Chasing Arsinoe (Polis Chrysochous, Cyprus): A Sealed Early Hellenistic Cistern and Its Ceramic Assemblage

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Introduction

Between 1983 and 2009, Princeton University's archaeological expedition to Polis Chrysochous uncovered large sections of the ancient city of Marion/Arsinoe, situated on the northwest coast of Cyprus (**fig. 1**)[1]. Marion, one of the smaller Iron Age kingdoms on Cyprus, was destroyed in 312 BCE by Ptolemy I Soter and its population was moved to Paphos[2]. A generation later, Ptolemy's son, Ptolemy II Philadelphos (285–246 BCE), founded a new city on the ruins of Marion, naming it Arsinoe after his wife and sister, probably shortly after her death in 270 BCE[3]. Flourishing to this day, the town retained the name of the Ptolemaic queen throughout the Hellenistic, Roman, Late Antique, Byzantine, and Medieval periods, and it only seems to have faded from local memory during the three centuries of Ottoman occupation between 1571 and 1878.

While ample evidence for Archaic and Classical Marion and for Medieval Arsinoe has emerged over years of excavation, substantive traces of the original Hellenistic settlement remain elusive. Recently, however, a close study of the pottery from a sealed cistern reveals a date of construction in the 3rd century BCE, suggesting that the feature and associated building were erected sometime during Arsinoe's initial Hellenistic foundation. In addition to help characterizing Arsinoe's foundation, the pottery from the sealed cistern will help define Early and Middle Hellenistic ceramic typologies specific to Cyprus and those further afield in an attempt to redress an overarching chronology problem concerning the Hellenistic East[4].

The architectural complex associated with the cistern is perched on a bluff overlooking the Chrysochous Bay and had a commanding position along the northern edge of the ancient town. The largest structure within the complex thus far encompass three-fifths of excavation area E.G0 and extends further south beneath the Byzantine basilica that occupies the south

1 The authors are grateful to Dr. Willy Childs and the Polis team for allowing us to publish the Hellenistic material from the site, and for their generous support of our research in Polis.

2 *Diod*. 19, 79, 4. On the literary and archaeological evidence for Marion, see Childs 1988, 121–130; Childs 1997, 37–48; Childs 1999, 223–236; Childs 2008, 64–68; and Childs et al. 2012, 91–106.

3 *Strab. geogr*. 14, 6, 3.

4 For reports on the excavation of this building between 1985 and 2008, see Childs 1988, 129–30, fig. 6 and pl. 38, 1; Childs 1997, 43 fig. 7; Childs 1999, 230–233, figs. 5. 7–9. 11; Najbjerg et al. 2002, 139–146; Childs 2008, 70–74. On a deposit of arrowheads discovered underneath the floor of the northern courtyard, see Olson – Najbjerg 2012, 639–656; and Najbjerg 2012, 240–242 fig. 4, 10.

Fig. 1 : Map of Cyprus.

side (**fig. 2**). Viewed from the south, the building consisted of a large, open courtyard that was surrounded on three sides by covered colonnades, probably of the Doric order. The cistern was located in the southwest corner of the southern courtyard. A thick layer of concrete provided a sturdy floor for the court, and finely cut and carefully laid limestone ashlars paved the surrounding porticos, whose sloping roofs were covered by pan-shaped roof tiles. The back walls of the porticos would have been constructed of mud brick, then plastered and painted white, black, red, and yellow to resemble brightly coloured marble slabs. To the east, the courtyard was bordered by a series of small rooms, and at the north end, two colourful hybrid columns with Ionic capitals on Doric or plain shafts would have formed a monumental entrance into a covered hall that separated the southern and northern courtyards[5].

The northern courtyard was also surfaced with a solid concrete floor and the large foundations suggest that the rooms that flanked it on the east and west had heavy, arcaded walls or stood two or even three stories high[6]. A cache of almost one hundred unused bronze arrowheads dating from the 5th to the 4th century BCE was discovered in a robbing trench associated with the structure. The discovery of three arrowheads in situ beneath the concrete floor near the robbing trench suggests that the projectiles had been deliberately deposited there during the construction of the building and offers a tentative date of construction[7].

5 For preliminary reports on the hybrid columns from E.G0, see Childs 1999, 230 fig. 5; Najbjerg et al. 2002, 142–144 fig. 6; Najbjerg 2012, 237–242 no. 84. For a discussion of the reused ashlars that paved the central hall and a photograph of the ashlar floor upon discovery, see Childs 1997, 43 and fig. 7.

6 For photographs and a detailed description of the ashlar and mud-brick foundations, see Childs 2008, 72–74.

7 Olson – Najbjerg 2012, 639–656; see also Najbjerg 2012, 240–242 fig. 4, 10.

Fig. 2 : View of E.G0 building from south and cistern opening inset.

Cistern Excavation

Excavation began in Trench d09 in 1997 to delineate the concrete floor identified fifteen years earlier through a small sounding. Like most trenches in E.G0, the upper levels of d09 consisted of a mostly non-stratigraphic admixture of ancient and Medieval robbing trenches and modern garbage pits. After weeks of excavating these pits and removing some of the Medieval walls, the fill that immediately covered most of the concrete floor was removed. The fill revealed large deposits of broken pottery, roof and floor tiles, column fragments, and wall plaster lying directly upon the concrete floor, indicating that a building with tiled floors and roofs, limestone colonnades, and colourful painted walls had collapsed. During the excavation of the fill in the southwest corner, an almost square stone resting on a stone frame was discovered (**fig. 1**). Upon removal, it became clear that the coarse stone slab (measuring 0.49 x 0.45 x 0.16 m) did not fit neatly into the stone frame (outer dimensions: 0.68 x 0.68 m; inner measurements: 0.43 x 0.41 m) and probably did not belong to the period when the cistern was in use. It most likely was put in place over the cistern mouth to create a permanent seal when the collapsed building was leveled to serve as a fill on which new structures were later constructed[8].

Beneath the square stone frame, a circular mouth (0.45–0.50 m in diameter) and ovoid neck led to a narrow shaft that opened into a wide, ca. 5.75-meter deep, carafe-shaped tank (**fig. 3**). The circular floor is slightly irregular with the north/south axis measuring 5.5 m

8 Upon Having completed their excavation of the cistern in July of 1997, the Princeton team replaced the cover stone over the cistern mouth. In the years following, however, the stone succumbed to modern vandalism, and parts ended up at the bottom of the cistern while others were scattered on the concrete floor.

and the east/west measuring 4.75 m. The cistern's total maximum volume would have been ca. 72.80 m^3. The walls of the cistern were constructed with cut and uncut stones of varying sizes and a fine, buff-coloured limestone ashlar served as the key stone that capped the central top of the tank. The lateral shaft was built into the west side of the cistern, where it provided access to its interior and served as the narrow opening through which water was pulled from above. The floor, paved with a fine, dark-grey, water-proof concrete gradually sloped towards this lateral opening, creating a sump. Once the cistern was excavated and the floor cleared in sections, a strange, vegetal-looking pattern appeared in the flooring[9]. These anomalies showed no evidence of being repairs, and must have been the result of natural processes following the abandonment of the water feature. The walls were covered with a thick layer of light-grey mortar with small inclusions and orange/brown, water-proof plaster. Thin lines of repair appeared on the north wall, approximately 1.60 m above the floor, as did clear water lines that demonstrated the cistern had been more than half full for an extended period. When in use, the tank was filled with rainwater via a network of drains that guided water from the surrounding roofs to a little opening in the neck of the cistern, 0.51 m below the surface[10].

When the team first entered the cistern, they came upon two distinct deposits on the floor. The larger of the two piles (Mound A) was situated directly below the lateral shaft opening and measured 0.34 m in height and 1.90 m in width. The smaller deposit (Mound B) had formed underneath a large crack in the opposite wall. Both mounds were topped by a thick layer of gravelly sand, stones, and mortar and plaster chunks that had fallen from the walls. Once the upper debris had been cleared to the west (Level 1), these layers, and the silt below and between them, were removed as Level 2. The small Mound B was excavated next, as Level 3; it produced a few bones, a few pieces of charcoal and shell, sherds of a broken pot, and a complete trefoil rim jug that sat on top of the mound (**fig. 4**).

As expected, Mound A, the large deposit immediately below the entry shaft to the cistern, produced a more robust assemblage (excavated as Level 4)[11]. With the first pass across the entire surface, the team removed the most recent layer which was characterized by heavy soil, large chunks of the cistern wall, and ceramic remains[12]. In addition to a few animal bones and teeth, the second and the third pass brought forth a few roof tiles, pieces of painted wall plaster, and several carved limestone fragments from the columns of the collapsed building above.

The crucial deposit in Mound A did not emerge until the large limestone ashlar that had served as a base for the pole by which the excavators entered and exited the cistern was removed. Although the next pass produced several more architectural fragments from the destroyed building above, it also yielded a large in situ ceramic assemblage (**fig. 5**). The excavators were able to identify and remove several individual pots. A final clearing of the floor produced a few bones, pieces of slag, charcoal, and wood fragments[13]. At the end of the 1997-season, the stone cover was put back in place over the opening, and the cistern remained open for research until 2012, when it was filled with sand to forestall its collapse.

The 1997 excavation helps reconstruct the sequence of events that left these deposits in the cistern. When the cistern was still in use, two slowly developing cracks in the wall allowed fine soil to penetrate the lining and create the two piles of silt that were excavated

9 The elongated, smooth ›lumps‹ are about 1.8 cm in height and 5.5 cm in width.

10 No drain pipes were ever found directly in association with the cistern, but a long cut in the cement floor, stretching from the SW corner of the cistern mouth to the SW corner of the concrete floor, indicates where pipes were dug up for reuse in a later period.

11 Mound A measured 0.34 m in height, 1.90 m in width, and extended approximately 1.20 m from the cistern wall.

12 The finds from Level 4 Pass 1 consisted of shells, bone/teeth, charcoal, roof tiles, painted wall plaster, a limestone column fragment, and three bases and two handles.

13 The final cleaning of the cistern floor (Level 4 Pass 5) produced only a few finds: Pieces of shell, fragmentary bone and tooth, a piece of lead, slag, bits of charcoal, and two small wooden sticks.

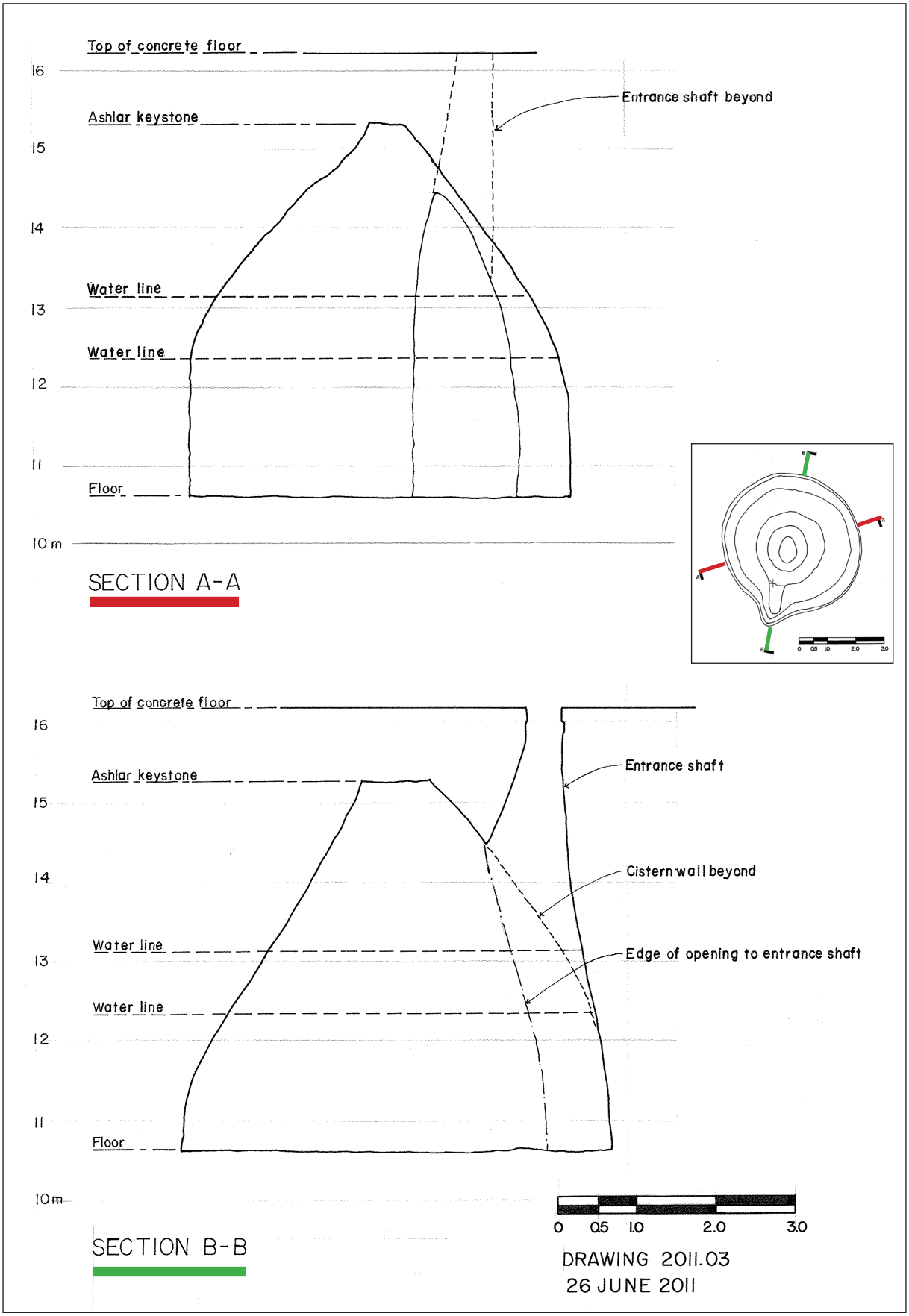

Fig. 3 : Plan and section of cistern (drawing by Kelley DesRoches Cotton and Krista Ziemba).

Fig. 4 : Photo of interior of cistern in 1997, showing raised lumps in floor, jug in situ in Mound B, water line at top and repair line.

Fig. 5 : Pottery deposits in Level 4 Pass 4.

as Mounds A and B. Jugs accidentally dropped into the cistern or those whose handles failed when retrieving water would either sink to the bottom beneath the opening of the cistern, creating Mound A (Level 4), or would float to the opposite wall to settle onto the smaller Mound B (Level 3). Following the destruction of the building above, unusable material, such as fragments of limestone columns, broken roof tiles, and pieces of wall plaster found their way into the cistern. The cistern was sealed as some point shortly thereafter considering material postdating the Hellenistic era was not found within the cistern. Silt continued to settle around the sunken vessels, especially those in Mound A. At some point in Late Antiquity, the formerly grand building was robbed of any usable building material. The concrete floor southwest of the cistern mouth was cut through in order to remove and reuse the clay pipes. Once the courtyard had been cleared of usable building materials, soil was brought in to level the area above the courtyard concrete, and new foundations were constructed on top. During the many centuries after its sealing, the cistern walls continued to collapse, with chunks of its plaster lining, pieces of mortar, stones, and soil from behind falling onto the dried up cistern floor and its two mounds and silt slowly covering everything in even greater quantity, as cracks in the walls developed and expanded.

Chronology

The carafe-shaped cistern is an architectural feature common to the Hellenistic period. Comparable examples can be found on Cyprus at Kourion associated with levels dated to the 3rd century and Geronisos dating to the 1st century[14]. Other Greek and Hellenistic examples can be found further afield at Pergamon (3rd –2nd centuries), Athens (5th century), and Olynthos (4th century)[15]. The context of the cistern is unique in that it presents a material assemblage dating to the earlier Hellenistic era and is one that was fully sealed without any form of intentional filling. The placement of a rectangular capstone overlaid with a floor fill, the lack of features indicating prolonged exposure (i.e. later archaeological material, guano, and animal

14 For Kourion see Connelly 1983, 25–90; and Last 1975, 39–72; and for Geronisos see Connelly – Wilson 2002, 269–329.

15 For Pergamon see Garbrecht 1987; Athens see Thompson 1933, 126–129; Olynthos see Robinson 1930, Robinson – Graham 1938, and Robinson 1946.

Fig. 6 : Selection of reconstructed vessels from cistern.

remains [birds, rats, livestock] found extensively in upper levels)[16], and a narrow chronological ceramic assemblage attests to two facts. First, the use-cycle of the cistern was relatively short, perhaps a few generations. Second, it was intentionally sealed almost immediately after it was abandoned. Given architectural precedents on Cyprus and the material assemblage bolstered by a wholly undisturbed context, it is possible to place the date of the cistern from the last quarter of the 4th century to the end of the 3rd century BCE.

Ceramic Evidence

Analysis of the ceramic assemblage excavated from the cistern began in 2010 and consisted of 61 vessels of varying preservation and 195 batches of potsherds (**fig. 6**). The ultimate goal of the study was to identify a secure deposit dating to the Early Hellenistic period, deposits that proved difficult to find at a site such as Marion/Arsinoe, and to use that ceramic assemblage to accomplish two things. First, to provide a meaningful contribution to the identification of Early Hellenistic ceramic typologies within Cyprus specifically, and the greater Greek sphere generally. Second, to identify and contextualize an important and transitional period that saw the refounding of the city and, in many ways, the foundation of Hellenistic culture in northwest Cyprus. To accomplish these goals, all ceramics were first studied using the Chronotype system and later a more typologically specific approach. The Chronotype system was developed as part of the Sydney Cyprus Survey Project and used by other projects such as the Australian Paliochora-Kythera Archaeological Survey, the Troodos Archaeological and Environmental Survey Project, the Eastern Korinthia Archaeological Survey, and the Pyla-Koustopetria Archaeological Project[17]. In the Chronotype system, every artifact fits into a chronological and descriptive hierarchy based on specific physical characteristics. Chronotypes range from the very precise (e.g., ›Attic Black Glaze – Rim Sherd‹, or ›Eastern Sigillata A, Hayes Form 4-handle‹) to the very imprecise (e.g., ›Coarse body sherd – Post-Prehistoric‹). When the pottery was analyzed using this system, sherds were divided into individual batches. A ›batch‹ denotes a group of similar pottery sherds from a geographic unit (i.e. excavation locus, architectural feature, survey unit, etc.) that share the same fabric, colour, and extant part as each other. A single batch, for example, could consist of a dozen orange Eastern Sigillata A body sherds, while another batch would include 4 Eastern Sigillata A rims.

16 For materials indicative of cisterns remaining open for prolonged periods of time, see Connelly – Wilson 2002, 273 who note the presence of »a dead sea gull, several dead rock doves, and a rock dove nest…together with quantities of guano« from the carafe-shaped cistern at Geronisos.

17 Meyer – Gregory 2003; Gregory 2004; and Moore 2008.

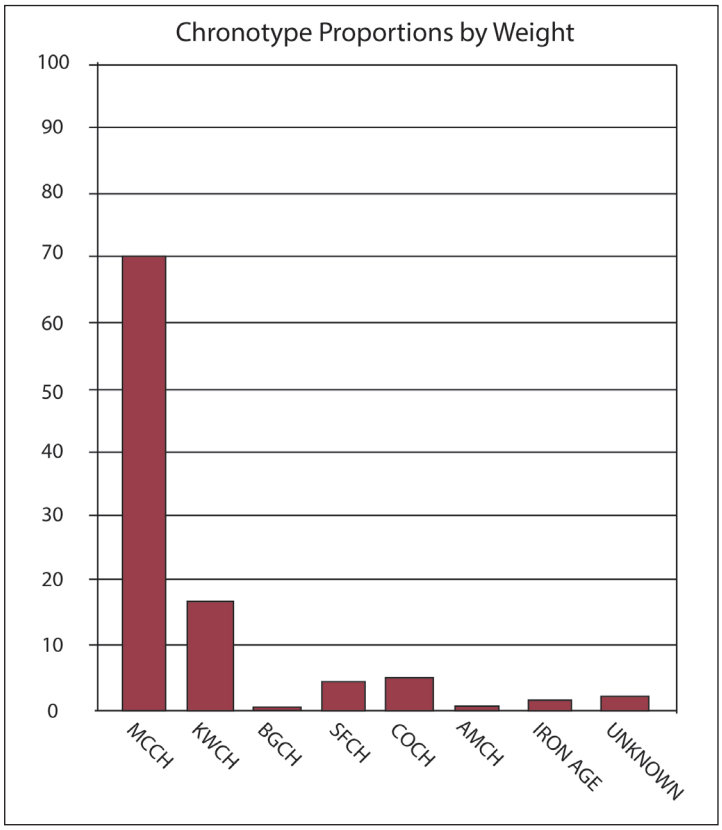

Fig. 7 :
Graph showing chronotype proportions by weight.

The Chronotype system served as an ideal means to process a large volume of pottery and quantitatively identify broad ceramic patterns. In examining the pottery excavated from the cistern, it became abundantly clear that the assemblage is fairly homogeneous. While one can fully appreciate that characterizing fabric groups by weight has its limitations, it does provide a valuable general characterization of the deposit. The most prevalent chronotype identified was a medium coarse fabric dating to the Cyrpo-Classical/Hellenistic period, which accounts for 70 % of the entire deposit by weight (**fig. 7**). The second most common fabric group was kitchenware accounting for 17 %, while black-glazed, semi-fine, coarse orange, and amphora, all groups dating to the Cyrpo-Classical/Hellenistic transitional period, account individually for less than 5 %. Finally, residual pottery dating to the Iron Age, a phenomenon appearing at the site in most levels postdating the Iron Age, accounts for roughly 1.5 % of the total.

Medium Course Cypro-Classical / Hellenistic (MCCH)
(figs. 8–12)

As noted above, the medium coarse group is by far the most common excavated material type from the cistern. Two fabric groups were identified from this assemblage upon closer examination. MCCH Fabric A is a fully fired buff fabric with occasional inclusions of mica and more frequent occurrences of larger limestones. The fabric is fairly porous with a small quantity of oval voids. MCCH Fabric B is a fully fired buff fabric with lime inclusions and small black stones. The two most common shapes found in these ware groups include the Hellenistic water jug (**nos. 1–23**) and one-handled trefoil rim jug (**nos. 24–28**). The Hellenistic water jug has been found in Early Hellenistic levels in Cyprus (Paphos, Eurychou-Phoenikas, Nicosia, and Pyla-Vigla) and further afield at Athens and Corinth[18]. The one-handled variety is attested at Nicosia in levels dating from the 3rd to middle of the 2nd centuries BCE, and the Athenian Agora in deposits dating from the

18 Polis see Olson 2013; Paphos see Papuci-Władyka 1995, 159 no. 241; Eurychou-Phoenikas see Nicolaou 1984, 248–249 nos. 16, 54 and Michaelidou-Nikolaou 1990, 159 no. 241; Nicosia see Berlin – Pilacinski 2004, 223–224 nos. 116–118; Pyla-Vigla see Olson et al. 2013, Caraher et al. 2014; Athens see Rotroff 2006, nos. 13–40; Corinth see Edwards 1975, 112–113 nos. 631–632 and Pemberton 1990, 18–19 no. 156.

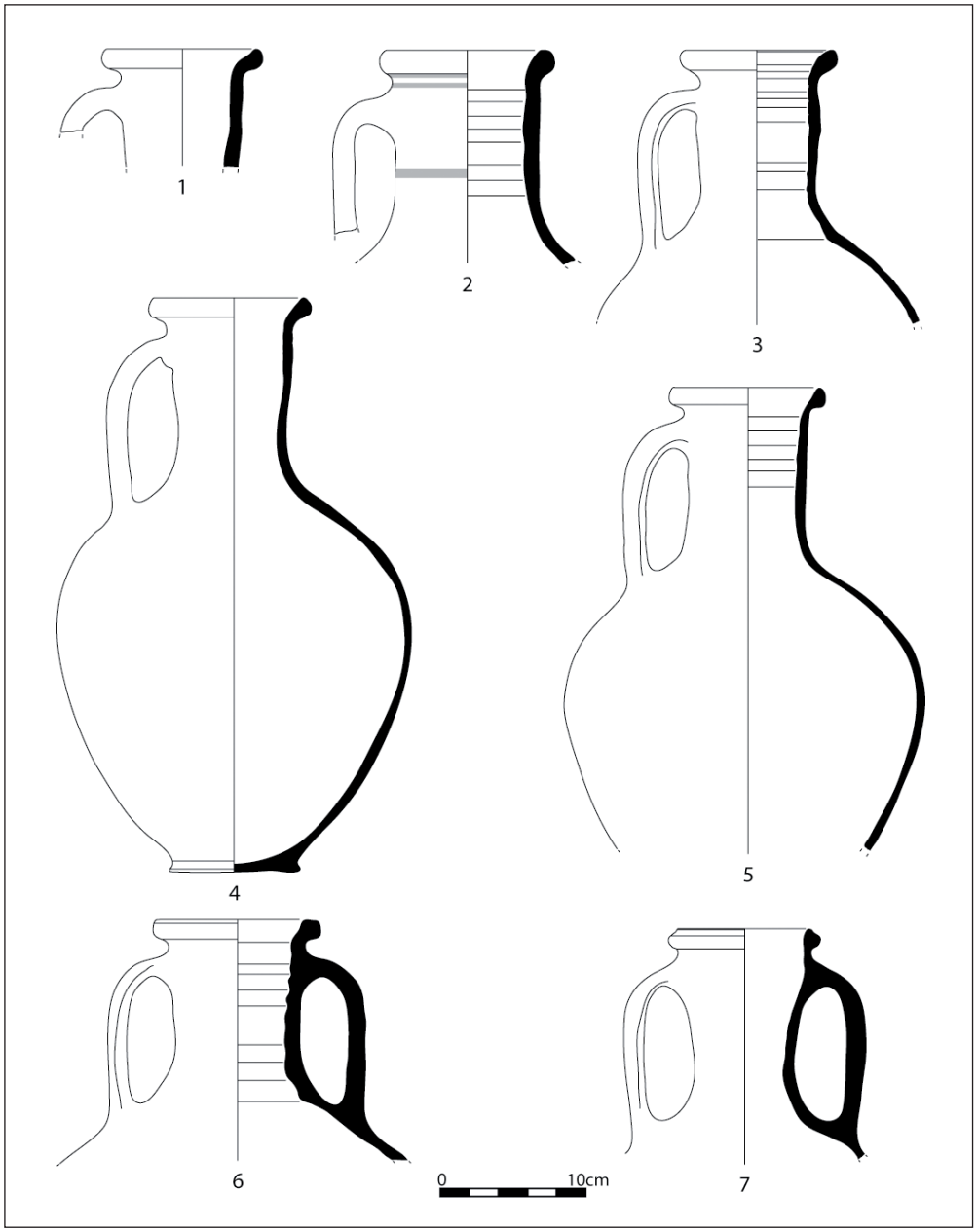

Fig. 8.

end of the 4th to middle of the 3rd centuries BCE[19]. A one-handled version with a similar shape and fabric, though with a more flaring rim, was discovered at the site of Pyla-Vigla in deposits dating from the late 4th to 3rd century BCE[20]. The Polis cistern examples appear in one and two handled versions and present the typical disc foot variety found in Athens.

1 (PO2104)

Shape: One-Handled Hellenistic water jug
Dimensions: D. Rim 11.5 cm, P. Height 9.1 cm, Weight 470 g
Chronotype: MCCH
Condition: Most of rim, neck, and handle
Fabric: MCCH Fabric A
Munsell: 10YR 7/6 yellow

2 (PO2079)

Shape: One-Handled Hellenistic water jug with brown painted lines
Dimensions: D. Rim 12.25 cm, P. Height 15.2 cm, Weight 1521 g
Chronotype: MCCH
Condition: Most of rim, most of neck, most of handle, and a number of sherds
Fabric: MCCH Fabric B
Munsell: 10YR 7/4 very pale brown

19 Berlin 2004, 223; Rotroff 2006, 73.

20 Caraher et al. in preparation.

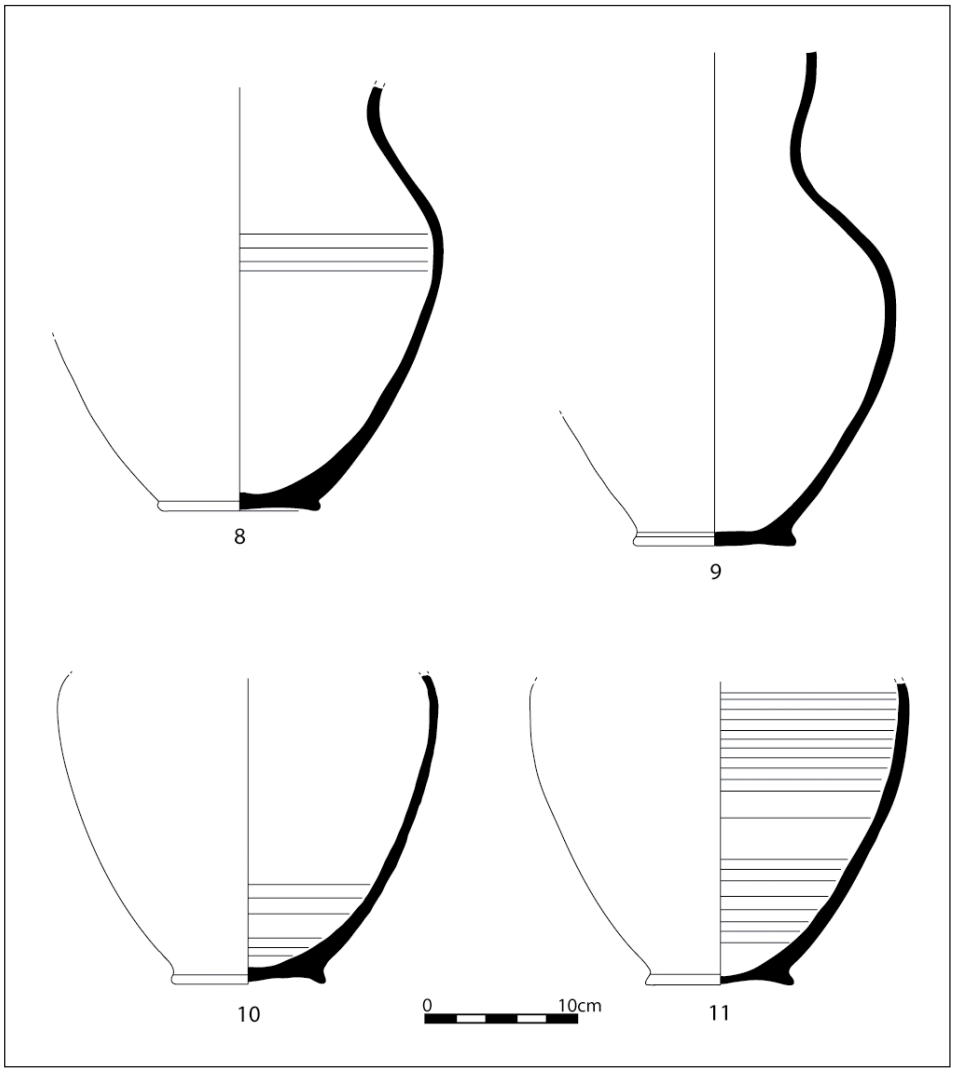

Fig. 9.

3 (PO 717)
Shape: One-Handled Hellenistic water jug with brown painted lines
Dimensions: D. Rim 11.5 cm, P. Height 20.1 cm, Weight 1820 g
Chronotype: MCCH
Condition: Most of rim, most of neck, most of handle, and a number of sherds
Fabric: MCCH Fabric B
Munsell: 10YR 7/4 very pale brown

4 (PO723)
Shape: One-Handled Hellenistic Water jug
Dimensions: D. Rim 11.75 cm, D. Base 9.8 cm, P. Height 41.2 cm, Weight 2340 g
Chronotype: MCCH
Condition: Complete vessel sans a few body sherds
Fabric: MCCH Fabric A
Munsell: 10YR 7/4 very pale brown

5 (PO2069)
Shape: One-Handled Hellenistic Water jug
Dimensions: D. Rim 11.5 cm, P. Height 33.6 cm, Weight 1561 g
Chronotype: MCCH
Condition: Complete rim, neck, and handle, half of the body
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

6 (PO2109)
Shape: Two-Handled Hellenistic water jug
Dimensions: D. Rim 12.25 cm, P. Height 18.8 cm, Weight 1142 g
Condition: Rim, neck, handles, and lower handle joins preserved
Chronotype: MCCH
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

7 (PO2128)
Shape: Two-Handled Hellenistic water jug
Dimensions: D. Rim 11.45 cm, P. Height 16.6 cm, Weight 794 g
Chronotype: MCCH
Condition: Complete rim, neck, but missing one handle
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

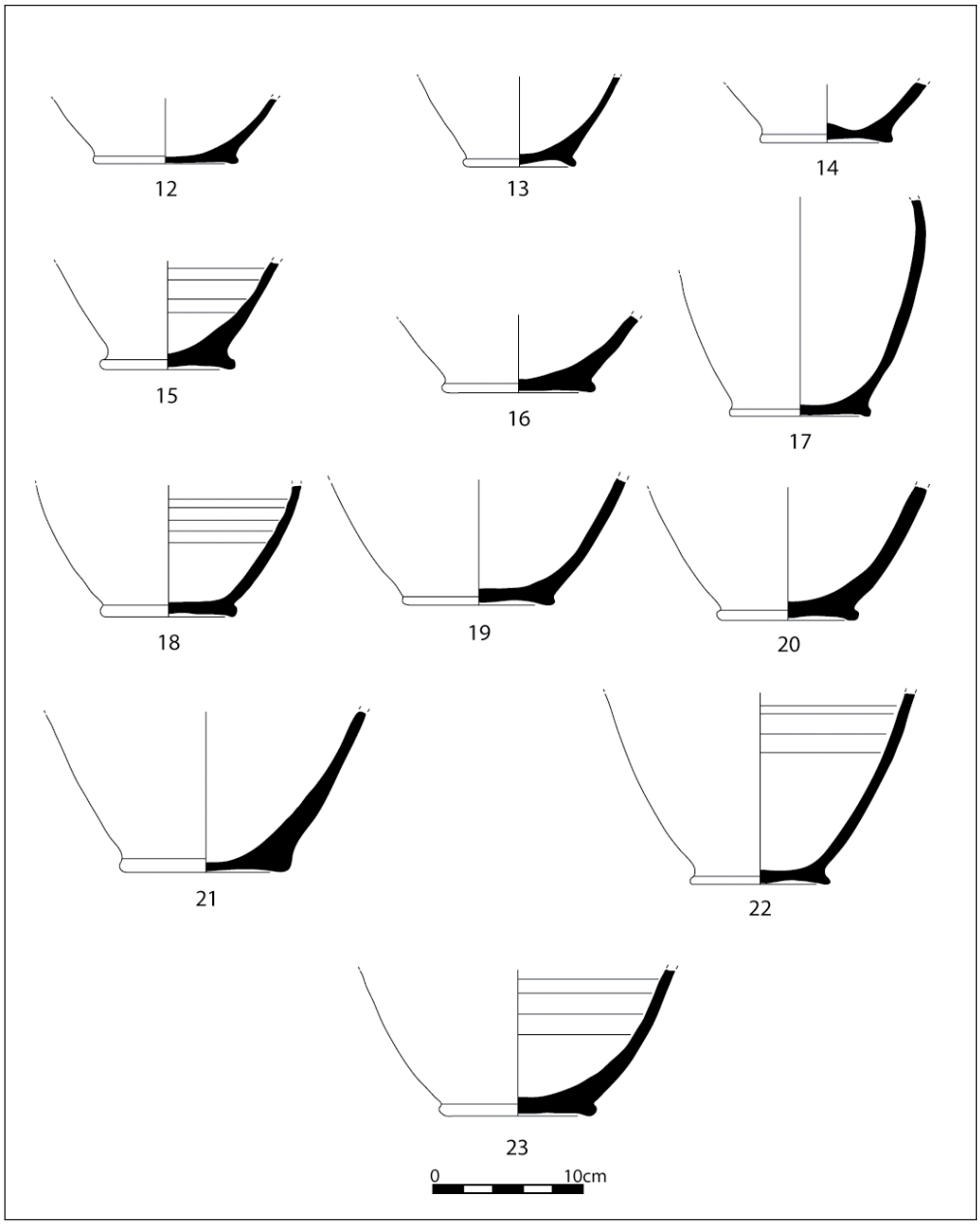

Fig. 10.

8 (PO2105)
Shape: One-Handled Hellenistic water jug
Dimensions: D. Base 11.4 cm, P. Height 29.2 cm, Weight 1893 g
Chronotype: MCCH
Condition: Complete base and about ½ of body
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

9 (PO724)
Shape: One-Handled Hellenistic water jug
Dimensions: D. Base 11.4 cm, P. Height 33.8 cm, Weight 1937 g
Chronotype: MCCH
Condition: Complete base and half of body and body sherds
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

10 (PO718)
Shape: Hellenistic water jug
Dimensions: D. Base 10.6 cm, P. Height 22.1 cm, Weight 2026 g
Chronotype: MCCH
Condition: Base and lower half
Fabric: MCCH Fabric A
Munsell: 5YR 6/6 reddish yellow

11 (PO720)
Shape: Hellenistic water jug
Dimensions: D. Base 10.65 cm, P. Height 20.8 cm, Weight 3401 g
Chronotype: MCCH
Condition: Bottom half with base and half of neck
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

12 (PO2078)
Shape: Hellenistic water jug
Dimensions: D. Base 10.05 cm, P. Height 4.4 cm, Weight 230 g
Chronotype: MCCH
Condition: Complete base and very little lower body
Fabric: MCCH Fabric B
Munsell: 2.5Y 8/4 pale yellow

13 (PO2064)
Shape: One-handled trefoil rim jugs
Dimensions: D. Base 8.1 cm, P. Height 6.4 cm, Weight 486 g
Chronotype: MCCH
Condition: Both are complete bases with some lower body
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

14 (PO2065)
Shape: One-handled trefoil rim jugs
Dimensions: D. Base 9.4 cm, P. Height 4 cm, Weight 486 g
Chronotype: MCCH
Condition: Both are complete bases with some lower body
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

15 (PO2070)
Shape: Hellenistic water jug
Dimensions: D. Base 9.6 cm, P. Height 7.2 cm, Weight 995 g
Chronotype: MCCH
Condition: Complete base and many body sherds
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

16 (PO2127)
Shape: Hellenistic water jug
Dimensions: D. Base 10.8 cm, P. Height 5.6 cm, Weight 1471 g
Chronotype: MCCH
Condition: Complete base and many body sherds
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

17 (PO2110)
Shape: Hellenistic water jug
Dimensions: D. Base 9.8 cm, P. Height 14.4 cm, Weight 1300 g
Chronotype: MCCH
Condition: Three large body sherds
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

18 (PO2129)
Shape: Hellenistic water jug
Dimensions: D. Base 9.8 cm, P. Height 9.2 cm, Weight 299 g
Chronotype: MCCH
Condition: Complete base with some lower body
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

19 (PO2080)
Shape: Hellenistic water jug
Dimensions: D. Base 10.6 cm, P. Height 9.1 cm, Weight 671 g
Chronotype: MCCH
Condition: Complete base and lower ¼ of body
Fabric: MCCH Fabric A
Munsell: 5YR 7/6 reddish yellow

20 (PO2074)
Shape: Hellenistic water jug
Dimensions: D. Base 10.1 cm, P. Height 9.2 cm, Weight 617 g
Chronotype: MCCH
Condition: Complete base and parts of lower body
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

21 (PO2063)
Shape: Hellenistic water jug
Dimensions: D. Base 11.8 cm, P. Height 11.2 cm, Weight 1791 g
Chronotype: MCCH
Condition: Complete base and many body sherds
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

22 (PO2123)
Shape: Hellenistic water jug
Dimensions: D. Base 9.9 cm, P. Height 13.6 cm, Weight 656 g
Chronotype: MCCH
Condition: Complete base with a little less than ½ the body
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

23 (PO2072)
Shape: Hellenistic water jug
Dimensions: D. Base 11.2 cm, P. Height 10.1 cm, Weight 1002 g
Chronotype: MCCH
Condition: Complete base and large body sherds
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

The second most common MCCH shape includes a series of one-handled trefoil rim jugs that were manufactured with MCCH Fabric A, among others, and present similar disc-shaped bases (**nos. 24–28**). The trefoil rim jug does not offer the same level of chronological specificity as Hellenistic water jugs, as the general shape and rim form are common from the Cypro-Classical throughout the Hellenistic eras in multiple fabrics. All recovered examples from the cistern show signs of breakage where the handle joins the body and rim. One would imagine that when the jug was lowered with a rope into the cistern shaft to collect water, the handles would at times detach

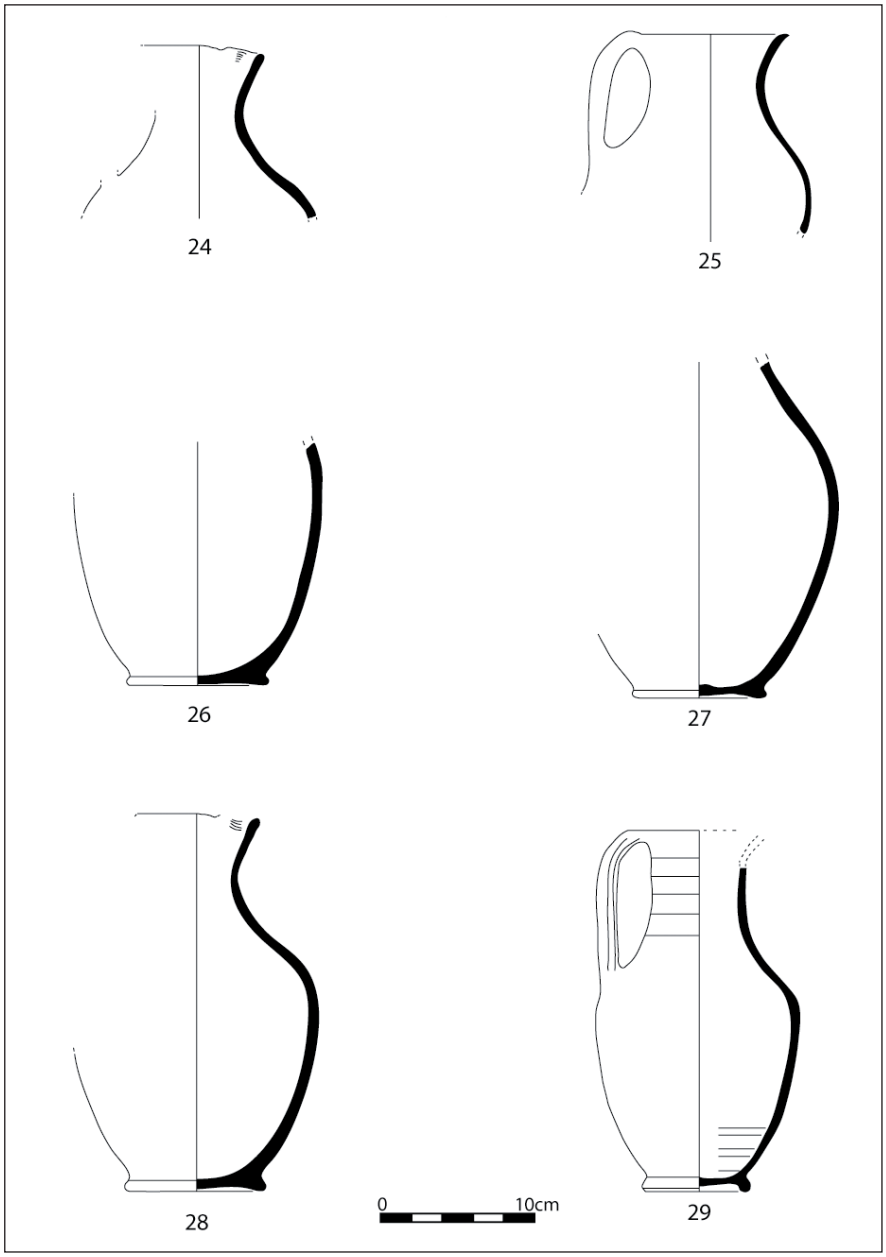

Fig. 11.

from the body and sink to the bottom. Such a sentiment would explain the comparatively large number of restorable vessels and the common breakage points where the handle joins the body and rim.

24 (PO2122)

Shape: Trefoil, one-handled jug
Dimensions: D. Rim ca. 8.8 cm, P. Height 11.2 cm, Weight 336 g
Condition: Most of trefoil rim (minus handle), neck, and the upper quarter of the body
Chronotype: MCCH
Fabric: MCCH Fabric A
Munsell: 10YR 7/4 very pale brown

25 (PO2043)

Shape: Trefoil, One-handled jug
Dimensions: D. Rim ca. 10.2 cm, P. Height 13.6 cm, Weight 479 g
Chronotype: MCCH
Condition: Complete rim and most of neck, handle, and body
Fabric: MCCH Fabric A
Munsell: 10YR 7/4 very pale brown

26 (PO2118)

Shape: Trefoil, One-handled jug
Dimensions: D. Base 9.85 cm, P. Height 16.1 cm, Weight 601 g
Chronotype: MCCH
Condition: Half of base and part of lower body
Fabric: MCCH Fabric A
Munsell: 10YR 7/4 very pale brown

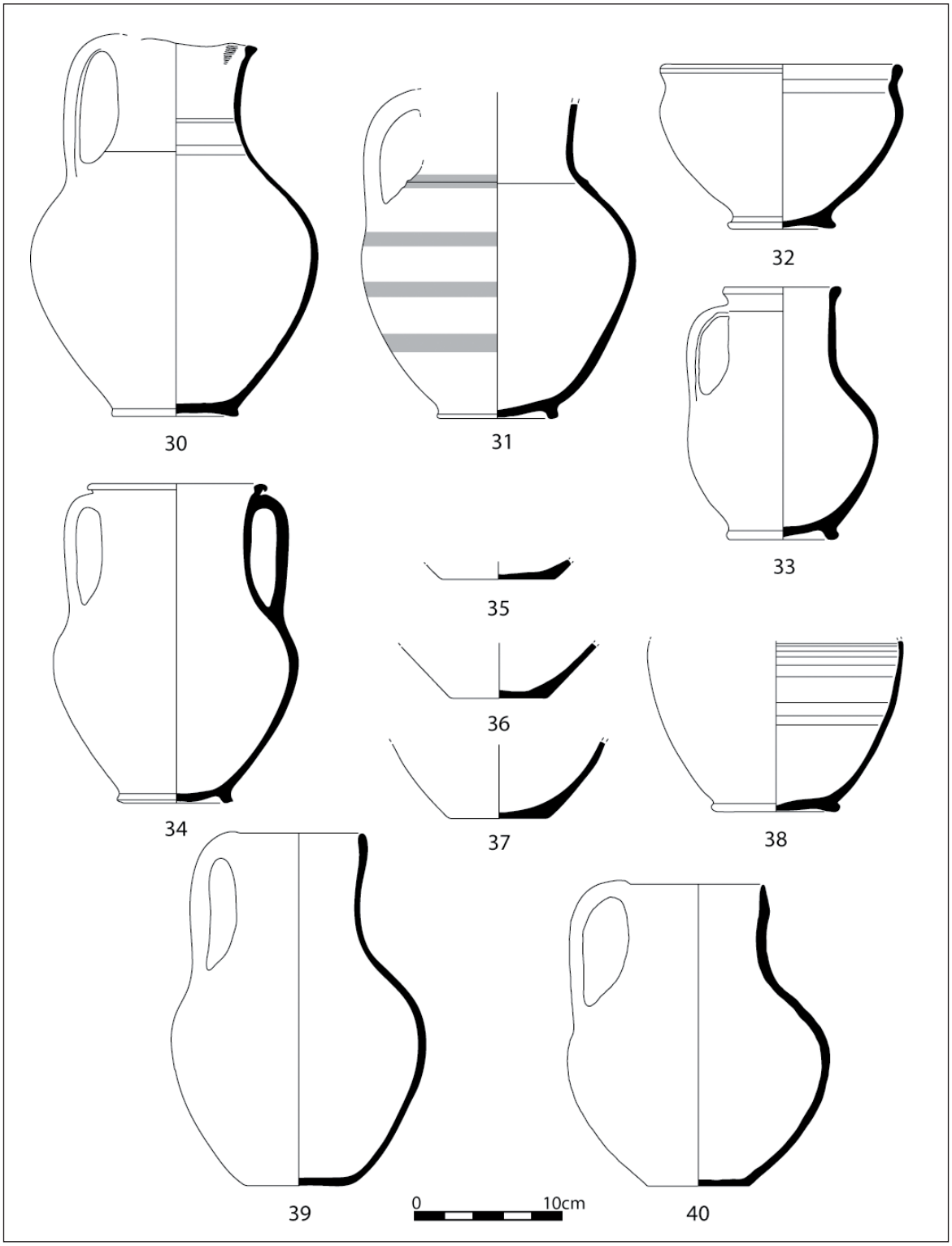

Fig. 12.

27 (PO2108)

Shape: Trefoil, One-handled jug
Dimensions: D. Base 6.9 cm, P. Height 22.2 cm, Weight 840 g
Chronotype: MCCH
Condition: Complete base with most of the body
Fabric: MCCH Fabric A
Munsell: 10YR 7/4 very pale brown

28 (PO2117)

Shape: Trefoil, One-handled jug
Dimensions: D. Base 9.4 cm, P. Height 25.8 cm, Weight 712 g
Condition: Two large fragments (Base and most of trefoil Rim), most of trefoil rim (minus handle), neck, part of upper body, and base
Chronotype: MCCH
Fabric: MCCH Fabric A
Munsell: 10YR 7/4 very pale brown

29 (PO2026)

Shape: One-handled pink jug with vertical burnishing
Dimensions: D. Rim ca. 8.8 cm, D. Base 7.4 cm, P. Height 24.2 cm, Weight 775 g
Chronotype: SFCH
Condition: Missing half of rim and 1/3 of central body
Fabric: fine pink, well levigated fabric with lime inclusion
Munsell: 2.5YR 6/6 light red

30 (PO721)

Shape: One-handled trefoil rim jug
Dimensions: D. Rim ca. 9.8 cm, D. Base 9.2 cm, P. Height 26.6 cm, Weight 1357 g
Chronotype: MCCH
Condition: Complete sans half of the rim near handle join
Fabric: Orange fabric with lime and mica inclusions, much coarser than MCCH Fabrics A and B
Munsell: 7.5YR 7/6 reddish yellow

31 (PO2106)

Shape: One-handled water jug (trefoil?) with horizontal painted lines and vertical burnishing
Dimensions: D. Base 8.8 cm, P. Height 23.2 cm, Weight 1285 g
Chronotype: SFCH?
Condition: Complete sans most of neck and rim
Fabric: Well levigated version of MCCH Fabric B
Munsell: 7.5YR 7/6 reddish yellow

The remaining shapes recovered in MCCH fabrics from the cistern include a slightly everted rim bowl, a one-handled jug, and a two-handled table amphora. The vessels represent the smallest extant shapes recovered from the cistern.

32 (PO2041)

Shape: Bowl
Dimensions: D. Rim 17.8 cm, D. Base 7.9 cm, P. Height 11.9 cm, Weight 585 g
Chronotype: MCCH
Condition: Complete except for a few body sherds
Fabric: MCCH Fabric B
Munsell: 5YR 7/6 reddish yellow

33 (PO2035)

Shape: One-handled jug
Dimensions: D. Rim 8.8 cm, D. Base 8.4 cm, P. Height 17.6 cm, Weight 580 g
Chronotype: MCCH
Condition: complete
Fabric: MCCH Fabric B
Munsell: 7.5YR 7/6 reddish yellow

34 (PO719)

Shape: Two-handled table amphora
Dimensions: D. Rim 13.2 cm, D. Base 8.6 cm, P. Height 22.4 cm, Weight 1072 g
Condition: Missing 75 % of rim and half of one handle, otherwise complete
Chronotype: MCCH
Fabric: MCCH Fabric A
Munsell: 10YR 7/6 yellow

Kitchenware Cypro-Classical / Hellenistic (KWCH) **(figs. 12–13)**

The second most prevalent fabric group is a kitchenware fabric corresponding to three different shapes. The first vessel is made up of the standard kitchenware fabric (brick red to black in colour, thin-walled, with lime inclusions). The shape presents a flat disc base, globular shape, a strap handle, and a slightly everted rim, all of which are characteristic features of the latter sequences of the Plain White Ware tradition. The shape is common among the cistern assemblage and is found throughout Cyprus dating from contexts attributed to the 5th–3rd centuries BCE[21]. The second variety was constructed using a similar kitchenware fabric into large thin-walled globular-shaped vessels. Finally, also using the same kitchenware fabric is a vessel with thicker walls, a horizontal rim, and a red wash on the body.

35 (PO2034)

Shape: Plain White V one-handled jug
Dimensions: D. Base 8.1 cm, P. Height 1 cm, Weight 125 g
Chronotype: KWCH
Condition: Complete flat disc base
Fabric: red cooking ware fabric with lime and mica
Munsell: 2.5YR 6/8 light red

36 (PO2125)

Shape: Plain White V one-handled jug
Dimensions: D. Base 7.1 cm, P. Height 4.1 cm, Weight 237 g

21 For nearly identical shapes see Benson 1956, pl. 34 no. 17, which he attributes to the Plain White V tradition and dates to the first half of the 5th century BCE.

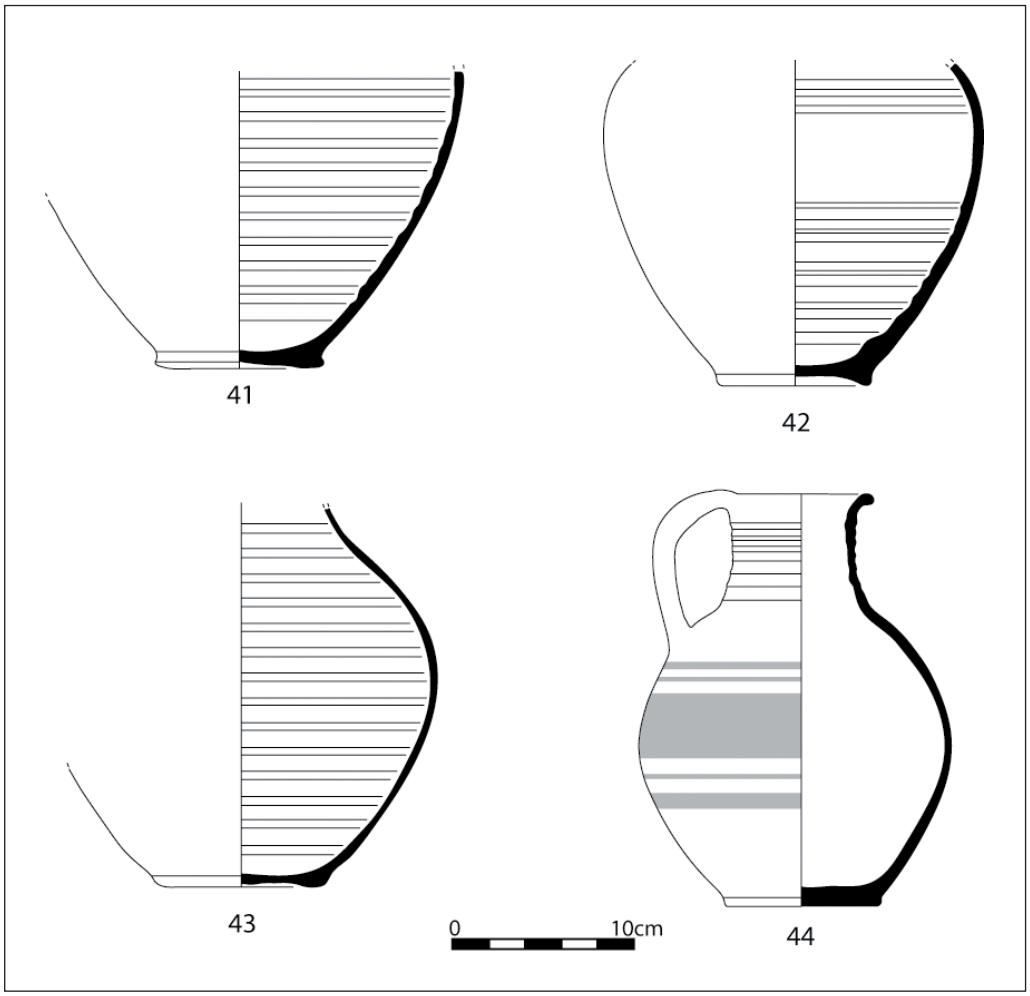

Fig. 13.

Chronotype: KWCH
Condition: Complete flat disc base and very little body
Fabric: red cooking ware fabric with lime and mica
Munsell: 2.5YR 6/8 light red

37 (PO2036)

Shape: Plain White V one-handled jug
Dimensions: D. Base 7.1 cm, P. Height 5.8 cm, Weight 178 g
Chronotype: KWCH
Condition: Complete flat disc base and about ¼ of lower body
Fabric: red cooking ware fabric with lime and mica
Munsell: 2.5YR 6/8 light red

38 (PO2107)

Shape: Plain White V Ware one-handled jug
Dimensions: D. Base 8.1 cm, P. Height 25.4 cm, Weight 1022 g
Chronotype: KWCH
Condition: Complete minus one third of the rim
Fabric: Black cooking ware with lime and mica
Munsell: Black

39 (PO715)

Shape: Plain White V water jug
Dimensions: D. Base 7.1 cm, P. Height 21.8 cm, Weight 788 g
Condition: Nearly complete, missing a few body sherds
Chronotype: KWCH
Fabric: red cooking ware fabric with lime and mica
Munsell: 10R 5/6 red

40 (PO2113)

Shape: Cooking ware jug
Dimensions: D. Base 9.2 cm, P. Height 12.4 cm, Weight 284 g
Chronotype: KWCH
Condition: Half of disc base and half of lower quarter of body
Fabric: red cooking ware fabric with lime and mica
Munsell: 7.5YR 7/6 reddish yellow

41 (PO2121)

Shape: Cooking ware jug
Dimensions: D. Base 9.9 cm, P. Height 16.8 cm, Weight 1041 g

Chronotype: KWCH
Condition: Bottom half with complete base
Fabric: red cooking ware with mica and lime
Munsell: 2.5YR 6/6 light red

42 (PO2103)

Shape: Cooking ware jug
Dimensions: D. Base 9.6 cm, P. Height 18.8 cm, Weight 1187 g
Chronotype: KWCH
Condition: Complete base and lower ¾ of body
Fabric: black cooking ware with lime and mica
Munsell: Black

43 (PO2075)

Shape: Cooking ware jug
Dimensions: D. Base 10.2 cm, P. Height 21.8 cm, Weight 1805 g
Chronotype: KWCH
Condition: Complete base and half of body up to the neck is preserved, and a number of sherds
Fabric: black cooking ware fabric with lime and mica
Munsell: Black

44 (PO2102)

Shape: One-handled jug
Dimensions: D. Rim 8.7 cm, D. Base 9.6 cm, P. Height 23.6 cm, Weight 1250 g
Chronotype: KWCH
Condition: Almost complete sans a few body sherds
Fabric: brown cooking ware fabric with lime and mica
Munsell: 2.5YR 6/8 light red

Discussion

The Hellenistic era's political organization comprised an admixture of mostly concurrent, feuding kingdoms (i.e., Ptolemaic, Seleucid, Antigonid, Attalid) that stretched from Greece in the west to the Indus Valley in the east. Recent studies of the era often focus on historical sources, non-literary textual sources, numismatics, and archaeology to characterize topics that include the economic realities of the Hellenistic world[22], the ancient city[23], imperialism[24], and the army[25]. What remains abundantly clear from these historiographic trends is the lack of a coherent chronological framework within the Hellenistic era as a result of two separate but interrelated factors: archaeological visibility and the lack of material benchmarks, especially during the earliest Hellenistic periods, capable of distinguishing temporal horizons.

Aperghis, in his examination of the royal Seleucid economy, notes the limitation of survey data by recognizing that earlier occupations may obscure later material, small sites may have been missed altogether, and, most importantly, that as the primary means of dating sites, pottery types are not well known enough to provide precise dating[26]. He states that survey data can reveal general trends in population and economy, but because of the nature of the data, it is impossible to differentiate these trends within the Hellenistic period because »the problem arises that not all sites discovered are likely to have been occupied simultaneously«[27]. For Aperghis, the primary issue is the inability to determine continuity in habitation among Hellenistic sites. Ma shares the views of many of those who focus on diachronic histories in noting that while archaeological evidence exists, it is disappointing and only provides a material context, as opposed to new information, for the themes of his book[28].

22 Aperghis 2004; Archibald et al. 2011.

23 Tscherikower 1927; Jones 1937; Jones 1940; Jones 1971; Jones 1980; Grainger 1990; Cohen 1995; Cohen 2006; Cohen 2013; Ma 2000.

24 Rostovtzeff 1941; Ma 2000; Aperghis 2004; Sherwin-White – Kuhrt 1993.

25 Austin 2001; Campbell 2004; Sabin et al. 2007; Bar-Kochva 1976; Bugh 2006; Chaniotis 2005; Romm 2011.

26 Aperghis 2004, 12.

27 Aperghis 2004, 12.

28 Ma 2000, 15.

For Ma preservation and the scant archaeological information of the Hellenistic countryside are the primary issues that make it impossible to »relate in detail the textual evidence with the relevant material remains«[29]. Finally, Grainger uses survey and excavation data extensively to examine the Hellenistic city, but notes his primary concern regarding chronology ascribed to survey data: »The evidence is such that it is only possible to compare occupation of the whole Persian period (539–333 BCE) with that of the Hellenistic as a whole (333–64 BCE)«[30].

Thanks to nearly a century of continuous study, many of the ceramic fine-ware industries of the eastern Mediterranean in the Hellenistic and Roman periods are now well understood with detailed shape typologies beginning as early as the 2nd century BCE. The earlier Hellenistic periods are the least visible owing to the lack of widely circulated and distinctive wares produced in the eastern Mediterranean. While some specific Early Hellenistic wares were produced (particularly Athenian and Antioch Black Glaze), there is no evidence of mass production and wide circulation. Rather it appears that in the Early Hellenistic period ceramic production and distribution was more localized, a situation that would require the definition of individual local repertoires. Unfortunately, no one site has the ability to solve the chronology problem because unlike the establishment of dominating industries like ESA in the middle of the 2nd century BCE, there were no ceramic assemblages capable of distinguishing definitive chronological benchmarks across multiple regions. The reliance of local or peri-regional ceramic industries in the early Hellenistic industries require detailed local ceramic analyses to understand local markets, patterns, and chronology. The Polis cistern assemblage represents such an exercise. Its archaeological context, one that saw a relatively short life cycle within the Early Hellenistic period and one that was wholly undisturbed, combined with a well preserved ceramic assemblage presents a dataset capable of identifying forms indicative of a specific temporal horizon within the Early Hellenistic period.

Conclusions

The ceramic collection from the cistern at Arsinoe, Cyprus provides one of the few glimpses into the Hellenistic period at the site discovered thus far. In fact, the Hellenistic period is one of the most underrepresented periods throughout Cyprus as Roman and Late Roman overburdens are common at most multi-period archaeological sites and typically obfuscate, diminish, or destroy any Hellenistic signature. Furthermore, the visibility of the ceramic groups within the earlier Hellenistic periods has yet to be identified and understood. While future work focusing on single period Hellenistic sites within the Eastern Mediterranean offers the promise of an opportunity for more detailed ceramic study, the ceramic assemblage from the Arsinoe cistern presents a small contribution towards solving the Hellenistic chronology issue by offering a coherent single period collection of utility vessels that can serve as useful comparanda for future ceramic studies in northwest Cyprus and throughout the greater Hellenistic world.

29 Ma 2000, 16.

30 Grainger 1990, 14.

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