά* (Καμάρα πόλις Κρήτης και ο πολίτης Καμαρίτης, ως Ξενίων εν Κρητικοίς φησίν ήτις Λατώ ελέγετο).

[11] Apostolakou 1995; and S. Apostolakou, *A Delt* 40 B 1985, 301-302; 41 B 1986, 232-234; 43 B 1988, 563-567; 44 B 1989, 461-463; 45 B 1990, 452-453; 47 B 1992, 601-02; 48 B 1993 496-498; 53 B 1998 (forthcoming); 56 B 2001 (forthcoming).



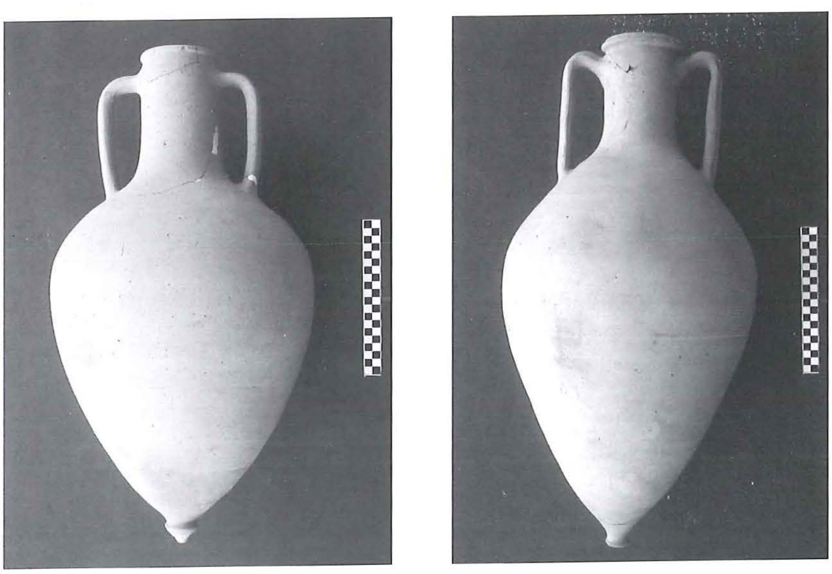


Fig.2 a) Grave 27, Stavros Cemetery; b) amphora AE 13611, Grave 24, Stavros Cemetery; c) profile of amphora AE 13611; d) amphora AE 13504, Grave 24, Stavros Cemetery; e) other pottery (AE 12547, 12565, 13482) from Grave 24; f) amphora AE 13509, Grave 22, Stavros Cemetery; g) amphora AE 12122, Grave 31, Potamos Cemetery.

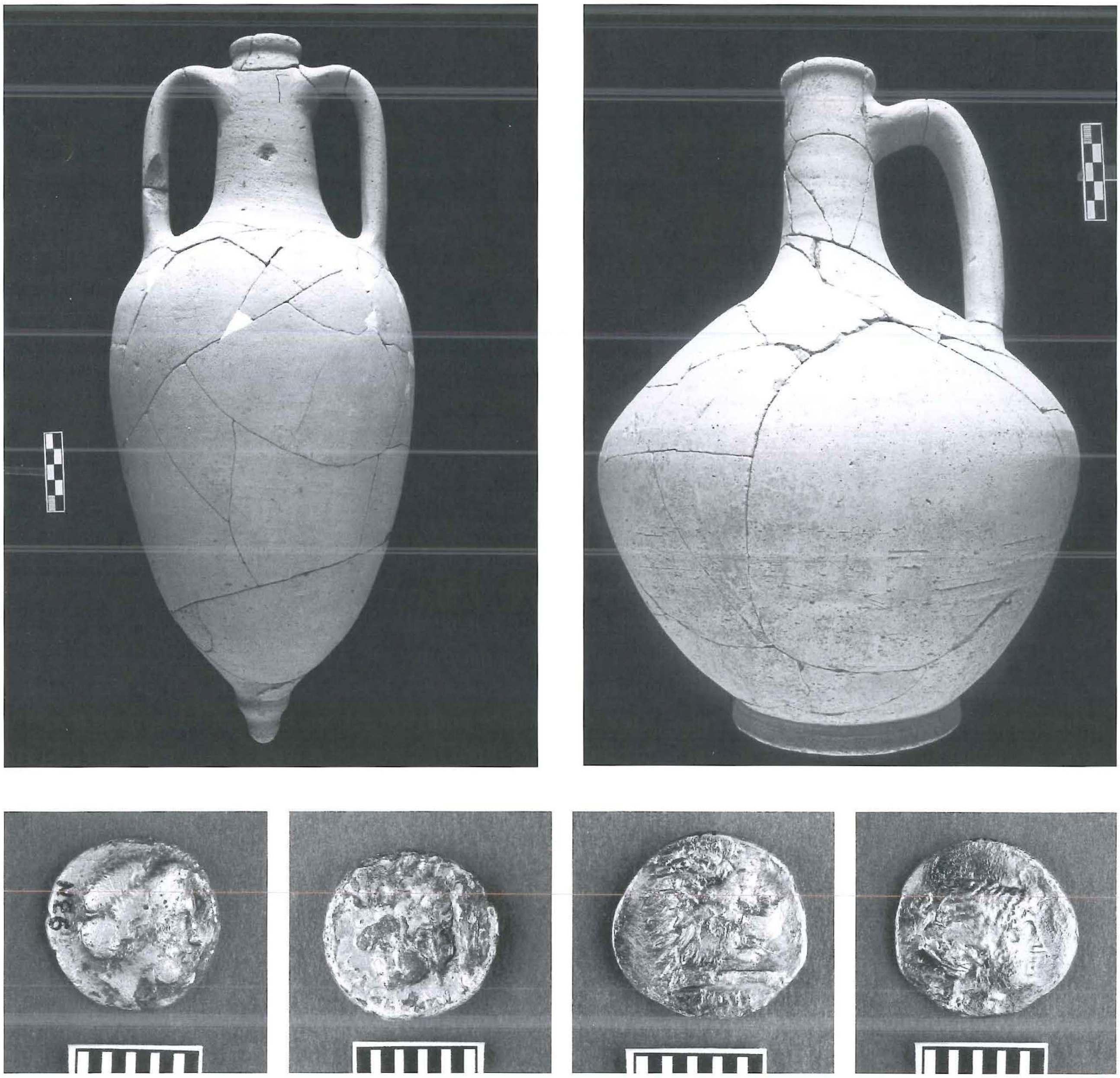


Fig. 3 a-b) amphora AE 13612 and lagynos AE 13505 from Grave 27, Stavros Cemetery; c-d) Cnidian silver coin AE N 26 from Grave 18, Stavros Cemetery; e-f) Cnidian silver coin AE N 9 from Grave 29, Potamos Cemetery.

3a-b).[12] The existence of a stone or a round loom-weight, or even a small vessel on the mouth of the amphoras and the jugs suggests that the vessels were full when placed in the grave.[13]

These grave goods, including the transport amphoras, are currently under study. Some amphoras in the graves are clearly imported, but the majority appear to be of local origin; local in the sense that their fabric resembles that of the other pottery found in the graves. A planned petrographic analysis will allow us to test this hypothesis. Ironically the small

[12] Grave 27 from the Stavros cemetery. Amphora AE 13612, lagynos AE 13505.

[13] For parallels to this unusual burial custom, see *infra* article by Craig Barker; and Michaelidis 1990.

number of imported shapes has hampered attempts to date the graves. For example, Grave 24 from the Stavros cemetery has yielded two local amphoras, the smaller of the two imitating the Rhodian shape, together with a pyxis, a bowl and a lamp (Fig. 2b-e).[14] None of this material can be dated precisely, although the shapes would appear to be Hellenistic. For the same reason we also included two more local amphoras from the Stavros cemetery (Fig. 2f-g).[15] Although at the moment they cannot be precisely dated, the amphoras indicate a vigorous local production at or near Kamara during the Hellenistic period.[16]

A considerable number of graves yielded a smaller type of amphora (*c.* 50 cm in height), with tall cylindrical neck, ovoid body and piriform toe, made of a cream-colored, mildly fired clay (Fig. 3a). This type of amphora was included in Marangou-Lerat's book on Cretan wine and amphoras as type AC6. She has dated the amphoras from the first century BC to the first century AD, on the basis of the evidence that was available to her at the time. However, further study of the coins that accompanied the amphoras suggests an earlier date for these particular burials. [17] Most were found together with Cnidian silver coins (Fig. 3c-f), which, according to Ashton's recent chronology, should be from the late fourth century BC.[18] Although coins can be misleading in the chronology of burials, it is highly unlikely that the Cnidian silver coins were kept for three or four centuries before they were deposited in large numbers with these burials. It is more likely that the Cnidian silver coins were deposited in the graves at a date closer to their time of circulation.

The Case of Trypetos

Excavations since 1987 at Trypetos, under the direction of the late Ephor Nikos Papadakis, have brought to light the remains of a Hellenistic settlement on a small peninsula a few kilometers east of Sitia (Fig. 1). The work has so far revealed several houses and parts of a fortification wall. The study of the pottery suggests that the site was established in the beginning of the third century and abandoned some time around the middle of the second century BC. Trypetos cannot be identified in the written sources, but the presence of a considerable number of unique bronze coins, struck with the abbreviation ΠΟ, suggests that the Hellenistic town of Trypetos was an autonomous polis, issuing her own coins.[19]

The transport amphoras from Trypetos are interesting for two reasons: a) there is a great variety of imported amphoras, including Rhodian, Coan, Cnidian, even Corinthian examples; and b) there is evidence for one new type of Cretan amphora, which represents the earliest evidence for production of wine in Hellenistic Crete. Study of the Trypetos pottery is still at an early stage, so we cannot yet present any statistical analysis for the imported and locally produced amphoras. With the aid of a small grant from the John F. Kostopoulos Foundation it was, however, possible to restore several vessels. Our discussion will focus on the amphoras found in rooms E 1, E 4 and E 5, which form parts of two houses in Complex E (Fig. 4). Of special interest is Room E 1, which probably functioned as a storeroom. So far, twelve amphoras and ten large pithoi have been catalogued. The excavation

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[14] Amphora AE 13611, smaller amphora AE 13504, pyxis AE12565, bowl AE 13482, lamp AE 12547.

[15] Amphora AE 13509 from Grave 22 of Stavros Cemetery and amphora AE 12122 from Grave 31 of Potamos Cemetery. The average height of these amphoras is ca. 0.65m.

[16] Kamara fulfilled three conditions important for the existence of transport amphoras production and trade of wine: a) River Potamos offered access to water, a prerequisite for the existence of pottery workshops; b) a safe harbor; c) and fertile land suitable for the cultivation of vineyards.

[17] Marangou-Lerat 1995, 89-91, pl. XXII, esp. nos A 147-A 148. For example, amphora no. A 150 (AE 12080) from Grave 29 of the Potamos cemetery was found together with silver Cnidian coin (AE N 9) carrying the name ΤΕΛΕΑΣ; amphora no. A 151 (AE 12056) was found with Cnidian coin carrying the name ΑΥΤΟΚΡΑΤΗΣ; and amphora no. A 153 (AE 12099) with Cnidian coin carrying the name ΚΑΛΛΙΦΡΩΝ. Moreover, it must be mentioned here that not all amphoras lumped by Marangou-Lerat under type AC 6 share the same features or are contemporary. Type AC 6 needs to be re-examined.

[18] Ashton 1999.

[19] For the most recent discussion on Trypetos, Vogeikoff-Brogan & Papadakis 2003. Preliminary reports have been published by the excavator in the *ADelt* 43, 1988, 561-562; 49,1994, 746-747; 50, 1995, 749-750; *Κρητική Εστία* Δ 2, 1988, 335-336; Δ 3, 1989/90, 291-292; Δ 4, 1991/93, 302-303. For the coins, see Papadakis 1991.

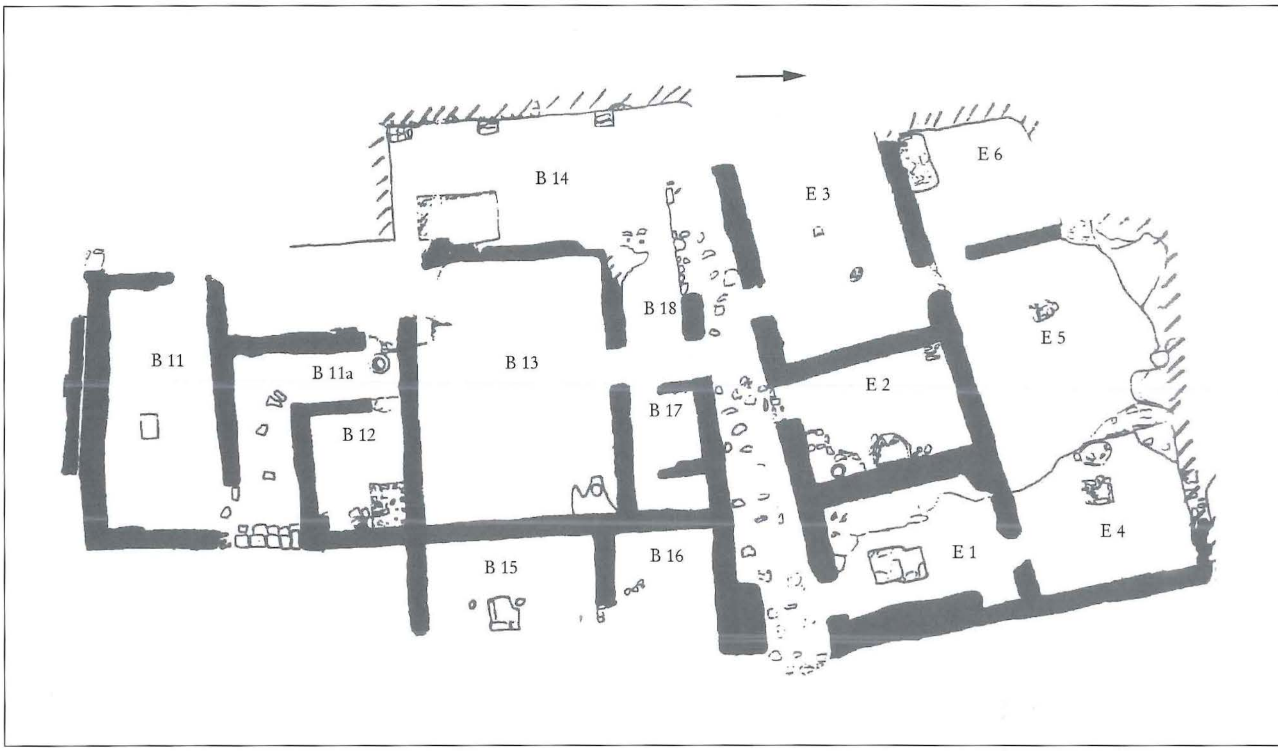


Fig. 4 Complexes B and E at Trypetos.

notebooks record that the majority of these vessels were found buried at a depth of 1 m below the floor level (as indicated by door threshold), perhaps an indication that the vessels were stored in a basement cellar covered by a wooden floor. E 1 also yielded a lamp, which resembles Type 32 of the Athenian Agora, and which Rotroff has dated in the period 220-180 BC (Fig. 5a).[20]

Room E 4 is interpreted as a reception hall because of its built hearth in the middle of the floor. In E 4 the excavator found tableware, three iron knives, eight loom-weights, four pithoi (three small and one large) and two amphoras (Fig. 5b). The lamp, usually encountered in contexts of the first half of the second century BC, belongs to a group of lamps made in Crete, possibly near Phaestus (Fig. 5a).[21]

Finally, Room E 5, which belongs to a different house, is interpreted as a reception hall or a family room. The function of the rooms, on the basis of their architectural features and archaeological finds, has been discussed elsewhere.[22] E 5 yielded tableware, eleven loom weights, one bronze arrowhead, two amphoras and one pithos (Fig. 5c). The lamp found in E 5 also resembles Type 32 of the Athenian Agora and dates in the period 220-180 BC (Fig. 5a).[23] On the basis of the lamps we propose to date the abandonment of the three rooms in Complex E in the second quarter of the second century BC.

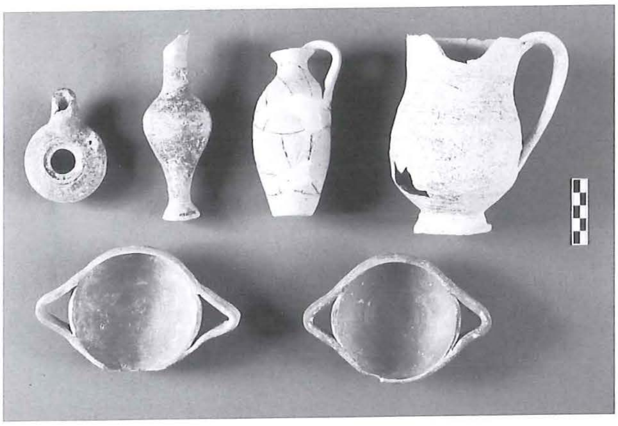
Since the main goal of this paper is to identify the manufacture of amphoras in East Crete, we will focus on a type of amphora, which very likely was produced in the vicinity of Trypetos. This hypothesis is based primarily on the observation that the fabric (2.5YR 6/8, light red with many inclusions of gray schist and some quartz) is very similar to that found in the nearby prehistoric excavations at Petras. The Petras fabric has been analysed with thin-section petrography and is consistent with the

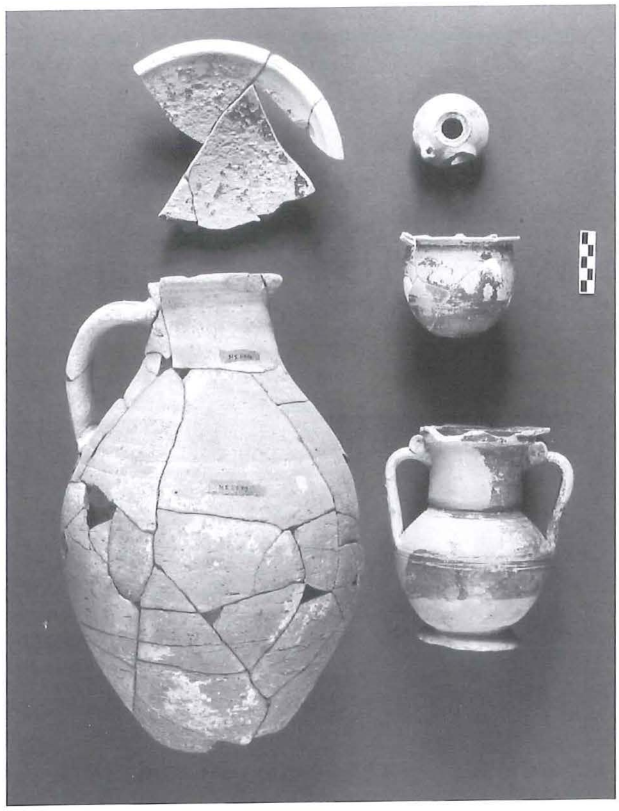
[20] MS 10272. See Howland 1958, 99-101, pl. 41; for the new date, see Rotroff 1997, 501.

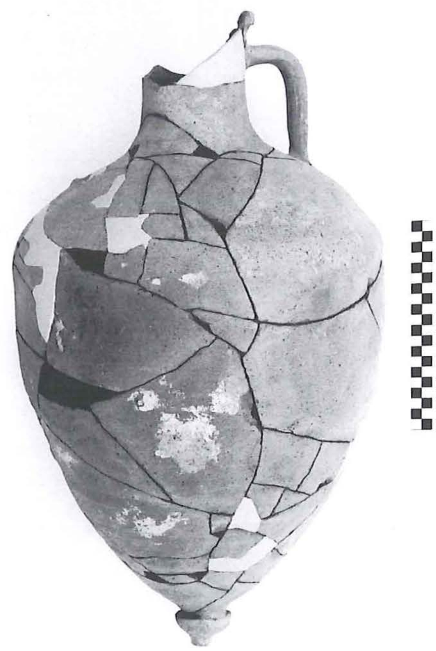
[21] MS 11388. See Hatzi-Vallianou 2000, 93-95, pls. 47-48; Mercando 1974-1975, 121-134.

[22] Vogeikoff-Brogan & Papadakis 2003.

[23] MS 10271.







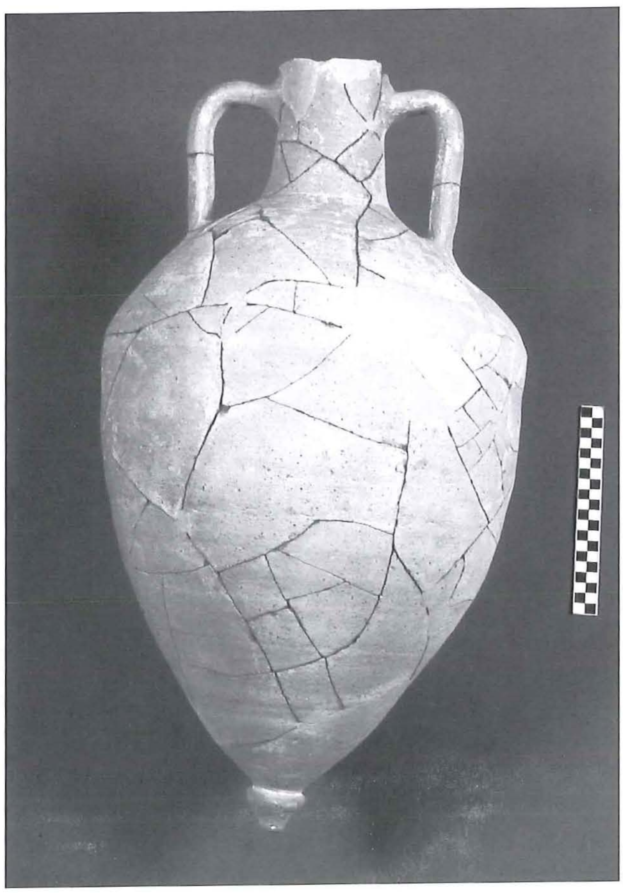


Fig. 5 a) lamps MS 10271 (above), MS 11388 (below), MS 10272 (right); b) tableware from Room 4, except for lamp; c) tableware from Room E 5; d) amphora MS 11880; e) amphora MS 11936.

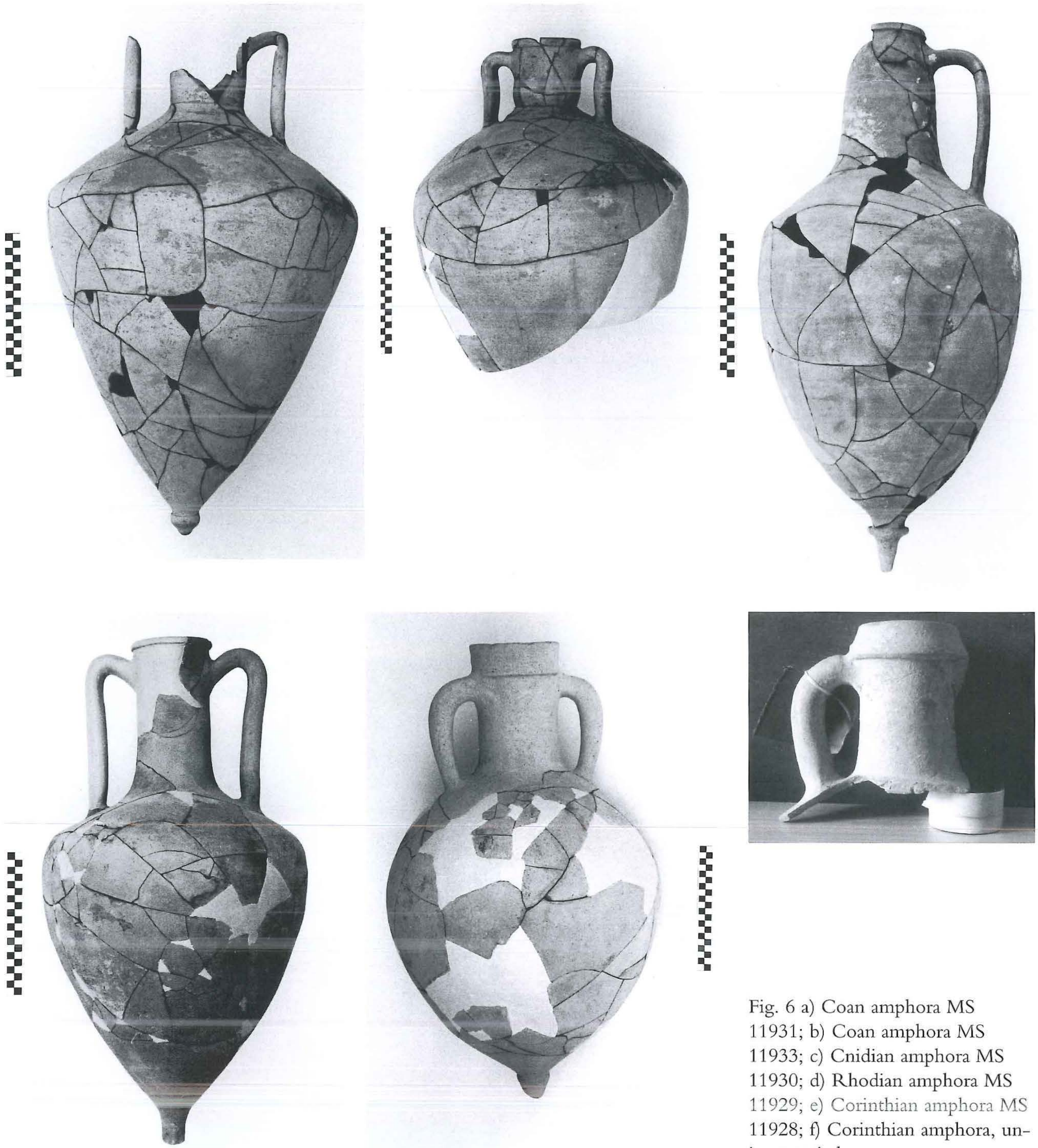


Fig. 6 a) Coan amphora MS 11931; b) Coan amphora MS 11933; c) Cnidian amphora MS 11930; d) Rhodian amphora MS 11929; e) Corinthian amphora MS 11928; f) Corinthian amphora, uninventoried.

local geology.[24] The type is represented by several examples at Trypetos, three of which come from Room E 1 (Figs. 5d-e and 7d-e).[25] On the basis of the lamps found in Complex E, the Trypetos type of amphora should be dated in the late third or early

[24] Personal communication with Dr. M. Tsipopoulou, director of the Petras Excavation Project.

[25] The average height of these amphoras is *c.* 0.65m.

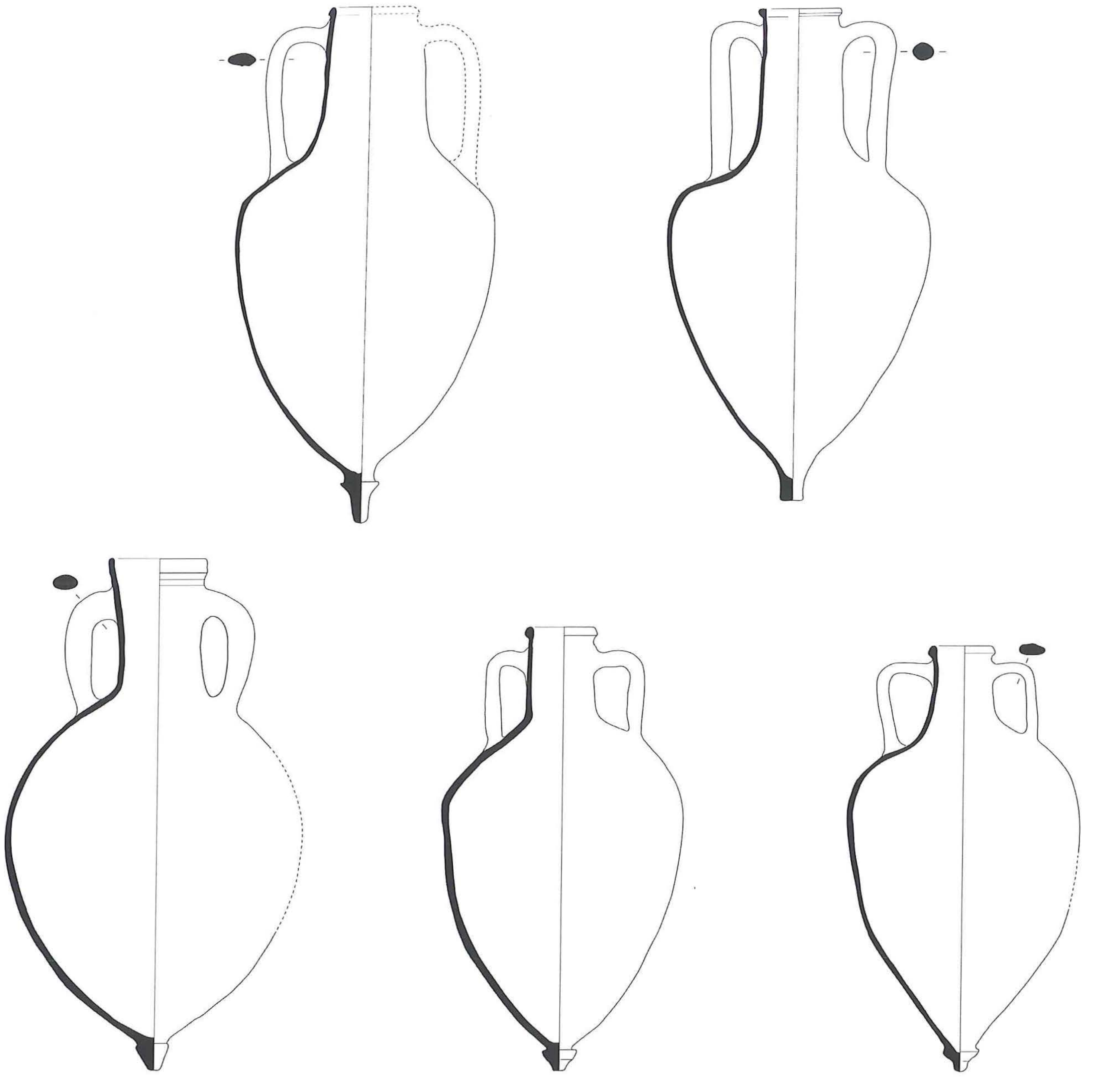


Fig. 7 a) Cnidian MS 11930; b) Rhodian MS 11929; c) Corinthian MS 11928; d) Cretan MS 11880; e) Cretan MS 11936.

second century BC. Together with the Hierapytnian stamped amphora handle found in another house at Trypetos, it represents the earliest evidence we have for production of wine amphoras in Crete in the Hellenistic period.

The imported amphoras found in Complex E include at least three unstamped Coans (with double-barreled handles), one Cnidian, one Rhodian and one Corinthian example. The Coan, Cnidian and Rhodian shapes compare well with examples from the Athenian Agora from the late third or early second century BC (Figs 6a-d and 7a-b).[26] The Cor-

[26] For the Coans, cf. Grace 1979b, fig. 56 (first and second from left); for the Cnidian cf. Grace 1979b, fig. 64 (first from left).

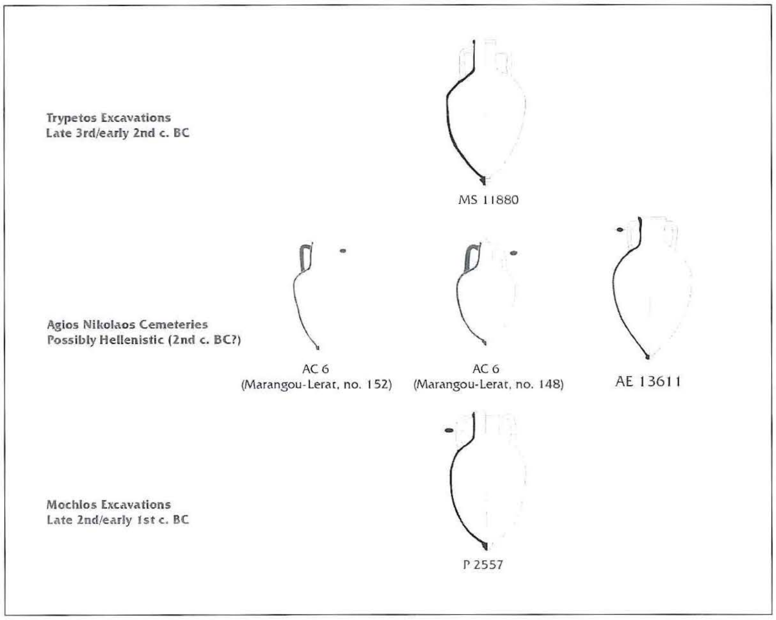


Fig. 8 Local Hellenistic amphoras from East Crete.

inthian amphora found in Room E 5 is of particular interest (Figs 6e and 7c). The shape compares well with a Corinthian Type A' amphora from the Athenian Agora found in a context (N 21:4, Satyr Cistern) dated from 250 to 215 BC.[27] It should be noted, however, that the scientific analysis of the amphora from the Athenian Agora does not fit any existing descriptions of Corinthian clay.[28] For that reason it will be interesting to compare the fabrics of the two amphoras in our forthcoming petrographic analysis. A second Corinthian amphora Type A' has also been recognized at Trypetos, but it has not yet been restored (Fig. 6f). This second Corinthian amphora has a slightly different fabric, and its shape combines both a heavier rim and handles which do not thin out at the bottom. We nevertheless suspect that the two amphoras are contemporary. Their discovery in Northeast Crete is quite significant. Until now, Crete never figured on the distribution map of this amphora type, which, according to Koehler's study, does not appear anywhere in the Eastern Mediterranean.

Conclusions

We have presented new evidence for the production of wine in East Crete during the Hellenistic period. Our research has identified several types of locally produced transport amphoras from the late third to the early first century BC (Fig. 8). The earliest known type is the amphora from Trypetos, which is found in contexts of the late third or early second century BC, and is contemporary with the Hierapytnian stamped amphoras found in Egypt and Trypetos (one example).[29] The half-size amphoras from the cemeteries of Agios Nikolaos (Marangou's type AC6) should no longer be considered early Roman, but Hellenistic. The coins and some of the pottery found with the burials, as well as the shape of the amphoras themselves, suggest a date within the second century BC, if not earlier. We have also suggested that other amphoras from the cemeteries of Agios Nikolaos might have been

[27] Koehler 1978a, 22-23 and 127, pl. 18, no. 87; Koehler 1992, 265-279. For the date of the context, Rotroff 1997, 465.

[28] The Trypetos amphora is characterized by a very pale brown surface 10YR 8/3, with 10R 6/6 light red core.

[29] Marangou-Lerat 1995, 124, pl. XXVI, fig. 84; Papadakis 2000, 419, no. 487.

Hellenistic products.

Finally, the amphoras from the excavations at Mochlos and Pyrgos-Myrtos represent the latest phase in the development of amphoras in East Crete in the late second and early first centuries BC. As in Agios Nikolaos, some are clearly imitations of Coan and Rhodian amphoras. This evidence should encourage a new examination of the form and the extent of wine production in Crete in the Hellenistic period. Naturally, we are aware that wine production in Crete does not automatically translate into wine trade outside Crete. Future study will also have to examine the role of trade between the expanding poleis of Hellenistic Crete, the existence of which is suggested by the discovery of the Hierapytnian stamped amphora handle at Trypetos. Such a study is hampered by the fact that ancient Hierapytna is still missing from the archaeological record. Even the evidence from city-states like Praisos and Itanos is limited.

Recent scholarship has interpreted the small number of Hierapytnian amphoras in Egypt as the personal property of Cretan mercenaries. The growing evidence for wine production in East Crete, in conjunction with the existence of a number of harbour sites like Trypetos, Itanos, Xerokambos/Ampelos (?), Leuke and Hierapytna suggests a different interpretation. The abundance of imported amphoras at Trypetos and Xerokampos (ancient Ampelos?) suggests that the ports of East Crete were stepping-stones on a sea route, which began on the islands of Rhodes and Cos, and the Cnidian peninsula and ended in Egypt. The well-known treaties between Rhodes and three poleis of East Crete (Hierapytna, Olous and Chersonesus) at the end of the third century BC, according to which the harbors and naval stations of the Cretan cities were placed at Rhodes' disposal, testify to the traffic between Rhodes and Crete.[30] There is no need to elaborate on the sea-faring connections between Crete and Egypt, attested through the centuries and in several articles on the matter.[31] If the Cretan wine amphoras did travel abroad, the best place to look for them is Egypt, in the company of the better-known cousins from the Dodecanese.

[30] Viviers 1999, 228-231, esp. 228.

[31] Cline 1994, 91-93; Watrous 1992, 177-178.

Standardization in Greek Amphora Capacities[1]

Malcolm Wallace

When goods are bought and sold, buyers, sellers, and tax people want to know how much is in the batch. When the goods were shipped in amphoras, if the amphoras had a standard volume of contents, one could multiply that size by the number of jars to find the answer. Otherwise, one would have to measure the contents for each jar, which takes time. Jars were made in sizes already in the Bronze Age Mediterranean; for example, Canaanite jars (containing terebinth) from the Uluburun wreck *c.* 1225 BC are in "three general size groups" with means of 6.7 l, twice that, and 26.7 l (four times that).[2] More evidence comes from Greek jars of the fifth through the third centuries BC.

Jars of a standard size that passed by count would naturally do so under « *des règles coutumières excluant tout développement anarchique* ... *Le seul problème qui se pose véritablement est donc de connaître le degré de précision qui était attendu...* ».[3] There are limits to the precision one may expect to find. Clay shrinks when fired, and "...a scarcely noticeable difference of dimensions and profile can produce a difference of about an eighth of the total capacity" (more than six per cent).[4] Modern measurements are not perfect; those made with water may be accurate at least to 0.1 l and those made with polystyrene beads to 0.5 l. The present capacity to the rim may be greater than the effective capacity of the jar in trade because of lost lining and stoppering.[5] The following list of measured groups of Classical and Hellenistic Greek jars from the same series in use at the same time illustrates the present state of the evidence.

Fifty-nine out of sixty East Greek amphoras from the Tektaş Burnu wreck, *c.* 425 BC or slightly earlier, measured with water, ranged from 21.8 to 29.1 l, +/- 3.7 l (or nearly fifteen per cent).[6] This range is distinctly greater than those of the other groups listed here. Study is continuing on two groups of Thasian amphoras of the fifth century BC found in house basements in Thasos, and their apparent ranges are also great, about sixteen and about twenty per cent. It may be that fifth-century amphoras were less precisely standardized than later ones.

Nine Mendean amphoras from the Porticello wreck of the early fourth century BC, measured with polystyrene beads, ranged from 19.3 to 23.9 l (or less than +/- 11%).[7]

Six full-size Panathenaic amphoras, dated by archon to 360/59 BC, were measured with polystyrene beads and ranged from 34.4 to 40.7 l (or more than +/- 8%), which may seem rather much for something as valuable as olive oil. One would not, however, expect niggling complaints about their prizes from victorious athletes. Fifty-eight jars from *c.* 570-320 BC ranged from 33 to 41.4 l, or about +/- 12%; fifty-five were within about +/- 10%.[8]

Twenty-two of twenty-three Rhodian amphoras from the Kyrenia wreck, *c.* 300 BC, measured

[1] Acknowledgment is gratefully made to the Danish Institute for the hard work of organizing efficiently and pleasantly both conference and publication, and in particular to Dr Eiring and Dr Lund for their gracious treatment of repeated delays, queries, and requests. Virginia Grace started me down this path, and I owe much to her interest and scepticism, as to that of Yves Garlan, Carolyn Koehler, and my sister and brother-in-law, Philippa and Dugald Matheson. Deborah Carlson has kept me in close touch with her ongoing study of the Tektaş Burnu amphoras.

[2] Pulak 1998, 188-224, at 201.

[3] Garlan 2000, 76.

[4] Grace 1949, 175-189, at 176; Garlan 2000, 81, n. 53.

[5] Matheson & Wallace 1982, App. 1, App. 3.

[6] Personal communication from D. Carlson.

[7] Eiseman & Ridgway 1987, 51-52; Lawall 1998a, 16-23 (on the date).

[8] Bentz 1998, Anhang 3 (where correct the capacity for no. 4.052 from 39.7 l to 38.8 l with Hamilton 1993, 243, n. 25).

with water, ranged from 23.1 to 28.8 l (or about +/- 10%).[9]

Eighteen of nineteen small ZH-group amphoras from the Serçe Liman wreck, *c.* 275 BC, measured with water, ranged from 10.3 l to 11.5 l (or about +/- 6%), and sixty-six large jars ranged from 34.8 l to 41.3 l (or more than +/- 8%). The eighteen large jars stamped ZHN/ΦΙΛΑ spanned the whole of this range.[10]

Ten Corinthian B amphoras from the harbor in Gela, made *c.* 275 BC, measured with water, ranged from 23.5 to 26.6 l (or about +/- 6%).[11]

Stamped Rhodian amphoras found at Rhodes from *c.* 230-200 BC, taken together, look like these other groups.[12] One hundred and seventy-seven jars ranged from 24.1 to 29.9 l (or about +/- 11%). One hundred and twenty-five of one hundred and twenty-six of these, of five fabricants in the term of the eponym Pausanias, measured with polystyrene beads, ranged from 25.4 to 29.1 l (or less than +/- 8%).

Yet twelve jars of Kleisimbrotidas in the term of Theuphanes ranged from 25.3 to 27.8 l, and thirty-nine jars of Diskos in four terms ranged from 24.1 to 26.7 l (each only about +/- 5%. Thirteen intact jars of Diskos in the term of Kratidas, measured with water, ranged from 24.8 to 26.2 l (or less than +/- 3%). We have no figures for other fabricants, which might add to the range, in these two years. Such low ranges come from the individual fabricant's great precision in linear dimensions. For Diskos' thirteen jars in the term of Kratidas our figures for the maximum diameter vary from 34.2 to 35.6 cm, +/- 0.7 cm, for Kleisimbrotidas' twelve from 34.9 to 36.0 cm, +/- 0.6 cm (or only about two per cent).

Mean capacity is, however, decreasing, from 27.3 l in the term of Pausanias to 26.2 l in the term of Theuphanes and 25.4 l in that of Kratidas. We suggested that sellers were knowingly giving buyers shorter measure.[13] That has been doubted.[14] Pausanias belonged to the generation before Kratidas, and contemporaries may not have noticed the slimming of jar profile, as in three decades it caused a lessening of the maximum diameter by only 1.9 cm. Still, is it chance that the mean goes down two liters in the hands of the most careful makers of amphoras? More finds might help to show how usual or unusual this degree of care was and whether the mean varies only gradually or sometimes gives signs of deliberate intervention.

In summary, the "*degré de précision*" in leading Greek amphora series seems generally speaking to have been to the order only of +/- 10 per cent. Yet there is no "*développement anarchique*," provided that the jars are shipped in sufficiently large batches. For example, the capacities of the eighty nine large ZH-group amphoras from the Serçe Liman wreck, measured either with water or with polystyrene beads, had one Standard Deviation of +/- 1.32 liters from their mean of 38.0 l. If the eighty-nine are a random sample of large-size ZH-group jars in trade at the time, this Standard Deviation indicates that 68 per cent of that whole "population" of jars were within a range of +/- 1.32 l (or +/- 3.5%). Ninety-five per cent were within twice this range, 2 S.D. of +/- 2.64 l (or +/- 7.0%).

Buying a single jar would take the risk of its being more than 3.5 per cent under standard size about one time in three and being more than 7.0 per cent under about one time in twenty (though as many jars would be over standard). Cautious buyers might rather get wine measured out more precisely into smaller containers. Buying the eighty-nine jars, however, or any other eighty-nine large ZH-group jars in trade at the time, would mean much less risk, for the standard error of the mean of the sample is 1 S.D. of the sample divided by the square root of the number of items in it, here +/- 1.32/the square root of 89 l or 0.14 l, and twice the standard error of the mean is 0.28 l. Nineteen times out of twenty, the total contents of any such batch would be within +/- 0.28 l of 38.0 l (or +/- 0.75%).

Where the range of individual jars in a batch is of the order of +/- ten per cent, the means of batches of twenty five should range on the order of +/- two per cent, and the means of batches of

[9] Matheson & Wallace 1982, 296.
[10] Koehler & Wallace 1987, 31-57, Appendix, 49-57.
[11] Personal communication from C.G. Koehler.
[12] Matheson & Wallace 1982, *passim*.
[13] Matheson & Wallace 1982, 294, 301.
[14] Garlan 2000, 82, n. 57.

one hundred should range on the order of +/- one per cent. Experienced buyers, sellers, and tax people would know empirically that the risk of getting an undersized batch decreased with the size of the batch. Thus even not very precise standardization of single amphoras let large batches pass by count.

Mediterranean Amphoras in India[1]

Elizabeth Lyding Will

Finding one's way in the study and interpretation of amphoras is like putting together a mosaic or jigsaw puzzle without a pattern, or wandering in a labyrinth without Ariadne's thread. In analyzing amphoras and their significance, one must focus on minute details and somehow at the same time keep constantly in mind the picture as a whole, but without a clear idea of the nature of that picture. So far are we from any sort of comprehensive understanding of what amphoras say about ancient economic history. At the same time, every addition to our knowledge gives us both a deeper and a wider view of the total subject. Thus, for example, the value to the Mediterranean amphora specialist of the material that has come to light in India during the last half century. With the Indian finds, important aspects of Mediterranean trade in the first century BC and the first century AD and even later are becoming clearer. The amphora finds in India not only illustrate what was being imported by India from the Mediterranean. In addition, as tangible, material evidence of exportation, they also make it possible for us to interpret more accurately the economic picture in the Mediterranean itself. They allow us to look at the Roman economy through a more powerful lens.

First, a brief historical summary:[2] During the Second World War, India was a place where archaeological research and excavation could be carried on safely, away from the fighting and bombing. In southern India, for example, French archaeological researchers were attracted to Arikamedu, a site about two miles south of Pondicherry, the capital of French India until 1954. The site is often associated with the name of Sir Mortimer Wheeler but, as early as 1937, the French scholar Gabriel Jouveau-Dubreuil had been picking up artifacts at Arikamedu, which he identified with the ancient Podukê, a trading center referred to in the *Periplus* 60:20.6a and in Ptolemy VII.1.14. Over the centuries, foreign merchants gave Podukê/Pondicherry a variety of names (including, among others, Puducheira, Poelitsjeri, Pollochire, and Poudicheri), and scholars today generally agree with Jouveau-Dubreuil and Wheeler that Arikamedu is the site of ancient Podukê. In any case, from 1941 to 1944, the Indian researcher A. Aiyappan and particularly the French investigators L. Faucheux and R. Surleau conducted excavations at the site. Their work attracted the attention of Wheeler, at the time Director General of Archaeology in India. Wheeler came down from Delhi to visit the site in 1944, and in 1945 he conducted his own excavations. Those excavations set a new standard for Arikamedu in the care with which Wheeler and his Indian colleagues, A. Ghosh and Krishna Deva, as well as their students, excavated, catalogued and illustrated the finds. A selection of these was presented by the three excavators in one major article (see note 2), and the finds were also referred to in subsequent publications by Wheeler. From Wheeler's time on, his fame, and the attention given to the site through its association with

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[1] This paper is dedicated to the memory of Dr. Vimala Begley, whose excavation and scholarship have done so much to reveal the close connections between India and the Mediterranean in the Roman period. *Acknowledgements*: Space limitations do not permit me to repeat the gratitude expressed in previous publications to the many colleagues in India and elsewhere whose help has facilitated my work at Arikamedu over the years. Here I am able to thank only those who have aided me with the present publication. Drs. John Lund and Jonas Eiring have been unfailingly kind and helpful both as editors and in all they did to make the 2002 Danish amphora congress in Athens the great success it was. I also thank most warmly Drs. Helen Bacon, Lionel Casson, H.K. Chuttani, Stefan Faller, Peter Francis (whose recent death is such a loss to archaeology, in India and worldwide), John Hubert, Wilhelmina Jashemski, Mira Menon, Verena Vidrih Perko, Nicholas Rauh, P. Ravitchandirane, Steven Sidebotham, Romila Thapar, Barbara Will, and Samuel Wolff. Last, but not least, I am most grateful to Judith Hinshaw and Sallie MacDougall for their kindness and help.

[2] As sources for this historical section I have relied on the late Vimala Begley's chapter, 'Changing Perceptions of Arikamedu', in Begley *et al.* 1996, 1-39; on Wheeler *et al.* 1946, esp. 18-22; and on Antony 1982, *passim*, esp. 120-123, 130-131.

him, have tended to obscure the pioneering contributions of his French colleagues, both those who preceded him and perhaps especially J.-M. Casal, a French archaeologist who did extensive excavations at Arikamedu after Wheeler, from 1947 to 1950.

After Casal, almost forty years were to pass before the Indian-American archaeologist and pottery-specialist Vimala Begley initiated new excavations at Arikamedu, under the sponsorship of the University Museum of the University of Pennsylvania and in collaboration with Professors K.V. Raman of Madras University and Steven Sidebotham of the University of Delaware. In three seasons (1989-1992), Begley and her team of excavators opened a number of new trenches at the site. Study of the finds by a group of international specialists greatly expanded our knowledge of the history and significance of Arikamedu. Two large volumes, co-authored and edited by Begley, were completed. The first appeared in 1996 (see note 2). The second volume was close to being sent off to the printer when Begley passed away very prematurely in the year 2000. Her death, a great loss to archaeology and to Roman pottery studies, delayed publication of the second volume, but at the time of writing it is expected to appear in 2004.

The process of locating and studying the archaeological finds from Arikamedu has been, and remains, as complicated a task as the effort to understand the history of the excavation of the site. A very good illustration of that statement is provided by the Mediterranean amphoras, to which a chapter in each of the two recent Arikamedu volumes is devoted. The amphora catalogue in Volume 1 consists of 82 amphora fragments from the 1941-1950 excavations, including 77 from the French excavations and five from Wheeler's catalogue. Volume 2 goes on to present a catalogue of 449 finds from the 1989-1992 excavations, in addition to material studied after Volume 1 went to press: five more fragments from Wheeler's catalogue, now in London, and four French finds, now in Bangalore. All the amphora fragments are now widely scattered, from London to Hanoi. For the record, and in the interest of accuracy, it seems appropriate to take this opportunity to specify their exact locations. Of the 77 pieces from the French excavations that were published in Volume 1, 68 are now in the Pondicherry Museum, six (all of them probably finds of Jouveau-Dubreuil) are in the Madras Museum, and three are in the Musée Guimet in Paris, where they were studied and photographed by Dr. Begley, as were the four French fragments, mentioned above, which are now in the Bangalore Museum. (An unknown number of other French finds, so far not studied, is said to be in the museums at Hyderabad and Hanoi.) As to Wheeler's finds, we have noted that five of his 116 amphora sherds are included in Volume 1, and five more are in Volume 2. His other amphora fragments, however, have vanished. They are said to be stored in the Central Antiquities Collection of the Archaeological Survey of India in the Purana Qila (Old Fort) in Delhi, but unfortunately only five fragments were available for study in 1990, when I went to Delhi to study them. The A.S.I. staff brought me those fragments on a handsome silver tray for examination, perhaps by way of apologizing for the fact that the remainder were somehow not available. The five additional Wheeler fragments now in London are in the Institute of Archaeology, University College London. I studied them there in 1994. (A sixth fragment could not be located by the Institute.) As already mentioned, those finds, along with the French fragments mentioned above as now in the Bangalore Museum, are published in Volume 2. That volume also contains a summary of some recent Mediterranean amphora finds from other sites in southern India (Karur, Alagankulam, Kudikadu, and Vasavasamudram).

French finds, then, dominate in Volume 1. Of Wheeler's amphora finds, only the ten referred to above were located and studied for publication, five of them in each volume of the Arikamedu series. Wheeler *et al.* did, of course, publish drawings of 37 of their 116 amphora finds in the 1946 article, and a photograph of eight of the fragments is included on plate 19b of Wheeler's famous 1954 book, *Rome Beyond the Imperial Frontiers*. The fragments in the 1946 article are, however, only partially accompanied by descriptions. In addition, the two largest pieces illustrated by Wheeler and his co-authors (nos. 83 and 84 on p. 44) are actually from the French excavations and are catalogued by the present writer in Volume 1. If we add the 82 fragments (including Wheeler's five) in Volume 1 to the 449 in Volume 2 (plus, in the same volume, the five Wheeler finds in London and the four French finds now in Bangalore), the grand total of Arikamedu amphora finds studied during the last decade comes to 540. That is a significant sampling, but the picture would be much more complete if future excavators could somehow find and study Wheeler's many missing (or possibly reburied?) fragments as well as the pieces said to be in Hyderabad and Hanoi. Unstudied private collections of finds from Arikamedu also exist in the Pondicherry area.[3] And there is another, more recent problem for future excavators and for researchers who may go to India to study the Arikamedu finds. The A.S.I. has reportedly made a selection of the pieces, including the amphora fragments, from the 1989-1992 excavations and taken them to Madras. The remainder have regrettably been reburied in Trench AV92-XIV at Arikamedu, presenting still another barrier to future scholarship.[4] But if burial with the passage of time should obliterate catalogue numbers written on the amphora fragments in that group, each of the diagnostic fragments has at least been illustrated in Volume 2 with a photograph, as have all the 1941-1950 finds published in Volume 1. In addition, unpublished photographs exist of all the non-diagnostic amphora fragments from the 1989-1992 excavations. They are attached to the catalogue cards made for each object.

Locating and studying the wandering amphora fragments found at Arikamedu has thus been a challenge, and it remains one to this day. An equally formidable problem has been the fragmentary condition of the finds, which has complicated the process of study and identification. The Begley team was meticulously scholarly in its treatment of all finds. Whereas the earlier French, British, and Indian researchers apparently had kept primarily diagnostic amphora fragments, the policy of the Begley team was to analyze, measure, draw and photograph every fragment, no matter how unpromising it might appear to be. There were no shortcuts. There was no effort to save time by weighing or "quantifying" finds. As a result, the 1941-1950 group, which includes almost no body fragments, appears at first sight to be generally better preserved. 85.3 per cent of the fragments in that group (omitting from the total the Bangalore and University College London collections published in Volume 2) proved to be identifiable by type. Coincidentally, 86 per cent of the better preserved fragments in the 1989-1992 group could also be identified by type, as opposed to only 62.1 per cent of the pieces in the group as a whole, while 37.8 per cent remained unidentified. Part of the difficulty in identification resulted from the fact that a large percentage (about 17 per cent) of the total number of 1989-1992 fragments, almost all of them body fragments, was excavated after the writer left India in 1992, and positive identification of the types to which those pieces belonged was not possible, although photographs, but no drawings, had been made of them.

So much by way of commenting on the history, the whereabouts, and the present condition of the amphora collection from Arikamedu. Let us turn now, at the risk of repeating part of what has already been said in more detail in Vols. 1 and 2 of *Arikamedu*, to a summary and description of the finds, and to their significance. We find that approximately two thirds of the identified amphora fragments at Arikamedu come from Mediterranean wine jars (67 per cent in the 1941-1950 group and 58.5 per cent in the 1989-1992 group, the latter percentage lower, as noted above, because 17 per cent of the 1989-1992 finds were not studied). The Tamil kings of southern India were very fond of Mediterranean wine. Wheeler, Raman and Begley mention passages in Tamil literature that refer to the delightful, fragrant wines brought to India by the Westerners (*yavanas*).[5] The *Periplus* (49, 56) calls attention to Indian importation of Mediterranean wine, as well as to Podukê as a port (60).[6] Now we have material evidence, pieces of the containers themselves, as proof of the importation of wine by Podukê/Arikamedu. The fragments tell us that

[3] Begley 1996, 6.

[4] Begley 1996, 4.

[5] Wheeler 1946, 23; *id.* 1954, 160; Raman 1991, 125; Begley 1996, 23.

[6] *Cf.* Casson 1989, 228-229. In an illuminating article published in 1990 on the now famous Muziris papyrus, the same author also details the huge expenditures involved in the transport of cargoes between the Mediterranean and India.

the Tamils particularly favored the wine of the island of Kos and of its neighbors in the southeastern Aegean, Rhodes and the city of Knidos. They also imported imitation-Koan wine from Pompeii. The figures as a whole show that 53.4 per cent of the imported wine was from Kos, 19.8 per cent was from Rhodes, 13.8 per cent was from Pompeii, and 11.6 per cent was from Knidos. A small amount of wine (1.5 per cent) was apparently even imported from southern France.

Why all the wine? And why did the Tamils prefer the cheaper, less delicate wines of Kos, Rhodes, and Knidos to the choicer vintages of Chios, Thasos, and Lesbos?[7] The wealthy Tamil nobility could have afforded the best wines. One answer may well lie in the fact that Koan, Rhodian, and Knidian wines, and almost certainly Pompeian pseudo-Koan wine as well, contained a large amount of salt, and salt would have acted as a preservative, preventing spoilage of the wine during the long voyage to India. Columella seems, in fact, to advise adding some salt as a preservative in the making of most wines,[8] and we might mention the fact that modern organic wines spoil quickly if sulfites have not been added to them. While we possess no Greek recipes for Koan wine, we do have the famous Roman recipe of Cato the Elder.[9] He advises procuring sea-water at a distance from the shore and at a time when there is no wind. The concentration of salt in the water would thus presumably be greater. Pliny the Elder also gives a recipe for Koan wine that implies the use of salt.[10] Another consideration in Antiquity may well have been the medicinal reputation of Koan wine. Pliny the Elder in the passage just cited implies that Koan wine was among those vintages felt to have medicinal qualities (perhaps because Hippokrates was from Kos?), and Horace describes it as a digestive aid.[11] Modern Indian table wines seem a bit on the sour side to a western palate, and if the same were true also of ancient Indian wines, taste could well have been another factor, though the Indians were not without sweeter wines. Pliny tells us, for example, that the Indians made a wine from dates.[12] We have already noted that Tamil literature praises the fragrance of western wine, so considerations of freshness, fragrance, taste, and curative qualities may explain why Mediterranean, and especially Koan, wines appealed to the Indian market. There were also western mercenaries whom the Tamil kings used as bodyguards and craftsmen, and there were the prosperous western traders as well. They could have played a part in introducing the Tamils to the advantages of importing Mediterranean wine, and they must certainly have been among the consumers of the wine imported by the Tamils.

Dating the wine jars sent to Arikamedu from the West is less easy than it would be if we had more stamped trademarks. The only two stamps discovered so far in all likelihood come from the same late Knidian jar, of the fabricant Kleupithes, dated by Virginia Grace as probably from the second quarter of the first century BC.[13] I reviewed the Arikamedu finds with Dr. Grace in Athens in 1990, and she expressed the opinion that the Koan fragments date from as early as the late second century BC, while the Knidians and Rhodians belong in the first century BC.

Probably the latest of the wine jars imported in quantity by Arikamedu were the Pompeian pseudo-Koan amphoras of Will Type $12a_2$.[14] Before discussing those jars, it may be useful to say a few words about the history of the production and exportation of wine at Pompeii, a topic with which some readers may not be familiar. Accumulating archaeological evidence is greatly aiding our understanding of the subject. It seems increasingly clear that, as early as the third century BC and in any case long before Sulla's siege of Pompeii in 89 BC, the two indigenous

[7] Tchernia 1986a, 105, 244 ranks Knidian as a choice wine, but Grace 1979b, text above figs. 31 and 69, says that, like Rhodian wine, Knidian was cheap and consumed in bulk. She notes that at Athens, "about 40,000 stamped handles have been collected of which 65 per cent or more are from Knidos." See also Will forthcoming, note 10.

[8] 12.21.2-6; *cf.* 12.25.1-3.

[9] 112-13.

[10] *NH* 14.77-79

[11] *Satires* 2.4.29. On Koan and pseudo-Koan wine and the trade with India, cf. also Will 2000a, 32-33; 2000b (especially lines 30-34); 2003, 16-18.

[12] *NH* 14.102.

[13] On Kleupithes, *cf.* Grace & Savvatianou-Petropoulakou 1970, 354; Grace 1985, 33. See also discussion and references in Will 1996, 329, Cat. 24.

[14] Dressel Form 3, Panella & Fano 1977, Group 3.

Samnite families of the Trebii and the Ovii in Pompeii had been active manufacturers of amphoras and bricks and exporters of wine in Greco-Italic amphoras of Will Type 1d, the first amphoras that can be called "Roman".[15] As far as their shape is concerned, Roman Greco-Italic amphoras were modeled on "Greek" Greco-Italics of Will Types $1a_1$ and $1a_2$, small jars bearing stamped names written in Greek letters, and manufactured chiefly, it now seems, in Greek cities of southern Italy and Sicily. The Greek jars had predominated in the latter fourth and earlier third centuries BC, before Rome seized control of the Mediterranean from Carthage in 241 BC. At that point, Roman Greco-Italics bearing Latin stamps appeared, and Pompeii was probably one of the first cities to export them. The Type 1d trademark bearing the stamped letters TR.LOISIO, found on amphoras exported throughout the Mediterranean, is known to be one of the earliest Latin amphora stamps. Vandermersch lists 22 examples of the stamp.[16] It seems highly likely that this Trebius Loisios (or Lusius in Latin) was a member of the prominent, indigenous, brick-making family of the Trebii in Pompeii. From his time, probably well into the second century BC, the Trebii and the Ovii were exporting wine throughout the Mediterranean. There may have been several men with the name of Trebius Loisios in different generations of the family.

It may, in fact, have been with an eye to gaining control over Pompeii's wine markets that Sulla besieged and occupied the city in 89. In any case, on departing, he left his nephew, P. Sulla, well known as the friend and client of Cicero, in charge of Pompeii. Very soon, P. Sulla began manufacturing not Greco-Italic amphoras, which were no longer in style, but double-handled pseudo-Koan amphoras stamped on both handles with his name. The fact that the island of Kos, as we have seen *supra*, was at this time sending large quantities of wine to India might well have stimulated production of pseudo-Koan wine in Pompeii. Sulla (and dare we say his uncle, the general?) did not yet have Indian markets in mind, however. Koan wine had been very popular in the Mediterranean. When it became less available, Sulla and his family could have decided to step in and supply the need. His amphoras were made of the same distinctive, unusually coarse, dark, "Vesuvian" clay that had characterized the Greco-Italic amphoras of Trebius Lusius exported from Pompeii during the preceding century.[17] Before long P. Sulla was joined by other exporters included, like the Trebii, in Castrén's important list of known Pompeians.[18] One of the best known of these was L. Eumachius. His stamps, like those of Trebius Lusius and P. Sulla, have been found in all corners of the Mediterranean. He too manufactured bricks, and it was his daughter, Eumachia, who donated to the city the famous Building of Eumachia.[19] Her tomb is the largest so far discovered at Pompeii.

Increasingly we see from the archaeological evidence that Pompeii was not just the small resort town we learned about in school. It was a resort town, yes, but it had a large harbor. Evidence for the harbor goes back to the late fourth century BC. Livy reports that in 310 BC a Roman fleet under

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15 Castrén 1975 frequently refers to commercial and political activities of the Trebii during both the Samnite and the Roman periods in Pompeii. He notes their political prominence on pp. 42-43 and states on pp. 45-46 that they are named on Oscan brickstamps from Pompeii. On the Trebii and on Greco-Italic amphoras of what I now call Type 1d but then called Form d, see Will 1982, esp. 348-353; 1987a, 172-173, 179-182; 1987b, 30-33; 1997, 122-123, etc., and Peacock & Williams 1986, Class 2. It should be noted that, in discussing Greco-Italic amphoras of Form d, Peacock & Williams show two amphoras under Class 2. The one on the left is a very nice example of Form d, an isolated find at Anthéor, not from a wreck, according to their source, Joncheray 1976: Plate III, 31. (The three famous Anthéor wrecks are all later in date than the Form d jar in question.) The jar illustrated on the right, however, belongs to Form a_2 rather than to Form d, which is generally larger than Form a_2. The a_2 jar they show on the right, a jar I have myself measured in the British Museum basement, has a height of 0.59m., whereas the jar they show on the left, according to the scale given by Joncheray, is 0.82m. in height. The failure to notice the difference in height was probably a factor in the misidentification.

16 Vandermersch 1994, 168-169.

17 On the coarse, dark clay of the amphoras of Trebius Lusius and its similarity to the clay of Pompeian pseudo-Koan jars, see Will 1982, 349-350; 1987a, 205-206; 1991, 152, and elsewhere. The authoritative work on the pseudo-Koan amphoras found at Pompeii is Panella & Fano 1977 *passim*, where Plate 1 illustrates in color the coarse, dark clay of the various pseudo-Koan groups they identify. Scotti 1984: 274, note 23, and 297 ff., also discusses the likelihood that certain Greco-Italic and pseudo-Koan amphoras from Region VI in Pompeii were locally produced.

18 Castrén 1975.

19 Will 1979, 37-39, 41.

P. Cornelius put in at Pompeii.[20] Strabo refers to Pompeii as an export/import harbor.[21] Jashemski illustrates a fanciful painted rendition of the harbor from House 1.14.6-7 at Pompeii.[22] As Dr. Jashemski first pointed out to me, excavations that have been conducted sporadically since 1959 in the silted-up port of Pompeii, in the Agro Murecine outside the city, are beginning to give us an idea of the impressive size of the harbor and its close relationship to the import harbor at Puteoli. Elia was, in 1961, the first to report on a large building found in the excavations, and on the striking paintings and numerous wax tablets it contained, and Giordano, in 1966 and in frequent subsequent articles (see note 25), summarized the contents of the tablets, many of them financial and legal records from Puteoli. Jashemski discusses and illustrates the building, which was apparently a center of some sort for traders.[23] Richardson refers to the tablets and to other evidence of the close commercial connections between Pompeii and Puteoli before the destruction of Pompeii.[24] Others give popularized reports on the building and the tablets.[25] While the port existed, as we have seen, as early as 310 BC, it was probably not until 241 BC, when the First Punic War ended with Roman victory, that large-scale commercial development could have begun. Extensive estates and vineyards, some of which have been excavated on the slopes of Vesuvius, provided the wine that was exported first to Mediterranean markets and eventually as far away as India.

In the early first century AD, after the time of Eumachius, the Pompeian exporters had apparently all but ceased stamping their products, and it is those unstamped pseudo-Koan jars, made of the same coarse Vesuvian clay, that were sent to Arikamedu, as well as to the other towns noted *supra* on the eastern coast of India where discoveries of Mediterranean amphoras are now appearing in ever larger numbers. A few of the Pompeian pieces examined at Arikamedu and in the Mediterranean still bear traces of a greenish surfacing that was apparently applied to them in imitation of the greenish surfaces of Koan amphoras. The Pompeians wanted the Indians to feel they were still buying Koan wine. There seems little reason to doubt that once Kos stopped exporting wine to India, presumably at some time during the latter first century BC, the energetic Pompeian exporters of pseudo-Koan wine decided to expand their exportation to India. The latter first century BC was a time when Italian exportation of wine and oil was giving way to provincial suppliers. As a result, amphora manufacturers in Italy were turning to the production of dishes and bricks. Pompeii, however, seems to have continued exporting amphoras of wine to India well into the first century AD, perhaps at least until the major earthquake of AD 62. After the destruction of Pompeii in AD 79, cities like Cosa on the west coast of Italy, and other cities on the coast of France and the east coast of Spain began to make their own pseudo-Koan amphoras, though no finds of such jars have yet been made in India. We did find at Arikamedu, however, a few fragments almost certainly belonging to the flat-bottomed Gaulish wine jars known as Laubenheimer 4 (Will Type 18). They suggest that when the wine they had formerly imported from Pompeii was no longer available, the Indians turned for wine to French suppliers. The French amphoras may represent the tail-end of Indian importation of Mediterranean wine.

Wine was not the only Mediterranean commodity brought into Arikamedu in amphoras. Olive oil and fish sauce were also imported in much smaller quantities, apparently to fill the needs of the expatriate western merchants, mercenaries, and workmen living among the Tamils. Between four and five per cent of the identified amphora fragments from Arikamedu come from jars for olive oil and the same percentage come from containers for fish sauce, a fact suggesting that both commodities were imported for the same consumers, the westerners in the area, and not for the Tamil nobility. With olive oil again, as with wine, we see that exportation to India shifted from one area of

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[20] Livy 9.28.2.

[21] Strabo 5.4.8.

[22] Jashemski 1979, 116, fig. 185.

[23] Jashemski 1979, 179-80 and fig. 266.

[24] Richardson 1988: 31 and note 1.

[25] Harris 2000; Harris & Schuster 2001; Andreau 2001. Jashemski 1979, 353, n. 73, and Richardson 1988, 31, n. 1, list the many publications of Giordano on the tablets. Harris, Schuster, and Andreau do not seem to realize that Pompeii was a major port.

the Mediterranean to another with the passage of time. At first, during the last half of the first century BC, olive oil was brought in from the Istrian peninsula and adjacent areas of the northern Adriatic.[26] Later, toward the end of the first century, Istrian oil was supplemented by a small amount of Spanish oil from Baetica. The Spanish fragments are among the earliest we have of Dressel's Form 20 (Will Type 20), which was ultimately to become the chief type of Roman amphora. For decades scholars, beginning at least with Loeschcke 1942, 101-104, have assumed that the Baetican jars evolved from Loeschcke's Haltern Form 71/Oberaden Form 83 (Will Type 11b), and the early fragments at Arikamedu confirm that probability. Their having traveled in their infancy as far from home as India also illustrates the energy with which the Baetican oil industry began its history, and foreshadows its impressive development during the next three centuries.[27]

Two additional fragments, both of them containers for olives or olive oil, reflect late Roman and early medieval activity at Arikamedu. They are the handle of a *spatheion* (Will Type 21c), a slender Tunisian amphora-type dating from the fifth century AD, and the handle of a Punic-type jar resembling Zemer Types 49-53,[28] dating between the third and sixth centuries AD. Another late container, which may have been used for both oil and wine, is also represented at Arikamedu by a single fragment. It comes from the widespread British Bii/Riley LR 1/Peacock and Williams Class 44 amphora-type. Its broad date-range in the early medieval period, from at least the fifth to seventh centuries AD, makes it difficult to assign a date to the Arikamedu piece. Like the other two pieces just described, it suggests a certain amount of late activity at Arikamedu and accords with the Indian archaeologist P. Ravitchandirane's recent discovery and excavation of the site of Manapattu, which lies 20 km south of Arikamedu and dates from about the tenth to seventeenth centuries AD.[29]

Spanish amphoras for fish sauce were also brought to Arikamedu in small numbers, as we have noted. The number would seem greater if one did not realize that seven fragments almost certainly come from the same amphora of Dressel Form 22 /Will Type 17,[30] which were therefore counted as one object.[31] There were 12 additional finds of fish sauce containers of Dressel Forms 7/8 (Will Type 16 b/c).

The amphoras from the excavations at Arikamedu clearly provide us with tangible evidence of active commercial relations between India and the Mediterranean from as early as the late second century BC to the latter first century AD. Scattered later finds also show that limited commerce continued

[26] Dressel's Form 6, Will Type 14.

[27] On Istrian and Baetican oil at Arikamedu, see Will 1996, notes 5 and 6, and Will forthcoming, notes 4 and 5.

[28] Zemer 1977.

[29] Personal communication from the excavator.

[30] Will 1996, Cats. 63-68; Will forthcoming, Cat. 273.

[31] The distinctive clay of the jar in question has a "layered" appearance when seen in section, with conspicuous gold mica. The insides of three belly fragments are thickly plastered with dried remnants of yellowish brown garum that contains small shells and many imprints of shells (Will 1996, Fig. 6.65). The same substance is frequently found inside garum jars. The jar is clearly an example of Dressel Form 22 and CIL IV, Type 4 (Will Type 17), a form heretofore thought of as a container for fruit, especially Cumaean apples, and I identify it as such in Will 1996, 319, suggesting that it had been reused for garum at Arikamedu. The identification of this type of jar as one in which fruit was shipped stemmed from the finding of 11 examples at Pompeii and four at Rome bearing dipinti naming Cumaean apples, "mala Cumana." Some scholars have associated those dipinti with Columella's statement (12.4.5) that fruit should be stored in small, cylindrical containers with wide mouths. He does not, however, seem to have large amphoras in mind. Could amphoras of Dressel 22 have originated in Spain? Beltràn Lloris 1970, 511-514 shows two amphoras of Dressel 21/22 found in Spain that do not bear dipinti naming fruit, though he notes that dipinti on these types elsewhere regularly seem to name fruit and apples, except for one example at Pompeii that names mackerel (*scombri)*. He feels that jars of this shape may have been Italian in origin. But I would like to suggest here, as I did in a recent paper (see abstract, Will 2001, 263), that jars of this type were in fact shipping containers for Spanish fish products and were reused for storage of fruit only after they had reached their destinations. It is important to realize that it was the shape of a Roman amphora that indicated its original contents. My research with other types of amphoras as well as this type suggests that only reused jars generally bore, or would need to have borne, dipinti naming contents. The jar found at Arikamedu therefore was, I believe, a shipping container for garum, not a fruit jar that had been reused for garum. An apple grower once told me that apples shipped any distance in such a jar, especially the apples at the bottom, would turn into applesauce by the time they reached their destination. For storage, however, after it had been cleaned and pitched, this wide-mouthed jar would be ideal for apples and other fruit.

into the Early Medieval period. As we have noted, several other sites in southern India are beginning to provide evidence closely similar to that from Arikamedu. To those sites should now be added Kottaimedu, inland from Arikamedu.[32] The publication of the site of Mantai in Sri Lanka is eagerly awaited.[33] Ray, while less interested in Roman trade than in Indian maritime networks, points out that Roman amphora fragments had as of 1995 been discovered at 26 sites in India, 16 of them in Gujarat and Maharashtra, many of them inland centers.[34] Faller notes that sherds of Roman pottery have been reported even on the Maldive and Laccadive Islands.[35] Tchernia seems to minimize the importance of Mediterranean trade with India, noting that he and Olivier Guillaume had managed to identify only 29 sites at which western amphora fragments had been reported, and viewing negatively finds that Ray had viewed more objectively.[36] Thapar takes an open-minded, moderate approach, based on her evident awareness that history and archaeology must go hand in hand in the search for truth.[37] We seem, in fact, to be on the brink of an era in which historians and archaeologists, working slowly, carefully, and harmoniously will strive together to attain a balanced picture of Antiquity, in India and elsewhere. Both Faller and Weerakkody provide historical models in their excellent assessments of what the ancient textual sources tell us about Sri Lanka in the Greco-Roman period,[38] and there is no question that the painstaking excavations at Arikamedu by Vimala Begley and her fellow excavators also provide an archaeological model for future work in India and elsewhere. Archaeologists and historians must work together to achieve a balanced view of Antiquity, in India and elsewhere.[39]

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[32] *Cf.* Ravitchandirane 1995.

[33] On the excavations at Mantai, see Carswell 1991. *Cf.* also the comments of Francis 1999.

[34] Ray 1995, 102.

[35] Faller 2001, 166.

[36] Tchernia 1995, 154. Two years later, he adopts a more positive tone, noting that Roman amphora fragments have been found at thirty-odd sites in India: Tchernia 1997: 238. On the topic of where amphoras have been found in India, Romila Thapar once told me that she feels there were many sites on the west coast of India that traded with the Mediterranean, but they have been destroyed by centuries of tides and weathering.

[37] Thapar 1997, 11-40.

[38] Faller 2000; Weerakkody 1997.

[39] As this essay was going to press, in fact, a report reached me that A.S.I., the Indian archaeological servide, is hoping to commence new excavations at Arikamedu in 2004.

The Eruption of Vesuvius and its Implications for the Early Roman Amphora Trade with India[1]

David F. Williams

The eruption of Vesuvius during the summer of AD 79 destroyed Pompeii and Herculaneum and must also have been an unprecedented ecological disaster for the area around the Bay of Naples. The ash falls seem to have covered a wide area and would have had a devastating effect on local agriculture and fishing, as well as disrupting communications and destroying the infrastructure of life. One of the casualties of this vast eruption would have been the local vineyards and it is hard to escape the conclusion that the famous wine industry of the region was all but destroyed. The long-distant transport containers for this wine were the locally made amphorae. These vessels are crucially important in providing direct evidence for the movement of agricultural produce of great economic significance – in this case wine – and Campanian amphorae are found in considerable numbers throughout the Mediterranean, though their distribution stretches much further, from northern Europe to India. Correct identification of the Bay of Naples amphorae is crucial, since given the destruction of the wine-growing areas by the Vesuvian eruption, these vessels become a precise chronological as well as provenance marker. One aspect of these amphorae currently being studied by the writer is their contribution to the Early Roman wine trade with India.

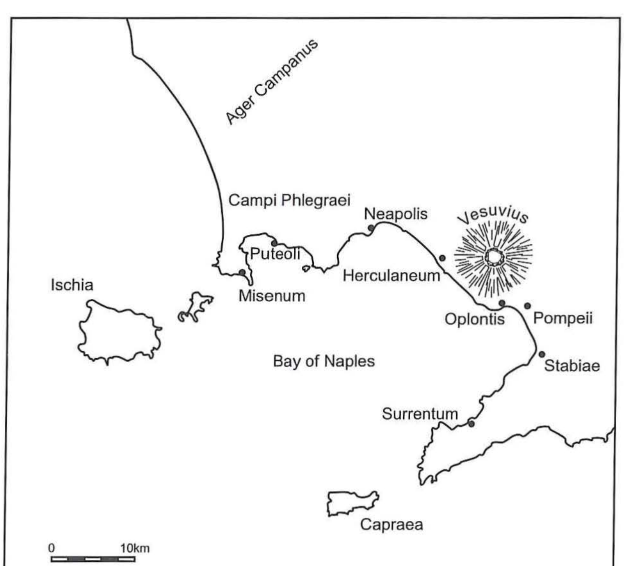

Fig. 1 Map of the area of Campania centred around the Bay of Naples.

The eruption of Vesuvius in AD 79

Explosive volcanic eruptions are spectacular events that occasionally have cataclysmic repercussions. This was certainly true of the two-day eruption of Vesuvius during the 24th and 25th August AD 79 with the accompanying local earthquakes and probable tsunami (Fig. 1).[2] The events on that occasion have been graphically described by Cassius Dio:[3]

"There were frequent rumblings, some of them subterranean, that resembled thunder, and some on the surface that sounded like bellowings; the sea also joined in the roar and the sky re-echoed it. Then suddenly a portentous crash was heard as if the

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[1] I would like to thank Helen Williams for help with the research, and Drs. Barbara Davidde and Roberto Petriaggi for permission to mention the petrological results from Qana prior to publication in the excavation report. Also the Institute of Archaeology, London, for permission to view the Arikamedu amphora sherds in their collection. Penny Copeland kindly drew the illustrations.

[2] Scandone *et al* 1993.

[3] *History of Rome* 66.22.

mountains were tumbling in ruins; and first stones were hurled aloft, rising as high as the very summits, then came a great quantity of fire and endless smoke, so that the whole atmosphere was obscured and the sun was entirely hidden, as if eclipsed. Thus day was turned into night and light into darkness. Some thought that the Giants were rising again in revolt (for at this time also many of their forms could be discerned in the smoke, and moreover, a sound as of trumpets was heard), while others believed that the whole universe was being resolved into chaos or fire. Therefore they fled, some from houses into the streets, others from outside into houses, now from the sea to the land, now from the land to the sea; for in their excitement they regarded any place where they were not as safer than where they were. While this was going on, an inconceivable quantity of ashes was blown out, which covered both sea and land and filled all the air. It wrought much injury of various kinds, as chance befell, to men and farms and cattle, and in particular it destroyed all fish and birds. Furthermore, it buried two entire cities, Herculaneum and Pompeii, the latter place while its populace was seated in the theatre. Indeed, the amount of dust, taken all together, was so great that some of it reached Africa and Syria and Egypt, and it also reached Rome, filling the air overhead and darkening the sun......These ashes, now, did the Romans no great harm at the time, though later they brought a terrible pestilence upon them."

The eruption of Vesuvius completely destroyed the small towns of Pompeii and Herculaneum but must also have been an unprecedented ecological disaster for the whole area around the Bay of Naples. The pyroclastic flows and ash falls seem to have covered a wide area and would have had a devastating effect on local agriculture and fishing, as well as disrupting communications and destroying the infrastructure of life. Explosive volcanic eruptions can have a devastating effect even at a considerable distance, and regions outside of the main area of activity are often affected. Thus, in 1783 the Icelandic volcano Skaptar-Jökull threw so much ash into the air that crops were destroyed in Caithness, 600 miles away, and 100 years later that year was still spoken of as the 'year of the ashie'.[4] Sigurdsson *et al.* (1982; 1985) have closely studied the distribution of windblown ash from the AD 79 Vesuvian eruption and it is clear that it was carried southwards by a prevailing northerly wind over the Campanian coast. Fig. 2 is an isopachyte (bed thickness) map of the distribution of the ash. The critical fall thickness is 10 mm, because this is sufficient to damage crops and to prostrate hay and wheat.[5] Anything above that causes a proportionate increase in destruction. The map demonstrates the extensive impact of the eruption on the Sorrento peninsula and southwards along the coastal plain of Campania. There are two distinct types of ash fall: the low level ash clouds carried by the wind and in contrast, the high level stratospheric ash, which we learn reached Rome, causing some unspecified pestilence at a later date. These ash falls would undoubtedly have had a serious effect on agriculture over a wide area of central southern Italy.

It is hard to demonstrate the effect on northern Campania because this would have been affected later by the fall of high-level tephra, but it would be unreasonable to assume that the region escaped completely. By the same token, it is reasonable to assume that the fishing industry of the Bay of Naples would have suffered and that port installations of, for example, Pozzuoli, would have been damaged by the tidal wave. This is hinted by Dio, but more explicitly described by Pliny the Younger.[6] Overall, the damage from Vesuvius, earthquakes and the sea must have been extensive, because Titus appointed two ex-consuls, *Curatores Restituendae Campaniae*, to supervise the restoration work and inheritance questions raised by the deaths of such large numbers of people.[7] How long the effects lasted is hard to ascertain but certainly by AD 92 the poet Papinius Statius was trying to convince his wife to return to Naples to live,[8] which suggests that at this time the town, situated to the northwest of Vesuvius, had sufficiently recovered from the eruption. It is extremely unlikely that the worst affected areas would also have recovered at this date, and Pompeii and

[4] Geikie 1882.
[5] Blong 1984, 319.
[6] *Letters* Book VI, 20.
[7] Scandone *et al* 1993.
[8] *Silvae* 3.5.

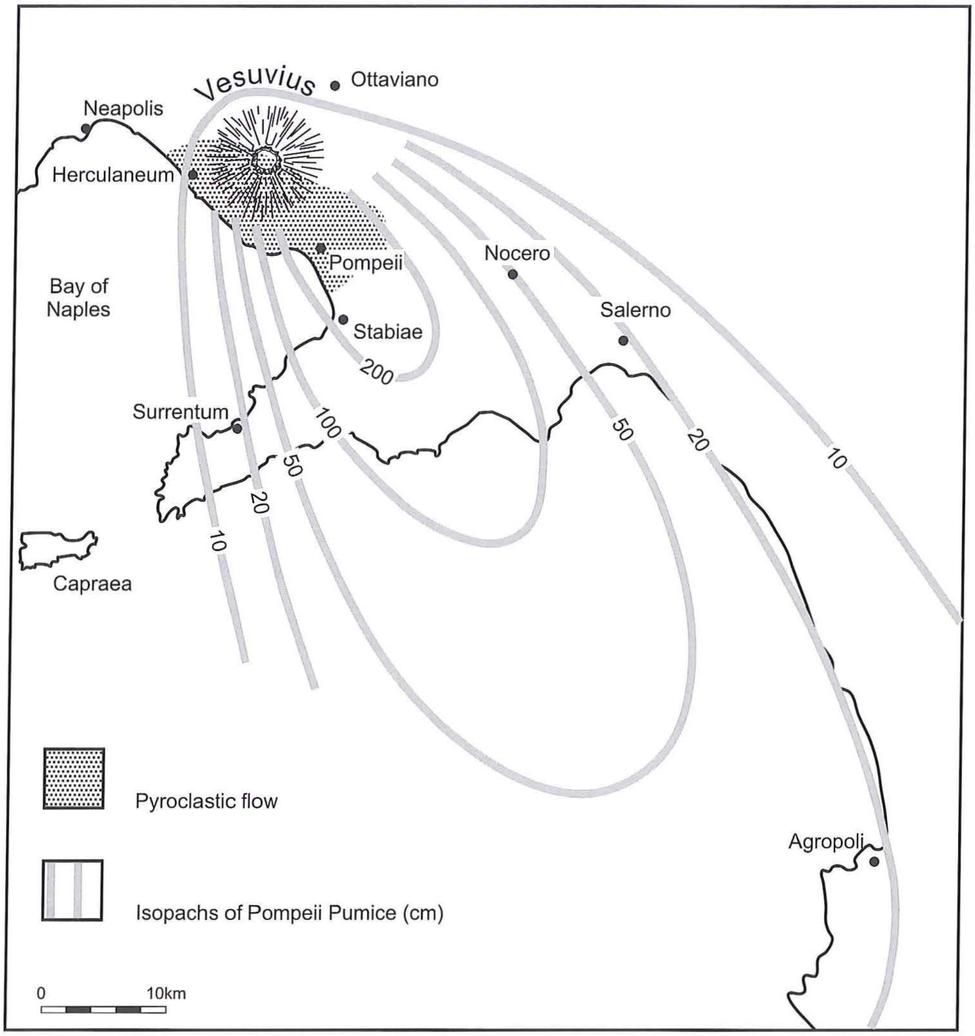

Fig. 2 Isopachyte map of the distribution of wind-blown ash from the AD 79 eruption of Vesuvius (After Blong 1984, fig. 2.12 top).

Herculaneum lay buried under thick layers of ash and pumice until their re-discovery a few centuries ago.

One of the casualties of this vast and devastating eruption would have been the local vineyards and it is hard to escape the conclusion that the famous wine industry of the region was all but destroyed. Clearly, organisations such as that of *Eumachius*, who was probably based at Pompeii, would have been decimated, though it has been suggested that production by this firm may already have declined before this date.[9] It should come as no surprise, therefore, to learn that Campanian wine imports to Rome suffered a drastic reduction in quantity after the AD 79 eruption.[10] Tchernia suggests that the following winter would have been a hard one for drinkers,[11] a view echoed by van der Werff and Parker.[12] However, this statement grossly underestimates the impact of the disaster and its effects on all aspects of local life. The long-distant transport containers for southern Campanian wine were the locally made amphorae. Amphorae are crucially important in providing direct evidence for the movement of agricultural produce of great economic significance

[9] Panella & Fano 1977.
[10] Widemann 1987.
[11] Tchernia 1986a, 230.
[12] Werff 1989, 357-376; Parker 1990, 325-331.

– in this case wine – and Campanian amphorae are found in considerable numbers throughout the Mediterranean, although their distribution stretches much further, from northern Europe to India. Correct identification of the Bay of Naples amphorae is important, since the destruction of the wine-growing areas by the Vesuvian eruption has made them an important chronological, as well as provenance, marker.

Campanian Dressel 2-4 amphorae

The most important Campanian transport amphora in use during the first century AD was the Dressel 2-4 form.[13] This amphora is readily recognisable, having a simple beaded rim, sharp carination on the shoulder and a cylindrical body leading to a solid, slightly flared, spike (Fig. 3). The long bifid handles are particularly distinctive, consisting of two joining-rods, which may split when found as broken fragments. Dressel's classification includes some variety in shape, but his types 2, 3 and 4 seem to comprise a roughly homogeneous group.[14] Like most amphorae, this form carried a variety of liquid and solid goods, although inscriptions show that in a majority of cases the content was wine.[15] The average capacity of a typical vessel is just over 25 litres.[16] The Dressel 2-4 shape evolved from the double-handled amphora made on the Greek Island of Kos from around the third century BC onwards.[17] The distinctive western Mediterranean adaptation of this Greek form appears to have been first made in Italy during the first half of the first century BC, at a time when the larger, heavier, Republican Dressel 1B amphora form was still being produced.[18] The Italian Dressel 2-4 form seems to have had a long period of production, for it was still being made, albeit in small numbers, at the beginning of the third century AD.[19] The reason for this adoption of a Greek amphora shape for the Roman market is not entirely clear but may possibly reflect a change in drinking habits at the time and a preference for Koan-type wines, which, according to Cato,[20] involved soaking the sun-dried grapes in sea water.[21] An added advantage of the new Dressel 2-4 form was that it was considerably lighter than its forerunner Dressel 1B, with much thinner walls and a more beneficial capacity/weight ratio.[22]

The distinctive form of the Dresssel 2-4 amphora makes it fairly easy to recognise, even in fragmentary form.[23] However, it can be problematic to determine the origin of individual vessels, for the popularity of the form meant that it was made in many of the wine-producing regions of the Roman world.[24] The more important non-Italian production areas in the western Empire include Catalonia and Baetica in Spain[25] and southern France.[26] In those many cases where nuances of the Dressel 2-4 form are lacking or when one is dealing with a non-distinctive body-sherd, an examination of the fabric is often the only way to suggest the origin. For the majority of amphorae, fabric analysis has to be undertaken by petrological or chemical means to try to diagnose origins or, in the absence of distinctive fabrics, at least to restrict the possibilities of sources. Unfortunately, there are very few individual amphora fabrics that can readily be identified by a simple visual observation. Perhaps the three most common types, and certainly in the western Mediterranean, are the "granitic" fabrics of the Catalan region of North-east Spain, the gritty heterogeneous Dressel 20 fabric from the Guadalquivir valley and the "black-sand" fabric of the Bay of Naples region of Italy.[27]

It is the distinctive "black-sand" fabric, which concerns us here. It has its name from an abundance of small glassy dark-coloured grains of pyroxene and associated volcanic material, scattered

13 Peacock & Williams 1986, Class 10.
14 Dressel 1899, pl. II.
15 See Sealey 1985, 42-47 for details.
16 Peacock & Williams 1986, table 1.
17 Grace 1979b, figs. 56-59; Whitbread 1995, 81-106.
18 Tchernia 1986a.
19 Freed 1989.
20 *De Agri Cultura* 112; see also 24 and 105.
21 Peacock & Williams 1986, 24; Unwin 1991, 103.
22 Peacock & Williams 1986, table 1.
23 Ghisotti 1996, pls. A, D-F.
24 Martin-Kilcher 1994.
25 Beltrán Lloris 1970.
26 Laubenheimer 1985.
27 Peacock & Williams 1986, Classes 3, 10 and 25.

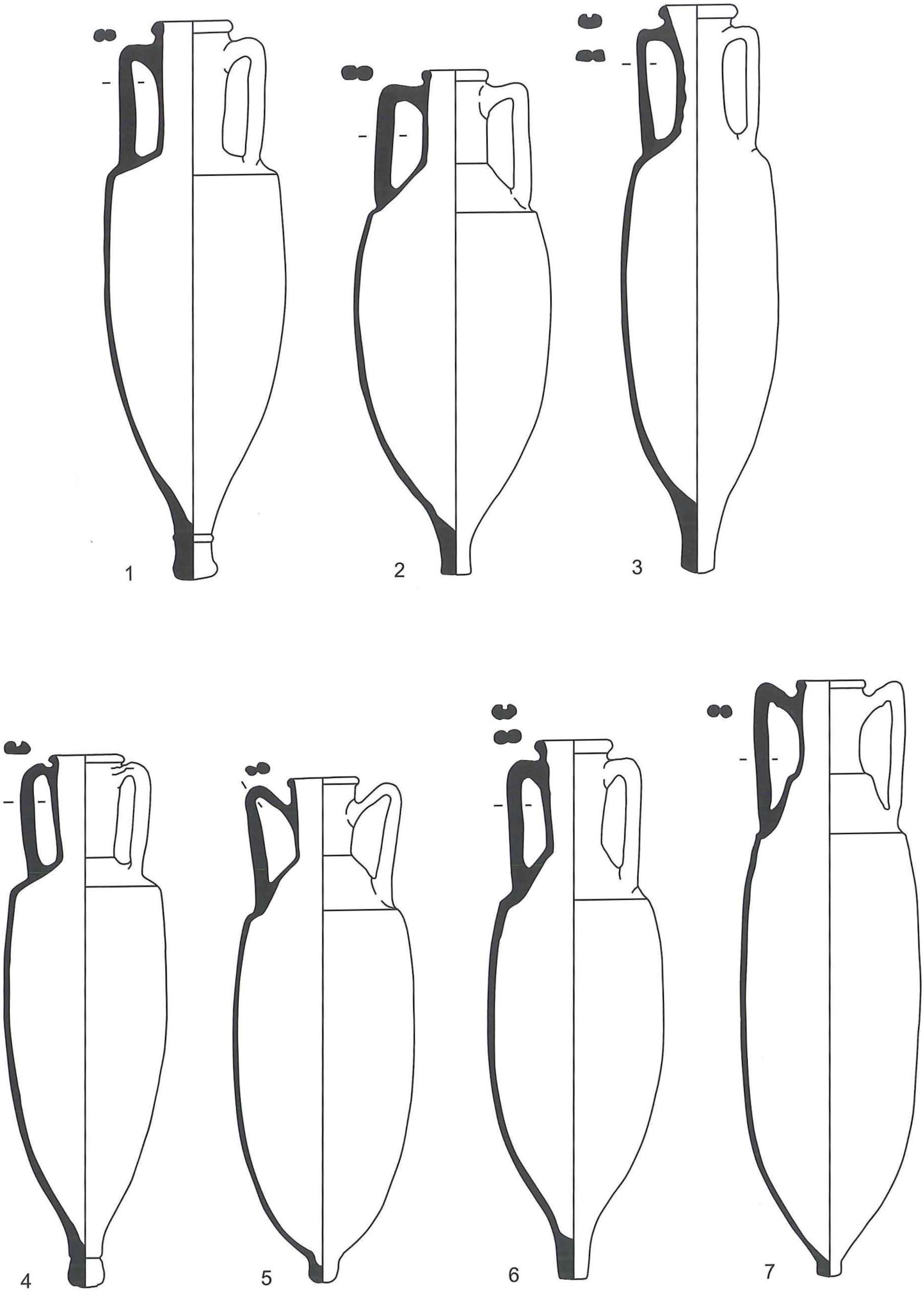

Fig. 3 Varieties of the Dressel 2-5 form (After Martin-Kilcher 1994, fig. 120). The typical "Pompeiian type" is no. 2.

throughout the clay of the vessel. As pyroxene is commonly associated with many of the volcanic formations stretched out along the Tyrrhenian coastal area north of Naples, a source or sources for this particular fabric might in theory occur anywhere in the region. However, although some of the known amphora production sites included in this wide area also produced fabrics containing pyroxene, the Bay of Naples clays/tempers, and in particular the area around Pompeii and Herculaneum, are sufficiently distinct to ascribe sources with confidence.[28] Moreover, Thierrin-Michael's petrographic work on Italian Dressel 2-4 included samples of "black-sand" amphora stamped by *L. Eumachius*, who is known to have been a prominent citizen of Pompeii.[29] It seems highly likely, therefore, that the "black-sand" fabric can be associated with ceramics from the Bay of Naples and the Dressel 2-4 amphora, made of these visually distinctive clays, would in all probability have carried wine produced in the region.[30] However, undiagnostic amphora body sherds in this fabric can sometimes prove difficult to ascribe to a particular form, since similar clays/temper were also used for Late Republican amphorae Dressel 1A and 1B.[31]

If it is accepted that the "black-sand" amphorae fabric is characteristic of the Bay of Naples, it becomes almost inevitable that the production of such amphorae would have been effected by the catastrophic eruption of Vesuvius in August of AD 79. However, it is interesting to note that Jongman argues that while Pompeian wine appears to have been somewhat mediocre, Sorrentine wine was much better.[32] He suggests that the bulk of Dressel 2-4 amphora production of the region was destined to contain this type of wine. The Sorrentine vineyards would of course have been directly in the line of the tephra fall and been similarly affected by the eruption. It is also noteworthy that the decline in Italian production during the Flavian period may have necessitated supplementation of the wine supply with imports from Gaul. If Widemann is right in ascribing it to the eruption of Vesuvius in AD 79, the devastation must have also been very widely felt over an extensive area of Italy.[33]

"Black-sand" Dressel 2-4 amphorae are commonly found on many Roman sites of the first century AD in northern Europe. They all show a fairly uniform picture of small but significant numbers up to *c.* AD 70 and then falling off sharply in the latter part of the first century AD. In Britain, "black-sand" amphorae occur on a range of late Iron Age pre-Roman sites in the south of the country[34] and are also found on Early Roman sites following the conquest of AD 43. They occur in small numbers at Colchester-Sheepen, AD 43-60/61,[35] but are not found in late first century AD contexts at Colchester.[36] In London, they are found during the period AD *c.* 50-70, but generally not much later.[37] This picture is repeated at the palatial villa complex at Fishbourne, where "black-sand" fabric amphorae are relatively common in contexts dated AD *c.* 65/70 and earlier, but are rare in later deposits.[38] This same picture is repeated on the northern frontiers of the Empire, where "black-sand" amphorae are found at the Swiss forts of Augst and Kaiseraugst in levels dated AD *c.* 30-70 and not much later.[39] This pattern is repeated at other Early Roman sites in Switzerland,[40] and on the frontier forts of Germany,[41] while at Nijmegen in Holland stamped amphorae of *L. Eumachi* are generally Neronean or slightly later in date.[42]

Overall, it is hard to escape the conclusion that the southern Campanian wine industry may have been all but destroyed in AD 79 and the "black-sand" amphorae in particular ceased to be produced either because the kilns were destroyed or because there was no longer a need for such containers. If it is so, the "black-sand" fabric is an important chronological, as well as provenance, marker. One

28 Peacock 1977; Thierrin-Michael 1990.
29 Thierrin-Michael 1990.
30 See also Panella & Fano 1977.
31 Peacock & Williams 1986, Classes 3 and 4.
32 Jongman 1991, 127.
33 Widemann 1987.
34 Peacock 1971, Fabric 2.
35 Sealey 1985, Part IV.
36 Symonds & Wade 1999.
37 Davies *et al.* 1994, 21.
38 Williams forthcoming a.
39 Martin-Kilcher 1994, 340.
40 Thierrin-Michael 1992.
41 Panella 1981.
42 Werff 1989, 357-376.

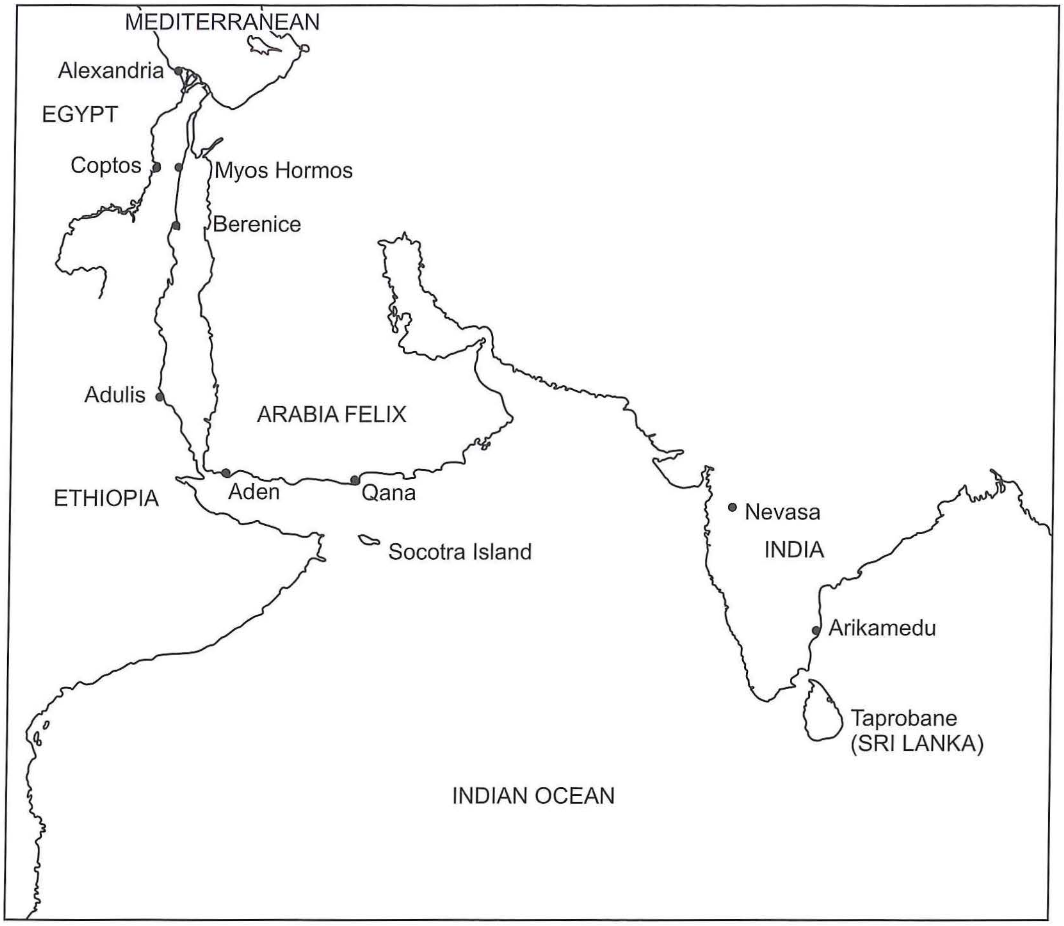

Fig. 4 Map of the area of the Red Sea and Indian Ocean.

aspect of these amphorae currently being studied by the author is their contribution to the Early Roman wine trade with India.

The Early Roman Wine Trade with India

We know from various literary sources that Italian wine formed an important element in the cargoes that were shipped from the Mediterranean to India via Egypt and other stopping-off places in the trade with Arabia and India (Fig. 4).[43] The *Periplus Maris Erythraei*, a seaman's log or diary, written in Greek during the mid-first century AD, was a shipping guide to the market-ports along the coasts of Arabia, East Africa and India. It also mentions the arrival of Roman wine at several ports in North and South India.[44] The archaeological evidence for the trade to India was first stratigraphically discovered by Wheeler at the east-coast site of Arikamedu, on the Bay of Bengal, in the 1940s, where sherds of Roman pottery, including amphorae, were excavated.[45] Since then, Roman amphora sherds have been reported from over fifty other sites in India, the majority situated in the northwest of the country (Fig. 5).[46] The latest finds tend to support Wheeler's view that there was a continuous supply of amphora at Arikamedu, rather than spasmodic contact with the Roman Mediterranean.[47]

[43] Rathbone 1983.
[44] Casson 1989, 39, 49, 56, 60
[45] Wheeler *et al.* 1946.
[46] Gupta *et al.* 2001.
[47] Wheeler 1946, 41-46.

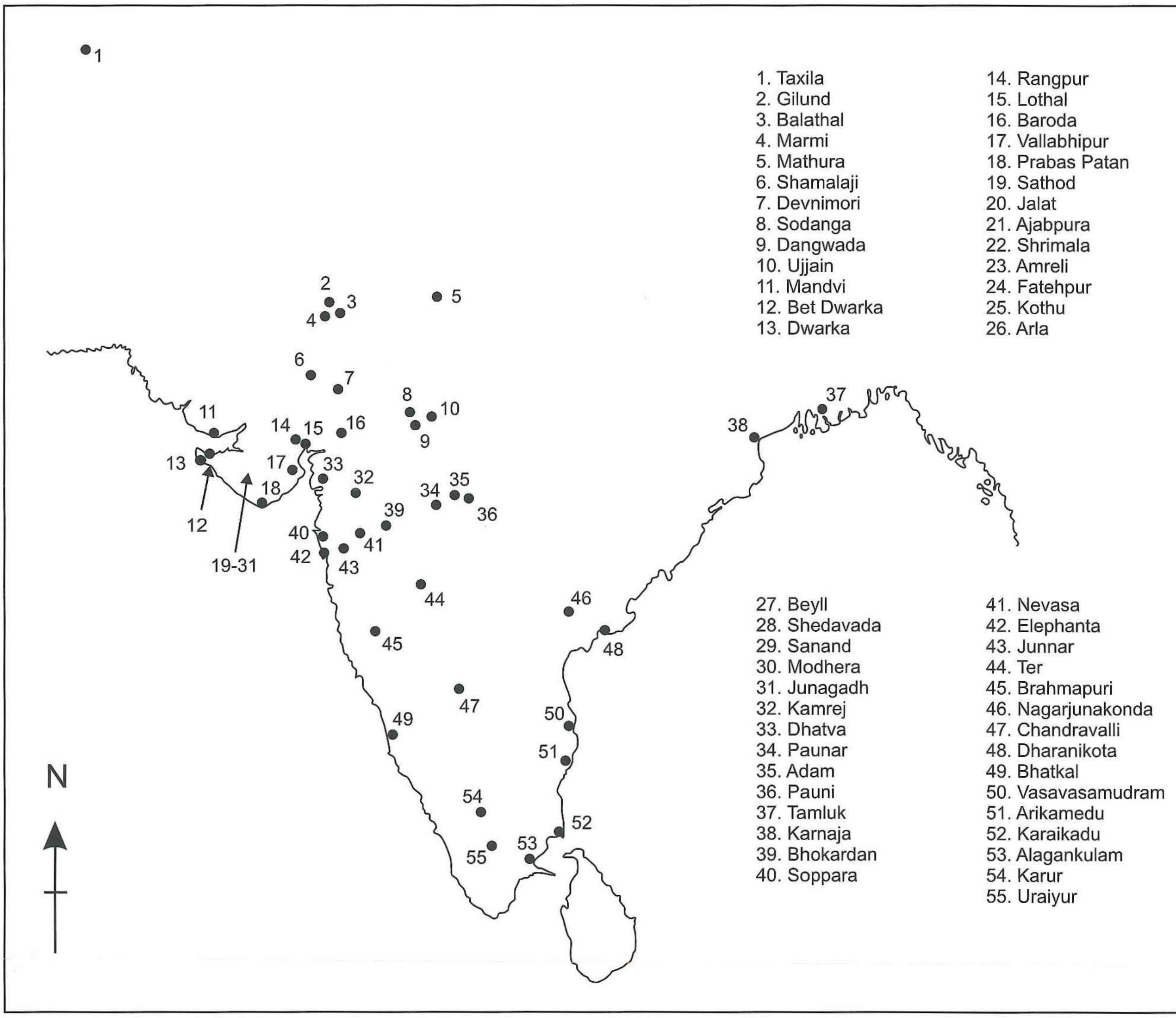

Fig. 5 Find-places of Mediterranean amphorae in India.

An examination of the amphorae from Arikamedu by Lyding Will has suggested that a large proportion are bifid-handled types, and that roughly half of these belong to the Greek Koan form and half are Italian Dressel 2-4.[48] Arthur has recognised the Pompeian "black-sand" fabric at Arikamedu,[49] and I have also seen this fabric present in a small group of amphora sherds from the same site, held by the Institute of Archaeology, London. The notion of a large Italian element at Arikamedu receives some support from my own examination of a selection of amphora sherds from Nevasa, situated on the banks of the River Pravara in north-west India.[50] Sixty-three amphora sherds were excavated from the site and almost all belong to the Dressel 2-4 form, the exception being a peaked handle belonging to the late Rhodian type.[51] Eight amphora sherds from Nevasa were thin-sectioned and studied under the

[48] Will 1991 151; 1996, 321-349.
[49] Arthur 1995, 31.
[50] Gupta *et al.* 2001.
[51] Peacock & Williams 1986, Class 9.

petrological microscope. Two were in the "black-sand" fabric and the remaining six were identified as coming from Italy, probably Campania.[52]

At this juncture it is instructive to mention two additional amphora assemblages, which, although not from Indian sites, nevertheless have a bearing on Early Roman amphora exports to India. The first is from the strategically important ancient port of Qana, located on the South Arabian coast, present day Yemen, near the modern village of Bir'Ali. Excavations at the port have uncovered a wide range of Mediterranean amphorae types covering the period from the first century AD to the fifth or early seventh centuries AD, with a majority from the early phase of the site identified as Dressel 2-4.[53] Recent work in the harbour area has brought to light another assemblage of early amphora forms, many belonging to the Dressel 2-4 type. A limited petrological examination of a selection of this material has shown that these come from a number of sources.[54] However, the majority of the analysed examples, thirteen out of twenty-one, can be ascribed to an Italian source, most probably Campania. Of these thirteen, two vessels are in the "black-sand" fabric associated with production around the Bay of Naples.

The second assemblage is from Quseir al-Quadim, the ancient *Myos Hormos,* which, with Berenice, was one of the two main Egyptian Red Sea ports that channelled the bustling two-way trade between the Roman Mediterranean and the Indian Ocean. Excavation at Quseir by David Peacock in 2000 revealed the early first century AD harbour and wharf area, which appears to have been substantially built of empty amphorae.[55] By far the most common form present is Dressel 2-4. An initial examination suggests that these are Italian and that a significant minority are in the "black-sand" fabric (these comments should be regarded as tentative until the total assemblage is reported on in detail by Dr. Roberta Tomber). This large group of Dressel 2-4 amphora clearly demonstrates that the main export route to India for these vessels went via the Red Sea.

If it is correct to attribute production of the Dressel 2-4 "black-sand" fabric to the Bay of Naples region, then it would seem likely that the exports of these vessels and the wine they contained through the Red Sea and thence eastwards to Qana and India, was carried out prior to the violent volcanic eruption of Vesuvius in August AD 79 (or perhaps a year or two after this date, allowing for vessels already in transit). The bulk export of "black-sand" amphorae re-emerged, but probably not before the third century AD and perhaps from Ischia.[56]

Conclusions

The premise put forward in this paper is that the AD 79 eruption of Vesuvius would not only have had a devastating effect on the vineyards around the Bay of Naples, but in all probability over a much wider area of Campania, with an important and far-flung trade network coming to an abrupt end. This view appears to be re-enforced by the archaeological dating evidence on finds of Dressel 2-4 "black-sand" amphorae from sites in northern Europe, as these vessels would have carried much of the wine produced in the area of Pompeii and Herculaneum. Dressel 2-4 "black-sand" amphorae do not occur very often after the late 70s AD at sites with well-dated contexts and can therefore be looked upon as an extremely valuable chronological marker, not least for the bulk exports of Campanian wine to Arabia and India.

The Italian Dressel 2-4 amphora form found in India could in theory have arrived at any time from the first half of the first century BC to the early third century AD.[57] However, it is unlikely that they would have been shipped to India, at least in bulk, before the attempted Roman conquest of South Arabia in 25 BC. At the other end of the time-scale, the main thrust of the bulk exportation of Italian wine in Dressel 2-4 amphora seems to have been over by the late first century AD.[58] The period between *c.* 25 BC and AD 100 would therefore ap-

52 Gupta *et al.* 2001.

53 Sedov 1996.

54 Williams forthcoming b.

55 Peacock *et al.* 2000

56 Arthur & Williams 1992.

57 Tchernia 1986a; Freed 1989; Arthur & Williams 1992.

58 Tchernia 1986a; Widemann 1987.

pear likely to have seen the main exports of Italian wine in Dressel 2-4 containers to India. However, the "black-sand" fabric of the Bay of Naples region, although not dominant, is certainly present in significant numbers among the export containers. Given the devastation caused to southern Campania by the eruption of AD 79, and the disruption that the event may have had on the production and exports of Campanian wine, many of the cargoes of Campanian wine in Dressel 2-4 containers, "black-sand" or otherwise, were probably exported before the AD 79 eruption.

Punic Amphoras in the Eastern Mediterranean[1]

Samuel R. Wolff

One may think that a discussion of Punic amphoras in the context of the Eastern Mediterranean is out of place, and indeed there is not much evidence of them. Yet a small number has appeared in the archaeological record, many of them yet unpublished. Their presence in relatively few numbers demands an explanation.

Punic Amphoras: a Brief Survey[2]

The earliest shipping containers in the Phoenician settlements in the Central and Western Mediterranean basin were, predictably, Phoenician types; i.e. types identical or similar to those found in Phoenicia. Most of these vessels have short storage-jar bodies with carinated shoulders and loop handles attached at the point of carination. In the sixth century BC, the sack-shaped amphora made its appearance in the Punic world, perhaps developed from the Tyrrhenian amphora. It is from these sack-shaped amphoras that the typical long, cylindrical bodied Punic amphoras developed from the fifth century onwards. Several series of amphora shapes developed in the Western Mediterranean. Two types dominated at Carthage: Maña D/Cintas 315, followed by Maña C/Cintas 312/313. Punic amphoras stand in contrast to Greek and Roman amphoras in that they were cylindrical or biconical; neck-less or with a short neck; had small handles attached to the body, not the neck; were unlined; and were rarely stamped. The Maña D/Cintas 315 probably held a dry commodity, perhaps fish, while the Maña C/Cintas 312/313 was more suitable for a liquid (wine, olive oil or *garum*?).

Attestations in the Eastern Mediterranean[3]

Five types of Punic amphoras appear in the Eastern Mediterranean: Maña/Pascual A4, Maña D (western variant), Maña C, a "tubular" type, and an unclassified variant. In addition, a Punic-type lid has been identified at the Athenian Agora.

Maña/Pascual A4 (Fig. 1) was manufactured in the region of the Straits of Gibraltar. A large number was found, together with fish remains, in the Punic Amphora Building at Corinth, dated towards the middle of the fifth century BC.[4] An additional example of this type was found at Olympia.[5] Several fragments have come to light at Athens at the Agora, dating to 500-480 BC,[6] and

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[1] I wish to express my appreciation to John Lund and Jonas Eiring for their considerable efforts in organizing this conference and for their invitation to participate in the published proceedings, despite not having presented a proper lecture at the conference itself. I am also grateful to Mark Lawall for sharing his vast knowledge of amphoras and Plaka restaurants so willingly; Nicholas Rauh for providing me with Fig. 2, information regarding Punic amphoras at Delos, and reference to Rotroff 1994; Ehud Galili for permission to mention the unpublished "tubular" amphora from the underwater harbor excavations at 'Akko; and Robert Curtis for his comments regarding stoppering and reference to Lesko 1977. I express my thanks to all scholars noted in the text as providers of personal communications. I accept responsibility for any inaccuracies presented here.

[2] For a lengthy discussion of Punic amphoras see Wolff 1986a, 21-106. Certainly, Ramón Torres 1995 provides the most thorough treatment on the subject, but unfortunately it is unavailable to me.

[3] Many more examples have undoubtedly been identified than what is cited here, but I am simply unaware of them. I would be grateful if readers would inform me of additional examples of each type.

[4] Williams & Fisher 1976, 107 and pl. 20:1-2; Williams 1978, 15-20; Munn 1983; Maniatis *et al.* 1984; Munn 2003.

[5] Gauer 1975, 67, pl. 22:3.

[6] Lawall 2001c, also S. Rotroff, pers. comm.

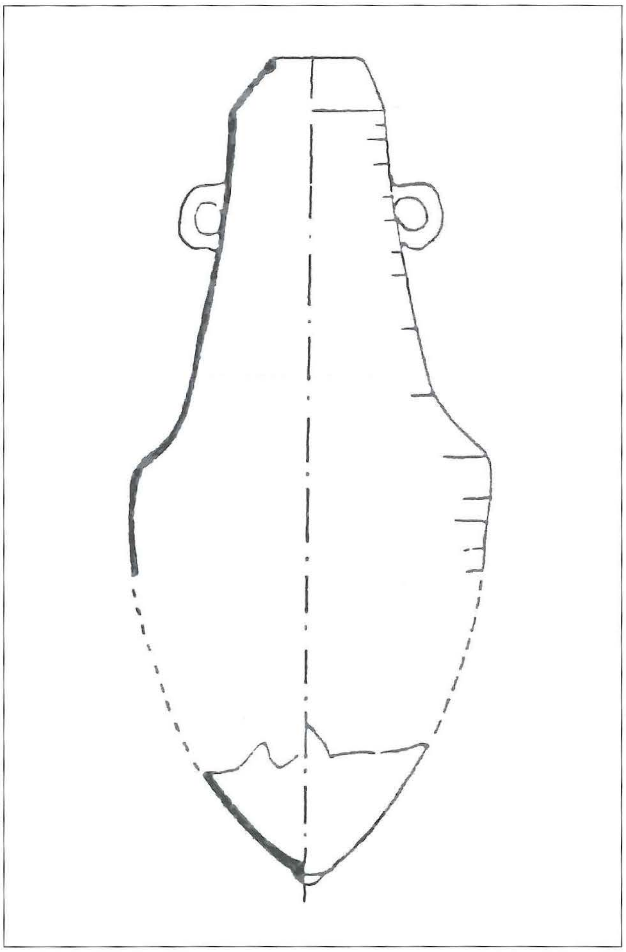

Fig. 1 Maña/Pascual A4 amphora. From Ponsich 1967, Fig. 2,IIb.

from the Kerameikos excavation.[7] Two additional handles from the Athenian Agora have been attributed to this type (or Punic amphoras in general).[8] The eastward route seems to have been fairly direct, from Morocco to the Aegean, with stops in Sardinia,[9] Carthage,[10] Pithekoussai,[11] and Camarina in Sicily.[12]

Maña D (Western variant): In the same context as the vessels noted above at Corinth, and continuing slightly later (*c.* 425 to *c.* 350 BC), were fragments of some sixty Punic hole-mouth amphoras.[13] Their long cylindrical bodies, hole-mouth rims, lack of necks, and button toes warrant their inclusion under the rubric Maña D, but their collared rims are distinctive enough to deserve a sub-type. Zimmerman Munn suggested a provenance in the far-western Mediterranean, as is the case of the previously discussed type, and they may even have arrived at the site in the same ships.[14]

It should be noted that Jully claimed to have identified a Maña D/Cintas 315 amphora in the Rhodes Museum, a claim I have not had the occasion to verify.[15] If his identification is correct, it would be the only example of this type in the Eastern Mediterranean, and perhaps the only vessel to occupy the gap between the fifth- to mid fourth-century amphoras mentioned above and the second- to first-century Type Maña C, discussed below.

Maña C1, C1 variant and C1/2: The ubiquitous Maña C2a (from the Central Mediterranean) and C2b (from the Western Mediterranean) are rarely found in the Eastern Mediterranean. Instead, variant forms appear, almost all late developments of the above (second to first century BC, if not later). The Maña C typology was defined by Ramón,[16] and I have already discussed the relevant types with additional variants.[17] The type has been found at the following sites in the Eastern Mediterranean.

Athens: Several complete or nearly complete examples from the Agora were published by Grace, who dated them from *c.* 200 to the late second century BC.[18] The two earliest examples can be loosely assigned to type Maña C1, while the remainder belong to type Maña C1/2. Dozens of additional examples from contexts in the Athenian Agora, ranging between 220 and 86 BC, have recently been identified by Lawall.[19]

[7] U. Knigge, pers. comm.

[8] Boulter 1953 pl. 40.170 and Rotroff & Oakley 1992, pl. 60:355.

[9] Bartoloni 1988, 60.

[10] Vegas 1987, 377 and pl. 9:171.

[11] di Sandro 1986, 91-99 and pls. 18-22.

[12] Orsi 1904, 847, fig. 58.

[13] Williams 1979, 115-117 and fig. 3; Munn 1983, 268-279; Munn 2003, 201-202.

[14] Munn 1983, 278; Munn 2003, 202.

[15] Jully 1975, 76.

[16] Ramón 1981a, 10-12.

[17] Wolff 1986a, 31-48.

[18] Grace 1956b, fig. 6:2-6.

[19] Lawall in a lecture presented at the Albright Institute of Archaeological Research, Jerusalem, December 2, 2002.

Fig. 2 Maña C1/2 from Delos (Courtesy Nicholas Rauh).

Corinth: One complete Maña C1/2 was found in the Early Roman Cellar Building (last decade of the first century BC).[20] It has a peg toe and profiled rim.

Delos: Several complete but unpublished Maña C1/2 amphoras can be found in the Archaeological Museum on Delos (Fig. 2). Their dates are unknown to me, but the peak of occupation at the site was *c.* 120 to 88 BC, suggesting that the vessels are later than 146 BC. Two apparent Maña C1/2 amphoras, perhaps the same as those mentioned above, were used as water conduits in the *Maison des Comédiens*.[21]

Southwestern Turkey: One complete Maña C2a amphora (but with a squared-off rim, instead of the typical "flying horse" rim) was found in the sea off Bodrum.[22] In addition, several Maña C rim sherds, mostly unpublished, were found at Ephesus.[23]

Israel: A few examples of Maña C amphoras have been identified from excavations in Israel. One rim and neck, stamped with a sign of Tanit, was found at 'Akko.[24] Farther south, several vessels were found in second century contexts at Tel Maresha; these are unpublished but have been noted by Finkielsztejn.[25] In addition, I identified two sherds from the recent Ashkelon excavations, likewise unpublished. The upper third of a Maña C1/2 with a stamp on its shoulder was found at Tel 'Ira, in the Negev in a Byzantine (!) context.[26] Finally, a complete example was discovered in an Early Roman residence in Jerusalem (second half of the first century BC) (Fig. 3).[27] This vessel is similar to Maña C1, but has a peg toe and squared-off rim (*cf.* the example noted above from Corinth).

[20] Slane 1986, 296 and fig. 68:110.

[21] Bruneau *et al.* 1970, pl. 7.

[22] Alpözen 1975, 16; Alpözen *et al.* 1995, 73.

[23] Gassner 1997, 111, no. 412 and pl. 36:412; see also T. Bezeczky in this volume; M. Lawall, pers. comm.

[24] Dothan 1974; Dothan 1976, fig. 30:17.

[25] Finkielsztejn 2000b, 214.

[26] Beit-Arieh 1999, 293 and fig. 6.141:8.

[27] Excavations in the Old City, Jerusalem, Reg. No. 8276/1, *cf.* Avigad 1980, fig. 69, far left.

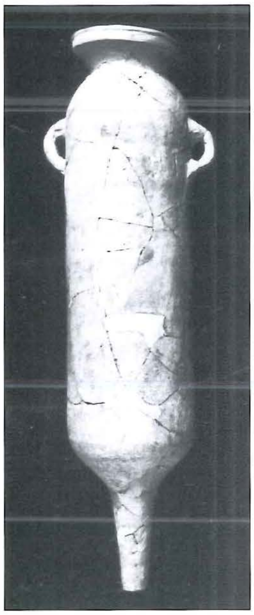

Fig. 3 Maña C variant from Jerusalem (Courtesy of the Jewish Quarter Excavation Publication Project).

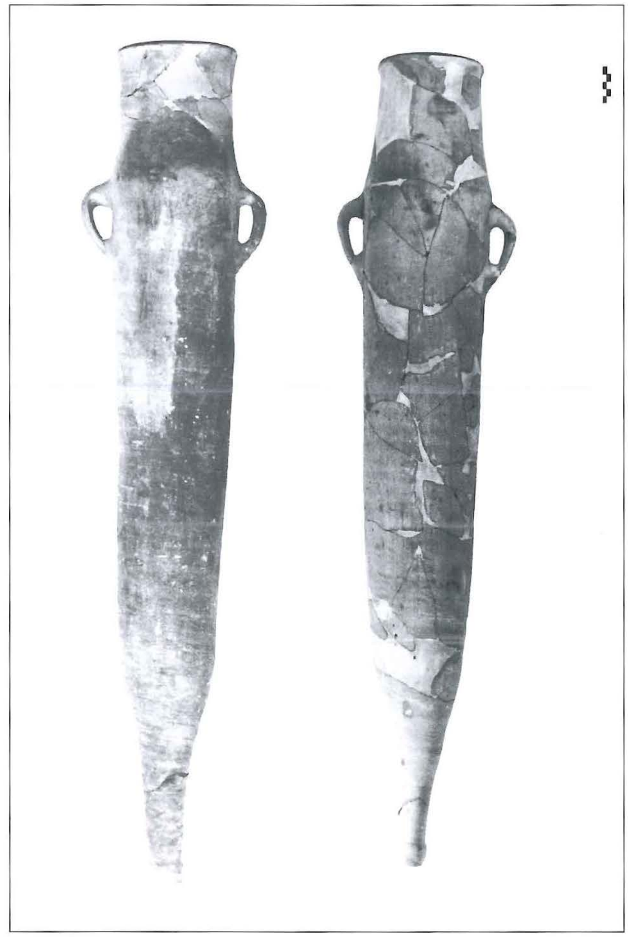

Fig. 4 "Tubular" amphoras from Corinth (Courtesy of Nancy Bookides, Corinth Excavations).

To summarize, most of the Maña C amphoras found in the eastern Mediterranean are of Type C1/2 (or variants thereof) and date to the second century BC (some apparently before 146 BC) and continuing into the first century BC. A striking fact is that many of these vessels were stamped, representing a higher proportion than those found in the central Mediterranean. Could this phenomenon be attributed to Roman influence (see below)?

"Tubular" amphoras: The term "tubular" was coined by G. Finkielsztejn, whereas I called it a Maña C variant (Fig. 4).[28] Its distribution is decidedly eastern (see below); the only examples from the Central Mediterranean were found in the sea off Solunto in Sicily.[29] Finkielsztejn has noted the similarity of the clay (red with white inclusions) with Maña C types from North Africa, and Will likened the clay of toes and handles with C.S. stamps from the Athenian Agora (see below), which all probably belong to this type of vessel, to that of the Tripolitanian African I and II amphora series.[30] Until chemical or petrographic tests can prove otherwise, a North African/Tripolitanian origin for this type should be assumed.[31] "Tubular" amphoras have been noted from the following sites in the Eastern Mediterranean.

Corinth: Two examples, with reference to a third, were published by Romano (Fig. 4). The context dates between 146 and 44 BC.[32] Athens: One example from the Athenian Agora (P26275) is stored in the Stoa basement storeroom.[33] In addition, Will has identified a toe fragment from the Acropolis South Slope excavations stamped with C.S. as the same "tubular" type of amphora from Corinth and elsewhere.[34] She compared the stamp of this toe fragment to the C.S stamped handles published

[28] Finkielsztejn 2000a, 141-142; 2000b, 214; Wolff 1986, 45.
[29] Tusa 1964, fig. 82; Tusa 1971, 267, figs. 4-5.
[30] Finkielsztejn 2000a, 142; E.L. Will, pers. comm.
[31] *Contra* Wolff 1986a, 45.
[32] Romano 1994, 88-89.
[33] Courtesy of Mark Lawall.
[34] Pers. comm.

by Grace and adduced that all three stamps derive from the same type of vessel.[35] Delos: At least one example is found in the Archaeological museum on Delos.[36] The vessel lacks its lower third. For its date see above.

Turkey: One complete vessel was found in the sea off Bodrum. Another vessel may be considered a variant type.[37]

Cyprus: One rim sherd was identified at Paphos.[38]

Israel: One example of this type, complete save its lower extremity, was found in a recent excavation at 'Akko.[39] The underwater harbor excavations at 'Akko yielded an almost identical fragment, lacking its lower third.[40] One possible example was found at Tel Gezer,[41] and several others, one with a monogram graffito, all reused as drain pipes, were unearthed at Tel Maresha.[42] The vessels date to the late second century BC.

Unclassified Variant: Two vessels were found at the Athenian Agora in contexts dating to *c.* 200.[43] They have long, cylindrical bodies, suggesting a Punic derivation, but they sport carinated shoulders, large handles attached at the point of carination, short, non-profiled rims, and are neck-less, all decidedly non-Punic characteristics. The closest parallels come from fourth- to third-century BC contexts at Basilicata, South Italy.[44] Type PE-31 from Ibiza, dated between *c.* 225 and 175 BC, is similar but has a collared rim and a slightly wider body.[45] The provenance and chronology of this type demand further investigation.

Lids (Fig. 5): Koehler published two lids (and noted two other possible examples) of the 'spinning-top' variety from the Athenian Agora (Fig. 5:A-B).[46] They were found just above the floor of the square peristyle building in the southeastern corner of its courtyard,[47] an early second century BC context. The lids have reddish-brown fabric and were covered by creamy white slip. Holes pierce the central 'spindle'. Close parallels, also dated in the first half of the second century, are known from the Byrsa excavations (Fig. 5:C) and the German excavations at Carthage.[48] They range from 8.5 to 11.3 cm in diameter, a size appropriate for a stopper in the neck of Maña C amphoras. The Agora and Carthage examples are identical, leading to the conclusion that

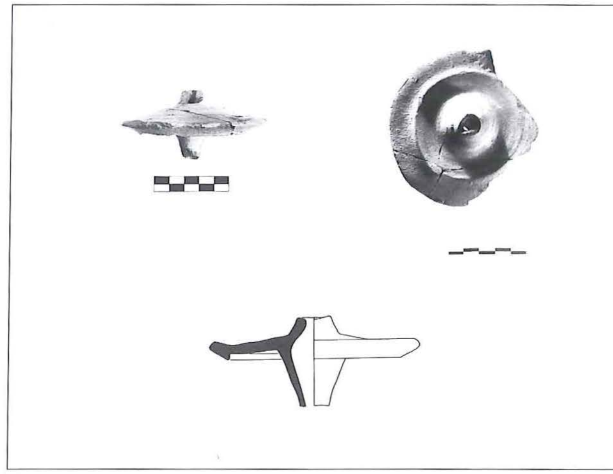

Fig. 5 A,B. Lids from the Agora (Courtesy Agora Excavations of the American School of Classical Studies); C. Lid from Byrsa, Carthage (from Lancel 1982, fig. 26:98).

they have a common origin: based on the fabric it was most likely Carthaginian. Pierced ceramic lids of a slightly different shape have been found associated with Maña C amphoras in several shipwrecks;[49] hence the observation by Koehler that such lids were "not apt to have been used in shipping" seems unfounded.[50] She wrote that the hole in the lid "provided for limited aeration of the contents of the jar, or for gases to escape".[51] It has recently been argued

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35 Grace 1956b, 109 and pl. XII:10-11.
36 N. Rauh, pers. comm.
37 Alpözen 1975, fig. 8,4-5.
38 Hayes 1991, 105-06, with reference to a complete vessel from Crete.
39 Tatcher 2000, fig. 4:2; Finkielsztejn 2000a, 141-142.
40 E. Galili, pers. comm.
41 Macalister 1912, pl. CLXXX.2.
42 Finkielsztejn 2000a, 142; 2000b, 214 and pl. 112:e, g.
43 Grace 1956b, fig. 7:3-4 and pl. XI:1-2.
44 Greco 1979, figs. 2-4, 6-9, 11.
45 Ramón 1981b, 117-118 and fig. 18; Ramon 1991, 124, fig. 49,2 and lam. XXIII,2.
46 Koehler 1986, 54 and figs. 3-4; 1996, 329, figs. 20.3-4.
47 R. Townsend, pers. comm.
48 Ferron & Pinard 1960-61, pl. LXXIV:434; Lancel 1979, 217, fig. 52; Lancel 1982, 32, fig. 26:98; Vegas 1987, fig. 3:29.
49 Wolff 1986, 94-95; Rotroff 1994, 143.
50 Koehler 1996, 329.
51 Koehler 1986, 54.

that this was probably not the case for vessels containing wine, since fermentation gases would have escaped in vats or open jars long before the wine was "bottled",[52] but perhaps a secondary or final fermentation took place during storage. Amphoras from Tutankhamen's tomb, for example, had a small saucer with a pierced hole inserted into the vessel's mouth and sealed around the edges. When fermentation ceased, the hole was sealed.[53] An alternative explanation for the presence of a pierced spindle is that a cord was threaded through it, its end dangling outside, enabling the consumer to remove the lid from the vessel's neck with relative ease.[54]

The Punic Sphere and the Eastern Mediterranean

As far as contacts between the Eastern Mediterranean and the far-western Punic sphere are concerned, one has to consider the long distance involved and indeed be impressed that there were any economic contacts at all. It is true that there existed a pan-Mediterranean trade in the eighth and seventh centuries BC, but it concerned the Phoenician motherland and her colonies and was initiated by a regional superpower, the Assyrians. Such factors did not exist in the Punic period. The fish trade between Morocco and Corinth in Maña/Pascual A4 amphoras was a short-lived exception in the second half of the fifth century, never to be repeated.

Turning to the Central Mediterranean, including Carthage and her territories in Western Sicily, Sardinia and Tunisia, the current archaeological record suggests that, with few exceptions, Punic amphoras and their contents were not exported to the east until the second century BC, and even then in relatively small numbers. The absence of fourth-century Punic amphoras in Greece is somewhat surprising, given that Greek amphoras and Attic black-glazed pottery flooded the Carthaginian market.[55] Since ships do not return empty, we must consider the possibilities that either Greek goods arrived at Carthage via a third port, perhaps to be located in Sicily, or that exchange from Carthage and other Punic ports with the East occurred in products not transported in amphoras.[56] There is a hint of such exchanges in a reference in Hermippus (fourth to third century BC) mentioning the fame of Carthage's carpets and pillows.[57] Obviously, such items do not survive in the archaeological record. Even more significant would be the shipment of Tunisian grain, which may have begun as early as the fourth century BC. Carthage was known to have supplied grain to Rome and Roman soldiers stationed in Greece in the third and second centuries BC.[58] Exchange of grain does not necessarily have to be interpreted as trade or gifts between Punic and Roman polities, but rather as coerced sales.

It is possible that Punic amphoras reached the eastern Mediterranean in larger quantities than we know of at present, at least from the second century onwards, but because of lack of identification and/or publication or opportunities of discovery, they have not come to our attention. An indication that this is a factor is that almost all of the examples cited above are whole vessels. Only when scholars begin dealing with the sherd material, as Lawall has done at the Athenian Agora excavations, for example, will an accurate characterization of Punic presence become apparent. But I doubt that it will add up to any significant amount.

It has been suggested that Punic amphoras were not suited for large-scale, long-distance shipping, and therefore do not occur, nor will they appear in future excavations, in large numbers.[59] This theory should be rejected, based on the observation that

52 Vogt *et al.* 2002, 68 and n. 10.

53 Lesko 1977, 20-21.

54 Rotroff 1994, 143.

55 Wolff 1986a, *passim*; Wolff 1986b.

56 The possibility that Punic amphoras were *vases-marchandises* rather than *vases-récipients* (i.e. vessels whose value was in the pot itself rather than its contents) must be considered, given their frequent use as drain- or sewer pipes on sites throughout the Mediterranean: Wolff 1986a, 97-98, especially n. 285, to which add now Delos: Bruneau *et al.*, *op. cit.*, and Tel Maresha/Marisa: Finkielsztejn 2000a, 142; 2000b, 214. Garlan 1983, 27 has argued that there was no long-distance market for empty Greek amphoras, but shapes of such vessels do not offer the advantages for conveying water that Punic ones enjoy.

57 Knorringa 1926, 76.

58 Greene 1986, 148-149.

59 Rotroff 1994, 142-143.

such containers were shipped to Italian peninsula sites in significant numbers.[60] It is true that few Punic amphoras reached the eastern Mediterranean. A similar distribution pattern exists, however, regarding Italian amphoras in the east until about 106 BC,[61] but no one would claim that these vessels were unsuitable for long-distance shipping. An alternative explanation for the dearth of Punic amphoras in the eastern Mediterranean is offered below.

The key to interpreting the presence of Punic amphoras in the eastern Mediterranean from the third century onward is to recognize that the Punic polity was no longer a major player in Mediterranean commerce. Rather, it was Rome which directed the exports of wine, olive oil and grain to its capital and to the east, both as trade items, perhaps related to the establishment of Delos as a free port in 167 BC, and as supplies for Roman soldiers stationed there, especially after the Second Punic War.[62] In light of the plenitude of Punic amphoras at sites in the Italian peninsula and the limited numbers of Punic (and Italian) amphoras in the east, I suggest that Roman protectionism was the most important operative factor in regulating trade to the east.[63]

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[60] Wolff 1986, 33, n. 32; 47, n. 83.

[61] Lund 2000a, 88-89.

[62] *Cf.* Lund 2000a, 86-87.

[63] *Cf.* Will 1997.

Concluding Remarks

Jonas Eiring, Gérald Finkielsztejn, Mark L. Lawall & John Lund

The contributions to the colloquium covered much territory and, by their very diversity, reflected the complex state of Eastern Mediterranean amphora studies at the beginning of the twenty-first century. One major outcome was the increased awareness of the importance of transport amphorae as a source for ancient history in the widest possible sense.

If we can agree that the ultimate goal of amphora research is to write history, then we must also ask ourselves how to achieve it. The obvious answer is to integrate the field's two current major research trends: the meticulous study of amphora stamps on the one hand and the approach based on a study of finds in quantified contexts on the other. The one line of research simply cannot do without the other.

The aim of the remarks below is to discuss some of the fundamental issues raised by the colloquium, issues that seem central to the future directions of research in transport amphorae of the Eastern Mediterranean. Answers, when offered, will be tentative, and are not intended as final statements, but rather as suggestions that may be developed more fully, perhaps in a series of smaller workshops.

The current health and future state of the discipline

The heading of this section is borrowed from Anthony Snodgrass' assessment of the state of Classical Archaeology in general from the 1980s. There Snodgrass offered a few useful criteria for the health of a discipline: 1) "...major advances occur from time to time in the way the subject is practiced, and, as a result, in the kind of work people actually do...", and 2) "...capacity to maintain a balanced, bilateral relationship with other, superficially entirely distinct, subjects..."[1] The same criteria can be applied to the narrower discipline of amphora studies, and the close of the present volume offers an appropriate venue for assessing the current state of research.

The increased use of scientific methods of provenance determination has advanced the research in the pre-Hellenistic period. Long after Marie Farnsworth's and Pierre Dupont's studies from the 1960s to early 1980s,[2] rigorous studies of fabric characterization are now becoming a standard component of typological research.[3] This advance is, however, slowed by the lingering dominance of the outdated "one-amphora form to one city" paradigm.

Historians have taken some account of research on pre-Hellenistic amphorae, but much of the attention is focused on the very narrow issue of amphora capacities in the Athenian Empire.[4] Trade issues are often cast in terms of Corinth *vs.* Attica in the vase trade, and in terms of the decline of East Greek fine-ware exports.[5] There has been some attention on the part of amphora researchers to those issues of ceramic quantification raised in archaeology more generally, but this interaction with another discipline has taken the form of 'borrowing' rather than 'bilateral' exchange.[6]

For the Hellenistic period two areas of major advance include on the one hand kiln-site studies, which revolutionized the interpretation and dating of Thasian stamps and contributed greatly to our

[1] Snodgrass 1987, 12.

[2] Farnsworth 1964; 1970; Farnsworth *et al* 1977; Dupont 1982; 1983 and 1986.

[3] E.g. for instance Whitbread 1995; Gassner 2000; Doulgéri-Intzessiloglou & Garlan 1990; Seifert 1996; Johnston & de Domingo 1997; Bettles 2003, and see too the on-going research by Dupont (forthcoming).

[4] Mattingly 1981; Barron 1986, Figueira 1998, Finkielsztejn 2002b and forthcoming d. Such a focus in historical studies is very much indebted, first, to Virginia Grace's insistence (e.g., 1949) on the importance of capacity measurements and Malcolm Wallace's ongoing research (e.g. 1986; 1986 and this volume).

[5] E.g. Lateiner 1982, and Dandamaev 1989, 157.

[6] E.g. Arcelin & Tuffreau-Libre (eds.) 1998.

understanding of the amphorae of Knidos, Rhodes and the Rhodian peraea,[7] and on the other the greater attention paid to issues of quantification.[8] On a broader methodological level, however, there has been little change in what is selected for publication and how it is published. The goals of interpretation, moreover, remain with few exceptions minimal.[9] On the negative side, historians have made little use of the changes that have occurred,[10] and Hellenistic amphora research has remained largely isolated from broader debates over artefact quantification in archaeology.

The state of research in the Roman and Late Antique periods is in many ways healthier. The methodological shifts noted for earlier periods – scientific analyses for provenance testing and extensive studies of production sites – are better established in the later periods. Extensive and intensive attention to quantification as a means of contributing to economic history, with research originating in Libya and Tunisia from the 1970s, is now fairly widespread,[11] and progress has also been made in the identification and thorough study of kiln sites.[12] Such work has more generally taken account of quantitative issues in archaeology, and substantive contributions to those broader debates have been made from the amphora side.[13] Post-Hellenistic amphora research also enjoys a 'bilateral' relationship with economic historians with historical debates shaping amphora studies and vice versa.[14]

A further sign of health alluded to by Snodgrass is the readiness for self-criticism and consistent re-examination of hypotheses. Despite the *REG* reviews by Garlan and Empereur (more recently by Garlan), there has until very recently been surprisingly little critical examination of fundamentals in pre-Hellenistic and Hellenistic amphora studies.[15] The assumption that amphora stamps certified capacity has been accepted by many scholars, but with little firm evidence. "One amphora shape to one city" remains an often repeated paradigm despite decades of evidence to the contrary (even the very idea of one city 'imitating' another must assume that such identities were significant for amphorae in Antiquity). Indeed, a very important point emerging from the papers in this volume and from the following comments on specific topics is that many elements of a basic operating paradigm for amphora studies in the Eastern Mediterranean are only now being developed. Those of our colleagues attending the conference, who specialize in the Western Mediterranean, were understandably nonplussed by this state of affairs.[16] At the same time, the extent of discussion here and elsewhere of such fundamental issues is a sign that the development is already underway.

Chronology

If chronology is the backbone of history, the first research objective must be to establish and refine the dating of all amphora classes (Conovici; Finkielsztejn; Koehler & Matheson), and the publications of deposits and contexts are crucial (Lawall; Lungu; Marquié; Nørskov; Timby; Williams).

But what levels of chronological precision and specificity of provenance are necessary to move from documentation of finds to socio-economic history? Here one might contrast the precision of research on Rhodian, Knidian, Thasian and Sinopean stamps with the more general perspectives

7 Garlan, especially 1986, 1993, 1999a and 2000; Debidour 1986; for the area of Knidos, see Empereur & Tuna 1989; Empereur *et al.* 1999; Doğer 1994 and 1996; Doğer & Şenol 1996, and Şenol *et al.* in this volume.

8 Increased attention to methods of amphora stamp quantification is especially clear in recent publications from Pontic scholars, e.g. Кац & Монахов (eds.) 1992; Avram 1996; Conovici 1998, etc.

9 For the Southern Levant, *cf.* e.g. the publications by D.T. Ariel, G. Finkielsztejn and S.A. Kingsley.

10 One exception to this trend is Sartre 2001, with reference to studies by Finkielsztejn.

11 E.g. Riley 1975; Papadopoulos 1989; Rautman 1995; Reynolds 1997-1998; Martin 2000; Rautman 2003, 163-215; Reynolds forthcoming.

12 E.g. Demesticha 2000; Manning *et al.* 2000; Rauh & Slane 2000; Demesticha & Michaelides 2001; Demesticha 2002 and 2003.

13 E.g. for instance Kingsley & Decker 2001.

14 For the Roman West, e.g. for instance Peña 1999; and this practice is not especially new, e.g. Tchernia 1986.

15 E.g. Finkielsztejn's compression of period IV for Rhodes, 2001a.

16 A similar sentiment is expressed by J.-P. Morel in his concluding comments to the Istanbul conference on amphorae and Black Sea trade (1999).

of the later Roman period. In which period has there been a more substantive contribution from archaeology to history? It is impossible to answer that without taking recourse in sweeping generalizations, but it would seem that that the major impact has been on the study of the Roman Empire and Late Antiquity.[17] The picture will likely change as archaeologists and historians gain more confidence in the increasingly precise stamp-chronologies, and as ways are found of incorporating the varying levels of uncertainties into the results. The crucial task is to determine and clarify the levels of precision and certainty related to chronologies of all amphora classes, and seek a balance between the kinds of amphora data that are brought to bear on historical issues and the chronological precision required by those issues.

Another important question is whether the division of amphora studies in the Eastern Mediterranean into three chronological units (pre-Hellenistic, Hellenistic, Roman and Late Antique) is really healthy. In pre-Hellenistic times, the focus of research has largely been on classification according to shapes and, to a lesser extent, fabric, with a goal of very narrowly defined production areas. For the Hellenistic period the focus has largely been epigraphic: producers of the stamped jars are often known with certainty, and the greater concern is with precise chronology. "Ceramic" studies, especially those seeking to classify amphorae without stamps, are extraordinarily rare. For the Roman and Late Antique period the focus is essentially ceramic, dealing with very broad regions of production ("the Aegean") and fairly wide chronological periods. This research trend may reflect actual differences in production and trade patterns during the periods in question, but deserves to be investigated more fully. One may in any event ask whether that is the way research should be carried out. At the colloquium, the contributions were grouped according to geography rather than chronology in order to pose that very question. Conferences, such as this one, which cut across traditional chronological and geographical divisions, should expose specialists in the various sub-fields to potentially useful perspectives from other regions and periods.

Terminology

The lack of a commonly agreed terminology is an impediment to the study of transport amphorae for specialists and non-specialists alike, and is apparent both for general terms[18] and names of individual amphora classes in the Eastern Mediterranean.[19] It is, of course, true that a consensus of sorts has emerged with regard to the names of many classes. Few archaeologists would now, for instance, refer to Late Roman 1 (LR 1) amphorae by any other name, but in other cases matters are more confusing. It is difficult for the uninitiated to guess that the terms Robinson K114, Riley MR 13, Hayes 7, Peacock-Williams 42, Beltrán 75, Ostia I, 451, Ostia IV, 440-441, Bjelajac III, Opaiţ VII and Dyczek 5 all refer to one and the same type of vessel: the Forlimpopoli amphora (Paczyńska & Naumenko).

Typologies in the different periods have been devised with various purposes and audiences in mind. As far as the pre-Hellenistic periods are concerned, an interest in assigning specific shapes to specific cities encouraged the splitting of broad shape classes into multiple types with an immense array of terms. For the Hellenistic period, however, typological studies have been so rare that a common practice is only now emerging: the discovery of what used to be called imitations of forms (or rather adoptions) has raised a new interest in the vessels themselves. Typologies concerning Roman and Late Roman amphorae have traditionally been founded on broad shape classes with only relatively recent interest in subdividing them (or not, as in the case of the continued use of the term Dressel 2-4 to describe almost anything with a double-barrel handle). Specialists are unlikely to lose their way in this maze, but the study of transport amphorae – not to speak of the promulgation of the results – would benefit from the establishment of a "*Conspectus* of Transport Amphorae". Such a work, while retaining sufficient flex-

[17] Contrast, for instance, the impact of amphora studies in Bresson & Descat (eds.) 2001 with Kingsley & Decker (eds.) 2001.
[18] E.g. Lawall 1995, 14-17; Morel 1999.
[19] A valiant attempt to sort out one terminological morass is found in recent work by Pierre Dupont (1998; 1999; 2000 and forthcoming).

ibility to accommodate differing research interests and new discoveries, might codify the recommended terms for each class together with a concordance of alternative terms.

On the 9th and 10th of May 2003 a workshop in Barcelona on *epigrafía anfórica* laid the groundwork for agreement on a future format for the publication of amphora stamps and *dipinti*. For *corpora* of amphora stamps the ideal would be to establish databases (accessible by all) under the umbrella and funding of international institutions, such as the *Union Académique Internationale*. Perhaps something similar is called for with regard to amphora typologies. Such a system should not be static but open to future refinements and the addition of newly recognized classes, and it might well take advantage of the current media technologies, with scholars grouping themselves in permanent "workshops" at protected Internet sites. This actually applies to all topics discussed in these concluding remarks.

Stamps – their purpose(s) and iconography

The study of amphora stamps will always play a central role in fourth-century BC and later amphora studies, and there are still geographical areas (Meyza) and periods (de Vincenz) for which the documentation remains fragmentary. If amphorae in a given class were made in various places, the individual purchaser could not have relied simply on the form of the vessel to identify the product it carried and its likely volume. Stamps, therefore, might have assisted not only at the point of production but also at importing ports and individual retailers. The questions of why certain producers used stamps, what the various 'syntaxes' of stamping indicate, and why some producers rarely or never used stamps, all remain central problems for new research and debate.[20]

The long-standing proposal of a link between amphora capacities or standards and stamping remains an especially active area of research with important new data emerging in recent years (Wallace). The increasing level of standardization of Classical, Hellenistic and later amphorae has been studied only by evaluating the "raw" capacities of the vessels. The Ancients used their own standards of volume and it is important to gain a deeper understanding of how many of the basic standards (e.g. the local *chous* for the Greek world) could be poured into an amphora of a given area and period. Much critical work also remains to be done simply in defining the size of these local units in the Aegean basin.[21] Intimately connected with this theory of stamps indicating the state's certification of the amphora's capacity is the early use of stamps showing local coin types. For this reason, the use of coin types (and not just coin symbols[22]) as amphora stamps in the Classical and early Hellenistic period deserves to be fully examined. The results may also address the question of "sourcing" referred to below. More generally, studies of connections between standardization, craftwork organization and governmental control might open further paths for interpreting the evidence from the Eastern Mediterranean amphorae.[23]

Another promising field of research concerns the iconography of the stamps (Badoud, Garlan & Blondé). These images were not placed on the amphorae by coincidence. They must have held specific meanings for the producer (of the amphorae and/or of its contents) or the consumer, but we are only beginning to decipher the inherent messages.

Sourcing the amphorae

Another crucial issue is the question of the geographical location of the source of a specific class of transport amphorae. True, scientific clay analyses, investigations of kilns and traditional archaeological

[20] Garlan 1999a, 153-172 and *passim*; Finkielsztejn 2002a and 2002b.

[21] Even for Rhodes, the size of a Rhodian *chous* at any point in time is uncertain (Matheson & Wallace 1982, 299-300). The size of a Chian *chous* is based on adjustments made to *sekomata* from Chios on the basis of debatable assumptions about the relationships between standards of volume and standards of coinage (see Lawall 1995, 296 with references).

[22] The famous Chian sphinx stamps seem to differ from their coin counterparts in the arrangement of the forelegs, see Lawall 1995, 108, note 84 with references, and Finkielsztejn 2002b and forthcoming d.

[23] E.g. Costin & Hagstrum 1995; Arnold 1991.

methods have advanced our knowledge in this area greatly in the last decades of the twentieth century (Ballet & Dixneuf; Karadima; Şenol *et al.*). Still, progress has been more marked in some geographical regions than in others, and the Athens colloquium highlighted a question, which has not been paid sufficient attention previously: the production of particular classes outside their primary source area. And the "source area" of a given class is not always defined. Chronological research should help define who created a given form first. Understanding why the form was adopted elsewhere and by whom would definitely contribute to our appreciation of ancient political and economic history.

Investigations of kiln sites and regional surveys have shown that many – if not most – amphora classes were manufactured over smaller or larger essentially contiguous geographical regions (this point is, of course, not surprising for specialists in the western Mediterranean).[24] At times, the source region of a specific amphora class apparently corresponded more or less to a political entity, but in other instances it extended over a wider geographical region. As our understanding of regional production increases, however, narrow correspondences between amphora types and civic units have become increasingly rare (Vnukov). It may be fruitful to think of such inter-regional classes as "a large family of related amphorae", as suggested by Matthew E. Loughton in the case of Dressel 1. He notes the existence of "several distinct types including the Dressel 1 'l'Esterel', Dressel 1 'Spargi', Dressel 1 'Sestius' and the Dressel 1 A/C 'Ruscino'".[25] Much the same might be envisaged for the inter-regional amphora classes of the Eastern Mediterranean.

This neat model is complicated by the observation that certain amphora workshops "imitated" amphora classes from elsewhere on a selective basis (Rauh).[26] In certain periods or in certain areas, it seems that the geographical contiguity of amphora production zones breaks down. This phenomenon, which will not make the job of sourcing amphora finds easier in the future, should be investigated more fully in order to determine 1) where such a production took place, 2) what was its scale, and 3) whether such products were only distributed at a regional level or were marketed more widely. If production was limited and the "pirated knock-offs" were only distributed at a regional level they would not alter the overall picture. A related question is whether we are dealing with plain forgeries or an attempt at marketing a specific product, which was associated with a specific shape. How could a purchaser identify products from different production centres in identical vessels? Perhaps labels and stoppers, generally made of perishable or fragile materials, did provide such information together with shipping documents accompanying the cargo, as evidenced by papyri.

Scientific analyses

Petrological and chemical analyses of amphora fabrics have a long history and are now quite commonplace. Current studies frequently combine fabric analyses and explorations of workshop sites or stamp series. As more and more studies are carried out there is a pressing need for co-ordination of results and sharing of 'old' data.

The intersection of scientific analyses and 'humanistic' research on amphora typologies and chronologies remains an area for continued attention.[27] With increasing recognition of broader regions of production in the pre-Hellenistic and Hellenistic periods, more extensive areas of potential provenance need to be considered and sampled. While fabrics might group together in terms of the statistical similarities of their compositions, the potential geographical spread of the group, i.e. excluding the many other likely candidates, remains a problem to be addressed through wide-scale geological studies and studies of amphorae themselves from a wide range of sites. In this regard the scarcity of publication of amphorae themselves (fragments without

[24] Empereur & Picon 1986 provides the best overview of their prolific results in this area; the papers published in this volume by Karadima and by Şenol *et al.* are further examples of work shedding light on regional production styles.

[25] Loughton 2003, 180.

[26] E.g. for Hellenistic Crete Eiring *et al.* 2002, 61-62; Finkielsztejn 2002b; Vogeikoff-Brogan *et al.* forthcoming.

[27] Whitbread 1995; Bettles 2003.

stamps) has been a major impediment to progress in provenance studies in the Eastern Mediterranean and Aegean. The present volume (Erten *et al.*; Rasmussen & Lund) offers some progress in this regard.

The best means of identifying the source of amphorae will always be the discovery and exploration of workshops and their refuse dumps, which is why it is important to carry out surveys at as many relevant places as possible. Such surveys refine our understanding of local production patterns and techniques and throw new light on the administrative matters involved. The exploration of Thasos is a well-known example.[28]

The use and re-use of amphorae

If transport amphorae are to achieve their true potential as a source for history, it is necessary to give far more attention to their use – and possible re-use – in ancient times. One way of coming to grips with this matter is to scrutinize the contexts in which amphorae are found.[29] The identity of the contents of the amphorae (only one type of commodity or several) should be taken more seriously than has been done in the past (Lund; Vogeikoff-Brogan). Finds from shipwrecks clearly indicate the wide range of possible contents,[30] but more extensive studies of residues should be encouraged.

The patterns of discarding used amphorae – the "normal" destiny of a container, as opposed to the more or less occasional "re-use" – should be understood in sites extensively excavated. One should not be content with residues in "fills" but should ask: "Were there specific dumping locations for used containers in a given settlement?" If not, can the patterns of use or dumping of fragments be discerned?

Much can be said about the question of re-use (Slane), which has often been shunned by amphora researchers. There is plenty of evidence for the re-use of transport amphorae at a local level,[31] for instance as storage vessels. The amphorae found in Room 13 of the Monumental Building U6 at "Panskoye I" were thus re-used as containers of oil and/or grain.[32] *Dipinti* and *graffiti* are indicative of such a re-use.[33] Re-cycled amphorae were used as building material,[34] burial containers for infants and in numerous other ways. However, the question of a systematic large-scale re-use of transport amphorae in inter-regional trade is controversial. There is little positive archaeological evidence for this practice before the time of the Roman Empire,[35] when things may have been different. Papyri suggest that such re-use was practiced on a large scale in Hellenistic Egypt,[36] but it is questionable whether Egypt should be regarded as typical or a special case.[37]

Regional aspects

Good geographical and chronological investigations should not only track evolution and abrupt meaningful changes of the forms of amphorae but also attempt to map their distribution at a regional level (Jacobsen). Even at a local level, such an investigation can lead to conclusions of historical significance (Jöhrens; Lomtadze & Zhuravlev; Papuci-Władyka & Kokorzhitskaya), and the different distribution patterns within a settlement likewise hold important clues to the development and history of the site in question (Ariel, Barker).

This approach is already producing results in the Aegean, and it has been suggested that a tradition of production linked to a political/ethnic group can also be demonstrated in the Levant, where a tradition may be tracked for more than fifteen centuries

[28] Garlan 1986; 1988; 1993; 1999a; Jones 1986; Whitbread 1995.

[29] E.g. Finkielsztejn 2002a.

[30] Carlson 2003.

[31] E.g. Kent 1953, 128; Grace 1962, 108-109; Lawall 1995, 19-20; Garlan 2000, 180 note 28.

[32] E.g. Ščeglov 2002, 53-54; Stolba 2002, 232 ad H 13 and 235 ad H 33.

[33] E.g. Will 2001; Stolba 2002, 235, 237; Johnston 1991 for a thorough analysis of multiple stages of graffiti on a late Archaic Thasian amphora found in Athens; and Lawall 1999.

[34] Punic and Mana C1/2 and tubular amphorae seem to have been re-used systematically as pipes, e.g. in Delos and Maresha, *cf.* Bruneau 1970, pl. 7 and Finkielsztejn 2002a and b; Wolff in this volume. A very extensive consideration of amphora re-use in hydraulic constructions is found in Mattioli (ed.) 1998.

[35] E.g. Lawall 1995, 19 note 14.

[36] Grace & Empereur 1982, 424-425.

[37] Cf. Lund in this volume.

(Regev). Something similar might be argued for the "Greek" amphora – if we use the widest possible definition of this concept. There is no reason to believe that these traditions are founded on ethnicity,[38] but they certainly show that the division between the pre-Hellenistic, Hellenistic and post-Hellenistic periods and also those of modern geopolitical entities are more of a hindrance than a help. Much is to be gained by observing the evolution and breaks in a region's amphora production over prolonged periods of time.

A promising venue for future research is to attempt to define for each site the proportion of local and regional amphorae as opposed to imported "inter-regional" ones (Abadie-Reynal; Aubert; Bezeczky; Göransson; Majcherek; Swan). There seems to have been considerable local variation in this respect, and probably also changes through time. A better understanding of the variations might lead to a better understanding of the position of individual sites in terms of the relative importance placed on agricultural production and exportation (using amphorae), transshipment of cargoes, and dependence on imported amphora-borne goods.

Transport amphorae and trade

Given the role of the transport amphora as the shipping and storage container *par excellence* for much of Antiquity, the lengthy relationship between amphora studies and economic studies is not surprising. The relationship has, however, not been without difficulties: amphora specialists and ancient historians alike have noted the lingering problems encountered when trying to move from amphora studies to economic history.[39]

The most common approach in this area has always been to document the numbers of jars (or fragments, or stamps) from each exporter and from each period of time as found at a series of importing sites. Fluctuations in each exporter's relative presence are then assumed to reflect changing commercial relations between the importer and the exporter. Several papers in the colloquium illustrated important variations on the basic approach (Auriemma & Quiri; Leonard & Demesticha; Malfitana; Opaiţ), variations that have taken increasing account of advances in our understanding of the mechanisms of ancient commerce, whether private or state-sponsored. Broad patterns in trade are beginning to emerge at many sites from the quantification of amphora finds from multiple, clearly defined archaeological contexts. A notable feature of these patterns is the significant presence of amphorae from the local area or from a relatively restricted 'local' region. While this local presence reminds us of the importance of amphorae in short-distance shipping and local storage, the far-flung discoveries of, for example, Rhodian, Knidian or Thasian stamps in the Black Sea, Cyprus, Israel and Lebanon attest to the ability of certain amphora types to break out of the local zones on a consistent basis.

A lingering issue in the study of long-distance shipping (Tomber; Will) is the extent to which the jars attest to direct links between exporter and importer. Textual sources have proven quite helpful in this regard in terms of documenting the rise of Italian and Roman merchants' interests and activities in the Eastern Mediterranean.[40] The people and, hence, the mechanisms behind amphora shipments from less documented exporters, such as those involved with various production sites of Punic amphorae found in the Eastern Mediterranean, remain more elusive (Wolff).

The future

There is reason for optimism for the future of amphora research in the Eastern Mediterranean, even if there is some way to go before the discipline can

[38] For current discussions of this politically fraught concept, see Malkin (ed.) 2001 and Hall 2002. In the Southern Levant, the general use of the so-called bag-shaped amphora in the Hellenistic period does not reflect the mosaic of the ethno-political divisions of the area, described in the introduction to Finkielsztejn 2000b.

[39] Garlan 1999a and b; Davies 2001.

[40] E.g. Müller & Hasenohr (eds.) 2002. On the other hand, there is no text to document the substantial imports of Roman (mainly Brindisian and North African) imports to the Southern Levant, starting in the middle of the second century BC, *cf.* Finkielsztejn 2000b, Lund 2000a.

catch up with the state of affairs in the West (Martin-Kilcher). The state of the discipline is by and large healthy (according to Snodgrass' diagnostics), and the papers presented at the colloquium reflected the diversity of ongoing research, mostly in the form of individual projects rather than co-ordinated broader programmes of research. There should, of course, be room for both approaches in the future, but the latter may provide a better scope for the use and co-ordination of available resources.

It is neither possible nor desirable to draw up a specific agenda for the future of the discipline. However, a number of potential paths have been indicated in the papers in this volume and in our concluding remarks. There will always be a need to focus on specific sites and the detailed archaeological record they provide, but local evidence should be put in a larger perspective on a regional and even inter-regional basis. More collections of stamps from excavations or other sources should be published: the grand-corpus projects have their undoubted value. For the Hellenistic period in particular it is perhaps time to focus just as much on amphorae as pottery, as was previously done on their stamps. It seems that tracking the production and distribution areas of amphora classes will be a good starting point for solving most of the problems addressed above: form and its evolution, fabrics for "imitations", stamping for chronology, prosopography and "imitations" of stamps, as well as standards for patterns of production and administration.

It is crucial to seek out amphorological evidence to answer questions of economic, political and social history. When amphora researchers are able to present studies showing the breadth of conclusions that *can* be drawn from the most modest amphora sherds, field archaeologists will start to pay attention to their amphora fragments as potential sources for the economic history of their site. We should blame no one but ourselves if non-amphora specialists have not sufficiently heeded our results. Therefore, a way must be found to communicate our questions and answers clearly to historians and others, who take part in our common quest.

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