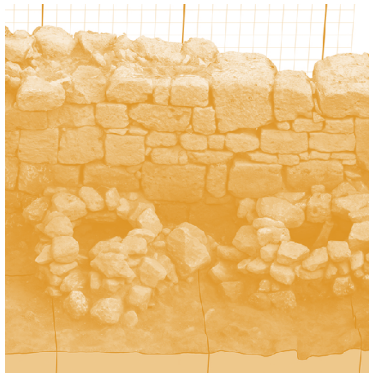
Unwrapping the micro-history of a house cistern from ancient Akrai/Acrae (southeastern Sicily)



Abstract: The paper looks into the turbulent history of the ancient town of Akrai/Acrae in a mountainous part of southeastern Sicily, encapsulated in the assemblage of finds from a domestic cistern, which was remodeled and adapted in the course of its use. The cistern is considered as an architectural feature against the background of the ancient town, and the assemblage recovered from it is examined thoroughly, category by category, giving insight into the life of the ancient inhabitants of this island in the Mediterranean.

Keywords: Akrai/Acrae, Sicily, micro-history, cistern, archaeological repertoire

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Ancient dwellings, like modern ones, were full of objects that are undeniable facts of everyday life (Sudjic 2008). For archaeologists, they enhance the pool of knowledge on human and natural activities in the past, rendering even apparently ordinary material (pottery, glassware, coins, oil lamps) informative and fostering a better understanding of the history of an ancient town, Akrai in southeastern Sicily in this case.

The paper presents the results of archaeological excavations carried out by the Archaeological Mission of the University of Warsaw at Akrai/Acrae (modern Palazzolo Acreide, southeastern Sicily) [*Figs 1*, *2*], in collaboration with the Parco archeologico di Siracusa (earlier Polo

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Regionale di Siracusa per i siti e musei archeologici Museo Paolo Orsi). The ancient town was founded by Syracuse about 664/663 BC and was inhabited continuously through late antiquity (Chowaniec 2017: 126–130). But despite numerous archaeological and historical studies, a detailed history of the town is still in the writing (Chowaniec 2015a) [*Fig. 3*].

The houses excavated in the decade between 2009 and 2019 presented plans going back to the end of the 3rd century BC. Earlier construction phases of these buildings are not known. The houses seem to have been built during the final years of Hiero II, tyrant of Syracuse, and/or at the onset of the official Roman administration (after 212 BC). Coins extracted from the wall structures included one minted in Syracuse, dated to after 214 BC, but with evidence of decently long circulation (Calciati 1983–1987: type *CNS* I:235), and another one from the mint in Tauromenium, struck at about the same time (Calciati 1983–1987: type *CNS* III:9) have corroborated this assumption.

The archaeological context featured in this paper, a house cistern, was discovered in a building comprising a number of rooms around a small central courtyard with modest remains of a portico. The courtyard may have been larger, having rooms only on the western and eastern sides, and was reduced in size at some point to make room for more chambers. There were four rooms in the eastern

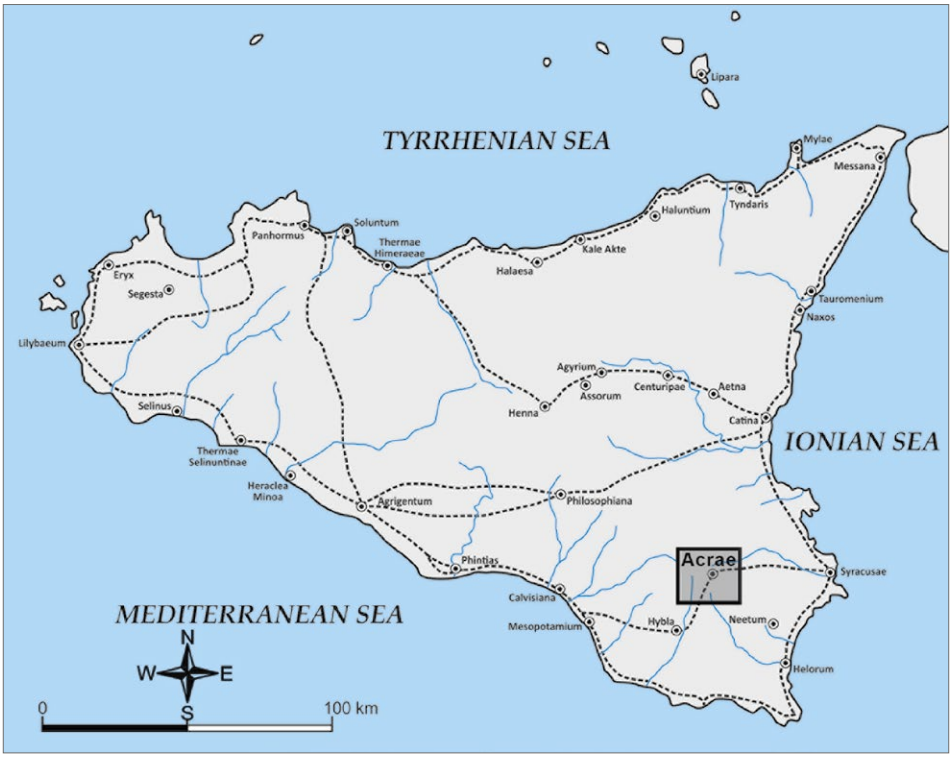

Fig. 1. Map of Sicily with location of studied area (After Uggeri 2004 | processing P. Zakrzewski)

Fig. 2. Acremonte hill, view from the southwest (Archaeological Mission at Akrai | photo R. Chowaniec)

Fig. 3. Orthophotomap of the archaeological site with excavated structures (Archaeological Mission at Akrai | photo M. Bogacki, processing R. Chowaniec)

wing. Of these, three (Nos 3, 4, and 5) belonged to the initial house plan, while the fourth (No. 8) may have been the original entrance to the house. Shortly after construction, the building appears to have been enlarged and adapted, and it might have also changed owners. New divisions were introduced, creating new and statelier rooms, which subsequently led to a rearrangement of the rooms and alterations of the painted decoration (Chowaniec, Lanteri, and Żelazowski 2018). Very well-preserved floors, made in the *cocciopesto* and *opus signinum* techniques (Room 6) were recorded. The latter technique, with geometric decoration made of white marble tesserae, was introduced to Sicily at the end of the 3rd century BC, gaining in popularity from the 2nd century BC on (for techniques and parallels, see De Vos 1975; Tsakirgis 1990: 427–428, 431–432, 434–435, 439, Nos 2, 33, 74; Brem 2000: 73–74; Zirone 2011: 169–174, 182–185; Tortorici 2016: 131–132, 286, No. 10). There is substantial proof of rooms with *opus signinum* floors being reorganized in the 1st century BC (Wilson 2000: 152) and this may have been the case of Akrai as well. In some rooms (Nos 3 and 6), the lowermost parts of the walls bore slight traces of painted plaster with remains of imitation-marble fresco painting (*a finto marmo*) (Falzone 2010) contemporary with the pavements. Two layers of fresco painting were identified in both of the rooms. The first layer was composed of creamy-yellow *arriccio*, white engobe, decorated with *crustae marmoreae*; this type was adopted in Sicily in the 2nd century BC (La Torre 2011: 270–273; Barresi 2014; Barresi and Guarneri 2018) and characterised the first style of painting inspired by the decoration of residences of Hellenistic rulers. Thanks to *intonacco* applied in two layers, it was possible to observe traces of fresco painting on a red background, laid on a thin ground coat [*Fig. 4*].

The reconstructed and adapted house fulfilled a residential function until the mid-4th century AD, when it was badly damaged as a result of a series of earthquakes and eruptions, in the 350s–370s, which affected Akrai on a par with many other Mediterranean towns (Chowaniec 2015a: 67–69). For the two decades after that there seems to have been no activity, but by the end of the the 4th century AD a revival was recorded in this part of the town. This late antique phase was characterized by inferior structures, a random choice of secondarily adapted architectural elements and solely production-related and economic activities (Chowaniec 2017: 166–170).

The town was in dire need of water from the start, particularly when the local ground water deposits in Plio–Quaternary deposits in the Hyblaean Mountains started to be overexploited by a growing population. Many wells were dug, which depleted these resources. Water supplies were supplemented with rainwater collected in cisterns, which were present in virtually every house excavated at Akrai.

The water reservoir discussed in this paper was situated slightly southwest of the middle part of a small courtyard within the house. The upper outlet was on the eastern side of the structure, below the inlet (at 764.77 m asl). The position of the cistern, as well as the said outlet, may suggest that a kind of *impluvium* USM.2 (looking from the west); location of the cistern inlet marked with a circle was located to the east, toward the middle of

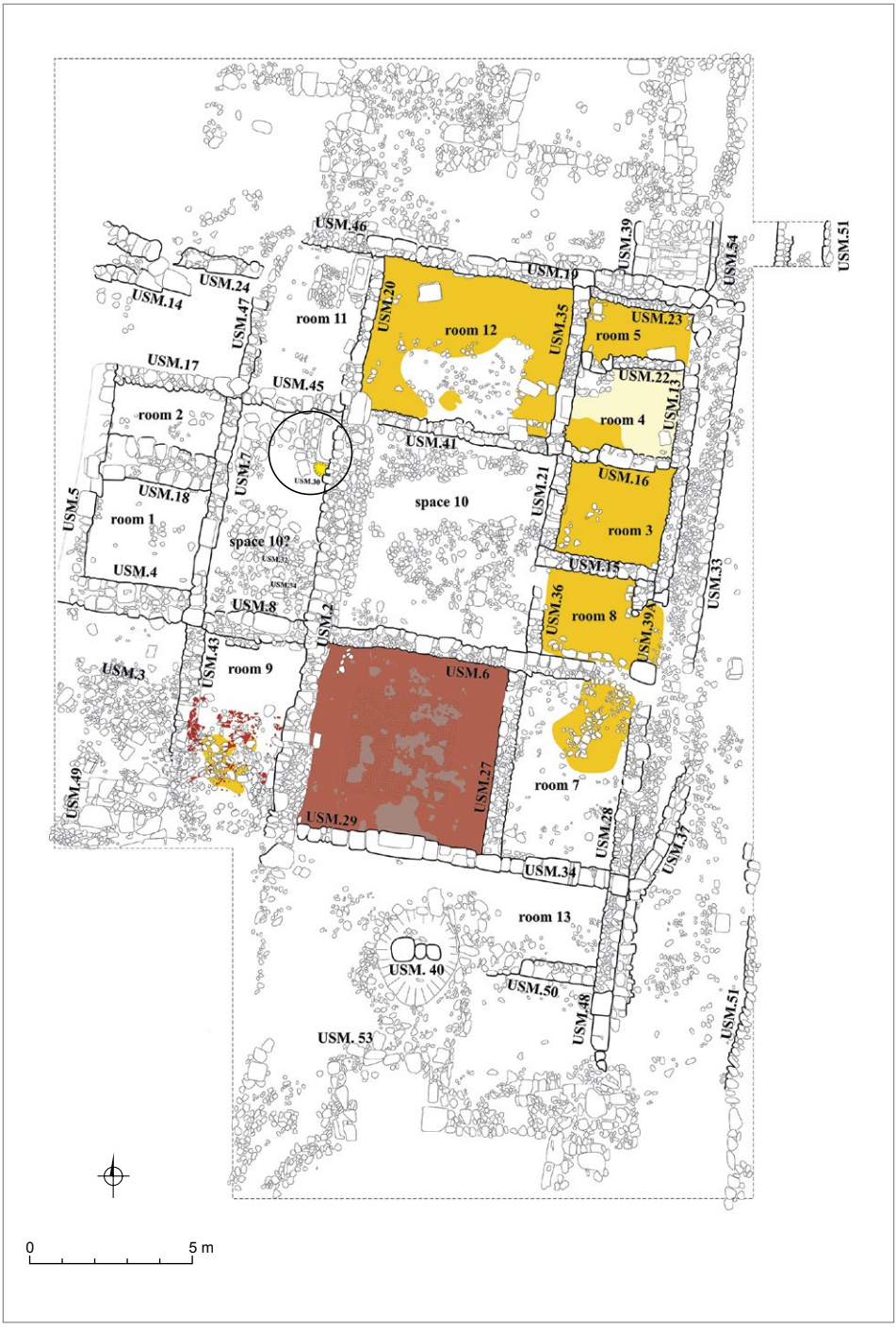

Fig. 4. General plan of the excavated area in the discussed residential area ; location of cistern marked with a circle (Archaeological Mission at Akrai | drawing M. Woińska, R. Chowaniec, P. Zakrzewski)

the original courtyard. The upper inlet measured 0.50 m by 0.60 m and was fitted with well-dressed stone blocks. The cistern was in the shape of a bell dilating toward the bottom with a relatively narrow neck at the top. Up to 1.50 m from the inlet it was made of small, tightly fitting and well dressed stones bonded with mortar mixed with fine volcanic sand (grain size 1.5–2.0 cm). Below, it was carved into the rock and its walls were plastered [*Fig. 5*].

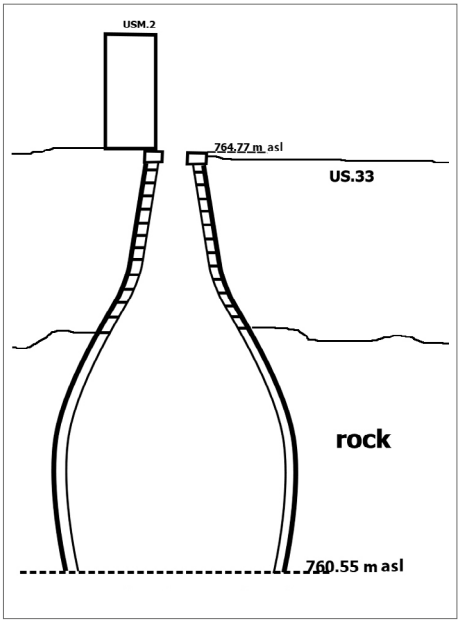

Fig. 5. Cistern with wall USM.2, section looking south (Archaeological Mission at Akrai | drawing R. Chowaniec)

In the reuse phase, the upper inlet of the cistern partly overlapped a stone structure and wall No. 2. The secondary exploitation of the reservoir was also confirmed by a structure constructed over the inlet and to its north, presumably at the end of the 4th century AD. A broad 'tub' made of a reused cracked stone slab was set next to the western face of the wall, on a layer of compact soil mixed with rubble. In the middle, a long shallow groove was carved alongside it, whereas the southern corner was pierced through so that water could dribble directly into the cistern. The whole installation was precisely fitted with reused stone blocks in order to make it stable and—by elevating it—ensure comfortable usage [*Fig. 6*].

Exploration of the cistern yielded material mainly from the backfill. The earth falling inside the reservoir formed a cone in the center. Heavier items, from the secondary exploitation phase, slipped to the sides.

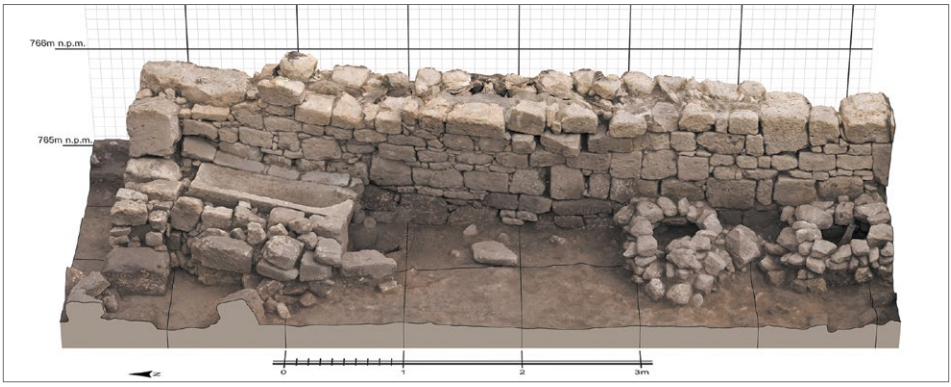

Fig. 6. 3D model of the cistern, wall and late antique structures (Archaeological Mission at Akrai | 3D model processing J. Kaniszewski)

MATERIAL CULTURE

NUMISMATIC FINDS

The backfill of the cistern contained 22 ancient coins, all made of copper alloys. They were attributed to five arbitrary layers [***Table I***]. Numismatic finds first started to appear at a depth of 762.65 m asl, some about 2 m below the cistern inlet. The coins from the fifth, lowest level were found only 25 cm above the bottom of the reservoir (760.50 m asl).

The coins are classified into two principal groups: seven items were Hellenistic and early Roman issues of Sicilian mints, mainly Syracuse, dated from the late 4th to the 2nd century BC, whereas the remaining 15 are the smallest Late Roman denominations struck between the mid-4th and the 5th century AD. Apart from the upper layers, these finds appear together throughout the subsequent levels of the backfill. Being secondary deposits in much later contexts, the Hellenistic–early Roman coins give no information of chronological significance. However, an analysis of the Roman coins from the cistern contributes to a more precise dating of the structure, especially with regard to when it ceased to function as a reservoir and was probably backfilled.

Level 5, close to the bottom (below 761.15 m asl), 0.65 m thick, yielded five coins, including three Hellenistic and two late Roman. A hiatus of approximately 20 cm between two clusters of finds resulted in a division of the level into two parts: A and B, but the similarity of the numismatic material indicated that it was in fact the same stratigraphic unit. The late Roman coins from this level, VOT XX MVLT XXX, belong to the same type issued by Constantius II and by Constans. Both were struck in mints of the Eastern Empire roughly at the same time, around AD 347 or 348. Their state of preservation is good, better than most late Roman bronze artifacts from the upper layers of the backfill, which are chronologically later; it could suggest a short time between their issue and the time when they reached eastern Sicily and were deposited ultimately in the cistern.

Level 4 (761.5–761.15 m asl) yielded nine coins, including two Hellenistic ones (both are only 10 mm in diameter and weigh 0.78 g and 0.88 g); five diagnostic bronzes of nominal value AE 4; and two unidentified ones of minimal size. Among the identifiable coins, three were of the SALVS REI PVBLICAE type showing advancing Victory dragging a captive, whereas the issuer, Arcadius, could be identified in only one case (*RIC* IX: 234, No. 86c, mint in Constantinople). They could have not been minted prior to AD 383. The fourth coin was also struck in the reign of Arcadius (*RIC* IX: 184, No. 48b, mint in Thessalonika), but represents the VOT V type, with a laurel wreath, from the years AD 383 to 388. Finally, there is a coin of the VOT X MVLT XX, type with laurel wreath, most likely with a portrait of Theodosius I, the dating of which may be suggested between AD 378 and 383 (*RIC* IX: 196, No. 19c, mint in Heraclea). These coins clearly show a coherent chronology, which may be narrowed to the AD 380s as their minting date. Notably, the SALVS REI PVBLICAE type

Table I. List of numismatic finds from the cistern context
asl – above sea level, Den. – denomination, Wg. – weight, Dia. – diameter

asl	Den.	Mint	Wg.	Dia.	Axis	Short description	Dating	Reference
Level 1: above 762.50 m asl								
762.65	AE 4	?	1.50	13	?	Illegible late Roman bronze coin Bent	After second half of 4th century AD	
Level 2: 762.50–762.00 m asl								
762.15	AE 4	?	1.05	11	180	Victory dragging captive type, presumably SALVS REI PVBLICAE Poor state of preservation	About AD 383–450	?
762.08	AE 4	Aquileia	1.38	12	0	Magnus Maximus, SPES ROMANORVM gate type Very good state of preservation	AD 387–388	*RIC* IX: 105 No 55a
762.08	AE 4 *minimus*	?	0.61	8	180	Cross within wreath type (Theodosius II?) Very poor state of preservation	About AD 425–435 (Theodosius II)	See *RIC* X: 275 Nos 440–455
762.08	AE 4 *minimus*	?	0.88	10	?	Type with cross? Very poor state of preservation	First half of 5th century AD	See *RIC* X: 275 Nos 440–455
Level 3: 762.00–761.50 m asl								
761.83		Syracuse	5.52	20	60	Apollon/Gorgoneion type Poor state of preservation	About 317–310 BC (Agathocles)	*CNS* II: 121; *BAR* 5
761.65	AE 4	Aquileia	1.01	13	0	Arcadius / Victory dragging captive SALVS REI PVBLICAE type Good state of preservation	About AD 388–394	*RIC* IX: 107 No. 58c

Table I (continued)

asl	Den.	Mint	Wg.	Dia.	Axis	Short description	Dating	Reference
761.61		Syracuse	6.64	20	270	Head of Zeus / Nike driving *biga* type Good state of preservation	After 214 BC	*CNS* II: 229; *BAR* 100
Level 4A: 761.50–761.30 m asl								
761.44	AE 4	Thessalo-nica	0.60	15	180	Arcadius, type VOT V within wreath type Mediocre state of preservation	AD 383–388	*RIC* IX: 184 No. 48b
761.33		Syracuse?	5.93	20	210(?)	Head of Kore/Nike driving *biga* type? Very poor state of preservation	Late 3rd/2nd century BC(?)	*CNS* II: 123–131; *BAR* 38 cf.
Level 4B: 761.30–761.15 m asl								
761.23	AE 4	?	0.93	12	180	Unidentified Emperor, Victory dragging captive SALVS REIPVBLICAE type Poor state of preservation	About AD 388–395	See *RIC* IX: 136 No. 69 (Rome); 262–263 No. 45/48 (Nicomedia)
761.23		Syracuse	5.32	20	330	Head of Zeus / Nike driving *biga* type Mediocre state of preservation	After 214 BC	*CNS* II: 226; *BAR* 100
761.21	AE 4	Constan-tinople	0.99	11x13	180	Arcadius, Victory dragging captive SALVS REI PVBLICAE type Mediocre state of preservation	AD 388–392	*RIC* IX: 234 No. 86c
761.21	AE 4	?	0.76	11	0	Unidentified Emperor, Victory dragging captive SALVS REI PVBLICAE type Poor state of preservation	AD 383–425	?

Table I (continued)

asl	Den.	Mint	Wg.	Dia.	Axis	Short description	Dating	Reference
761.20	AE 4 *minimus*	?	0.88	10	?	Tiny coin, illegible	Late 4th/5th century AD(?)	
761.20	AE 4	Heraclea ?	1.39	11	30	Unidentified Emperor, VOT X MVLT XX within wreath type Good state of preservation, but obverse legend off flan	AD 378–383	*RIC* IX: 196 No. 19c (Theodosius I)
761.15	AE 4 *minimus*	?	0.78	10	?	Tiny coin, illegible	Late 4th/5th century AD(?)	?
Level 5A: 761.15–761.00 m asl								
761.07		Syracuse	2.39	12	90	Head of Apollo/apex type Poor state of preservation	After 214 BC 208–204 BC (*BAR*)	*CNS* II: 214; *BAR* 11
761.03	AE 4	Constan-tinople	1.36	13	180	Constantius II, VOT XX MVLT XXX within wreath Good state of preservation	AD 347–348	*RIC* VIII: 453 No. 72
761.01		Lilibaeum	6.74	20	0	Head of Apollo/*kithara* type Mediocre state of preservation	After 241 BC (2nd century BC?)	*CNS* I: 261 No. 1ff.
Level 5B: below 761.00 m asl								
760.82	AE 4	Heraclea ?	1.48	14	0	Constans, VOT XX MVLT XXX within wreath type Good state of preservation	AD 347–348	*RIC* VIII: 433 No. 47/55/60 cf.
760.75		Syracuse	5.35	17	0	Radiate head ("Artemis") / walking figure ("Horus") type	After 214 BC 211-200 BC (*BAR*)	*CNS* II: 238; *BAR* 108

with Victory and a captive is one of the most popular types of late Roman coins found in Akrai. All other types, dated to AD 395 or later, are certainly scarcer at this archaeological site.

Level 3 (762.00–761.50 m asl), although thicker than level 4, yielded only three coins. Two Hellenistic ones and a single specimen of the SALUS REI PVBLICAE type with Victory and a captive, issued by Arcadius, from the same timeframe as the previous ones (*RIC* IX: 107, No. 58c, mint in Aquileia). Four coins were found in level 2 (762.50–762.00 m asl), all of them of late Roman date. These included a well-preserved bronze of Magnus Maximus of the SPES ROMANORVM type with a gate, dated to AD 387 or 388 (*RIC* IX: 105, No. 55a, mint in Aquileia), as well as a single specimen with Victory and a captive on the reverse, the emperor unrecognized, dated to between AD 383 and 450 (it may be a SALVS REI PVBLICAE, but its poor state of preservation makes a conclusive identification impossible). Another two coins are barely decipherable, however, one certainly bears the motif of a Latin cross within a wreath on the reverse. The item may be dated to between about AD 425 and 450. This type was issued predominantly in the rule of Theodosius II and significantly less often by Valentinian III. The reverse of the other coin possibly presents a cross without a wreath. It proves that the closer to the inlet, the later the coins, which, in turn, indicates that the stratigraphy of the backfill was undisturbed. It could be confirmed by a single coin find from level 1 (762.65 m asl), it is however poorly preserved, bent, and intentionally scratched.

LAMPS

The cistern yielded only six lamps, three of which are very fragmentary and one (No. 6) an absolute unicum. All were manufactured in local or regional workshops and were either autochthonous 'inventions' or copies modelled on African originals. The chronological framework is very clear. Two lamps from the end of the Republic and the reign of Tiberius form the first group: a wheel-thrown lamp (No. 1) coinciding in date with a moulded one (No. 2), the two types coexisting in Akrai. As a matter of fact, lamp No. 1, parallels of which abound across the site, is a much earlier—Hellenistic—local creation that subsisted unchanged until the first half of the 1st century AD. The second group (Nos 3 to 6) clearly fits the timeframe between AD 440 and 550, which complies with the dating obtained from the studies of other artifacts.

Group 1: Late Republican to Tiberian lamps

No. 1 [*Fig. 7.1*]: clay: 2.5YR 5/6 red; medium-quality clay with occasional inclusions, poorly-burned; slip: 7.5 YR 6/6 (reddish yellow); dated from the 2nd century BC to the 1st century AD.

A wheel-thrown lamp with a flat circular base, rounded shoulder, and biconvex profile. Slightly protuberant rounded nozzle incorporated into the shoulder. No trace of combustion observable. This type of lamp, a local derivative of the Ricci type C (Ricci 1973: 212–213), is common at Akrai/Acrae, where it constitutes one of the most numerous typological groups. It is a local 'marker' differentiating it from other common types of wheel-thrown lamps present in the best-studied archaeological town assemlages of Sicily

(Chrzanovski 2015: 178–181; 2018: 252–253, with further references and parallels);

No. 2 [*Fig. 7.2*]: clay: 2.5YR 5/6 red; good quality with small middle-sized limestone inclusions, well fired; slip: 5 YR 4/3 (reddish brown); dated from the early Augustan to Tiberian times.

A small fragment of the shoulder and the beginning of the handle of an early Loeschcke type IA lamp (for the chronology of lamps of Italian provenance, see Bailey 1980: 132, type A.ii), enriching a series of lamps of this type made in the micro-region and found in recent excavations at Akrai/Acrae. All the said lamps, the shoulder fragment included [*Fig. 8*], were made of regional clay and reflect the Romanization of the workshop production in Syracuse and its vicinity) which reproduced extensively all the latest Republican types, i.e., Vogelkopflampen, Dressel 4a, and Loeschcke I, adapting them and modifying to cater to their own tastes (Chrzanovski 2015: 239–245).

Fig. 7. Lamps and lamp fragments from the cistern context (Archaeological Mission at Akrai | photos M. Bogacki, M. Murawski, M. Zawistowska)

Group 2: Local copies of late African lamps of type Bussière 31 (Atlante X)

Homogeneous as it is, the group is interesting because it demonstrates once again the range and diversity of Syracusan workshop production, as well as their attempts to copy or imitate North African lamps from the mid-5th to the 7th century AD. As a matter of fact, the recorded specimens present a full spectrum of manufacturing quality from really poor (No. 3) through mediocre (No. 4) to accurate overmoulding (Nos 5 and 6).

No. 3 [*Fig. 7.3*]: clay: 10YR 7/4 very pale brown; poor quality clay with many inclusions, poorly-burned; slip: none or not preserved; dated AD 450 to 550.

Back part of a lamp with preserved moulded handle. The discus decoration and the shoulder ornaments are indiscernible, while the raised ring defining the discus appears very high compared to African examples.

No. 4 [*Fig. 7:4*]: clay: 7.5YR 6/6 reddish yellow; medium quality clay with inclusions of limestone, poorly- burned; slip: none or not preserved; dated AD 450 to 550. An almost intact lamp, missing the end and the left part of the nozzle. Traces of combustion on the nozzle channel indicating use. The shoulder bears a pattern of ornamented circles alternating with lozenges. The discus is adorned with a peacock or a crested egret with three hoops, walking towards the handle and holding a branch behind its back. This is a fairly rare motif, known mainly in its most popular, horizontal rendering with the bird walking left (the upper part of the mould preserved in Geneva, see Chrzanovski 2017: 158, No. 87 with further references) and a Tunisian lamp found in Tim-

Fig. 8. Fragment from Akrai overlaid on the best preserved locally made Loeschcke I A lamp (Redone after Chrzanovski 2018: 246, Fig. 17)

gad (see Bussière 2007: 123, C637, Pl. 47; with further literature). Most authors claim that the bird is more like an egret, a sacred bird known from pharaonic times and mentioned already in the Old Testament, which was subsequently integrated as a hoopoe (الهدهد /*hudhud*) also into the Byzantine and Islamic traditions, where its hoop was considered a strong talisman against the evil eye. Rendered vertically, the bird is usually shown holding a vase in its beak, which is, however, absent in the case under discussion (a Tunisian lamp from Timgad, see Bussière 2007: 125, C675, Pl. 49).

Fig. 9. Lamp from the Geneva collection with details of two of its busts and the central ornament of the Akrai lamp (firdt from left) (Courtesy Musée d'Art et d'Histoire de Genève, inv. C 1478 ©S. Crettenand and MAH)

No. 5 [*Fig. 7.5*]: clay: 5YR 6/6 reddish yellow; good quality clay with silver mica inclusions, well fired; slip: 10R 6/8 light red; dated AD 450 to 550.

Fragment of the back part of a lamp with the handle and part of the shoulder. Several small blobs indicate trapped oxygen bubbles in a mould made by a local potter not on an archetype but on an original African lamp. The shoulder decoration features a pattern of ornamented horseshoes alternating with leaves. The discus, now lost, was probably adorned with a geometric pattern of vegetal decoration.

No. 6 [*Fig. 7.6*]: clay: 2.5YR 7/6 light red; medium quality clay with inclusions, well fired; slip: 2.5YR 5/6 red; dated AD 430 to 550.

Fragment of the upper part of a lamp (bottom part and handle lost). Traces of combustion around the wick hole and on the nozzle channel, indicating use. Several small blobs are proof of oxygen bubbles trapped in the mould as in the previous example. Shoulder decorated with ornamented horseshoes alternating with leaves. The discus is adorned with the head of an apostle within a frame that is ornamented with dots and topped with two branches ending in an ivy leaf. This representation is a unicum. Single framed busts are known, e.g., that of Orpheus in a similar square frame and that of emperors/empresses in a circular frame. Renderings of the bust of a bald and bearded apostle are also well known, it being one of three kinds of busts decorating extremely rare lamps with shoulders bearing representations of the Twelve Apostles. The best known example has the image of a man seated on a throne and holding a book on the

discus. The lamp is in a Geneva collection (De Rossi 1867; 1870) and has been the object of debate from the mid-19th century. Added to the earlier discussion (see Chrzanovski 2011: 277) are a few other North African lamps with the Twelve Apostles depicted on the shoulders [*Fig. 9*]: two from the Bibliothèque Nationale de France (type Atlante XIA2 and X, see Trost and Hellmann 1996: 112–113 No. 144, 142–143 No. 223, with further literature and discussion), and one from the British Museum (Bailey 1988: 196, Q1777, Pl. 21).

GLASS FINDS

The assemblage of glass vessels was numerous, although for the most part small, poorly preserved and not diagnostic. A morphological analysis of the fragments identified a minimum of 27 vessels in the set. The bulk of these were conical beakers, supplemented by a few goblets, a beaker lamp and a flask (the catalog below presents the individual types). The present discussion encompasses 21 representative vessel fragments. All the pieces show characteristics of free-blown glass vessels. Olive-green and pale green glass masses were used most frequently. Single vessels were produced from glass of the following colors: green (2), yellowish–green (1), pale blue (1), and translucent with a pale green tinge (2). The material is dated to the late Roman and Byzantine periods.

Conical beakers

Isings Form 106b1 (Isings 1957: 126–129; already published by Wagner 2015: 159–161, Fig. 8) or Trier Form 52 (Fünfschilling 2015: 338). The type is characterized by a wide and fire-rounded rim (Dia. between 6.0 cm and 8.8 cm); a narrow and concave base, often with a wide pontil mark (Dia. 3.4 cm to 4.0 cm). Only one base is slightly larger (Dia. 5.0 cm), which suggests that it was part of a deep bowl. These drinking vessels belonged to Sicilian table ware popular in late antiquity. Fully preserved specimens were found, among others, in the cemeteries of Ragusa, the San Mauro di Sotto necropolis in Caltagirone, the catacombs of Syracuse, and in the vicinity of Palermo. Basile argues that in late antiquity this type of vessels, although with bases of a slightly larger diameter, was produced in northern Italy as well as in the workshops of Rome (Basile et al. 2004: 45–46). Conical beakers of the type, similar to finds from Akrai, made of glass of various hues of green, dated to between the 4th and early 5th century AD, were found in Augst (Fünfschilling 2015: 338) [*Fig. 10A–B*; *Table 2*].

Beaker lamp

Isings Form 134 (Isings 1957: 162). The type was classified as C1 and C2 in the Crowfoot and Harden typology (1931: 199). Deep goblets made of glass with three small handles attached to the upper part of the vessel appeared in the Near East at the end of the 4th century AD. These goblets were used as lamps, a linen wick being held in a lead holder fixed to the edge of the rim, which was folded outward and downward (Milavec 2017: 200–201). These lamps played a vital role in religious or funeral contexts. Being fairly symbolic, they are usually found in subterranean Christian cemeteries, e.g., Rome, Latium and Sicily. Uboldi classified them as type I.1 (1995: 96). These lamps were registered in the San Marziano crypt in Syracuse,

Table 2. Glass finds from the cistern context

No.	Description	Diameter (cm)	Colour	Weathering
1–18.	**Conical beakers** (Isings Form 106b1			
1.	Fragments of fire-rounded rim and concave base with a pontil mark; smooth and shiny surfaces; numerous small elliptical bubbles [*Fig. 10A:1*]	Rim 8.4; Base 4.6	Translucent, olive-green glass	Dark weathering; rainbow iridescence
2.	Fragments of fire-rounded rim and concave base with a pontil mark; smooth and shiny surfaces; single round and fusiform bubbles [*Fig. 10A:2*]	Rim 6.6; Base 3.4	Translucent, olive-green glass	Dark weathering; rainbow iridescence
3.	Fragments of fire-rounded rim and concave base with a pontil mark; smooth and shiny surfaces; single small round bubbles [*Fig. 10A:3*]	Rim 8.8; Base 4.2	Translucent, amber glass	Dark weathering; rainbow iridescence
4.	Fragments of fire-rounded rim and concave base with a pontil mark; smooth and shiny surfaces slightly cracked in the lower part; numerous very small elliptical bubbles [*Fig. 10A:4*]	Rim 8.4; Base 4.6	Translucent, pale green glass	Dark weathering; rainbow iridescence
5.	Fragments of fire-rounded rim and concave base with a pontil mark; smooth and shiny surfaces slightly cracked in the lower part; numerous small and single fusiform bubbles [*Fig. 10A:5*]	Rim 6.0; Base 3.4	Translucent, olive-green glass	Dark weathering; rainbow iridescence
6.	Concave base with a pontil mark; smooth and shiny surfaces; single small and medium round bubbles [*Fig. 10A:6*]	Base 4.0	Translucent, olive-green glass	Dark weathering; rainbow iridescence
7.	Concave base with a pontil mark; smooth and shiny surfaces; numerous small and medium round bubbles [*Fig. 10A:7*]	Base 4.0	Translucent, pale green glass	Dark weathering; rainbow iridescence
8.	Concave base with a pontil mark; smooth and shiny surfaces; numerous small elliptical bubbles [*Fig. 10A:8*]	Base 4.2	Translucent, olive-green glass	Dark weathering; rainbow iridescence
9.	Concave base with a pontil mark; smooth and shiny surfaces; single small round bubbles [*Fig. 10A:9*]	Base 3.6	Translucent, green glass	Dark weathering; rainbow iridescence
10.	Concave base with a pontil mark; smooth and shiny surfaces slightly; single small round bubbles [*Fig. 10A:10*]	Base 5.0	Translucent, green glass	Dark weathering; rainbow iridescence
11.	Fragment of thickened fire-rounded rim; smooth and shiny surfaces; single small and very small elliptical bubbles [*Fig. 10B:11*]	Base 7.8	Translucent, pale green glass	Dark weathering; rainbow iridescence

Fig. 10A–B (this and opposite page).Glass conical beakers, Isings Form 106b1 (Archaeological Mission at Akrai | drawing and photo M. Wagner)

Table 2. Glass finds from the cistern context (continued)

12.	Fragment of thickened fire-rounded rim; smooth and shiny surfaces; single fusiform bubbles [*Fig. 10B:12*]	Rim 9.0	Translucent, olive-green glass	Dark weathering; rainbow iridescence
13.	Fragment of thickened fire-rounded rim; smooth and shiny surfaces; numerous small and very small round bubbles [*Fig. 10B:13*]	Rim 6.6	Translucent, pale green glass	Dark weathering; rainbow iridescence
14.	Fragment of thickened fire-rounded rim; smooth and shiny surfaces; single small elliptical bubbles [*Fig. 10B:14*]	Rim 7.0	Translucent, pale green glass	Dark weathering; rainbow iridescence
15.	Fragment of thickened fire-rounded rim; smooth and shiny surfaces; numerous small elliptical bubbles [*Fig. 10B:15*]	Rim 6.6	Translucent, pale green glass	Dark weathering; rainbow iridescence
16.	Fragment of thickened fire-rounded rim; smooth and shiny surfaces; numerous small and very small elliptical bubbles [*Fig. 10B:16*]	Rim 7.0	Translucent, yellowish-green glass	Dark weathering; rainbow iridescence
17.	Fragment of thickened, uneven fire-rounded rim; smooth and shiny surfaces; single small round and fusiform bubbles [*Fig. 10B:17*]	Rim 7.0	Transparent, colourless glass with pale green tinge	Dark weathering; rainbow iridescence

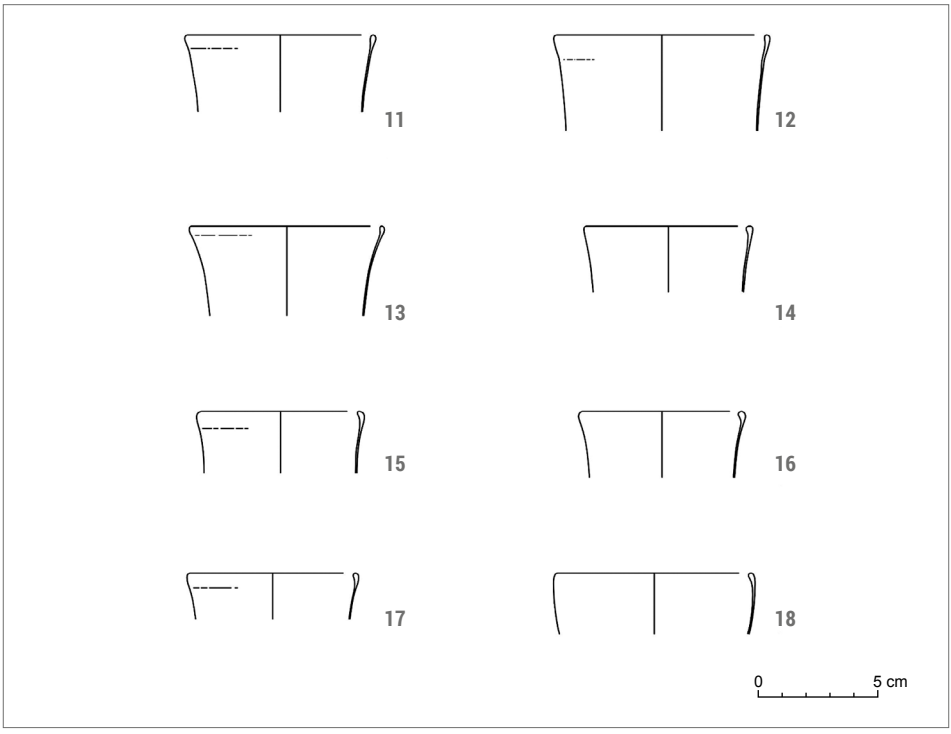

Table 2. Glass finds from the cistern context (continued)

18.	Fragment of thickened fire-rounded rim; smooth and shiny surfaces; single small round and fusiform bubbles [*Fig. 10B:18*]	Rim 8.2	Transparent, colourless glass with pale green tinge	Dark weathering; rainbow iridescence
19–21	**Other forms**			
19.	Beaker lamps (Isings Form 134). Fragments of hemispherical bowl with a tubular rim folded outward and downward and a pushed-in base, three handles (one of them preserved) with roughly circular cross section, dropped onto the wall and drawn-up and re-attached to the outside of the rim; smooth and shiny surfaces; single small elliptical bubbles [*Fig. 11:1*]	Rim 8.4; Base 4.4	Translucent, pale green glass	Light weathering; rainbow iridescence
20.	Goblets (Isings Form 111). Fragments of goblet with almost vertical walls in the upper part of the hemispherical bowl, a fire-rounded rim, a cylindrical long stem, and a conical, pushed–-n base; smooth and shiny surfaces; single small round bubbles [*Fig. 11:2*]	Rim 7.0; Base 4.8	Translucent, pale blue glass with olive streak	Light weathering; rainbow iridescence
21.	Flask with funnel rim. Funnel, fire-rounded rim with constriction in the upper part of the cylindrical neck; smooth and shiny surfaces; a few vertical fusiform bubbles [*Fig. 11:3*]	Rim 4.4	Translucent, olive-green glass	Dark weathering; rainbow iridescence

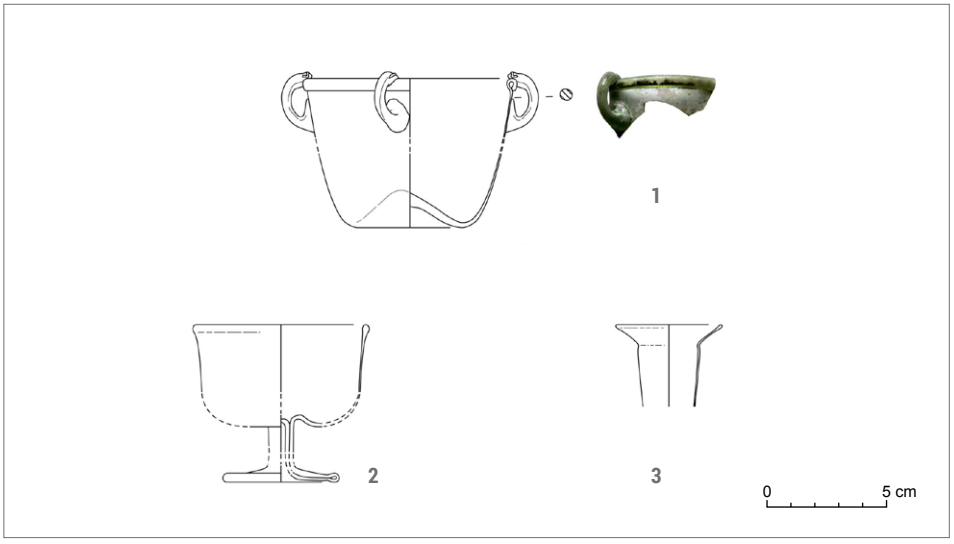

Fig. 11. Glass: 1 — beaker lamp, Isings Form 134; 2 – goblet, Isings Form 111;
3 – flask with funnel rim (University of Warsaw Akrai Project | drawing and photo M. Wagner)

dated to the AD 520s (Isings 1957: 162). The lamps appeared in contexts dated from the 4th to 8th centuries AD (Crowfoot and Harden 1931: 199). Form C1 came into use in Italy at the end of the 4th century AD and, most probably, functioned until the 8th century AD (Uboldi 1995: 104–105). The pale green glass fragments from cistern are reconstructed as a deep bowl with tubular rim turned outward and downward, and a pushed-in base. Three small 'Ds'—shapely handles, of which only one remains—drop to the upper wall of the vessel, are drawn up and finally attached to the outside of the rim [*Fig. 11:1*, *Table 2:19*].

Goblets

Isings Form 111 (Isings 1957: 139–140; already published by Wagner 2015: 163). Fragments of five goblets were found, the glass pale green, yellowish-green, olive-green, and pale blue. The base diameter ranges from 3.0 cm to 4.8 cm. Vessels of this type appeared in the 4th century AD and were also used in later periods (Çakmakçi 2009: 50–51) [*Fig. 11:2*, *Table 2:20*].

Flask

Flask with funnel rim, characterized by a cylindrical neck and globular or piriform body. In material from the Beirut excavations, they appeared in contexts dated between the 6th and 7th centuries AD, and resembled, to a considerable extent, the fragment found in Akrai (Jennings 2006: 177, Fig. 7.26.5) [*Fig. 11:3*, *Table 2:21*].

FINE WARE

In general, only 32 fragments of fine ware vessels were found, which makes it the least numerous group among other identified categories of ceramics (2.7%) (Domżalski 2018: 212–214, Pls 1–3). Only the best preserved diagnostic and decorated fragments of fine ware are discussed here [*Figs 12*, *13*].

The FW finds were dominated by Late Roman fragments representing solely African Red Slip Ware (20 fragments). They were found in different levels of backfill, from top to bottom. The other 12 sherds (not illustrated), also found in different levels, come from earlier periods and they are definitely residual in character, as indicated by their poorer state of preservation and smaller size. These include: three sherds of Late Classical and Early Hellenistic Black Gloss Ware (two fragments of skyphoi and one fragment of a bowl with incurved rim) from the 4th to 3rd century BC (see Stone 2014: 92–94, 102–105, Pls 5, 9–10), one fragment of Italian Terra Sigillata (plate, Form 18) from the early 1st century AD (Ettlinger et al. 1990: 82–83), and eight fragments of early Roman African Red Slip Ware A and A/D (including one bowl of Form 9B and one dish of Form 31) from the 2nd to mid-3rd century AD (Hayes 1972: 13–299; 1980: 484–523; Mackensen and Schneider 2002; 2006; Bonifay 2004: 45–65, 154–210).

Fragments of Late Roman African Red Slip Ware are generally dated from the mid-4th to mid-6th century AD (Hayes 1972: 13–299; 1980: 484–523; Mackensen and Schneider 2002; 2006; Bonifay 2004: 45–65, 154–210). Both the earliest and the latest finds are singular, the bulk consisting of fragments of 5th century AD vessels. The earliest find is a small fragment of ARS C1–2 dish of Form 50A/B (not illustrated) from the mid-or late 4th century

AD. It is the only find from workshops located in central Tunisia.

Other late Roman fragments are represented by ARS D vessels from the northern part of modern Tunisia. Among these there is a distinctive group of three variants of Form 61 dishes: variant 61B (one fragment, Fig. 14:1), variant 61B/C (six fragments, Fig. 14:2), and variant 61C (one fragment, Fig. 14:3). Of these the earliest one is dated to the 1st half of the 5th century AD, the latest to the late 5th century AD, and the transitional one to the middle decades of this century. The

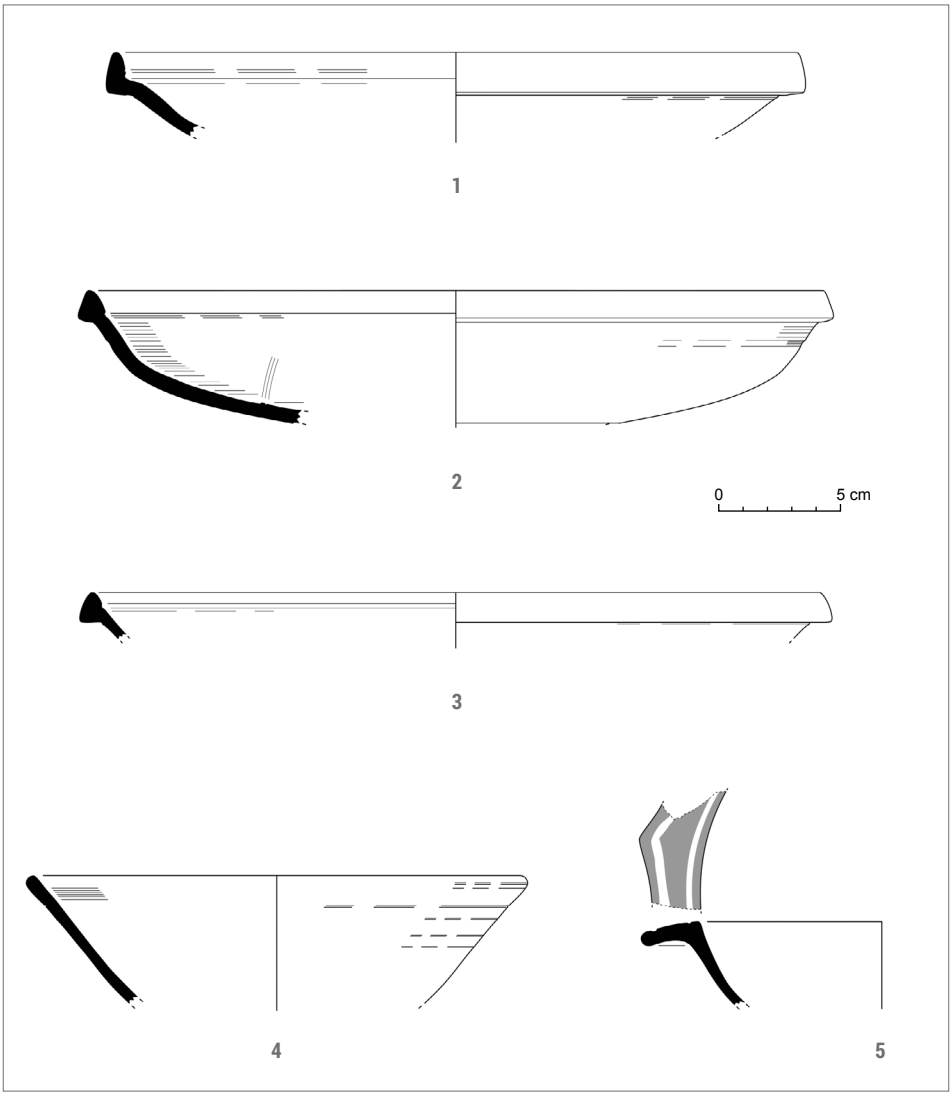

Fig. 12. Selected fine ware finds from the cistern: ARS D: 1 – form 61B, 2 – form 61B/C, 3 – form 61C, 4 – form 81B, 5 – form 97 (Archaeological Mission at Akrai | drawing and photo K. Domżalski)

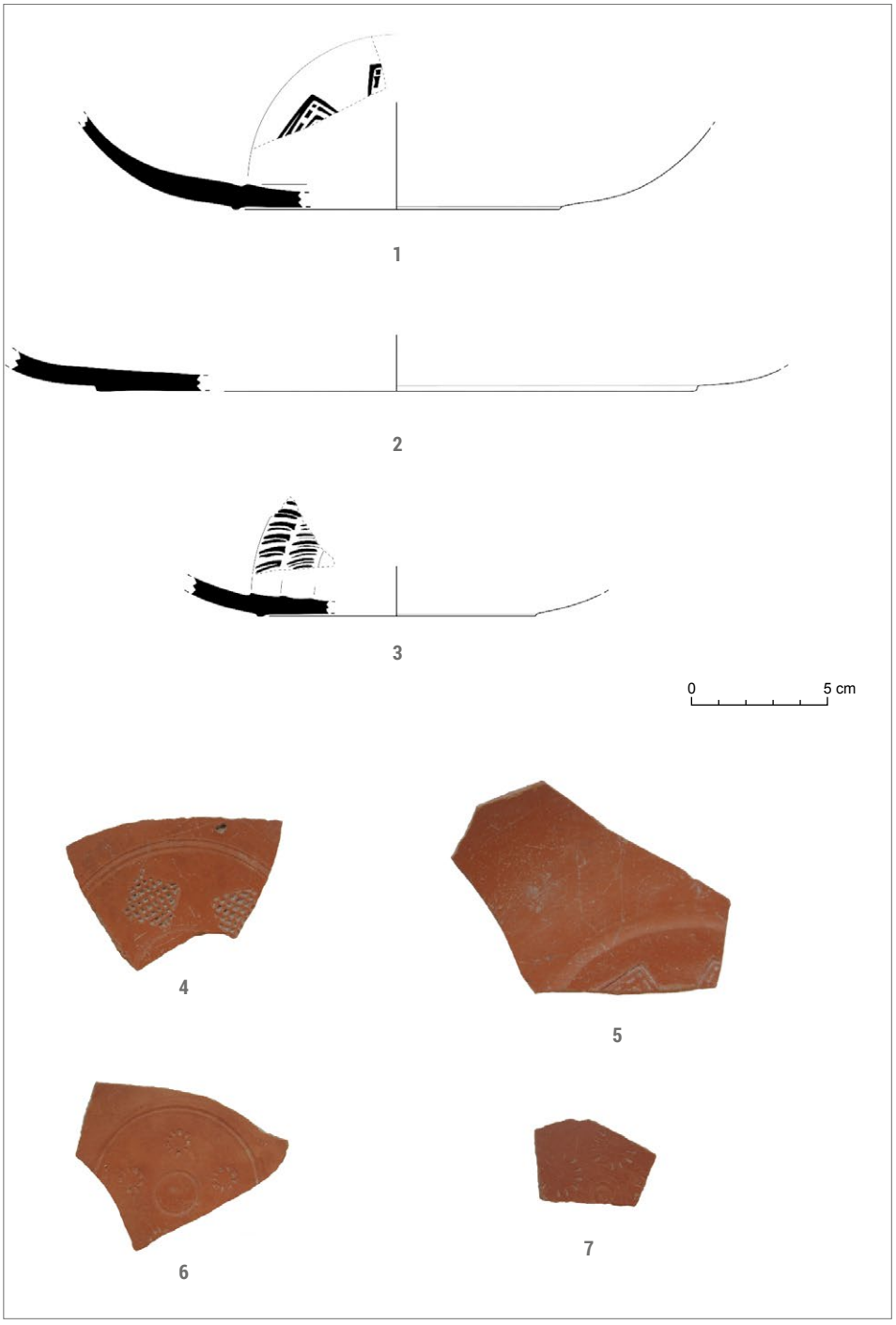

Fig. 13. Selected fine ware finds from the cistern: ARS D: base fragments (Archaeological Mission at Akrai | drawing and photo K. Domżalski)

described dish was among the most popular and the most often exported ARS types, which is also proven by other finds from Akrai (Domżalski 2018: Fig. 5). Most of base and floor fragments of undetermined large dishes (some possibly also representing forms 61B–C) are also dated to the 5th century AD. Four of them bear a simple geometric motif, generously stamped inside the vessel, creating a medallion-like composition encircled with a single or double grooved line [*Fig. 13:1, 4–7*]. The rather careless manufacturing technique of the motifs and their stamping indicate the A III decorative style used in the discussed period. The largest amount of ARS D finds came from the lowest level 5, together with an ARS C1–2 fragment of Form 50A/B.

Other ARS D vessels are represented by a few sherds. The first one is an undecorated bowl rim, Form 81B [*Fig. 12:4*], dated to the late 5th century AD. A flanged bowl, Form 91, represented by a base fragment, decorated with bands of so-called feather roulletting [*Fig. 13:3*] is probably of similar or later date (variant A or early B?). Since the upper part of the vessel is missing, its more precise defining and dating is impossible. Among the more diagnostic sherds, the latest find (from level 1) is definitely a fragment of a bowl, Form 97, with scalloped rim [*Fig. 12:5*], from the first half of the 6th century AD.

AMPHORAE

Altogether 217 amphorae fragments, making for 18.5% of the total ceramic finds from the context, were registered (Domżalski 2018: 212, Pls 1, 2). The amphorae from several different regions from Cilicia or Cyprus in the East, to Sicily and southern Spain in the West were noticed. The eastern amphorae are represented by fragments of LRA 1 containers of Cilician or Cypriot provenance (Lang 1976: 57–58; Empereur and Picon 1988: 33, 35, Fig. 21; 1989: 236; Demesticha 2000; 2003: 471–472; 2014: 601; Manning et al. 2000; Demesticha and Michaelides 2001; Pieri 2005: 80; 2007: 613–614; Iacomi 2010: 25; Autret 2012: 254; Leidwanger 2014: 898–899). These types were produced between the second half of the 4th century AD and the 7th century AD, both in Cilicia and Cyprus (Autret 2012: 263). Amphorae from southern Spain (type Keay XIX) are also represented in the material. They were produced between the late 3rd or early 4th century AD and the early or mid-5th century AD (Keay 1984: 160, 168).

A group of North African amphorae has also been registered, among them examples of Tripolitanian (Keay XI/Tripolitana III) and perhaps Tunisian amphorae (Keay XXV and Keay LXII). The Keay XI amphorae were produced from the late 2nd or early 3rd century AD up to the 4th century AD (Keay 1984: 136; Bonifay 2004: 105, 107). The presence of a single foot of a Keay LXII amphora in the context is questionable. Although the piece displays numerous traits differentiating it from the Keay LXII amphorae, still its general morphology resembles the type. Such is also the case with two feet of a Keay XXV amphorae. Both attest a large typological diversification, which reflects a wealth of small production centers. While describing the Keay XXV amphora type, Simon J. Keay (1984: 191) noted that "Identifications of foot types is difficult, since they

are often very plain and employed on different types of amphora".

A Keay XXIII amphora, preserved as a foot, is a type of a questionable origin and unconfirmed provenance (Keay 1984: 173). Alan J. Parker (1977: 36) suggested their Lusitanian provenance and Daniele Manacorda (1977: 145) followed suit, considering the Keay XXIII amphorae to have been produced in the Iberian Peninsula.

Production of the said amphora types could also be dated to late antiquity: Keay LXII (second quarter of the 5th to the mid-6th century AD, Keay 1984: 347), Keay XXV (different variants produced from the 3rd to the 5th century AD, Keay 1984: 193), and Keay XXIII (late 4th to early 5th century AD, Keay 1984: 173, 178).

The presence of local, Sicilian containers is confirmed by finds of fragments categorized as Naxos flat-bottomed ovoid amphorae. Their production was attested at Naxos (Pacetti 1998: 187; Ollà 2001: 48–49; Malfitana et al. 2009: 138, 140; Casalini 2014: 272; Franco and Capelli 2014a: 552; 2014b: 350; see Menchelli and Picchi 2016: 236). The chronology of various variants of this class of amphorae covers a period from the second half of the 1st century to the mid-5th century AD (Franco and Capelli 2014b: 350).

KITCHEN AND COOKING POTTERY

This category consists of 246 fragments comprising Roman kitchen and cooking vessels (late 1st to mid-6th century AD, with a predominance of forms from the 4th to the mid-5th century AD). This group is dominated by vessels of local or regional, Sicilian production (Olcese 2012: 432–469): wares 8a, 9 and probably 12, with a fair share of imported specimens falling into three manufacturing groups: Pantellerian Ware (Ware 8), Aegean Cooking Ware (Ware 11), and African Cooking Ware (Wicenciak 2015: 265–272, Fig. 9). Typological and macroscopic analysis of forms and wares (fabric and surface treatment) led to the recognition of two production regions in eastern Sicily, one in the vicinity of Messina (based both on typology and fabrics, W8a) and the other in Akrai or its vicinity (as indicated by fabrics, W9). The latter group, distinguished by its characteristic fabric and production features, was dubbed the Akrai Cooking Ware (Wicenciak 2015: 272–273).

The production site for the W12 group of vessels has yet to be determined. This pottery could be classified as:

1. *Akrai Cooking Ware (AkCW) = Ware 9*

The backfill contained 135 fragments of cooking pots of the following Akrai types: 26, 49, 55, 56, 58, 62, 67, as well as three fragments of bases (for a typology, see Wicenciak 2015: 258–265) [*Fig. 14*]. All of them were ascribed to the macroscopic group W9. Moreover, this group also included a single lid handle (type T68) and a base of a jug (type T69). The AkCW is characterized by the presence of volcanic glass inclusions in the products. Visually, most of the fragments appear to be scorched; their external surfaces usually are melted and cracked, while their rims are deformed (Wicenciak 2015: 256, Table 2, Fabric 9). The AkCW is defined by the reddish color of the external and internal surfaces (2.5 YR 4/4 or 4/6). The core is very dusky red (2.5 YR 2/2). The vessels are well-fired. Of the 75 types of vessels distinguished within the Akrai

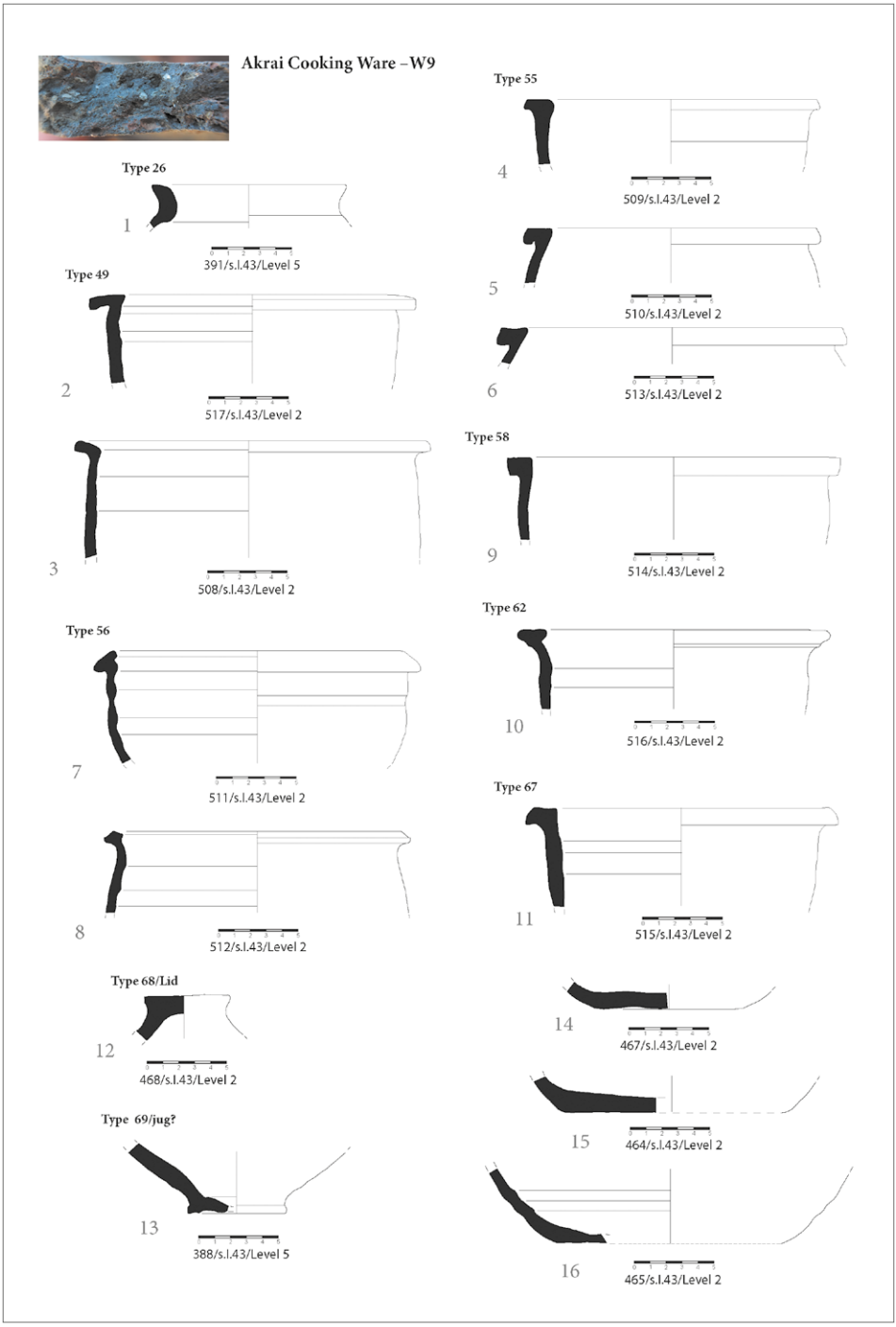

Fig. 14. Akrai Cooking Ware (AkCW) – Ware 9 (Archaeological Mission at Akrai | drawing and microphoto U. Wicenciak)

collection (Wicenciak 2015: 258–265; new types T66–75 were added recently), 34 are AkCW cooking pot forms. The richness and typological diversity of this assemblage corroborate the existence of several workshops producing various types of cooking pots across the Akrai region. A precise dating of this group is not possible at the moment, although preliminary estimates are available since the layers with the highest number of these forms (26 types) are dated very broadly from the 4th century BC to the 6th century AD. The same chronology regarding other artifacts like fine ware, coins, and lamps, was noted inside the cistern. Some of the cooking pot types from the AkCW group (e.g., Akrai types 49, 62, and 56) show morphological similarities to the cooking vessels from the group of Aegean Type cooking pots (see below for more on Aegean Cooking Ware). Chemical composition as well as petrographic and mineralogical analyses of just four AkCW fragments point to similarities between the AkCW and the vessels from Leontinoi (modern Lentini), and consequently argued that the Akrai vessels were produced in Lentini (Barone et al. 2016: 182, Fabric C:175). For lack of Roman samples from Lentini, Barone compares the Roman-period AkCW vessels with Hellenistic finds from Lentine (Agodi et al. 1998; 1999; Barone et al. 2005). However, one should exercise caution when making interpretations based on just four fragments. Lentini and Akrai lie within the same geological zone, only 45 km apart, hence the clay used for ceramic production on both settlements could have been very similar (Barone et al. 2005: 753, Pleistocene bluish marly clay). Moreover, in the Roman period, identical types of kitchen vessels could have been produced in both towns, something that could not be ascertained for lack of published data from Lentini. Therefore, it seems reasonable at this stage of research to consider both possibilities, namely, that the AkCW vessels could either have been produced locally at Akrai or that the entire kitchen vessel production might have been transferred from Lentini to Akrai in the Roman period, or that the AkCW pots could have been brought to Akrai from Lentini.

2. *Peloritani Mountains and the vicinity of Messina Ware = Ware 8a*

It is a group of vessels represented only by two fragments of rims, classified as Akrai types T65 and T66 [*Fig. 15*]. Their fabric (out/inside 5YR 5/3) is fine-grained and contains scarce amounts of fine white and red grains. In a previous study, vessels from this macroscopic group were ascribed to the Pantellerian Ware (Wicenciak 2015: 270), but more recent archaeometric analyses have pointed instead to the Messina region and the Peloritani Mountains as the place of origin (Barone et al. 2015: 316–317).

3. *Unidentified production = Ware 12*

The production site of the W12 group of vessels remains undetermined and identifying it would require archaeometric analyses [*Fig. 16*]. The fabric (out/inside 5YR 7/6, core 5YR 5/1) is dense, fine-grained, with many medium and large dark red rough grains (iron?). Vessels classified in the Akrai kitchen and cooking vessels typology are two types of lids (T25 and T73), a casserole (T75), and a stand (T74). The casserole type imitates

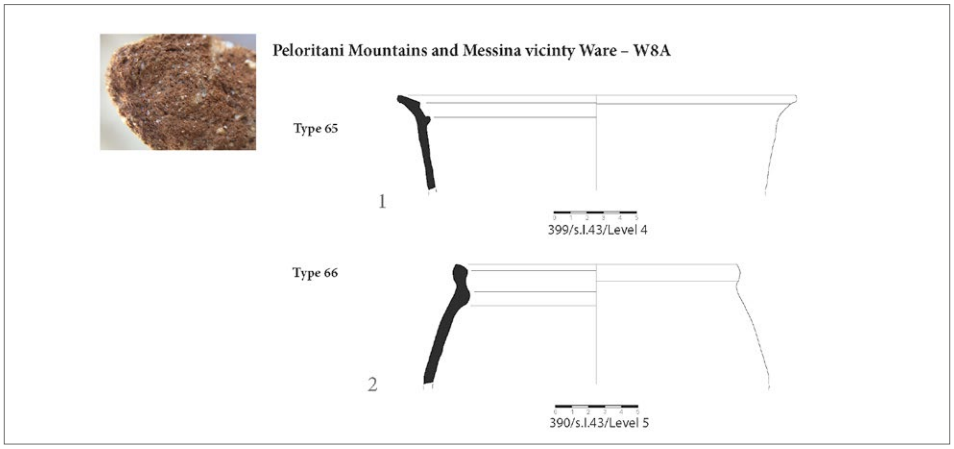

Fig. 15. Peloritani Mountains and Messina vicinity Ware – W8A (University of Warsaw Akrai Project | drawing and microphoto U. Wicenciak)

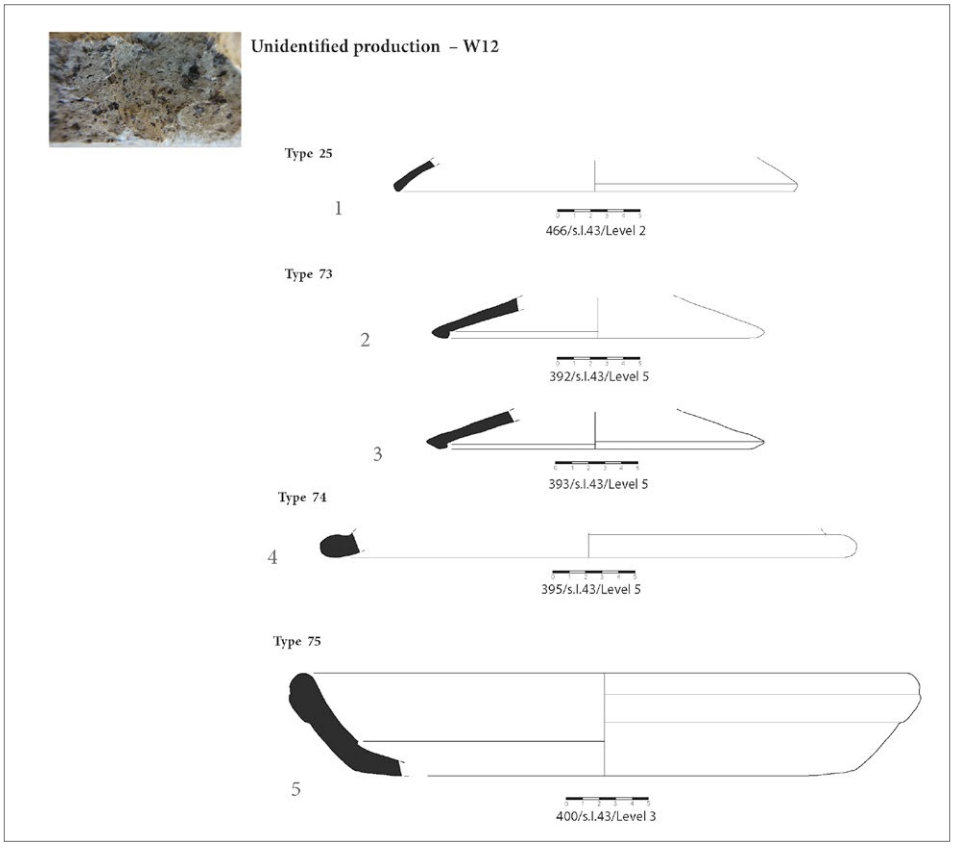

Fig. 16. Unidentified production – W12 (Archaeological Mission at Akrai | drawing and microphoto U. Wicenciak)

the shape of the 4th and 5th century AD Pantellerian production (see below, T19).

4. *Pantellerian Ware (PW) = Ware 8*

The PW is the second most common, after those of local or regional provenance, group of pottery (found) in the backfill of cistern. These vessels were manufactured on the island of Pantelleria between the 1st and 5th century AD (Olcese 2012: 524; Peacock 1982: 78–80). They are kitchen specimens with technological features indicating their use for cooking or roasting [*Fig. 17A–B*]. The thick-walled vessels were manufactured from a very characteristic fabric (5YR 5/3) with significant quartz and volcanic temper (Wicenciak 2015: 256, Ware 8, coarse fabric). These are open forms, such as pans or casseroles (Wicenciak 2015: 258–260), and fitting lids were made from the same fabric. The cistern deposit contained the following Akrai types 1, 2, 19, 23, and 24. These forms of vessels appeared at other sites across Sicily in contexts dated from the mid-4th to the 5th century AD (Baldassari 2015: 448, Fig. 3).

5. *Aegean Cooking Ware = Ware 11*

A group of imported cooking vessels of a fine-grained fabric interspersed with tiny specks of silver mica which is characteristic of the Aegean region in southwestern Asia Minor. The results of macroscopic analysis of finds from Akrai match the fabric description of the LR micaceous Aegean cooking ware group. Vessels made of this fabric were manufactured between the mid-5th and mid-6th century AD, and appeared at numerous

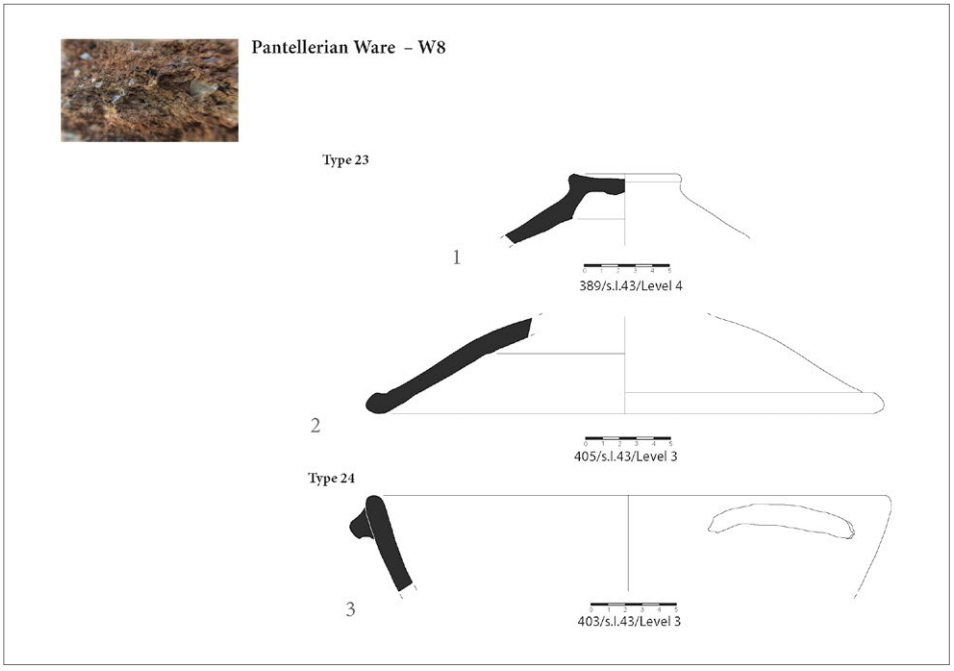

Fig. 17A. Pantellerian Ware – W8: lids and open vessel (Archaeological Mission at Akrai | drawing and microphoto U. Wicenciak

Fig. 17B. Pantellerian Ware – W8: open vessels (Archaeological Mission at Akrai | drawing and microphoto U. Wicenciak)

sites across the Aegean, Adriatic Italy and Carthage (Slane and Kiriatzi 2014: 910, Figs 8, 9). Therefore, their presence in eastern Sicily is just as likely. The backfill contained four types of cooking pots (Akrai types 13, 70, 71, and 72) [*Fig. 18*]. These forms find parallels, among others, in the material from Knidos dated to the early 5th century AD, where kitchen ware production, including cooking pots, was modelled on vessels from western Anatolia (e.g., Ephesus) (Doksanalti 2010: 770, Fig. 5; Doksanalti and Tekocak 2014: Fig. 4: 21).

6. *African Cooking Ware (ACW)*

Kitchenware imports from North Africa are represented by two fragments of dishes of form Hayes 181 (Hayes 1972: 200)/ Bonifay Type 3 (Bonifay 2004: 211–213, Fig. 112), as well as a single fragment of a lid form Hayes 185 (Hayes 1972: 204)/ Bonifay Type 9, variants B or C (Bonifay 2004: 221, Fig. 118) [*Fig. 19*]. These forms were produced between the late 1st and mid-4th century AD.

PLAIN TABLE WARE

The plain table ware found in the top part of the backfill was of a mixed character. While they were mostly of late Roman date (late 4th, 5th and perhaps into the 6th century AD), they were also accompanied by some much earlier (Republican or Early Imperial) sherds. The lower part of the fill contained ceramics of consistently late Roman date (Hayes 2006–2007; Rizzone and Sammito 2006: Pl. I, Nos 10,

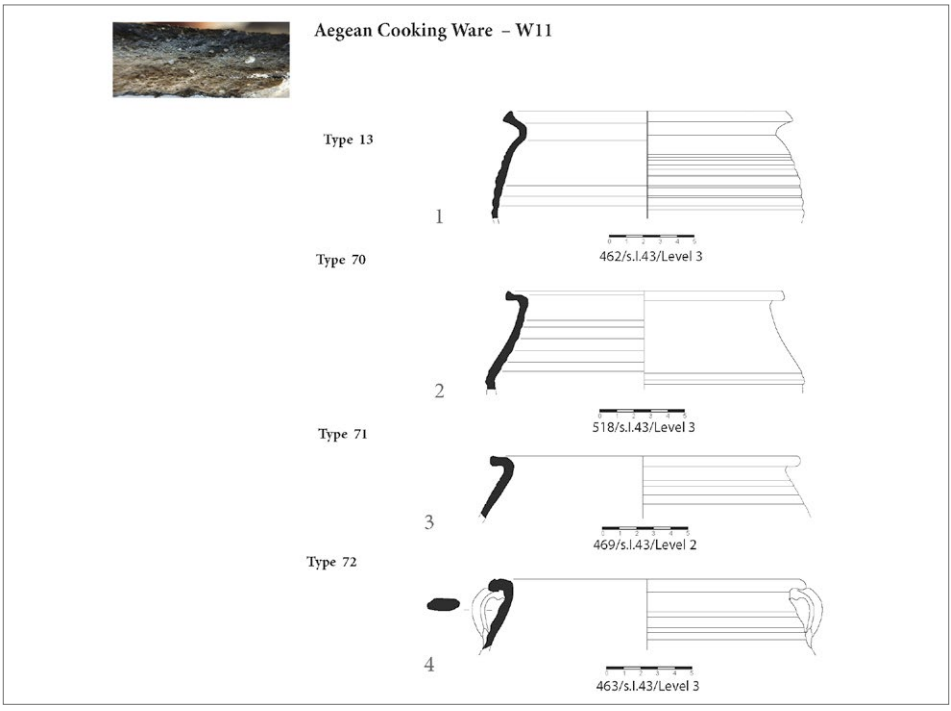

Fig. 18. Aegean Cooking Ware – W11 (Archaeological Mission at Akrai | drawing and microphoto U. Wicenciak)

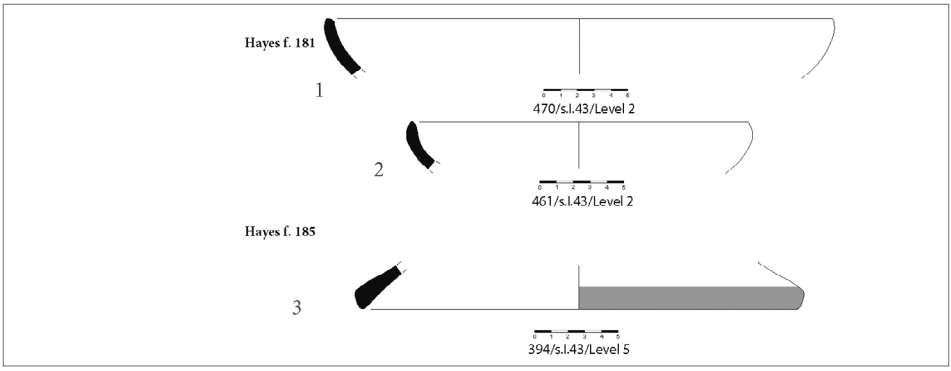

Fig. 19. African Cooking Ware (Archaeological Mission at Akrai | drawing U. Wicenciak)

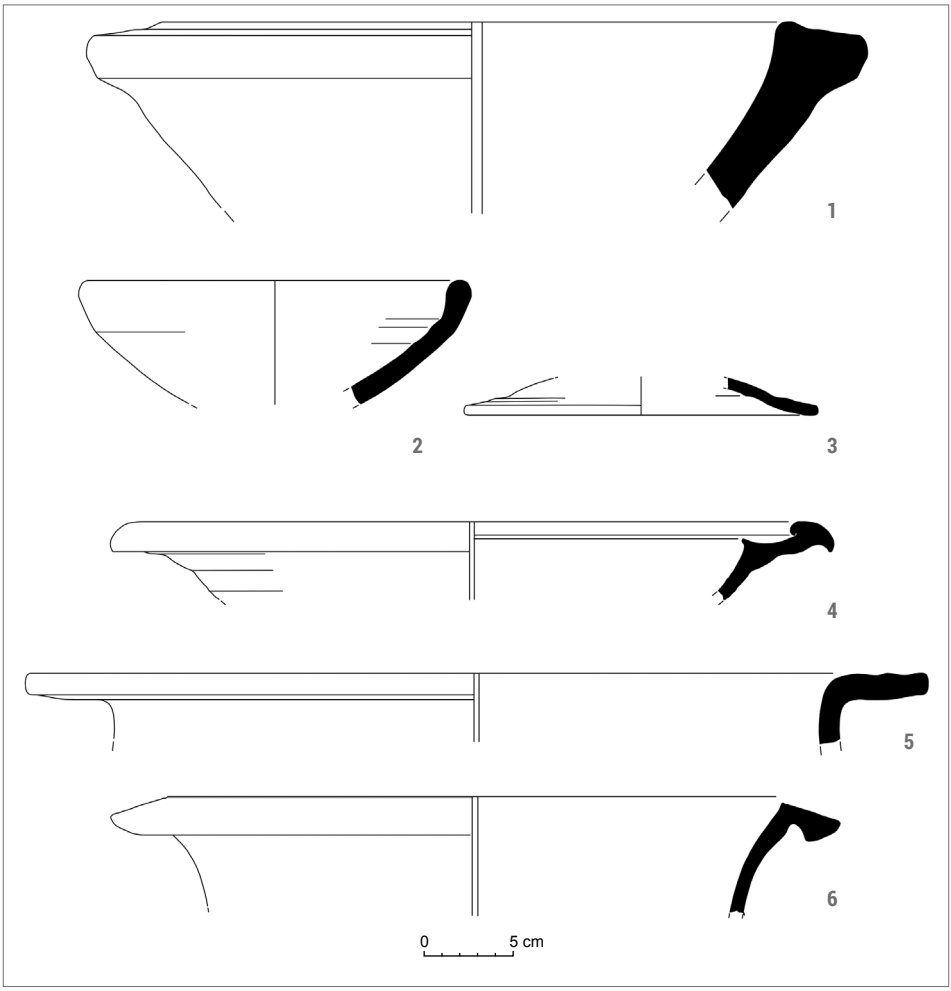

Fig. 20. Plain table ware: open vessels (Archaeological Mission at Akrai | drawing M. Burdajewicz)

13 and 16). The vessels found in levels 3 through 5 in some cases were recomposed of fragments coming from more than one level, e.g., 621/15 [*Fig. 22:9*] and 626/15 [*Fig. 23:12*] (levels 3–5), or 625/15 [*Fig. 22:11*] and 627/15 [*Fig. 21:7*] (levels 4–5), which suggests that these three layers formed a chronologically homogenous fill. As regards fabrics of the late Roman vessels in question, they seem generally to be descendants of earlier Roman imperial period fabrics (for the fabrics distinguished in the plain tableware category of ceramics, see Młynarczyk 2015), mostly later variants of F1, F 3 and F 3/F 4 being represented as well.

The plain table ware found in the cistern must have been destined for daily activities such as preparing, serving and consuming food. Open-shape vessels are apparently prevalent. Among them are fragments of mortaria in a coarse (ceramic building material) fabric [*Fig. 20:1*], a coarse-ware bowl with curved wall and rounded rim [*Fig. 20:2*] (Amari 2014: Fig. 3:6), a large dish or lekane [*Fig. 20:4*], a very shallow lid which may have been used also as a saucer [*Fig. 20:3*]. Moreover, two rims [*Fig. 20:5, 6*] apparently pertain to *situlae* (deep basins or 'buckets') (Amari 2014: Figs 3:3, 3:4 respectively, the latter with a horizontal handle). A basin frag-

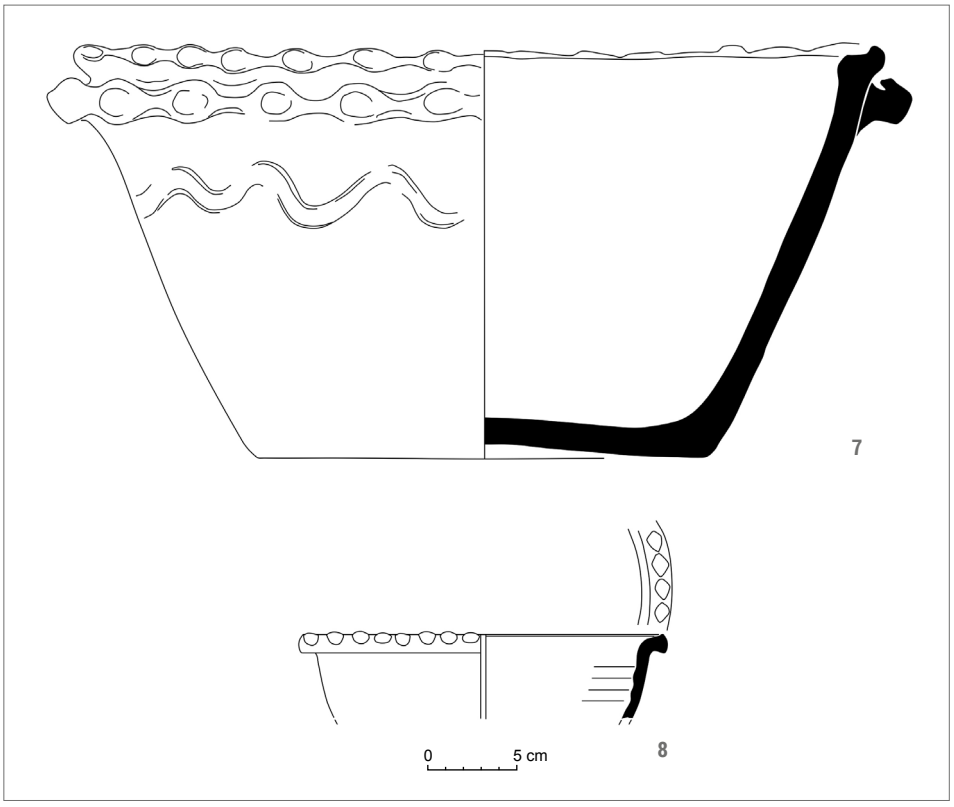

Fig. 21. Plain table ware: basin and fragment of bowl (Archaeological Mission at Akrai | drawing M. Burdajewicz)

ment [*Fig. 21:7*] bears a 'pie crust' decoration on the rim (Amari 2014: Fig. 3:5), a similar ornament adorns the rim of a smaller open shape, to be identified as a bowl [*Fig. 21:8*].

Closed-shape vessels seem to be fewer, although several sherds of 'combed' amphorae bodies should be noted. Additionally, there are fragments of a table(?) amphora [*Fig. 22:9*], its neck apparently pitched(?) inside; and a concave base in the same fabric [*Fig. 22:10*], although not joining, probably belongs together with the upper part. Another amphora [*Fig. 22:11*] bears some similarity to the

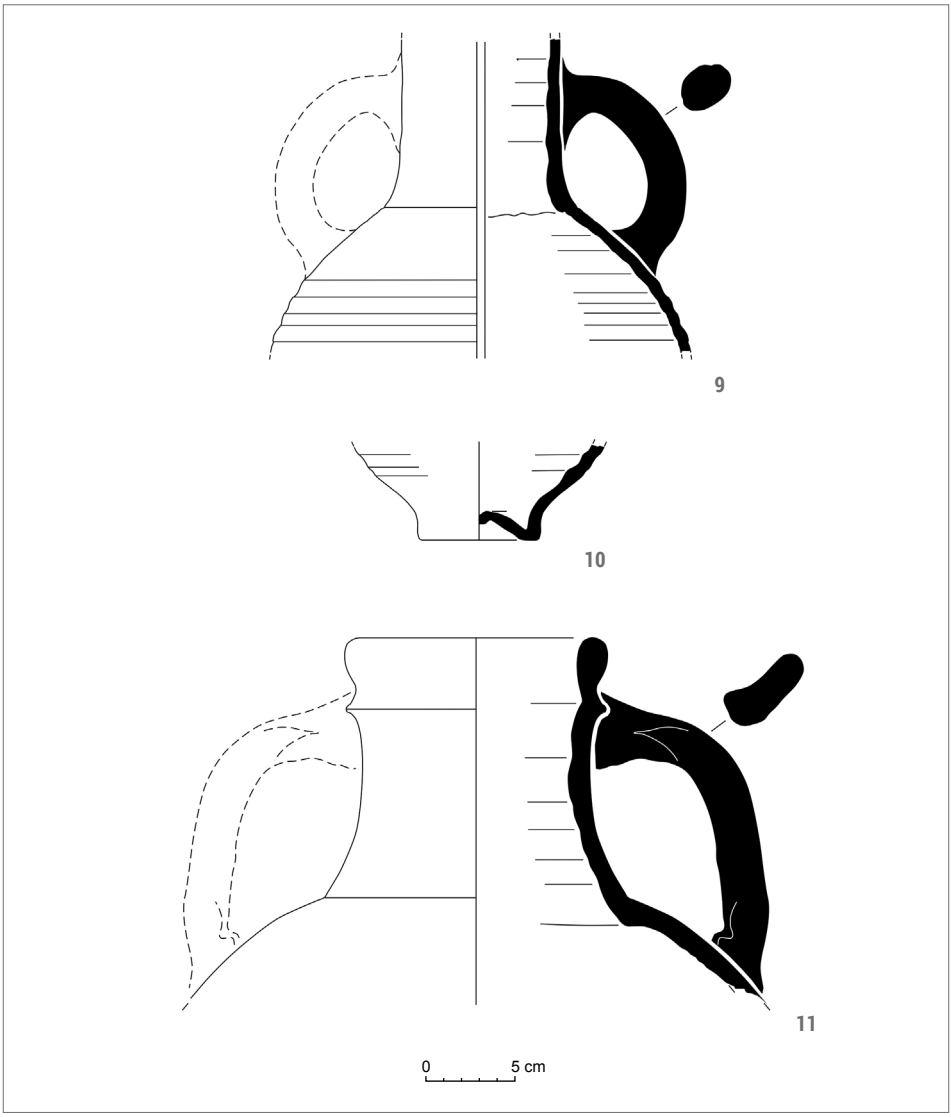

Fig. 22. Plain table ware: amphorae fragments (Archaeological Mission at Akrai | drawing M. Burdajewicz)

Mid Roman 1a amphorae, except for a distinctly different handle and some details of the profile (Amari 2014: Fig. 1:1–2). Unfortunately, the late Roman material pertaining to plain tableware or domestic multifunctional vessels (that is, for preparing food in other ways than cooking as well as serving and consuming) has not been sufficiently studied as yet and publications are scarce. For this reason, the late Roman assemblage from Akrai certainly deserves further consideration.

OTHER OBJECTS (MISCELLANEA)

The backfill of the cistern yielded some other artifacts, e.g., two bronze needles, flattened at the top and fitted with an oval-shaped eye; a fragment of the upper part of a bone needle with oval-shaped eye; three pestles made of stone; a few fragments of bronze and iron artifacts; a small iron sickle; a fragment of a bronze arrowhead; a bronze balance; and two stone weights. Among these artifacts there are two that call for special attention: a female terracotta head and a bronze signet ring.

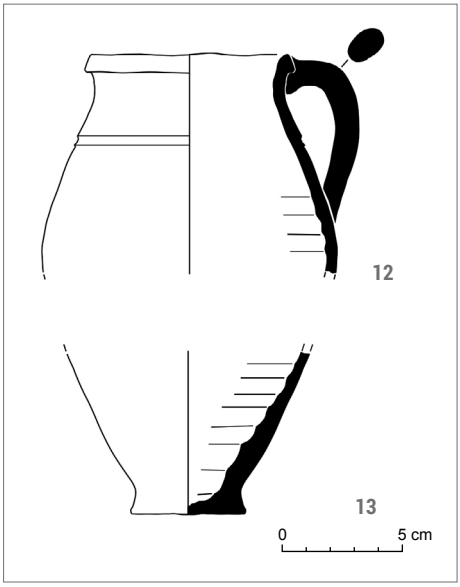

Fig. 23. Plain table ware: fragments of closed vessels (Archaeological Mission at Akrai | drawing M. Burdajewicz)

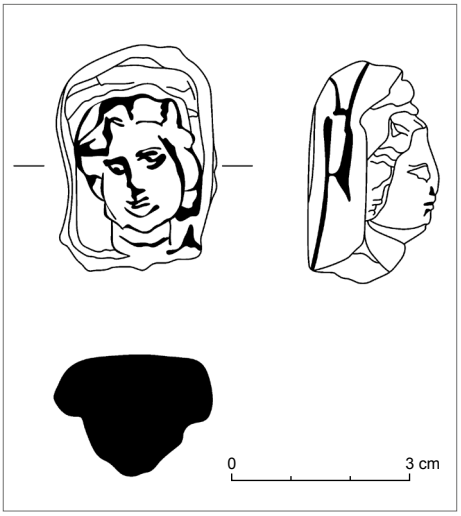

Fig. 24. Terracotta head of a woman (Archaeological Mission at Akrai | drawing M. Woińska)

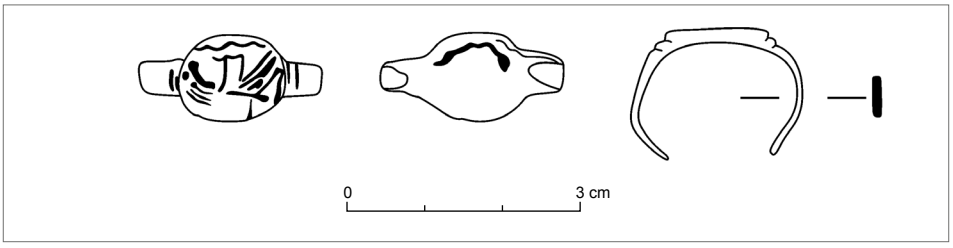

Fig. 25. Signet with flat oval bezel (Archaeological Mission at Akrai | drawing R. Chowaniec)

The female terracotta head is made of well-fired clay with a high density of inclusions of fine-grained mica and single grains of organic impurities, uniform in color: 2.5YR/6/6 light red. The head, with almond-shaped eyes, straight nose and straight lips with the ends turned down, is inclined slightly to the right. The hair is styled in a melon coiffure with remains of a veil still visible. The terracotta is dated to the mid-3rd–2nd century BC (Bell 1981: Figs 89, 93, 168, 281; Burn and Higgins 2001), which means it must have come from an earlier period and its place in the backfill is definitely residual [*Fig. 24*].

The dating of the signet ring complies with the chronology of the assemblage from the reuse phase. The flat oval bezel bears a representation of a bird, in left profile, with outspread wings (Orsi 1942: 155–156) [*Fig. 25*].

ARCHAEOZOOLOGICAL REMAINS

The archaeozoological collection contains 1105 animal remains, studied according to standard archaeozoological practice (Silver 1969; von den Driesch and Boessneck 1974; Reitz and Wing 1999; Lasota-Moskalewska 2008). Altogether, 1034 elements of animal skeletons were recognized [***Tables 3, 4***], which amounts to 94.03% of the analyzed assemblage. The bulk of bone and teeth fragments came from mammals (989) and birds (16). Moreover, 11 bones of a tortoise, probably from a single individual, were found, as well as 23 shells of mussels and snails.

The mammalian remains were dominated by domesticated animals. Wild animals were represented merely by four bones of deer, which amounted to 0.41% of the whole group. Elements of skeletons of the four basic species were most prevalent among the remains of domesticated animals. Among these, remains of sheep and goat were most numerous, reaching 46.14% of the remains of the domesticated mammals. Next in number, were the remains of cattle (27.85%) *ex aequo* with pig (26.00%). In addition, horse, donkey, and dog yielded a few fragments each. Birds were represented by skeletal remains of domesticated chicken. Remains of small ruminants, cattle, pig, deer, and chicken represented post-consumption waste. Some of them bore traces of portioning and culinary processing of meat. Vertebrae of cattle and sheep or goat showed nu-

Table 3. Animal remains from the cistern context

Taxon		n
Cattle	*Bos primigenius* f. taurus	253
Pig	*Sus scrofa* f. domestica	271
Sheep	*Ovis ammon* f. aries	48
Goat	*Capra aegagrus* f. hircus	54
Sheep/Goat	*Ovis ammon* f. aries / *Capra aegagrus* f. hircus	347
Horse	*Equus ferus* f. caballus	6
Donkey	*Equus africanus* f. asinus	4
Dog	*Canis lupus* f. familiaris	2
Deer	*Cervus elaphus*	4
Mammals		989
Chicken	*Gallus gallus* f. domestica	10
Galliformes		2
Aves identified		4
Birds		16
Snails		8
Mussels		15
Tortoise		11
Undetermined		66
TOTAL		**1095**

merous signs of chopping along the spine in the sagittal plane, across the middle of the vertebrae or either on the left or right sides of their bodies, which suggested that carcasses had been halved and portioned. In ruminants and pig, traces of carcass portioning were also relatively numerous around the hip, he knee, shoulder and elbow joints. Skulls and jaws of some pigs (only the oldest individuals) showed

Table 4. Anatomical distribution of mammal remains from the cistern context

Anatomical element	Cattle	Pig	Sheep	Goat	Sheep/ Goat	Horse	Donkey	Dog	Deer
Horn core/antlers	2			8					
Cranium	37	51	8	4	72				
Mandible	10	15	10	9	20				1
Cranial teeth	7	5	2		13				
Mandibular teeth	5	15	4	6	3				
Teeth		2							
Hyoid bone					2				
Cervical vertebrae	5	7	2		9				
Thoracic vertebrae	16	7			10				
Lumbar vertebrae	23	14			18			1	
Sacrum	2	2			1				
Coccygeal vertebrae									
Sternum									
Costae	36	84			72				
Scapula	14	8	1	3	12				
Humerus	10	10	1	1	12	2		1	
Radius	7	6	2	3	6				
Ulna	2	2			7	1			
Carpal bones	8								
Metacarpals	2	2	2	4	17				
Pelvis	12	3			9		1		
Femur	10	11		1	23		1		
Patella		9			4				
Tibia	12	8	2	3	20	2			1
Fibula	1								
Astralagus	1	1	4	1					
Calcaneus		3	2	1					1
Other tarsal bones									
Metatarsals	7	4	1	1	14	1	1		
Metacarpals or metatarsals	6				2				
Phalanx I	9	1	5	6	1				1
Phalanx II	7	1	2	3			1		
Phalanx III	2								
Total	**253**	**271**	**48**	**54**	**347**	**6**	**4**	**2**	**4**

signs of chopping and filleting, which suggested that brawn was consumed. Filleting was also evident on the ribs of all the above-mentioned species. It is puzzling, however, to see signs of chopping or whittling on the caudal side of a horse tibia. It may suggest horse meat consumption, but it is highly probable that it represents a craft-related activity that was abandoned unfinished for whatever reason.

In the case of pig, age-at-death was estimated for six individuals. Two of them were slaughtered under one month of age, one was between four and six months old, still another one about six to eight months, while one female and one male lived for 22 to 24 months, respectively. This indicates that slaughter involved mostly morphologically immature animals. It is worth noting that several dozen bones from all parts of the carcasses belonged to the two youngest individuals, one of which was found at the bottom of the cistern, whereas the other in the upper layers of the backfill.

Much less data on age-at-death could be obtained from dentition analysis performed on cattle, sheep and goat. The only thing that is certain is that the bulk of the individuals of these species reached morphological maturity, with the youngest sheep and goats, whose remains were found in the cistern, slaughtered at about 21 to 24 months of age, whereas the oldest were three or four years old. In the case of cattle, the age of the slaughtered animals ranged from several months (under one year) to five or even seven years old. This suggests two-directional breeding of these species, in which some of the animals were meant as a source of meat and slaughtered at a young age, while the other group was kept alive longer for diverse benefits of their husbandry, such as milk, wool or, in the case of cattle, pulling power. Of the chicken bones, three out of ten belonged to immature individuals, and only one to a mature female.

The registered bones were characterized by a high degree of fragmentation due to the animals' young age, culinary processing and taphonomic processes affecting the bones after their deposition as waste. Few bone fragments, apart from distal elements of extremities (mostly phalanges) were preserved in a state allowing measurements. Only one measurement enabling a withers-height calculation was obtained for cattle: the parameter, determined on the basis of the total length of the radial bone (GL = 263.3 mm) of cattle, was 113 cm.

The deposit found inside the cistern was mostly composed of kitchen waste, which being dated fairly broadly hinders an unambiguous statement whether it had accumulated over a long period of time or was the result of a short-term process. The anatomical composition of the remains as well as observations made in the course of an osteological analysis of remains from arbitrary layers indicate that, in the case of pig and probably also cattle, the bones of each species were deposited separately, in a single or, more probably, several larger batches (at least six pigs and four bovines). The analyzed remains reflect the dominant role of domesticated species as sources of protein and animal fat in the discussed period. The most prominent item in the menu of the residents of Akrai who deposited this material was lamb and goat meat, whereas pork and beef were of lesser importance.

MICRO-HISTORY: CHRONOLOGY AND FILLING

Micro-history, as stated by István M. Szijártó (2016), investigates—through small objects (artifacts, in case of archaeology)—answers to bigger historical questions regarding the life of 'past actors'. This paper presents artifacts of material culture excavated from a single cistern, reflecting thus on the micro-history of one Hellenistic–Roman house, reused in the later Roman and Byzantine periods, and shows its turbulent fate as well as that of its residents from the ancient settlement of Akrai/Acrae. The presented assemblage of objects contributes also to an interpretation of everyday social-oriented history. "The reduction in scale is an experimental operation precisely because of this fact, that it assumes that the delineations of context and its coherence are apparent and it brings out those contradictions which only appear when the scale is altered. ... The choice of micro dimensions arose as a direct result of the traditional preponderance of macro contextual interpretation, in view of which it was the only possible direction to take" (Levi 1991: 107).

The time and mode of use and filling of the cistern can be reconstructed on the basis of a general architectural history of the household and material culture (most of all numismatic evidence, fine ware, oil lamps and glass finds) found in the backfill. The large assemblage of artifacts, along with the big architectural blocks that were also found inside the cistern, show that the deposit accumulated gradually. The lowest level is exceptional in this regard, because it reveals the probable reason for when the fill started to accumulate, namely, a series of earthquakes in the AD 350s–370s, which also affected Akrai. This hypothesis is supported not only by the chronology of the material, but also by the characteristic deformation of the architecture, collapse of structures in one direction as a consequence of oscillation, and breaks in the walls which are evidence of a natural disaster (Chowaniec 2015a: 67–69; 2017: 166–170).

The material dated after the earthquake suggests that this area, at the end of the 4th century AD, after a few decades of stagnation, evidenced for instance by the absence of new coins, was again occupied for production and household usage. Once the area had been leveled with soil and intact or relatively undamaged architectural elements had been recovered from the rubble, new structures were built in this provisionally adapted space. This secondary adaptation was also evidenced by a practice of barring entrances with nibs or lintels and by the readjusting of the cistern for further exploitation. New structures and secondary space divisions followed more or less the layout of the original walls of the late Hellenistic–Roman house, indicating that the old walls were still standing above ground at the time. As a whole, however, the complex lacks either coherence or logic.

An interesting example shedding light onto the secondary function of the whole complex is the construction related to the cistern. No roof above it may suggest that the cistern was no longer in use as a reservoir for rainwater. Instead, it was involved in some kind of production, especially as the whole area was now

dedicated to some craft-related activity. The 'tub' might have been used for flushing, washing, or cooling things, the water used for this purpose, which would have run in the groove and refilled the reservoir, needing not to be particularly clean, especially as all the residue and pollutants would have gathered at the bottom anyway.

The proposed interpretation of the secondary exploitation of the cistern seems plausible, because approximately 2 m away from it there were traces of metallurgical activity in the form of two small hearths or small kilns with post-production waste, such as heavily vitrified slag or cut pieces of bronze ingots, and various tools—an axe, whetstones, iron gravers, tongs, bradawls, chisels, knives—in the immediate vicinity, as well as the bottom of a clay vessel containing remains of slag and a knife for cutting/portioning sulphur (Chowaniec 2015b: 10; 2017: 193).

Manufacturing activity was additionally confirmed by an enormous assemblage of bone and antler artifacts. Intensification of antler processing in late antiquity has been observed at many sites throughout the Mediterranean. Products made of antler and horn were intended to serve as a substitute for ivory, which at the time was reserved exclusively for sacred items (St. Clair 2003: 16–17). Finished products, semi-products, waste and offcuts, bone material after preliminary processing were noted within the house. The largest group (almost 500 specimens) among the bone and antler artifacts were hairpins and needles made from metacarpals, metatarsals, tibias, and radial bones of cattle, and, in some cases, from deer antlers (e.g., for hairpins made of bone, see Fituła 2018). The products were handcrafted with a turning lathe. The vast majority was carefully ground, rubbed and polished to give some shine to the surface. Many of the artifacts were left at an early stage of treatment, i.e., they were merely given a basic shape without any further elaborate treatment. In order to prepare a bone for further treatment, it had to be softened, in water, for example, so the cistern could have been useful in this context as well.

The cistern backfill was packed with fragments of plain table and kitchen ware, amphorae, and some ceramic building materials (from 36.2% to 14.7%, respectively) (Domżalski 2018: 212–214), including mainly late Roman and Byzantine pottery from the 5th/6th century AD, and late Roman amphorae. However, there were also finds from earlier periods (Hellenistic), which most probably had been deposited in the backfill of cistern during the original usage or later in the process of cleaning and readaptation.

The fine ware seems to be a homogenous group, represented by the most popular ARS vessels imported to Akrai in the 5th century AD (form 61 dish). However, the last use is indicated by one or two of the youngest finds, coming probably from the first decades of the 6th century AD. There were also many fragments of glassware which, mainly on the basis of parallel examples from other sites in Sicily, Italy, and the Levant, may be dated to between the 5th and 6th century AD. It would be in line with the date suggested by the pottery found at the site (Wagner 2015: 159, 165–167, Fig. 8.15).

The numismatic evidence is crucial for determining the history of this cistern and house. Two late Roman bronzes from level 5 are approximately 30 years older than the earliest finds from level 4, separated by a 10 cm thick layer, which seems hardly a coincidence. It has to be stressed that no coins of the FEL TEMP REPARATIO type, with the emperor and a rider on the reverse, were found in the cistern. They are dated from AD 355 to AD 363 and this refers to coins of a denomination reduced to size AE 3 or even smaller, found frequently at the site of Akrai. Neither are there any coins of the SPES REI PVBLICE type, usually quite common in Akrai, which come from the terminal years of the reigns of Constantius II and Julian II (about AD 355–363). The reservoir does not contain any AE 3 bronzes of the SECVRITAS REI PVBLICAE type, with Victory holding a palm and a wreath, which started to be produced in AD 364 and which are known from other parts of the town.

Thus, it may be hypothesized that the cistern served in its original function at least until about the mid 4th century AD. At the time, two coins of the VOT XX MVLT XXX type, from AD 347 or 348, both exceptionally well preserved, were deposited therein.

It is hard to tell whether the deposition of some much older Hellenistic bronzes—the three items from level 5—can be tied back to a more distant past, perhaps the original use of the cistern, or were somehow deposited contemporaneously with its later life. Most of the coins, if not all of them, found their way inside the cistern at the same time, about AD 350 to AD 355. However, numerous coins from level 4 (as well as a single bronze of the VOT V type from level 3), dated to between AD 378 and AD 395, suggest that the intensive backfilling of the tank did not start before this period or shortly after that. Once it was clear that it could no longer hold water, it was methodically filled in. In level 2, around 1.50 m above the cistern bottom, clearly later coins minted in the first half of the 5th century AD were found next to coins issued at the end of the 4th century AD. At the same time, the much older Hellenistic coins, present in the backfill up to this level (above 761.83 m asl), ceased to appear. It suggests that the backfill soil now contained less archaeological material in general and, notably, not from distant past, mainly objects of daily use, or items which had gone out of use in a relatively recent past. The stratigraphic units of the fill grow thicker the closer they are to the cistern's inlet, while the number of coins found in the layers decrease.

Establishing the date when the reservoir was definitively filled in does not seem to be possible in the light of the numismatic and other finds. The youngest coin shows that it was approximately in the mid-5th century AD at the earliest, but most probably much later. Few small denominations confidently dated to the 5th and early 6th centuries AD have been recognized at the site of Akrai until now. It is therefore not surprising that, apart from the bronzes with a cross motif on the reverse found in level 2 (from about AD 425 to AD 455, if we assume the fringe dates), no later coins have been found. Thus, the answer to the question about the youngest archaeological material is rather given by the other kinds of artifacts.

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Abbreviations of numismatic references

BAR Carroccio B., *Pelorias* 10, Messina 2004
CNS *Corpus Nummorum Saeculorum*, Milano
OLA *Dal basileus Agatocle a Roma. Le monetazioni siciliane d'età ellenistica (cronologia – iconografia – metrologia)*,
RIC Sutherland C.H.V., Carson R. A. G. (eds.), *Roman Imperial Coinage* vol. I: *From 31 BC to AD 69*, London 1984; Mattingly H., Sydenham E. A. (eds.), *Roman Imperial Coinage*, vol. II: *Vespasian to Hadrian*, London 1926

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