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# EARLY POTTERY PRODUCTION IN *APULUM* (PARTOŞ) – AN OVERVIEW OF RECENT RESEARCH

*Apulum*, the modern city of Alba Iulia (Romania) became one of the largest conurbations north of the Danube during the early Severan times (**fig. 1**). This complex urban settlement included a legionary fortress, *canabae* and two separate towns: *Colonia Aurelia Apulensis* and *Municipium Septimium Apulensis*. The rapid development of this conurbation is due to a number of factors: the military presence, the proximity of the goldmines from *Alburnus Maior*, the economic potential of Mures Valley and its location on the imperial road axes. Furthermore, *Apulum* was the center of the imperial administration in *Dacia* and the residence of the governor[1].

The excavations started in 1989 by A. Diaconescu in the territory of the *Colonia Aurelia Apulensis* (known today as suburb Partoş) focused on identifying the edges of the c*olonia*[2]. They have revealed along with votive objects related with *Liber Pater* cult, a number of kilns and large quantities of pottery, mainly waster pits, indicating here a kiln activity site. Systematic excavations developed by *Apulum Project*[3] from 1998 until 2003 have shed light on the nature and history of the site and produced much clearer evidence of pottery production activities in the area[4].

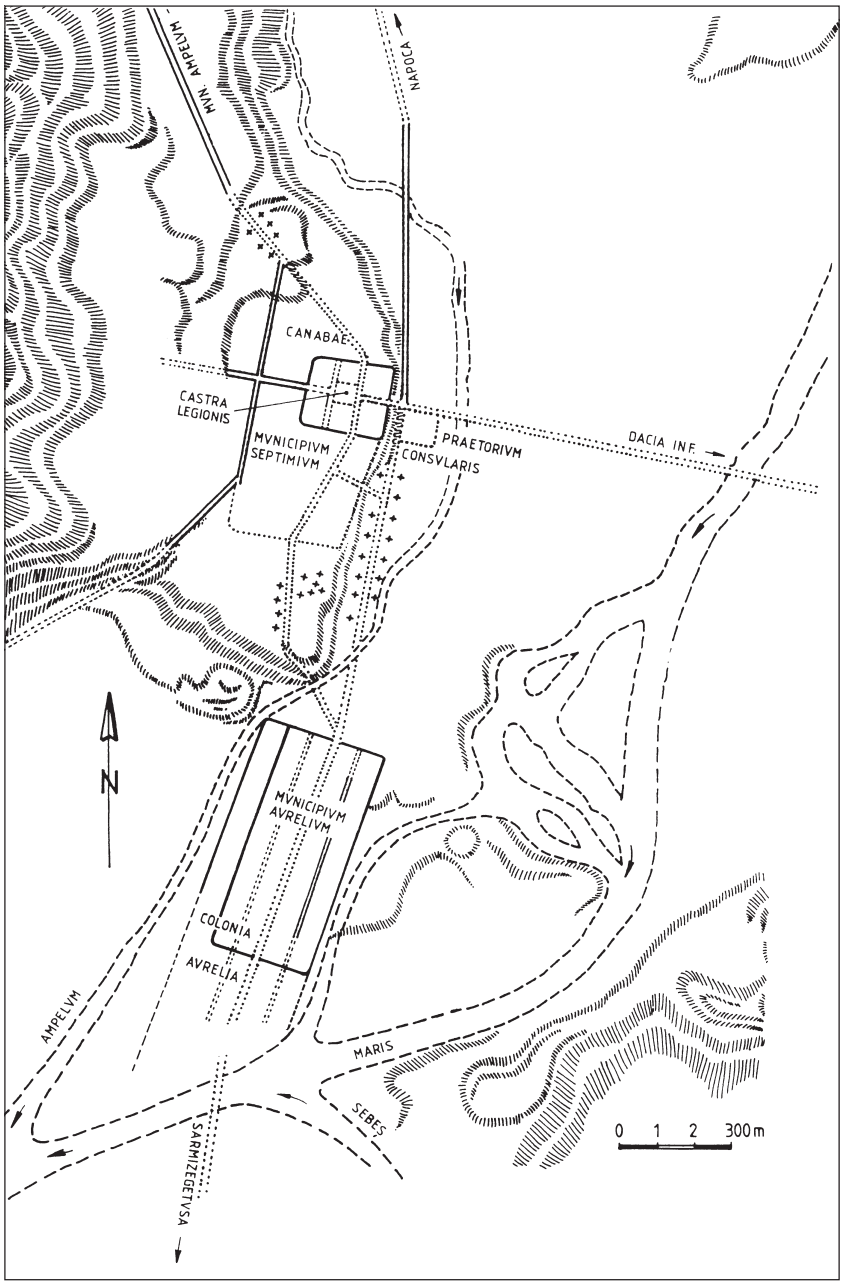



**Fig. 1:** Severan Apulum, the different co-existing settlements

## The extent of the Partoş light industrial area

*Background of the research* – Pottery manufacture in Partoş was previously documented by B. Cserny who conducted the first rescue excavation at *Colonia Aurelia Apulensis* in 1911–12. He recorded a complex building with at least 13 rooms, probably a workshop, judging by the kilns and the large amount of waste or unfinished pottery found in rooms H and I[5]. Other kilns and waster pits were recorded by Cserny in the vicinity, on different properties within the area of Partoş[6]. His remarkable reports are of considerable value in view of the location of

[1] Piso 1995, 203–209.
[2] Diaconescu 2004, 103–117.
[3] *Apulum Project* was a tri-national project, collaboration between University of London-Birkbeck College, Humboldt Universität zu Berlin and Babes-Bolyai University of Cluj, led by I. Haynes, A. Schäfer and A. Diaconescu. The excavation team consisted mostly of students from Britain, Romania and Germany supervised by professional field archaeologists.
[4] I would specially like to thank Robin Symonds for all his support, trust and patience he had shown to me as well as help and consultancy for the creation of this paper. This work could not have been possible without the help of numerous field archaeologist colleagues and I am very grateful to all of them: Doru Bogdan, Claudia Melish, Jamie Sewell, Gabi Sicoe, Szilomer Panzer and to all others directors, supervisors and students.
[5] Cserny 1912, 112; 266–268.
[6] Cserny 1912, 282–283.

his research very close to the site excavated by the *Apulum Project* team.

Evidence for major production at Partoş comes from several sources. In addition to the four kilns uncovered by A. Diaconescu's evaluation trenches, two others were excavated by the *Apulum Project* team (**figs. 2–3**). Furthermore, the magnetometer survey undertaken by GSB prospection at the initiative of I. Haynes in 2002 showed strong responses typical of kilns or other such strong fired features in the area south of the site, suggesting that the excavated trenches are on the northern limit of the industrial area. To this evidence we should add a large variety of potters' tools that testify to production activities: roulettes for decoration (**figs. 4–5**), potters' wheel fragments (**fig. 6**), tripod-shaped clay objects used to stack and support the vessels in the kiln (**figs. 7–8**), *poinçons* (**fig. 9**) and moulds for samian bowls (**fig. 10**).

Together all this information helps to illuminate a picture of the light industrial area that lies on the river Mures terrace.

**Fig. 2**

**Fig. 3**

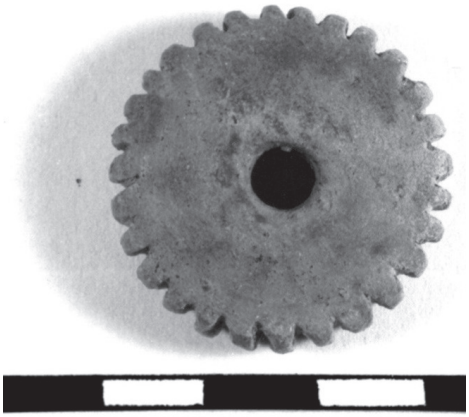


**Fig. 4**

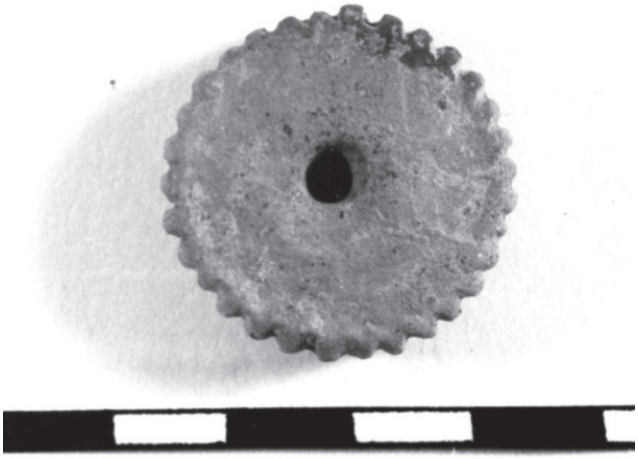


**Fig. 5**

**Fig. 6**

**Fig. 7**

**Fig. 8**

**Fig. 9**

**Fig. 10**

The basic requirements for pottery production were present there: good suitable clay, tempering material, water and fuel, a good local market and access to trade and transport routes.

**General discussion on pottery production on the site**[7]

Pottery production proved to be the earliest discernable activity on this site. It was marked in the earliest stages by a substantial clay extraction, activity that generated a huge pit (generally referred to by the excavators as 'the big pit') on the eastern part of the site. The cut of the pit represents stratigraphically the earliest feature. The edges of the pits were reached in few of its eastern and western limits (it was about 20 m wide), its southern edge appears to fall a bit north of the railway embankment (that lies south of the site); the northern extent remains yet unknown. The pit was open for a long time, however, as the soil analyses have shown that at least for a while it contained a large pool of standing water. The resulting hole became a waste disposal area by those working with the kilns. At one stage a kiln was built into the pit and wasters piled up around it. When this kiln was abandoned the pit was filled in by pottery waste before being finally covered with earth and gravel. The fills within the pit consisted of frequent deposits of burnt daub, waste pottery, charcoal and bricks that were vitrified at one end (presumably from having been placed in the kiln). All these finds were products of kiln activity. When the sanctuary for *Liber Pater* was built up in this area, pottery production continued in its immediately vicinity, possibly linked to the sanctuary. Kilns and pottery activity congregate around the cult buildings but do not encroach on the central area. These kilns represent the latest traces of activity at the site.

[7] For the data about the site formation I thank Dr. I. Haynes.

## Pottery Analysis[8]

The site generated the largest group of well-stratified pottery excavated in the area (in excess of 600,000 sherds). The pottery production database comprises currently 76,663 analyzed sherds from definite production contexts. The huge amount of waste pottery that backfilled the 'big pit' suggests the output of a substantial workshop. The pottery residue here obviously represents what was disposed but also illustrates the range of vessels produced. The following is a summary of all the pottery which can now be identified as coming from the kiln activity.

### Coarse Reduced Wares

The early production activities seem to have been mainly characterized by reduced wares: 88,2% (by sherd count) of the pottery that backfilled the 'big pit' are coarse reduced wares (**fig. 12**). Two major fabrics have been identified (encoded as APCR1 and APCR2), the second one being essentially a coarser version of the other. These are basically the most common Roman coarse grey fabrics, with a finely irregular matrix, sparse-to-moderate grey/white fine-to-medium sized quartz, medium mica and some fine (limestone?) white inclusions. Many examples have a dark grey core with paler grey margins and no surface treatment. Mica inclusions are more likely the result of using micaceous clay rather then a tempering; all pottery seen so far in *Apulum* is very micaceous. A hand-made version of this fabric also occurs very rarely.

The **forms** (**nos. 1–38**) include all the major vessel types, with jars and lids the most common (**fig. 13**). Apart from the obvious wasters, all reduced pottery has unusually soft walls, irregular rims, poor surface treatment and was obviously never used. The state of preservation is generally very fragmentary, probably due to a deliberate fragmentation process[9].

*Flagons* form a significant proportion of reduced ware. One type appears to be very distinctive in this typology (1FAP), a lid seated flagon with one or occasionally two handles, bulbous body and flat bottom (**nos. 1–3**). The wide mouth (diameters measure 140–150 mm), strong handles and its large proportions suggest rather a storage flagon or a small amphora. Seventeen such wasters, almost complete, were found in a pit full of *dolia*, which has been re-used in a later stage as a dump for waste.

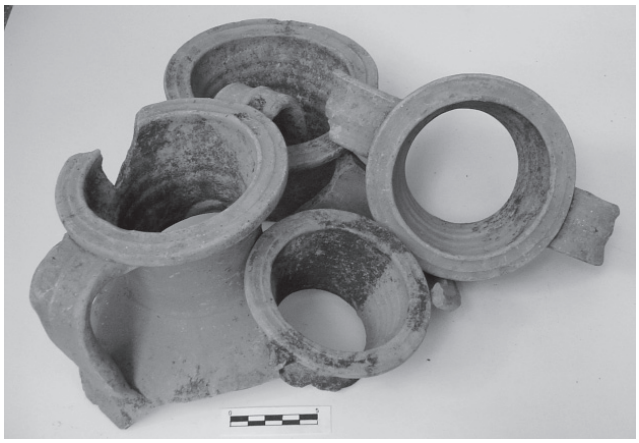


**Fig. 11**

*Pinched-mouth flagons* (I.C.AP), probably used to pour liquids, represent only a small percentage of the flagons (**nos. 4–5**). It has been possible to reconstruct only a small number of complete profiles; they are very difficult to be identified as bodysherds, unless rims or larger fragments are not preserved.

*Jars* are by far the most common vessel type produced on this site, both by sherd count and EVEs (estimated vessel equivalents). The majority of jars are *lid-seated* (**nos. 6–7**), supported by a similar proportion of lids. The vessel has a thickened everted rim, short neck, rounded body and typically one or two grooves on the shoulders, many of the exemplars being also one handled (**nos. 8–9**). Another distinctive jar type, also referred to as *Schultertöpfe*, has a more triangular rim and a sharply angular shoulder (**nos. 10–11**), paralleled in many Swiss sites[10]. *Storage jars* (**nos. 12–14**) form an interesting group; the shape appears to be very similar to a *dolium*, mostly the rims, but in a rather smaller, jar-like version.

*Beakers* are not heavily represented. Such table wares are more likely to have had a finer fabric. The exemplars seen so far in this ware have a globular body, taller rim slightly curved and one or two handles (**nos. 15–16**).The bodysherds are actually easily confused with smaller jar fragments, which could account for their rarity.

*Bowls* include few distinctive types. The most common form of bowls is the *wide-mouthed bowl* (**nos. 17–20**) with a squared off rim frequently with an internal bevel and a cordon directly beneath the rim, high shoulders and a small flat base. Typically there is a groove at the junction of the neck and the shoulder; two grooves may also occur on the shoulders. Different rim variants are illustrated, thickened or angular, more or less everted, the vessels being essentially the same type; this is rather a cooking ware, very similar to jars (II/IV). It is very difficult to distinguish in bodysherds between the wide mouth bowls and the lid seated jar, the rims of the vessels being very similar as fabrics and forms.

[8] The pottery classification was based on identification of *forms within fabric types*. The fabric analyses followed the criteria used in the Museum of London Pottery Fabric Collection (Orton et al. 1993, 231–242. — The fabrics analyzes were led by Fiona Seeley [MoLAS]). They were isolated using a binocular (× 20) microscope. A significant aspect of the fabric descriptions is the textual definition rather than a strictly technological one. Descriptions of the main characteristics of each fabric have been adopted instead of attempting to identify each inclusion type (frequency, size, sorting, rounding); the main characteristics recorded refer to differences like fine-coarse, hard-soft, surface treatment and methods of manufacture. Further thin section analyses are needed for a better definition of the local fabric types. — Form classification and definition generally follows the current London system, which in turn is based on the Marsh and Tyers system established in 1978 for early coarse pottery from Southwark (Marsh/Tyers 1978). The *Apulum* production type-series is actually an extension of this typology. The division of pottery into major classes (e.g. I= flagons, II =jars, etc.) has been maintained; the subdivision into form types proved to be rather difficult to follow, therefore local types were defined in a slightly different manner.

[9] The 'big pit' fills posed problems of soil stability for the next generations too.

[10] Ettlinger/Simonett 1952, Taf. 5. — Ettlinger 1949, Taf. 12,2.

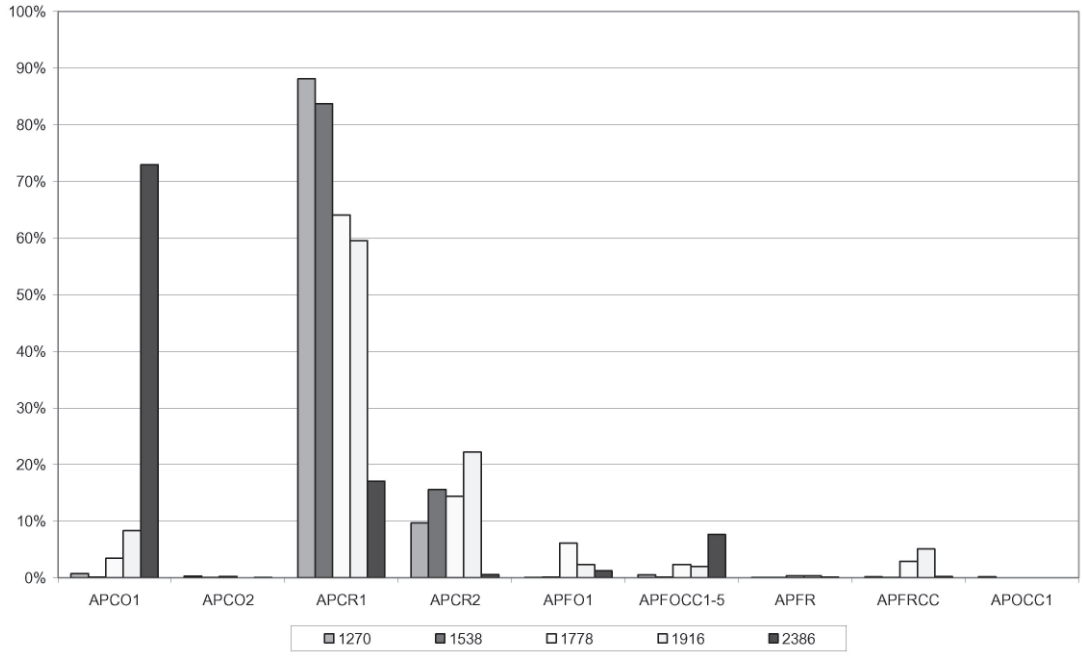



**Fig. 12:** All fabrics by sherd's count, Eve's and weight

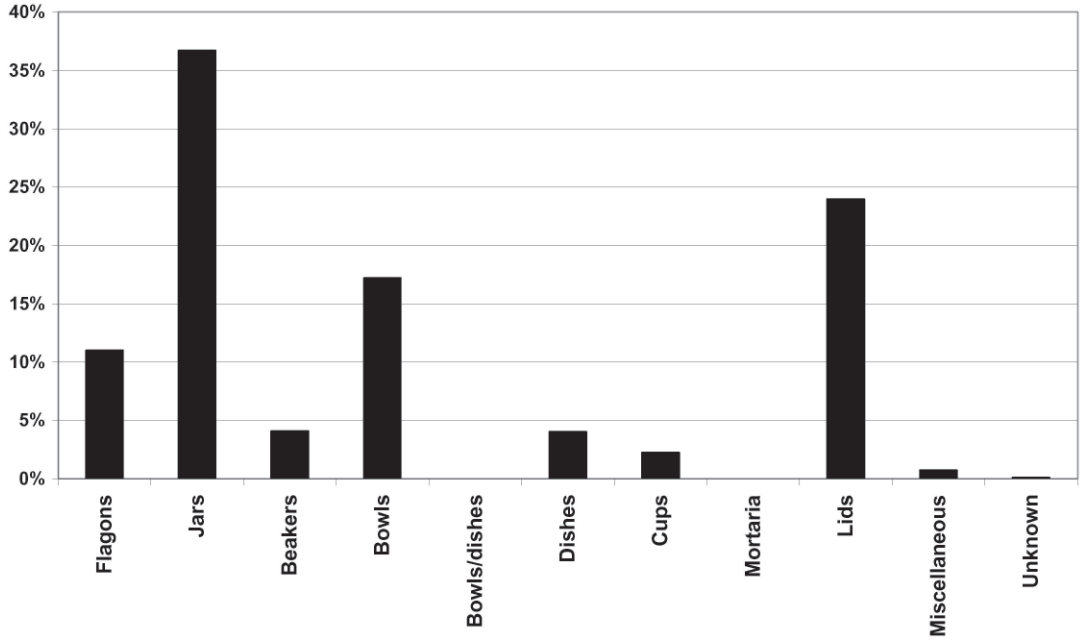



**Fig. 13:** All forms by sherd's count

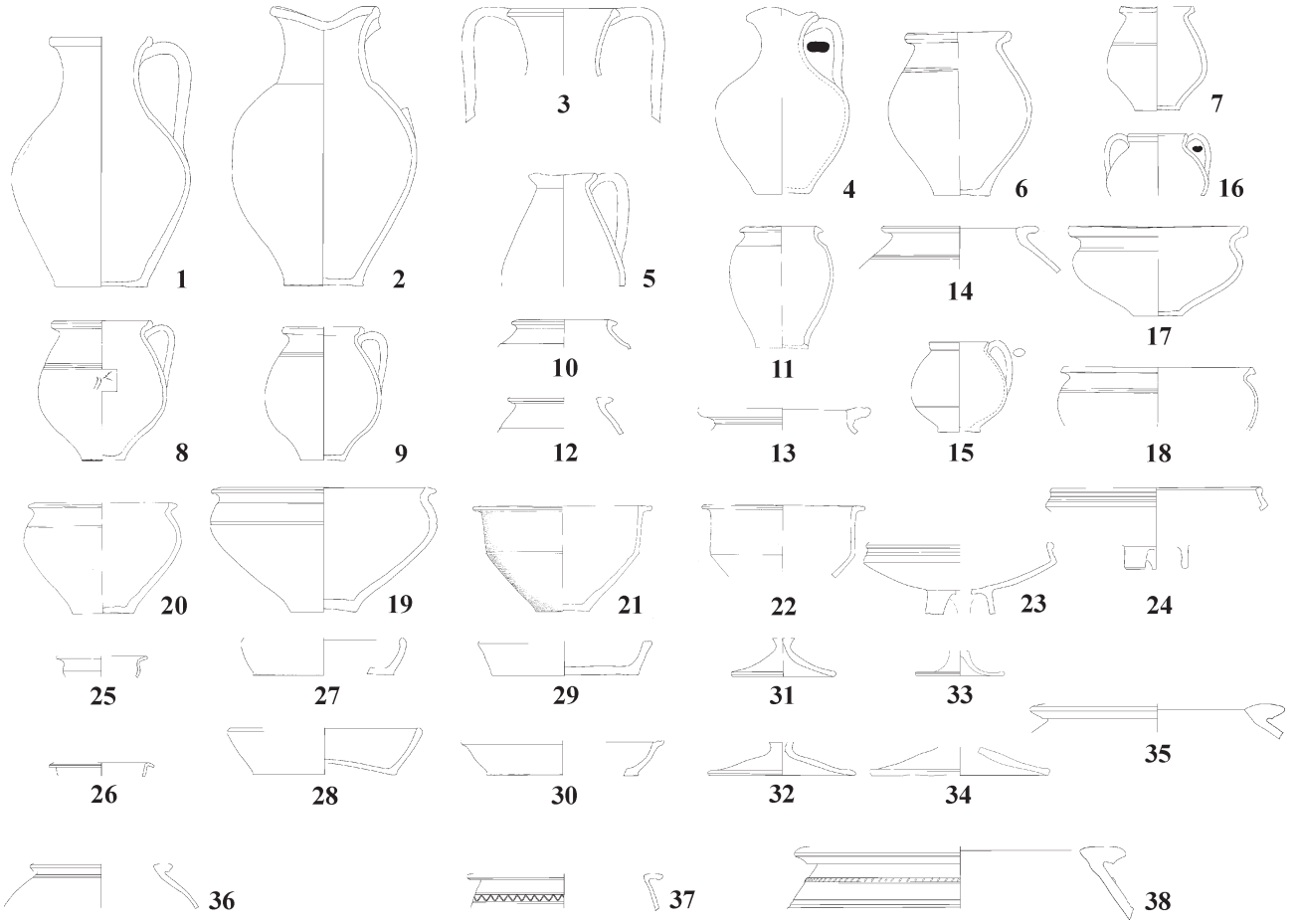
Another interesting type is the *carinated bowls* (IVA). The vessels have generally a grooved rim, thin carinated walls and a small, flat base (**nos. 21–22**). Most of the exemplars have a groove at the point of carination. Particularly interesting forms are the so called *tripod bowls/ Dreifußschalen* (**nos. 23–24**), for this province associated with Norico-Pannonian influences[11]. Though only three individuals could be identified their local production is supported by wasters. *Miniature bowls* (**nos. 25–26**) with broad everted rim are completing the range of bowls, from the very wide to the very small recipients.

*Dishes/Plates* fall into two main groups: dishes with plain rim (IV/VJ.AP) and dishes with grooved rim. There are some variations in the angle of the wall and rim to the base (**nos. 27–28**). A second type has probably matched with a lid (**nos. 29–30**).

The *lids* are also highly represented. Their use together with jars, bowls and storage flagons is supported by similar rim diameters. There is not much variety within this category; the largest numbers of lids are of type IXA.AP1 (**nos. 31–33**) with plain rounded rim whereas IXA.AP2 has a somewhat hooked rim (**no. 34**). Along with the hard gray fabric, the lids also occur in a softer version, generally with a darker black core and a brownish exterior.

*Dolia* were one of the main grey ware products of this kiln site. Quantification by sherd count in this case is not

[11] HUSAR 1999, 174.



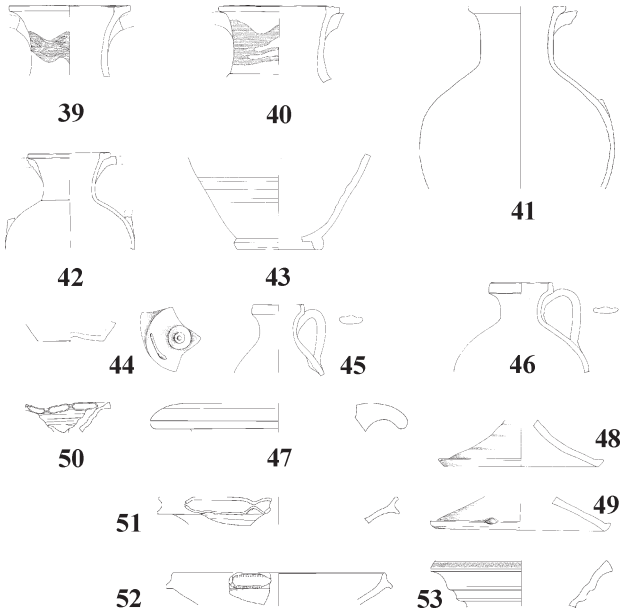

**1–38:** Coarse Reduced Wares. Scale 1 : 10

very accurate; they are better represented by weight and EVEs; unlike jars or bowls, *dolia* broke in rather larger fragments and therefore may appear under-represented. A dominant type, with slight variation in rim angulations can be observed (**nos. 35–37**). They are typically decorated with grooves or occasionally wavy lines immediately under the rim or on top of the shoulders. Some have a so called *late La Tène decoration* (**no. 38**).

### Coarse Oxidized ware

The high percentage of reduced ware for the largest production features, initially suggested that early kiln activity would have produced only grey ware, whereas oxidized wares were better represented among the late production. This opinion was soon contradicted by subsequent excavated features. A few large oxidized ware contexts appeared, illustrating very early production activities. There is no doubt these are only a fraction of the early oxidized ware production picture of this site.

*Flagons* are the main form illustrated in this ware (**fig. 14**). The contexts (C: 2386) excavated represent in fact a misfiring, a kiln loaded almost exclusively with storage flagons. The whole firing went badly wrong and was dumped with the kiln itself. It is not only that all vessels underwent the same conditions in the kiln but there is also a high homogeneity of form types. The flagons are the by far dominant




**39–53:** Coarse Oxidized Ware. Scale 1 : 10

form, representing almost 90% of the vessels found (by sherd count, EVEs and weight). The majority of these vessels illustrate one storage type vessel (1E AP), with a large bulbous body and two strong handles, resembling an amphora

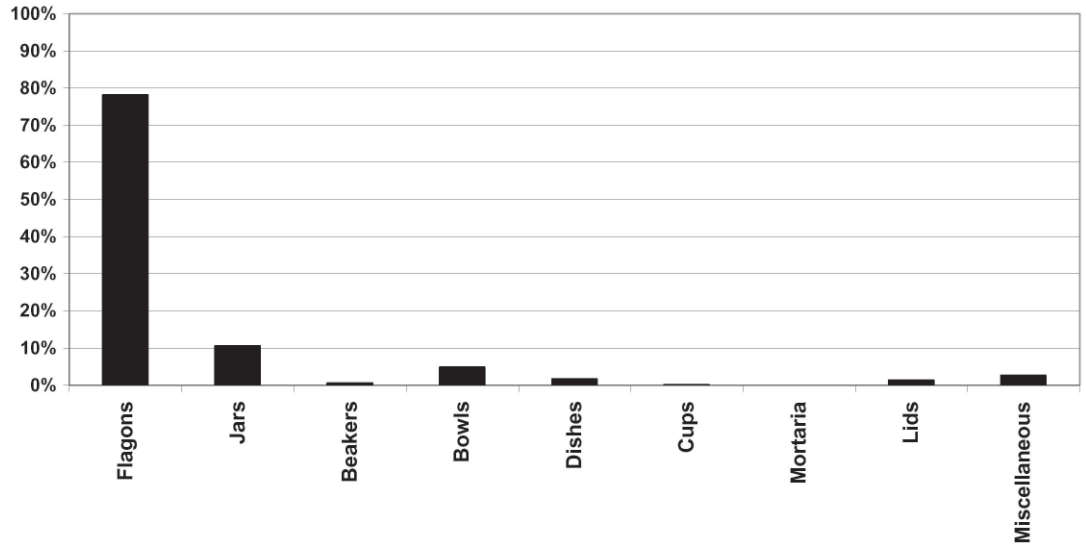



**Fig. 14:** Context 2386, % forms by sherd-count

type (**nos. 39–42; fig. 11**). The flagons have a large mouth (diameters ranges from 130 to 160 mm), with a flat grooved/ moulded rim, possibly matching lids or stoppers. The bases are ringed or 'omphalos' shaped (**nos. 43–44**).

The fabric is red-orange to beige with sparse fine white quartz, moderate stain of iron or black particles and some fine mica. Some examples have a soft, paint-like, colour coating, on the upper half. Sometimes black and red painted wavy lines may occur as decoration. The firing was intense, these vessels being actually overfired, as many are completely destroyed, with big bubbles or interior voids.

A second type is significantly less represented and was more probably a table ware, with a smaller, rounded body, one handle and a higher, plain rim (**nos. 45–46**).

The rest of the vessels within the firing were probably meant to fill in the free spaces in the kiln, sometimes placed inside larger vessels as variation in colour suggests.

The following forms are also certainly attested by wasters as being local products.

*Mortaria* are illustrated only through a minimum number of gritted fragments. The presence of few clearly waster's fragments prove though such vessels were also locally produced. One single rim fragment illustrating a common type was identified (**no. 47**).

*Lids* may rarely occur, similar types to the reduced versions. Most of the examples have a concave profile, with up-turned rim (**nos. 48–49**).

*Tazze* (*turibula*) are not heavily represented but there are a significant number of fragments and some obvious wasters that testify to their early production. Two types were identified on the basis of rim and body characteristics. The most common has a *pinched rim* (the rim and the flange have been pinched together at some intervals), sometimes with a carination on the body (**nos. 50–52**). The second type has a rather simple rim and a body, with many carinated flanges (**no. 53**). Rouletted decoration may occur on both types, on the rim and flange. Diameters generally illustrate medium-sized vessels (240–300 mm).

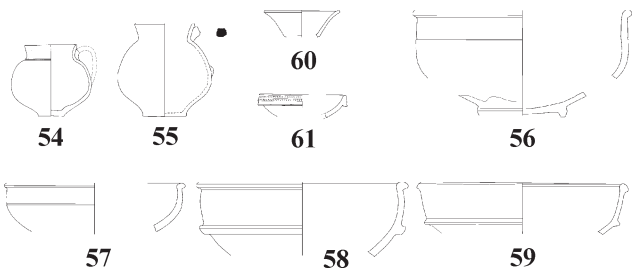
**Fine wares**

Though fine wares represent only a small percentage of all pottery, it seems reasonable that a larger scale production also existed along with the coarse wares manufacture. It is probable that the excavated features only illustrate partially the character of the whole industry. The presence of the 'big pit', filled almost exclusively with grey ware products, may create a false image of the whole early production picture. The fine oxidized wares could easily be products of kiln activity taking place in the vicinity of the excavated site, as the oxidized contexts also included sufficient waste fine ware vessels to attest to their early production.

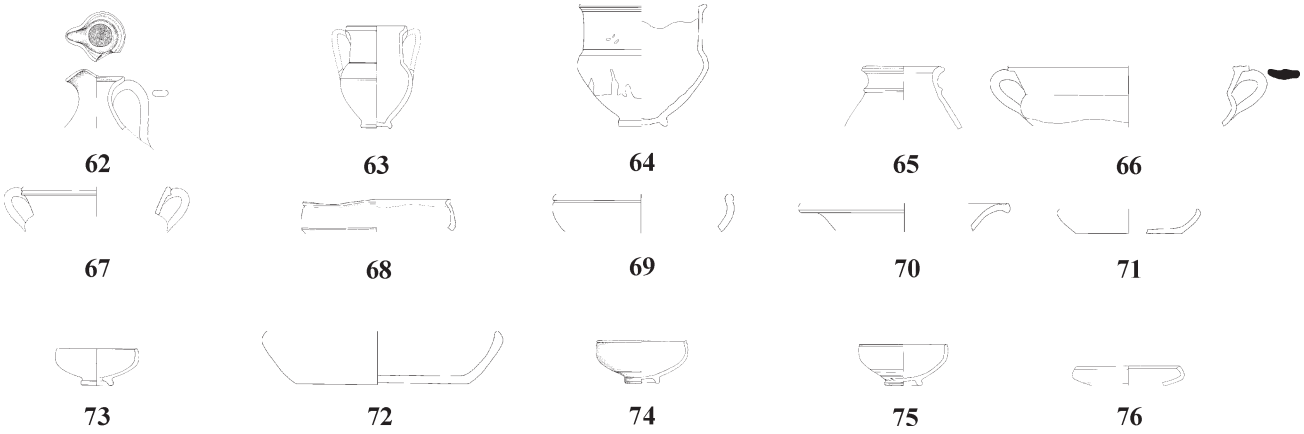
**Fine Reduced Ware**

They have generally a hard, pale grey fabric with fine black and red inclusion and occasionally some mica and very sparse fine quartz. The surface has a dark grey to almost black colour-coating. Many of the vessels are colour coated**.** The lower part of the exterior is often left without slip; in some cases there are brush marks while others rather suggest dipping.

*Beakers* are not very common, but ovoid ones, with thin walls, high shoulders and a sharply everted rim could be identified (**nos. 54–55**).They have normally one or two handles.




**54–61:** Fine Reduced Ware. Scale 1 : 10




**62–76:** Fine Oxidized Colour Coated Ware. Scale 1 : 10

*Bowls* are the most frequent, regularly illustrating bead rimed types, local imitations of Drag. 37 (**nos. 56–57**) or flanged Drag. 44s prototypes (**nos. 58–59**). Many examples have rouletted decoration under the rim or on the inner floor surface/inside base.

*Cups* imitating Drag. 33 are represented by few fragments (**no. 60**), as well as imitations of other known types (**no. 61**). Smaller bowls could also be rather considered as cups.

### Fine Oxidized Colour Coated Ware

Few fabrics were identified, including local samian types. Far clearer evidence of fine ware production is documented for the later phases. These are generally fine red-to-orange fabrics, with fine quartz and occasionally very fine limestone, red and black iron inclusions. Mica can be more visible on the surface then in the section. The colour-coatings are usually darker then the fabric, from red-orange to brown. In nearly all cases the slip extends further down the vessel on the outside, indicating dipping. Closed vessels are usually slipped on the upper part of the outside and the top part of the neck on the inside.

The range of illustrated forms includes almost exclusively table wares.

Fine *pinched mouth colour coated flagons* (**no. 62**) are the only form of flagon so far represented in this ware. Beakers included both *Kantharos* (**nos. 63–64**) and necked vessels, for the use of drinking (**no. 64**). Two handled bowls with moulded rim and ringed off bases were quite popular in this ware's typology (**nos. 66–67**). *Bowls* and *dishes* are actually not heavily represented, the types produced generally illustrate imitations of samian prototypes (**nos. 68–70**). *Plates* (IV/VJ) resemble the shallow platters of Pompeian Red Ware dishes, used for cooking as well as a table ware (**nos. 71–72**). Finely tooled hemispherical *cups*, sometimes decorated with grooves complete this repertory (**nos. 73–76**).

### Conclusions

This large corpus of pottery well illustrates the many different types of pottery that were produced on this site in the second half of the second century AD. Generally, there is not a large variety within form types for the analyzed contexts, a situation probably due to the limitations of mass production. Thousands of vessels illustrating a single form type, from the very large to almost miniature examples, can only illustrate the industrial character of the production.

It is worth noting the overall predominance within flagon types of the *storage flagons*, both in reduced and oxidized ware. A significant local production of *dolia* is also to be added as well as a later amphora production. This could be the result of large-scale local consumption and suggests constant economic or agricultural activities that required the use of such storage and transport vessels.

The high percentage of cooking vessels is generally common for such kiln sites. Though less represented for the analyzed body of pottery, fine wares still illustrate an almost complete range of table ware.

Pottery manufacture proved to be a constant activity throughout the history of the settlement. The bulk of finds analysed here clearly belong to the first period of activity on the site during mid second century. It seems reasonable that the development of this industry was closely tied to the demand and prosperity of *Apulum* in its early history but mostly from Severan times onwards.

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**Fig. 1:** After DIACONESCU 2004, 107 fig. 4,13.
**Fig. 2–10:** A. Schäfer.
**Fig. 11–14** and **Nos. 1–76:** M. CIAUŞESCU.