

# HEROM

Journal on Hellenistic and Roman Material Culture

*Edited by*

Daniele Malfitana, Jeroen Poblome, John Lund

*Includes a thematic section on:*

Minding Gaps in the archaeological record

*Composed and edited by*

Smadar Gabrieli, Kristina Winther-Jacobsen and John Lund

**Volume 9–2020**

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and Roman Material Culture

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# IN SEARCH OF LOST CENTURIES: HAND-MADE POTTERY IN CYPRUS BETWEEN ROME AND THE CRUSADERS

R. Smadar Gabrieli

## INTRODUCTION

This article is an outcome of a Marie Skłodowska-Curie Individual Fellowship project<sup>1</sup>, which focused on a period of gap in the archaeological and historical record of Cyprus, from the mid-7th to the late 12th centuries. In political terms the period is framed between the end of Roman control over the island and the Arab raids of AD 649-653, and the annexation of the island to the Crusader east by Richard the Lion Heart in 1191. The first two centuries are variously known as the condominium, the co-regency or the 'treaty centuries'. During this time a treaty between the Umayyad Caliphate and the Byzantine Empire divided control over the island, and the population found itself, in the often quoted words of St Willibald (AD 723): 'Betwixt Greeks and Saracenes'. Evidence for this period, whether of historical sources or archaeological finds hardly exists. Circumstances began to change during the 11th century, some time after the Byzantine Empire gained full control over Cyprus in AD 965, but still documents are few, and archaeological evidence nearly non-existent, particularly outside urban centres.

This is not the place for a detailed survey of the evidence to the period. Metcalf's seminal book from 2009 *'Byzantine Cyprus 491-1191'* still stands as an excellent introduction to, and summery of, the archaeological evidence. Metcalf's book came at a watershed moment, when the gap period gradually became a subject of dedicated research by historians and archaeologists alike<sup>2</sup>. Although there had always been scholars who urged for reassessment of the evidence<sup>3</sup>, in the absence of data the common view of the period for a long time can be epitomised by the Soloi inscription, which followed the Arab raid on the city in AD 648/9: "...Many were killed, and about 120,000 were led away as prisoners. Again, subsequently the island suffered a new invasion, more lamentable than the preceding one, in the course of which a greater number of people fell under the dagger and were led away prisoner ..." [as translated in METCALF 2009, p. 223].

1. The project *'Bridging the Gap: The Lost Centuries of Cyprus between Rome and the Crusaders'* was undertaken as a Marie Skłodowska-Curie Individual Fellowship in collaboration with Kristina Winther-Jacobsen, of the Saxo Institute at the University of Copenhagen. The project was funded by the European Union's Horizon 2020 research and innovation programme under grant agreement 703667. I am grateful to the excavators who allowed me access to material: William Childs, Jane Fejfer, Sturt Manning, Demetrios Michaelides, Despina Pilides, Eleni Prokopiou and Marcus Rautman. And to Kristina Winther-Jacobsen without her, this project would not have happened.
2. E.g. RAUTMAN 2005; PAPACOSTAS 2013; STEWART *et alii* 2014; PROKOPIOU 2015; ROGGE - GRÜNBART 2015; ZAVAGNO 2017.
3. MEGAW 1986, 518.

The view today is more nuanced, although crisis cannot be denied. There is little doubt that the late 7th century began a period of economic decline<sup>4</sup>. Maritime trade routes were disrupted, and the island's economy turned inward and became increasingly subsistence-oriented, affecting rural settlements and urban centres alike<sup>5</sup>. Pottery finds reduce dramatically by the end of the 7th century, and in the early 8th century seals and coins become very scarce<sup>6</sup>. There is hardly any evidence of rural occupation throughout the period. The regional surveys of the Palaipaphos area<sup>7</sup>, the Troodos (The Sydney Cyprus Survey Project [SCSP])<sup>8</sup> and the Troodos Archaeological and Environmental Survey Project [TAESP])<sup>9</sup>, the Vasilikos Valley<sup>10</sup> and the Xeros river valley<sup>11</sup> barely found settlements or even pottery that could be dated to the gap. Particularly significant are the results of TAESP and the Xeros river valley survey, which specifically targeted this period: Although ceramics that date to the first two centuries of the gap was identified in limited quantities by TAESP, sites are nearly completely absent<sup>12</sup>. Only preliminary results of the Xeros River Valley survey are published, but only 1% of the ceramics were dated to the 'Early Medieval' (7th-12th centuries)<sup>13</sup>. The coastal cities of Salamis/Constantia, Amathus and Kourion dwindled, and eventually, in the 8th or 9th centuries were abandoned.

Nevertheless, there is evidence, some of it circumstantial, that the current archaeological record does not present the full picture. Through the co-regency centuries the Cypriots paid hefty taxes to two masters, and there is evidence that they did it without fail into the 10th century<sup>14</sup>. The urban centres that were abandoned were replaced by sites in close proximity (Famagusta, Limassol, and to a lesser extent Episcopi)<sup>15</sup>. By the time the island was integrated again into the eastern Mediterranean trade in the 10th/11th centuries, the capital had moved inland, but to a location that offered easy access to Byzantine territories through the harbour of Kyrenia<sup>16</sup>. Some rural activity can be identified through foundation of churches: not a large number through the co-regency period but considerably intensified after full integration into the Byzantine empire<sup>17</sup>.

The Cypriot gap should also be assessed in the context of the 'Dark Ages' of the 7th-9th centuries in the Aegean and Eastern Mediterranean. Identifying the archae-

4. For recent reiteration of shifting or declining economy, METCALF 2014; RAUTMAN 2014.

5. METCALF 2009, 496; PAPACOSTAS 2012, 80-82; 2015, 117-118.

6. METCALF 2014.

7. SORESENSEN - RUPP 1993.

8. GIVEN - KNAPP 2003.

9. GIVEN *et alii* 2013a-b.

10. TODD 2016.

11. PAPANTONIOU - VIONIS 2019.

12. GIVEN *et alii* 2013a, 335-336; GIVEN *et alii* 2013b, Tables 2.1, 3.1, 4.1, 5.1.

13. PAPANTONIOU - VIONIS 2018, Fig. 23

14. METCALF 2009, 449-450.

15. PAPACOSTAS 2015, 117, 144.

16. PAPACOSTAS 2012, 81-84.

17. PAPACOSTAS 2013, 181-182 and Fig. 3; see also PROKOPIOU 2010; 2014; 2015.

ological record of the period throughout the area is problematic to an extent that triggered the proposition that it merits dedicated methodology of excavation and post-excavation processing<sup>18</sup>. The view of a dark age is, however, gradually being replaced by one of a period of transition, with changing economy, social organisation, and landscape use, whose material culture is hardly known and therefore invisible. Since the Cypriot economy was rural-based, the suggestion of a change in landscape use and in material culture that rendered settlements invisible archaeologically<sup>20</sup>, is more plausible than an unpopulated landscape. That use of pottery was more restricted and a new and unknown corpus was introduced, is more likely than a complete absence in a society as heavily reliant on pottery as Cyprus was throughout its history.

Closing the ceramic gap of the 'Dark Age' in the eastern Mediterranean was approached in a number of ways. *Redating fine wares*: The life-span of certain types of Late Roman wares (e.g. Cypriot Red Slip, LR1 amphorae) was extended into the 8th- and perhaps the 9th century<sup>21</sup>. This not only brings more sites within this period, but opens the possibility of dating associated local wares. *Composition of assemblages*: Given the elusive nature of stratified deposits of the period, and the frequent absence of datable 'guide fossils' a promising approach is not to rely on specific types for dating, but to look at whole assemblages, at changes in proportion of various categories/types of ceramics and at repeated combination of types<sup>22</sup>. *Dedicated study of coarse wares*: Coarse wares (undecorated utilitarian ware) were recognised as predominant in many 'Dark Age' assemblages, and since this corpus is traditionally neglected by archaeologists, and there are few chronological typologies for it, this fact contribute to the invisibility of sites that contain little else<sup>23</sup>. More attention has been dedicated to coarse wares in recent years, but with only partial success. A major problem is the often restricted distribution of the workshops, which limits extrapolation from one area to another. One particular sub-set of the coarse wares is the hand-made corpus that was in use during the 7th-8th centuries in the Aegean and eastern Mediterranean side by side with wheel-thrown wares<sup>24</sup>. Originally considered to be an intrusive ware, related to the Slavic invasions, a much more acceptable interpretation in my opinion is that the so-called 'Slavic Ware' is primarily a response to changing conditions, and manufactured independently in multiple locations throughout the area<sup>25</sup>. The Cypriot hand-made pottery which is the subject of this paper, should be seen as part of this phenomenon.

18. LAVAN - MULRYAN 2015.

19. E.g. POBLOME 2014; VIONIS 2020; EGER - VORDERSTRASSE this volume.

20. Cf. RAUTMAN 2014.

21. E.g. ARMSTRONG 2006; 2009.

22. E.g. GABRIELI *et alii* 2007; VROOM 2011, 154; JACKSON this volume.

23. VROOM 2011, 149-150.

24. Cf. VIONIS *et alii* 2009, 152-153, 161-162; VROOM 2011, 146; VIONIS 2020, 81-82.

25. VROOM 2003, 141-143.

Although the start of the Cypriot gap is clearly part of the wider ‘Dark Ages’, it still stands apart in continuing for considerably longer. The revival in material culture finds in the Aegean during the 10th century did not extend to Cyprus. Instead, as mentioned above, even recent surveys identified few sites prior to the 12th century. Locally made pottery is still unknown, and datable imports of the 10th-late-12th centuries, such as the Byzantine White Wares are rare. Extending the date range of particular wares or complete assemblages can only have impact on the early part of the Cypriot gap, and that a limited one. It was necessary to find local production that continues through the whole gap, and the hand-made pottery that appeared first in the 7th century, and was common in the 12th-13th centuries, was identified as such.

Accordingly, the primary aim of the ‘Bridge’ project was to establish a chronological typology to the hand-made pottery from the 7th century to the 12th.

In view of the extended duration of the gap in Cyprus, and the limited expected data — the gap is no doubt only perceived, but the reduction in material culture is real, and the ceramic assemblage that can be attributed to the period is unlikely to ever be more than moderate — it was necessary to ‘tailor-make’ a methodology, and this we considered should be applicable outside this particular case. After all, gaps — some local some widespread; some short-term, others over a few centuries — recur along time and geography, as the contributions to this volume amply demonstrate. Accordingly, the second aim of the project was to formulate the method that was to be developed in a way that would make it applicable for comparable gaps in different periods and geographical areas.

## RE-WRITING THE LANDSCAPE

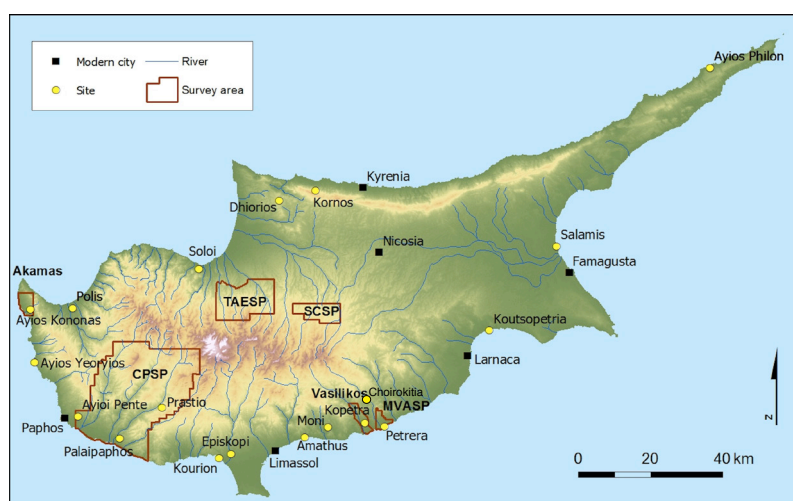


Fig. 1. Map of Cyprus; sites and major survey areas marked.

The first reconstruction of the Cypriot rural landscape as archaeologically invisible rather than deserted, was by McClellan and Rautman in a conference paper in the early 1990s<sup>26</sup>. In 2014, Rautman published a more complex and detailed interpretation<sup>27</sup>.

The two models can be summarised as follows:

- Interruption of reliable routes of commerce and collapse of regional and extra-regional markets combined with taxes levied by two masters, led to a change in land-use strategies.
- Small cultivators may have moved seasonally, inhabiting temporary shelters, and pastoral households began to exploit a wider territory.
- In the absence of fixed centres, less evidence for habitation remained in the landscape.
- Household utensils for everyday use were increasingly made of perishable materials.
- Pottery of the period is poorly understood

The implication of this last item is that the tradition of manufacture was interrupted, and that the new corpus, even if introduced gradually as Rautman demonstrated<sup>28</sup>, was different enough that it could not be traced back to it. Considering the extreme paucity of datable finds, and in particular that of coins and seals<sup>29</sup>, the possibility of an unrecognised pottery corpus opened new avenues of research.

What little evidence we have for ceramic manufacture towards the end of the Late Roman period fits with a discontinuity in production. The largest and best known kiln site, Dhiorios, ceased production by the end of the 7th century, or at the latest, the first half of the 8th<sup>30</sup>. Another workshop that produced the whole range of domestic ceramics was recently found in the Xeros river valley near Kophinou, and it, too, did not survive into the gap period<sup>31</sup>. The same is true for the amphorae kilns in Paphos, Amathous and Zygi<sup>32</sup>. I am aware of only one kiln site that may have survived through the gap — the site of St George Hill, Nicosia (PASYDY), where kilns operated before the gap, and wheel-thrown misfires of the 11th-12th centuries were found. But whether production was uninterrupted through the gap is as yet unclear<sup>33</sup>.

26. MCCLELLAN - RAUTMAN 1995. Unfortunately only the abstract was published.

27. RAUTMAN 2014, 51-53.

28. RAUTMAN 1998, 89.

29. METCALF 2014, 64.

30. Catling, who excavated the site dated the end to the 8th century (CATLING 1972, 80; 2008, 204); Hayes preferred the late 7th century, the date of the latest contexts in the episcopal precinct at Kourion that contain Dhiorios material (HAYES 2007, 435); ARMSTRONG (2009, 161-167) upholds production into the 8th century, on the basis of extended dates for the Cypriot Red Slip and the LR1 amphorae.

31. PAPANTONIOU - VIONIS 2019, p. 19

32. DEMESTICHA 2013, 171, 173. ARMSTRONG 2009, 163-164 suggests that production continued into the 8th century, but this does not impact the argument here.

33. PILIDES 2013, 249-250.

The new corpus was identified as the hand-made pottery that had first been dated to the 8th century by Megaw and Hayes at the basilica of Kourion, where hand-made cooking pots were found in the demolition contexts associated with coins, White Wares, amphorae and cooking wares from Constantinople<sup>34</sup>. For a time hand-made vessels were published only as incidental catalogue items<sup>35</sup>. The turning point was the Late Roman village of Kalavastos-*Kopetra* in the Vasilikos Valley, where a quantity of hand-made pottery was found in the latest levels (mid-7th century)<sup>36</sup>. The excavator, Rautman, was the first to offer interpretation of this corpus and place it in a theoretical framework, when he published a comparative study of the crises of the Late Bronze Age and the post-Late Roman Period in the eastern Mediterranean, using Cyprus as a case study<sup>37</sup>.

Rautman's 1998 article dovetailed with his earlier work with McClellan. The scenario of a shift to a less sedentary society requiring reduced-scale production for more limited range of functions, and possibly for smaller population, fits well with abandonment of, or dramatic reduction in, the use of the fast wheel, and a limited range of wares, possibly primarily cooking wares<sup>38</sup>. It is also in line with the view of a shift in the Aegean and eastern Mediterranean, including Cyprus, from urban centres with dependent rural hinterland to dispersed rural occupation, a change in subsistence economy, and settlements to a large extent self-sufficient<sup>39</sup>.

## HAND-MADE POTTERY: THE EMERGENCE OF A NEW CORPUS

Once attention began to focus on the hand-made pottery, and as the number of publications increased and further excavations allowed access to more material — published and unpublished — the picture that emerged was of variability in individual vessels between, and sometimes within sites, but with a common feature of extremely coarse fabric and an often apparently careless finish. These characteristics, considered with the results of the petrographic analysis for Kalavastos-*Kopetra*<sup>40</sup>, en-

34. MEGAW 1986, 511-512. Later HAYES (2007) published hand-made pottery also from earlier, 7th-century last-occupation contexts.

35. DIEDERICH 1980, 62, cat 303, Sal6873, Pl. 25, not specified as hand-made; MEGAW 1986, 511-512; MANNING *et alii* 2002, 52, Fig. 6.5.

36. ARMSTRONG 2009, 168 suggests a possibly later date, as with the Paphos amphorae kiln. Her work is very important for the study of the early gap, but will not impact on this particular study, since no development of the hand-made corpus could be identified between the 7th and 8th centuries (see below).

37. RAUTMAN 1998, 94-95.

38. For an extensive discussion of the conditions that effect the extent of pottery production in partially sedentary and nomadic societies and the types of vessels manufactured, see ARNOLD 1985, 119-167, in particular 119-125 and 135-139.

39. Vionis 2020, 84-86.

40. RAUTMAN *et alii* 1993; RAUTMAN *et alii* 2003.

couraged a view of local manufacture in domestic workshops, for the household or neighbourhood<sup>41</sup>.

Kalavassos-*Kopetra* offered further insight into the beginning of the corpus, when hand-made pottery was found in contexts of the early 7th century, coinciding with the wheel-thrown pottery of the period<sup>42</sup>. This was the first indication for continuity between the hand-made pottery of the gap period and the Late Roman production, demonstrating a gradual shift in production mode. Finally, Rautman recognised that some of the vessels were fully hand-formed, while others were formed or finished on the turning table, i.e., there were two different manufacturing techniques within the hand-made corpus<sup>43</sup>.

Eventually the quantity of available data and the distribution of the sites made it possible to consider a study of the gap period through this corpus, but before it could be used as an interpretation tool, a chronological framework was necessary. This became more feasible when the hand-made wares of the 12th-13th centuries were established as the only locally manufactured cooking ware for the medieval period<sup>44</sup>. It was then possible to suggest that the 7th-8th century assemblage represented the beginning of a process of development that led to the assemblage of the 12th-13th century. However, four centuries or more separated these two points of reference, and there was no immediately discernable similarity between them apart from the manufacturing technique. In contrast to the 7th-8th centuries hand-made pottery, by the 12th century the variation in details of the individual shapes was limited, the fabric was much less coarse and visually uniform along the known assemblages, and the surface was well-smoothed and well-finished. Petrographic analysis of cooking wares from the 13th to the 16th centuries from Paphos, suggested that the Paphos wares may not have been produced locally<sup>45</sup>.

## WORKING HYPOTHESIS

When we first formulated the Marie-Curie project, we used the above data to suggest the following hypothesis as a basis for the research plan:

[1] Economic crisis and social changes in Cyprus around the mid 7th c. led to the collapse of the centralised mass production of pottery; the fast wheel was abandoned, or its use considerably reduced.

41. RATUMAN 2003, 212.

42. RATUMAN 1998, 87; 2003, 175-176.

43. RATUMAN 1998, 89.

44. GABRIELI 2007.

45. GABRIELI 2006, Appendix V groups (d) and (e).

[2] Small workshops produced hand-made pottery for local markets; there was a certain level of 'household production'; styles were local, or at most regional.

[3] With time, larger production centres developed; styles became more widespread, with inter-regional influence [possibly increased level of craft specialisation]<sup>46</sup>.

[4] Finally, production converged on an area away from the coast (Troodos?); coastal workshops stopped production, or adopted the fast wheel for a different range of wares.

This hypothesis suggests a coherent path of development in the hand-made pottery. If identified, it should be possible to deduce the relative position of non-dated assemblages within the sequence, and to direct future study. If proven wrong, then any resolution of the gap will depend only on continuing the slow, painstaking accumulation of evidence that started in this project, without the benefit of a pattern to allow deductions.

## APPROACH

The data available at the beginning of the project was not enough to offer even a rudimentary seriation, nor were there enough contexts to date more than a handful of vessels. It was therefore necessary to adopt a more flexible approach to define a sequence of development between the beginning and end points. We formulated the following stages of work:

- Define clearly the beginning and end points.
- Identify parameters of change.
- Sketch possible stages of development for each of these parameters.
- 'Fill-in the dots'. (1) Identify intermediate reference points: find hand-made pottery in assemblages within the gap that can be dated by stratigraphy or independent finds, and use them as new reference points to reassess parameters of change and development; (2) Look for new shapes in sites or assemblages within the gap, whether datable or not, to substantiate or modify the postulated intermediate shapes.

As work proceeded these stages were extended and refined, and by the end of the project a more detailed methodology was formulated (see summary and conclusions below).

Because this paper is largely about methodology, I shall focus on the process, not only the results.

46. It should be reiterated that hand-made pottery manufacture does not necessarily equate with non-specialised craft (e.g. LONGACRE *et alii* 2000). Peacock's model (PEACOCK 1982, 8-11), which is so often used by archaeologist to claim so, was constructed, as the author said, for a specific time and area. An article about craft specialisation in the manufacture of the hand-made pottery of the gap period is in preparation.

## THE PROJECT

*Define the beginning and end points.*

Site/location	Code	Character	Dates within gap	Excavator	Relevant publication
<b>Western Cyprus</b>					
Ayioi Pente, Yeroskopou	[GAP]	coastal, rural	7th-8th <sup>47</sup>	D. Michaelides	MICHAELIDES 2013, 2014
Ayios Kononas, Akamas	[AK]	coastal, rural	7th-11th & possibly later	J. Fejfer	FEJFER 1995; CRABB unpublished <sup>48</sup>
Fabrika Hill, Paphos	[PFH]	coastal urban	7th-8th & possibly later	J.R. Green	GABRIELI et al. 2007
Polis-Arsinoe	[POL]**	coastal, urban	7th-12th	W.A.P. Childs	CARAHER et al. 2013
Saranda Kolones, Paphos <sup>49</sup>	[FC]	coastal, urban	7th-9th; 1180/1200 to 1222	A.H.S. Megaw	HAYES 2003; MEGAW 1971, 1972
Kouklia (Palaipaphos)	[KO]	coastal, rural	late 12th/early 13th (pit)	E.G. Maier, M.-L. von Wartburg	VON WARTBURG 1997*
<b>Centre-south coast</b>					
Kalavastos-Kopetra, Vasilikos Valley	[KK]	coastal, rural	7th	M. Rautman	RAUTMAN 1998, 2003; RAUTMAN <i>et alii</i> 1993
Kourion Basilica	[CB]**	coastal, urban	7th-9th	A.H.S. Megaw	HAYES 1980, 2007
Maroni-Petrera, Vasilikos Valley	[MP]	coastal, rural	7th	S.W. Manning	MANNING et al. 2002*
<b>Inland</b>					
Panayia tou Kambou, Choirokitia	[PTK]	inland, rural	7th-12th	E. Prokopiou	PROKOPIOU 2010, 2014
Palaion Demarcheion, Nicosia	[PD]	inland, urban	12th (pit)	I. Violaris	VON WARTBURG & VIOLARIS 2012*
St George Hill, Nicosia (PASYDY)	[PAS]**	inland, urban	7th-12th	D. Pilides	PILIDES 2013

\* Only published material was available.

\*\* ID numbers for vessels from these sites refer to project data base. In other sites, the numbers are the excavation registry numbers.

**Tab. 1.** The sites.

No sites were available from the eastern or northern parts of the island.

47. Red Slip fragments dating to the 8th century were identified by Pamela Armstrong (pers. comm.).

48. I am grateful to Dr Fejfer for access to this report.

49. Renovations to the store room of the Paphos Museum made it impossible to do an exhaustive survey of the assemblage, and future return to the material may be profitable. I am more grateful than I can say to the museum staff, and in particular Margarita Kouali, Neoptolemos Demetriou, Andreas Michaelides

*The beginning of the gap* (Table 1; Figs. 2-5):

The number of types is limited, and Figs. 2 and 4 present the common shapes. Most of the vessels could be described as cooking wares — pots, casserole/cooking bowls, and shallow pans — but the absence of soot marks on many of the pots indicates multi-function. Kalavasos-Kopetra, Maroni-Petrera, and Kourion (the centre-south sites), and St George's Hill, Nicosia, show considerable similarity in shapes (Fig. 2:1-5). Only the small bowls (Fig. 3) are exclusive to Kalavasos-Kopetra. The variations in details are numerous but minor — handle section and placement, inclination of the rim, angle of the shoulder — and significantly, they could not be related either to chronology or to a particular site.

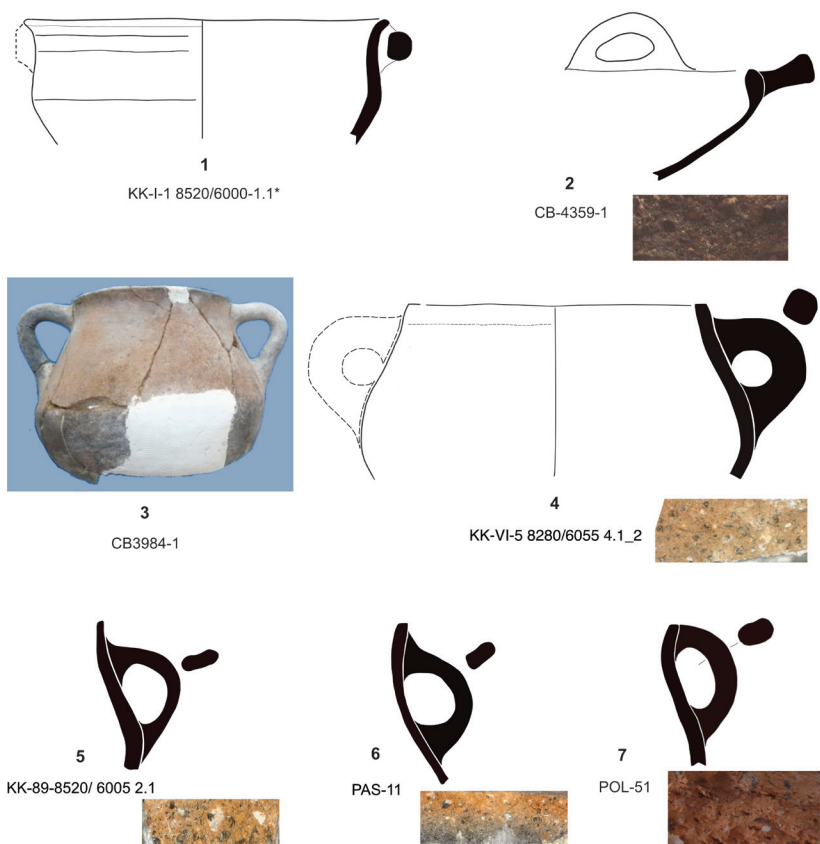
The early-gap assemblages in western Cyprus (Ayios Kononas, Ayioi Pente, Fabrika Hill, Polis-Arsinoe, Saranda Kolones; Fig. 4) formed a clearly separate group. The open shapes were similar, but the pots were completely different. The range of shapes is larger, but the most common were standardised, down to a recurring incised band on the shoulder (Fig. 4:3-9). Only three examples of the centre-south shape were found in the west: one in Ayioi Pente (GAP-014), one in Saranda Kolones (FC2384-1), and one in Polis (Pol-51 Fig. 2:7). In the west too, no relation could be found between specific variation of shape and a site or chronology.

In fabric, the west also stands apart. Under macroscopic examination, early-gap fabrics have considerable variability, although all are very coarse. In the west, however, there is a common and distinct fabric which is strong-brown to orange or yellow in colour, containing over 20% and often over 30% medium to large/very large, angular inclusions, bluish-grey, brown, reddish-brown and white (see fabric photos in Fig. 4)<sup>50</sup>. The three examples of centre-south-style pots that were found in the west were all manufactured in this local fabric (Fig. 2:7).

A few cooking pots of the early gap keep shapes of the Late Roman period (Fig. 5). Not surprisingly, most are derivatives of the common Dhiorios pot with concave rim (Fig. 5:3, 4). They again demonstrate the continuity in tradition which is indicated by the co-existence of hand-made and wheel-thrown pottery in Kalavasos-Kopetra.

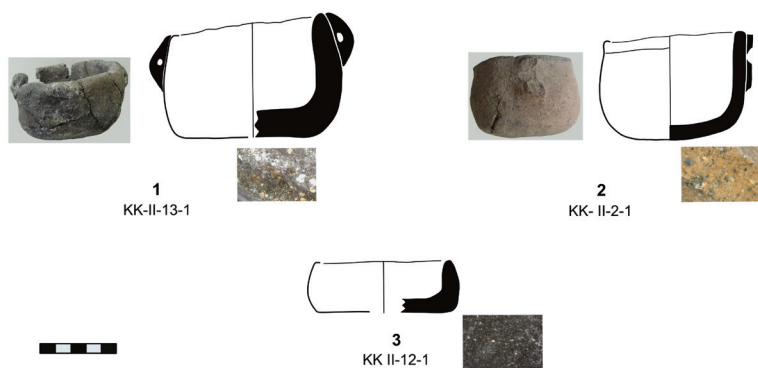
and Antonis Kyriakou, for their heroic efforts to allow as much access as possible under very difficult circumstances.

50. Petrographically, this proved to be two fabrics, see Fabric Groups A and B in 'Petrographic Analysis' below.



\* Rautman 2003: 213, cat. 190.

**Fig. 2.** Early gap: common shapes of centre-south and inland sites, 2:7 is a rare example from the west.



**Fig. 3.** Early gap: small bowls from Kalavasos-Kopetra (after Rautman 2003:175).

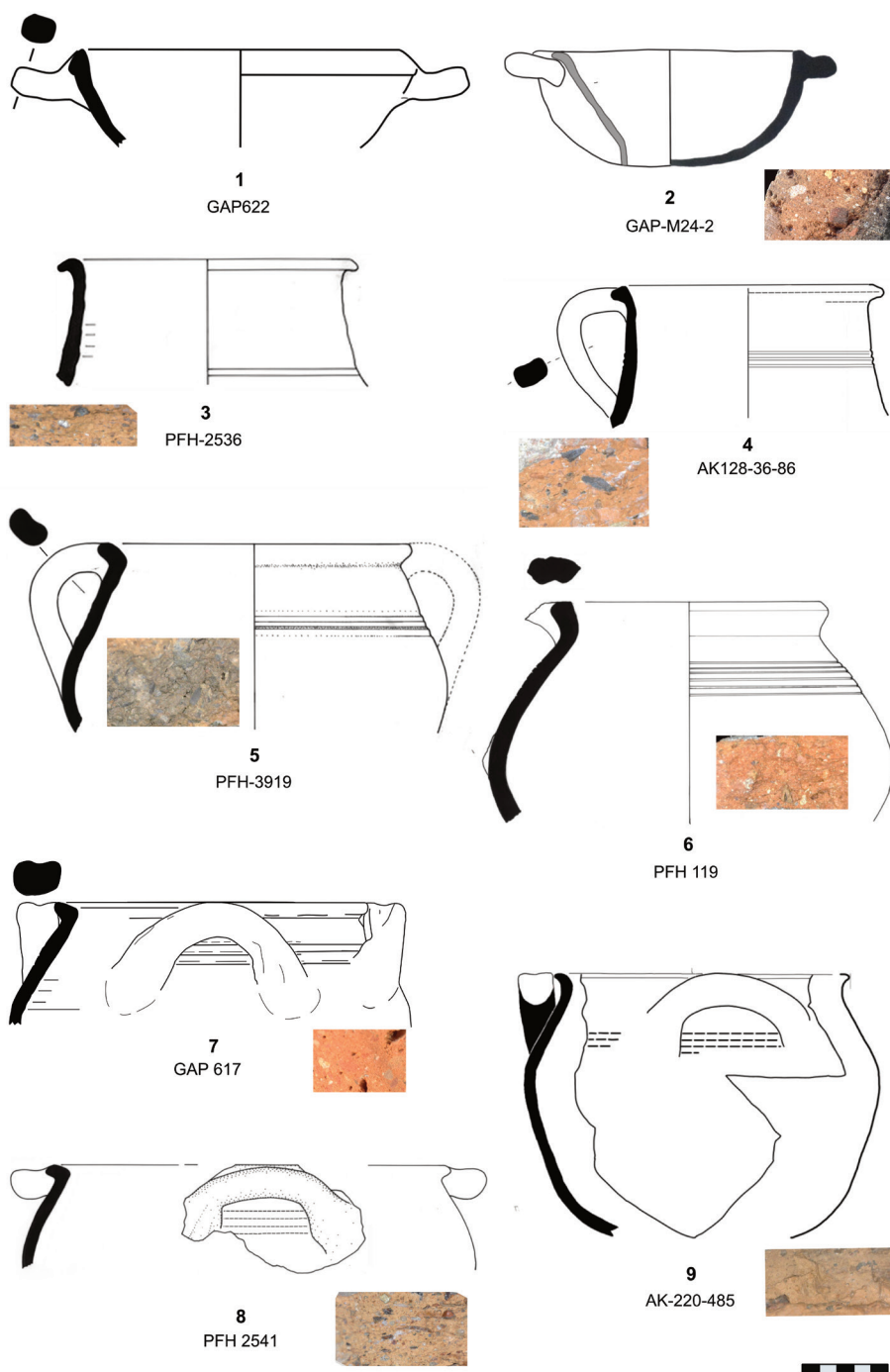
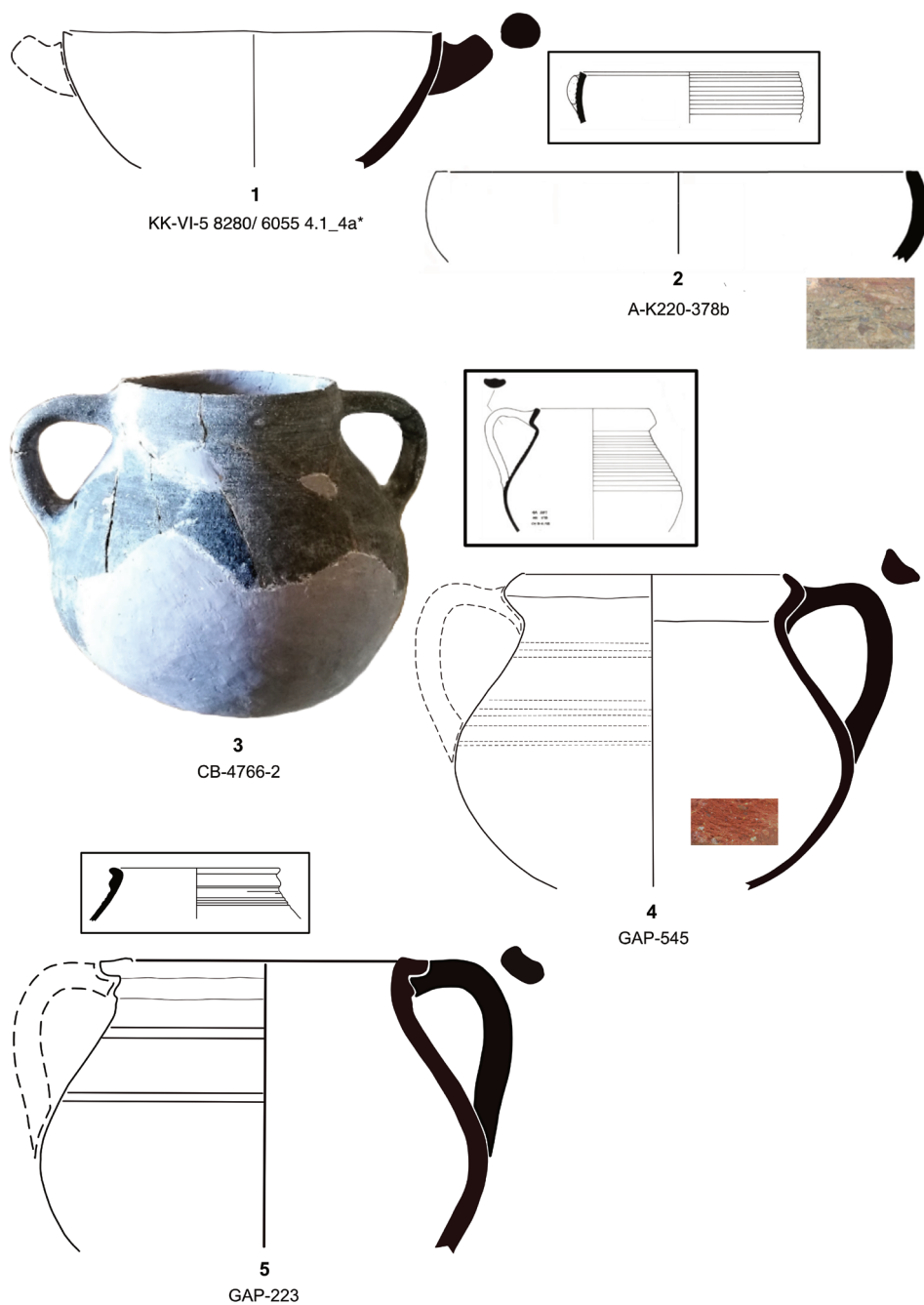


Fig. 4. Early gap: common shapes of the western sites.



\* Rautman 2003: 175

Fig. 5. Early-gap vessels in Late Roman tradition (insets: associated LR shapes).

*The end of the gap* (Table 1; Fig. 6):

Figure 6 summarises the end-of-gap assemblage. The types included pans, pots, small cups/bowls and jugs with pinched spout. There is considerable uniformity in shapes and fabrics by the end of the gap. The indication is that regionality was considerably reduced, if not altogether disappeared by then. The minor differences between assemblages of the 12th-13th centuries from Polis, Paphos, Nicosia, and the Troodos — e.g. in each area slightly different firing characteristics, such as surface colour and the presence/absence of dark core, were recorded — suggest that the similarity denotes common style, or production area, rather than central production.

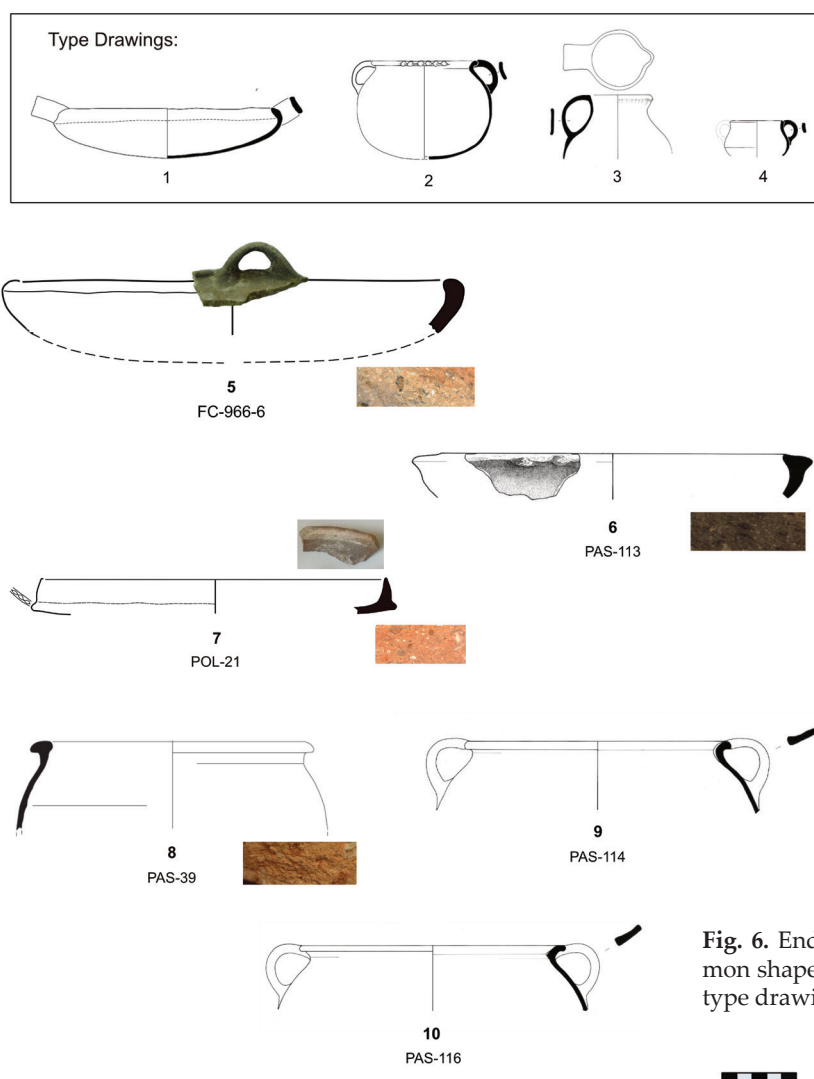


Fig. 6. End of gap: common shapes (1-4, general type drawings).

**In summary,** At the beginning of the project, the assessment of the assemblage of the early gap was based on limited data from publications (Kalavasos *Kopetra*, RAUTMAN 1998, 2003; Maroni *Petrera*, MANNING 2002; Kourion, HAYES 2007), ca. 25 vessels in all, and ca. 40 vessels from Fabrika Hill (some published in GABRIELI *et alii* 2007) and Ayioi Pente<sup>51</sup>. Although there was some repetition in forms (e.g. the cooking-pot type in Fig. 2 was published from Kourion, Kalavassos *Kopetra* and Maroni *Petrera*)<sup>52</sup>, the overall impression was one of considerable variability, with the small dataset containing all the shapes in Figs. 2-4, and quite a few more variants. As the sample size increased, the number of shapes did not alter much. Some proved to be rare, or found in one site only (e.g. the small bowls in Kalavasos *Kopetra*, Fig. 3), but the distribution of the majority fell into a pattern, and by the end of the project, when the database increased to 560 vessels, 273 of them from the early gap, it became apparent that a few shapes dominated the early assemblages. The open casseroles/cooking bowls, of which only 33 were found (14 in the west, 19 in the centre-south and none from Nicosia), continued to show limited variability across the study area (Figs. 2:1, 2; 4:1, 2), but the most common type, that of the cooking pot, showed clear regionality, with distinct shapes for the western sites on the one hand, and the sites of the centre-south and inland Nicosia on the other. At this point 175 cooking pots could be assigned to the early gap. Of these, 54 are of the shape in Fig. 2:3-7, all of them from the centre-south sites and Nicosia, and 7 are variants on it; 51 are of the shapes in Fig. 4:5-9, all from the western sites; 40 pots could not be assigned to any of these shapes, some because the sherd was too small, or lacked a rim, others were a single example of a shape. The last 20 are derivatives of Late Roman shapes, of these 7 are undoubtedly handmade, the others are either turned or wheel-thrown, but distinct from the Late Roman vessels by features such as very coarse fabric, non-ridged body, square handle-section. A certain variability was therefore confirmed, but two regions were distinctly established. Other morphological details that were measured neither supported nor disputed the observations based on overall morphology. The rim-diameter range (15-22 cm) and the wall-thickness (0.6-1.3 cm) showed no preference by site, type, or position in the stratigraphic sequence, and complete height was available for very few vessels. Manufacturing techniques were of no help either, with both regions including hand-made and turned vessels. The fabrics, however, under visual examination and petrographic analysis, reinforced a distinct western region (see petrographic analysis section below).

No evidence was found to development during the early gap in the most extended sequences — Kourion Basilica (7th-9th centuries), St George's Hill and Polis-Arsino (both straddling the gap). The sample-size is still limited, and finer dating within

51. In spite of the growing interest in the gap period, and corresponding increase in literature, publications of archaeology of the period are still sparse, and even fewer include pottery. The publications cited in Table 1 are not only the only ones that refer to the hand-made pottery, they constitute much of the published ceramics that deal with the period. Very little attention has been given to the post-Roman coarse wares, beyond Hayes' publications of the Kourion Episcopal Precinct (HAYES 2007) and isolated deposits from Saranda Kolones (HAYES 2003), and the survey publications mentioned above.

52. RAUTMAN 1998, Fig. 4.7; MEGAW 1986, Fig. 8b; MANNING *et alii* 2002, Fig. 6.5-92.

the sequences is difficult because of the thin layers of cumulative material, but I now suggest that the early phase, from the late 7th century and at least until the beginning of the 9th century (the final Kourion date) should be treated as a single entity, until further evidence.

For the late gap the original impression of a coherent assemblage, with a unified style throughout the study area, did not change.

### *Parameters of change*

The data available at the beginning of the project made it possible to identify parameters of change between the beginning and the end of the gap. New shapes entered the corpus, and changes were identified in morphological details and in fabrics. As the project proceeded these parameters became better defined, but no new ones were recognised. The description below takes into account the insights acquired during the project. Figure 7 shows the details that were recorded.

### *New shapes in the 12th century:*

*Shallow pans with in-turned rim and flat base* (Fig. 6:6, 7), the rim is usually thickened to a triangular section. They were published in a 12th century pit in the Palaion

SITE	Item Number	Find Spot	Century estimate context
	Shape	Type	Century estimate vessel
	Height	Diameter	Wall thickness
<b>Description</b>			
<b>Rim</b> <input type="checkbox"/> simple <input type="checkbox"/> upright concave <input type="checkbox"/> folded out <input type="checkbox"/> projecting out <input type="checkbox"/> ridge out at base <input type="checkbox"/> flattened <input type="checkbox"/> 'excess ridge' in/out <input type="checkbox"/> upright <input type="checkbox"/> everted concave <input type="checkbox"/> thickened out <input type="checkbox"/> projecting in <input type="checkbox"/> squared <input type="checkbox"/> flattened in/out <input type="checkbox"/> groove on lip <input type="checkbox"/> everted <input type="checkbox"/> horizontal <input type="checkbox"/> thickened in <input type="checkbox"/> overhang <input type="checkbox"/> in-turned <input type="checkbox"/> fold groove in <input type="checkbox"/> lid support ledge			
<b>Handles</b> <input type="checkbox"/> vertical <input type="checkbox"/> from below rim <input type="checkbox"/> to body <input type="checkbox"/> above max body <input type="checkbox"/> horizontal <input type="checkbox"/> below rim <input type="checkbox"/> inclined <input type="checkbox"/> lug-piecrust <input type="checkbox"/> from rim <input type="checkbox"/> to shoulder <input type="checkbox"/> to max body <input type="checkbox"/> loop <input type="checkbox"/> on rim <input type="checkbox"/> hugging wall <input type="checkbox"/> lug <input type="checkbox"/> lug horse-shoe			
<b>Handle Section</b> <input type="checkbox"/> oval <input type="checkbox"/> square <input type="checkbox"/> flattened <input type="checkbox"/> sliced thick <input type="checkbox"/> groove on upper face <input type="checkbox"/> round <input type="checkbox"/> rectangular <input type="checkbox"/> sliced wide and thin <input type="checkbox"/> sliced narrow <input type="checkbox"/> raised edges			
<b>Base</b> <input type="checkbox"/> flat <input type="checkbox"/> round <input type="checkbox"/> sagging <input type="checkbox"/> ring <b>Neck</b> <input type="checkbox"/> yes <input type="checkbox"/> no <b>Spout</b> <input type="checkbox"/> 'teapot' <input type="checkbox"/> pinched <b>Manufacture technique</b> <input type="checkbox"/> turntable <input type="checkbox"/> hand			
<b>Surface</b> <input type="checkbox"/> smooth <input type="checkbox"/> rough out/in <input type="checkbox"/> striations vertical <input type="checkbox"/> vegetal imprints <input type="checkbox"/> reduced firing <input type="checkbox"/> sealant in <input type="checkbox"/> wet-smoothed <input type="checkbox"/> striations random <input type="checkbox"/> striations horizontal <input type="checkbox"/> finger marks out/in <input type="checkbox"/> line deposit in			
<b>fabric</b> <input type="checkbox"/> dark core <input type="checkbox"/> reduced patches <input type="checkbox"/> lime inclusions <input type="checkbox"/> reduced in <input type="checkbox"/> very large incs. <input type="checkbox"/> reflective (mica?) <input type="checkbox"/> reduced out <input type="checkbox"/> voids <input type="checkbox"/> reduced fully <input type="checkbox"/> plant imprint <b>Description:</b>		<b>decoration</b> <input type="checkbox"/> incised <input type="checkbox"/> combed <input type="checkbox"/> pie-crust <input type="checkbox"/> plastic <b>location</b> <input type="checkbox"/> rim <input type="checkbox"/> neck <input type="checkbox"/> shoulder <input type="checkbox"/> handle <input type="checkbox"/> body <b>pattern</b> <input type="checkbox"/> straight line <input type="checkbox"/> straight bands <input type="checkbox"/> dashed line <input type="checkbox"/> wavy line <input type="checkbox"/> wavy bands <input type="checkbox"/> stamped circles <input type="checkbox"/> dots	
<b>illustration</b> <div style="border: 1px solid black; height: 150px; width: 100%;"></div>		<b>Fabric photo</b> <div style="border: 1px solid black; height: 100px; width: 100%;"></div>	

Fig. 7. Data-base card.

Demarcheion Nicosia<sup>53</sup>, and in slightly later pits (late 12th/early 13th centuries) in the Archbishop's Palace Nicosia<sup>54</sup>, and in Kouklia<sup>55</sup>, and were also common in the collections of St George's Hill, Saranda Kolones and Polis-Arsinoe.

*Small cups/bowls* (Figs. 6:4; 11:1, 2), with two vertical handles and slight constriction below the rim. They were published in the 12th-century pit from the Palaion Demarcheion, Nicosia<sup>56</sup>, and in the late 12th/13th century pits in the Archbishop's Palace, Nicosia<sup>57</sup>. Only two were identified in the surveyed collections: one from Saranda Kolones, the other from St George's Hill.

*Jugs and Jars with pinched spout* (Fig. 6:3). Two shapes of liquid containers with short neck, ovoid body and a pinched spout entered the assemblages towards the end of the gap: jugs with a single handle, and jars with two handles and sometimes with incised decoration on the shoulder or along the handles. These two shapes are considered together because they cannot always be distinguished in fragments. Soot marks on a few jugs indicate that they were sometimes used for cooking. The jugs were published from pits dating to the late 12th/13th century in the Archbishop's Palace, Nicosia<sup>58</sup>; no jars have so far been published in contexts that overlap the 12th century, but they were found in 13th-century contexts in Paphos. Only six jugs were found in contexts surveyed during the project, and only two spouts — one in Polis, the other in St George's Hill. Both were in mixed contexts that contained also post-gap material.

### *Morphological details:*

*Rims of pots:* In the early assemblages of the centre-south and Nicosia, the rim of the pots is simple, merely a smoothed edge of the wall (Fig. 2:3-6). In the western group, the rims are shaped, usually thickened and sharply everted or folded over (Fig. 4:3-9). By the 12th century, the rims are, carefully shaped, everted — often to the horizontal — either thin (Fig. 6:10), or thickened and rounded, sometimes with an overhang (Fig. 6:2, 8, 9).

*Handles:* Handles of pots and casseroles/pans at the beginning of the gap are quite hefty, with round, oval or near rectangular section, sometimes with a wide groove along the upper face. By the 12th century, the handles are sliced, thin and wide (Compare Figs. 2 and 4 with Fig. 6). This change is apparently total.

Lug handles are very common on pans at the end of the gap (Fig. 6:6), often decorated with indentations. They are rare at the beginning.

53. VON WARTBURG - VIOLARIS 2009, Fig. 2:6, 7.

54. FRANÇOIS 2017, Pit H13, Fig. 5:1; Pit I15-015, Fig. 5:2; Pit H15, Fig. 26:7, 8.

55. VON WARTBURG 1997, Fig. 11:12.

56. VON WARTBURG - VIOLARIS 2009, Fig. 2:8.

57. FRANÇOIS 2017, Pit I15-015, Fig. 4:8; Pit H15, Fig. 26:3-5.

58. FRANÇOIS 2017, Pit H13, Fig. 5:3; Pit H15, Fig. 26:9, 10.

*Spout:* Pinched spouts are associated with the jugs and jars of the late 12th/13th centuries.

*Decoration:* The only decorative element that was identified at the beginning of the gap was a combed band on the shoulder of some pots in the western sites (Fig. 4:3-9). In the 12th century rims of pots and lugs of pans often have pie-crust edge (Fig. 6:2, 7). The only precursor to the incised decoration that is common in the 13th century, is a faint, shallow single wavy line on a few vessels in St George's Hill (Fig. 9:1).

*Wall Thickness:* The wall tends to be thinner in the late gap. This is a tendency rather than fully measurable, particularly given the range in wall thickness in any given vessel, and the fragmentary nature of the assemblage (the wall is often thinnest around mid-body). It is possible to say however, that pots with wall thickness 0.7 cm or more (up to 1.1 cm) are hardly found after the mid-gap; while pots whose minimum wall-thickness is 0.4 cm or less, are nearly exclusive to the late gap.

*Fabric:* The distinct western fabric no longer exists by the 12th century. The visible changes from the early fabric of the centre-south are a finer clay matrix, and inclusions mostly within the small-medium size (up to 2 mm) in contrast to the common presence of large-very large ones in the early gap (2-5 mm and above). Firing is also considerably more uniform. Surface-colour variation within individual vessels nearly disappeared, and the range of colours is reduced from shades of yellow-brown, reddish-brown, brown and grey to dark brown or dark reddish-brown.

### **Petrographic analysis** (Table 2, Appendix 1)

One hundred and forty three samples were submitted to petrographic analysis, and 37 of these were also submitted to WD-XRF analysis<sup>59</sup>. The aim was to try and shed light on the organisation of production, location of workshops and distribution of the products. A detailed analysis of the results is in preparation, and the following is a summary of the results that are relevant to two issues: the regionality of production in the early part of the gap, and the increasing uniformity towards the end of the gap. The results confirmed the initial observations set above on both issues, but produced a more nuanced picture.

Table 2 summarises the distribution of the fabrics according to sites and chronology; Appendix 1 provides description of the predominant fabric groups.

59. The thin sections were prepared in the Fitch Laboratory, the British School in Athens. Petrographic analysis was undertaken by Dr. Dikomitou-Eliadou from the University of Cyprus, and WD-XRF by Dr. Noemi Müller from the British School at Athens. Twenty four of these samples, From Kalavassos Kopetra, Ayioi Pente and St George Hill were part of the project 'Stirring Pots on Fire', directed by Athanasios Vionis from the University of Cyprus, and funded by the A.G. Leventis Foundation. I am grateful to Dr. Vionis and Dr. Dikomitou-Eliadou for access to the results of their project.

Site	Fabric group A	Date range	Fabric group B	Date range	Fabric group C	Date range	Imports	Date range	Other
<b>Western:</b>									
<i>Ayioi Pente</i> [14]	A2 (2); A4 (1); A5 (1); A7 (1); A11 (2)	early gap	B1 (5); B2 (1)	early gap	C1 (1)	early gap			
<i>Ayios Kononas</i> [23]	A1 (13); A8 (1); A9 (1); A12(1)	early gap	B1 (2)	early gap	C1 (4)	early gap (1); transition form (2); late gap (1)			1
<i>Fabrika Hill</i> [14]	A1 (1); A2 (1); A3 (2); A11 (2)	early gap	B1 (4); B2 (4)	early gap					
<i>Polis-Arsinoe</i> [15]	A1 (2); A2 (1); A6 (1); A11 (2)	early gap	B2 (1)	early gap	C1 (6); C6 (1)	transition form (2); late gap (5)	E (1)	early/mid gap	
<i>Saranda Kolones</i> [13]	A1 (1); A10 (1); A13 (1)	early gap			C1 (4); C5 (1)	late gap	D (3) E (2)	mid-late gap	
<b>Total [79]</b>	<b>38</b>		<b>17</b>		<b>17</b>		<b>6</b>		<b>1</b>
<b>Centre-south</b>									
<i>Kalavassos Kope-tra</i> [7]					C1 (7)	early gap			
<i>Kourion</i> [17]			B1 (1); B2 (1)	8th-9th c. (demolition)	C1 (9)	7th-9th c.	E (1)	8th-9th c. (demolition)	5
<b>Total [24]</b>			<b>2</b>		<b>16</b>		<b>1</b>		<b>5</b>
<b>Inland</b>									
<i>St George Hill</i> [36]			B2 (1)	early gap	C1 (16); C2 (9); C3 (2); C7 (1)	early-late gap			7
<i>Panayia tou Kam-bou</i> [4]					C1 (3)	n/a			
					C4 (1)	early gap			
<b>Total [42]</b>			<b>1</b>		<b>32</b>				<b>7</b>

**Tab. 2.** Petrographic analysis: fabrics distribution by sites.

A hundred and twenty one samples fell within three major fabric groups (A-C). Each group was subdivided (Group A into 13 fabrics, Group B into 2, and Group C into 7). Fourteen samples were divided between five minor fabrics, all strictly local, each found in one site only. They will not be discussed here.

Seven samples of wheel-thrown coarse wares were selected as a control group, and indeed proved to be of foreign origin, probably Levantine (Fabrics D and E). Two samples, one from Polis the other from Kourion, are of cooking pots that Hayes identified as a type found in Constantinople, dating to the late 7(?) and 8th century, possibly originating from south-west Asia Minor<sup>60</sup>. The other five are from Saranda Kolones, and were placed by Hayes in trays labelled 'Dark Age Byzantine'. Of these, two are glazed, one is a shoulder-spout, and two are small cups/bowls (Fig. 11:3, 4). They will not be further discussed here.

### *Fabric-Groups A and B*<sup>61</sup>

Samples of Fabric Groups A (38 samples) and B (20 samples) have some mineralogical and technological similarities, and their mineralogical characteristics are compatible with the geology of the Mamonia complex in southwestern Cyprus. Their common compositional characteristics include the presence of large monocrystalline quartz grains, presence of chert and radiolaria chert, and micritic limestone (see Appendix 1 for the composition of the variants). Also, these fabrics present elongated voids across the sections, parallel to the surface of the vessels' walls. The bimodal size of the rock and mineral inclusions are indicative of clay tempering. In the case of fabrics of group A, the clay is tempered with mudstone sand; fragments of siltstone and sandstone that are recorded in subordinate amounts in some samples are likely to have accompanied the mudstone fragments. In the case of Fabric Group B, the co-existence of igneous and sedimentary components suggests mixing of two different types of clay: a non-calcareous clay with a sedimentary calcareous one, which contributed the sedimentary constituents (e.g. micritic limestone fragments, chert fragments, microfossils and calcite grains), particularly in Fabric B2. Petrography and WD-XRF analysis indicate inter-group mineralogical and chemical similarities respectively (Eight samples of Fabric Group A and four of Fabric Group B were submitted to WD-XRF analysis).

In their regional distribution, samples of Fabric Group A are exclusive to western sites, and samples of Fabric Group B nearly so (Table 2): the exceptions are one sample from St George's Hill (a pan that could not be attributed chronologically), and two from Kourion, a site which although definitely part of the centre-south group, is on the Roman road that marks the boundary between the east and west according to Bekker-Nilsen<sup>62</sup>. These facts, considered with earlier studies of ceramics from south-western Cyprus<sup>63</sup>, make it possible to argue that fabrics in groups A and B were manufactured in the Paphos region and consumed locally<sup>64</sup>. Both fabric groups are restricted to the early gap, and I shall return to this later.

60. HAYES 2007, 437; Fig. 14.7: G5, G6.

61. The description of the fabrics is based on the information given by Dr Dikomitou-Eliadou, and see the Appendix for detailed composition.

62. BEKKER-NILSEN 2004, Pl. 1.

63. E.g. DIKOMITOU-ELIADOU *et alii* 2016; MAKARONA *et alii* 2016.

64. DIKOMITOU-ELIADOU, pers. comm.

Looking at the distribution of the individual fabrics within the western region (Table 2), the large number of minor fabrics in Group A, and the inter-site distribution of the more substantially-represented ones suggest that at least the manufacturing of vessels in Fabric Group A was under the influence of a common style, rather than that there was central manufacture. Ten of the 13 fabrics in Group A have only one or two samples. The only large group, fabric A1 (17 samples) shows strong association with a single site, Ayios Kononas (13 samples), with two more samples from nearby Polis, and only two from the Paphos area. Yet even this seemingly local fabric does not translate to a tight group morphologically — i.e. there is no indication of a single workshop. Fabric Group B has only two fabrics, of similar size (12 and 8 samples). The samples concentrate in the Paphos area (8 are from Fabrika Hill, and 7 from Ayioi Pente), but like Group A, there is no common denominator in morphology between the vessels.

### *Fabric Group C*

With 63 samples this is the largest fabric group. This is an igneous fabric rich in pyroxene — and particularly orthopyroxene — altered pyroxene and amphiboles, and fragments of igneous rocks such as basalt, diabase and gabbros. All constituents of the group are characteristic of the Troodos ophiolite, with carbonate inclusions being rare to absent. In contrast to Fabric-Groups A and B, there are no indications of tempering in Fabric-Group C.

Fabric C1 is the predominant one in the sample (50 vessels, 34% of the whole sample, and 79% of Group Fabric C). It is a coarse igneous fabric with gabbro and diabase fragments, pyroxene, olivine, iddingsite and amphibole, serpentine and feldspar grains. Its optical activity is relatively high. There is considerable variation in inclusion size, and their mode of distribution. This fabric was used from prehistory onwards, especially for the production of cooking pots. It has been recorded at sites both at the north and south foothills of the Troodos Mountain Range, and at present it cannot be associated with a specific site or region of production, but on the contrary, its wide spatial and chronological distribution is probably a result of the presence of similar, igneous materials on both sides of the Troodos mountains, and multiple production areas (Dikomitou-Eliadou, pers. comm.).

Fabric C2 is very similar mineralogically to C1 but finer. Chemically, the two fabrics cannot be separated (16 samples of Fabric C1 and two of C2 were submitted to WD-XRF). Fabric C2 is the only fabric in this group apart from C1 with multiple sample (nine vessels). It was found only at St George's Hill and all samples are from the late part of the gap, the only possible indication to a local workshop.

Fabric Group C is found throughout the study area, and in contexts from the early gap to the late, so its particular chronological distribution in the west is significant (Table 2):

- Only two out of the 17 samples of this fabric group in the west date to the early-gap: a pot from Ayios Kononas, and a pan from Ayioi Pente.
- All the samples that were found in the west of the 'transition form' of the 9th/10th century (see below) and the late gap are Fabric C (15 samples, 13 of them C1).

**In summary**, the results of the petrographic analysis support an interpretation of regional differentiation in the early gap, with subsequent abandonment of western production, or a shift to a different fabric under inter-regional influence. There is no indication, however, that the gradual influence that was surmised in the working hypothesis (3: *styles became more widespread, with inter-regional influence*) took place during the 7th-9th centuries. There is no evidence, either petrographic or stylistic, to distribution of vessels into the western region or out of it, and if potters did move between the regions, they apparently conformed to the style in the area where they were working. It is possible that as more sites are found, and more assemblages recorded, and particularly when the chronology is better defined, this conclusion will be modified.

### *'Fill-in the dots'*

In an attempt to keep the narrative simple, I shall avoid an exhaustive discussion of the full assemblage, and follow only the most common shape, that of the cooking pot, which will be used to illustrate the process and conclusions. A brief reference to the pans and cups/bowls will conclude this section.

### *Intermediate reference points: the Transition Form (Fig. 8)*

As said above, no development could be identified between the 7th and 9th centuries. A breakthrough came in the post-destruction phase of the Ayios Kononas basilica. The basilica was built in the 4th century and the last phase of construction, as well as its collapse, were dated to within the 8th century. Use of the area continued however, since a burial that was sunk into Layer 4, below a pebble floor in the western aisle next to the apse, was dated by C14 to 890-1030<sup>65</sup>. A new shape of cooking pot was found in the basilica (Fig. 8:1). It was not directly associated with the burial but found in close proximity (Layer 1 of the nave, to the south-east of the burial, not associated with datable finds). Two examples of this form (hence 'transition form') were found close to each other. Stratigraphically, being above the level of the collapse of the basilica, they could date from the late 8th century onward. The layers below are thin, and contain mixed/accumulation material, the latest securely dated vessel being a Bag-Shaped amphora of the 7th-9th century<sup>66</sup>. However, since the burial was sunk directly into Layer 4, there is a reasonable argument that Layer 1 contains also material that was roughly contemporary with it.

65. FEJFER 1995, 83-85.

66. BARKAI *et alii* 2010, 90-91, Fig. 3, Ovoid Amphora Type 1. The material is not yet published, and I am grateful to Dr Fejfer for access, and to Dr Demesticha for her help with identification.

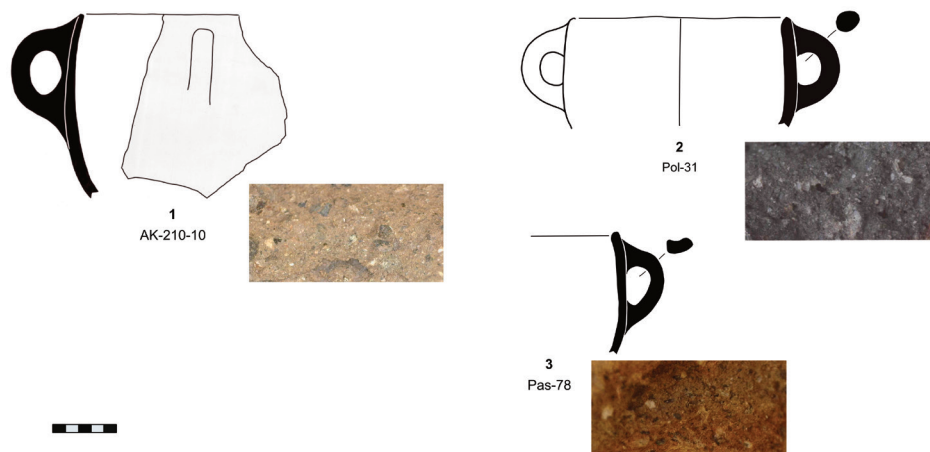


Fig. 8. Transition form.

There is additional circumstantial evidence for 9th/10th century date of the transition shape: no examples were found in the demolition contexts in Kourion (although admittedly the sample from these contexts is small); the twenty one examples that were found of the transition form are from Ayios Kononas, St George Hill and Polis-Arsinoe, i.e. none is from purely early-gap sites.

Within the parameters of change the transition form also slots after the early gap, but not much later. The globular outline is not like either the early or late gap shapes, but with more affinity to the late globular cooking pots. The handle section, which is square or round, and the rim, which is formed by flattening the edge of the wall are both within the centre-south early-gap tradition. The shape shows variability in details (e.g. position and section of the handle; Fig. 8), rather than the consistency of the late-gap vessels. In macroscopic examination the fabric of the two Ayios Kononas vessels is also similar to the centre-south fabric, but is not as coarse; yet it is coarser than the common fabric of the 12th century. Ten transition-form vessels were submitted to petrographic analysis. Four were from the western sites of Ayios Kononas and Polis-Arsinoe, and all four were fabric C1, which is nearly absent from the western-sites in the early gap (Table 2).

Finally, the transition form marks the end of regional differentiation. None of the western shapes, or the western fabrics were found in association with it, or with subsequent shapes, and contexts.

Taking all of the above into consideration, the transition shape is tentatively dated to the late-9th/10th century.

In two of the four sites that straddled the gap no example of the transition form was found, and no finds at all could be dated between the early and late gap. In Saranda Kolones this absence is in line with the near-absence of early-gap hand-made pottery and with the 10th-11th centuries gap that Hayes recognised for the site<sup>67</sup>, while in Panyia tou Kambou, only a few hand-made vessels were found, and none in a securely dated context.

In the long sequences of St George's Hill and Polis-Arsinoe, contexts from the middle of the gap were difficult to isolate and date. Globular amphorae and/or apparent derivatives of Late Roman Red Slip wares provided a date-range to some contexts that had hand-made vessels, but it could rarely be narrowed to less than two-three centuries<sup>68</sup>. Often contexts containing 7th/8th and 12th centuries finds contained also some unknown shapes. Their recurring content and place in the sequence suggest that they may have been 'telescoped' long-term accumulation of sparse activity rather than simply mixed. This suggestion echoes the phenomenon Rautman suggested as pointing to rural occupation in the Vasilikos Valley in the first part of the gap: "More convincing circumstantial evidence of rural activity may be the presence at the same locations of identifiable artifacts dating both before the eighth century and after the ninth century<sup>69</sup>..." Rautman added a caveat: "While not all such locations were continuously occupied over this interval, in many cases their significance seems to have been remembered by later inhabitants", but in the case of the urban sites of Polis-Arsinoe and St George's Hill, the probability of continuous occupation rather than lingering memory is higher. This difficulty in identifying relevant contexts is, of course, the essence of a gap, but was still disappointing.

### *Position new shapes in sequence*

The transition form was used as a new reference point to re-evaluate the parameters of change, with particular reference to the long sequences of St George's Hill, Polis-Arsinoe and Saranda Kolones. A number of in-between stages were identified between it and the end of the gap, and it was possible to suggest the following sequence for them (Fig. 9):

1. Globular body, the rim not yet modelled, but everted, and distinct from the wall (Fig. 9:1, 2). So far there are only two examples, both from St George's Hill. One (PAS-46; Fig. 9:1) has a sliced handle with a flat section, slightly concave on its upper face. Although not yet as thin and wide as later, in technique and style it is unambiguously of the late gap. The context includes fragments of globular amphora dating to the 8th-10th centuries and a 12th(?) century jug/jar. The second example

67. HAYES 2003, 451.

68. I am grateful to Dr Athansios Vionis for his invaluable help in identifying associated finds.

69. RAUTMAN 2014, 53.

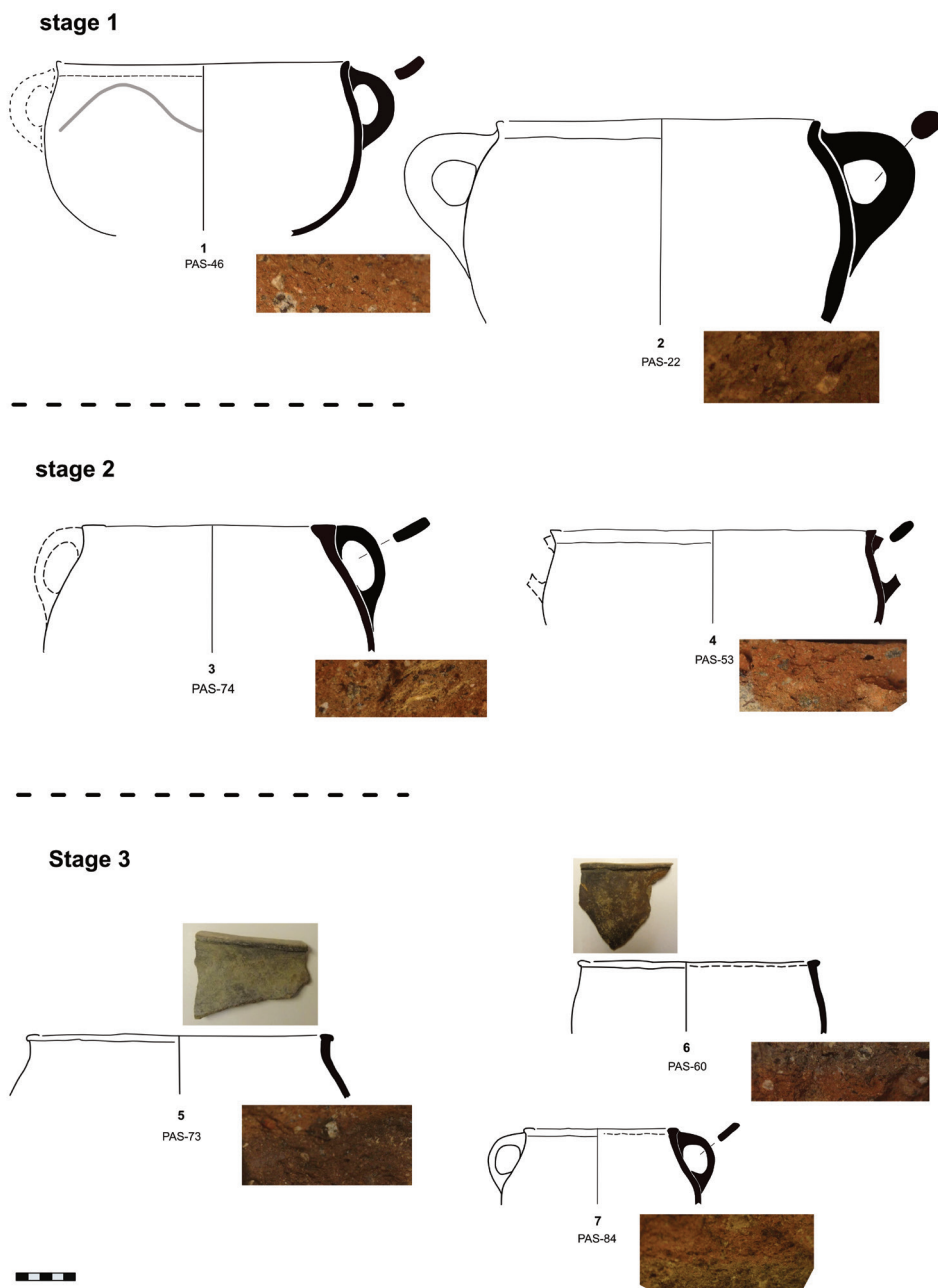


Fig. 9. Development of pots through the late gap.

(PAS-22; Fig. 9:2) comes from a mixed context. The handles section is round, and the firing uneven. It may be earlier than PAS-46, or it may show that the development does not keep an even pace across the parameters of change.

In the subsequent two stages the pots have the 12th-century thin, wide, sliced handle, extending from the rim to the shoulder. The walls tend to be thinner, the surface well-smoothed, fired to dark brown. The outline remains globular, but often with a short neck. Both stages were found in St George's Hill and Polis-Arsinoe, but not in Saranda Kolones, where Hayes identified no 10th-11th centuries deposits.

2. The rim is flattened, to form a lip that projects slightly in and out, with a 'fold-groove' on the inside (Fig. 9:3, 4). The surface outside is smoothed. Occasionally the handle is not sliced (Fig. 9:4).

3. The rim is flattened to form the 'fold-groove' as above, but is slightly thickened out, shaped and smoothed (Fig. 9:5-7). The outward smoothing sometimes results in pronounced excess ridge along the outside edge (Fig. 9:5, 6).

The primary difference between stages (2) and (3) is in the modelling of the rim: simply flattened, as opposed to flattened and shaped, and may therefore be construed as progression according to the hypothetical sequence of development. It is, however, a subtle difference, and there is not enough data to clarify the level of overlap between the two. Their relative position in the sequence should eventually be re-assessed.

4. The well-modelled rims of the 12th century, showing more variety (Fig. 6:2, 8-10). When the fold groove is present, it is more of a feature, quite even and reflects the careful shaping of the rim (Fig. 6:8). The excess-ridge disappeared by now, but a pie-crust edge is common.

The pots provided the best example to the application of the method we suggested for studying the hand-made corpus, but I want to refer briefly to two other shapes that are absent in the early gap.

*Shallow pans with in-turned rim and flat base* (Figs. 6:6, 7). Like the 12th-century pans with rounded outline (Fig. 6:1, 5) the shape quite likely developed from the pans of the early gap (e.g. Fig. 2:2). It is possible to suggest late-gap predecessors to the 12th-century shape, because there are pans that in their manufacturing technique parallel Stage 3 of the pots above: with rim thickened and rounded on the outside, showing fold-groove just below the lip in, and excess ridge out (Fig. 10:1, 2). The crudely made pan in Fig. 10:3 already has the thickened rim with triangular section of the 12th century, but the slight ridge caused by smoothing outward, and the wide uneven groove below the rim, suggest a possibly earlier phase.

*Small cups/bowls* (Fig. 11: 1, 2): Although the shape is common in late 12th/13th century contexts in Nicosia and Paphos<sup>70</sup>, only the two illustrated examples were found in the project assemblages. This type may have its origin in small bowls of the early gap such as the ones found in Kalavassos Kopetra (Fig. 3), but more likely derives from Byzantine imports. Two wheel-thrown cups/bowls were found in Saranda Kolones (Fig. 11:3, 4), in trays that Hayes set aside as ‘Dark Age’, but with no finer date attribution. Their fabric according to petrographic analysis may be non-Cypriot (Fabric

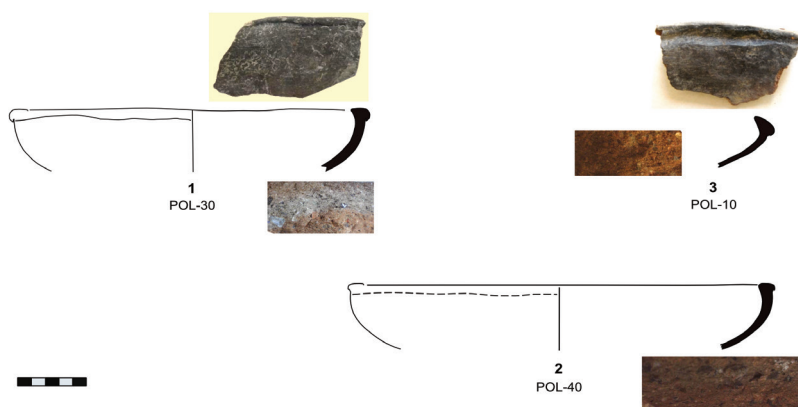


Fig. 10. Late-gap pans.

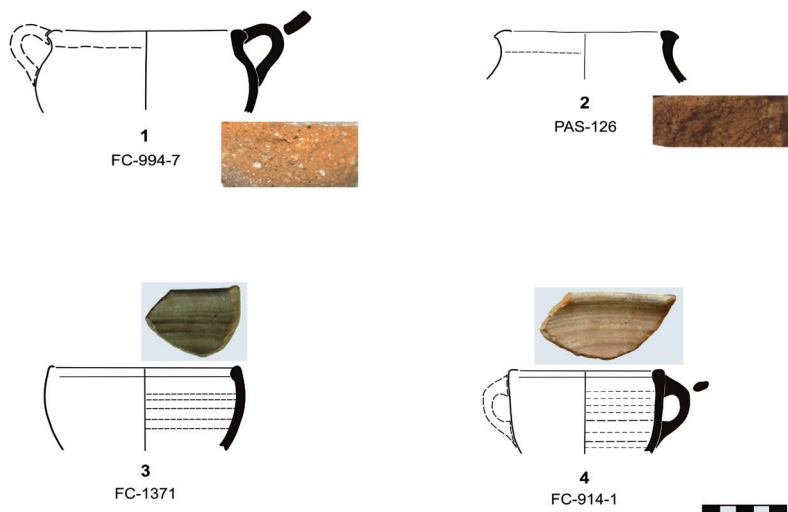


Fig. 11. Cups/bowls: 1-2 local; 3-4 Byzantine imports.

70. GABRIELI 2008, 436-437, Fig. 7; FRANÇOISE 2017, 831, 848, Figs. 4:7, 8; 26:3-6.

D; Appendix 1), and the third vessel of this fabric, a glazed casserole, was published by Hayes as a Byzantine import, of the 7th-9th centuries<sup>71</sup>. These imports could be the inspiration for the local cups/bowls, or the shape could be a hybrid: an outline that is similar to the Byzantine import, in combination with the vertical handles and the slight constriction below the rim, can be viewed as a miniature version of the cooking pots of the 12th century. No preliminary stages were identified, which seems to support a straightforward imitation of foreign form rather than development from an early one.

### *Reassessment of the working hypothesis*

With these results it was possible to reassess the working hypothesis:

(1) [*Economic crisis and social changes in Cyprus around the mid 7th c. led to the collapse of the centralised mass production of pottery; the fast wheel was abandoned, or its use considerably reduced*].

Remains unchanged

(2) [*Small workshops produced hand-made pottery for local markets; there was a certain level of 'household production'; styles were local, or at most regional.*]

It seems now that the balance leans towards regional styles, and possibly there was a combination of regional and local workshops even during the early gap. Overlapping distribution may have increased uniformity of style within each region, and led to dropping off the 'outliers' — such as the imitation of the Late Roman shapes — but no ongoing development could be discerned.

(3+4) [*With time, larger production centres developed; styles became more widespread, with inter-regional influence. Finally, production converged on an area away from the coast (Troodos?); coastal workshops ceased production, or adopted the fast wheel, producing a different range of wares*].

The assumption of gradual development of production centres and inter-regional influence cannot be supported. Instead the gap should be divided into two: during the first century and a half, or two centuries, the study area was divided into two regions, and they seem stable and set apart. The transition form may have developed from the most common pot of the centre-south, but bears no similarity to any of the western shapes. There is no novelty about western Cyprus operating as a separate production/distribution zone<sup>72</sup>.

71. HAYES 2003, 513-515, cat. 404, Fig. 36.

72. See LUND 2002 and 2006, for the Early Roman period.

In the second part of the gap both the western fabrics and the western shapes disappear, a single fabric dominates the study area, and Polis and Nicosia exhibit similar development into the 12th century. The seemingly abrupt transition and overall similarities, and particularly the change in fabric, suggest not a local development under outside influence, but a centre, or an area of production expanding its distribution to the west. Differences between Nicosia and Polis in some firing indicators, fabric coarseness, slight differences in lugs etc., point against a single centre of production and towards regional workshops working within a cohesive tradition.

A modified model is now suggested:

[1] Economic crisis in the mid 7th c.; centralised mass production collapses; the fast wheel abandoned.

[2] small workshops produce pottery for local markets; a certain level of 'household production'. **Currently, larger workshops produce pottery for regional markets, interacting with the local workshop to consolidate regional styles, but keeping local peculiarities.**

[3] **One regional style, maybe developing from the centre-south style, possibly originating outside the study area, took over the market of cooking/coarse ware in the second half of the gap. Production was not centralised, but workshops operated within a single strong tradition.** Coastal workshops stopped production, or adopt the fast wheel for a different range of wares.

This reconstruction is in line with the current state of knowledge within the project study area, but it is only an interim step, until further data is gathered and further reassessment is possible.

## CONCLUSIONS

The aims of the project were to understand the production of the hand-made pottery of the gap period in Cyprus and establish a framework of chronological development for it, so that it could become a research-tool; and to formulate the methodology that was developed in a way that would make it applicable in comparable situations.

At the end of the project it is possible to show partial success as far as 'bridging the gap' of the hand-made pottery is concerned. Collections with hand-made pottery between the 8th and 11th centuries remain sparse; assemblages from the eastern or northern part of the island were not available; and the chain of development for the existing corpus is not complete.

Nevertheless, progress is not inconsiderable. The path through the gap is certainly patchy, but it can be traced. The hand-made pottery of the period is now divided

into two phases, the turning point being around the 9th/10th century. Small local workshops no longer seem to be the only producers in the early gap; an impression of excessive variability gave way to strong regionality and stable styles — nearly a stasis. In the late part of the gap regionality and variability decrease dramatically, and rudimentary stages of development can now be traced for this period. By the end of the gap the tradition of hand-made manufacture for cooking ware was strong enough that the fast wheel was not re-introduced to manufacture this corpus until modern times.

These results should be considered as a new starting point for future research: not only to be refined as more data becomes available, but also to reassess, modify, possibly turn around, as better explanations offer. As was the case for the beginning of the gap, future studies of the ceramics should not be divorced from study of the economy and landscape-use that would have affected the shifts and changes in production and distribution.

Turning to the methodology, as work proceeded, the original four-point approach developed and became more detailed and more flexible. I want to acknowledge here a debt to two people who taught me the value of uncertainties. To John Hayes, who told me that with an unknown corpus progress may be achieved when inviting criticism for work in progress rather than wait for a full certainty that may never come, and to Robin Torrence who taught me that to topple a working hypotheses is an effective way forward. With this advice in mind, the following methodology incorporates acknowledgement of uncertainties and constant reassessment, and this, I believe, offers the flexibility necessary for it to be applicable elsewhere.

### *Preliminary:*

- Identify the corpus(es) that could be recognised through the gap.
- Determine and define initial and end assemblages.
- Identify parameters of change between the two points.
- Consider agents of differences other than chronology — e.g. assess regionality.
- Suggest a hypothetical process or a set of circumstances that tie the beginning and end assemblages
- Use the parameters of change to reconstruct possible intermediate stages.

### *Field Work*

- Identify intermediate reference points. These may be (1) contexts that can be dated stratigraphically or by association with other types of material culture; (2) long sequences; (3) 'hybrid' forms that relate to the parameters of change.
- Re-draw the parameters of change between successive reference points and refine the conjectured development.
- Constant re-assessment and modification of the conjectured path is the essence of the field work. As the data accumulate, circumstances change, and the approach and expectations should remain flexible.
- Identify production-areas/workshops using a combination of morphological, stylistic and scientific analyses.

The last item, which is about production mode and distribution networks, can be helpful in assessing if the results, the trends that were identified, are applicable outside the study area. Small-scale, strictly local manufacture could have a coherent path of development, but it is less likely to be applicable outside the study area, and therefore any progress with the gap will require painstaking repetitive studies across the island. Extended distribution, on the other hand, can be expected to lead to diffusion of styles and to engender imitations, and therefore predictable patterns.

In our study area, the initial regions present different circumstances: The continuity in fabric and the affinity in some characteristics of shape between the early gap and the 'transition form' in the centre-south and inland sites leave the possibility of a link still to be found between them, unlike the abrupt cut-off between the early and late gap in the west.

The spread of styles and fabric to the west in the second part of the gap gives grounds for optimism that this corpus extends to other regions, while we may expect more regional styles in the early gap. Taking into account the long history of regional production specific to the west, it is possible however, that other regions will prove to have more affinity with the centre-south and Nicosia areas.

I suggest three directions for future study:

- The data within the study area should be extended, targeting in particular sites and assemblages that can be dated between the 9th and 11th centuries, or provide sequences that offer relative chronology through parts or all of the gap.
- The area of the study should be extended, to understand better inter- and intra-regional differences, patterns of regional development, and the extent of distribution of local and regional production.
- Survey collections should be revisited, to try and identify rural sites.

## *Appendix: Fabrics Description (predominant fabric-groups)*

### **M. Dikomitou-Eliadou**

The Thin sections were examined using an Olympus BH2 series Polarized Light Microscope at magnifications from x4 to x20. The samples were divided into fabric groups according to their similarities or differences in the presence of rock and mineral inclusions, their distribution and density across the section, and other visible technological features, such as optical activity, degree of vitrification, distribution and density of voids. At a second stage photomicrographs of representatives from each fabric group and all outlier samples were taken using Leica DM EP polarising microscope with an attached Q imaging Go-3 digital camera, at x2.5 and x5 magnifications. The photomicrographs were managed using Q Capture Pro 6.0 software.

FABRIC	DESCRIPTION
<b>A1</b>	<b>Coarse fabric with large mudstone and large quartz grains, a few shale fragments, a few micritic limestone fragments, a few siltstone fragments, secondary calcite, some chert fragments, and elongated voids</b>
A2	Predominant presence of mudstone fragments in bright reddish colours and main constituent in coarse fraction
A3	Mudstone fragments, large grains of quartz and large fragments of radiolarian chert
A4	Predominant presence of orange mudstone, common open microfossils and presence of secondary calcite
A5	Predominant presence of mudstone fragments across the section - comparable to A2 but with quartz grains also in coarse fraction
A6	Dominance of brown-red mudstone fragments in an almost unimodal grain distribution, large orange clastic rock fragments, rarely sandstone fragments and a few large rounded quartz grains
A7	A few mudstone and siltstone fragments and a varied presence of igneous rocks (diorite, gabbro) and metamorphic rocks a few quartzite and chert fragments
A8	Large mudstone fragments are the only component in coarse fraction, also presence of secondary calcite in some of the elongated voids and one fragment of sandstone
A9	Large brown and grey mudstone fragments, a few micritic limestone fragments, secondary calcite in voids and rarely small siltstone fragments
A10	With mudstone, frequent large siltstone fragments, a few chert fragments, large grains of quartz and one large aggregate of quartz grains
A11	Weathered, with dark brown mudstone fragments, and weathered igneous rock fragments, large quartz grains and a few, small chert fragments
A12	A few large mudstone fragments and weathered igneous rock components (diabase, granite, feldspar, amphibole) and quartz grains
A13	Exceedingly similar with A1 with the addition of a heavy presence of small, angular and sub-angular opaques that cover the entire thin section

<b>B1</b>	<b>Coarse fabric characterised by the co-existence of chert and radiolaria chert fragments, calcite grains and micritic limestone, microfossils, basalt and gabbro fragments and their constituent minerals. Mixing of clays.</b>
B2	With minimum presence of igneous components and a more unimodal presence of the sedimentary inclusions that were added to the clay
<b>C1</b>	<b>Coarse igneous fabric with gabbro and diabase fragments, pyroxene, olivine, iddingsite and amphibole, serpentine and feldspar grains. Very dense texture. Variation in inclusion size and minimum presence of voids.</b>
C2	[Semi-coarse], igneous fabric containing ultramafic rock fragments and the rocks' mineral constituents in coarse and fine fraction. Comparable to C1 but with inclusions in smaller sizes
C3	Igneous mineral grains mostly in fine fraction but large grains of monocrystalline quartz and frequent voids
C4	Containing gabbro, granite, and diabase fragments, quartz, feldspar, biotite and iddingsite grains, as well as grey clastic sedimentary rock fragments
C5	[Semi-coarse], containing orthopyroxene and altered orthopyroxene grains, alkali and plagioclase feldspars and mono crystalline quartz grains in a finer dark brown clay. It seems that coarser mineral grains are a result of tempering clay with sand. Presence of secondary calcite and common voids
C6	[Semi coarse], with dense texture and very few voids, containing ultrafic rock mineral grains and rock fragments turning into opaques
C7	Igneous rocks fragments, such as gabbro, diabase, basalt and microgranite, as well as large quartz and feldspar grains, pyroxene and amphibole grains and opaques
<b>D</b>	<b>A semi-coarse fabric with a fine dark brown clay matrix and angular and sub-angular monocrystalline quartz grains, as a result of sand tempering. A few of the larger pieces of quartz are whole, rounded grains.</b>
<b>E</b>	<b>A semi-coarse fabric with a fine brown to dark brown clay matrix and angular grains of monocrystalline quartz, alkali and plagioclase feldspars, and a few biotite laths, clinopyroxene, orthopyroxene and amphibole grains, and fragments of weathered plagiogranite</b>

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