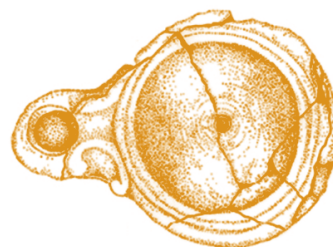


A group of early Roman lamps from Chhîm, Lebanon: preliminary research on shapes, fabric and provenance



Abstract: The early Roman oil lamps from recent excavations by a Polish team in Chhîm constitute a significantly fragmented group. Macroscopic analysis of fabrics, combined with a typological study and complemented by iconographic research wherever applicable, revealed similarities between these lamps and similar finds from the Levant. The fabric underscores a production continuity from the Hellenistic period and reveals similarities with a regional semi-fine ware. The collected data suggest the Southern Phoenician coast as a potential center of production.

Keywords: Chhîm, Phoenicia, Roman period, oil lamps, macroscopic fabric analysis, semi-fine ware, iconography

The early Roman lamps presented in this paper represent four selected groups of 1st and 2nd century AD lighting devices found at the Chhîm archaeological site in Lebanon. The site is located on the outskirts of the modern village of Chhîm in the Chouf Mountains, located some 30 km south of Beirut. The excavation concerned the area of the ancient village, including a Roman temple, a Byzantine basilica, village dwellings, oileries and cisterns (see Périssé-Valéro 2009; Waliszewski and Wicenciak 2015).

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Acknowledgments

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The samples mentioned in the paper were analysed within the framework of a project "Enlightenment in Ancient Times. Research on Hellenistic and Roman terracotta oil lamps from Nea Paphos, Cyprus", dedicated to interdisciplinary research on lamps from Paphos. The project was funded by the Polish National Science Centre Grant 2015/19/N/HS3/01810 (Preludium 10 program).

The presented material was selected from the Hellenistic and Roman assemblage of lamps (dated between the 3 century BC and the 4th/5th century AD), found in the area of the ancient village (a total of 165 lamp fragments¹), as well as 20 examples from two rock-cut tombs, A and B, located east of the village.² The material is for the most part significantly fragmented, posing difficulties for a proper classification into types and interpretation of iconographic motifs. Only a few objects, most of them from Tomb A, are bet-

ter preserved. Even so, fabric groups were distinguished. Four interrelated groups among lamps from the said period (92 assigned fragments) are described in this paper, including basic information on types and decorative motifs. Also included is a discussion of analogous finds and the tentative provenance of the groups.

The paper is intended as a preliminary study, offered in the hope of stimulating further research on the lamps produced and distributed in the Levantine region.

METHODOLOGY

The fragmentation of the oil lamps from Chhîm made a full reconstruction of shape and decoration difficult. However, classification by fabrics was possible based on macroscopic observation of fabric characteristics selected and assessed according to a fabric description system published by Orton and Hughes (2013) with some modifications (see Marzec, Kajzer, and Nocoń 2020). Features described include: amount, size and color of inclusions; presence and shape of voids; hardness, fresh break texture, feel of the surface and, if any, surface treatment. Core and surface coloring was described using Munsell Soil Color Charts (1990; 2013). Observations on individual fragments were carried out usually with the naked eye under comparable lighting conditions,

occasionally complemented with observations under a 10x magnifying glass.

Typological and iconographic studies were also undertaken. The lamps were classified according to the Loeschke typology (Loeschke 1919), including basic lamp types from the Roman manufacturing tradition. The lamps were dated based mostly on parallels from the region (Rey-Coquais 1963; Pritchard 1988; Marchand 1996; Mikati 1998; Frangié 2009, 2011; Sussman 2012; Frangié-Joly 2017) because the nature of the archaeological layers in Chhîm disallow a more precise dating.

The preserved decorative motifs were compared with published Roman lamps from the region (see above) and beyond (Bailey 1980; 1988).

1 This number does not include the Byzantine lamps studied separately by Tomasz Waliszewski. The publication, including the entire assemblage of lamps, is currently in preparation.

2 For more information on the tombs and their content, see Ortali-Tarazi and Stuart 2004.

FABRIC CHARACTERISTICS

The lamps discussed in this paper were assigned to four interrelated groups macroscopic fabric groups characterized below [Table 1]. Particle size and amount as well as shape of voids observed in fresh breaks differed slightly, but at the same time, the color and shape of inclusions seemed to be compatible between the groups, suggesting their analogical composition and provenance. Moreover, differences could be observed in the color of fresh breaks and surfaces (from pale yellow to light red) and hardness (from powdery to hard).

This variety could be interpreted as the result of different technological processes (such as firing temperatures or degree of oxidation) or distinct clay sources, characterised by slightly different mineralogical and chemical composition. The question could be resolved with laboratory analyses. Meanwhile the group is treated as four interrelated groups, divided by their physical properties, foremost the hardness and color of the core and slip.

Table 1. Characteristics of the four fabric variants distinguished on grounds of macroscopic observation

Fabric properties	Fabric group			
	1	2	3	4
Inclusions	Few to frequent, fine to medium, white, dark and red	Frequent, fine to medium, white, red, dark and grey	Few, fine to medium, white, red and dark	Few, fine to medium, white; frequent, fine dark and red
Voids	Rare, angular	Frequent, rounded	Frequent, rounded and angular	Frequent, rounded and angular
Hardness	Fairly hard to hard	Fairly hard to hard	Soft	Fairly hard
Color, core	Very pale brown (10YR7/4) to reddish yellow (5YR7/6)	Reddish yellow (7.5YR7/6), pink (5YR7/4) or light red (2.5YR6/6)	Pale yellow (2.5YR8/4) or pale brown (10YR8/4)	Pale yellow (5Y8/4), yellow (10YR8/6) to pink (7.5YR7/4)
Color, surface	Yellowish red (5YR5/8), red (2.5YR5/8), reddish brown (5YR5/3) to dark grey (5YR4/1)	Yellowish red (5YR5/8), light red (2.5YR6/8) to dark grey (5YR4/1)	Red (2.5YR5/8) to dark grey (5YR4/1)	Reddish brown (5YR5/4), brown (7.5YR5/4) to very dark grey (5YR4/1)
Surface treatment	Matt or semi-lustrous slip	Matt or semi-lustrous slip	Semi-lustrous slip, often blurred	Semi-lustrous slip
Surface feel	Smooth	Smooth	Powdery	Smooth
Fresh break texture	Smooth	Smooth	Smooth	Smooth
Frequency (number of lamps)	28	32	8	24
Illustrated examples	Fig. 1b, Figs 2, 3a–c,e, 4a, 5, 7b–c	Figs 3f, 6, 7a	Fig. 7d	Figs 1a, 3d, 4b

PRESUMED FABRIC PROVENANCE AND DISTRIBUTION

The characteristics of the described fabrics preclude a local manufacture of these lamps. The pottery presumably produced in Chhîm (Wicenciak 2016a: 621, 666–668) includes only coarse ware (amphorae, kitchen vessels and possibly lamps) without any surface treatment. However, the presented fabric features are very similar to the Hellenistic fabric group defined as Semi-fine ware. This was described for the first time for plain-ware vessels from Tel Anafa in Israel (Weinberg 1970: 20; Berlin 1997a; 1997b: 9–10). It was identified subsequently among pottery finds from many sites, showing the wide distribution of some shapes, especially the amphoriskoi, in the Mediterranean (Lund 2015: 200; Ugarković and Šegvić 2019 with distribution maps and further references). Further studies have revealed the variety of pottery forms produced in semi-fine, including lamps, and variants of the fabric with slightly different characteristics and amount of inclusions (Młynarczyk 2001: 248–249; Berlin and Stone: 140–141; Élaigne 2019: 390). The connection between Hellenistic wheel-made lamps produced in the 3rd to early 2nd century BC, mouldmade late Hellenistic lamps of the 2nd to 1st century BC and other Hellenistic semi-fine ware vessels has been discussed for the finds from Tel Anafa (Dobbins 2012: 108–109). The

same author also studied early Roman lamps in relation to semi-fine ware, and interpreted them as a continuity of the production (Dobbins 2012: 113–114). Also, the lamps representing different chronology (Hellenistic to Roman) and found in 'Akko-Ptolemais (Berlin and Stone 2016: 185–186) and Tyre (Élaigne 2019: 384, 390) were assigned to semi-fine ware. These data correspond well with the research conducted on the lamps from Chhîm. The fabric similarities between lamps of different chronology and technologies have also been documented.

The Southern Phoenician coast, more specifically, the neighborhood of Tyre have been assumed as the production region of semi-fine ware (Berlin 1997b: 9–10; Rotroff 2006: 161–162; Frangić 2009: 237; 2011: 318; Dobbins 2012: 110; Lund 2015: 200; Berlin and Stone 2016: 141; Wicenciak 2016a: 637–641; 2016b: 113; Élaigne 2019: 381), but without any direct archaeological evidence; so far excavations have not uncovered any structures (kilns or workshops) or wasters connected with pottery production (Wicenciak 2016a: 637). The provenance, therefore, is tentative at best, especially as researchers have suggested different workshops for the production of regional semi-fine ware variants (Młynarczyk 2001: 250; Berlin and Stone 2016: 141; Frangić-Joly 2017: 28–30).

LAMPS FROM CHHÎM: TYPOLOGY AND ICONOGRAPHY

The discussed group of lamps from Chhîm is dated to the early Roman period, that is, between the early 1st and the late 2nd centuries AD. Taking into

account typological diversity, the lamps were classified into three basic types with stylistic variants, but the exact form is usually difficult to distinguish because

of the poor state of preservation. More generally, the lamps can be classified as relief discus lamps, typical of early Roman times.

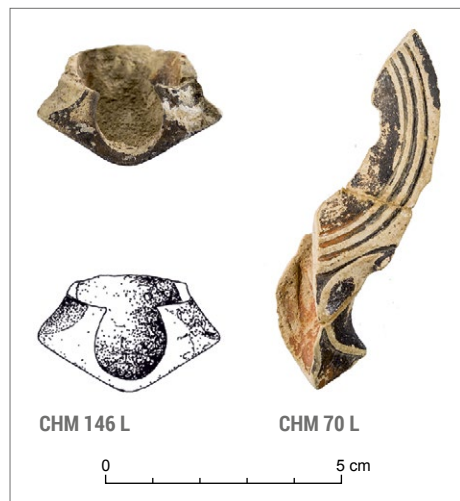


Fig. 1. Loeschcke I type lamps (PCMA UW Chhîm Project | photo A. Oleksiak, drawing M. Makowska)

The earliest examples may be assigned to type Loeschcke I, characterized by a rounded body, grooved shoulders and typical angular nozzle flanked by volutes [Fig. 1]. Lamps of this type are dated to the early 1st century AD.

The second type, Loeschcke IV, is characterized by a similar body shape but is rounded at the end of the nozzle. It is dated to the 1st century AD. One almost completely preserved example, but without discus decoration, was found in Tomb A [Fig. 2].

Decorated fragments can be assigned to both described types (without the nozzle, it is impossible to distinguish between the two). Identified motifs are few and can be divided into thematic groups. A rosette with a varying number of petals is a simple, floral motif identified on a few fragments (not illustrated). Depictions of animals were also record-

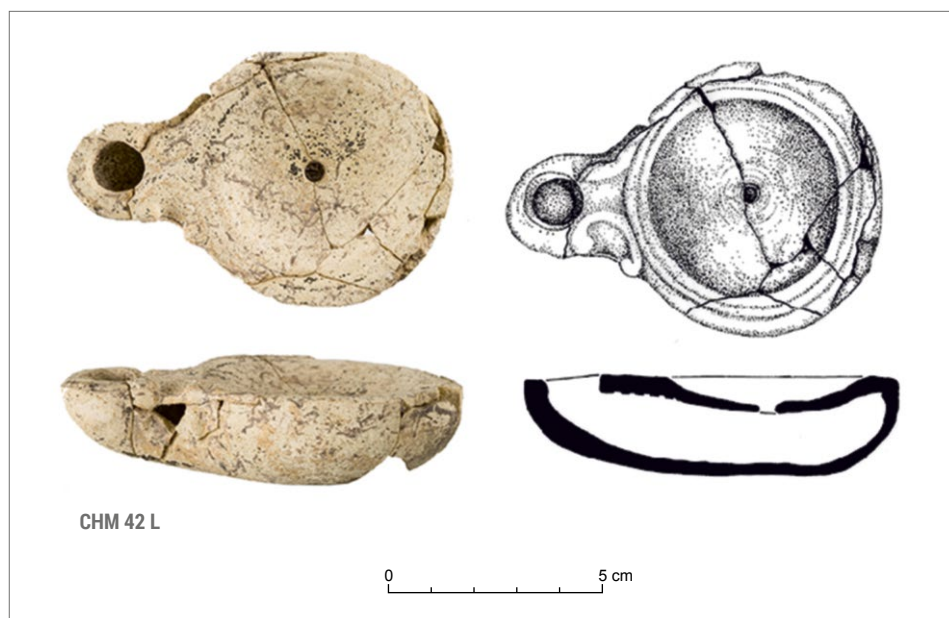


Fig. 2. Loeschcke IV type lamp (PCMA UW Chhîm Project | photo A. Oleksiak, drawing M. Makowska)

ed on a few objects and again the best preserved objects come from Tomb A. One of them depicts a bull [Fig. 3:a]. A very similar depiction may be found on a lamp of a different type from Sidon (Rey-Coquais 1963: 156, No.27, Pl. VI). The bull motif is also found on an early Roman lamp from Beirut (Mikati 1998: 95, Pl. 13.3). The other lamp from Tomb A calls to mind a bucolic scene known from an Italian lamp in the British Museum Collection (see Bailey 1980: 44–45, 174, Q923, Fig. 48, Pl. 16). The motif consists of an animal, probably a goat, jumping to the right (originally leaning against

a tree) over a round object [Fig. 3:b]. In the full scene there is a dog curled up below the tree and the goat. The scene could be interpreted as a local derivative of a more complicated decorative scene, such as that on imported Italian lamps. A reduced scene of this kind is well documented among finds from Tyre, where three analogical examples were reported (Marchand 1996: 61). One parallel was purchased in Damascus (Kennedy 1963: No. 491, Pl. 20) and a similar lamp is known from a tomb excavated in Paphos, Cyprus (Raptou 2004: Cat. No. 16, Pl. 44.3).

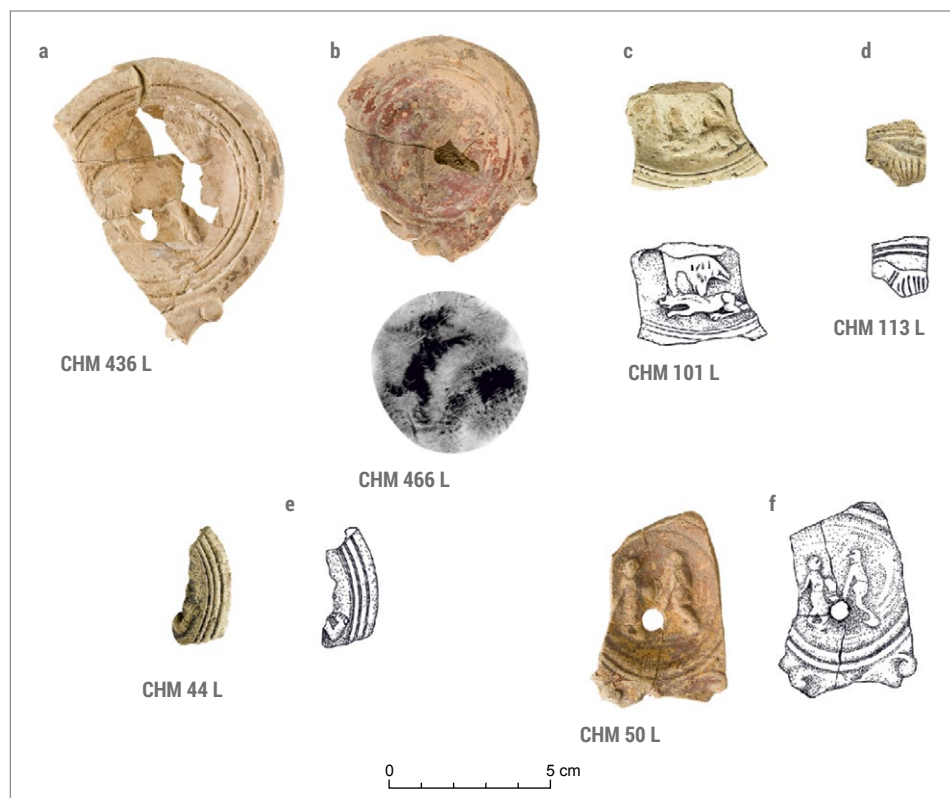


Fig. 3. Discus scenes on lamp fragments of the Loeschcke I and IV types from Chhîm: a – bull; b – bucolic scene with goat and dog; c – wolf with puppy; d – lion; e, f – gladiator scenes (PCMA UW Chhîm Project | photo A. Oleksiak, drawing M. Makowska)

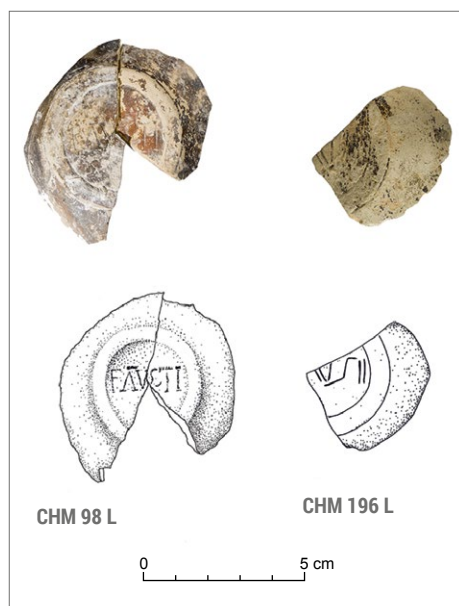


Fig. 4. Lamps with the FAVSTI signature (PCMA UW Chhîm Project | photo A. Oleksiak, drawing M. Makowska)

Other animal scenes are poorly preserved. One fragment is decorated with what is probably a depiction of a wolf with a cub [Fig. 3:c], while another small fragment features a lion [Fig. 3:d].

Figural scenes found on fragments of type Loeschcke IV include what could be depictions of gladiators [Fig. 3:e–f]. Albeit direct parallels cannot be indicated because of the poor state of preservation, the motif was very popular on early Roman lamps (see Bailey 1980: 52; 1988: 55–59), including the Levantine region (compare Mikati 1998: 179, Sussman 2012: 12).

Lamps from the 1st century AD often bore workshop signatures. Two of the lamps in the assemblage from Chhîm were signed with the name FAVSTUS [Fig. 4], which is a well-attested name in Beirut (Mikati 1998: 117–119; 2003: 175). The signature has

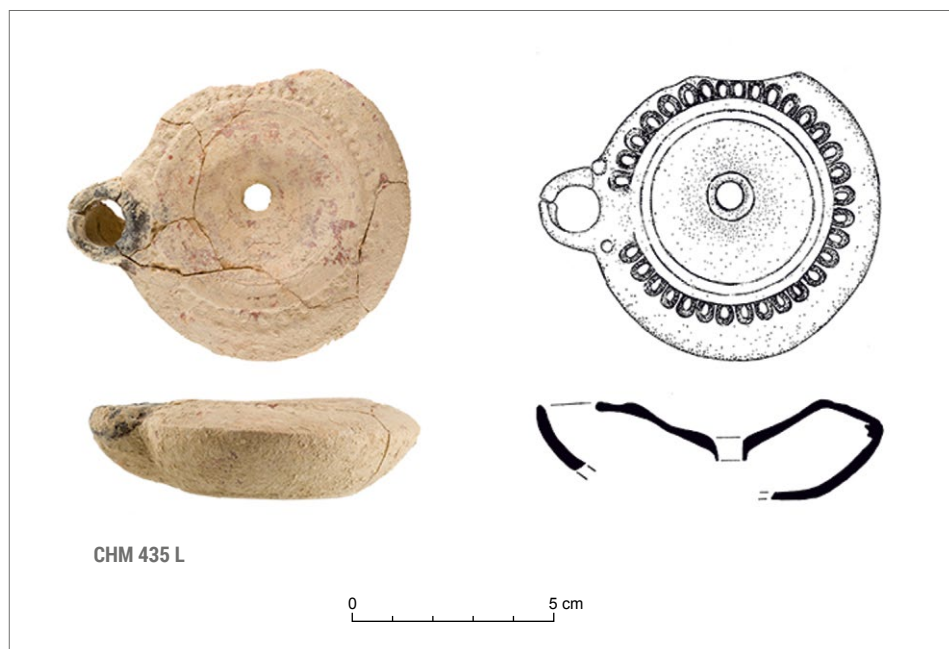


Fig. 5. Loeschcke VIII type lamp (PCMA UW Chhîm Project | photo A. Oleksiak, drawing M. Makowska)

two different variants, both coming from a mould rather than incised on a leather-hard lamp (compare Mikati 2003: 176): compare an example made in a mould possibly taken from an original archetype [Fig. 4 left] with

one with modified lettering, presumably the result of surmoulage [Fig. 4 right] for which second-generation moulds were used (Bailey 1997: 168). The name of Faustus is known from different sites in Egypt, Cy-

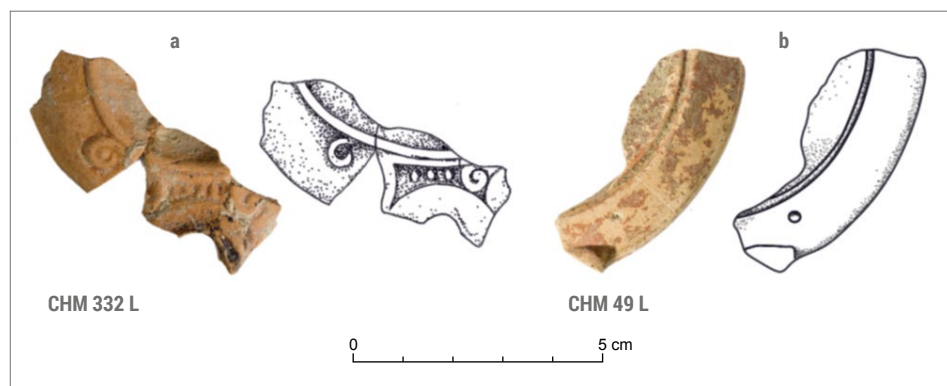


Fig. 6. Loeschcke VIII type lamps with different decoration around the nozzle: a – flanking volutes; b – ‘pimples’ (PCMA UW Chhîm Project | photo A. Oleksiak, drawing M. Makowska)

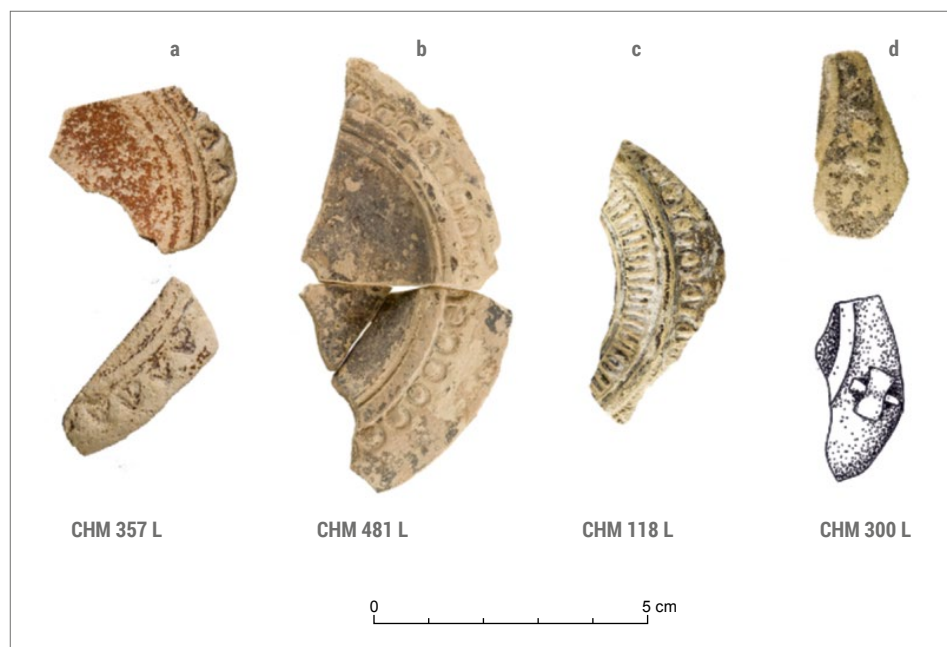


Fig. 7. Loeschcke VIII type lamps with different shoulder ornaments: a – ivy leaves; b – ovules; c – ovules and ladder pattern; d – double-axe motif (PCMA UW Chhîm Project | photo A. Oleksiak, drawing M. Makowska)

prus and the Levant (Bailey 1980: 95; Oziol 1993: 34–36; Lynch 1995; Mikati 1998: 117; Mikati 2003: 175; Dobbins 2012: 176–179; Sussman 2012: 12). The widespread presence of such a signature on lamps could reflect the migration of a manufacturer who established branches of his workshop in different places. However, it is also possible that some of these lamps are ancient forgeries (Sussman 2012: 12).

A large group of lamps represents the Loeschcke VIII type which was predominant in the 2nd century AD but it also continued into the 3rd century AD (Bailey 1988: 280–281; Rosenthal-Heginbottom 2017). This form is well exemplified by a lamp from Tomb A [Fig. 5]. It is characterised by a rounded body with ornamented shoulders. The nozzle is very short, sometimes flanked by simplified volutes. The space between

these volutes and the discus may be filled with a geometrical ornament [Fig. 6:a] or small “pimples” on both sides of the nozzle [Fig. 6:b]. The most common ornament around the discus consists of stamped ovules [Fig. 7:b–c] separated from the central space by one or a few rings [Fig. 7:a–b]. A popular combination used in lamp decoration includes ovules connected with a ladder pattern surrounding the inner part of the discus [Fig. 7:c]. The motif of ivy leaves was also attested [see Fig. 7:a]. Single motifs on the shoulders are rare, e.g., a double axe [Fig. 7:d] (compare Sussman 2012: 62–64). Analogical lamps are generally dated from the mid-1st to the 2nd century AD (Frangié and Salles 2011: 285; Sussman 2012: 58, 67). Sadly, none of the fragments from Chhîm preserved the discus decoration.

DISTRIBUTION OF ANALOGOUS LAMPS

Analogous lamps presumed to be from the region are not easy to identify without a good fabric description. The shape is not usually helpful in indicating provenance, especially in the case of 1st century AD lamps which demonstrate common shapes derived from Italian products and most likely produced independently in various workshops. Some features observed in slightly later lamps of type Loeschcke VIII, such as simplified volutes or “pimples” flanking a short nozzle together with the motif of a double axe seem to be characteristic of the region understood broadly as the Levant (compare Hayes 1980: 86; Sussman 2012: 56, 62–63). Although there is no clear evidence for a particular provenance, coastal Phoenicia might have been where these lamps

were produced (Rosenthal-Heginbottom 2012; 2017: 156), tentatively supporting the connections with semi-fine ware discussed above. In Phoenicia, early Roman lamps of the Loeschcke VIII type have been recorded at many sites in Beirut (Mikati 1998: 100, Pl. 20), Byblos (Frangié and Salles 2011: 285, Pl. 11), Deb’aal (Hajjar 1965: Pls XX–XXI), Jiyeh (personal view), Sarepta (Pritchard 1988: 185–186, Fig. 75), Sidon (Rey-Coquais 1963: 156–157, Nos 29–33, Pls IV–V) and Tyre (Marchand 1996: 64–65, Nos 61–67). But their distribution is much wider and includes numerous sites in Palestine (Sussman 2012: 55–67, 230–260, Nos 254–481; Lapp 2016: 49–72, Nos 78–142), Syria (Hayes 1980: 86–87) and beyond (see below). Only a comprehensive, comparative study of fab-

rics, complemented by laboratory analysis, can help to understand the production and distribution patterns.

Some additional data comes from the mouldmade lamps of late Hellenistic date, made of semi-fine ware that could have preceded the production of the lamps described above. These lamps were usually made of a grey variant of the ware (effected by firing in a reduced atmosphere without oxygen). They often had an S-shaped side lug and were decorated with rays and chevrons, as in this example from excavations in Jiyeh, Lebanon [Fig. 8], or with a figural depiction of Eros on top of the body. The distribution pattern in this case is similar to that previously discussed for early Roman objects (see Rey-Coquais 1963: 148, Pl. 1, No. 1;



Fig. 8. Late Hellenistic mouldmade semi-fine lamp with S-shaped side lug, rays and chevron ornament, found in Jiyeh (PCMA UW Chhîm Project | photo M. Kajzer)-

Pritchard 1988: 174–178, Figs 73–74; Kassab Tezgör and Sezer 1995: 164–170, Nos 437–456; Marchand 1996: 57, No. 1; Młynarczyk 1997: 36; Mikati 1998: 92, Pl. 10:2; Sussman 2009: 41, 54; Frangié 2011: 318–320; Frangié and Salles 2011: 280–281, Pls 3–4; Frangié-Joly 2017: 65; Élaigne 2019: 384) and supports the assumption that they were produced on the Phoenician coast (Frangié 2009: 237). Beyond this presumed region of manufacture, numerous late Hellenistic lamps are known from Delos (Bruneau 1965: 87–88, Nos 4144–4201) and single examples were unearthed in Tarsus (Goldman and Jones 1950: 101, Fig. 194). Moreover, both Hellenistic and early Roman lamps made of an analogous fabric, were found on several sites in Cyprus: Famagusta (Karageorghis 1966: 336, Fig. 90), Palaepaphos (Bezzola 2004: 48, Nos 222–224), Panagia Ematousa (Wismann 2006: 346, Figs 170, 178), Nicosia (Oziol 1977: 55, 59, Nos 115–117, 132–133) and Nea Paphos, where they were noted at several locations (see Karageorghis 1986: 874, Fig. 118; Młynarczyk 1978: 241–242, Nos 30–33; 1998: 55, Fig. 1f; Papuci-Władyka 1997: 132; Kajzer 2019: 102–103). Early Roman discus lamps of type Loeschcke VIII were recorded at Amathus (Abadie-Reynal 1987: 57, No. T.256/14, Pl. XXX), Archimandrita (Bezzola 2004: 66, Nos 269–270, Pls 7–8, 23), Kourion-Episkopi (Oliver 1983: 255, No. 48, Pl. XLI:9), Kourion-Agios Hermogenis necropolis tombs 8 (McFadden 1946: 474, No. 28, Pl. XXXVIII) and 64, Nos 3 and 74 (personal observation), Nea Paphos (Młynarczyk 1998: 57; Kajzer 2019: 117–118) and Salamine (Karageorghis 1978: No. 73, Pl. XIX). Single examples are also known from the Archaeological Museum in Nicosia (Oziol 1977: 186–188, Nos 549–555, Pl. 31) and from the Piéridès Collection (Oziol 1993: 56, No. 81, Fig. 12).

Laboratory analyses of six samples taken from Hellenistic and Roman lamps representing the said fabric group found at the Paphos Agora³ were aimed at identifying their provenance. Thin-section petrography combined with WD-XRF chemical analysis revealed connections between lamps of different chronology and types, and suggested

their Levantine provenance (Kajzer 2019: 172; Kajzer et al. forthcoming). Even though the sample was quite small, the Cypriot provenance of these lamps was definitely excluded in view of the different mineralogical and chemical composition of the fabric. Last but not least, these results add another element to the study of Phoenician lamps.

CONCLUSIONS

Preliminary research on the early Roman lamps from Chhîm discussed above has suggested that the lamps could have been made of semi-fine ware or related. Assuming this is correct, lamps made of this fabric were continuously produced from the 3rd century BC to the early Roman period, possibly into the 2nd century AD (see Frangié-Joly 2017: 29) despite major changes in shape and decoration. The provenance of this type of ware is provisionally connected with the Southern Phoenician coast, an idea that only detailed studies of the chemical composition of fabrics and their petrographic characteristics could confirm. The wide distribution of the discussed semi-fine ware lamps and other vessels suggest production on a significant scale. It is even more likely when the use of moulds in the technological process is considered and the extraordinary distribution observed in other case studies, e.g., Hellenistic Ephesian and Knidian lamps (Giuliani 2011; Kajzer 2019: 180–181). However, the presence of analogous lamps at different archaeological sites may also be the result of several independent places of produc-

tion (Młynarczyk 1997: 36). Laboratory analyses could produce more conclusive results if materials from different sites are sampled, this combined with a comparative study of archaeological finds and geological matter from the presumed production region. The state of research on oil lamps from this region, together with the lack of any recorded lamp or, more generally, semi-fine ware workshop, do not facilitate identification of production centers. Still, macroscopic fabric analysis and laboratory examination of analogous finds, including the lamps from the Paphos Agora, open the way to a speculative consideration of the region of Tyre, located 48 km from Chhîm in a straight line, as a probable production area for semi-fine ware and with it also lamps (Wicenciak 2016b: 113).

Issues of semi-fine ware production, its continuity in Roman times, and the reasons for and date of its decline remain open for further investigation, lamps included, supported by more reliable chemical and petrographic analysis to demonstrate the internal variability of this pottery group.

3 The Paphos Agora Project directed by E. Papuci-Władyka from the Institute of Archaeology, Jagiellonian University, Kraków, Poland, see <http://www.paphos-agora.archeo.uj.edu.pl/>.

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References

- Abadie-Reynal, C. (1987). Céramique romaine. In V. Karageorghis, O. Picard, and C. Tytgat (eds), *La nécropole d'Amathonte, tombes 113–367*, II. *Céramiques non chypriotes* (=Études chypriotes 8) (pp. 45–58). Nicosia: Fondation A.G. Leventis
- Bailey, D.M. (1980). *Catalogue of the lamps in the British Museum II. Roman lamps made in Italy*. London: British Museum Publications
- Bailey, D.M. (1988). *Catalogue of the lamps in the British Museum III. Roman provincial lamps*. London: British Museum Publications
- Bailey D. (1997). Roman Pottery Lamps. In I. Freestone and D. Gaimster (Eds), *Pottery in the making. World ceramic traditions* (pp. 164–169). London: British Museum Press
- Berlin, A. (1997a). From monarchy to markets: The Phoenicians in Hellenistic Palestine. *Bulletin of the American Schools of Oriental Research*, 306, 75–88
- Berlin, A. (1997b). The plain wares. In S. Herbert (ed.), *Tel Anafa II.1. The Hellenistic and Roman pottery* (=JRA Supplementary Series 10/2) (pp. 1–244). Ann Arbor, MI: Kelsey Museum of the University of Michigan
- Berlin, A.M. and Stone, P.J. (2016). The Hellenistic and Early Roman pottery. In M. Hartal, D. Syon, E. Stern, and A. Thatcher, *'Akko II: the 1991–1998 excavations. The early periods* (=IAA Reports 60) (pp. 133–202). Jerusalem: Israel Antiquities Authority
- Bezzola, S. (2004). *Lucerne fittili dagli scavi di Palaepaphos (Cipro)* (=Ausgrabungen in Alt-Paphos auf Cypern 5). Mainz am Rhein: Philipp von Zabern
- Bruneau, P. (1965). *Exploration archéologique de Délos XXVI. Les lampes*. Paris: De Boccard
- Chrzanowski, L. (2019). *Lampes antiques, byzantines et islamiques du Nil à l'Oronte. La Collection Bouvier*. Warsaw: PCMA UW; University of Warsaw Press
- Dobbins, J.J. (2012). The lamps. In A.M. Berlin and S.C. Herbert (eds), *Tel Anafa II.2. Glass vessels, lamps, objects of metal, and groundstone and other stone tools and vessels* (pp. 99–212). Ann Arbor, MI: Kelsey Museum of Archaeology
- Élaigne, S. (2019). Les assemblages hellénistiques de Tyr (Liban, Mission franco-libanaise). In A. Peignard-Giros (ed.), *Daily life in a cosmopolitan world: Pottery and culture during the Hellenistic period. Proceedings of the 2nd Conference of IARPotH, Lyon, November 2015, 5th–8th* (pp. 381–395). Vienna: Phoibos Verlag
- Frangié, D. (2009). *Beyrouth hellénistique: du port de l'époque perse à la colonie augustéenne* (unpubl. Ph.D. diss.). Université Panthéon-Sorbonne

- Frangié, D. (2011). Les lampes hellénistiques de Beyrouth (chantiers 002/026). In D. Frangié and J.-F. Salles (eds), *Lampes antiques du Bilad es Sham: Jordanie, Syrie, Liban, Palestine. Actes du colloque de Pétra-Amman, 6–13 novembre 2005* (pp. 303–335). Paris: De Boccard
- Frangié, D. and Salles, J.-F. (2011). Lampes de Byblos. In D. Frangié and J.-F. Salles (eds), *Lampes antiques du Bilad es Sham: Jordanie, Syrie, Liban, Palestine. Actes du colloque de Pétra-Amman, 6–13 novembre 2005* (pp. 259–302). Paris: De Boccard
- Frangié-Joly, D. (2017). *Le site de Bey-144: fouilles et étude de la céramique (période hellénistique – début de l'ère romaine)* (=BAR IS 2881). Oxford: BAR Publishing
- Giuliani, A. (2011). New aspects on the chronology of Hellenistic lamps from Ephesos. In *7^ē Epistēmōnikē synantēsē gia tēn hellēnistikē keramikē: Aigio 4–9 apriliou 2005* (pp. 533–538). Athens: Ekdosē tou Tameiou archaiologikōn porōn kai apallotriōseōn
- Goldman, H. and Jones, F.F. (1950). The lamps. In H. Goldman (ed.), *Excavations at Gözlü Kule, Tarsus I. The Hellenistic and Roman periods* (pp. 84–134). Princeton, NJ: Princeton University Press
- Hajjar, J. (1965). Un hypogée romain à Deb'aal dans la région de Tyr. *Bulletin du Musée de Beyrouth*, 18, 61–104
- Hayes, J.W. (1980). *Ancient lamps in the Royal Ontario Museum I. Greek and Roman clay lamps*. Toronto: Royal Ontario Museum
- Kajzer, M. (2019). *Produkcja i dystrybucja hellenistyczno-rzymskich lampek oliwnych we wschodniej części Basenu Morza Śródziemnego w oparciu o znaleziska z Nea Pafos na Cyprze* (Production and distribution of Hellenistic and Roman oil lamps in the Eastern Mediterranean based on the finds from Nea Paphos in Cyprus) (unpubl. Ph.D. diss.). Jagiellonian University in Kraków (in Polish)
- Kajzer, M., Marzec, E., Müller, N.S. and Kiriati, E. (forthcoming). *Production and supply of ceramic oil lamps in Hellenistic and Early Roman Nea Paphos, Cyprus. Integrated typological, chronological and provenance studies, ABSA*
- Karageorghis, V. (1966). Chronique des fouilles et des découvertes archéologiques à Chypre en 1965. *BCH*, 90(1), 297–389
- Karageorghis, V. (1978). *Excavations in the necropolis of Salamis IV*. Nicosia: Department of Antiquities, Cyprus
- Karageorghis, V. (1986). Chronique des fouilles et découvertes archéologiques à Chypre en 1985. *BCH*, 110(2), 823–880
- Kassab Tezgör, D. and Sezer, T. (1995). *Catalogue des lampes en terre cuite du Musée archéologique d'Istanbul, 1. Epoques protohistorique, archaïque, classique et hellénistique* (*Varia anatolica*, VI.1). Paris.
- Kennedy, C.A. (1963). The development of the lamp in Palestine. *Berytus*, 14(2), 67–115
- Lapp, E.C. (2016). *The clay lamps from ancient Sepphoris: Light use and regional interactions*. Winona Lake, IN: Eisenbrauns
- Loeschcke, S. (1919). *Lampen aus Vindonissa: Ein Beitrag zur Geschichte von Vindonissa und des antiken Beleuchtungswesens*. Zürich: Baer

- Lund, J. (2015). *A study of the circulation of ceramics in Cyprus from the 3rd century BC to the 3rd century AD* (=Gösta Enbom Monographs 5). Aarhus: Aarhus University Press
- Lynch, K.M. (1995). Desperately seeking Faustus. *The Biblical Archaeologist*, 58(2), 115
- Marchand, J. (1996). The lamps. In P.M. Bikai, W.J. Fulco, and J. Marchand, *Tyre: The shrine of Apollo* (pp. 57–67). Amman
- Marzec, E., Kajzer, M., and Nocoń, K. (2020). Methodology – macroscopic analysis of pottery (table wares, unguentaria, lamps and kitchen wares). In E. Papuci-Władyka (ed.), *Paphos Agora Project (PAP) 1. Interdisciplinary research of the Jagiellonian University in Nea Paphos UNESCO World Heritage Site (2011–2015). First results* (pp. 217–221). Kraków: Historia Iagellonica
- McFadden, G.H. (1946). A tomb of the necropolis of Ayios Ermoyenis at Kourion. *American Journal of Archaeology*, 50(4), 449–489
- Mikati, R. (1998). *The AUB Beirut souks excavations 1994–95, the terracotta lamps* (unpubl. MA thesis). American University of Beirut
- Mikati, R. (2003). Faustus the Early Roman lamp maker visits Beirut. Evidence of a Tyre-based production. In L. Chrzanowski (ed.), *Nouveautés lychnologiques* (pp. 175–180). Hauterive NE: LychnoServices
- Młynarczyk, J. (1978). Hellenistic terracotta lamps from Nea Paphos. *Report of the Department of Antiquities, Cyprus*, 1978, 235–253
- Młynarczyk, J. (1997). *Alexandrian and Alexandria-influenced mould-made lamps of the Hellenistic period* (=BAR IS 677). Oxford: Archaeopress
- Młynarczyk, J. (1998). Lampki terakotowe z polskich wykopalisk w Nea Pafos (Terracotta lamps from Polish excavations in Nea Paphos). In W.A. Daszewski and H. Meyza (eds), *Cypr w badaniach polskich: Materiały z sesji naukowej zorganizowanej przez Centrum Archeologii Śródziemnomorskiej UW im. Prof. K. Michałowskiego, Warszawa, 24–25 luty 1995* (pp. 51–66). Warsaw: Wydawnictwa Uniwersytetu Warszawskiego (in Polish)
- Młynarczyk, J. (2001). Local and regional wares at Tell Keisan in the Hellenistic period. *Et Trav.*, 19, 238–262
- Oliver, A., Jr. (1983). Tomb 12 at Episkopi. *Report of the Department of Antiquities, Cyprus*, 1983, 245–256
- Ortali-Tarazi, R. and Stuart, B. (2004). Two rock-cut Roman tombs in Chhim. *Bulletin d'archéologie et d'architecture libanaises*, 6, 107–134
- Orton, C. and Hughes, M. (2013). *Pottery in archaeology*. Cambridge: Cambridge University Press
- Oziol, T. (1977). *Salamine de Chypre VII. Les lampes du musée de Chypre*. Paris: Boccard
- Oziol, T. (1993). *Les lampes au Musée de la Fondation Piéridès, Larnaca (Chypre)*. Lyon: Maison de l'Orient
- Papuci-Władyka, E. (1998). Nea Paphos. The cistern south of the Villa of Theseus. *PAM*, 9, 130–135
- Périssé-Valero, I. (2009). Le sanctuaire romain de Chhîm. Évolution et mutations d'un site cultuel de la montagne libanaise. *Topoi*, 16(1), 65–92

- Pritchard, J.B. (1988). *Sarepta IV. The objects from area II, X: The University Museum of the University of Pennsylvania excavations at Sarafand, Lebanon*. Beirut: Département des publications de l'Université libanaise
- Raptou, E. (2004). A painted Roman tomb at Paphos (P.M. 3510). *Mediterranean Archaeology*, 17, 311–321
- Rey-Coquais, J.-P. (1964). Lampes antiques de Syrie et du Liban. *Mélanges de l'Université Saint-Joseph*, 39, 145–165
- Rosenthal-Heginbottom, R. (2012). Lamps from Tel Dor (Dora)—Local production and Egyptian iconographic influence. In L. Chrzanowski (ed.), *Le luminaire antique: Lychnological acts 3. Actes du 3^e Congrès International d'études de l'ILA, Université d'Heidelberg*, 21–26. IX. 2009 (=Monographies instrumentum 44) (pp. 311–320). Montagnac: Editions Monique Mergoïl
- Rosenthal-Heginbottom, R. (2017). (Presumable) cultic artefacts from domestic contexts at Dora. In O. Tal and Z. Weiss (eds), *Expressions of cult in the Southern Levant in the Greco-Roman period: Manifestations in text and material culture* (=Contextualizing the Sacred 6) (pp. 149–161). Turnhout: Brepols
- Rotroff, S.I. (2006). *The Athenian Agora XXXIII. Hellenistic pottery: The plain wares*. Princeton, NJ: American School of Classical Studies at Athens
- Sussman, V. (2009). *Greek and Hellenistic wheel- and mould-made closed oil lamps in the Holy Land: Collection of the Israel Antiquities Authority* (=BAR IS 2015). Oxford: Archaeopress
- Sussman, V. (2012). *Roman period oil lamps in the Holy Land: Collection of the Israel Antiquities Authority* (=BAR IS 2447). Oxford: Archaeopress
- Ugarković, M. and Šegvić, B. (2019). New insights into the far-flung markets of Levantine products: Phoenician Hellenistic amphoriskoi from the eastern Adriatic. In A. Peignard-Giros (ed.), *Daily life in a cosmopolitan world: Pottery and culture during the Hellenistic period. Proceedings of the 2nd Conference of IARPotH, Lyon, November 2015, 5th–8th* (pp. 67–79). Vienna: Phoibos Verlag
- Waliszewski, T. and Wicenciak, U. (2015). Chhîm, Lebanon: A Roman and Late Antique village in the Sidon hinterland. *Journal of Eastern Mediterranean Archaeology & Heritage Studies*, 3(4), 372–395
- Weinberg, S.S. (1970). Tel Anafa. The second season. *Muse*, 4, 15–24
- Wicenciak, U. (2016a). Ceramic patchwork in Hellenistic to Byzantine Phoenicia: Regionalization and specialization of vessel production. *PAM*, 25, 619–689
- Wicenciak, U. (2016b). *Porphyreon. Hellenistic and Roman pottery production in the Sidon hinterland* (=PAM Monograph Series 7). Warsaw: PCMA UW
- Wismann, T. (2006). The lamps. In L.W. Sørensen and K.W. Jacobsen (eds), *Panayia Ematousa I. A rural site in south-eastern Cyprus* (=Monographs of the Danish Institute at Athens 6) (pp. 338–354). Aarhus: Aarhus University Press