

LUSITANIAN AMPHORAE: PRODUCTION AND DISTRIBUTION

edited by

**Inês Vaz Pinto, Rui Roberto de Almeida
and Archer Martin**



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Inês Vaz Pinto,* Rui Roberto de Almeida
and Archer Martin*****

* CEAACP – Centro de Estudos em Arqueologia, Artes e Ciências do Património / TROIA RESORT

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The Lusitanian Amphorae from the Roman Villa of Vale da Arrancada (Portimão, Algarve, Portugal)

Carlos Fabião,* Catarina Viegas* and Vera de Freitas **

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The Roman villa of Vale da Arrancada is located in the county of Portimão, lying about 4km from the coast and about 1.5km from the Arade River. In 1984, municipal works uncovered a Roman cistern, several structures and a polychrome mosaic. The cistern was totally filled, containing numerous archaeological remains from the Roman period and Late Antiquity.

This paper aims to present a systematic analysis of the Lusitanian amphorae recovered inside Vale da Arrancada's cistern. The various amphora types identified (Almagro 50, Almagro 51c, Algarve 1 and a local 'Keay 25' type), mainly produced in Algarve, allowed these productions to be characterized morphologically and the consumption pattern of the Vale da Arrancada villa in its last occupational phase to be glimpsed.

KEYWORDS: LUSITANIAN AMPHORAE; ALGARVE PRODUCTION; ROMAN VILLA; VALE DA ARRANCADA; LATE ANTIQUITY.

Introduction

The Roman villa of Vale da Arrancada is located in the municipality of Portimão and today is 4km north of the Atlantic coast and 1.5km from the Arade River, a relevant route to the coast often used in Antiquity and mediaeval times. It is settled close to a small stream, on the southern slope of a hill surrounded by good agricultural land (Figure 1).

J. Leite de Vasconcellos (1918: 25-27) published a first notice on this villa back in 1918. This author detected a wine press excavated in the rock (still existing at present), a grave, 'foundations of houses with Roman concrete floors (*'formigão'*) and a polychrome mosaic.' The site remained untouched until 1984, when the municipality drew up an urban project for the area. Those works recovered a cistern, several structures and a geometric polychrome mosaic, we do not know if the same one reported by Vasconcellos or another one of the villa's complex. The Instituto Português do Património Cultural (IPPC) appointed José Olívio Caeiro, then professor at the Universidade de Évora, to carry out a rescue excavation. Later, in 1987, new excavations were done in the area close to the cistern, this time directed by Rui Parreira, from the IPPC's Serviço de Arqueologia da Zona Sul.

The cistern was formed by two interconnected rectangular tanks with three portholes at the bottom of the building. The cistern was built of stone blocks with horizontal rows of tiles, the typical late antique *opus vittatum mixtum*,

lined in hydraulic mortar. It was covered by a brick vault with some rows of brick still in place. The central area of both tanks had circular depressions in the mortar for cleaning. The cisterns were totally filled with debris and contained various archaeological remains from the Roman and late antique periods, which are today in the Museu de Portimão. Due to the lack of any final report on the fieldwork, it is impossible to identify different layers or any other stratigraphic or contextual issues (Figure 2). It is also impossible to know what strategy was used for the collection of artefacts - so we should be very cautious with any quantitative analysis.

The pottery from the cistern of Vale da Arrancada

A preliminary analysis of the pottery assemblage revealed the vast chronological range of the site's occupation, from the mid 1st century BC until the first half of the 6th century AD, with some artefacts that may belong to more recent times (mediaeval and modern). Among the pottery recovered, a few examples of black-glazed / Campana wares and also some other vessels that date back to the early Roman Empire were found (South Gaulish and Hispanic Sigillata and thin-walled ware). The ceramics that can be ascribed to Late Antiquity are much more frequent, such as African Red Slip Ware (ARS) D, Gaulish DSP and Phocaean Red Slip Ware. Among the coarse wares, there are various wares, such as African cooking wares, but local/regional products are dominant with a relevant number of handmade pieces.

The amphora sample consists of 117 pieces (MNV). Nineteen of them are from the Roman province of Baetica (Dressel 20, Beltrán IIB, Keay 16, Keay 19, Dressel 23, Terrón 2, La Orden). Five are North African products (Africana IID,

¹This research was produced in the framework of the collaboration agreement signed by UNIARQ, Centro de Arqueologia, Universidade de Lisboa and the Museu de Portimão.

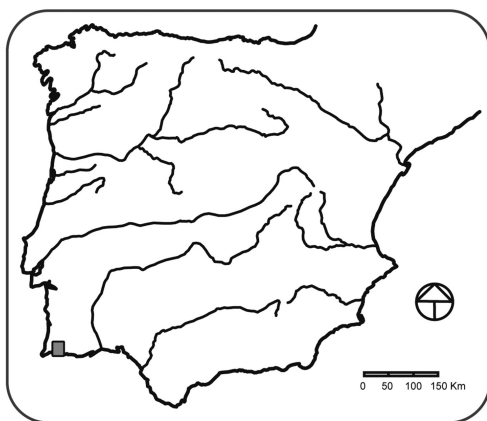


FIGURE 1. ROMAN VILLA OF VALE DA ARRANCADA (PORTIMÃO).

Africana IIIA and Keay 27B). Four are eastern Mediterranean types (Late Roman Amphora 1a, 1b and 4). One comes from the Balearic Islands (Keay 79). We were not able to identify either the form or the origin of nine of them. Lusitanian amphorae, the most frequent in the assemblage (79 MNV), are represented by the Almagro 50, Almagro 51c, Almagro 51 a-b/Algarve 1, local 'Keay 25' forms and by some sherds of undetermined types (Figure 12).

The archaeological context

The assemblage recovered in the Roman cistern should also be discussed in order to allow the understanding of the deposit's formation process.

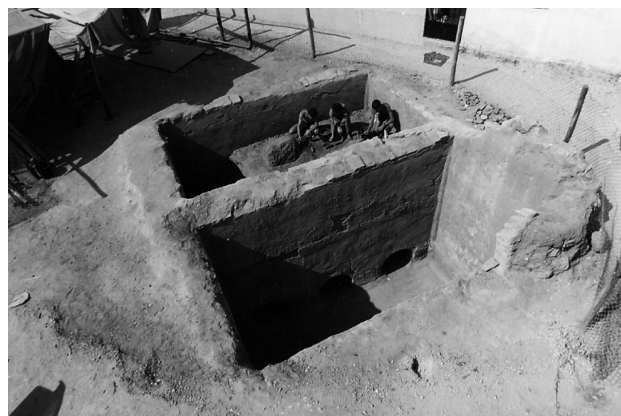


FIGURE 2. THE ROMAN CISTERN EXCAVATION IN 1984.

As already mentioned, the assemblage is very heterogeneous, with artefacts from the 1st century BC (black-glazed ware) until the first half of the 6th century AD and also with some modern pottery. Different hypotheses can be suggested for such a disparate assemblage: a long-term filling, covering part of this ample timespan but not all, as the building looks like a late antique feature; or just a later filling from the late 4th to late 5th centuries, in one single episode or in different moments within this chronological frame. The presence of earlier artefacts could be explained by residual items and the later and modern ones by final episodic depositions / intrusions (Figure 14).

However, upon a more detailed observation of the chronological distribution, it could be proposed that most of the artefacts belong to a period between the end of the 4th century and the third quarter of the 5th century. Actually, most of the imported tableware in the assemblage belongs to ARS D Hayes 59, 61A, 61B, 63, 67, 87A, and 91 with dates from the end of the 4th century until the third quarter of the 5th century. This sample also includes Hayes 97 and Hayes 93 / Fulford 52.1 / El Mahrine 18, which dates into the first half of the 6th century (Hayes 1972: 145-148), and Hayes 91C, with a date range from the first half of the 6th century (Bonifay 2004: 179). Some ARS D pieces with burnished patterns also belong to this later phase, and some of the Phocaeen Red Slip Ware and DSP fragments also fall within this date range. The assemblage's discard pattern is also very diverse, as some tablewares are represented only by some small sherds and others by several sherds that fit together into almost complete pieces. The same pattern can be seen in the amphora assemblage. The smaller sherds correspond mainly to the earlier types, while the better preserved amphorae (sometimes almost complete ones) belong to the latest periods, as will be seen *infra* in some Lusitanian examples, but also in some other North African and Baetican forms.

So, we believe that this deposit may correspond to the latest phase of occupation of the Roman villa and the subsequent abandonment of the installation, as was the

case of the cistern. The assemblage reflects mainly the villa's pottery consumption pattern in its latest phases of occupation, both foodstuffs transported in amphorae and fine wares. The sample of Lusitanian amphorae presented in this paper belongs to this late antique period.

The Lusitanian amphorae

The fabrics

We approached the amphora assemblage by macroscopic observation and clay description, aiming to identify the different fabrics. Then we tried to match our different groups with the available descriptions from publications and with some samples we had from known production centres in order to assign them to specific, already known fabrics, but always bearing in mind that we can have sherds from other not yet identified / described regional production centres.

Based on this, we considered **Fabric 1**, which includes the majority of sherds in our sample, with 50 pieces, as having similar features to the one described for the amphora production centre at Martinhal (Sagres), and for that reason we assume that it has its origins there or in another production centre in the vicinity that has not been identified / described yet.

Within this fabric, it is possible to consider three different subgroups: most of them belong to what we call **Fabric 1a** (25 MNV), with these main distinctive characteristics: orange in colour, with the typical petrographic characteristics of Martinhal production, namely abundant medium-sized inclusions consisting of quartz (white and grey) and feldspars - rounded and angular in shape -, calcite, crushed shells, rounded iron inclusions - brown / red in colour and the size of coarse sand - and rare schist fragments. The fabric has a medium texture and is light red, like its slip (Munsell 2.5 YR 6/8), with some fragments that are of a very pale brown colour (Munsell 10YR 7/4 and 10YR 8/4).

Fabric 1b (12 MNV) differs from **1a** in showing clear signs of being exposed to high temperatures. This exposure appears to be the result of pieces over-fired in the kiln, which did not keep them from being used as containers, at least for short-distance transport. Despite this, one should not discard the possibility of an unknown, new production area in the vicinity. This fabric **1b** contains the same components as **1a**, with a texture that appears to be more stratified in the break. The iron inclusions acquired a black hue, sometimes breaking the surface. The fabric shows cracks on the surface and a shade between light grey (Munsell 10YR 7/2) and grey (Munsell 10YR 6/1). The slip, mostly very pale brown (Munsell 10YR 8/3), shows a distinctive tone from the fabric.

Fabric 1c (13 MNV) shares the same characteristics as the previous ones as far as the inclusions and their size and proportions are concerned. The distinctive features are the

surface finishing of the pieces, showing careful smoothing, and the colour of the paste, of a more reddish hue that is different from the sherds belonging to the previous fabric subgroups. One piece (Figure 8, no. 2) has a brownish fabric with a thin, greyish brown slip.

Despite the different subgroups proposed, we do not exclude the possibility that all of them came from the same production centre, maybe Martinhal (Sagres), the observed differences reflecting different dates or different production episodes.

Fabric 2 (3 MNV) has a compact and clean texture, with less frequent inclusions of sand, consisting of calcite, white and grey quartz, iron oxides and small flecks of mica. We were not able to establish a correspondence of this fabric to a specific production area, but a local/regional provenance is highly probable according to the petrographic inclusions. The clay is reddish yellow (Munsell 5YR 7/6) with a very pale brown slip (Munsell 10YR 8/4) on the outside.

Fabric 3 is characterized by its reddish yellow colour (Munsell 5YR 7/8) and a medium texture with abundant inclusions consisting of rounded white quartz, white feldspar and mica (small and not abundant flecks), as well as rare rounded and medium-sized iron inclusions. The surface treatment is a simple smoothing, with a thin slip of the same shade of grey as the clay or very pale brown (Munsell 10YR 8/2). This fabric is quite similar to that described for the workshops of the Tagus and Sado Valleys, which leads us to propose that these pieces were actually produced somewhere in those regions.

Fabric 4 (18 MNV) has a compact texture, refined clay with very small inclusions that are difficult to identify by simple macroscopic observation. They consist of relatively common rounded quartz, of rare, rounded brown / orange oxides and of very rare small flecks of mica. The clay colour ranges from light red (Munsell 2.5YR 6/8) to red (Munsell 10R 5/8), and the surface seems to have had a thin slip of the same colour. The surface of the pieces is very carefully smoothed. Once again, we were unable to identify the provenance of the amphorae with this fabric.

The forms

We classify the piece Figure 3, no. 1 as an Almagro 50 amphora (1 MNV), a type not significant in number within the assemblage. It belongs to **Fabric 1a** (*vide supra*), and both shape and fabric present strong similarities with analogous amphorae from Martinhal, Sagres (Bernardes *et al.* 2013: fig. 6, nos. 10-12).

Within the set of Lusitanian amphorae, Almagro 51c is the best represented form (37 MNV), which is not surprising considering that it is the most important amphora produced in Lusitania during Late Antiquity. Two different fabrics were identified within this type, in some cases with peculiar typological details. The Almagro 51c amphorae in **Fabric 1** show some features close to the products of

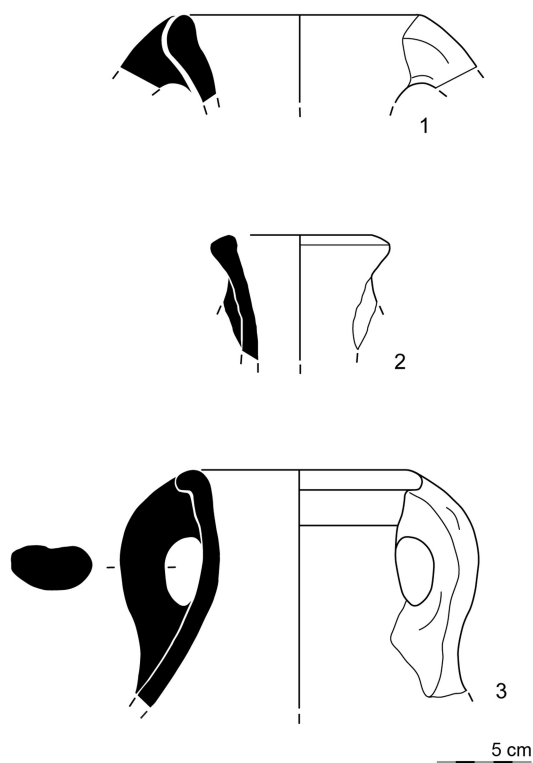


FIGURE 3. ALMAGRO 50 AMPHORA TYPE (**FABRIC 1A**); LOCAL 'KEY 25' AMPHORA TYPE (**FABRIC 1A**) AND UNDETERMINED AMPHORA TYPE (**FABRIC 1C**).

Martinhal, chiefly their morphological characteristics, as well as the incised wavy line that they often bear on the neck (Figures 4, 5 and 6). Among the Almagro 51c amphorae recovered at Vale da Arrancada, we think we have identified some pieces (three individuals) that can be attributed to workshops from the Tagus and/or Sado Valleys (our **Fabric 3**) (Figure 7).

The so-called Lusitanian Almagro 51a-b is the second best represented amphora type from the cistern at Vale da Arrancada (28 MNV), and is present in two distinct fabrics, **Fabric 1c** and **Fabric 4**. This amphora type was recently revised, and one of us suggested naming it 'Algarve 1', as this particular amphora was produced in several production centres of the region (Fabião, Filipe and Brazuna 2008). This type is quite different from those already known in western Lusitania (chiefly in the Sado Valley production centres), particularly as far as the shape of the rim and mouth and the position, profile and section of the handles are concerned (Figures 8 and 9). While in the Sado Valley the handles are usually positioned below a moulded rim, describing a semi-circular arch, the handles of the amphorae from Vale da Arrancada are placed on the moulding of the upper part of the neck and are attached to the amphora shoulder almost perpendicularly, showing a profile with a linear tendency. The section of the handle is also different: in the Sado Valley production, the section is oval / triangular and strongly moulded, while on the Vale da Arrancada amphorae of what we consider to belong to Algarve 1 the section is elliptical, sometimes

with a vertical groove. The assemblage shows a great diversity in the shape of the rims, which can be conical with external moulding (Figure 8, no. 2; Figure 9, no. 1) or simple and straight (Figure 9, no. 4), the same pattern already seen on amphorae from Lagos, Martinhal and S. João da Venda, Loulé (Fabião and Arruda 1990). The necks are proportionally tall, and, although there is no complete example, it can be assumed that the body had a long piriform shape with a conical spike.

As mentioned before, the Algarve 1 amphorae from Vale da Arrancada are in two distinct fabrics. Most of them were included in **Fabric 4** (17 MNV) (Figure 9), while the remaining (11 MNV) have the characteristics of **Fabric 1c** (Figure 8).

The piece Figure 3, no. 2 can be assigned to what the researchers in the production centre at Martinhal have called Late Dressel 14 / Martinhal 1, and its fabric is compatible with this workshop's products (Figure 10). As it is a late antique product, the observations of the authors concerning the similarities to the African Keay 25 (Subtype 2 and 3) / Africana III B/C are quite relevant (Bernardes *et al.* 2013: 320), and the Late Dressel 14 designation makes no sense, as there is no earlier production of that type at Martinhal. This form had previously been classified as Beltrán 65A (Silva, Soares and Correia 1990: 225-246, fig. 76, nos. 9-11). It was then included in the middle phase of the debris ('*entulheira*') of Kiln III, which has been dated from the beginning of the 4th to the beginning of the 5th century on the basis of a fragment of ARS D (Hayes 61A), giving a *terminus post quem* for at least one phase of the production of this amphora type. This amphora, which is not very common in Martinhal, was produced in **Fabric 1a**, which is compatible with the known fabrics of this production centre. In our opinion, this form should be assigned to a local variant of Keay 25 (Martinhal Type 1 seems also acceptable, when the fabric characteristics allow a categorical relationship with that production centre to be established), a classification we propose both for the Martinhal amphorae, and for the one recovered at Vale da Arrancada (see also Bernardes and Viegas, in this volume).

In addition to the amphorae that can be assigned to well-known typologies, there are some that show different shapes that did not allow a satisfactory typological classification. We chose to call these amphorae 'undetermined', although they belong to different morphological 'families.' In one case, Figure 3, no. 3 (**Fabric 1c**), one can see a container whose attributes are close to the Beltrán 72 shape, a Baetican amphora, or other related late forms, but due to the small part preserved it makes no sense to stress that relationship.

Other pieces of undetermined type share the same morphological features, which allowed us to group them, also because they are the sole representatives of **Fabric 2** (only three MNV). These amphorae, which in a preliminary observation could be included in Almagro 51c, show some details that separate them from the canonical models and

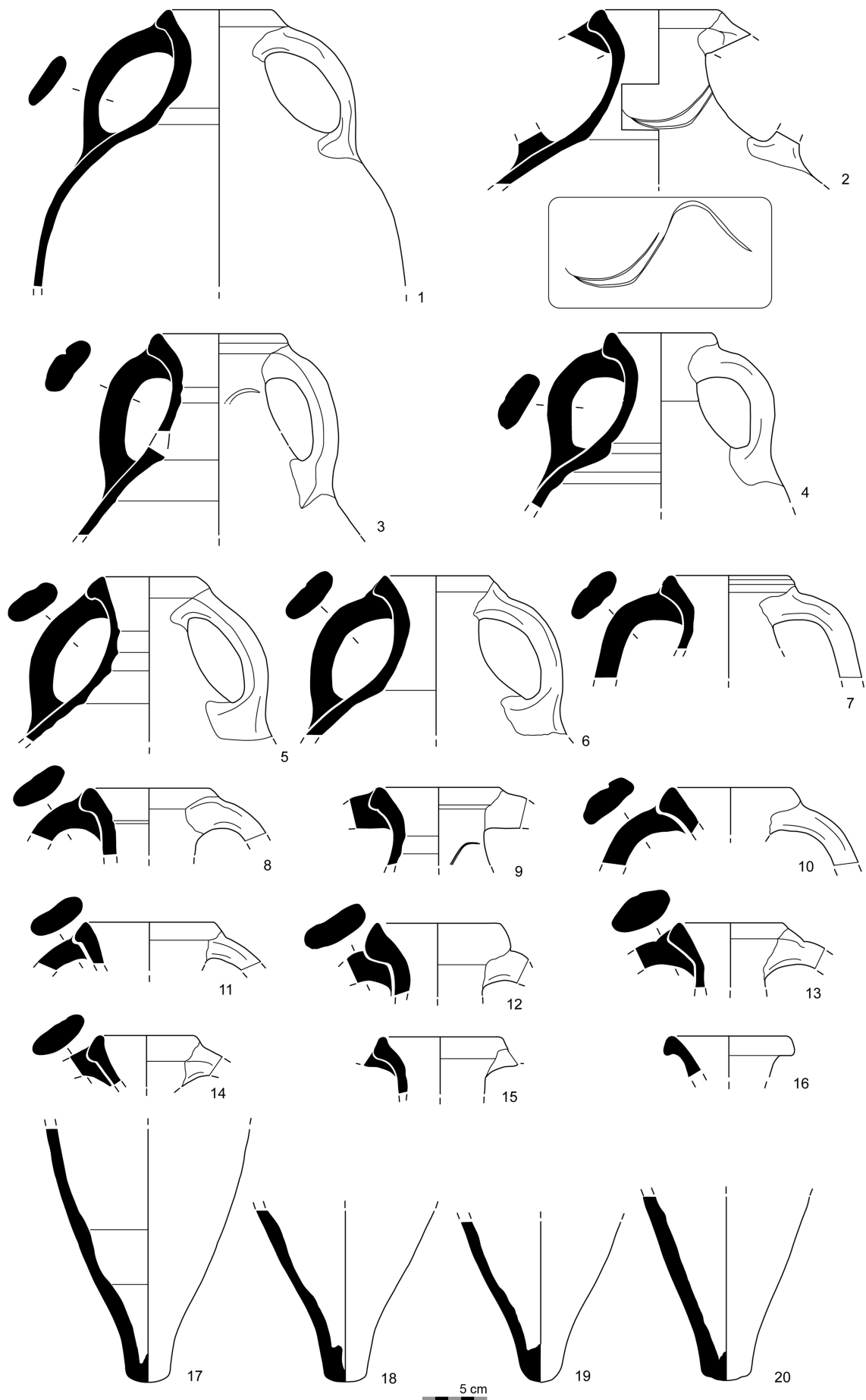


FIGURE 4. ALMAGRO 51C AMPHORA TYPE (FABRIC 1A).

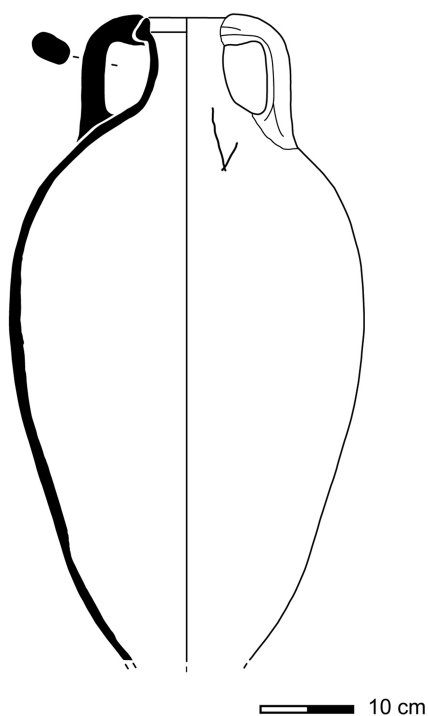


FIGURE 5. ALMAGRO 51C AMPHORA TYPE
(FABRIC 1A).

should be discussed further, as perhaps we need to discuss all the different morphological groups of Almagro 51c that we insist on classifying within the same form. We refer in particular to the place where the handle is placed and its profile and section, which we can see in Figure 10, nos. 1-3, as well as the moulding of the neck, which can be observed in the same figure (nos. 1 and 3), but some other details look closer to the amphora Almagro 51a-b produced in western Lusitania than to the Almagro 51c type.

We should also highlight the amphora Figure 10, no. 2, which bear a *post-cocturam* graffito on the upper part of the body, close to the neck, where we can read a numeral: XXXXXII. It is not easy to conclude what that might be, but we think that it may correspond to a measure of capacity, 52 *sextarii*, for instance, a figure that seems compatible with the amphora's capacity, although we do not have the complete form. Another analogous graffito is present on the amphora in Figure 5, the same form and the same place for the graffito, which is difficult to interpret: perhaps the numeral five (V), badly sketched or just some sort of symbol. Alternatively, it may be an incomplete graffito: various hypotheses for something that we just do not have a solid interpretation. Given its position on the amphora, it may be a note of capacity, if it is a numeral, as we have done for the other graffito, but actually we

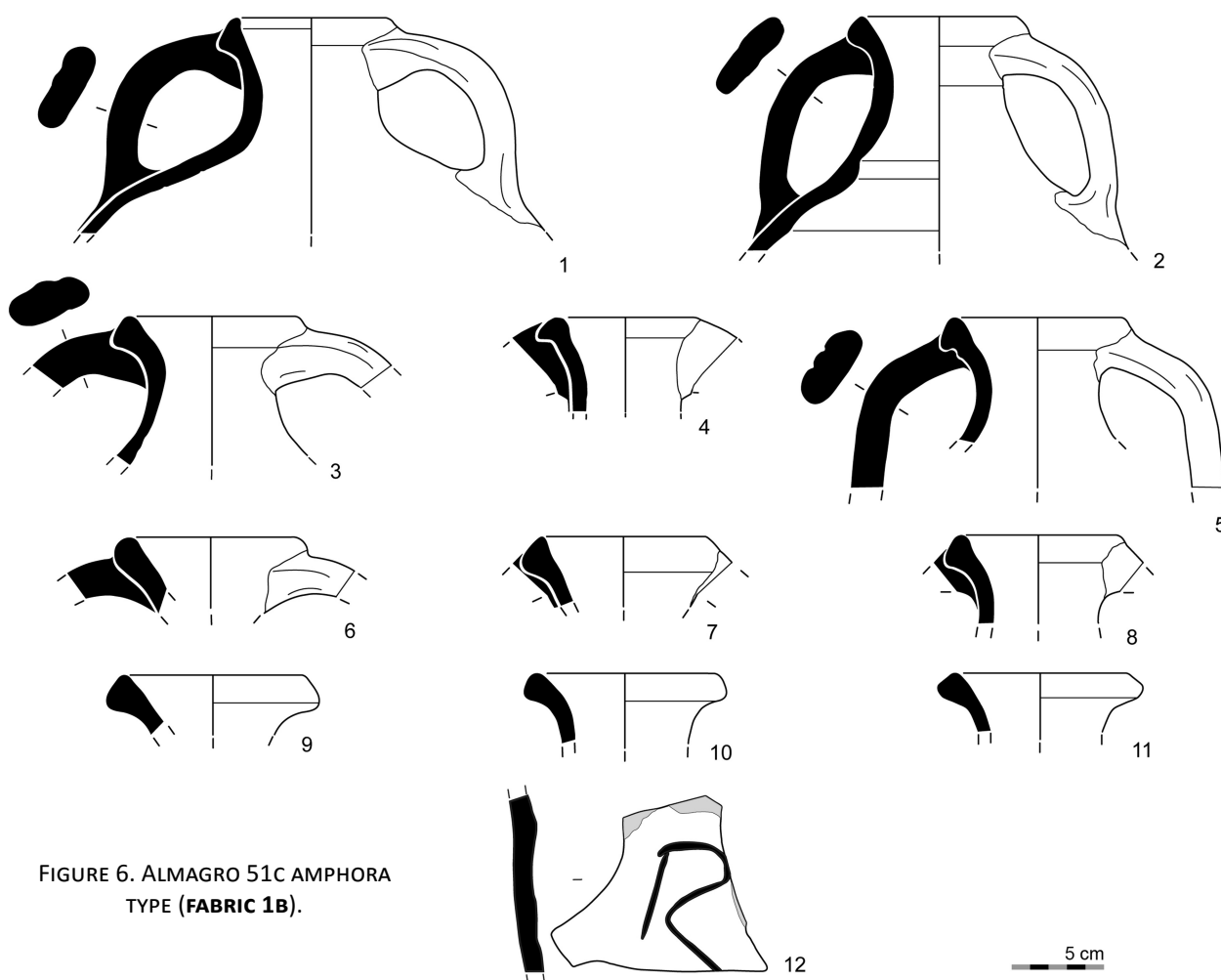


FIGURE 6. ALMAGRO 51C AMPHORA
TYPE (FABRIC 1B).

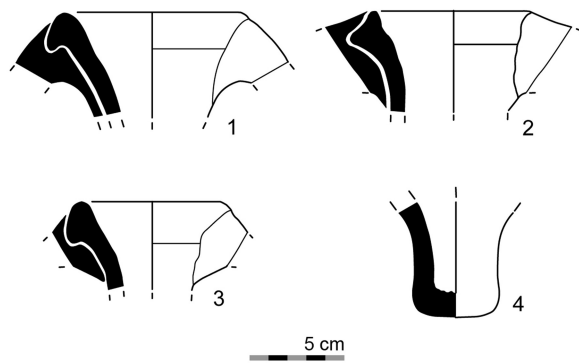


FIGURE 7. ALMAGRO 51C AMPHORA TYPE
(FABRIC 3).

have no idea what kind of known Roman measure would correspond to a *five* on an amphora of that shape. Another body sherd (Figure 6, no. 12) bears another graffito that seems to be an R. Once again, we do not have any possible interpretation for this.

Also included in the undetermined amphora types were two amphorae with some similarities to Algarve 1, particularly considering the height of the neck, the simple, straight rims (Figure 11, no. 1), or the conical shape of the neck (Figure 11, no. 2). Despite these resemblances, they differ from Algarve 1 in the position of the handles, attached to the rim and not to the upper part of the neck.

In short, we may suggest that this set of undetermined amphora types recovered in Vale da Arrancada illustrates a certain absence of standardization that affects the late Lusitanian workshops of the Algarve in their later stage of production.

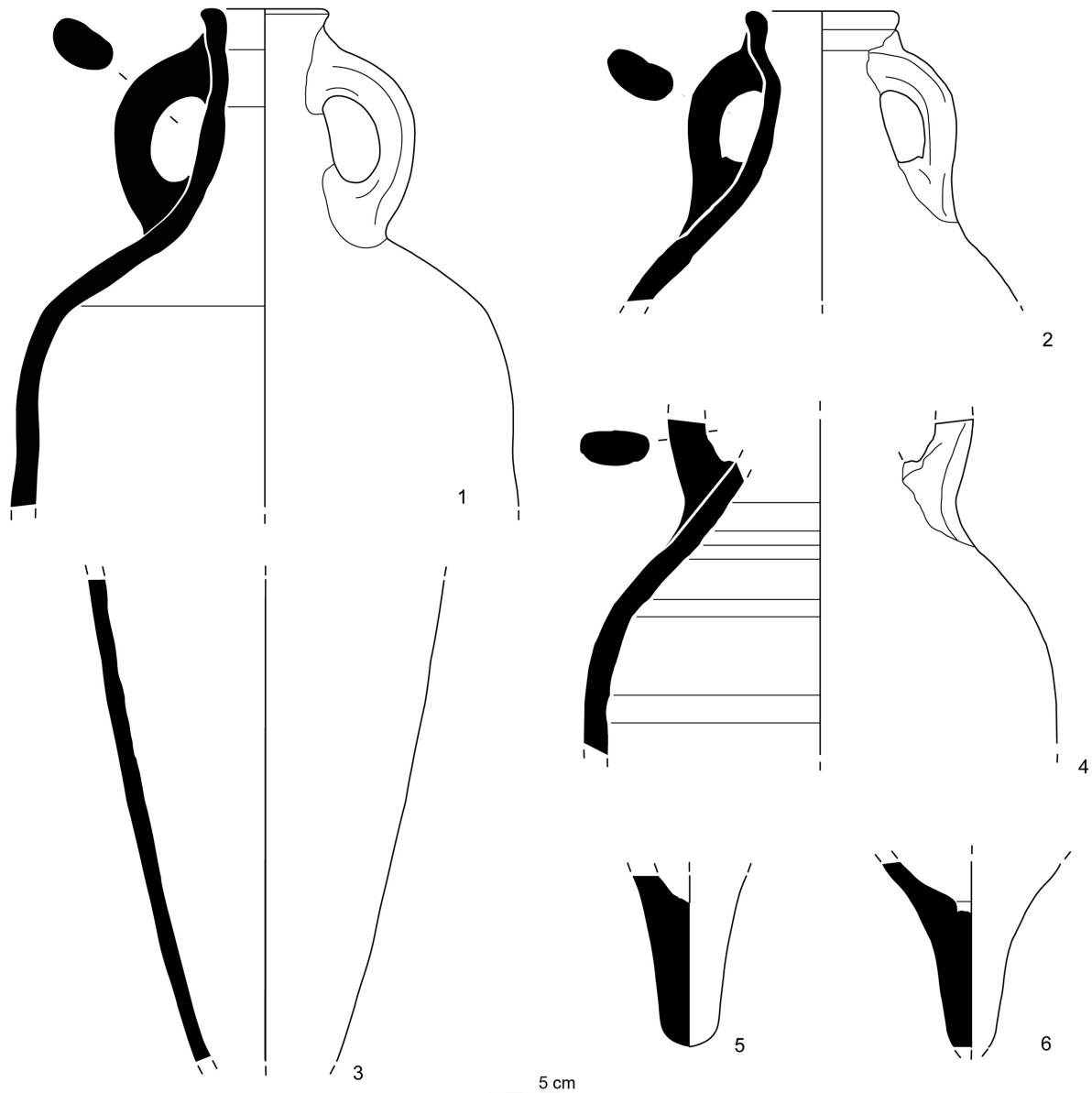


FIGURE 8. ALGARVE 1 AMPHORA TYPE (FABRIC 1C).

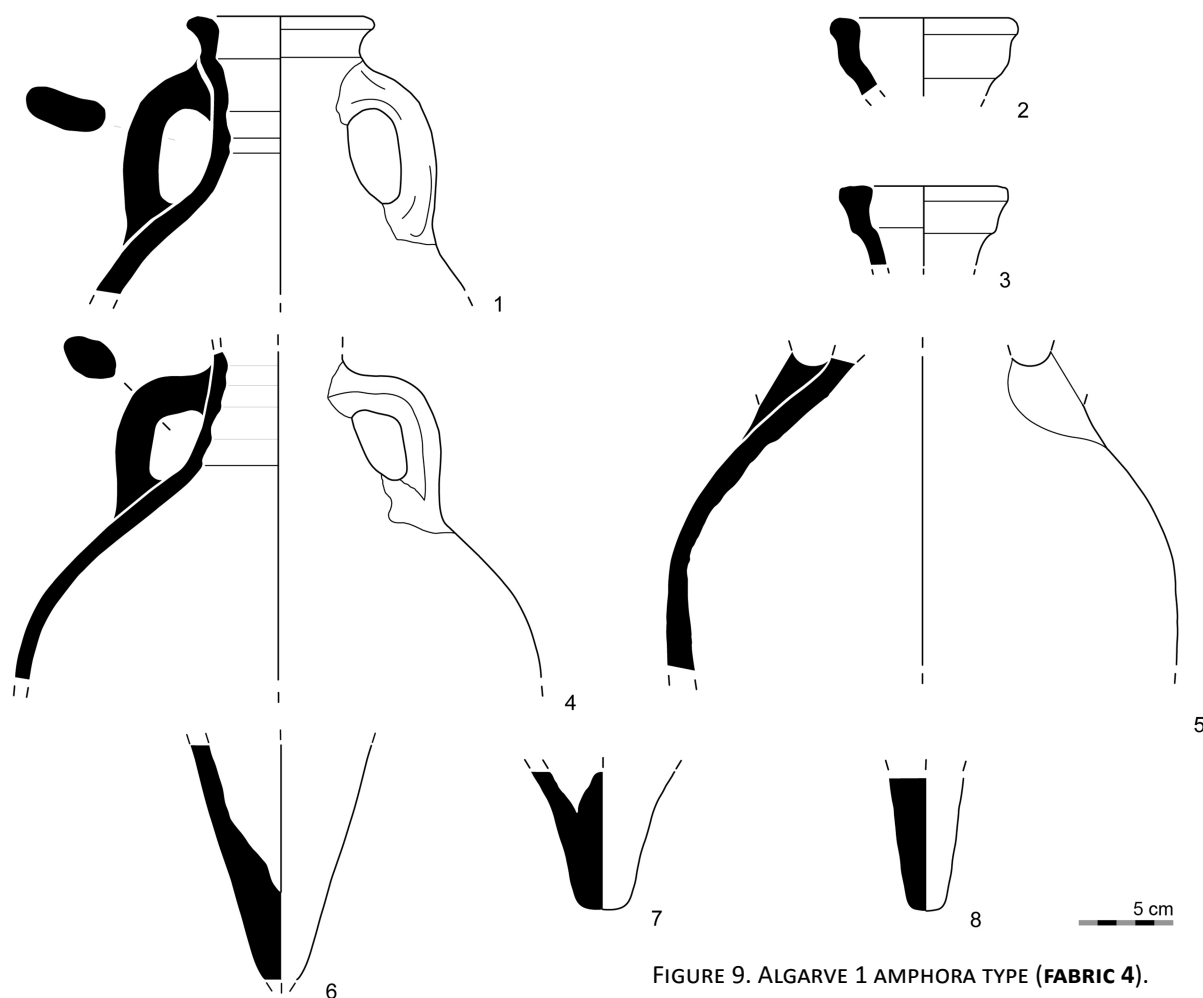


FIGURE 9. ALGARVE 1 AMPHORA TYPE (FABRIC 4).

The Lusitanian amphorae from Vale da Arrancada in the context of production and consumption centres in the Algarve

Despite the absence of stratigraphic or contextual information, the amphora assemblage recovered from the cistern at Vale da Arrancada is relatively homogeneous and large enough (117 MNV) to allow some assessment of consumption patterns and commerce. The systematic analysis of the assemblage shows that most of the amphorae date to Late Antiquity and that Lusitanian amphorae are the majority (67% NMI), as one would expect in a rural villa. The supply centres of Baetica, North Africa (Tunisia), the eastern Mediterranean and the Balearic Islands are also represented, although to a lesser extent (33% MNV) (Figure 12). But although less relevant *per se* they are diversified enough. The villa's consumption pattern clearly shows a strong connection with the different sources of foodstuffs, or at least a close relationship to an urban centre where all these imports arrived before being redistributed to rural settlements. We should bear in mind the proximity of the villa to the mouth of the Arade River, very rich in Roman finds, chiefly due to modern dredging (Silva, Coelho-Soares and Soares 1987; Teichner 1997; Diogo, Cardoso and Reiner 2000; Ipsii 2015; Fonseca 2015).

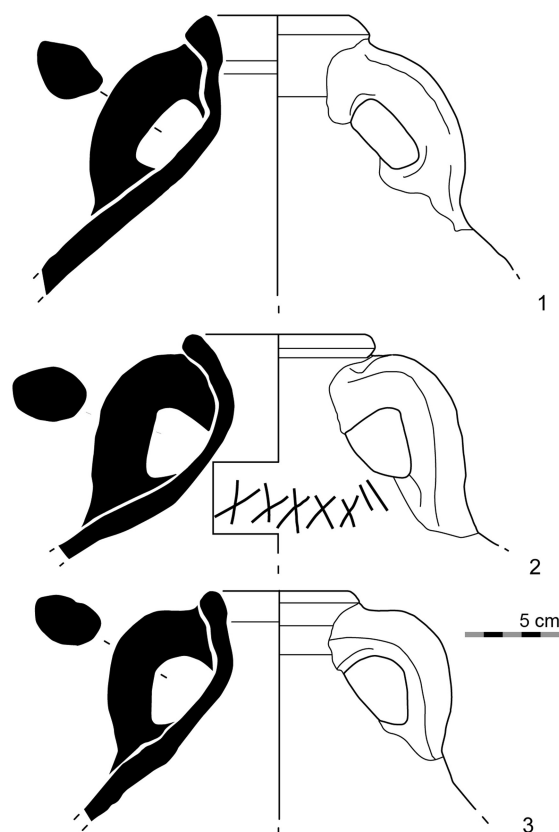
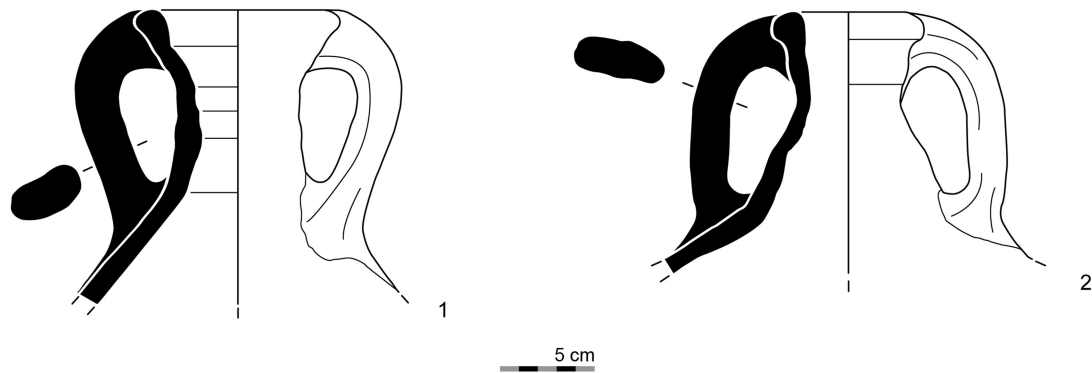


FIGURE 10. UNDETERMINED AMPHORA TYPE (FABRIC 2).

FIGURE 11. UNDETERMINED AMPHORA TYPE (**FABRICS 1C AND 4**).

Production	total fragments	rim	base	handle	body frags	MNV	%
Lusitanian Algarve	141	45	39	53	4	68	58
Lusitanian undetermined	21	7	2	11	1	11	9
Baetican Guadalquivir	6	6				6	5
Baetican Cádiz	5	3	2			3	3
Baetican Huelva	14	2	6	2	4	6	5
Baetican Eastern	1		1			1	0,8
Baetican undetermined	3	3				3	3
Balearic Islands	1				1	1	0,8
North African	20	5	4	8	3	5	4
Eastern Mediterranean	5	3	1	1		4	3
Undetermined origin	46	3	8	17	18	9	8
Total	263	77	63	92	31	117	100%

FIGURE 12. VALE DA ARRANCADA'S AMPHORA TYPES, TOTAL OF FRAGMENTS AND MNV (=MINIMUM NUMBER OF VESSELS ACCORDING TO PROTOCOLE 1998).

As far as Lusitanian products are concerned (Figure 13), amphorae from the Algarve workshops are dominant, and the Martinhal production centre (**Fabric 1**) was responsible for supplying most of the fish-product amphorae to the site (63.3% MNV), with Almagro 50, Almagro 51c, Algarve 1 and local 'Keay 25' amphorae present. This dominance is expected considering the relative proximity of Vale da Arrancada to Martinhal, the largest amphora production centre in the Algarve in Late Antiquity. But the identification of amphora provenance does not mean the identification of the place where those amphorae were filled with their contents, as Martinhal seems to have just a small *cetaria* unit in strong contrast with the several amphora kilns operating there (Bernardes *et.al.* 2013). Before the identification of the site's small *cetaria* complex and also before the identification of Lagos' amphora production, one of us suggested that the containers produced at Martinhal could have been used to transport the fish products from several fish products centres identified in the western area of the Algarve (Fabião 2004: 397). Nevertheless, we think that most of Martinhal's amphora production must have been used

to transport fish products processed at different places around the area, and so the Vale da Arrancada amphorae demonstrate that one of the destinations of these products would have been the local / regional market, of which this villa is a testimony.

Other Algarve production centres were represented (**Fabric 4**), although in this case we could not identify which workshop they came from. Despite the geographical proximity, we did not identify any pieces corresponding to the Lagos production.

The amphorae of other pottery centres outside the Algarve region are also present, including the Tagus / Sado Valleys (**Fabric 3**), although they are less relevant (only 10% MNV).

From a typological point of view, the dominant form corresponds to Almagro 51c (46.8% MNV), which is not surprising since it is the dominant form in the repertoire of the late Lusitanian pottery centres. The Algarve 1 form is also represented but less significantly (5% MNV). The

		form	total fragments	rim	base	handle	body frags	MNV	% MNV
Lusitanian Algarve	Fabric 1a	Almagro 50	1	1				1	1
		“Keay 25”	1	1				1	1
		Almagro 51c	65	22	10	28	5	22	28
		undet.	2	1			1	1	1
	Fabric 1b	Almagro 51c	26	12	1	12	1	12	15
	Fabric 1c	Algarve 1	18	2	11	4	1	11	14
		undet.	2	2				2	3
	Fabric 4	Algarve 1	25	3	17	5		17	22
		undet.	1	1				1	1
Lusitanian undetermined	Fabric 2	undet.	3	3				3	4
	Fabric 3	Almagro 51c	5	3	2			3	4
		undet.	13	1		11	1	5	6
Total			161	52	41	60	8	79	100%

FIGURE 13. VALE DA ARRANCADA'S LUSITANIAN AMPHORAE ACCORDING TO THEIR FORM AND FABRIC.

Categories	Production	Fragments	% frags	MNV	% MNV
fine wares	Campana B ware	1	0.1	1	0.2
	Thin-walled ware	9	1	6	1
	South Gaulish Sigillata	22	2	9	2
	Peñaflor Hispanic Sigillata	2	0.5	2	0,4
	Hispanic Sigillata	49	4	22	4
	ARS A	66	6	14	3
	ARS C	13	1	4	1
	ARS C / D	1	0.1	1	0,2
	ARS D	135	12	48	9
	Late Phocaean Red Slip Ware	11	1	4	0,8
	'Luisante' Sigillata	1	0.1	1	0,2
	DSP	40	4	8	1
lamps	ARS C ou D	1	0.1	1	0,2
common ware	African cooking ware	38	4	31	6
	Others/ local or regional productions	672	60	338	64
	Baetican common ware	14	1	14	3
Modern glazed ceramics		26	2	16	3
Faience		9	1	4	1
Total		1110	100%	524	100%

FIGURE 14. VALE DA ARRANCADA'S OTHER POTTERY CATEGORIES RECOVERED (NUMBER OF FRAGMENTS AND MNV).

sample also shows examples of Almagro 50 and the local 'Keay 25' type (Figure 3), as well as other pieces difficult to classify.

In short, a considerable diversity of local / regional origins and shapes is represented, not always easy to explain (either by contents or by chronology) but clearly showing the wide-ranging consumption pattern of the villa's inhabitants.

Despite the knowledge we have for foodstuff consumption carried in amphorae in southern Lusitania being chiefly related to urban centres, such as Balsa and Ossoinoba (Viegas 2011), both on the eastern side of the present Algarve, we have also some information for rural settlements, such as Milreu (Estói, Faro) (Teichner 2008: 93-270), and other less known sites. The urban pattern of imports shows a different picture from what can be observed on rural sites. In those cases, the origin of the amphorae was divided in a more balanced way between Lusitanian products and those from Baetica and North Africa. Lusitanian products are not dominant overall, nor among them are those coming from the Algarve's pottery production centres, as happens in Vale da Arrancada or in Milreu. In Ossoinoba (Faro), during Late Antiquity there is also a significant assemblage of eastern Mediterranean amphorae (Almeida *et al.* 2014: 151-160) and in Milreu, a villa in Ossoinoba's territory, the amount of local / regional amphorae is greater than in the town, although there is no quantified data on the amphorae on this rural site (Teichner 2008, II: 33-129, Taf. 126-168), as in Vale da Arrancada. We believe this difference probably reflects the significant distinction between an urban consumption pattern, more open to maritime trade and a direct receiver of imports, and a rural consumption pattern, receiving products redistributed from the towns and being the final consumption spot of redistributive networks. But we will certainly need more information from other sites to confirm this hypothesis. Some regional differences can also be assumed, as both Balsa and Ossoinoba are in the

eastern part of the Algarve, and Milreu surely received amphorae from there, while Vale da Arrancada is far away, possibly receiving foodstuffs carried in amphorae from another unknown urban (?) source.

Nevertheless, we need more information about western areas of the Algarve, as we have sound evidence for intense commerce along the Arade River in Roman times, based on amphora finds that are not particularly representative of the local / regional productions and give less information for late antique types (Silva *et al.* 1987; Diogo *et al.* 2000; Ipsiis 2015: <http://www.ipsiis.net/index.php?idType=3&idMenu=4&idGroup=7>); on the contrary, the coin evidence is very strong for Late Antiquity and even one Byzantine coin from Justinian I was retrieved from the river (Teichner 1997; Ipsiis 2015: <http://www.ipsiis.net/index.php?idType=3&idMenu=4&idGroup=10&idSubGroup=11&idTopic=45>). Thus, the evidence for continuous, major commercial activity along the Arade is solid, but we have no idea what sort of settlement or settlements could justify such movement, as we do not know any relevant town in the area (for a recent discussion on the topic, see Alarcão 2010: 108-111).

Regarding the formation process of the archaeological context recovered in the cistern at Vale da Arrancada, it seems probable that it was used as a place to discard rubbish after its deactivation, that rubbish representing the different moments of the Roman villa's occupation. This

occupation must have begun in Roman republican times though its nature is difficult to characterize. The Roman villa could be a 1st-century AD foundation with a long occupation period, as usual for this type of settlement in the region. But the cistern, for its building characteristics, the typical late antique *opus vittatum mixtum*, must be related to later occupation phases. It was used as a dumping place, for some period of time, probably around the late 4th / 5th centuries, but remained an open accessible space, as the presence of a few mediaeval / modern fragments seems to testify. Despite that, most of the pottery recovered in the cistern seems to belong to what we assume to be the last occupational phase of the villa, which is the period between the end of the 4th and the third quarter of the 5th century, with few later examples dating from the middle of the 6th century.

Despite our lack of knowledge about the depositional/stratigraphic conditions, the Lusitanian amphorae recovered in the cistern can be seen as a good testimony of this rural settlement's consumption pattern, a mixed and diversified range that depended chiefly on local / regional products but also benefitted from the strong integration of southern Lusitania in the Roman Empire, so some exotic products, such as those from North Africa and the eastern Mediterranean, also arrived there. This is what we can assume to be the typical redistribution pattern from towns to the rich rural villas of their territory. One main question remains unanswered: where was that town?

Catalogue

Figure		Inv. No.	Type	Fabric	Rim Diam. (cm)	Total height (cm)
Fig. 3	No. 1	VA.264	Almagro 50	1a	14	4.5
	No. 2	VA.188	Keay 25	1a	9.4	6.6
	No. 3	VA.142	undetermined	1c	13	12.5
Fig. 4	No. 1	VA.208	Almagro 51c	1a	9.8	21.4
	No. 2	VA.241	Almagro 51c	1a	10.4	13.4
	No. 3	VA.232	Almagro 51c	1a	10.8	15.5
	No. 4	VA.252	Almagro 51c	1a	8.8	13.5
	No. 5	VA.204	Almagro 51c	1a	9.4	12.7
	No. 6	VA.206	Almagro 51c	1a	9.5	12.3
	No. 7	VA.221	Almagro 51c	1a	10	7.9
	No. 8	VA.207	Almagro 51c	1a	10.5	5
	No. 9	VA.219	Almagro 51c	1a	10.5	6
	No. 10	VA.229	Almagro 51c	1a	10.8	6
	No. 11	VA.235	Almagro 51c	1a	11	3.7
	No. 12	VA.247	Almagro 51c	1a	11	5.6
	No. 13	VA.233	Almagro 51c	1a	9.4	5
	No. 14	VA.231	Almagro 51c	1a	9	4
	No. 15	VA.228	Almagro 51c	1a	10	4.4
	No. 16	VA.222	Almagro 51c	1a	10	3
	No. 17	VA.276	Almagro 51c	1a	-	19.5
	No. 18	VA.271	Almagro 51c	1a	-	13
	No. 19	VA.268	Almagro 51c	1a	-	12
	No. 20	VA.278	Almagro 51c	1a	-	14
Fig. 5	No. 1	VA.140	Almagro 51c	1a	10.7	62

Figure		Inv. No.	Type	Fabric	Rim Diam. (cm)	Total height (cm)
Fig. 6	No. 1	VA.251	Almagro 51c	1b	10	11
	No. 2	VA.246	Almagro 51c	1b	9.8	12.6
	No. 3	VA.199	Almagro 51c	1b	10.8	8
	No. 4	VA.193	Almagro 51c	1b	9.4	5
	No. 5	VA.240	Almagro 51c	1b	10.5	9
	No. 6	VA.245	Almagro 51c	1b	10.4	3.8
	No. 7	VA.234	Almagro 51c	1b	11	3.8
	No. 8	VA.205	Almagro 51c	1b	10	4.7
	No. 9	VA.202	Almagro 51c	1b	11.5	3.3
	No. 10	VA.224	Almagro 51c	1b	11	4
	No. 11	VA.230	Almagro 51c	1b	11	3.6
	No. 12	VA.209	Almagro 51c	1b	-	9.7
Fig. 7	No. 1	VA.197	Almagro 51c	3	11	5.6
	No. 2	VA.196	Almagro 51c	3	10.9	5.3
	No. 3	VA.195	Almagro 51c	3	9	4.6
	No. 4	VA.267	Almagro 51c	3	-	6.1
Fig. 8	No. 1	VA.145	Algarve 1	1c	7.3	28.7
	No. 2	VA.181	Algarve 1	1c	8.8	16.7
	No. 3	VA.249	Algarve 1	1c	-	27.8
	No. 4	VA.146	Algarve 1	1c	-	19.3
	No. 5	VA.270	Algarve 1	1c	-	9.8
	No. 6	VA.275	Algarve 1	1c	-	10.6
Fig. 9	No. 1	VA.148	Algarve 1	4	10	14.6
	No. 2	VA.191	Algarve 1	4	10	4.2
	No. 3	VA.145	Algarve 1	4	7.3	28.8
	No. 4	VA.250	Algarve 1	4	-	17
	No. 5	VA.260	Algarve 1	4	-	16
	No. 6	VA.274	Algarve 1	4	-	12
	No. 7	VA.153	Algarve 1	4	-	7
	No. 8	VA.280	Algarve 1	4	-	7
Fig.10	No. 1	VA.149	undetermined	2	9.7	14.7
	No. 2	VA.144	undetermined	2	10	11.5
	No. 3	VA.150	undetermined	2	8	12
Fig.11	No. 1	VA.143	undetermined	1c	10.8	15.
	No. 2	VA.253	undetermined	4	7.9	13.8

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