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30

Regional Exchange of Ceramics – Case Studies and Methodology

Panel 5.7

Verena Gassner (Ed.)

Propylaeum
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Edited by

Martin Bentz and Michael Heinzelmann

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PREFACE

On behalf of the 'Associazione Internazionale di Archaeologica Classica (AIAC)' the 19th International Congress for Classical Archaeology took place in Cologne and Bonn from 22 to 26 May 2018. It was jointly organized by the two Archaeological Institutes of the Universities of Cologne and Bonn, and the primary theme of the congress was 'Archaeology and Economy in the Ancient World'. In fact, economic aspects permeate all areas of public and private life in ancient societies, whether in urban development, religion, art, housing, or in death.

Research on ancient economies has long played a significant role in ancient history. Increasingly in the last decades, awareness has grown in archaeology that the material culture of ancient societies offers excellent opportunities for studying the structure, performance, and dynamics of ancient economic systems and economic processes. Therefore, the main objective of this congress was to understand economy as a central element of classical societies and to analyse its interaction with ecological, political, social, religious, and cultural backgrounds. The theme of the congress was addressed to all disciplines that deal with Greco-Roman civilization and their neighbouring cultures from the Aegean Bronze Age to the end of Late Antiquity.

The participation of more than 1200 scholars from more than 40 countries demonstrates the great response to the topic of the congress. Altogether, more than 900 papers in 128 panels were presented, as were more than 110 posters. The publication of the congress is in two stages: larger panels are initially presented as independent volumes, such as this publication. Finally, at the end of the editing process, all contributions will be published in a joint conference volume.

We would like to take this opportunity to thank all participants and helpers of the congress who made it such a great success. Its realization would not have been possible without the generous support of many institutions, whom we would like to thank once again: the Universities of Bonn and Cologne, the Archaeological Society of Cologne, the Archaeology Foundation of Cologne, the Gerda Henkel Foundation, the Fritz Thyssen Foundation, the Sal. Oppenheim Foundation, the German Research Foundation (DFG), the German Academic Exchange Service (DAAD), the Romano-Germanic Museum Cologne and the LVR-LandesMuseum Bonn. Finally, our thanks go to all colleagues and panel organizers who were involved in the editing and printing process.

Bonn/Cologne, in August 2019

Martin Bentz & Michael Heinzelmann

The regional Scale: a new Perspective on Ceramic Exchanges in Campania (8th–6th centuries BC)

Segolene Maudet

Circulations of goods between Campania (fig. 1) and the whole Mediterranean world between the 8th and the 6th centuries BC, as well as along the Tyrrhenian coast, are well attested, making them a very interesting case study for a history of archaic exchanges.[1]

The archaeological documentation is incomplete and fragmentary, even for sites extensively excavated and the vast majority of the known contexts are graves, which complicates the matter even further. It was however possible to conduct a statistical and spatial analysis of the local distribution of some allogenous ceramics[2], thanks to the extensive publication of some areas of the necropolis of Pithekoussai and Pontecagnano.[3]

This article will focus on allogenous ceramics, especially from the regional area.[4] Allogenous means that, on a given site, the researcher has identified with a certain degree of certainty the nature of local production, in terms of paste, technique, ornaments, forms, etc. Some vases that do not fit into this local production may simply be a minor local production influenced by others traditions, whereas some other are identified as allogenous. An allogenous vase had to arrive, at some point, at the site, and this circulation could be interpreted in many different ways. The study of allogenous vases can therefore lead to some very interesting anthropological issues, of economic anthropology as well as of cultural anthropology.[5]

This article aims at exploring some of those complicated issues by focusing on a specific sample of allogenous vases: the impasto[6] productions from Campanian sites during the early Iron Age[7]. I will first clarify the limits assigned here to the Campanian regional space, as well as the importance of this regional scale to study the circulation of ceramics. I will then present the considered sample from Pontecagnano and then conclude with some more general observations.

A regional scale for the study of ceramics

The regional scale, in between the Mediterranean scale and the monographical study of a single site, is a good first step toward synthesis, while allowing for a close analysis of the contexts. This scale can be used in two different ways at least. First, one can study the circulation of some productions from the sites of one region within a regional space. Secondly, the circulation and the reception of foreign goods can demonstrate similarities or differences in the consumption patterns between the regional sites.

The regional scale remains a very subjective geographical level, especially during the Archaic period, when no clear political boundaries existed.[8] The first occurrence of the name *Campani* was refering to people living in the 5th century BC around Capua[9] and the first

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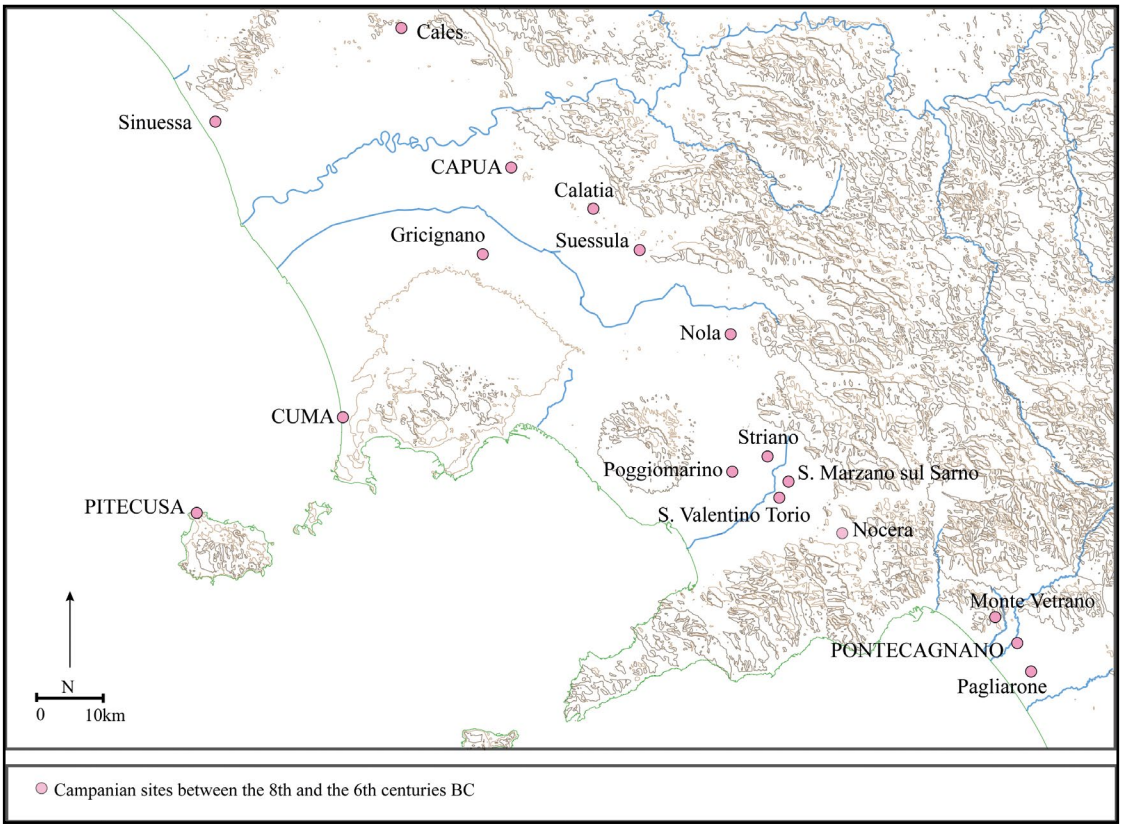

Fig. 1: Campania in the Early Iron Age.

official delimitation of Campania as a region can be traced back to Augustus in the first century. The pertinence of such a regional study between the 8th and the 6th century BC has been demonstrated by various scholars based on archaeological evidence.[10] Cuma, Capua and Pontecagnano share many similarities in material culture and stylistic traditions. The spatial analysis of the circulation of some ceramics could be a way to dynamically define "a" regional space, as I will explain later in this article.

The impasto vases from other regional sites in Pontecagnano during the early Iron Age

Studies on allogenous ceramics have focused for a long time on Greek vases, especially in Campania. The foundation of Pithekoussai and Cuma led to an increasing number of Greek vases arriving in Campanian sites, from those two sites but also from the Aegean area.[11] The regional circulation of those vases from Pithekoussai and Cuma is today well known.[12] Those vases are very different from the previous local impasto production and therefore easy to identify as allogenous in the indigenous sites of Campania.

Here, I would rather like to focus on a less known collection of allogenous ceramics: the impasto vases made in a specific Campanian site but found in some others. I will take Pontecagnano in the early Iron Age[13] as a case-study, since we have a well-established typology of the local production[14] as well as an identification of impasto vases as allogenous in the various publications.

D'Agostino and Gastaldi choose to separate the local types from the allogenous ones in the first publication of three sectors of the western necropolis of the EIA, Greek vases belong to this allogenous category, along with vases from southern Italy with a decoration 'a tenda'.[15] However, we can also find some allogenous vases within the typology of the local production. Gastaldi defines a subtype named 'RNL'[16] for some amphorae, a jug, a pyxis and cups[17] in the publication of the Pagliarone sector. The amphora type 70RNL refers to the 70A2 type or 7A2 type in the 1988 typology[18] (fig. 2)[19]. The information on the specific exemplars[20] seems to show that all of the 70RNL or 7A2 class has an allogenous character, indicating close affinity with productions from sites of the 'Fossakultur'[21], in Campania or in Latium[22]. A pyxis from the Pagliarone sector could also come from Cuma.[23]

The type 7E identifies amphorae probably produced in the Sarno Valley (fig. 2).[24] Three anforischi[25] (fig. 2), but also a jug[26], a goblet[27] and a scodella[28] have probably the same origin.

D'Agostino and Gastaldi attributed some cups with a specific handle to a Capuan production[29], except for one vase of the same type attributed to a Cuma production. An isolated amphora is also attributed to Cuma.[30]

In the absence of archaeometrical analysis, it can be very difficult to precisely identify the origin to those impasto vases, with regional productions looking sometimes much alike.[31] It would also be necessary to study each vase specifically, as well as to revisit the whole sample. New publications have indeed extended our knowledge of impasto production in Campania, especially for Capua[32] and Cuma[33].

It would also be useful to study the presence of this kind of circulation in other Campanian sites. It however implies that the local production is already well defined. In Pithekoussai, the identification of impasto vases was for a long time mostly linked with the issue of an indigenous presence on the island at the time of the arrival of the Greeks[34], or with an indigenous component in the Greek society in Pithekoussai.[35] It was however difficult to distinguish between a local production and impasto vases from other Campanian sites, or even from Etruscan or Latin sites.[36] The striking similarities between the impasto vases of Gricignano, cemetery recently discovered, and those of Pithekoussai, have led to a better understanding of the material culture of the indigenous group of Pithekoussai.[37]

The study of this specific kind of material can give many indications on the regional dynamics in early Iron Age Campania.

First, the proximity between the impasto productions of Pontecagnano, the Sarno Valley, Cuma or Capua can actually be a sign of closeness between those sites. The single fact that it is sometimes very difficult to distinguish between a vase made in Pontecagnano with allogenous influences or a vase made in the Sarno valley, for example, shows how close the material cultures are. To the contrary, vases from the Etruria region or from southern Italy present clearer

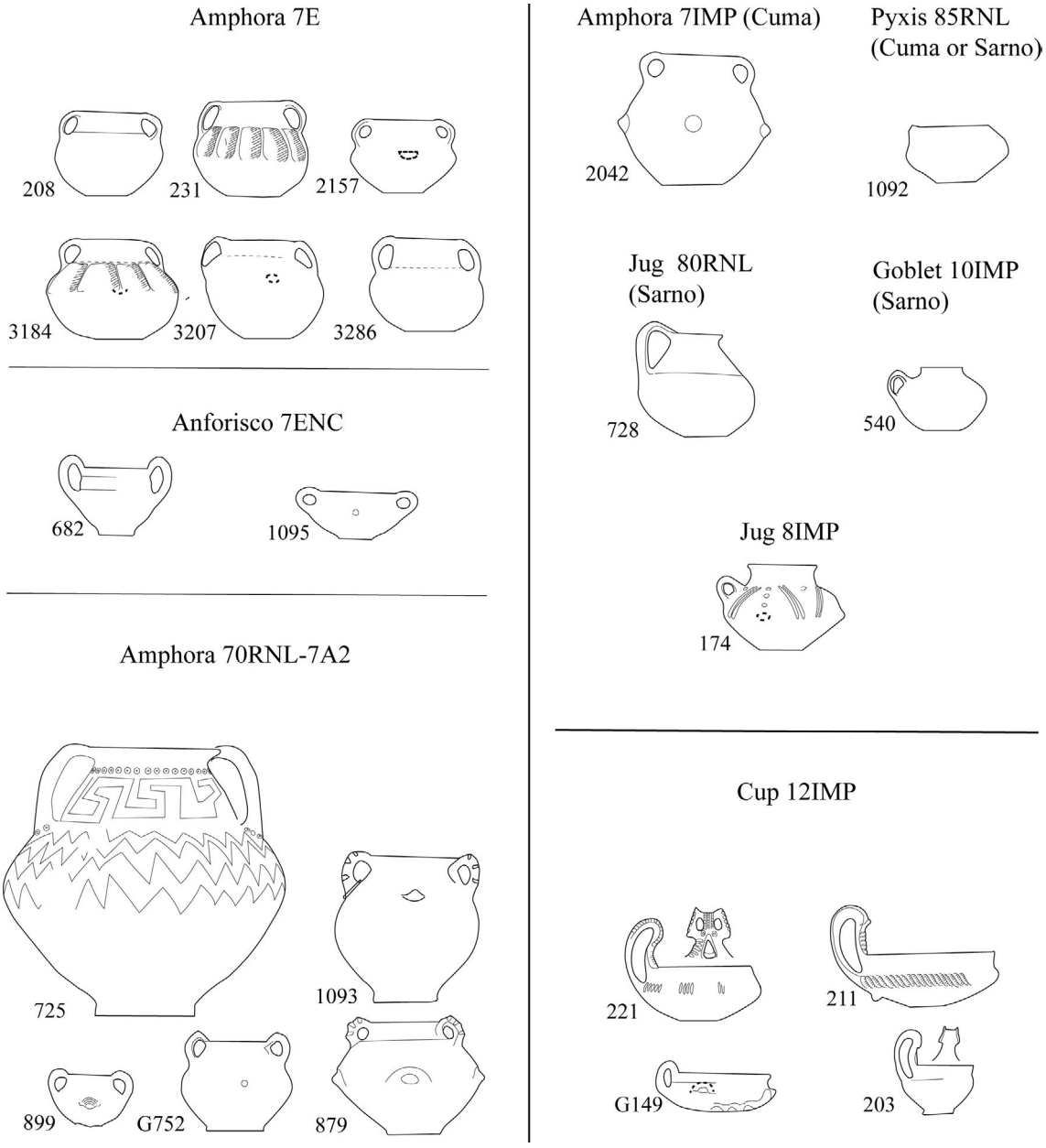

Fig. 2: Impasto EIA vases from Campania in Pontecagnano and Pagliarone.

differences. In a way, this material proximity could be seen as a relative definition of a regional space, where the sites are close enough to have such common traditional handcrafts. This raises the issue of the boundaries of such a regional space. The close affinity between the productions of Cuma and of some sites in Latium is well known, as well as the links between Capua and some proto-Etruscan sites, or even between Pontecagnano and some proto-Etruscan sites. We choose here to consider that the geographic proximity defines a first regional area, from Cuma

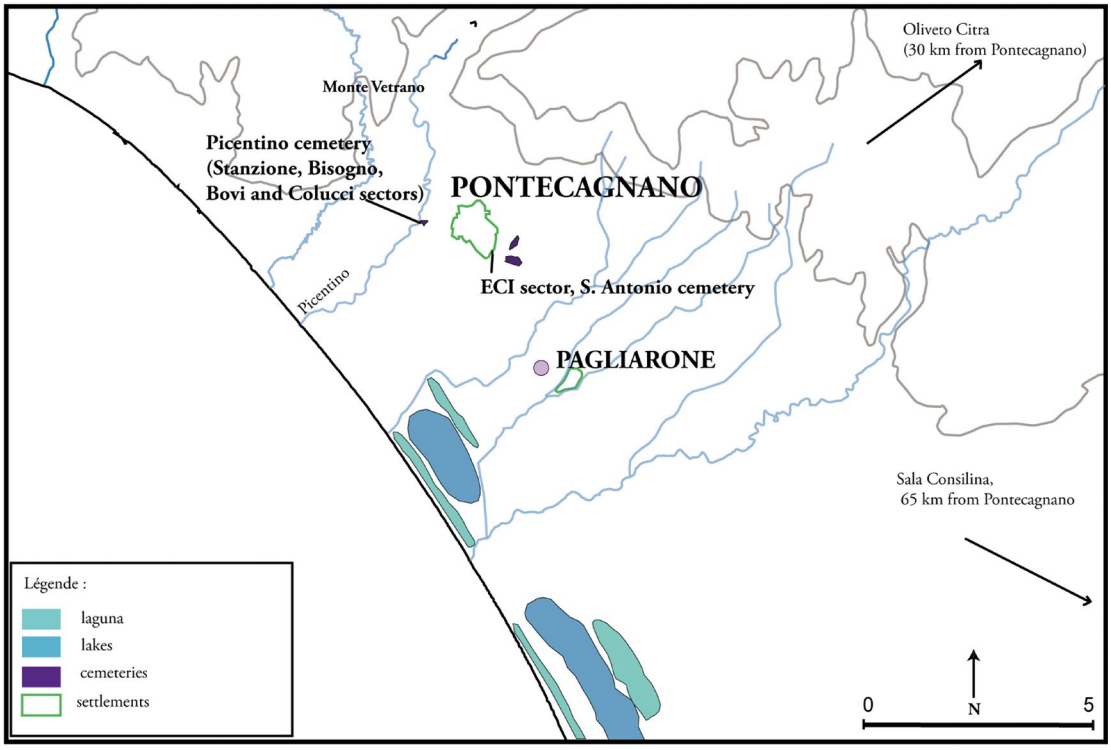

Fig. 3: Pontecagnano and its surroundings in the EIA.

to Pontecagnano. The links between the Campanian sites and other sites such as Sala Consilina, Osteria dell'Osa or Cerveteri are very strong, but a close analysis of the vases circulations between those sites and the Campanian ones showed a different pattern.[38]

The study of the graves, in which such vases were found, and their chronology gives some interesting insights on a micro scale. In the first phase of the EIA in Pontecagnano, between the 9th century and the beginning of the 8th century[39], only one grave in the Pontecagnano site had a regional impasto vase: the 2042 feminine inhumation in the Bisogno sector. A personal mobility might explain it: a young woman from Cuma came to Pontecagnano. The other graves containing such impasto vases from the regional area are in the Pagliarone sector and are mostly feminine graves.[40] It is however difficult to stress a specific pattern: the graves all contained little material aside from the impasto vase and were disseminated in the whole sector.

Because these vases are handmade and without a specific ornamentation, archaeologists have considered that they were of little economic value, and therefore that they cannot have been exchanged for themselves.[41] In this case, a personal mobility could explain the arrival of such a vase. The presence of allogenous individuals in the Pagliarone sector is also attested, with graves attributed to people from Calabria, and also a more mixed pattern in the funerary rituals than in Pontecagnano itself.[42] The Pagliarone area, located near a lagoon, was maybe more opened to strangers, from Calabria, but also from the regional area. The

tradition of weddings as a way to establish and reinforce links between communities is well known, a phenomenon that could explain why most of the concerned graves are feminine. The presence of an allogenous vase is however not necessarily the sign of a person´s mobility. Interpretations must take all elements into account, as always with funerary evidence.[43] One significant example is the 725 grave from Pagliarone, attributed to an allogenous woman from the north of Campania or from Latium. An amphora of the 70RNL type was used as a cinerary urn: it is extremely rare to find an allogenous vase used for such a function, which is why an allogenous origin of the defunct is a possible explanation.[44]

We can trace different forms of regional circulations in the second phase of Pontecagnano, between 780–770 and 740–730 BC. The cups from Capua were in graves showing signs of distinction. Here, it is believed that they are a sign of the economical exchanges between Pontecagnano and Capua, maybe placed in the graves of people belonging to groups engaged in such relations. Capua was indeed a very important site for economical exchanges, located on the road between Campania and Latium. Similar cups have been found in Monte Vetrano[45], a little site close to Pontecagnano, where many allogenous objects were part of the funerary deposits.

The amphorae from the Sarno Valley were located in relatively wealthy graves and were systematically associated with drinking vases.[46] In one case, the 3223 grave of the ECI sector, the amphora was intentionally broken, therefore probably used during a funerary ritual. It is possible that those amphorae were exchanged[47] for their content, maybe a drink. The excavation of Poggiomarino in the Sarno Valley, a site with an important craft component, could bring more information.[48]

In conclusion, the study of those impasto vases from Campania demonstrates the importance of the regional space for economic and social circulations. The identification in progress of those regional impasto vases in each site will soon allow a more complex reconstitution. The presence of an allogenous regional vase in a grave does not mean automatically that it belonged to an allogenous individual. Every abnormality[49], in the deposit or in the funerary ritual, as well as the location of the grave, must be considered. Such circulations of regional vases are mostly confined to the 9th and the 8th century. This chronological limit has to do with a vast modification of the ceramic production in Campania, but also, maybe, to a more global change in the ways of exchanging in the regional space.

Notes

[1] I would like to thank Verena Gassner for giving me the opportunity to present this research in her panel.

[2] Maudet 2016, under revision.

[3] Buchner – Ridgway 1993; D'Agostino – Gastaldi 1988; De Natale 1992; Gastaldi 1998; De Natale 2016.

[4] Perlès 2005, 201. The circulation of metallic ornaments or weapons is also well documented, Maudet 2016.

[5] Perlès 1992; Dietler 2010.

[6] We use here the Italian term "impasto" to refer to a type of coarse pottery, hand-worked, produced in Italy at that time, in opposition to fine pottery, made using a wheel.

[7] EIA in the rest of the text. The EIA in central Italy runs from the middle of the 10th century to the end of the 8th century, when the Orientalizing period begins, Fulminante 2014.

[8] The bibliography on regional spaces delimited thanks to archaeological evidence is extremely vast. On the Italian peninsula, see Bourdin 2012; Blake 2014 and Fulminante 2014. Reger 1994 proposed to study the economy of Hellenistic Delos in such a regional perspective : see Le Quéré 2015, 14–17, referring to Feyel 2006 for a dynamic and network-based definition of a regional space. In the wake of Horden – Purcell 2000, the idea of micro-regional areas has also be highlighted, promoting a relational and connected conception.

[9] Cerchiai 1995.

[10] Beloch 1890; Frederiksen 1984; Cerchiai 1995.

[11] Bailo Modesti – Gastaldi 1999, see also D'Agostino – Gastaldi 1988, 44–48; D'Agostino 1979; Melandri 2011, 298–316.

[12] Mermati 2012.

[13] A general map of the cemeteries is given in Fig. 3, inspired by Pellegrino – Rossi 2011, 206 fig. 125 and Rossi 2004, 229 fig. 3.

[14] D'Agostino – Gastaldi 1988, 17–42.

[15] D'Agostino – Gastaldi 1988, 42–48.

[16] Gastaldi 1998, 59.

[17] The 120RNL type is represented by one vase, a cup from the 2035 grave in the Pagliarone sector, Gastaldi 1998, 133. The cup has very close affinities with vases from Capua but also from Sala Consilina, Gastaldi 1998, 133 note 292.

[18] D'Agostino – Gastaldi 1988, 22–23. Gastaldi 1998, 59, explains in the note 7 that the 70RNL type used to be classified as 70A2, or 7A2.

[19] This original figure was made redrawing vases from the illustrations in D'Agostino – Gastaldi 1988; De Natale 1992 and Gastaldi 1998. The relative heights of the vases have been respected, but there is no uniform scale for the reduction of size. The bibliographical references concerning each vase can be found in this article. The mention of "Sarno" as an origin refers to productions from sites from the Sarno river Valley.

[20] Vases from this type have been found in the following graves : 725, 879, 899, 1093 (Pagliarone), as well as the group of vases found outside a grave, G752, Gastaldi 1998, 59 for the 725 and 879; D'Agostino – Gastaldi 1988, 23 mentioned the presence of the 7A2 amphora type in graves G752, 879, 899 and 1093.

[21] The expression 'Fossakultur' was originally forged in Säflund 1938. It refers to a number of sites of the EIA central and southern Italy, where pit burial is the funerary norm. These sites also share some aspects of material culture, especially in their ceramic production. In Campania, the Sarno Valley, Cuma, Suessula, Calatia, Nola…have been interpreted as 'Fossakultur' sites, Cerchiai 1995, 9–12.

[22] Gastaldi 1998, 103 note 162, referring to the amphora of the 725 grave, explains that this type of amphora is particularly close to some vases of the Osteria dell'Osa cemetery, Bietti Sestieri 1992. The amphora from the 879 grave seems a production from Cuma or, once again, from the Latin area, as indicated in Gastaldi 1998, 122, note 241.

[23] The pyxis from the 85RNL type was found in the 1092 grave, Gastaldi 1998, 131. The vase shows close affinities with exemplars from Cuma but also from the Oliveto-Citra culture.
[24] The type 7E is named "Anfora tipo Cultura delle Tombe a Fosse", but it is immediately explained that the vases are very probably from the Sarno valley, D'Agostino – Gastaldi 1988, 24. The distribution of this type is established as follow in the same page: graves 208, 231 (Stanzione), 610 (unpublished), 2157 (Bisogno). The publication of the ECI sector from Pontecagnano in 1992 added some information: the 7E type is separated in two sub-types, referring to the typology of the Sarno sites established in Gastaldi 1979, 39. New vases are related to this type, from the graves 3207, 3184 and 3286, De Natale 1992, 17. Two new vases from the graves 6523 and 6543 in the Colucci sector have been published in De Natale 2016, 78. 87.
[25] From the 581, the 682 and the 1095 graves. The 581 is unpublished, but the 682 and the 1095 graves are from the Pagliarone area, Gastaldi 1998, 87. 133 (see Fig. 2).
[26] The jug from the 728 grave in Pagliarone belongs to the 80RNL type. The attribution to a Sarno production is made in Gastaldi 1998, 105 note 174.
[27] The goblet from the 540 grave is attributed to a 10IMP type, "from the Sarno Valley", in D'Agostino – Gastaldi 1988, 27. The grave is unpublished.
[28] The scodella from the 727 grave is from the 15IMP type, "probably an importation from the Sarno Valley", D'Agostino – Gastaldi 1988, 34. This grave is published in Gastaldi 1998, 104, with a more nuanced opinion on a Sarno valley origin of the vase.
[29] The 12IMP cup type is described in D'Agostino – Gastaldi 1988, 31, with two vases from Capua (graves 203, 211) and one from Cuma (G149), see Fig. 2.
[30] The amphora from the 2042 grave (sector Bisogno) belongs to a 7IMP type in D'Agostino – Gastaldi 1988, 24, "probably an importation from Cuma", see also 168–169 for the description of the grave.
[31] In the case of the olla of the 3231 grave in the ECI sector, the vase seems allogenous, but it is difficult to identify a specific origin. The form is close to a production from 'Fossakultur' sites, such as those in the Sarno valley, but the decoration is closer to a Capuan production, De Natale 1992, 15; referring to Johannowsky 1983.
[32] See especially Melandri 2011.
[33] Brun et al. 2009; Nizzo 2011 and Criscuolo 2004.
[34] Buchner identified in 1936 an indigenous settlement on the Castiglione hill, that could have been contemporary of the arrival of the Euboeans, Buchner 1936; Buchner – Gialanella 1994, 39–40.
[35] D'Agostino 1999; D'Agostino 2011.
[36] D'Agostino 1999; Cerchiai 1999. The impasto production from Pithekoussai has been revisited in Pacciarelli 1999, in relation with new studies on the prehellenic Cuma. Cerchiai identified some vases from Pontecagnano in the Pithekoussan cemetery, for example a scodella in the 705 grave, Cerchiai 2017, 230.
[37] De Caro 2011; Cerchiai 2017.
[38] See Maudet 2016.
[39] D'Agostino – Gastaldi 1988, 110–115.
[40] It must however be precised that the determination of the gender was mostly based on the funerary deposit, since the remains did not allow the anthropological analysis to determine the biological sex,

D'Agostino – Gastaldi 1988, 258; also Gastaldi 1998, 153. The use of an exclusion principle has improved the results of such objects-based gender determination, see Vida Navarro 1992. I thank Reine-Marie Bérard for this reference.

[41] D'Agostino 1999.

[42] Gastaldi 1994; also Cerchiai 2013, 140–141.

[43] See the method delimited in D'Agostino 1985; recently D'Agostino 2015.

[44] Gastaldi 1998, 103–104.

[45] Gobbi 2011; Cerchiai 2013, 143.

[46] See Maudet 2016 for a more detailed analysis.

[47] De Natale 1992, 17 explains that the scarcity of the attestations of those vases in Pontecagnano makes it very plausible that those amphorae have been imported.

[48] Albore Livadie – Cicirelli 2012 is only a partial publication of those excavations.

[49] In a statistical sense, considering the funerary variability of the graves: see Cerchiai 1999 or recently Cinquantaquattro 2012.

Image Credits

Fig. 1–3: by author.

References

Albore Livadie – Cicirelli 2012

C. Albore Livadie – C. Cicirelli, Poggiomarino 1, 1 (Rome 2012).

Bailo Modesti – Gastaldi 1999

G. Bailo Modesti – P. Gastaldi (éd.), Prima di Pithecusa: i più antichi materiali greci del golfo di Salerno (Naples 1999).

Beloch 1890

K. J. Beloch, Campanien, Geschichte und Topographie des antiken Neapel und seiner Umgebung, von Julius Beloch. Zweite vermehrte Ausgabe (Breslau 1890).

Bietti Sestieri 1992

A. M. Bietti Sestieri, The Iron Age community of Osteria dell'Osa: a study of socio-political development in central Tyrrhenian Italy (Cambridge 1992).

Blake 2014

E. Blake, Social networks and regional identity in Bronze Age Italy (Cambridge 2014).

Bourdin 2012

S. Bourdin, Les peuples de l'Italie préromaine: identités, territoires et relations inter-ethniques en Italie centrale et septentrionale (VIII^{e}–I^{er} s. av. J.-C.) (Rome 2012).

Brun et al. 2009

J.-P. Brun – H. Duday – P. Munzi – M. Torino, Le recenti indagini del Centro Jean Bérard nella

necropoli preellenica, in: Cuma: Atti del quarantottesimo Convegno di studi sulla Magna Grecia, Taranto 27 settembre – 1 ottobre 2008 (Tarento 2009) 355–382.

Buchner 1936

G. Buchner, Note preliminare sulle ricerche preistoriche nell'isola d'Ischia, Boll. Paletnologia Ital. N.S. 1, 1936, 65–93.

Buchner – Gialanella 1994

G. Buchner – C. Gialanella, Museo archeologico di Pithecusae, Isola d'Ischia, Itinerari dei musei, gallerie, scavi e monumenti d'Italia 22 (Rome 1994).

Buchner – Ridgway 1993

G. Buchner – D. Ridgway, Pithekoussai, Monumenti antichi. Serie monografica 4 (Rome 1993).

Cerchiai 1995

L. Cerchiai, I Campani (Milan 1995).

Cerchiai 1999

L. Cerchiai, I vivi e i morti: i casi di Pithecusa e di Poseidonia, in: Confini e frontierà nella grecità d'Occidente: Atti del trentasettesimo convegno di studi sulla Magna Grecia, Taranto, 3–6 Ottobre 1997 (Tarente 1999) 657–679.

Cerchiai 2013

L. Cerchiai, Mobilità nella Campania preromana: il caso di Pontecagnano, in: Mobilità geografica e mercenariato nell'Italia preromana, Annali della fondazione per il Museo Claudio Faina XX (Rome 2013) 139–162.

Cerchiai 2017

L. Cerchiai, Integrazione e ibridismi campani: Etruschi, Opici, Euboici tra VIII e VII sec. a.C. Ibridazione e integrazione in Magna Grecia. Forme, modelli, dinamiche. Atti del LIV convegno internazionale di studi sulla Magna Grecia, Taranto, 25–28 Settembre 2014 (Taranto 2017) 221–243.

Cinquantaquattro 2012

T. Cinquantaquattro, La necropoli di Pithekoussai (scavi 1965–1967): variabilità funeraria e dinamiche identitarie, tra norme e devianze, AIONArch. 19–20, 2012, 31–58.

Criscuolo 2004

P. Criscuolo, I materiali preellenici della necropoli di Cuma. Analisi cronotipologica e interpretazione socioculturale. (PhD Diss. Università degli Studi Federico II Naples 2004).

Cuma 2012

F. Mermati, Cuma: le ceramiche arcaiche (Pozzuoli 2012).

D'Agostino 1979

B. D'Agostino, Le necropoli protostoriche della valle del Sarno. La ceramica di tipo greco, AIONArch. I, 1979, 59–75.

D'Agostino 1985

B. D'Agostino, Società dei vivi, comunità dei morti: un rapporto difficile, DialA 3,1, 1985, 47–58.

D'Agostino 1999

B. D'Agostino, Pithecusa e Cuma tra Greci ed Indigeni, in: La colonisation grecque en Méditerranée occidentale: actes de la rencontre scientifique en hommage à Georges Vallet organisée par le Centre Jean-Bérard, l'École Française de Rome, l'Istituto Universitario

Orientale et l'Università degli Studi di Napoli « Federico II » (Rome-Naples, 15 – 18 Novembre 1995) (Paris 1999) 51–62.

D'Agostino 2011

B. D'Agostino, Pithecusa e Cuma nel quadro della Campania di età arcaica, RM 117, 2011, 35–53.

D'Agostino 2015

B. D'Agostino, Pottery and Cultural Interaction in EIA Tyrrhenian Settlements, in: V. Vlachou (éd.), Pots, Workshops and Iron Age Society : Function and Role of Ceramics in Early Greece. Proceedings of the Internationl Symposium held at the Université libre de Bruxelles, 14–16 November 2013, Etudes d'archéologie (Bruxelles 2015) 231–240.

D'Agostino – Gastaldi 1988

B. D'Agostino – P. Gastaldi (éd.), Pontecagnano. II. La necropoli del Picentino : 1. Le tombe della prima Eta del Ferro, AIONArch. Quad. 5 (Naples 1988).

De Caro 2011

S. De Caro, La necropoli orientalizzante dell'insediamento US Navy di Gricignano d'Aversa (CE), in: O. Paoletti – M. C. Bettini (eds.), Gli Etruschi e la Campania settentrionale. Atti del XXVI Convegno di Studi Etruschi ed Italici, Caserta-Santa Maria Capua Vetere-Capua-Teano, 11–15 novembre 2007. (Pisa 2011) 467–474.

De Natale 1992

S. De Natale, Pontecagnano, II. La necropoli di San Antonio: Propr. ECI, 2. Tombe della Prima Età del Ferro (Naples 1992).

De Natale 2016

S. De Natale, Pontecagnano. II.7, La necropoli del Picentino: tombe della Prima Età del Ferro dalla proprietà Colucci (Naples 2016).

Dietler 2010

M. Dietler, Archaeologies of colonialism: consumption, entanglement and violence in ancient Mediterranean France (Berkeley 2010).

Feyel 2006

C. Feyel, Les artisans dans les sanctuaires grecs aux époques classique et hellénistique à travers la documentation financière en Grèce (Paris 2006).

Frederiksen 1984

M. Frederiksen, Campania (Rome 1984).

Fulminante 2014

F. Fulminante, The urbanisation of Rome and Latium Vetus: from the Bronze Age to the Archaic Era (London 2014).

Gastaldi 1979

P. Gastaldi, Le necropoli protostoriche della Valle del Sarno: proposta per una suddivisione in fasi, AIONArch I, 1979, 13–59.

Gastaldi 1994

P. Gastaldi, Struttura sociale e rapporti di scambio nel IX sec. a.C., in: La presenza etrusca nella Campania meridionale: Atti delle giornate di studio, Salerno-Pontecagnano, 16–18 novembre 1990 (Firenze 1994) 49–60.

Gastaldi 1998

P. Gastaldi, Pontecagnano II.4. La necropoli del Pagliarone, AIONArch Quad. 10 (Naples 1998).

Gobbi 2011

A. Gobbi, Le vie dei fiumi e i traffici del mare. L'insediamento di Monte Vetrano sulle colline picentine, in: A. Campanelli (éd.), Dopo lo tsunami, Salerno antica (Catalogo della mostra, Salerno 2011-2012) (Naples 2011) 188–195.

Hordan – Purcell 2000

P. Horden – N. Purcell, The corrupting sea: a study of Mediterranean history (Oxford 2000).

Johannowsky 1983

W. Johannowsky, Materiali di età arcaica dalla Campania, Monumenti antichi della Magna Grecia 4 (Naples 1983).

Le Quéré 2015

E. Le Quéré, Les Cyclades sous l'Empire romain: histoire d'une renaissance (Rennes 2015).

Maudet 2016

S. Maudet, Les échanges dans la Campanie archaïque (VIII^{e}-VI^{e} siècles av. J.-C.) : essai d'histoire économique à partir du matériel céramique (PhD Diss. Panthéon-Sorbonne Paris 2016).

Melandri 2011

G. Melandri, L'età del ferro a Capua: aspetti distintivi del contesto culturale e suo inquadramento nelle dinamiche di sviluppo dell'Italia protostorica, BARIntSer 2265 (Oxford 2011).

Nizzo 2011

V. Nizzo, I materiali cumani del Museo Archeologico di Firenze: nuovi dati su Cuma preellenica e sugli scavi Osta, in: O. Paoletti – M. C. Bettini (eds.), Gli etruschi e la Campania settentrionale, Atti del XXVI Convegno di studi etruschi ed italici, Caserta, Santa Maria Capua Vetere, Capua, Teano, 11-15 novembre 2007 (Pisa 2011) 541–559.

Pacciarelli 1999

M. Pacciarelli, Giorgio Buchner e l'archeologia preistorica delle isole tirreniche, in: C. Gialanella – P. G. Guzzo (eds.), Dopo Giorgio Buchner: studi e ricerche su Pithekoussai: Atti della Giornata di Studi, Ischia, 20 giugno 2009 (Pozzuoli 1999) 43–56.

Pellegrino – Rossi 2011

C. Pellegrino – A. Rossi, Pontecagnano 1,1. Città e campagna nell' Agro Picentino (Gli scavi dell'autostrada 2001–2006) (Fisciano 2011).

Perlès 1992

C. Perlès, Systems of Exchange and organization of production in Neolithic Greece, JMedA 5, 2, 1992, 115–164.

Perlès 2005

C. Perlès, Réflexions sur les échanges dans le Néolithique de Grèce, in: P. Clancier – F. Joannès – P. Rouillard – A. Tenu (eds.), Autour de Polanyi, Vocabulaires, théories et modalités des échanges (Nanterre 2005) 201–215.

Reger 1994

G. Reger, Regionalism and change in the economy of independent Delos, 314–167 B.C (Berkeley 1994).

Rossi 2004

A. Rossi, Contesto ambientale e dinamiche insediative tra l' età del Ferro e l'età arcaica, AIONArch 11–12, 2004, 225–234.

Säflund 1938

G. Säflund, Bemerkungen zur Vorgeschichte Etruriens, StEtr 12, 1938, 17–55.

Vida Navarro 1992

M. C. Vida Navarro, Warriors and weavers: sex and gender in Early Iron Age graves from Pontecagnano, Accordia Research Papers 3, 1992, 67–99.

Trade in the Decapolis-Region (Jordan)

Nora Voss

This paper presents current considerations about the regional and supra regional trade of three ancient cities in northern Jordan. This is based on ceramics collected during three survey seasons of „Historical Land-use and Landscape Reconstruction in the Decapolis Region (Jordan)" project based at the University of Vienna and which I have analysed for my PhD research. My aim is to examine the import behaviour of the inhabitants of the individual cities, to demonstrate similarities and to work out differences. Since the ceramic material from the project is diverse, the cooking ceramics were selected to illustrate my approach and present initial results.

The analysis of the survey ceramics in general concentrated on the period between the early Hellenistic period at the end of the 4th century BC and the reign of the Umayyad dynasty in the 8th century AD. In total, 48,648 sherds from the relevant period were collected and 33,433 of these sherds have been analysed so far. The 5253 diagnostic sherds, as the most significant pieces, provide the basis for this research.

The survey took place around the ancient cities of Abila and Gadara, modern Umm Qays near Lake Tiberias, as well as around the modern village of Umm el-Jimal, further to the east, in the Hamada Desert.

Gadara and Abila lie in the fertile highlands not far away from the rivers Jordan and Yarmuk. The two cities were connected to an important east-west trading road from the Jordan Valley up to southern Syria. This road connected them with other cities of the Decapolis like Pella, Gerasa and Philadelphia (modern Amman), as well as with the region around Lake Tiberias.[1] Apart from their geographical location, Abila and Gadara also have other similarities. Both cities belonged to the Roman province of Syria from 64/63 BC onwards, when Gn. Pompey intervened during the turmoils in Judaea.[2] Their membership of the Decapolis, a league of towns founded during Hellenistic times, removed them from the sphere of influence of the local rulers and gave them a certain degree of independence.[3]

Umm el-Jimal, in contrast, was a rural settlement located in the inhospitable basalt region of the southern Hauran, which had only a small amount of arable land, and focused particularly on animal husbandry. The nearby Via Traiana Nova connected Aila, presentday Aqaba on the Red Sea, in the south with Bosra in southern Syria, and continued further northwards.[4]

Methods

Due to the poor state of conservation of the surveyed pottery – the size of most sherds varies between a matchbox and a finger nail – the focus of my research lies on the analysis of the fabric. By examining the composition of the clay and determining the inclusions[5] a certain place of production can be assumed for some of the fabrics defined so far.

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The preliminary attribution depends on published fabrics from the region, which are attributed to a production site. The results presented here must therefore be regarded as preliminary, considering that the archaeometric investigations as well as the verification of their results based on broader comparative material is still ongoing.

By analysing the results of the research undertaken so far, it is clear that the pottery assemblages from Abila and Gadara have a lot in common. The material from Umm el-Jimal in contrast is very different. It is also striking that the repertoire is dominated by a couple of wares. The cooking ware shows some interesting characteristics that can be across the entire assemblage. It is also vital to the understanding of regional ceramics trade, especially because all three sites probably did not have their own production of cooking ware.[6]

Cooking Ware

In the analysis of the survey material, ceramics were only addressed as cooking ware if they could be clearly identified as such due to their shape or other characteristics like traces of heat effects. Based on these criteria, 1570 fragments could be identified as cooking vessels.

The ceramic repertoires from Abila and Gadara can be treated as one, because the assemblages are nearly identical (fig. 1a–b). By far the largest group of pottery belongs to so-called Galilean Ware[7]. It is a group of fabrics made in the area around Lake Tiberias between the 1st and mid-4th century AD. It occurs only in cooking vessels, mainly cooking bowls and casseroles. Most frequent are cooking bowls with two grooves at the rim dated to the early 2nd – to the mid-4th century AD.[8]

They are followed in quantity by the so-called 'Hard Red Wares' and Jerash Terracotta,[9] which were likely produced in Gerasa, the modern town of Jerash, located north of Amman. Both wares contain a lot of quartz inclusions and depending on the individual fabrics, lime, mica and red or dark particles. The 'Hard Red Wares' can be distinguished from Jerash Terracotta by a better sorting of the inclusions and the greater hardness of the sherd. The inclusions of this ware consist only of transparent quartz, mica and in some cases a little bit of lime. The focus of production of this ware lies presumably between the 4th and the 7th century AD, with Jerash Terracotta being produced between the 6th and 7th century.[10]

This fits well with the dating of the most common casseroles and cooking pots of this ware. Casseroles with an almost vertical rim[11] as well as cooking pots with an overhanging lip[12] and thin walled pots with a pronounced neck[13] occur most often with this kind of pottery. All such vessels date to Byzantine times.

It is noteworthy that the production site of the 'Hard Red Wares' first produced cooking bowls that imitate a Galilean Ware bowl of the 4th-century[14] before the typical casserole with a vertical rim was used.

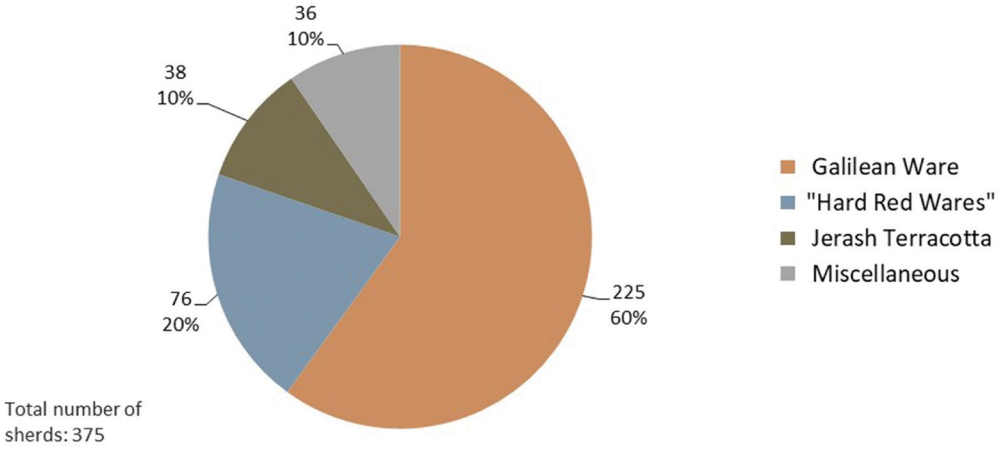

Fig. 1a: Distribution of cooking ware in Abila.

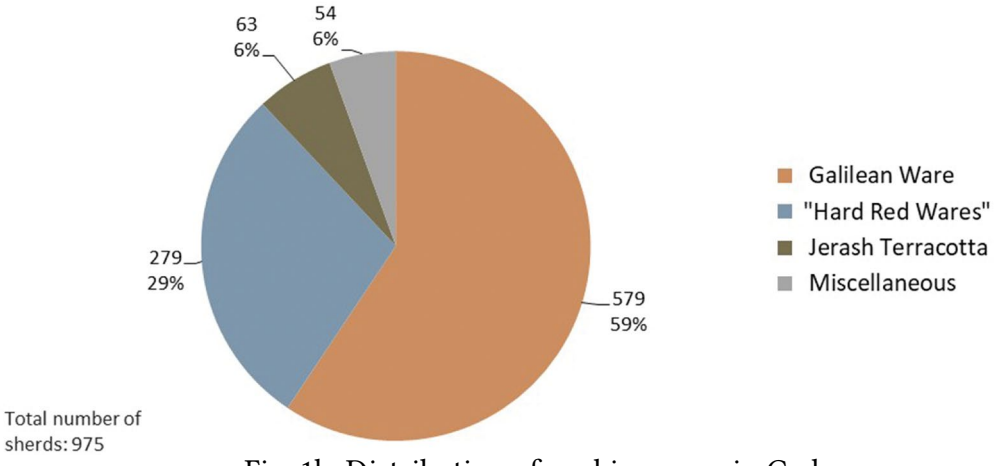

Fig. 1b: Distribution of cooking ware in Gadara.

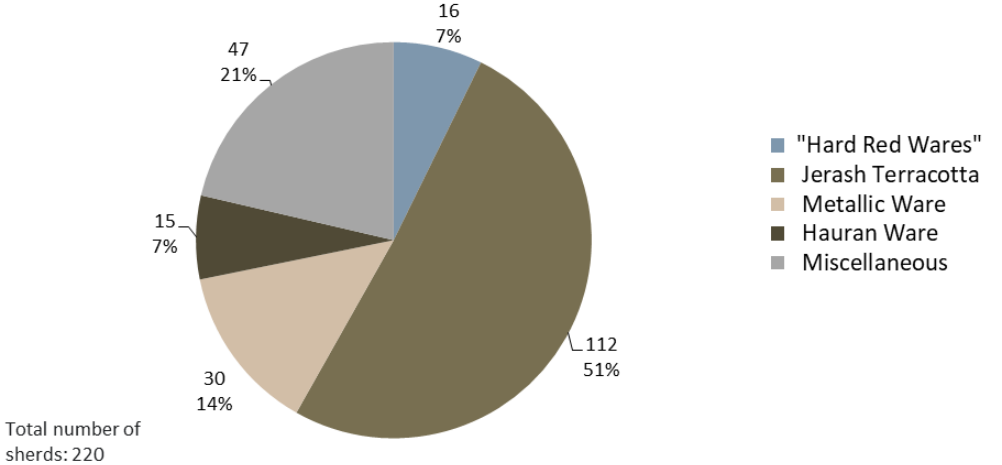

Fig. 1c: Distribution of cooking ware in Umm el-Jimal.

In contrast to this the structure of the repertoire from Umm el-Jimal (fig. 1c) is different, but also shares some characteristics. Like in the other cities, pottery from Gerasa dominates the assemblage by far, but fragments of Galilean Ware are completely missing.

During the whole survey just a single sherd of this ware was found. In Gadara and Abila, on the other hand, they accounted for almost 20 percent of all sherds, but I will discuss this in more detail later. Instead, there are wares in Umm el-Jimal that do not appear in the two other cities at all or only occasionally. This includes Hauran Ware and so-called Metallic Ware.

Hauran Ware has a characteristic dark red colour with large basalt inclusions on the surface that are partly clearly visible without a microscope. It was probably made in the region around Bosra, possibly in Si. The focus of production lies in the 1st–4th century AD.[15]

Metallic Ware gets its name from its sometimes metal-like appearance.[16] It is often unusually thin-walled and has clear-cut shapes reminiscent of metal vessels. In addition, it often has a dull shining slip that emphasises this impression. Similarities with the fabrics of Jerash Terracotta are striking. An attribution to the production site of Gerasa is likely, but other places of origin are currently also considered. This ware was very common in the 3rd and 4th century AD.[17]

According to this, a change of import behaviour can be determined for Umm el-Jimal in the 4th/5th century AD as in the other two cities. The cooking pottery from Gerasa, that is, Jerash Terracotta and the 'Hard Red Wares', completely dominate the assemblage from Umm el-Jimal. Previously, the cooking ceramics seem to have been imported mainly from the Hauran.[18] In addition, however, a whole series of fabrics occur that could not be assigned to any existing wares, summarised as a new one, and could thus not yet be assigned to a production site.

The assemblage of vessel shapes is not as homogeneous as that in Abila and Gadara, but nevertheless it seems that closed cooking vessels were generally more used in Umm el-Jimal than open forms. This can be traced back to the lack of Galilean cooking bowls in the statistics, but may also point to differences in the eating habits of the population. This will be further investigated in my PhD dissertation.

To summarise: before the 4th century AD Abila and Gadara imported their pottery from the western region around the Sea of Galilee, Umm el-Jimal, however, from the Hauran further north. From the 4th century AD onwards, the majority of the vessels found in all three cities were produced in southern Gerasa.

If this phenomenon was also observed at other sites in the region, this would be a revealing observation for the understanding of the mechanisms of regional trade in northern Jordan.

Whether this had solely geographical reasons or whether political and historical relationships played a role can probably not be fully understood from ceramics alone, but should be included in the analysis of trade relations in the region.

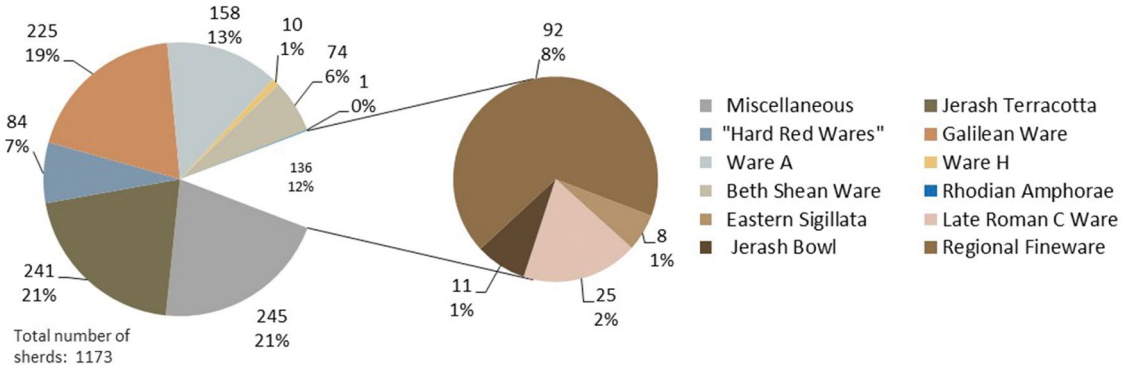

Fig. 2a: Distribution of wares in Abila.

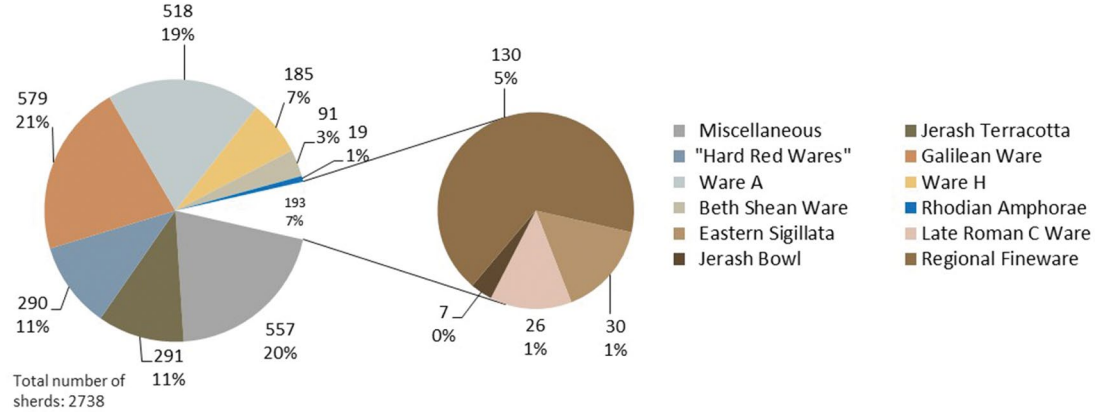

Fig. 2b: Distribution of wares in Gadara.

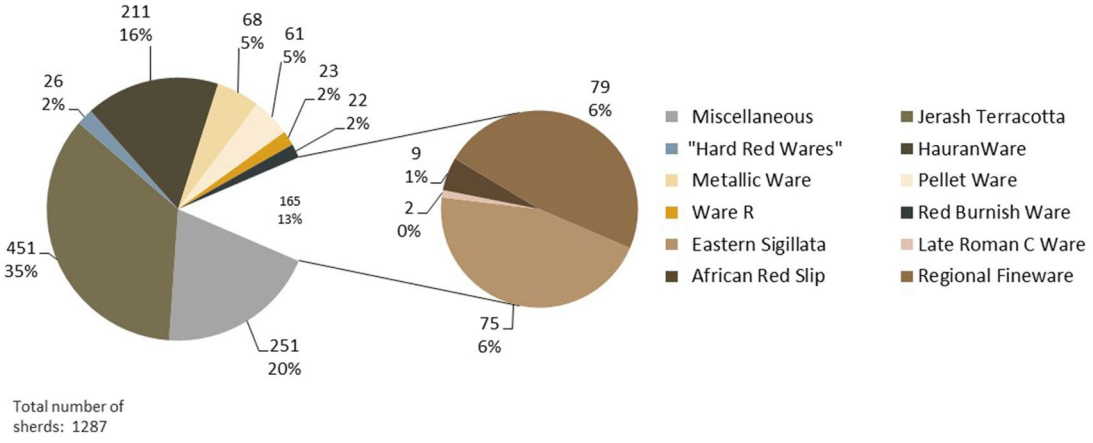

Fig. 2c: Distribution of wares in Umm el-Jimal.

Trade Connections

In any case the trade routes must be considered in connection with these results. Since maritime or river transportation, which was normally preferred in Antiquity, is not possible in this region, transport of goods by land must be assumed. By dealing with this, some open questions can be clarified.

The road network of the Decapolis region is well known for the 1st–3rd century AD.[19] Later the network of trade routes is not so well explored, but sources such as the Tabula Peutingeriana suggest that many of the previously established roads were still used.

Milestones indicate the existence of a route system that points to the important function of the ancient cities of Damascus, Bosra, Philadelphia and Gerasa in the trade from the Near and Mid East to the Mediterranean.[20]

Within the examined region two main routes existed. The already mentioned north-south route from the Red Sea along the still used King's Highway, which was extended between 112 and 114 AD – at the time of Trajan's rule to the Via Traiana Nova. The second is an east-west route from Caesarea Maritima via Skythopolis, Pella and Gerasa, which passed by Philadelphia, to meet the Via Traiana Nova, connecting the inland towns with the Mediterranean ports.

A proposed alternative route via Gerasa to Bosra was perhaps the road from the Jordan Valley past Gadara and Abila to the east. It should be taken into account, however, that this much shorter connection is much more difficult because of the differences in altitude.

This shows that the preferred trading partners of all three settlements are largely in line with the easily accessible cities in the vicinity. Bosra and Gerasa were easily accessed by the Via Traiana Nova from Umm el-Jimal. Gadara and Abila are located on a commercial road connecting Skythopolis and the region around Lake Tiberias with the settlements in central Jordan. Gerasa is also relatively easy to reach.

Complete Assemblage

Extending this knowledge to the entire ceramic assemblage from the survey project, results are indeed comparable. Again, the similarities of Abila and Gadara are clearly visible (fig. 2a–b), as well as the strongly differing structure of the material from Umm el-Jimal (fig. 2c). As the diagram shows, Galilean ware, 'Hard Red Wares' and Jerash Terracotta, as well as Hauran and Metallic Wares, are the most widely represented ceramics in the entire assemblage. It should be noted that Jerash Terracotta, but also the two wares that only occur in Umm el-Jimal, also appear in other vessel types, not only in cooking vessels.

Equally prominent are the probably locally produced coarse wares represented here as Ware A and H (fig. 2a–b). Locally produced ceramics are also dominant in fine ceramics. Very interesting are the Jerash Bowls[21], listed here separately, which imitate forms of African Red Slip vessels, and another group of vessels, which imitates forms of Late Roman C Ware but which could not be assigned to a specific production location.

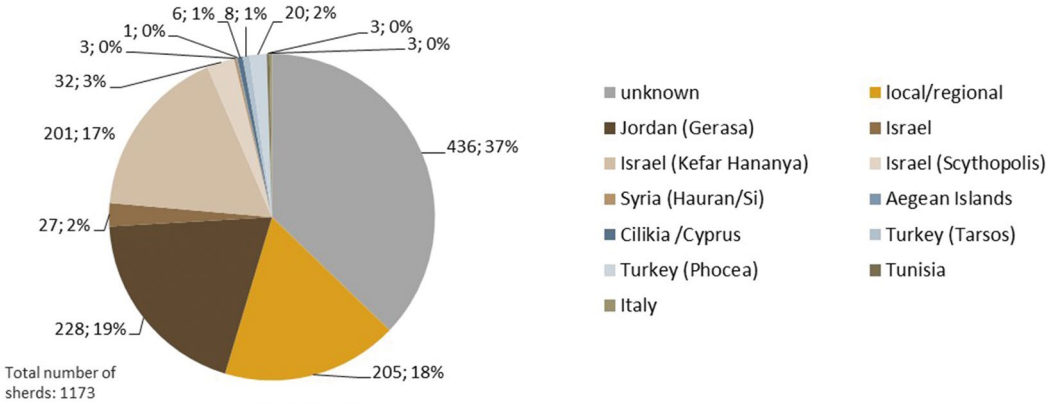

Fig. 3a: Provenance of ceramics in Abila.

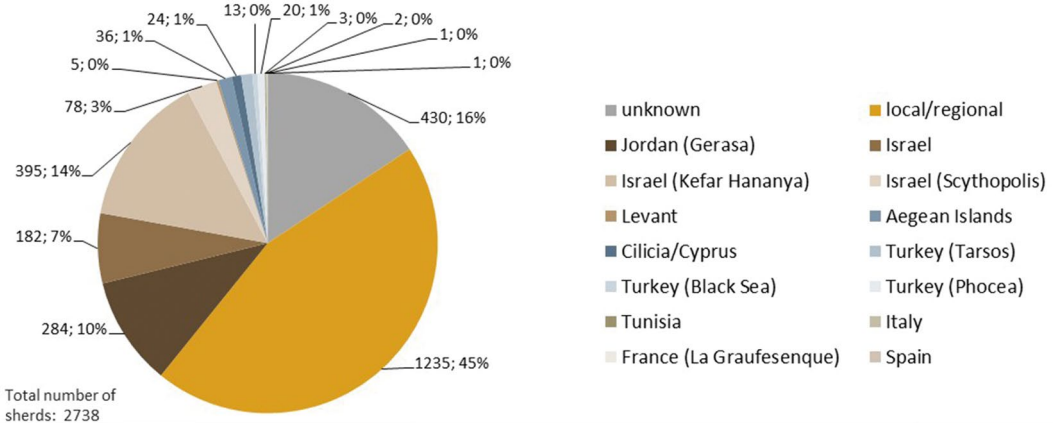

Fig. 3b: Provenance of ceramics in Gadara.

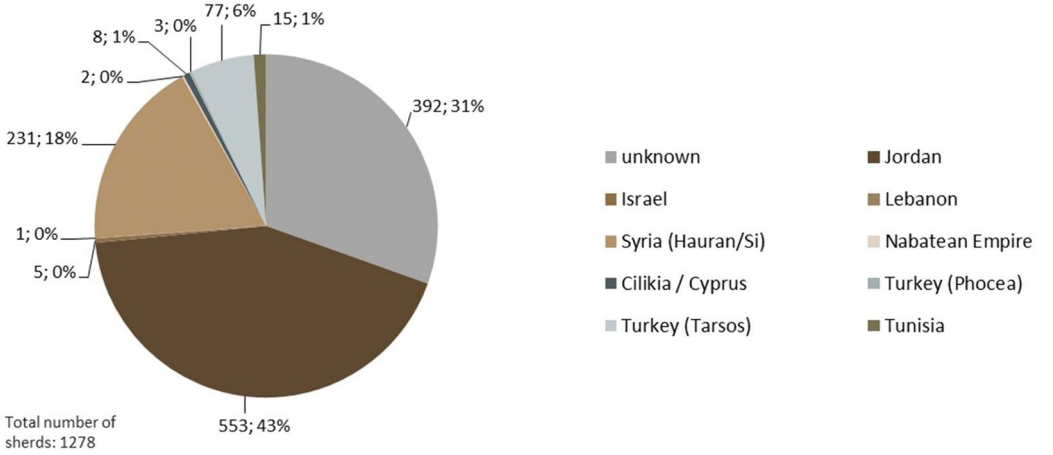

Fig. 3c: Provenance of ceramics in Umm el-Jimal.

The graph shows the dominance of local and regional ceramics (fig. 3). The yellow coloured part represents the ceramics that were probably made in or around Abila or Gadara. Unfortunately, no workshops were located so far. The segment shown in brown refers to wares produced in the region. I consider regional wares to be from production sites in the modern states of Jordan, Israel, Lebanon and southern Syria. Together they make up the largest share of ceramics. Especially in Umm el-Jimal, which probably did not have its own ceramic production, more than 50% of the ceramics come from the surrounding areas. The blue coloured unit indicates ceramics from the eastern Mediterranean. Here, above all, emerge table wares from production sites located in modern Turkey, including Eastern Sigillata A and Late Roman C Ware as well as Late Roman Amphora 1 fragments that occur mostly in Umm el-Jimal. Especially in Gadara also sherds from more distant production sites can be detected. Among them, a total of 19 fragments of Rhodian amphorae are remarkable. Some of the handles found have stamp marks.

Also outstanding are single fragments from amphorae from the Gulf of Naples and from Spain as well as a fingernail sized rim of a Sigillata from Gaul. This shows that Gadara had a larger inflow of ceramics from faraway regions of the Roman Empire, perhaps because of its location or character.

Conclusion

Finally, I would like to highlight that the ceramics presented here derive from a survey. This means archaeological artefacts which were taken from their original context and deposited in a secondary one. In addition, the assemblage, which results from this secondary context only provides a very selective, exclusive picture of the real repertoire of ceramics present in each respective ancient settlement. What I would like to point out is that, although the tendencies of trading behaviour of the inhabitants of a city can be seen in the trade patterns, it does not have to reflect them one-to-one. Thus, the presence of imported ceramics does not necessarily require trade contacts to the place of production, nor does the absence of a ceramic type indicate the non-existence of exchange. The sporadic presence, especially of imported amphorae and other vessels, in which goods have been transported, can also be explained by the second-hand use of such vessels.[22] For example, an amphora with Rhodian wine might have been traded in one of the coastal cities and after it was emptied, it could have been transported as a pure transport vessel filled for example with water to a different place where its fragments were found.

The absence of a ceramic type may have several reasons. On the one hand, it may simply not have been found yet. During the survey, only a limited area of a site was covered. This represents only a fraction of the total area. On the other hand, the particular character of a settlement at a certain time as well as its size must be taken into account.

For example: the frequent appearance of Late Roman C Ware, African Red Slip Ware and Jerash Bowls in relation to Eastern Sigillata A in Abila can be explained by a stronger settlement and its greater prosperity in Late Antiquity. In contrast, around Umm el-Jimal we searched an area where the earliest settlement and its necropolis was presumed. In this area we found almost all the Eastern Sigillata A sherds discovered during the survey.

This shows both the potential and the difficulties that the evaluation of this material entails. On the one hand, the analysis of ceramics makes it possible to make detailed statements about the social and cultural aspects of the examined cities. On the other, the material must always be viewed as a whole. Statements should not be made easily without examining all aspects of the assemblage and alternative explanatory models.

Notes

[1] Gregoratti 2011, fig. 2.

[2] Wineland 1992, 105 f.

[3] Zangenberg – Busch 2003, 117.

[4] Gregoratti 2011, fig. 1–2.

[5] In order to give a standardised and comprehensible description of the fabric, the Munsell Soil Color Charts (Baltimore 2009) for colour determination were used. To the shape, the sorting, and the frequency of the inclusions and air pockets, I use the estimates from Kinne 2006, 28–30. In the determination of the inclusions, I follow the assessments of Orton et al. 2013, 236–237.

[6] See for Umm el-Jimal: Osinga 2017 and for Abila and Gadara upcoming article often he author.

[7] Adan-Bayewitz 1993, 60–78. 155–156.

[8] Common in the survey assemblage: Adan-Bayewitz 1993, 91–97 fig. 1B. 5. 13. 20; 100–103 fig. 1D. 3 (cooking bowls); 128–130 fig. 4E. 2; 132–135 fig. 4E. 3 (cooking pots); 103–109 fig. 1E. 5. 8 (cassarolls).

[9] The term „Jerash Terracotta“ is inherited from E. Osingas work about the ceramics from Umm el-Jimal(2016, 166). The name is derived from a assumed production site in Gerasa (modern Jerash). It shows great similarities with Vincent Clark and Robert Falkner's type C (1986, 251) and Alexandra Uscatescu's group C (1996, 46) at Jerash, as well as Susanne Kerner and Lee Maxwell's "Terracotta" (1990, 241) at Gadara. On the base of new perceptions, other places of origin are currently also considered.

[10] Osinga 2016, 166; Kerner – Maxwell 1990, 241.

[11] Vriezen – Wagner-Lux 2015, 133. 319 fig. XII. 22 nos. 11-14; Kerner – Maxwell 1990, 246 fig. 37 no. 15.

[12] Hennessy et al. 1992, 135. 139–141. 146–147 fig. 92:8. 98:12; Nielsen et al. 1993, 178 fig. 20; Kerner – Maxwell, 1990, 246 fig. 37.11; Loffreda 1974, 46–47 fig. 10.6.

[13] Cf. Segal et al. 2009, 128 fig. 133; Hennessy et al. 1992, 173 fig. 108:4.

[14] Cf. Form Adan-Bayewitz 1B (Adan-Bayewitz 1993, 91–97).

[15] Freeman 1995, 63.

[16] Freeman 1995, 63; Osinga 2017, 163.

[17] Freeman 1995, 63.
[18] A similar trend can be seen within the material from an excavation trench from the city centre of Umm el-Jimal analysed by E. Osinga in her PhD.-Thesis, cf. Osinga 2016, 234–236.
[19] Thomsen 1917, 32–75.
[20] Gregoratti 2011, 513–519 fig. 1–2.
[21] Csitneki 2017; Uscatescu 1995; Watson 1989.
[22] Gassner 2001, 135 f.

Image Credits

Fig. 1–3: by author

References

Adan-Bayewitz 1993
D. Adan-Bayewitz, Common Pottery in Roman Galilee: A Study of Local Trade, BarIlan Studies in Near Eastern Languages and Culture (Ramat-Gan 1993).

Csitneki 2017
D. Csitneki, Jerash Bowls: Fine Tableware from Jerash, in: A. Lichtenberger – R. Raja (eds.), Gerasa/ Jerash: From the Urban (Aarhus 2017).

Freeman 1995
P. Freeman – D. Kennedy, Southern Hauran Survey 1992. Appendix: Ceramic Evidence, Levante 27, 1995, 39–73.

Gassner 2003
G. Gassner, Materielle Kultur und kulturelle Identität in Elea in spätarchaischer-frühklassischer Zeit. Untersuchungen von Gefäß- und Baukeramik aus der Unterstadt (Grabungen 1987–1994), AF 8 (Vienna 2003).

Gregoratti 2011
L. Gregoratti, The Role of the Decapolis Region in Connecting Inland Syria with the Mediterranean Coast, ARAM periodical 23, 2011, 509–525.

Hennessy et al. 1992
J. Hennessy – A. McNicoll – R. Smith, Pella in Jordan 2. The Second Interim Report of the joint University of Sydney and College of Wooster Excavations at Pella: 1982 - 1985, MedA Suppl. 2 (Sydney 1992).

Kerner – Maxwell 1990
S. Kerner – L. A. Maxwell, Keramik. Gadara Vorbericht 1986-1988, AA 105, 1990, 239–251.

Kinne 2006
A. Kinne, Tabellen und Tafeln zur Grabungstechnik [4](Dresden 2006).

Loffreda 1974

S. Loffreda, Cafarnao II: La Ceramica (Jerusalem 1974).

Nielsen et al. 1993

I. Nielsen – F. Gorm Andersen – S. Holm-Nielsen, Gadara – Umm Qes III: Die byzantinischen Thermen, Abhandlung des deutschen Palästina-Vereins 17 (Wiesbaden 1993).

Orton et al. 2013

C. Orton – P. Tyer – A. Vince, Pottery in Archaeology (Cambridge 2013).

Osinga 2016

E. Osinga, The Countryside in Context: Stratigraphic and Ceramic Analysis at Umm el-Jimal and Environs in Northeastern Jordan (1st to 20th century AD) (PhD Diss. University of Southampton 2016).

Segal et al. 2009

A. Segal – J. Mlynarczyk – M. Burdajewicz – M. Schuler – M. Eisenberg, Hippos-Sussita: Tenth Season of Excavations (July and September 2009) (Haifa 2009).

Thomsen 1917

P. Thomsen, Die römischen Meilensteine der Provinz Syria, Arabia und Palaestina, ZDPV 40, 1917, 1–103.

Uscatescu 1995

A. Uscatescu, Jerash Bowls and other Related Local Ware from the Spanish Excavations at the Macellum of Gerasa (Jerash), AAJ 39, 1995, 365–408.

Vriezen – Wagner-Lux 2015

K. J. Vriezen – U. Wagner-Lux, Gadara – Umm Qes II. The Twin Churches on the Roman-Byzantine Terrace and Excavations in the Streets, Abhandlung des deutschen Palästina-Vereins 30/2 (Wiesbaden 2005).

Watson 1989

P. Watson, Jerash Bowls: Study of a Provincial Group of Byzantine Decorated Fine Ware, Syria 66, H. 1, 1989, 223–261.

Wineland 2001

J. - D. Wineland, Ancient Abila. An Archaeological History, BARIntSer 989 (Oxford 2001).

Zangenberg – Busch 2003

J. Zangenberg – P. Busch, Hippos und Gadara. Ein Hauch von Welt am See, in: G. Fassbeck – S. Fortner – A. Rottloff – J. Zangenberg (eds.), Leben am See Gennesaret: Kulturgeschichtliche Entdeckungen in einer biblischen Region? (Mainz 2003) 117–129.

Ports and trades in central-Tyrrhenian Bruttium between II BC and II AD: the case of Vibo Valentia (Calabria/Italy)[1]

P. Vivacqua – M. T. Iannelli

After the Punic Wars, Rome began a process of reorganization of the acquired *Bruttium* territory: it preserves some Greek towns such as Reggio and Locri and transforms others like Crotone and *Tempsa* in Roman colonies; Vibo Valentia and *Copia* in Latin colonies. Later in 123 BC, following the Graccan reforms, *Cosentia, Pandosia, Minervia Nervia Scolacium* are founded. During this period *Bruttium* assumes a significant importance because it becomes a point of connection between Africa and the east. The consular road *ab Capua ad Regium*, which ensures the connection between Rome and Sicily, was built. The discovery of a *cippus miliaris* near Vibo Valentia[2], provides topographical indications of the consular road, as well as the distance in Roman numerals and the name of *Annius T (iti) filius / Pr (etor)*, identified with *T. Annius Rufus*, which had completed the construction of the road, initiated by the consul *P. Popilius Laenas*[3] (fig. 1). According to the *Tabula Peutingeriana* and to the *Anonymous Ravennate*, the Calabrian road system is completed by at least two other roads: one on the Tyrrhenian coast and one on the Ionian coast.[4] At the same time the ports are also rearranged. Strategic ports are Crotone on the Ionian coast, Reggio and Vibo Valentia on the Tyrrhenian coast; there are also some intermediate calls at *Copia* and at *Minervia Nervia Scolacium*; also very important is the *portus Herculis*, cited from the sources and located in the territory of Vibo Valentia in the current location of Torre S. Maria, south of Tropea.[5] Thanks to the new infrastructures *Bruttium* starts a productive recovery, exploiting the economic and agricultural richness through the birth and development of the first production villas[6], mainly concentrated in the territory of *Copia* and Vibo Valentia, with the consequent industrial organization of agricultural and clay production.[7]

Regarding Vibo Valentia (fig. 2) and its territory (fig. 3), recent studies have reconsidered the process of romanization in the Latin colony of Vibo Valentia and the *ager vibonensis*, proposing a continuity between the settlement of the colony, in 192 BC, and the previous Brettian occupation of the end of the 4th century BC.[8] After the Social War, around 89 BC, the town becomes an autonomous *municipium*. It has a great impetus with the construction of the via Annia-Popilia and its strategic position allows it to control the north of the Lametin Gulf and the south of the entire plain of Metauros. In addition, its territory consists of a broad coastal strip, with vast cultivated areas that converge towards the Mountains of Sila, a large reserve of wood and pitch. The historical information give a flourishing picture of the city in the Republican age, while the Imperial one marks the monumentalization of the urban structure during the 2nd–3rd century AD, with the construction of the theater, perhaps of an amphitheater, of a public thermal building and some patrician *domus* with polychrome mosaics.[9] The discovery of some statues of fine workmanship[10] and two portraits including the one in *marmor numidicum* of Agrippa, the general of Augustus, dated to the end of the

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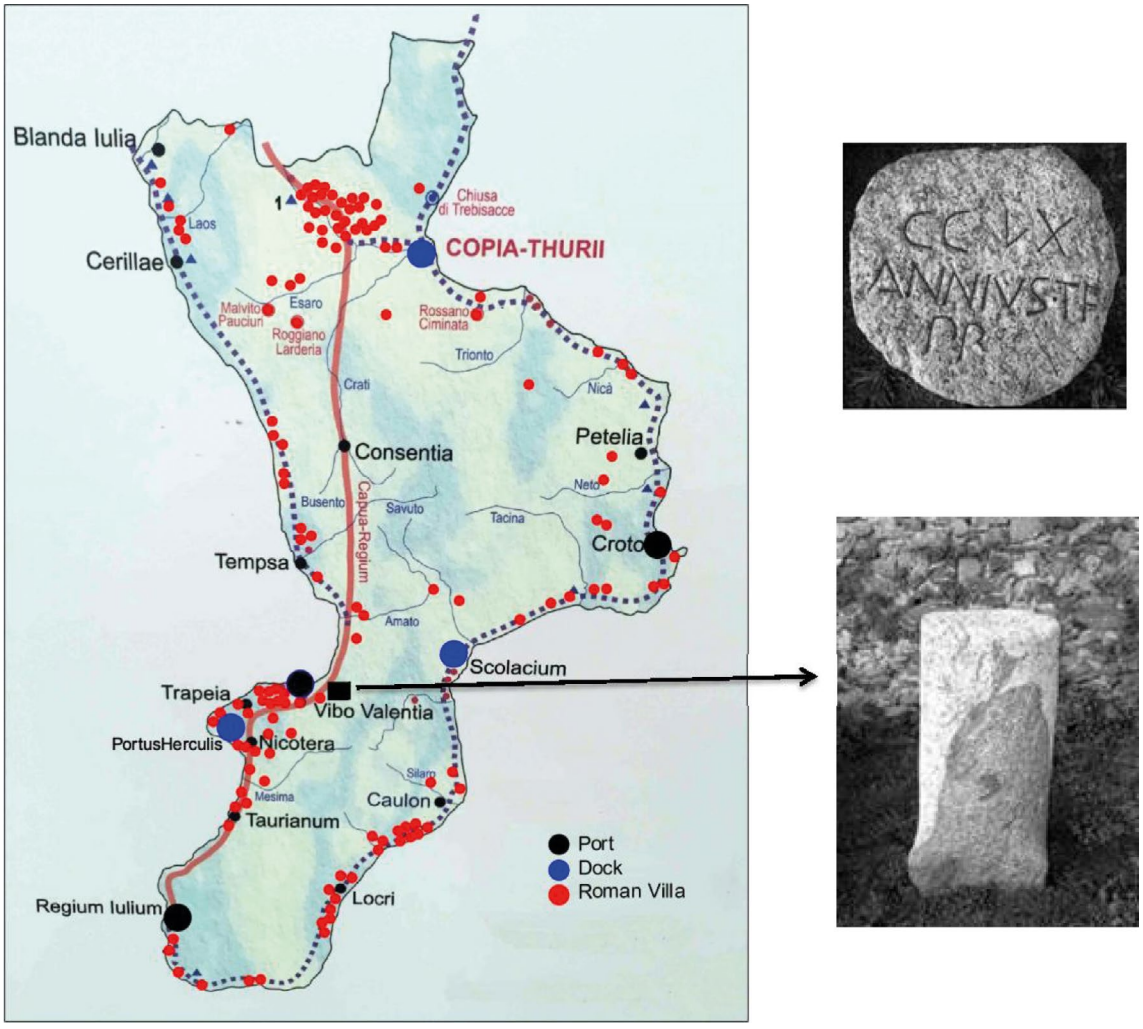

Fig. 1: Calabria in roman period: cippus miliaris from Vibo Valentia-S. Onofrio.

first century BC, testify not only solid artistic links between the Urbs and Vibo Valentia, but above all economic and political relations that are configured both in the personal attention of Agrippa towards the *municipium*, where he owns vast properties, and in the presence of an urban aristocracy firmly linked to the Roman ruling classes.[11] Vibo Valentia is therefore an active center, politically linked to Rome and the reference pole of a vast territory, intensely exploited with settlements in the villa; the port has a fundamental role. It is the only Tyrrhenian port south of Naples and a must for communications with Sicily. Archaeological investigations[12] and underwater excavations[13] have highlighted the structures of the Roman port that was active up to the late ancient and medieval age in the area between Bivona and Trainiti, where the anthractures, currently underwater, have been highlighted.[14] In Bivona a 100 m long port dock dated to the 5th century AD has been excavated.[15] The port of Vibo Valentia was restored by Agatocle in Greek times. It

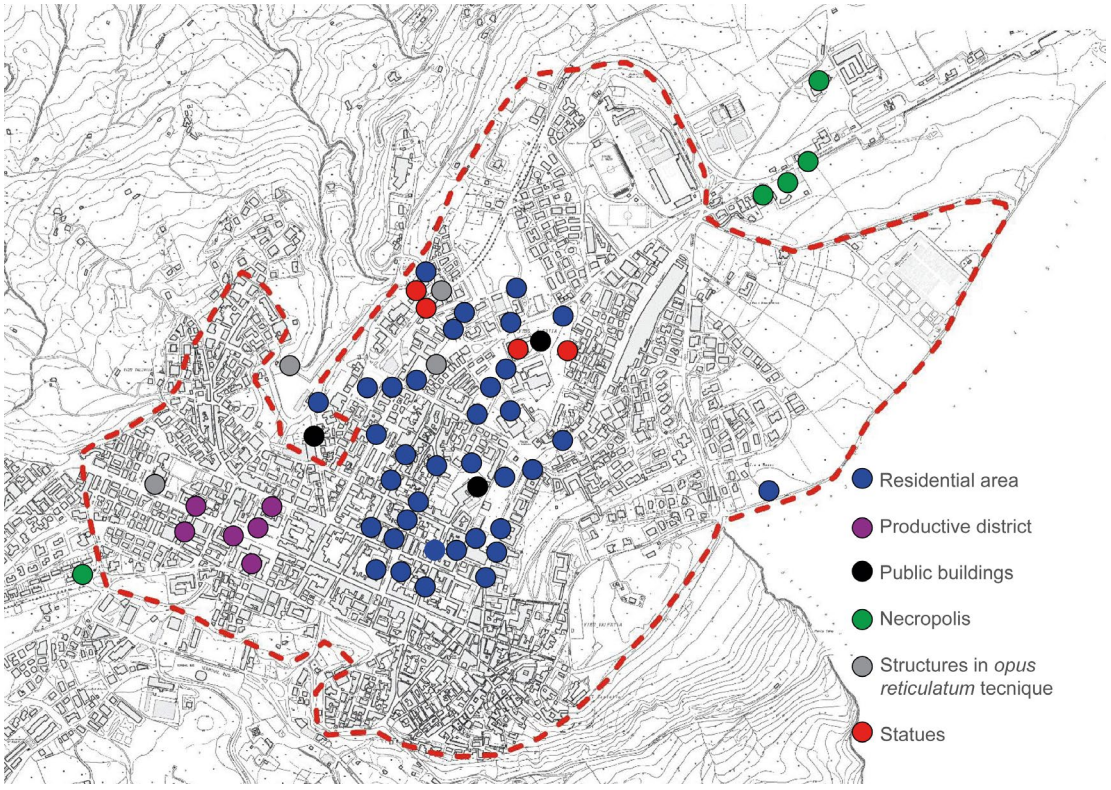

Fig. 2: The roman town of Vibo Valentia in the II BC–II DC.

plays an important role during the civil wars in 48 and 38 BC, when the city with its territory gains the favors of Caesar and Octavian because it offers the indispensable support of its port, as a basis for operations conducted on the Strait, against Pompey. The town's dynamic economy is suggested by the presence of the craft district located in the western part, where several active kilns have been found;[16] two other kilns were found near the municipal building recently.[17] They were active between the 2nd century BC and 2nd century AD, and were used for the production of ceramics of common use and thin-walled ceramics (fig. 4). The latter represents a novelty in the study of the *Bruttium* ceramics, since this workshop is the only one excavated so far that produces this particular type of ceramic, which has always been considered a product of central-Tyrrhenian Italy. The kilns of Vibo Valentia also produce amphorae, for which the typological and archaeometric analyses have confirmed a local production. These data suggest an economic vitality of the city, which not only was able to produce various types of ceramic containers, but through the port, was able to export the agricultural surplus, in the amphorae.

The local production of amphorae, confirmed by the archaeometric analysis are: Dressel 1, 2–4 and Dressel 21–22. As for the Dressel 21–22, they have particular characteristics in the rim molding similar to specimens from Cuma, for which a production of the *Bruttium* has been hypothesized.[18] As for imports, among Italian productions, Lamboglia 2 amphorae is

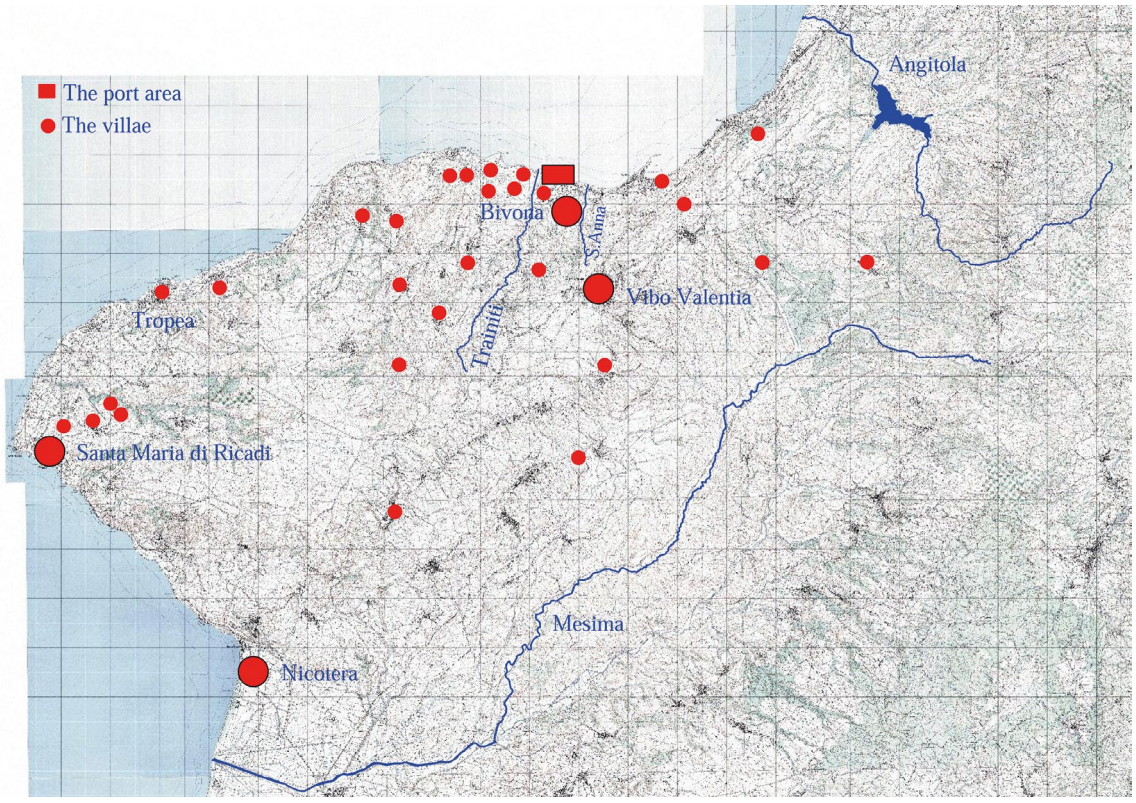

Fig. 3: The Vibo Valentia territory in the II BC–II DC.

to be noted. The production from Spain is represented by *garum* amphorae, such as the Dressel 7–11 and the Beltran II A and B, and the Dressel 14, olive oil Dressel 20 and Haltern 70 amphorae used to transport *defrutum* wine. A small percentage of the imported wine comes from Gallia transported in the Gauloise 4 amphora. The African imports at this stage are not very consistent, compared to those of the following centuries.[19] There are few specimens of neo-Punic amphorae of 1st–2nd century AD like the Van der Weff 2, the Dressel 18 and the amphorae Uzita pl. 52 that present a continuity in the morphology with the previous amphorae of Punic tradition.[20] This is interesting because it shows a continuity of traffic with North Africa that in the first centuries after the destruction of Carthage, continues to propose Punic morphological models. In fact, the relationships between Vibo Valentia and the Carthaginians are well attested by the historical and archaeological sources for the beginning of the 4th century BC, when the city was refounded by the latter following the conquest by Dionysius the Elder who had captured and transferred the Hipponiates to Syracuse.[21] The presence of a Carthaginian military garrison in Vibo Valentia was also hypothesized, which guaranteed protection for the city and an economic advantage for the Carthaginians who could stock up on wine, minerals, wood and pitch.[22] The Aegean amphorae from Crete are particularly numerous. In particular one example, Knossos 19, is almost intact. From Rhodes the late wine amphorae continue to arrive, reflecting a commercial continuity established in

Fig. 4: Vibo Valentia: the kilns near the municipal building: the thin-walled ceramics.

the previous centuries between 3rd – beginnings 2nd century BC. The territory is a very rich and fully inserted in the Mediterranean commercial circuits, thanks to the presence of the port. The discovery of some production plants, excavated in different locations[23], suggests a well-organized manufacturing industry also in the territory, probably functional to the production of containers for the storage and transportation of foodstuffs. The major port was excavated at Trainiti-Bivona. In this area the „Villa of Bivona" has been found and studied.[24] Several papers on its late antique phase have been published[25], but it also presents activities during the 2nd BC–2nd AD that are still unpublished. In the port area local productions are represented by Dressel 1 and Dressel 2–4. Among the imports the Iberian amphorae and the Rhodes ones are found at a lower percentages comparing to the city, while the imports from Crete are higher. Tripolitans I and II from Africa and the flat-bottomed amphorae Ostia II 522 = Ostia III 464 of probable Sicilian or North African origin are also found. In Bivona there are also the Dressel 2–5 Aegean amphorae and the amphorae Mau XXVII–XXVIII from Asia Minor; the latter are absent in the town, but found in other centers of the territory, probably distributed by the port thanks to the presence of small calls located along the coast including the *portus Herculis*. Several clues suggest that it can be located in the Capo Vaticano area due to the presence of a natural bay sheltered from the winds; this area is an obligatory point of reference for the coastal navigation that from the Strait of Messina goes up to the Tyrrhenian Sea (fig. 5). The port of Capo Vaticano was settled since the Archaic period, when the *phrourion* of Torre S. Maria was built on a rise, and then abandoned at the end of the 4th century BC.[26] During the 3rd century BC the settlement is moved further down, in the bay of S. Maria di Ricadi, where there is the best landing place and where a deposit of amphorae Dressel 1 A and B, Dressel 1 B-Lamboglia 2 and *Kadoi* was excavated. The

Fig. 5: Tropea (VV): the area of Portus Herculis.

considerable quantity of amphora found immediately suggested that the place was used as storage of foodstuffs, intended to be transported. The hypothesis of a local production of containers was also advanced.[27] The presence of numerous overcooked fragments, and the results of the archaeometric analyses have confirmed the on-site manufacturing activity. The type of Dressel 1 B-Lamboglia 2, represents a type of transition within the Calabrian amphoric panorama of the Republican age, which links the Adriatic tradition of the Lamboglia 2 with that of the Tyrrhenian Dressel 1.[28] Two examples present two fragmentary scrolls that complement each other, and yet the reading of the stamp is very problematic; the letters in sequence are: *ME · PPI · LA* (fig. 6). Perhaps it is the name of a local character; or a complete onomastic form with *praenomen*, *nomen* and *cognomen* and the final part stands for *Latinus*, considering this character as coming from Lazio. In other locations we have noticed that the characteristics of the Dressel 1 fabric found in the S. Maria di Ricadi depot are similar to those of Dressel 1 found in the rest of the territory and in the underwater specimens. This fact suggests that the amphorae of S. Maria di Ricadi, through the coastal navigation, reached the port of Vibo Valentia, from where they were distributed both to the neighboring territory and a wider range area.

Another type of containers recently identified in Santa Maria di Ricadi are the *kadoi*. They are characterized by a particular shape of the wide swollen and rounded mouth, a piriform body and a small base with a flat base; they do not have loops and therefore cannot be properly considered amphorae (fig. 7, no. 1–3). Several names have been proposed including *doliola*[29] or *kadoi*[30], the last one used by ancient sources to describe

Fig. 6: Ricadi loc. S. Maria (VV): the stamp on amphora Dressel 1B-Lamboglia 2.

a container for wine and dried fruit or for solid pitch as evidenced by the inscription on the bronze Locri tablets of the *Olympeion* 3rd century BC.[31]

Many of these containers have been found in Puglia and Campania and in Calabria.[32] They are found in some excavations both on the Tyrrhenian and Ionian coast (Chiusa di Trebisacce, Crotone, Capo Colonna, Sellia Marina, *Kaulonìa* on the Ionian coast; Pian delle Vigne, Vibo Valentia, on the Tyrrhenian coast).[33] Seven specimens found in Calabria have the stamp *pix brut*, that is pitch *bruttia*[34] (fig. 8). The pitch was a specific product of the *Bruttium* and special containers had been created, most often Dressel 1. They have been found in the coastal territories of the colonies of Calabria, mostly in inhabited complexes or in warehouses connected to port facilities. Wood and pitch were very popular products and a source of wealth for the Roman state.[35] Ancient sources describe the process for pitch extraction; in particular Pliny the Elder defines pitch bruttia, „spissa", that is of dense and viscous consistency obtained by adding vinegar during boiling. It was used for various uses: in medicine, in cosmetics, as a slow-burning material. In particular, pitch was used in the preparation of wine, to seal the lids, to waterproof the internal surfaces of amphorae and to caulk ships. A pitch processing plant was recently found in *Sila Silva*[36]; after the process of extraction and processing, it was transported on the Ionian and Tyrrhenian coasts, where it was further processed and refined, and then exported. More detailed data on the content and size of Calabrian *kadoi* are provided by the discovery of Monasterace-Punta Stilo, ancient *Kaulonìa*, on the Ionian coast, where 4 *kadoi* were recovered, coming from the same underwater deposit and probably related to the same wreck. Archaeometric analyses, in fact, have demonstrated a local origin of the raw fabric. It was also possible to reconstruct the entire *kados* profile, calculated with the capacity of about 27 liters and revealed through chemical and organic analyses that the content was pitch[37] (fig. 7, no. 4). However, for the specimens of S. Maria di Ricadi, it is reasonable to suppose that they also carried other goods, such as the *garum*, because the deposit of S. Maria di Ricadi, which is

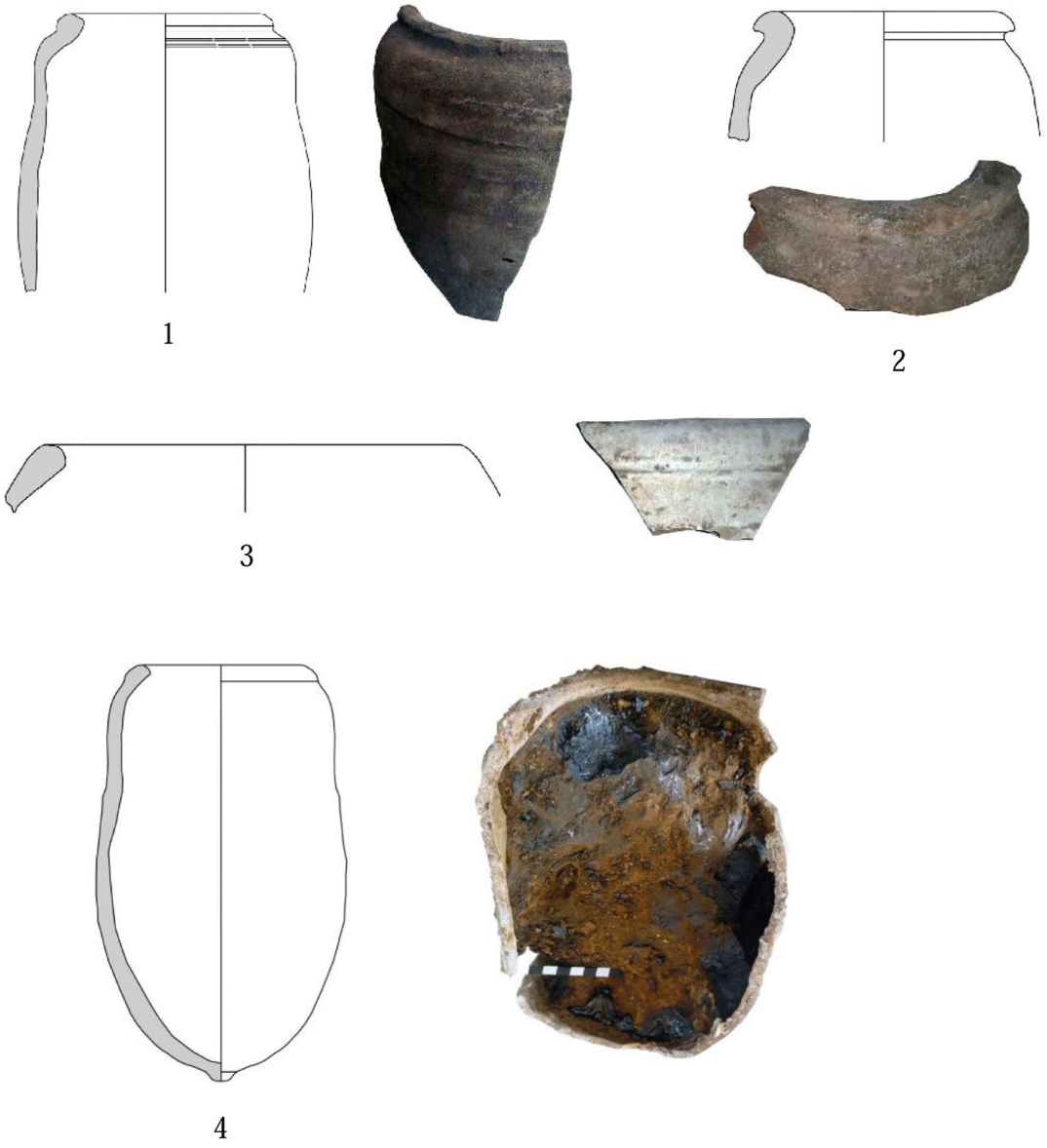

Fig. 7: Typology of Calabrian *kadoi*.

located near the sea, appears closely connected with the factories for processing fish found on the coast of Vibo.[38]

In conclusion, regarding the amphorae, we can present the first possible comparisons between the city of Vibo Valentia and its territory. Already starting from 2nd century BC the city and the territory had commercial traffic with the Mediterranean, thanks to the presence of the port and minor calls, which convey the import goods but also those intended to be exported. Between 2nd and 1st century BC, alongside the local productions, commercial relations are consolidated with those areas that had already supplied the

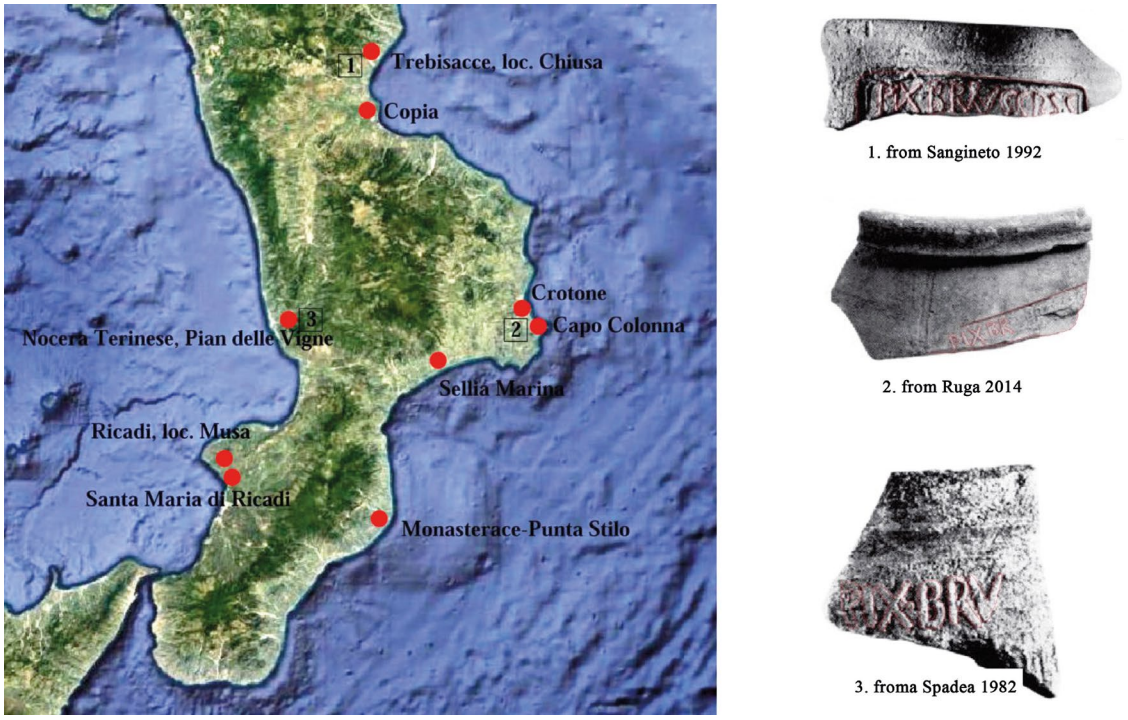

Fig. 8: The distribution of *kadoi* in Calabria.

city and the territory in the previous centuries, such as North Africa. Italian goods also arrive, especially from the Adriatic with the Lamboglia 2. During the 1st century BC and for the whole 1st–2nd century AD local workshops specialize in the creation of new and different types of amphoras, such as Dressel 1 B-Lamboglia 2, Dressel 2–4 and Dressel 21–22, well-attested both in the city and in the territory. As for imports, Spanish goods arrive predominantly in the city, especially with Dressel 20 and Dressel 7–11, which in the territory are not found; while the Haltern 70s are more numerous. The Gallic amphorae are found in the city and at the moment they do not seem to be present in the territory. The consumption of wines from the east and especially from Crete is more present in the territory, while the city continues to consume the Rhodian wine as it was in previous centuries. The wine produced in the area of Asia Minor and transported with the Mau XXVII–XXVIII is present, particularly in Bivona, but absent in the city. At this stage the contribution of African amphorae that make up 3% of the total fragments is marginal, even if so-called neo-Punic amphorae are still coming. The African goods will become significant in the city and in the territory starting only from the 3rd century AD until late antiquity.

With regard to the containers of local production, it is still to understand whether they were used for wider range transport or for local trade only. The archaeometric comparison with the fragments found in the consumption centers, and a careful typological and morphological analysis will provide further indications.

Notes

[1] The excavation and the study of Vibo Valentia ceramics were conducted by Archaelogical Superintendence of Calabria under scientific direction of M. T. Iannelli.
[2] Pitimada 1953, 343–344.
[3] La Torre 1990; Taliano Grasso 1995.
[4] Givigliano 1994, 318–328.
[5] Sabbione 1979.
[6] Accardo 2000.
[7] Sangineto 1994, 579–580.
[8] Cannatà 2013, 176–182.
[9] Iannelli – Givigliano 1989, 635–646; Rotella 2014.
[10] Faedo 1994, 599–616.
[11] Paoletti 2014, 174–176.
[12] Rotella – Sogliani 1998.
[13] Mariottini 2001.
[14] Lena 1989, 583–607.
[15] Sogliani – Rotella 1998.
[16] Iannelli – Givigliano 1989, 650–656.
[17] Bonomi – Sabbione 2011, 665–667.
[18] Botte 2009, 156–158, tipo 2.
[19] Cuteri et al. 2014.
[20] Rizzo 2002, 153–154; Rizzo 2014, 260–270; Capelli et al. 2017, 19–32.
[21] Iannelli et al. 2017.
[22] De Sensi Sestito 2011.
[23] Iannelli 1989.
[24] Cucarzi et al. 1995; Sogliani – Rotella 1998.
[25] Sogliani – Rotella 1998; Cuteri et al. 2007; Cuteri et al. 2014, Cuteri et al. forthcoming.
[26] Lattanzi 1989, 557–558.
[27] Lattanzi 1988, 655.
[28] Sangineto 2006.
[29] Auriemma 1997.
[30] Cavassa 2008.
[31] Costabile 1992.
[32] Cavassa 2008, 102 fig. 2.
[33] Chiusa di Trebisacce: Sangineto 1992. – Crotone e Capo Colonna: Spadea 2006, 51–65. – Sellia Marina: Corrado 2009. – Pian delle Vigne: Spadea 1982, 85.
[34] One from Chiusa di Trebisacce, three from Capo Colonna, one from Crotone and two from Pian delle Vigne.
[35] Giardina 1981, 99–100.
[36] Marino – Taliano Grasso 2010.

[37] Vivacqua et al. forthcoming.
[38] Iannelli – Cuteri 2007.

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Fig. 1–8: by authors.

References

Accardo 2000
S. Accardo, Villae Romanae nell'ager Bruttius. Il paesaggio rurale calabrese durante il dominio romano (Rome 2000).

Auriemma 1997
R. Auriemma, Per la carta archeologica subacquea del Salento, in: Atti del Convegno Nazionale di archeologia subacquea, Anzio 30-31 maggio e 1 giugno 1996 (Bari 1997) 225–239.

Bonomi – Sabbione 2011
S. Bonomi – C. Sabbione, Attività della Soprintendenza per i Beni archeologici della Calabria, in: La vigna di Dioniso e culti in Magna Grecia: Vite, vino e culti in Magna Grecia, Atti del quarantanovesimo Convegno di Studi sulla Magna Grecia, Taranto 24-28 settembre 2009 (Taranto 2011) 657–688.

Botte 2009
E. Botte, Le Dressel 21-22. Anfore da pesce tirreniche dell'alto impero, in: S. Pesavento Mattioli – M. B. Carre (eds.), Olio e pesce in epoca romana. Produzione e commercio nelle regioni dell'Alto Adriatico Atti del Convegno Padova, 16 febbraio 2007 (Rome 2009) 149–171.

Cannatà 2013
M. Cannatà, La colonia latina di Vibo Valentia (Rome 2013).

Capelli et al. 2017
C Capelli – A. Contini – D. Dajaoi – G. Rizzo, Anfore neopuniche del I secolo d. C. di Arles, Ostia e Roma: classificazione tipo-petrografica, origine e diffusione, the journal of Fasti online, 2017, 1–43.

Cavassa 2008
L. Cavassa, Les Kadoi à poix du Bruttium, MEFRA 220,1, 2008, 99–107.

Costabile 1992
F. Costabile, Redditi, terre e fondi finanziarie dell'Olympeion: tributi, imposte e rapporti contrattuali, in: F. Costabile (ed.), Polis ed Olimpeion a Locri Epizefiri: costituzione economia e finanze di una città della Magna Grecia: editio altera e traduzione delle tabelle locresi (Soveria Mannelli 1992) 160–174.

Corrado 2009
M. Corrado, Nuovi dati di scavo ed epigrafici sulle manifatture tardo-repubblicane di anfore commerciali del versante ionico calabrese gravitanti sul golfo di Squillace (Cz), the journal of Fasti online 138, 2009, 1–10.

Cucarzi et al. 1995

M. Cucarzi – M. T. Iannelli – A. Rivolta, The costal site of Bivona, its detection and its environmental changes through geoarcheological exploration, in: Geosciences and Archeology in the Mediterranean Countries, Atti del Congresso Internazionale, Cairo Novembre 28-30 1993 (Cairo 1995) 149–168.

Cuteri et al. 2007

F. A. Cuteri – M. Corrado – M. T. Iannelli – M. Paoletti – P. Salamida – B. A. Sangineto, La Calabria fra Tarda Antichità ed Alto Medioevo attraverso le indagini nei territori di Vibona Valentia, della Massa Nicoterana, di Stilida-Stilo. Ceramiche, commerci, strutture, in: M. Bonifay – J. C. Tréglia (eds.), Late Roman coarse ware, cooking ware and amphorae in the Mediterranean. Archeology and archeometry Aix-en-Provence – Marseille – Arles, 13-16 avril 2005 (Oxford 2007) 461–476.

Cuteri et al. 2014

F. A. Cuteri – M. T. Iannelli – P. Vivacqua – T. Cafaro, Da Vibo Valentia a Niotera. La ceramica tardo romana nella Calabria tirrenica, in: N. Poulou-Papadimitriou – E. Nodarou – V. Kilikoglou (eds.), Late Roman Coarse wares, cooking wares and amphorae in the Mediterranean Archeology and Archaeometry. The Mediterranean: a market without frontiers (Oxford 2014) 63–79.

Cuteri et al. forthcoming

F. A. Cuteri – M. T. Iannelli – P. Vivacqua – G. M. Crisci – D. Barca – N. Rovella, La provincia di Vibo Valentia nella tarda antichità. Considerazione sulla produzione e circolazione delle anfore e della ceramica comune, in: Late Roman Coarse wares, cooking wares and amphorae in the Mediterranean Archeology and Archaeometry. Land and sea: pottery routes, Agrigento 24-27 maggio 2017, forthcoming.

De Sensi Sestito 2011

G. De Sensi Sestito, Cartagine e la Magna Grecia in età dionisiaca. Il ruolo di Ipponio, in: M. Intrieri – S. Rubichini (eds.), Fenici e Italici, Cartagine e la Magna Grecia. Popoli a contatto culture a confronto. Atti del Convegno Internazionale, Cosenza 27-28 maggio 2008 (Pisa 2011) 29–50.

Faedo 1994

L. Faedo, Aspetti della cultura figurative in età romana, in: S. Settis (ed.), Storia della Calabria 2 (Rome 1994) 597–652.

Giardina 1981

A. Giardina, Allevamento ed economia della selva in Italia meridionale: trasformazioni e continuità, in: A. Giardina – A. Schiavone (eds.), Società romana e produzione schiavistica I. L'Italia: insediamenti e forme economiche (Bari 1981) 87–113.

Givigliano 1994

G. Givigliano, Percorsi e strade, in: S. Settis (ed.), Storia della Calabria 2 (Rome 1994) 243–362.

Iannelli 1989

M. T. Iannelli, Hipponion – Vibo Valentia: documentazione archeologica e organizzazione del territorio, Annale della scuola normale superiore di Pisa 3, 19, 1989, 683–736.

Iannelli – Givigliano 1989

M. T. Iannelli – G. Givigliano, Hipponion –Vibo Valentia: la topografia (carta archeologica), Annale della scuola normale superiore di Pisa 3, 19, 1989, 627–681.

Iannelli et.al. 2017
M. T. Iannelli – P. G. Guzzo – G. Gaglianese – B. Minniti – A.M. Rotella – P. Vivacqua, Hipponion tra la seconda metà del IV e la fine del III sec. a. C.: ricostruzione topografica alla luce di nuove scoperte, in: G. De Sensi Sestito – S. Mancuso (eds.), Enotri e Brettii in Magna Grecia. Modi e forme di interazione culturale (Soveria Mannelli 2017) 397–510.

Iannelli – Cuteri 2007
M. T. Iannelli – F. A. Cuteri, Il commercio e la lavorazione del pesce nella Calabria antica e medievale con particolare riferimento alla costa tirrenica, in: L. Lagòstena – D. Bernal – A. Arévaloo (eds.), Cetariae 2005. Salsas y Salazones de pescado en Occidente durante la Antigüedad. Actas del Congreso Internacional Cadiz, 7-9 de novembre de 2005 (Oxford 2007) 285–300.

La Torre 1990
G. F. La Torre, Per lo studio della viabilità romana in Calabria: considerazioni sul tracciato della via cosiddetta Annia o Popilia dalla Conca di Castelluccio a Vibo, in: Klearchos 125-128 (Reggio Calabria 1990) 149–185.

Lattanzi 1988
E. Lattanzi, L'attività archeologica in Calabria nel 1987, in: Atti del ventisettesimo Convegno di Studi sulla Magna Grecia, Taranto-Pestum 9-15 ottobre 1987 (Taranto 1988) 647–657.

Lattanzi 1989
E. Lattanzi, L'attività archeologica in Calabria-1988, in: Atti del ventottesimo Convegno di Studi sulla Magna Grecia, Taranto7-12 ottobre 1988 (Taranto 1989) 545–563.

Lena 1989
G. Lena, Vibo Valentia. Geografia e morfologia della fascia costiera e l'impianto del porto antico, in: Annale della scuola normale superiore di Pisa, serie 3, 19 (Pisa 1989) 583–607.

Marino – Taliano Grasso 2010
D. Marino – A. Taliano Grasso, Ricerche topografiche e scavi archeologici nella Sila Grande, in: L. Quilici – S. Quilici Gigli (eds.), Atlante Tematico di Topografia Antica, 20 (Rome 2010) 51–78.

Mariottini 2001
S. Mariottini, Volontariato ed archeologia subacquea: esperienza di ricerca in Calabria, in: M. Gacobelli (ed.), Lezioni Fabio Faccenna. Conferenze di archeologica subacquea (Bari 2001) 37–50.

Paoletti 2014
M. Paoletti, Il ritratto di Agrippa da Vibo Valentia, in: M. T. Iannelli (ed.), Hipponion Vibo Balentia Monsleonis. I volti della città (Reggio Calabria 2014) 171–179.

Pitimada 1953
L. Pitimada, S. Onofrio (Catanzaro). Rinvenimento di cippo miliario, NSc 7, 1953, 343–344.

Rizzo 2002
G. Rizzo, Instrumenta urbis I. Ceramiche fini da mensa, lucerne ed anfore a Roma nei primi due secoli dell'impero (Rome 2003).

Sabbione 1979
C. Sabbione, Ricerche archeologiche nei territori di Locri e delle sue sub colonie, in: Atti del diciottesimo Convegno di Taranto, Taranto 8-12 ottobre 1978 (Taranto 1979) 382–398.

Rizzo 2014

G. Rizzo, Ostia VI. Le terme del nuotatore. Le anfore, Ostia e i commerci mediterranei (Rome 2014).

Sangineto 1992

A. B. Sangineto, Il deposito di anfore di tre bisacce ed un recipiente per la pix bruttia, in: F. Costabile (ed.), Polis ed Olimpeion a Locri Epizefiri: costituzione economia e finanze di una città della Magna Grecia: editio altera e traduzione delle tabelle locresi (Soveria Mannelli 1992) 183–190.

Sangineto 1994

A. B. Sangineto, Per la ricostruzione dei paesaggi agrari delle Calabrie romane, in Storia della Calabria, in: S. Settis (ed.), Storia della Calabria 2 (Roma-Reggio Calabria 1994) 559–593.

Sangineto 2006

A. B. Sangineto, Anfore, in: G. F. La Torre – F. Mollo (eds.), Blanda Julia sul Palecastro di Tortora. Scavi e ricerche (1990-2005) (Soveria Mannelli 2006) 310–335.

Sogliani – Rotella 1998

A. M. Rotella – F. Sogliani, Il materiale ceramico tardoantico ed altomedievale da contesti di scavo e dal territorio nella Calabria centro – meridionale, in: L. Saguì (ed.), Ceramica in Italia: VI – VII secolo, Atti del Convegno in onore di John W. Hayes (Roma 11–13 maggio 1995) (Firenze 1998) 769–776.

Spadea 1982

R. Spadea, L'area di Piano della Tirena e di S. Eufemia Vetere, in: G. Maddoli (ed.), Temesa ed il suo territorio. Atti del Colloquio di Perugia e Trevi 30-31 maggio 1981 (Taranto 1982) 79–89.

Spadea 2006

R. Spadea, L'abitato del promontorio lacinio e la colonia romana di Crotone, in: R. Spadea (ed.), Ricerche nel santuario di Hera Lacinia a Capo Colonna di Crotone (Rome 2006) 51–65.

Taliano Grasso 1995

A. Taliano Grasso, Considerazioni topografiche sulla via Annia tra Muranum e Valentia (Rome 1995).

Vivacqua et al. forthcoming

P. Vivacqua – G. Biscontin – F. C. Izzo – A. Bernardi, I kadoi del Bruttium: nuove evidenze archeologiche ed archeometriche, in: Atti e Memorie della Società Magna Grecia s. V., vol. III, 2018 [2019], forthcoming.

Roman cooking vessels as indicator for regional trade in the Pontine region, Central Italy

Barbara Borgers

Background

The Pontine region is situated on the Tyrrhenian Sea ca. 60 km southwest of Rome, and is bounded by the Alban Hills and Lepine Mountains. The Pontine Region Project (PRP) is dedicated to the archaeological study of this region, uses landscape approaches, such as field walking. Over the last 30 years, the PRP project has studied 35km² of the region with changing geographical, thematic or chronological focus. Most recently, the PRP project focuses on the Roman economic history of the region, uses pottery data as a proxy. This work uses two main approaches:

- A bottom-up approach: to identify evidence for pottery production and map distribution patterns of local products from Forum Appii and Ad Medias, using typological and petrographic studies.[1]
- A top-down approach: to develop an overarching database that incorporates all data and finds on sites identified in the project, with the aim of mapping the movement of imported wares, including amphorae and various fine wares.[2]

In this contribution, the distribution patterns of local and imported coarse ware from Forum Appii and Ad Medias on the Via Appia will be compared to those of imported amphorae and black gloss ware, with the aim of identifying similarities and differences in the movement of these ware groups within the region between the 4th and 1st century BC.

Pottery Production sites studied within the PRP

During the mid-Republican period, evidence for black gloss ware production has been identified in the hinterland of the Roman colonies at Norba and Antium, but has not yet been the subject of further compositional study.[3]

During the late Republican period, evidence for amphora production has been identified at the sites of Astura[4], Forum Appii and Ad Medias, and has been studied in thin section petrographic analysis.[5]

Movement of local and imported coarse ware in the Pontine region[6]

No kilns for coarse ware have been identified in the study region. Nevertheless, the combination of typological study with thin section petrography suggests that:

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During the mid-Republican period, two fabrics of high collared jars with convex-shaped rim[7] circulated in the region: one was produced near Satricum, whereas the other was imported from the Rome and Tiber Valley region.

During the late Republican period, two additional fabrics of high collared jars with almond-shaped rim[8] circulated: one was produced at Ad Medias, whereas the other was imported from the Rome and Tiber Valley Region or from Campania.

Movement of imported amphorae and black gloss ware in the Pontine region[9]

During the mid-Republican period, very few (Greco-Italic) amphorae from Campania were imported, whereas large quantities of black gloss ware in the 'Gruppo dei Piccoli Stampigli' tradition, produced in various centres around Rome, circulated in the region, and particularly around Ad Medias.

During the late Republican period, amphorae occur in relatively large quantities at Forum Appii and Ad Medias, many of which were imported from Northern Africa (Van der Werff types 1–3), Campania and Tyrrhenian central Italy (Dressel 1A). In addition, at Forum Appii a large number of amphorae of regional production have been identified. By contrast, there is a decline in the presence of imported black gloss ware.

Preliminary Conclusions and Further Work

During the mid-Republican period, the movement of imported ware groups in the Pontine region shows similar trends to Rome's *Suburbium*. The absence of amphorae suggests that wine was distributed in other containers, such as barrels or bags.[10] The stamps on the black gloss ware, which was produced in the Pontine region, are in the 'Gruppo dei Piccoli Stampigli' tradition.[11] Imported coarse ware follows similar trade routes as black gloss ware, and comes from the Rome and Tiber Valley region. Also, Forum Appii and Ad Medias seem to have been integrated in similar trade networks. This can be explained by their proximity, as well as by their location on the Via Appia.

During the late Republican period, the Pontine region seems to be characterised by increasing levels of connectivity. This is suggested by the increased number of local production sites, as well as by the variety in fabrics of imported amphorae and coarse ware. This can be explained in two ways: 1) demographic growth, and, certainly, craftsmen were attracted by new markets; 2) increasing integration in various economic networks, for instance, the harbour at Terracina may have served as a hub for the distribution of overseas (amphorae) or Italian (black gloss ware) products.

At this time, Forum Appii developed into a regional hub from where amphorae were redistributed, while Ad Medias remained largely rural and ceased to exist in the early Imperial period.

Further research, comprising a more robust quantitative dataset from the entire region as well as integration of the regional pottery data in the database, is needed to confirm these observations and to relate them to broader demographic and economic developments.

Notes

[1] Borgers et al. 2018; Tol – Borgers 2016.
[2] Tol 2017.
[3] Tol – De Haas 2013.
[4] De Haas et al. 2008.
[5] Borgers et al. 2018.
[6] Borgers et al. 2017.
[7] Olcese 2003, olla type 2.
[8] Olcese 2003, olla type 3a.
[9] Tol 2017.
[10] Tol 2017.
[11] Tol – De Haas 2013.

References

Borgers et al. 2017
B. Borgers – G. Tol – T. De Haas, Roman cooking vessels (ollae): a preliminary study of the material from the Pontine region, Central Italy, Science and Technology of Archaeological Research 3,2, 2017, 314–325.

Borgers et al. 2018
B. Borgers – G. Tol – T. De Haas, Reconstructing Production Technology and Consumption Patterns, Using Thin Section Petrography: A Pilot Study of Roman Pottery Production in the Pontine region, Central Italy, JASR 740, 2018, 1064–1072.

De Haas et al. 2008
T. De Haas – P.A.J. Attema – H. Pape, Amphorae from the coastal zone between Anzio and Torre Astura (Pontine Region, Central Italy): the GIA excavations at Le Grottacce, a local amphora collection and material from surveys in the Nettuno area, Palaeohistoria 49/50, 2008, 517–616.

Olcese 2003
G. Olcese 2003, Ceramiche comuni a Roma e in area romana: produzione, circolazione e tecnologia (tarda età repubblicana – prima età imperiale) (Mantova 2003).

Tol 2017
G. W. Tol 2017, From surface find to consumption trend: a ceramic perspective on the economic history of the Pontine region (Lazio, Central Italy) in the Roman period, in: T. De Haas – G. Tol

(eds.), The Economic Integration of Roman Italy, Rural communities in a Globalizing World (Boston 2017) 367–388.

Tol – Borgers 2016

G. Tol – B. Borgers, An Integrated Approach to the study of local production and exchange in the lower Pontine Plain, JRA 29, 2016, 349–370.

Tol – De Haas 2013

G. Tol – T. De Haas, Pottery Production and Distribution in the Pontine Region: a Review of Data of the Pontine Region Project, in: G. Olcese (ed.), Ricerche archeologiche, archeometriche e informatiche per la ricostruzione dell'economia e dei commerci nel bacino occidentale del Mediterraneo (metà IV sec. a. C. – I sec. d. C.), Immensa Aequora Workshop (Rome 2011) 149–161.

Roman Pottery from Lilybaeum. Some remarks on imported products and transmarine contacts

Antonella Mandruzzato – Martina Seifert – Debora Oswald

The team of Hamburg and Palermo Universities has been working in Marsala since 2007, when the "Lilybaeum Archaeological Project", led by Inge Nielsen and Nicola Bonacasa, started in collaboration with the Superintendence of Trapani and the Archaeological Museum of Marsala.[1] Following a preliminary geological survey and geophysical prospecting,[2] excavations were carried out in the northeastern area of the Archaeological Park of Marsala, the so-called 'Zona Mura', between 2008 and 2009 (fig. 1).[3] They brought to light the remains of some structures belonging to insulae delimited by limestone-paved roads[4] and of a fortification wall from a late Roman rebuilding phase.[5] The results of the study of the located structures are undoubtedly interesting as they mark the starting point for new investigations on Lilybaeum's urban history.

However, this paper shall not focus on the architectural remains, but on the pottery. Among the features that have marked the history of pottery productions in Lilybaeum, two are particularly worth mentioning: firstly the gradual decrease in traditional Punic forms in the local coarse pottery repertoire over the Hellenistic period, as suggested by Babette Bechtold in her analysis of the vessels found in the necropolis,[6] and an increase in typical Hellenistic-Roman forms;[7] secondly, the great development of Lilybaeum's trade, which flourished during the Roman period, due to the harbour activities importing products from Italy and northern Africa.[8] The second point is particularly important with regard to the preliminary results presented in this paper.

The exhibition "Lilibeo. Testimonianze archeologiche dal IV sec. a. C. al V sec. d. C."[9], organised by the Superintendence of western Sicily in 1984, offered an important synthesis of all research carried out on urban studies, architecture, art and handcrafted production in Lilybaeum. It first provided an organic presentation of pottery samples from the Republican and the early Imperial period brought to light by the ancient town and necropolis excavations.[10] The prevalence of thin-walled pottery[11] and Italian Sigillata[12] among fine tableware, for example, is particularly worth pointing out.

Concerning the materials imported during the late Roman period, a recently published archaeological context of the '*decumanus maximus*' (excavations carried out by the Superintendence of Trapani) showed a significant number of vessels imported from North Africa: over fifty percent of the amphorae, for instance, are African imports.[13]

Despite the increase in research in Marsala and its surrounding area, followed by the prompt release of results, the systematic study of Roman pottery is still at its early stage. The elaboration of an overall summary of all data from previous excavations combined with results from more recent researches should mark the starting point to lay out efficient strategies for future work. In consideration of the role carried out by Lilybaeum, the expected results will represent an important frame of reference for a

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Fig. 1: 'Zona Mura', Sectors III, IV and V during the excavation.

deeper understanding of the economic situation and trade patterns during the Hellenistic and Roman period on the island.[14]

The ongoing analysis of the pottery found in the area called 'Zona Mura' allows to provide some preliminary data.[15] Imported fine tableware was mostly produced in North Africa, although its types were widespread in the western Mediterranean from the middle Imperial period to at least the 5th century. African red slip ware is mainly represented by plain shapes in D fabric[16] – as flat-based dish Hayes 58B, bowl Hayes 61A, the large bowl Hayes 67 and the flanged bowl Hayes 91A, except for few forms, as ARS E[17] Hayes 70 – most of which come from production centres in northern Tunisia.[18]

African cooking ware found together with ARS sherds includes forms such as the dish Hayes 181 (fig. 3,1), the lids Hayes 182 and Hayes 196 (fig. 3,4), the 'classic' type of the casserole Hayes 197 (fig. 3,2); the findings also include lids with undifferentiated or thickened rolled rim;[19] finally some others with blackened rim and un-slipped exterior wall are attributable to form Hayes 195.[20]

Furthermore, there is a considerable amount of fragments of cooking pots among the catalogued material. The texture of the fabric and diverse inclusions, which are visible to the naked eye and include traces of volcanic origin, lead to the conclusion that they consist mainly of samples of Pantellerian Ware.[21] The considerable presence of Pantellerian Ware is likely due to the trade routes between northern Tunisia and western Sicily, that could include a stop in Pantelleria,[22] and the competitiveness of these specialised cooking pots: as Peacock wrote on Pantellerian ware production "[…] it was probably greatly esteemed for its resistance to thermal shock".[23]

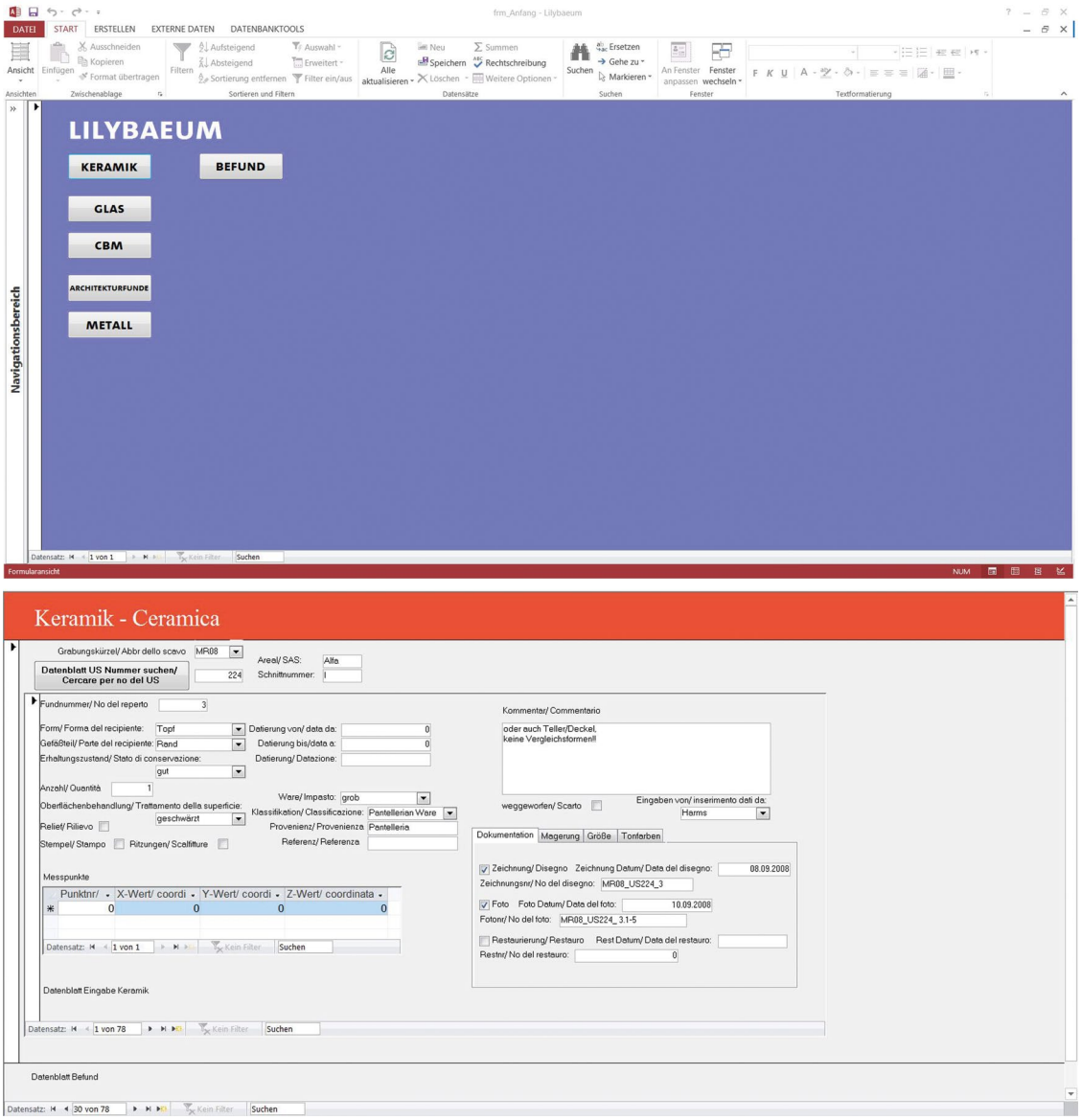

Fig. 2: Lilybaeum database: splash screen and pottery form.

The study of common ware is already showing that some typologies are present in other centres of the western and southwestern regions of the island as well. The basins of the late Roman contexts in the sub divo necropolis in Agrigento prove to be a good example. The morphological characteristics of the artefacts brought to light by the 'Zona Mura' excavations show close correspondences not only with vessels produced at Agrigento, but also with those imported to Agrigento from other Sicilian and African workshops.[24]

The pottery of the 'Zona Mura' presents close analogies to the findings belonging to a late Roman context from a sewer within the aforementioned excavation of the '*decumanus*

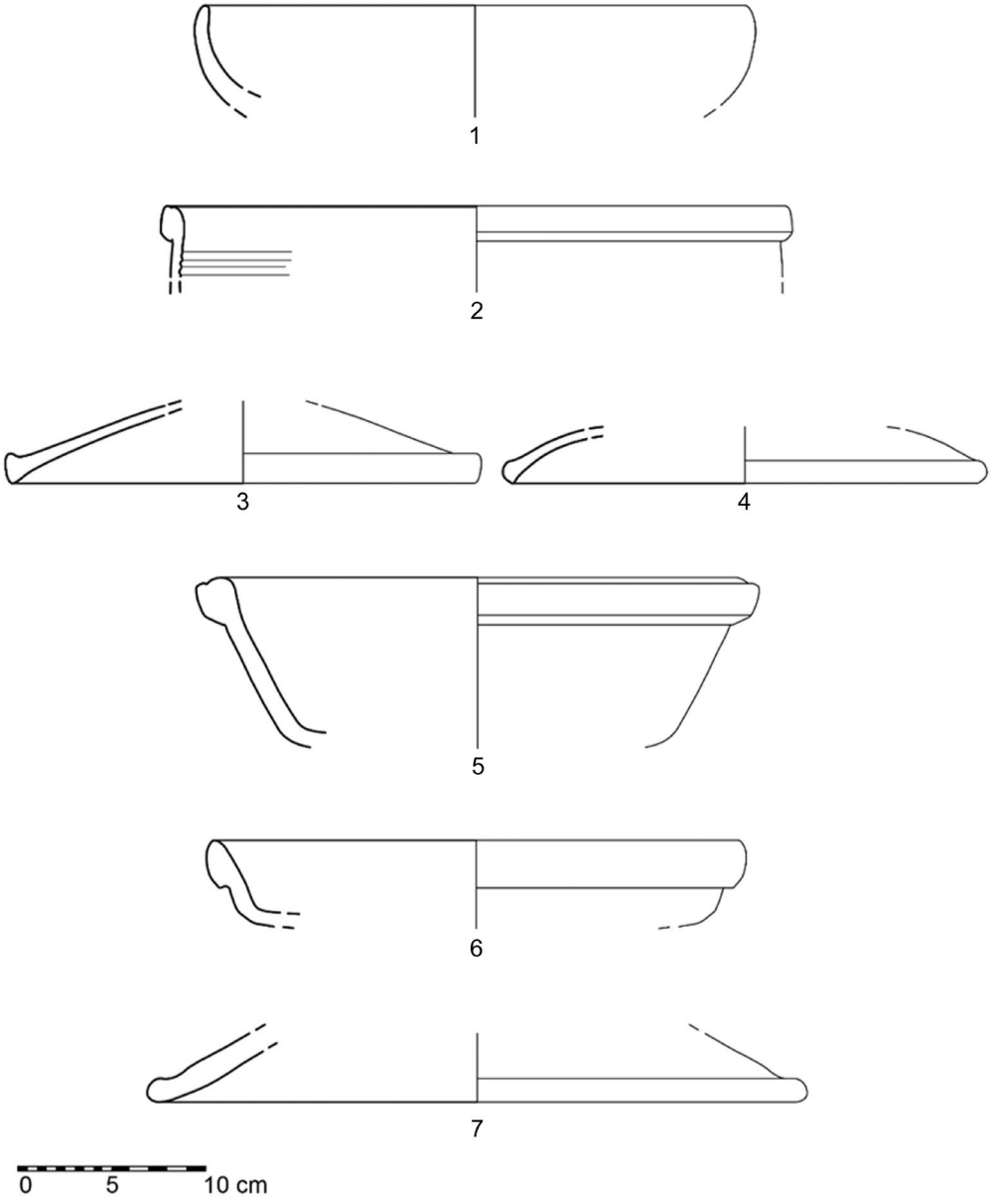

Fig. 3: African cooking ware (1–4) and Pantellerian ware (5–7) (drawings by L. Fazio).

maximus'.[25] The two contexts are connected through the origin of both the tableware and cooking ware. The recurrence of forms Hayes 50B, 61A, 67 and 91 is particularly striking. Concerning the cooking pots, the most common typologies – other than form Hayes 181 – are numerous sherds attributable to the Pantellerian Ware, with the same repertoire that was brought to light by the 'Zona Mura' excavations.[26]

Recent studies on the trade routes between North Africa and Sicily during the Roman and late Roman period tried to figure out the reasons for the constant flow of African

pottery imports and the presence of Carthaginian products in Lilybaeum and its region up to and throughout the 5th century AD. The study by Michel Bonifay and Daniele Malfitana, who have evoked Elizabeth Fentress' and Pascal Arnaud's hypotheses, focused on the role of coastal navigation and the concept of "circular trade" between the Tunisian coast and the extreme western areas of the Strait of Sicily on the basis of archaeological evidence. This system was independent from the larger trade routes that brought African and Sicilian wheat to Rome and it kept on working throughout the 5th century AD, as documented by the findings on the southwestern Sicilian coast.[27] The vicinity of Lilybaeum to the northern Tunisian coast should be highlighted in particular, as was already noticed in Antiquity: "The shortest passage from Lilybaeum across to Libya in the neighbourhood of Carthage" – Strabo writes – "is one thousand five hundred stadia; and on this passage, it is said, some man of sharp vision, from a look-out, used to report to the men in Lilybaeum the number of ships that were putting to sea from Carthage".[28]

The fact that the city possessed three well-equipped harbours on the promontory is equally relevant. These harbours – as Enrico Caruso pointed out[29] – formed an actual "harbour system", that represented a privileged dock for coastal navigation. Next to the greater trade routes for the transport of African and Sicilian wheat and other merchandise to Rome, other routes between the northern Tunisian coast and the southwestern coasts of Sicily, that could include a stop in Pantelleria, are therefore highly probable. This helps to explain not only the constant flow of the African vessels towards the centres in the south-western sector of Sicily, but the relevant presence of Pantellerian Ware imports.[30]

Notes

[1] Members of the mission 2007–2009 at Marsala were Martina Seifert, Antonella Mandruzzato, Andrea Harms, Alessia Mistretta and Thomas Fuchs.

[2] Bonacasa – Nielsen 2010, 146–149.

[3] Bonacasa – Nielsen 2010 (Lilybaeum Archaeological Project). Mistretta et al. 2014 (preliminary results of the excavations and complementary geophysical prospection by M. Seifert and N. Babucic in 2012).

[4] The structures show a complex stratigraphic sequence. Mistretta et al. 2014, 67–72.

[5] Bonacasa – Nielsen 2010, 153; 155 fig. 13.

[6] Bechtold 1999, 188–191.

[7] Local production of black glazed pottery in the Hellenistic period: Di Stefano 1993, 44 f.; Di Stefano 2002, 88.

[8] Wilson 1990, 251–270 (trade patterns in the Imperial age). Malfitana 2004, 2006 (on Eastern and Italian Sigillata imported to Sicily). Bonifay – Malfitana 2016, 409 f. 415 f. 423 (Northern Africa imports).

[9] Di Stefano 1984.

[10] Oliveri 1984, 117–123.

[11] Some workshops have been identified in Sicily: see Denaro 2008, 85–89.

[12] The stamps (L. Tettius Samia, Cn. Ateius, L. Rasinius Pisanus, C.P.P. and more) suggest that imports from Italian workshops were constant at least until the beginning of the 2nd cent. AD. Oliveri 1984, 119–123. See also: Mandruzzato 1987, 429 f. pls. II.2, VI.4; Polito 2000, 70 f.; Malfitana 2004, 326.

[13] Pisciotta 2013, 155–158: cp. Diagrams 1–3, 156 fig. 33. ARS ware was coming from workshops in the region of Carthage.

[14] The aim of the 'Lilybaeum Archaeological Project' is therefore to contribute to a better definition of the trade flows to Lilybaeum, through the data provided by analysing the pottery from the 'Zona Mura'. The project involves the database Lilybaeum (fig. 2), to manage both the sampling of data and the visual documentation. Bonacasa – Nielsen 2010, 146.

[15] All fragments catalogued come from layers which lie above the road and floor levels in Sectors III, IV and V of the excavation.

[16] Atlante I, 78 ff.

[17] Atlante I, 119 ff.

[18] Bonifay 2004, 48–50. For the ARS imports on the Western coast of Sicily see Bonifay 2016, 520 fig. 126; 521 fig. 127; 524–526.

[19] A sherd is ascribable to the form Hayes 185 (fig. 3,3); its fabric is reddish, with several inclusions typical of cooking ware probably produced by workshops of Byzacena. On African cooking ware from 'Zona Mura': Mandruzzato – Seifert 2014; Mandruzzato – Seifert forthcoming.

[20] This type is morphologically linked to the lid form Hayes 182: Bonifay 2004, 227. It has been documented on the northern coast of Sicily, in Termini Imerese: Belvedere – Burgio 2016, 226; see also Malfitana – Bonifay 2016, 649.

[21] Such identification is further supported by the repertoire of the forms, which are common in this production. In fact, we could record the presence of the bowl with straight wall and short flat or oblique rim, the bowl with a convex-topped rim rounded to the outside (fig. 3,5) and some samples of the rounded-rim type. This form is also documented in its straight, or everted-wallshape (fig. 3,6) and with pendent rim. As for the lids, we have samples with straight wall and thickened rim (fig. 3,7) as well as lids with rim curved to the outside and separated from the straight wall by a groove. Mandruzzato – Seifert forthcoming.

[22] Bonifay – Malfitana 2016, 416; 412 fig. 91.

[23] Peacock 1982, 80. On the reasons for the wide distribution over a vast area of the Central and Western Mediterranean see Peacock 1982, 79 f.

[24] Cp. Carra 2007, 71–81.

[25] Pisciotta 2013.

[26] Pisciotta 2013, 159. At a recent congress in Palermo new data has been presented: Pisciotta forthcoming.

[27] Bonifay – Malfitana 2016, see esp. 408 fig. 90. 409–410. 412 fig. 91. 420–423.

[28] Strab. VI, 2, 1 (English translation by H. L. Jones, Loeb Classical Library, 1924).

[29] Caruso 2008, 82 f.

[30] Bonifay – Malfitana 2016, 416.

Image Credits

Fig. 1–3: Archive of the Archaeological Mission of Hamburg and Palermo Universities at Marsala.

References

Atlante I
A. Carandini (ed.), Atlante delle forme ceramiche I. Ceramica fine romana nel bacino mediterraneo (medio e tardo impero) (Rome 1981).

Bechtold 1999
B. Bechtold, La necropoli di Lilybaeum (Rome 1999).

Belvedere – Burgio 2016
O. Belvedere – A. Burgio, Termini Imerese, in: Malfitana – Bonifay 2016, 223–231.

Bonacasa – Nielsen 2010
N. Bonacasa – I. Nielsen, Il Progetto Archeologico Lilibeo, Mare Internum. Archeologia e culture del Mediterraneo 2, 2010, 145–155.

Bonifay 2004
M. Bonifay, Etudes sur la céramique romaine tardive d'Afrique, BARIntSer 1301 (Oxford 2004).

Bonifay 2016
M. Bonifay, Annexe 1. Éléments de typologie des céramiques de l'Afrique romaine, in: Malfitana – Bonifay 2016, 509–573.

Bonifay – Malfitana 2016
M. Bonifay – D. Malfitana, L'apport de la documentation sicilienne à l'étude du commerce de l'Afrique romaine, in: Malfitana – Bonifay 2016, 403–439.

Carra 2007
R. M. Carra, La ceramica comune: le forme aperte, in: R. M. Bonacasa Carra – F. Ardizzone (eds.), Agrigento dal Tardo Antico al Medioevo. Campagne di scavo nell'area della necropoli paleocristiana. Anni 1986-1999 (Todi 2007) 71–81.

Caruso 2008
E. Caruso, Lilibeo punica e romana: storia e topografia, in: E. Caruso – A. Spanò Giammellaro (eds.), Lilibeo e il suo territorio. Contributi del Centro Internazionale di Studi Fenici, Punici e Romani per l'archeologia marsalese (Palermo 2008) 73–92.

Denaro 2008
M. Denaro, La ceramica romana a pareti sottili in Sicilia (Mantova 2008).

Di Stefano 1984
C.A. Di Stefano (ed.), Lilibeo. Testimonianze archeologiche dal IV sec. a.C. al V sec. d.C. Marsala, Chiesa del Collegio, dal 3 dicembre 1984 (Palermo 1984).

Di Stefano 1993
C.A. Di Stefano, Lilibeo punica (Marsala 1993).

Di Stefano 2002
C. A. Di Stefano, La documentazione archeologica del periodo dionigiano nella Sicilia occidentale, in: N. Bonacasa – L. Braccesi – E. De Miro (eds.), La Sicilia dei due Dionisî. Atti della settimana di studio Agrigento 24–28 febbraio 1999 (Rome 2002) 81–91.

Malfitana 2004
D. Malfitana, Italian Sigillata imported to Sicily: the evidence of the stamps, in: J. Poblome – P. Talloen – R. Brulet – M. Waelckens (eds.), Early Italian Sigillata. The chronological framework and trade patterns. Proceedings of the First International Congress Leuven May 7 and 8 1999 (Leuven 2004) 309–336.

Malfitana 2006
D. Malfitana, Metodologie, problemi e prospettive di ricerca negli studi di ceramologia ellenistica e romana in Sicilia. Un planning per future ricerche tra archeologia e archeometria, in: D. Malfitana – J. Poblome – J. Lund (eds.), Old pottery in a new century. Innovating perspectives on Roman pottery studies. Atti del Convegno Internazionale di Studi Catania 22–24 Aprile 2004 (Catania 2006) 399–421.

Malfitana – Bonifay 2016
D. Malfitana – M. Bonifay (eds.), La ceramica africana nella Sicilia romana, I–II (Catania 2016).

Mandruzzato 1987
A. Mandruzzato, La sigillata italica in Sicilia. Importazione, distribuzione, produzione locale, in: H. Temporini (ed.), ANRW II, 11.1 (Berlin 1988) 414–449.

Mandruzzato – Seifert 2014
A. Mandruzzato – M. Seifert, Ceramica da cucina dalla "Zona Mura" a Marsala. Le importazioni africane, ReiCretActa 43, 2014, 573–580.

Mandruzzato – Seifert forthcoming
A. Mandruzzato – M. Seifert, Marsala, "Zona Mura": la ceramica da cucina tardoromana, in: Land and sea: potteryroutes. Proceedings of 6th International Conference on Late Roman Course Ware, Cooking Ware and Amphorae in the Mediterranean: Archaeology and Archaeometry Agrigento 24–28 maggio 2017, forthcoming.

Mistretta et al. 2014
A. Mistretta – A. Mandruzzato – M. Seifert, Note di archeologia lilibetana. Un primo bilancio delle indagini della missione archeologica delle Università di Palermo e di Amburgo, Mare Internum. Archeologia e culture del Mediterraneo 6, 2014, 67–78.

Oliveri 1984
F. Oliveri, Terra Sigillata Italica, in: Di Stefano 1984, 119–123.

Peacock 1982
D. P. S. Peacock, Pottery in the Roman World. An ethnoarchaeological approach (London 1982).

Pisciotta 2013
F. Pisciotta, Periodo 5. (fine V - inizi VI d. C.), in: Epigrafia e Territorio. Politica e Società. Temi di antichità romane IX (Santo Spirito 2013) 153–162.

Pisciotta forthcoming
F. Pisciotta, Lilibeo, le Egadi e le rotte mediterranee: il dato ceramico, in: La Sicilia e il Mediterraneo

dal tardo antico ai Normanni. Prospettive di ricerca tra archeologia e storia. Congresso Internazionale dedicato a Fabiola Ardizzone Palermo 11–13 ottobre 2018, forthcoming.

Polito 2000

A. Polito, La circolazione della sigillata italica liscia in Sicilia, QuadAMess I.2, 2000, 65–102.

Wilson 1990

R. J. A. Wilson, Sicily under the Roman Empire. The archaeology of a Roman province, 36BC – AD 535 (Warminster 1990).

Between Therme and Troy: the ceramic exchange in the regional network of the northern Aegean in the late 8th and early 7th c. BC

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In the second half of the 8th and the early 7th century BC a dynamic exchange network developed in the multi-ethnic northern Aegean basin, manifested by changes in the ceramic assemblages at a number of local sites.[1] It encompassed the coastal zone between the Thermaic Gulf to the west and Troy to the east, incorporating the islands of Thasos, Samothrace, Tenedos and Lemnos (fig. 1). Although the study of the manufacturing, exchange and consumption patterns of local ceramic groups during the discussed period is still in its beginning, the last 30 years of research have contributed to a growing knowledge on the subject.[2] The importance of the discussion can be emphasised in the light of the fact that a significant part of the coastal area as well as the islands of the northern Aegean were still inhabited at that time only by native pre-Greek people.[3]

The colonisation of the northern Aegean basin was a long-lasting process. It started in the second quarter of the 7th century BC for Thasos and the Thracian Chersonese, while the rest of the coast between Athos peninsula and Propontis received Greek colonists in the middle and the second half of the 7th century BC.[4] Consequently, the Aegean basin turned into Hellenic Sea and the polis became the main social and political structure in its coastal areas. In the second half of the 8th and the first quarter of the 7th century BC,

Fig. 1: Map of the Northern Aegean with place names mentioned in text.

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however, the coast of the Aegean Thrace and the islands of Thasos and Samothrace are still inhabited only by native *ethne*. Their ceramic production still follows the native tradition of handmade wares with smoothed or burnished/polished surface and incised, fluted or stamped decoration.[5] By contrast, the demographic picture in the northeastern and northwestern corners of the Aegean at that time does not appear so clear-cut since the early Greek settlers have, presumably, already established themselves there. The eighth city of Troy is traditionally accepted as the "Greek" one, but this assumption was challenged some years ago and the significant role played by the native Luwian people was advocated.[6] The ceramic assemblage until the mid-7th century BC is dominated by local wares (Northwest Anatolian Grey Ware, Tan and Buff Wares, painted G 2-3 Ware), while connections with contemporary ceramic groups from mainland and eastern Greece are hard to prove.[7] Similarly, the coastal zone of the Thermaic Gulf and the western Chalcidice peninsula are traditionally seen as region where early, pre-8th century BC, Euboian activities and economic interests are registered. The view is usually supported by the presence of Euboian and Euboian type locally produced pottery.[8] This was also challenged in the last 20 years and the view that the importance ascribed to the Euboians is overemphasised, was advocated.[9] However, the volume and nature of the archaeological evidence ascribed to Euboian activities changes from 8th century BC on. It is probably not a coincidence that imports from the eastern Mediterranean and the southeastern Aegean dated to the late 8th and early 7th century BC are concentrated exactly in sites in that region and probably partly linked to the commercial activities of the Euboians. By contrast, the territories east of Sithonia peninsula, which were beyond the area of active Euboian involvement, have not produced equivalent contemporary imports.

Considering the demographic situation, the distribution of local ceramic groups in the second half of the 8th and the early 7th century BC in the northern Aegean is very indicative for the directions and mechanisms of exchange between the inhabitants of its micro regions. It remains an open question who had the leading role in this system of exchange and if it is at all reasonable to search for a "protagonist."

While the currently known ceramic assemblage from sites east of Nestos Delta and from Samothrace suggests more active exchange with the Troad and Lemnos, the island of Thasos, its Peraia and the Strymon Delta appear as a crossing point where ceramic imports from east and west reached (fig. 2). This regionally developed network was not restricted to distribution of various locally manufactured ceramic groups in neighbouring sites. It included transmission and adoption of technological know-how, most likely facilitated by the work of itinerant potters. The distribution pattern of a regional group of standardised sub-geometric, fine, painted tableware, known as G 2-3 Ware (fig. 3,1), mirrors the movement of vessels, but also potters and technological knowledge from Troy and Lemnos in westerly and northerly direction, towards Samothrace, Thasos, coastal Thrace and less so the Thermaic Gulf (fig. 2 red). It is the main group of painted tableware with sub-geometric decoration manufactured in the northeastern Aegean in

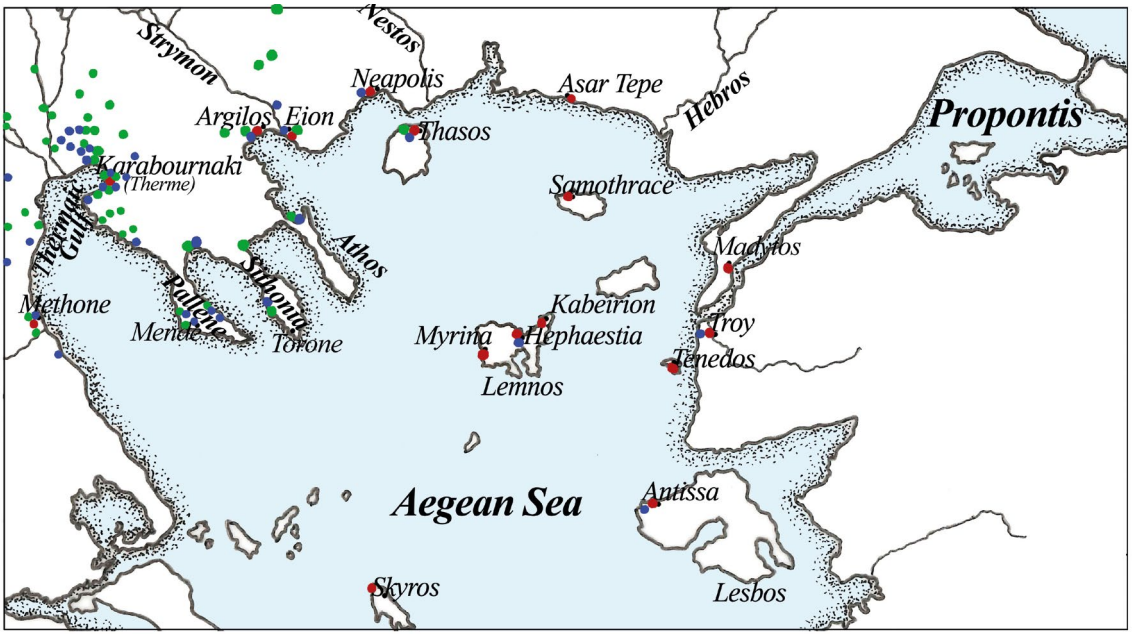

Fig. 2: Distribution map of G 2-3 Ware (red dots), Silver Slip Ware (green dots) and Thermaic transport amphorae (blue dots) (prepared by author).

the second half of 8th and the first half of 7th century BC.[10] Its quantity and contextual distribution in Troy and Lemnos as well as the results from NAA of fragments from Troy and the evidence for production on Lemnos clearly indicate that these were the two main centres of manufacture and sources of exported vases and travelling potters.[11] The argument is supported by micro-XRF analysis of 120 samples from various sites.[12] The results indicate that the manufacture must have been organised in multiple centres rather than in a single one which would then export vases for exchange. An on-site small scale production at least on the island of Thasos and the opposite coast has already been advocated.[13] The process had significant impact on the native Thracians living on the islands of Samothrace, Thasos and the opposite coastal areas. It not only led to the adoption of new ceramic technology, wheel-made vs the native handmade, but to introduction of new shapes whose usage was perhaps linked to the introduction of new social practices as well.[14] Although G 2-3 Ware vessels were discovered in sites west of the Strymon Delta, such as Argilos, Karabournaki and Methone[15] their quantity is minimal in comparison to the dominant groups of locally and regionally (from the Thermaic Gulf) manufactured tableware. G 2-3 Ware vessels appear to have reached the northwestern corner of the Aegean perhaps occasionally, rather than as a result of regular exchange.

On the other side contemporary ceramic groups produced in the Thermaic Gulf are present on Thasos and sites on the opposite mainland coast, but did not travel further to the east, apart from a small amount of shards from Troy. The distribution pattern of two

Fig. 3: Examples of G 2-3 Ware (photos: author), Silver Slip Ware (fragments to the left after Κεφαλίδου – Ναζλής 2013, εικ. 3–4; restored vessel after Τζαναβάρη 2013, εικ. 1) and Thermaic transport amphorae (after Τιβέριος 2013, εικ. 1α–β).

ceramic groups, the so-called Thermaic transport amphorae and the Silver-Slip Ware can best illustrate the process.

The Silver-Slip Ware (fig. 3,2) features very distinctive silvery or golden surface colour due to the high mica content in the fabric and even more in the slip that covers it.[16] The distribution map indicates concentration in sites along the northern and the eastern coast of the Thermaic Gulf (fig. 2 green). It is currently accepted that it must have been manufactured in several centres, one of which is the Sindos settlement mound. The easternmost point where it appears, according to the currently available evidence, is the pre-colonial settlement on Thasos[17] where it shares context with G 2-3 Ware, Grey Anatolian Ware, Thermaic transport amphorae and native handmade wares.[18] It is indicative for the exchange between these two micro regions within the northern Aegean network. On the other side examples from Koprivlen in Bulgaria[19] suggest a different model of distribution and exchange. These are locally produced and most likely indicate the work of itinerant potters who introduced new technological skills to the native Thracians, similarly to those who introduced and manufactured G 2-3 Ware on the island of Thasos.

The Thermaic transport amphorae (fig. 3,3), nearly contemporary with G 2-3 and the Silver-Slip Ware, were produced in the coastal area of the Thermaic Gulf and also reached the island of Thasos. Their distribution, however, continued to the east and can be illustrated by a small number of fragments from Troy, Lemnos and Lesbos (fig. 2 blue).[20] In consideration with the fact that such amphorae were discovered in Syria and southern Italy, their distribution is often associated with the long-distance, seaborne commercial activities of the Euboians who probably had an important role in connecting the northwestern Aegean to the eastern Mediterranean. Such model, however, is hard to apply for the area east of Athos peninsula since the contemporary archaeological record there does not suggest any Euboian link. The results from a chemical analysis of a Thermaic amphora fragment from Troy are even more revealing as these indicate its local production.[21] Again, like the local manufacturing of G 2-3 Ware on Thasos and of Silver-Slip Ware in Koprivlen, the archaeological evidence suggests the travelling of craftsmen and technological transfer. It does not mean, of course, that import of ceramic vessels and their content, especially in the case of the amphorae, did not exist. It rather adds one more aspect to the exchange patterns that developed along the northern Aegean littoral in the late Geometric and the early Archaic period. Another interesting aspect of the distribution pattern of late Geometric and early Archaic north Aegean ceramics is the apparent lack of Thermaic wares along the coast between Thasos and Troy and on the island of Samothrace, where northeastern Aegean ceramics such as G 2-3 and Grey Anatolian Wares have come to light. This situation is revealing on the sea routes that were followed and directions of sailing. A boat leaving the Thermaic Gulf, sailing south and then east would have had to go around the tips of the Pallene and Sithonia peninsulas of Chalcidice. After that, however, Lemnos

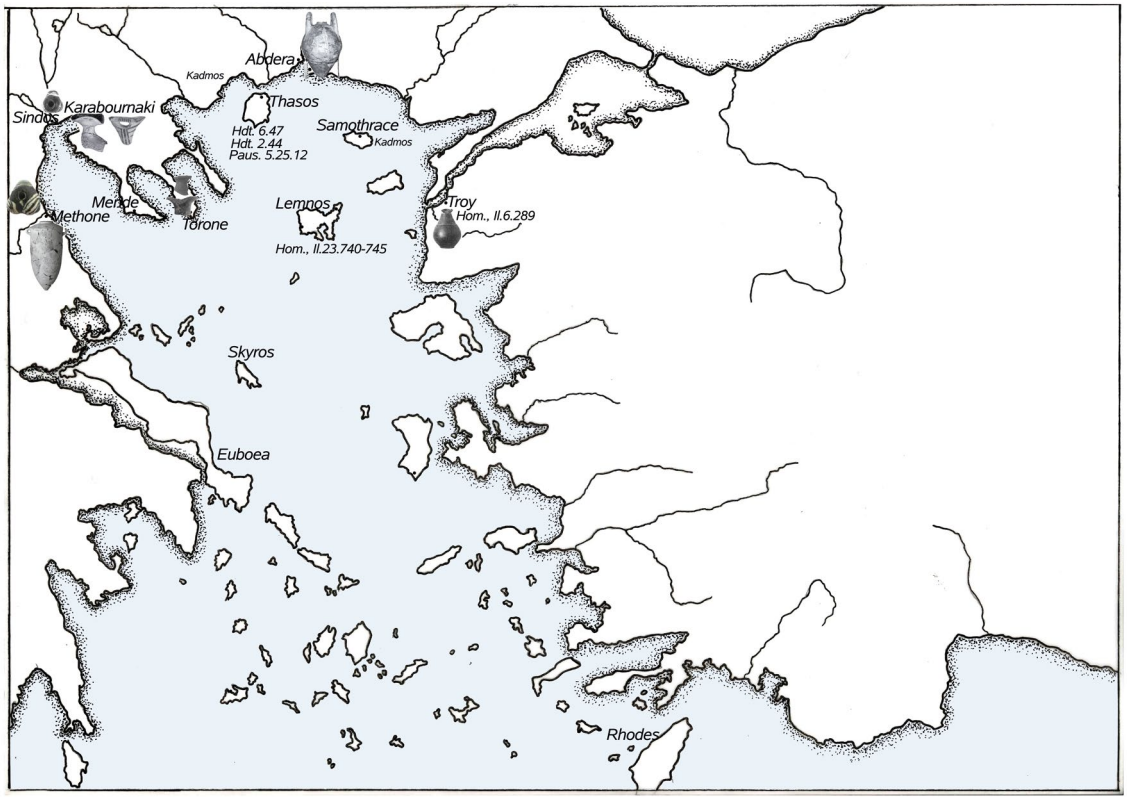

Fig. 4: Distribution map of Cypriot, Phoenician and Phoenician-type artefacts in the Northern Aegean and sites associated with Phoenicians by ancient literary sources.

is the next point due east, giving access to Troy or Lesbos to the southeast. Had a boat tried to go north and then followed the coast of Thrace in eastward direction, it meant sailing around the southern tip of Athos peninsula. This is a very dangerous journey even today[22] and we have the examples of the destroyed Persian fleet there in 492 BC,[23] followed by the digging of Xerxes' canal 10 years later,[24] as well as the disaster of the Spartan fleet in 411 BC.[25] It seems that the coast of Thrace between the Strymonic Gulf and Nestos Delta as well as the north coast of Thasos were more easily accessible from the Thermaic Gulf by a land journey followed by a short sea crossing and the distribution map of the Thermaic amphorae and the Silver-Slip Ware certainly traces land routes (fig. 2 green and blue). By contrast, G 2-3 Ware is currently known only from coastal sites. As it started from the northeastern Aegean (Troy and Lemnos), it is not a surprise to find it in sites such as Samothrace and Asar Tepe. A boat sailing from the east did not have to negotiate an obstacle such as Athos peninsula and could easily access the coast between Thasos and Troy. Considering the fact that the Euboians did not have commercial and sailing initiatives east of Chalcidice one may imagine that its distribution is a result of the

activities of the local population of Troy and Lemnos. Forty years ago J. Graham suggested a link between the distribution of G 2-3 Ware and Phoenician activities in the northern Aegean reported by the ancient literary testimonies.[26] Since there is no archaeological evidence that could be directly linked to Phoenician activities between Athos peninsula and Troy, this idea still remains hypothetical. The coastal sites of the Thermaic Gulf and Chalcidice, however, have produced still limited number of eastern Mediterranean ceramics and artefacts dated to the late 8th and early 7th century BC, which provide evidence for contacts with this part of the ancient world, most likely via Euboia and Cyprus and allows for the assumption that a small number of Levantine people might have been present or occasionally visiting the northern Aegean. It is important, however, that the distribution map of G 2-3 Ware overlaps with the distribution map of Cypriot and Phoenician objects in the northwestern Aegean and with the map of sites where the written sources place Phoenicians, east of the Chalcidice Peninsula (fig. 4). This is a topic that the future discoveries will throw more light on.[27]

Notes

[1] Some of the best illustrations of this process come from the islands of Thasos and Samothrace: cf. Gimatzidis 2002, 73–81; Ilieva 2009, 109–123; Ilieva 2010, 138–171; Ilieva 2014, 85–96; Ilieva 2018, 231–250.

[2] The annual reports on the archaeological and archaeometric research in North Greece are presented in the AEMTH volumes, while a number of doctoral dissertation at the Aristotle University of Thessaloniki have greatly contributed to our understanding of the ceramic manufacture and exchange in the LG and Archaic northern Aegean. For collected papers on the subject: cf. Adam-Veleni et al. 2013; Tiverios et al. 2012; Kefalidou – Tsiafaki 2012; Kotsonas 2012, 111–300.

[3] Archilolochus (fr. 46-52) refers to the native people of Thasos and the opposite mainland at the time of the Parian arrival as *Thracians*. Similarly, the ancient literary tradition agrees on the Thracian origin of the pre-Greek population of Samothrace. For collected literary sources on Samothrace: cf. Lewis 1958; Burkert 1993, 178–191. The ancient literary sources provide various accounts on the identity of the pre-Greek peoples of Lemnos. Homer knew them by the name *Sinties* (Il. 1, 594) and *Sinties of savage speech* (Od. 8, 293-294). Sch. ad Il. 1, 594 tells us that the Sinties were Pelasgoi, the sch. ad Od. 8, 294 describes them as Thracians. Hellanicus of Mytilene, fr. 71a knew that the people of Lemnos were Thracians, but describes them as *mixhellenes* and few in number. The sch. ad Aesch. Pers. 890 also refers to Lemnos as Thrace (Thracian). Herodotus (Hdt. 5, 26; 4,145; 5, 138-139) informs us that the non-Greek inhabitants of Lemnos (and the neighbouring Imbros) were Pelasgoi. Thuc. 4, 109, 1 knew of the people of Lemnos as Pelasgoi, but described them as part of the tribe of the Tyrsenians. The coast between lower Strymon and Hebros rivers was home of various Thracian *ethne*, some of which were known by tribal names such as Kikones (in the Ismaros area opposite Samothrace), Bistones (along the lower Nestos, in the chora of later Abdera), Edonoi (lower Strymon, around Pangaion), for collected sources and comments cf. Delev 2005, 105–121; Delev 2007, 85–106; Ilieva 2006; Ilieva 2017, 253–275; Ilieva 2018, 231–251. Similarly the

area east of Hebros river, around Ainos, the Melas Gulf and the Thracian Hersonese was inhabited by Thracian tribes some of which known as early as the Homeric epics (east Thracians living around Ainos, Il. 2: 844–845, 4: 519–520), for collected sources and comments on Thracian Hersonese: cf. Tsvetkova 2008.

[4] For the colonisation of the Northern Aegean: cf. Ilieva 2006; Tiverios 2008, 1–154; Damyanov 2015, 297–301. For Thasos in particular: cf. Muller – Mulliez 2009, 135–150 with earlier bibliography; for Samothrace: Graham 2002, 221–260; Ilieva 2010, 138–170.

[5] For the specifics of the EIA local, hand-made ceramics from Aegean Thrace: cf. Triantafyllos 1990, 297–322; Koukoulē-Chrysanthakē 1992; Ilieva 2010, 138–170.

[6] Rose 2008, 399–430.

[7] Aslan 2002, 79–129.

[8] Tiverios 2008, 1–154.

[9] Papadopoulos 1997, 191–219; Papadopoulos 2011, 113–133; Anagnostopoulou – Gimatzidis 2013, 369–376.

[10] For summarising studies on G 2-3 Ware, see Ilieva 2007, 212–27; Ilieva 2009, 109–123; Ilieva 2010, 138–171; Ilieva 2013, 123–131; Ilieva 2014, 85–96; Ilieva 2016, 207–222; Ilieva 2018, 231–250; Ilieva et al. 2010, 565–574.

[11] The results from NAA analyses of Trojan ceramics proved the local origin of G 2-3 Ware (Mommsen et al. 2001, 169–211), while the discovery of misfired sherds on Lemnos supports its role as a centre of manufacture (Beschi 1994a, 69; Beschi 1994b, 35).

[12] Ilieva et al. 2010, 565–574.

[13] Ilieva 2014, 85–96; Ilieva 2018, 231–250.

[14] See recently Ilieva 2016, 207–222; Ilieva 2018, 231–250.

[15] Karabournaki: Tiverios et al. 2001, 259. 262 fig. 6. – Methone: Kotsonas 2012, 115. – Argilos: Ilieva 2013, 123–131.

[16] For summarising discussions on technological features, shape repertory, centres of manufacture and distribution: cf. Tiverios 1992, 357–367; Gimatzidis 2010, 226–252.

[17] Two deep trenches excavated by P. Bernard in 1960 in the ancient town of Thasos, to the north-west of the Artemision, led to the revealing of the earliest evidence of habitation, especially in sounding G1: Bernard 1964, 77–146. Partly excavated apsidal (or oval?) building K with a dividing wall, clay floor and stone masonry which probably continued in a wattle-and-doubt construction and the associated ceramic finds of North Aegean manufacture were initially interpreted as the earliest remains of the Parian *apoikia* established by the first wave of settlers led by *oikistes* Telesikles. The layer with these remains was dated by the excavator to the first half of the 7th c. BC. The re-examination of the stratigraphy and the ceramic assemblage from this earliest layer of habitation led to the conclusions that it precedes the Greek arrival on the island and belongs to a Thracian settlement dated to the last decades of the 8th and the early 7th c. BC.: Kohl et al. 2002, 58–70; Muller – Mulliez 2009, 135–150. The nature and the date of the finds from this layer influenced its designation as *pre-colonial* in terms of chronology, meaning that it is immediately preceding the establishment of the Greek settlers on the island, see Graham 2001, 364–402; Koukoulē-Chrysanthakē 1993, 679–735; Kohl et al. 2002, 58–70; Muller – Mulliez 2009, 135–150; Ilieva 2009, 109–121. The results from the re-examination and

the new chronological margins of the precolonial settlement have as a consequence the dating of the Parian arrival ca. 670–660 BC (Muller – Mulliez 2009, 135–150 with earlier bibliography) *versus* the older dating ca. 650 BC supported by Graham (Graham 1978, 62–98; Graham 2001, 364–402). In fact this habitation level must have been preceded by an even earlier phase, represented by a very small part of a wall named P in the new topographic plan of trench G1: cf. Kohl et al. 2002, 58–70.

[18] Bernard 1964, 77–146.

[19] Bozkova 2002, 133–144; Bozkova – Delev 2012, 69–78.

[20] Catling 1998, 151–187. For detailed discussion on terminology, technological and ornamental features, centres of manufacture and distribution see Kotsonas 2012, 150–158 (with earlier bibliography).

[21] Momsen et al. 2001, 195–196 (sample 118); Kotsonas 2012, 155 no. 532.

[22] In 1835 when Leaky was walking around Athos he couldn't find a local sailor willing to take him by boat around the south-eastern tip of the peninsula despite the generous amount that he offered. The storms around its shores, especially the north-eastern one are notorious and still intimidate the local sailors and fishermen: Hovardas 2007, 12.

[23] Hdt 6, 44. 95; 7, 189.

[24] Hdt. 7, 22–24. 37. 116–117. 122.

[25] The Spartans lost 50 ships according to Diod. 13, 41, 1–3.

[26] Graham 1978, 61–98.

[27] I would like to attract the attention to an analogous example of another group of famous easterners that, according to Herodotus (Hdt. 5, 98; 7, 59. 106–113. 119; 9, 116), not only crossed, but established themselves in Aegean Thrace – the Persians. It is a well-known axiom that had the Herodotus text not survived, the archaeological record would never make us guess their presence in the area. Nevertheless, no one questions the validity of this written testimony, while the information on the Phoenicians in the area is frequently scrutinised in comparison and juxtaposition to the material evidence (or more correctly its absence).

Image Credits

Fig. 1–4: by author.

References

Adam-Veleni et al. 2013

P. Adam-Veleni – E. Kefalidou – D. Tsiafaki (eds.), Pottery Workshops in Northeastern Aegean (8th – early 5th c. BC) (Thessaloniki 2013).

Anagnostopoulou – Gimatzidis 2013

H. Anagnostopoulou – S. Gimatzidis, Αρχαία Μένδη: κεραμική από τις πρώιμες φάσεις της πόλης, AEMTH 23, 2013, 369–376.

Aslan 2002

C. Aslan, Ilion before Alexander: Protogeometric, Geometric, and Archaic pottery from D9, StTroica 12, 2002, 79–127.

Bernard 1964

P. Bernard, Céramiques de la première moitié du VII[e] siècle a Thasos, BCH 88-1, 1964, 77–146.

Beschi 1994a

L. Beschi, Η ιστορική σημασία του ιερού των Καβείρων στη Λήμνο, in: Λήμνος φίλτατη, Πρακτικά του 1ου συνεδρίου δημάρχων του Αιγαίου Μύρινα Λήμνου 21–24 Αυγούστου 1992 (Athens 1994) 65–76.

Beschi 1994b

L. Beschi, Το ιερό των Καβείρων στη Λήμνο, Archaiologia 50, 1994, 31–37.

Bozkova 2002

A. Bozkova, Pottery with Geometric Decoration and Related Wares, in: A. Bozkova – P. Delev (eds.), Koprivlen I (Sofia 2002) 133–144.

Bozkova – Delev 2012

A. Bozkova – P. Delev, Archaic pottery with painted geometric decoration from South-Western Bulgaria, in: M. Tiverios – V. Misailidou-Despotidou – E. Manakidou - A. Arvanitaki (eds.), Archaic pottery of the Northern Aegean and its periphery (700–480 BC). Proceedings of the Archaeological Meeting Thessaloniki 19–22 May 2011 (Thessaloniki 2012) 69–78.

Catling 1998

R. Catling, The typology of the Protogeometric and Sub-Protogeometric pottery from Troia and its Aegean context, StTroica 8, 1998, 151–187.

Damyanov 2015

M. Damyanov, The Greek colonists, in: J. Valeva – E. Nankov – D. Graninger (eds.), A Companion to Ancient Thrace (Blackwell 2015) 295–307.

Delev 2005

P. Delev, Stratifying Herodotus: Local Tribes between the lower Axios and the Nestos, Thracia 16, 2005, 105–121.

Delev 2007

P. Delev, The Edonians, Thracia 17, 2007, 85–106.

Gimatzidis 2002

S. Gimatzidis, Ο αποικισμός της Θάσου: Η επανεξέταση της κεραμικής πρώιμων φάσεων της αρχαίας πόλης, AEMTH 17, 2002, 7–81.

Gimatzidis 2010

S. Gimatzidis, Die Stadt Sindos. Eine Siedlung von der späten Bronze- bis zur klassischen Zeit am Thermaischen Golf in Makedonien (Rahden/Westf. 2010).

Graham 1978

A. J. Graham, The Foundation of Thasos, BSA, 1978, 61–98.

Graham 2001

A. J. Graham, Thasian Controversies, in: A. J. Graham, Collected Papers on Greek Colonization. Mnemosyne Suppl. 214 (Leiden 2001) 365–402.

Graham 2002

A. J. Graham, The colonization of Samothrace, Hesperia 71, 2002, 221–260.

Hovardas 2007

P. Hovardas, Η Ακτή της Χαλκιδικής κατά τους ιστορικούς χρόνους (unpublished MA thesis Aristotle University of Thessaloniki 2007).

Ilieva 2006

P. Ilieva, Егейска Тракия между Бистонида и Пропонтида (8 – 6 в.пр.Хр.), дисертация за присъждане на образователна и научна степен доктор. СУ Св. Климент Охридски (unpublished PhD thesis University of Sofia 2006)

Ilieva 2007

P. Ilieva, Thracian-Greek συμβίωσις on the shore of the Aegean, in: A. Iakovidou (ed.), Thrace in the Graeco-Roman world. Proceedings of the 10th International Congress of Thracology (Athens 2007) 212–226.

Ilieva 2009

P. Ilieva, "G 2-3 Ware" and the non-Greek Populations on the North Aegean coast, in: Z. Μπόνιας – J. Perreault (eds.), Greeks and Thracians in Coastal and Inland Thrace during the Years Before and After the Great Colonization (Thasos 2009) 109–123.

Ilieva 2010

P. Ilieva, Samothrace: Samo- or Thrace?, in: Sh. Hales – T. Hodos (eds.), Material Culture and Social Identities in the Ancient World (Cambridge 2010) 138–171.

Ilieva 2013

P. Ilieva, G 2-3 Ware: The Sub(proto)geometric Tradition of the Northeastern Aegean, in: P. Adam-Veleni – E. Kefalidou – D. Tsiafakis (eds.), Pottery workshops in the Northeastern Aegean (8th – early 5th c. BC) (Thessaloniki 2013) 123–131.

Ilieva 2014

P. Ilieva, Regional standardization and local variation: the case of the North Aegean G 2-3 Ware, in: A. Kotsonas (ed.), Understanding standardization and variation in Mediterranean ceramics. Mid 2nd to late 1st millennium BC, BABesch Suppl. 25 (Leuven 2014) 85–96.

Ilieva 2016

P. Ilieva, Becoming modern: North Aegean Thracian communities adopting wheel-made ceramics, Thracia 21, 2016, 207–222.

Ilieva 2017

P. Ilieva, Thracians on the Northern Aegean islands: written testimonia and current archaeological evidence, Thracia 22, 2017, 253–275.

Ilieva 2018

P. Ilieva, Thracians of Odonis, the first Parians on Thasos and the North Aegean neighbours: the case-study of a group of pre/para-colonial ceramics, in: D. Katsonopoulou (ed.), Paros and its Colonies (Athens 2018) 231–251.

Ilieva et al. 2010

P. Ilieva – D. Tsiafaki – N. Tsirliganis – A. Sakalis – N. Kazakis, G 2-3 Ware from the North Aegean basin: results from an archaeometric research 2008 – 2011, AEMTH 24, 2010, 565–574.

Kefalidou – Nazlis 2013

E. Kefalidou – Y. Nazlis, Μη καταστροφική χημική ανάλυση (XRF) τοπικής και εισηγμένης κεραμικής από τη Νέα Καλλικράτεια Χαλκιδικής, in: P. Adam-Veleni – E. Kefalidou – D. Tsiafakis (eds.), Pottery workshops in the Northeastern Aegean (8th – early 5th c. BC), Scientific Meeting AMTh 2010 (Thessaloniki 2013) 173–182.

Kefalidou – Tsiafaki 2012

E. Kefalidou – D. Tsiafaki (eds.), Κεραμέως παίδες (Thessaloniki 2012).

Kohl et al. 2002

M. Kohl – A. Muller – G. Sanidas – M. Sgourou, Ο αποκισμός της Θάσου: η επανεξέταση των αρχαιολογικών δεδομένων, AEMTH 16, 2002, 58–72.

Kotsonas 2012

A. Kotsonas, Η ενεπίγραφη κεραμική του «Υπογείου»: προέλευση, τυπολογία, χρονολόγηση και ερμηνεία, in: G. Tzifopoulos (ed.), Μεθώνη Πιερίας I (Thessaloniki 2012) 111–300.

Koukoulē-Chrysanthakē 1992

Ch. Koukoulē-Chrysanthakē, Πρώτοϊστορική Θάσος (Athens 1992).

Koukoulē-Chrysanthakē 1993

Ch. Koukoulē-Chrysanthakē, Η πρώιμη εποχή του σιδήρου στην Ανατολική Μακεδονία, Ancient Macedonia 1, 1993, 679–735.

Mommsen et al. 2001

H. Mommsen – D. Hertel – P. Mountjoy, Neutron activation analysis of the pottery from Troy in the Berlin Schliemann collection, AA, 2001, 169–211.

Muller – Mulliez 2009

A. Muller – D. Mulliez, Από την Οδωνίδα στη Θάσο. Θράκες και Έλληνες (8ος–6ος αι.π.Χ.): προσπάθεια απολλογισμού, in: Z. Μπόνιας - J. Perreault (eds.), Greeks and Thracians in Coastal and Inland Thrace during the Years Before and After the Great Colonization (Thasos 2009) 135–150.

Papadopoulos 1997

J. Papadopoulos, Phantom Euboians, JMedA 10,2, 1997, 191–219.

Papadopoulos 2011

J. Papadopoulos, "Phantom Euboians" – A Decade On, in: D. Rupp – J. Tomlinson (eds.), Euboea and Athens. Proceedings of a Colloquium in Memory of Malcolm B. Wallace, Athens 26–27 June 2009 (Athens 2011) 113–133.

Rose 2008

B. Rose, Separating Fact from Fiction in the Aeolian Migration, Hesperia 77, 2008, 399–430.

Tiverios 1992

M. Tiverios, Οι ανασκαφικές έρευνες στη Διπλή Τράπεζα της Αγχιάλου κατά το 1992, AEMTH 6, 1992, 357–367.

Tiverios 2008

M. Tiverios, Greek colonisation of the Northern Aegean, in: G. Tsetskhladze (ed.), An account of Greek colonies and other settlements overseas 2, Mnemosyne Suppl. 193 (Leiden 2008) 1–154.

Tiverios 2013

M. Tiverios, Ταξινόμηση ντόπιας κεραμικής στον μακεδονικό χώρο κατά την Εποχή του Σιδήρου – ορισμένες δεύτερες σκέψεις, in: P. Adam-Veleni – E. Kefalidou – D. Tsiafakis (eds.), Pottery workshops in the Northeastern Aegean (8th – early 5th c. BC), Scientific Meeting AMTh 2010 (Thessaloniki 2013) 15–24.

Tiverios et al. 2001

M. Tiverios – E. Manakidou – D. Tsiaphake, Ανασκαφικές έρευνες στο Καραμπουρνάκι κατά το 2001: ο αρχαίος οικισμός, ΑΕΜΤΗ 15, 2001, 255–262.

Tiverios et al. 2012

M. Tiverios – V. Misailidou-Despotidou – E. Manakidou – A. Arvanitaki (eds.), Archaic pottery of the Northern Aegean and its periphery (700–480 BC). Proceedings of the Archaeological Meeting Thessaloniki 19–22 May 2011 (Thessaloniki 2012).

Triantafyllos 1990

D. Triantafyllos, Η Θράκη του Αιγαίου πριν από τον ελληνικό αποικισμό, ThrakEp 7, 1990, 297–322.

Tsvetkova 2008

Yu. Tsvetkova, История на Тракийския Херсонес (от Троянската война до времето на римското завоевание) (V. Tarnovo 2008).

Tzanavari 2013

K. Tzanavari, Τοπική κεραμική από την τράπεζα Λεμπέτ στην Πολίχνη Θεσσαλονίκης, in: P. Adam-Veleni – E. Kefalidou – D. Tsiafakis (eds.), Pottery workshops in the Northeastern Aegean (8th – early 5th c. BC), Scientific Meeting AMTh 2010 (Thessaloniki 2013) 207–212.

Reading connectivity on decorative grounds. A statistics-based approach to investigate interregional relations in early Iron Age Greece

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The most reliable data regarding characteristics of ancient pottery that is provided by the publications of archaeological excavations is its decoration. Far too often, especially in older reports, the shape features cannot be read from the photograph, or the colour of the clay is subjectively assigned. This fact is taken as a basic reason to approach the question of interconnectivity between sites or regions starting from the different decorative elements that have been used to embellish ceramics.

The timespan in focus is the 12th to 8th century BC, the areas under scrutiny are the regions around the gulfs of Corinth and Patras, complemented by the Ionian islands of Ithaca and Kefalonia, as well as the Argolid, which is included because of its far better conditions regarding the quantity and quality of data. Some major transformations take place during this period starting with a century of a certain stability that even witnesses some attempts to reinstate the lost palatial order. What follows is a long phase of so-called darkness that only ends when the Greek polis states come into being.

By mapping the different decorative elements in concordance to certain ceramic shapes it is tried to deduce spatial units whose interpretation is a matter of debate. Are they more than economic contact zones? Apart from this qualitative question, an answer to which is hard to find, it is hoped, at least, to declare periods of higher/lower connectivity between regions that might point to a more vivid picture of the Dark Ages than has been drawn so far.

Besides the straightforward mapping of the distribution of certain characteristics in material (in our case: ceramic) culture through time, which might be understood as illustrating similarities within groups, an equally promising task will be to take a look at the differences between them. As mentioned before, I consider similarities as being expressions of a high degree of interaction between different groups, while dissimilarities point to independent or isolated developments.[1]

The amount of data produced suggests a statistical approach which can be realized for example via the software environment R. Taking account of the fact that the Greek early Iron Age is, archaeologically speaking, a prehistoric period and as such not a field of research that is central to Classical Archaeology, the application of "prehistorians'" methods in "classical" areas is to be understood as a potentially fruitful enterprise.

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Note

[1] A similar approach has been adopted by Morgan – Whitelaw 1991 with regard to the Argolid. They assigned different decorative or other 'stylistic' elements to the amount of almost one thousand vessels or sherds, mainly coming from Argos, Mycenae, Tiryns, and Asine, aiming at a measure of similarity or dissimilarity, respectively, between each pair of sites using the Euclidean Distance Coefficient. In connection with further archaeological and historical data, they draw some quite interesting conclusions about the role of pottery decoration within the Argive plain from the Proto- to the Late Geometric period. As they were able to show, especially the coastal site of Asine underwent substantial changes with regard to its connectivity to the plain. It is, basically, my intent to extent this local or sub-regional perspective to the entirety of the regions around the gulf.

References

Morgan – Whitelaw 1991

C. Morgan – T. Whitelaw, Pots and Politics. Ceramic Evidence for the Rise of the Argive State, AJA 95, 1991, 79–108.

Pottery vessels and other ceramic objects constitute important sources for issues of trade and exchange in Antique societies as they are available in great quantities and as their provenance often can be determined by archaeological or archaeometric methods. Most studies on the exchange of ceramics however concentrate on aspects of long-distance trade, as differences between wares and/or types produced in different, far distant regions can be recognized more easily. This fact, together with the psychological fact of the greater attractiveness of these items, might have lead to an exaggerated perception of the amount of goods traded via the oversea trade in the archaeological record.

In contrast to this, aspects of regional exchange between neighbouring cities have not been given the same attention in the field of Mediterranean archaeology, although they might give important insights into the problems of regional connectivity and they also had greater importance during Antiquity than normally assumed. One of the reasons of this deficit can certainly be found in the difficulty of clearly and unambiguously distinguishing ceramics produced within one region from each other, as they often share the same repertory of shapes or decoration styles.

This panel comprises case studies from different areas and different periods of the Mediterranean, all of which clearly demonstrate the difficulties in reconstructing networks of regional exchange, but also show their importance for the economy of ancient towns.

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