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Terra sigillata and amphorae from the Roman *Villa* at Tourega (Évora, Portugal)

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Abstract

This paper presents the *sigillata* and amphorae recovered during the excavations of the Roman *Villa* at Tourega in southern Portugal, utilising the analysis of the data to identify commercial links and trade routes supplying the *villa*. Of all the *sigillata* recovered, the Italian type, the south Gaulish, the Spanish and African forms were present; but taken as a whole, there was a higher proportion of northern Spanish *sigillata*, travelling by river and road networks. The amphorae, carrying mainly fish-based products, derived from the river valleys of the Tagus and Sado in *Lusitania*. Only a small proportion of amphorae came from *Baetica* and other areas.

Introduction

This paper aims to study the *sigillata* and amphorae from a Roman *villa* in southern Portugal as presented in the session *Close encounters: sea- and riverborne trade, ports and hinterlands...*, focusing on trade, production areas and commercial routes. Even though these two types of materials, *sigillata* and amphorae, were traded for very different reasons (the former to acquire and use as table ware, and the latter bought for their contents), they are both particularly interesting in the study of the economic exchanges and commercial connections of a Roman *villa* and its region. They were both specialised commodities, produced in very specific areas, and sometimes traded over long distances.

The Roman *Villa* at Tourega was located in the Roman province of *Lusitania*, on the outskirts of the Roman city and capital, the *civitas Ebora Liberalitas Iulia* (Figure 9). According to an inscription found near the *villa*, and dated to the beginning of the 3rd century A.D., at least for a certain period the *villa* belonged to a senatorial family (Encarnação 1984, 456). Archaeological excavations undertaken from 1985 to 1996 exposed a large bath complex consisting of a building containing rooms and tanks for hot and cold baths, and a water reservoir. Although still under study, the stratigraphy, wall construction and related artefacts point to three main phases of construction (Vaz Pinto, Viegas, Ferrer Dias 1997, 73-81). The chronology, mainly based on the data presented here, is from the Tiberian period until the end of the 4th century or beginning of the 5th A.D.

The materials presented in this paper were mostly recovered from the excavation of the bath complex, although a small proportion comes from soundings in other areas of the *villa*. The large area excavated, approximately 600 square metres, suggests that the sample is valuable and deserves to be studied and interpreted, even though continuation of archaeological work in future may produce new data.

Since our approach is a commercial and economic one, morphological attributes of the samples, their excavation contexts or their chronological aspects will not be discussed as they will be published in the site monograph in the near future. As regards quantification, the minimum number of vessels (MNV) is estimated by counting the fragment type most represented for each form and for each type of ware or fabric. The main objective will be to understand the development and importance of commercial trends, mainly focusing on the ceramic production and manufacturing centres. The proportions of imports from each original centre of production at different periods will also be examined. Comparisons with materials from other sites will determine whether Tourega follows a common pattern or presents a particular site specialisation.

I - Terra sigillata

a) Characteristics of the sample

The excavations undertaken at Tourega produced about 876 fragments of *terra sigillata*, of which 193 fragments correspond to forms identified in the current typologies (Ettlinger *et al.* 1990, Dragendorff 1895, Bémont and Jacob 1986, Roca and Fernandez 1999, Hayes 1972 and 1980). The determination of different wares is based both on fabric and slip analysis undertaken with a hand magnifier (15x). The minimum number of vessels (MNV) consists of rims, body or base fragments, as long as they are a characteristic feature of a certain type. The main *sigillata* types in the western Mediterranean are present at this site. They include the Italian type, which came mainly from Arezzo but possibly from other production sites in Italy; and the South Gaulish, which derived mainly from La Graufesenque but also from Montans. In addition, the Spanish *sigillata* came mostly from Tricio (La Rioja) in the Ebro valley in northeast Spain but also from Andújar (Jaén), in the southern province of *Baetica* (today's Andalusia). African Red Slip Ware (ARS) A, C and D reached Tourega from northern Africa (Figures 1 and 7).

The *sigillata,* combined with other ceramics, is the main source of material for studying the chronology of Tourega's bath building and *villa*. In fact, the presence of Tiberian Italian-type *sigillata* (Consp. 18, 20 and 22) and an early South Gaulish form (Drag. 24/25) allows us to

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date the beginning of the occupation of the site to this period. The end of the occupation occurred at the end of the 4th century or beginning of the 5th century AD, since the latest forms are ARS D, Hayes 59 A and B, 61 and 67. The production of Hayes 67 spans from the middle of the 4th to the middle of the 5th century A.D., but this form is quite rare at the site and may have arrived only in the late 4th century or beginning of the 5th. Also significant is the total absence of later African forms and late Phocean ware.

	MNV	%
Italian type *sigillata*	13	7
South Gaulish *sigillata*	40	20
Spanish *sigillata*	62	32
ARS A	12	6
ARS C	34	17
ARS D	32	17
Late Spanish *sigillata*	3	2
TOTAL	193	100

FIGURE 1. DISTRIBUTION OF DIFFERENT *SIGILLATA* TYPES AT TOUREGA

Italian type *sigillata* forms 7% of Tourega's total *sigillata* yield. The earliest form is Consp. 12 (Haltern service I), dated from the middle to the end of the Augustan period (Figure 2), and the most abundant is Consp. 20.4, common in the Mediterranean area and dated up to the Tiberian period. Two of the examples at Tourega had applied decoration, although it is not possible to distinguish the motifs. Also present are the plates Consp. 18 (Haltern service II), the cups Consp. 22 which indicate imports in the Tiberian period and Consp. 37 of a slightly later date (Ettlinger *et al.* 1990, 82-90). The only decorated piece probably belongs to a chalice. The potter's stamp SEX/ANNI (*Sextus Annius*), from Arezzo, usually dated from 10 B.C. to A.D. 10. (Oxé and Comfort 1968, 27-30, n. 88), appears in a rectangular frame. Several examples have already been found in Spain (Béltran 1990, 68) and three in Portugal, two of them in Alcácer do Sal (Alarcão, 1971, 424; Faria, Ferreira and Diogo 1987, 66, 1) and one in Santarém (Viegas forthcoming).

South Gaulish *sigillata* (20%) is mainly represented by La Graufesenque production centre (Figure 2). Despite the great variety of forms produced, only the most common are present in Tourega: the dishes Drag. 15/17 and 18/31, and the cups Drag. 24/25 and 27. The rarity of decorated forms (also attested in other places in Portugal, for instance in Conímbriga (Delgado, Mayet, Alarcão 1975) is confirmed by the find of only one piece of a bowl (Drag. 30) usually dated from the Claudian-Flavian period. One unreadable stamp belongs to this production. Only two rims of a coarser buff fabric with a brown slip came from the Montans production centre. Therefore, Tourega follows the same pattern as other sites in the Iberian Peninsula during the Claudian-Vespasian period in which the La Graufesenque *officinae* were the leading exporter to the Peninsula. It is accepted that the Gaulish products became very rare under the Flavians and were slowly substituted by Spanish *sigillata*, whose production began in the middle of the 1st century to be a serious competitor in the Iberian markets.

Spanish *sigillata* is the most abundant type at Tourega (32%) and the productions from Tricio (La Rioja) are the commonest (about 80%), although the Andújar (Jaén) examples are also present. The most common forms of plain *sigillata* from Tricio (La Rioja) at Tourega are the cup (Drag. 27) and the dish (Drag. 15/17), probably used

Italian type *sigillata*		
(Arezzo and other origins)		
	MNV	**%**
Consp. 12	1	8
Consp. 18	2	15
Consp. 20	4	30
Consp. 22	3	23
Consp. 37.5	1	8
Decorated	1	8
Stamp.	1	8
Total	13	100

South Gaulish *sigillata*		
La Graufesenque		
	MNV	**%**
Drag. 15/17	5	13
Drag. 18/31	14	34
Drag. 24/25	8	19
Drag. 27	7	17
Drag. 35 (?)	1	3
Ritt. 8 (?)	1	3
Decorated	1	3
Stamp	1	3
Montans		
Lud Tb	2	5
Total	40	100

Spanish *sigillata*		
Tritium Magalum		
	MNV	**%**
Drag. 15/17	12	19
Drag. 24/25	1	2
Drag. 27	12	19
Drag. 35/36	1	2
Drag. 39	3	5
Hisp. 2	1	2
Decorated	21	33
Stamps	2	3
Andújar		
Drag. 15/17	4	6
Drag. 27	1	2
Hisp. 2	1	2
Decorated	2	3
Stamp	1	2
Total	62	100

FIGURE 2. DISTRIBUTION OF FORMS OF ITALIAN TYPE, SOUTH GAULISH AND SPANISH *SIGILLATA*

together. The dish (Drag. 39), with barbotine-decorated handles is represented by three pieces, and forms Drag. 24/25 and Drag. 35 are represented by one example each. The dishes (Drag. 15/17) with moulded walls closely imitating the South Gaulish form are not present, suggesting that the earliest production of this ware, present for instance in Conímbriga, did not reach the *villa* at Tourega. The decorated forms Drag. 29, Drag. 29/37 and Drag. 37 are abundant, but the garland decorations, known to be early in Spanish production, have not been found. The most common decoration are the metopes, dated from the middle to the end of the 1st century A.D., and the concentric circles usually combined with the typical Spanish floral motifs, dated from the second century A.D. Three stamps came from Tricio (La Rioja): C.LOD attributed to CLODIVS; SELI (...) attributed to SELIESI.FE; and (...).TI.TI.LV.PI., probably the work of TITVS and LVPIANVS, both known from La Rioja area (Saènz and Saènz 1999, 98, 109, 124, 128). The Spanish *sigillata* from Andújar is not as common and the only forms present are the dish Drag. 15/17, *Hispanica* 2 and the decorated bowl Drag. 37. No readable stamp was found from this production.

African Red Slip wares (ARS) represent 40% of the *sigillata* found at Tourega (Figure 5). ARS A is rather rare (6%) but it includes two early forms, Hayes 4 A and Hayes 6, imitations of South Gaulish wares, and dated from the Flavian period to the middle of the 2nd century A.D. The most abundant form in Tourega is, as usual, Hayes 14/17, dated from the middle of the second until the middle of the third century A.D. (Hayes 1972, 39-43). ARS C is more common (17%) and the forms found at the site are again some of the more typical: form Hayes 45, 50 and 52 with applied decoration. The large plate Hayes 50 is the most abundant at Tourega and occurs in the variants A and B, this last one being the latest and coarser variant dated to the end of the 4th century A.D. Type Hayes 49, dated from the end of the 3rd to the beginning of the 4th century A.D., is also present proving that it was not just the most common types which arrived at Tourega.

The proportion of ARS D (17%) is almost the same as ARS C, and its most frequent form is the dish Hayes 59, dated from the 4th to the beginning of the 5th century A.D. Also present, although in small quantities, are forms Hayes 58 and 61 with similar dates. The latest import is form Hayes 67, which in its later variants, may occur until the middle of the 5th century A.D. (Hayes 1972, 116), as it was referred to earlier.

Contemporary to the imports of ARS D, Late Spanish *sigillata* was also imported from the Douro and Ebro valleys (Figure 3). This *sigillata* type is rare at Tourega (2%) and its forms closely imitate some of their contemporary forms in ARS D.

b) Comparison to other *Lusitanian villae*

It is possible to compare the pattern of imports of Tourega's *terra sigillata* with the one from the *villa* at São Cucufate (Alarcão, Étienne, Mayet 1990, 248-251), located in the territory of *Pax Iulia*, the *civitas* south of *Ebora Liberalitas Iulia*. Although the quantity of *sigillata* present at São Cucufate (3415 rims) is much more plentiful than the one from Tourega, there are some interesting comparisons to be drawn. The higher proportion of Italian type and South Gaulish *sigillata* at Tourega is an indication of a slightly earlier occupation at this site. Spanish *sigillata* is the most important type in both sites, but the proportions from the production centres of Tricio (La Rioja) and Andújar (Jaén) in the *Baetica* province, are quite different. While at São Cucufate they are equally represented, at Tourega there is a preponderance of *sigillata* coming from Tricio (about 80%). It is also clear that the imports of African wares in São Cucufate (62%) are proportionally more frequent than at Tourega (40%).

The *villa* of Alto da Cidreira (Cascais), near the Atlantic coast, shows a completely different pattern of imports being "a good example of strong maritime commercial ties and the almost exclusion of overland commerce" as is pointed out by Nolen (1988, 61). In fact, at that site,

			MNV	%
ARS	**A**	Hayes 4 A	1	8
		Hayes 6	3	25
		Hayes 14/17	8	67
		Total	12	100

ARS	**C**	Hayes 45	6	18
		Hayes 49	2	6
		Hayes 50	21	61
		Hayes 52	5	15
		Total	34	100

			MNV	%
ARS	**D**	Hayes 58	5	16
		Hayes 59	12	37
		Hayes 61	7	21
		Hayes 67	4	13
		Decorated	4	13
		Total	32	100

Late Spanish ***sigillata***	**Douro and Ebro valleys**	Bowls	3	100
		Total	3	100

FIGURE 3. DISTRIBUTION OF FORMS OF AFRICAN RED SLIP WARES (A, C AND D FABRICS) AND LATE SPANISH *SIGILLATA*.

Spanish *sigillata* is present in small proportions and the Andújar (Jaén) productions are more important than those from Tricio (La Rioja). The ARS assemblage is more abundant than that of the early imperial types, ARS A being specially numerous and represented by six different forms. ARS C and D are also present as well as Phocaean and late Gaulish "*T.S. grise*" (*Ibid.* 1988), which do not occur at Tourega.

In the *villa* of Povos (Vila Franca de Xira) on the banks of the river Tagus we have a total lack of Italian type *sigillata*, and the South Gaulish *sigillata* is rare and came only from the La Graufesenque (Ferrer Dias 1998, 15-24). Contrary to what happens in Alto da Cidreira, Spanish *sigillata* from Tricio (La Rioja) is twice that of Andújar.

Compared to Montinho das Laranjeiras (Alcoutim) on the banks of the river Guadiana, there again no Italian type *sigillata* was found and the South Gaulish is almost absent (Coutinho 1997). As in Alto da Cidreira and again opposed to Tourega, the Andújar (Jaén) products are much more abundant than those from Tricio (La Rioja). In Montinho das Laranjeiras ARS A is extremely frequent which is not the case in Tourega. Both types C and D are present in almost the same forms as in Tourega but in that site the imports seem to continue until the middle of the 5th century A.D.

II - Amphorae

a) Characteristics of the sample

The amphora sample is composed of 167 different rims, handles and bases that represent a minimum number of 79 vessels. Usually rims are the most abundant type of fragment and correspond to the number of vessels, but in some cases, handles of different forms or different fabrics also represent one vessel. The variety of forms is listed in Figure 4 and examples of each one are reproduced in Figure 8. Vessels of uncertain form or origin may represent Lusitanian production sites still unknown and less typical Baetican, Gaulish and African products. The determination of production sources is based on fabric analysis undertaken with a hand magnifier (15x) and compared to reference collections and published materials. Petrographic studies in progress, but not yet completed, may still clarify the origin of pieces now unclassified.

According to the interpretation of amphora contents developed by researchers over the years, almost all the amphora forms found at Tourega were containers for fish-based products (Beltrán IIB, Dressel 14, Almagro 51c, Almagro 50 and Almagro 51a-b), and only amphora Dressel 2/4 was a wine container, and Dressel 20 an olive oil container (Peacock and Williams 1986; Sciallano and

Form	*Lusitania* (Tagus-Sado)	*Baetica*	Uncertain	Total
Dressel 2/4	-	-	1	1
Dressel 20	-	1	-	1
Beltrán IIB	-	1	-	1
Dressel 14	13	1	4	18
Almagro 50	4	-	-	4
Almagro 51c	31	2	2	35
Almagro 51a-b	2	-	-	2
Uncertain	5	1	11	17
Total	55	6	18	79
%	69,6%	7,6%	22,8%	100%

FIGURE 4. MINIMUM NUMBER OF AMPHORA VESSELS BY FORM AND ORIGIN.

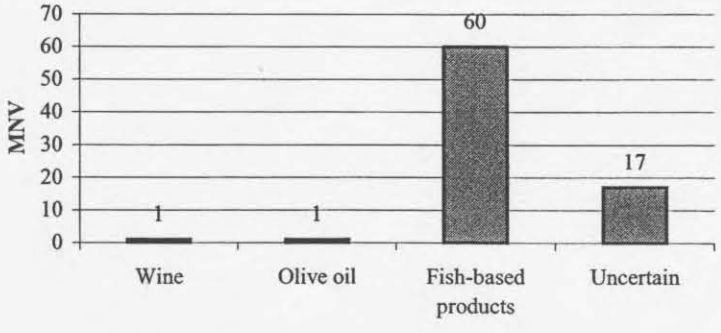

FIGURE 5 - CONTENTS OF AMPHORAE AT TOUREGA

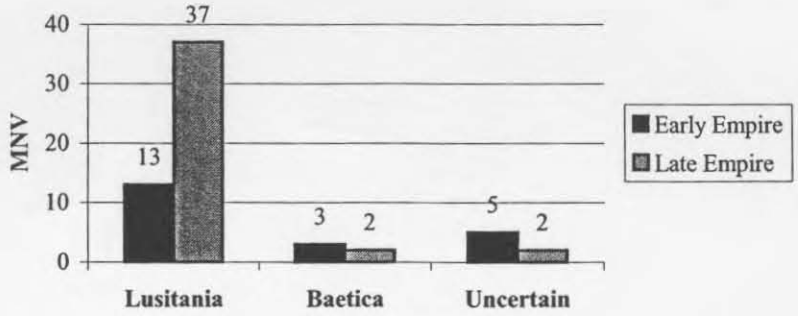

FIGURE 6 - SOURCES OF AMPHORAE FROM TOUREGA IN THE EARLY AND LATE EMPIRE.

Sibella 1994). If variant A of Almagro 51c, the so-called Lusitana 3, proves to be a wine amphora according to its resemblance to wine containers like Dressel 30 and Gauloise 4 (Diogo 1987, 184; Alarcão and Mayet 1990, 189), the decision not to distinguish the variant forms in this study does not affect the overall proportions since that type is very rare at Tourega.

The graph on Figure 5 illustrates the proportion of contents of the identified amphorae. It highlights the overwhelming importance of fish-based products (75.9%, or 96.8% of the identified amphorae) of the imports to this *villa*, and suggests the importance of this foodstuff in the diet, as it was noticed at the São Cucufate *villa* (Alarcão *et al.* 1990, 254). The rarity of wine (1.3%) and olive oil (1.3%) amphorae suggests local production of these two important dietary necessities.

The table in Figure 4 shows that the most important origin of amphorae found at Tourega are from the river valleys of the Tagus and Sado in south-central Portugal (Figure 10), which are contiguous areas of similar geological formation, and whose products are very difficult to distinguish among each other, either by fabric or form (Mayet, Schmitt, Tavares da Silva 1996). This is the only identified Lusitanian production area represented at Tourega. The other well identified source of amphorae found at this *villa* is *Baetica*, in southern Spain, famous for its olive oil produced in the valley of Guadalquivir (Figure 10) and exported all around the Mediterranean. This province was also well known for its fish-based products from the bay of Gades (Figure 10) as well as for wine. The Tagus and Sado valleys account for about 70% of the vessels, consisting mostly of forms Dressel 14 and Almagro 51c, while *Baetica* only supplies about 7.5%, and the remaining 23% are of uncertain origin.

Based on the production period attributed to each form by the development of research in this field (Peacock and Williams 1986; Sciallano and Sibella 1994), two main periods of production can be determined, i.e. the 1st-2nd centuries or Early Empire, and the 3rd-5th centuries or Late Empire. As clearly shown in Figure 6, there is an evolution in the origin of imports. The comparison of production sources in these two periods shows that the Tagus and Sado valleys were consistently the main supplier of amphorae to Tourega. Moreover, the relative proportion between this area and *Baetica* is much lower in the Early Empire (61.9%) than in the Late Empire (90.2%). In fact, Baetican containers represent 14.3% of the imports in the Early Empire but only 4.9% in the Late Empire.

b) Comparison to other Lusitanian *villae*

The comparison of Tourega's amphorae to those of other Lusitanian *villae*, i.e. São Cucufate (Vidigueira) (Alarcão *et al.* 1990 251-255; Mayet, Schmitt, Tavares da Silva 1996, 167-192; Mayet and Schmitt 1997, 71-109), Quinta das Longas (Elvas) (Almeida and Carvalho 1998: 137-163), Povos (Vila Franca de Xira) (Banha 1991-1992, 49-90), *Villa Cardílio* (Torres Novas) (Diogo and Monteiro 1999, 201-214) and Vilares de Alfundão (Ferreira do Alentejo) (Norton *et al.* 1993-1994, 181-190) may show to what extent Tourega presents the same patterns of consumption or differs from them.

Imported wine from outside *Lusitania* comes to these *villae* in small quantities, never exceeding 5% of the amphorae found, from Italy (*Villa Cardílio* and Povos), *Baetica* (São Cucufate, *Villa Cardílio* and Povos) and Gaul (Povos). At Tourega, there is one vessel possibly from *Tarraconensis* (Figure 8, n. 23), but wine represents only 1.3% of the amphorae found.

Amphorae Dressel 20 and Dressel 23, used to transport olive oil from *Baetica*, date to the period from the 1st to the 5th century. They are represented in small proportions in all the *villae* considered, but more abundant in the Early Empire (Tourega, Quinta das Longas, São Cucufate, *Villa Cardílio* and Povos), and less numerous in the Late Empire (*Villa Cardílio* and Povos). Tourega follows the general pattern confirming that imports of olive oil were regarded as a luxury item. With the exception of Alfundão, where no olive oil vessel was found, Tourega presents the lowest proportion (1.3%) and Povos the highest (10.9%) of Baetican olive oil amphorae.

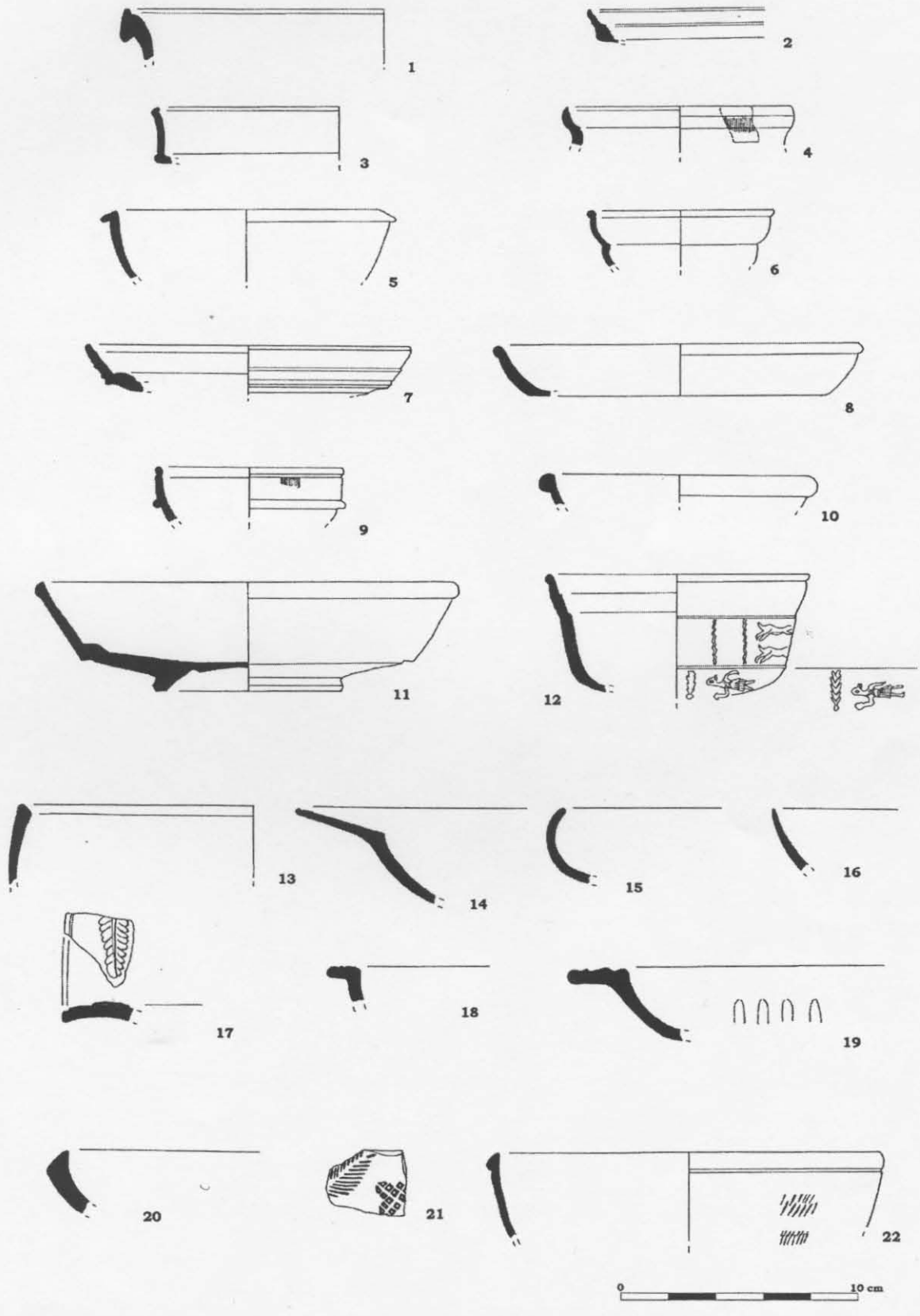

FIGURE 7. ITALIAN TYPE *SIGILLATA*: 1 - CONSP. 12; 2 - CONSP. 18; 3 - CONSP. 20; 4 - CONSP. 22; 5 - CONSP. 37.5; SOUTH GAULISH *SIGILLATA*: 6 - DRAG. 27; 7 - DRAG. 15/17; 8 - DRAG. 18/31; 9 - DRAG. 24/25; SPANISH *SIGILLATA*: 10 - DRAG. 35; 11 - DRAG. 15/17; 12 - DRAG. 29; ARS A: 13 - HAYES 14/17; ARS C: 14 - HAYES 45; 15 - HAYES 49; 16 - HAYES 50; 17 - HAYES 52; ARS D: 18 - HAYES 58; 19 - HAYES 59A; 20 - HAYES 61A; 21 - ARS D STYLE A (II); 22 - LATE SPANISH *SIGILLATA*.

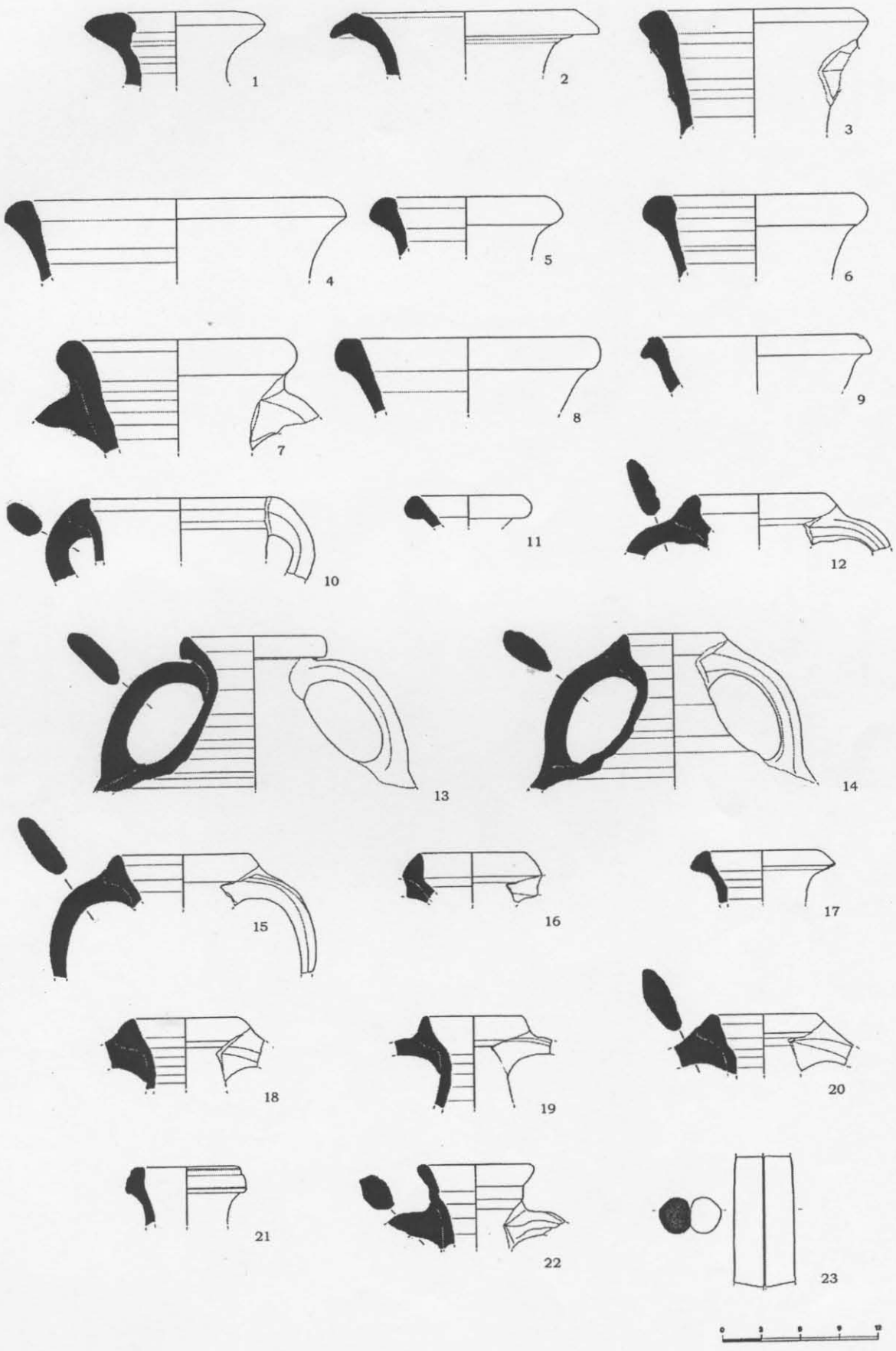

FIGURE 8. BAETICAN AMPHORAE: 1 - DRESSEL 20; 2 - BELTRÁN IIB; LUSITANIAN AMPHORAE: 3-8 - DRESSEL 14; 9 -10 - ALMAGRO 50; 11-21 - ALMAGRO 51C; 22 - ALMAGRO 51A-B; UNCERTAIN: 23 - DRESSEL 2-4.

Fish-based products represent the overwhelming majority of amphorae found in these *villae*, with the possible exception of *Villa Cardílio*, where the abundance of Almagro 51c variant A or Lusitana 3 may indicate local wine production. Fish-based products come from *Baetica* in the Early Empire in amphorae Dressel 7-11, Beltrán I, Beltrán II and Dressel 14a, and usually in rather small proportions. In Tourega there are only one Beltrán IIB and one Dressel 14 from *Baetica*. Only in São Cucufate is Dressel 7-11 the most abundant fish-based amphorae in the second half of the 1st century. These products come in much greater quantities from the valleys of the Tagus and the Sado in the form Dressel 14b, definitely dominating the Lusitanian market after the first century. Therefore, in the Early Empire these *villae* follow different patterns, not necessarily directly related to their geographical location. While at São Cucufate one third of imports of fish-based products comes from *Baetica*, in Alfundão (20 km away), that proportion must have been much lower since only one vessel was found compared to forty-five Lusitanian amphorae. *Villa Cardílio* follows São Cucufate, having five Beltrán I and II amphorae against fourteen Dressel 14b. Povos does not have any Early Empire fish-based product amphora from *Baetica*, and Quinta das Longas has one against four Lusitanian, but due to the small sample (24 identified fragments), no definitive conclusions can be drawn.

In the Late Empire, fish-based products came from *Baetica* in much lower proportions in amphorae Almagro 51c found at Tourega, *Villa Cardílio* and possibly Povos. Some productions of Almagro 50 discovered at São Cucufate, Alfundão, *Villa Cardílio* and Povos are generally considered to be from the Algarve although its production centre has not yet been found (Peacock and Williams 1986, 131; Fabião and Carvalho 1990, 52-53). The same may be said for a Beltrán 72 found at *Villa Cardílio*, which may be from that region or from *Baetica*, which would increase the quantity of Baetican imports in this period. Fish-based products may also come in very small proportions from Northern Africa (Tunisia) in amphorae Africana II A (*Villa Cardílio*) and possibly Keay XXXVII (Povos). However, the overwhelming majority comes from the valleys of the Tagus and Sado, 94.9% at Tourega, 100% at Quinta das Longas, 93.8% at São Cucufate, and 84% at Alfundão. We will set aside Povos, whose amphorae Almagro 51c and Almagro 50 do not have a well defined origin, and *Villa Cardílio* which is a different case because of the abundance of Lusitana 3, interpreted as a wine amphora. The main site specialisation at Tourega seems to be the low proportion of Baetican imports in the Early Empire, and particularly in the second half of the 1st century A.D. The absence of the southern Almagro 50 in the Late Empire, especially when compared to São Cucufate, another inland *villa*, is also significant. Other sites like Povos and *Villa Cardílio* that received this kind of amphora are close to the river Tagus that facilitated river transport. Although this low proportion of Baetican and southern imports in Tourega would have to be confirmed in other sites of the region and in the city of *Ebora Liberalitas Iulia*, it may reflect the lack of proximity to navigable rivers and a dependency on land routes. Meanwhile, São Cucufate, and its capital *Pax Iulia*, would take advantage of the proximity of the river Guadiana which would facilitate the transport of goods from the eastern Algarve up to the southern Alentejo.

III - Evidence and importance of commercial trends

In the ancient world, the economic advantage of maritime and river transport compared to land routes is well known. Evidence from shipwrecks shows that fine wares and amphorae coming from Italy and southern Gaul were transported through the Mediterranean all the way to Hispania. *Sigillata* and amphorae from those areas and different regions of *Baetica* and northern Africa were exported to the Atlantic coast of *Lusitania* according to the abundance of finds in coastal sites like Balsa (Nolen 1994), Pessegueiro (Tavares da Silva and Soares 1993) and Tróia (Etienne, Makaroun, Mayet 1994) (Figure 9). Mixed cargoes, with products from different provinces, were the most common, probably traded and loaded in Gades. Although amphorae would be the main goods carried on the ships, fine wares were complementary to the main commerce of provisions. On the other hand, Spanish *sigillata* from Tricio (La Rioja), in northern Spain, was conveyed by inland routes, both river and land ones. Likewise, to reach the inland areas of *Lusitania*, goods were preferably carried by river from the main sea harbours, and roads were only used when riverine routes were no longer possible. Certainly, an active commercial route would run from the eastern Algarve up the Guadiana River towards the capital of the province, Emerita Augusta, supplying the cities along the way, and avoiding navigation of the severe Atlantic. On the Atlantic coast, the Tagus and Sado estuaries, as well as the river Mira one, were also important distribution points for riverbourne commerce towards the interior of the province.

According to their geographical location, Tourega and *Ebora Liberalitas Iulia* would have to rely heavily on land routes possibly originating from a point off the river Sado, while São Cucufate and Pax Iulia would greatly have benefited from their proximity to the Guadiana River, and also to the tributary of the Sado River. This would explain why Tourega's imported ceramics follow rather the continental model than the maritime one (Etienne, Makaroun and Mayet 1994, 29). In fact, Tourega's Spanish *sigillata* originates to a certain extent more from Tricio (La Rioja) (80%) than from *Baetica* (10%). Meanwhile, at São Cucufate those proportions are 50% for each, and in an island harbour like Pessegueiro the production of Tricio only represents 28% (Tavares da Silva and Soares 1994, 90). This may also be related to the relative proximity of Tourega to *Augusta Emerita*, an important redistributing market for this product (Mayet 1990, 210-211). In fact, Tourega also benefited from its location certainly very close to the road from *Emerita*

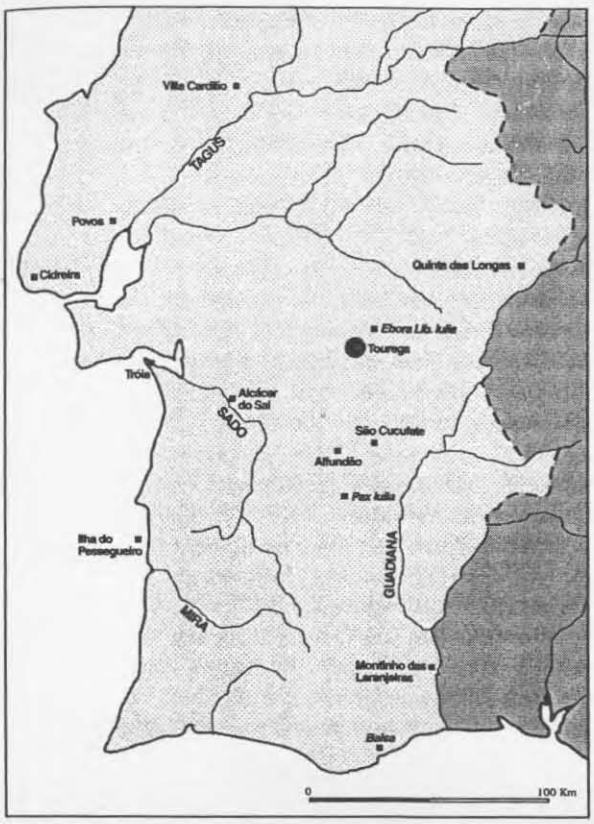

FIGURE 9. LOCATION OF TOUREGA (ÉVORA) AND OTHER SITES MENTIONED IN THE TEXT.

Augusta to *Olisipo* (Lisbon) through *Ebora* and *Salacia* (Alcácer do Sal) (Alarcão 1988, 98). African Red Slip type A, competing with Spanish *sigillata* in the markets, but coming by sea, only represents 7% at Tourega, but 16.53% at São Cucufate and 24% at Pessegueiro. In the same way, Baetican amphorae are rather rare at Tourega (7.6%) and far more common at São Cucufate (20.3%). African Red Slip types C and D, other products circulated by sea, are common in all Lusitanian sites where they do not have a serious continental competitor at the time they circulate. Nevertheless, the proportion of ARS C and D at Tourega (18% and 17%) is lower than at São Cucufate (20.57% and 23.71%). In this period, the sites along the Guadiana (São Cucufate and Alfundão) as well as those along the Tagus (Povos e *Villa Cardílio*) receive amphorae from the Algarve, although in smaller quantities, while there are none in Tourega or Quinta das Longas.

While African *sigillata* dominates the Hispanic markets in the Late Empire, African amphorae are not abundant and it is the Lusitanian products that dominate the foodstuff commerce, particularly in relation to the fish-based products that abundantly reached the inland *villae*. This is easily explained by the dynamics and quality of Lusitanian products, exported to the main areas of the Empire, and follows the tendency for importing from the nearest productive region (Fabião 1998, 181). But this also shows that the circulation of fine wares and amphorae were independent, even when produced in the

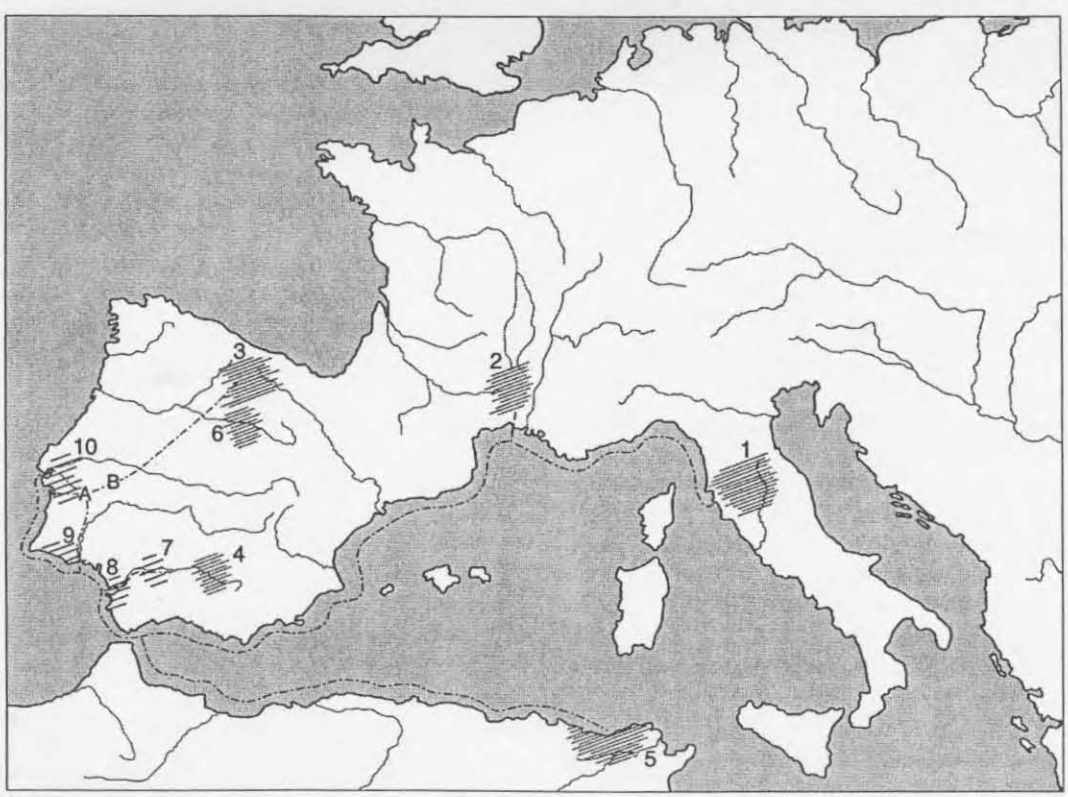

FIGURE 10. A - TOUREGA; B - *EMERITA AUGUSTA*; 1 - AREZZO; 2 - LA GRAUFESENQUE/MONTANS; 3 - TRICIO: 4 - ANDÚJAR; 5 - CARTHAGE; 6 - DOURO VALLEY; 7 - GUADALQUIVIR; 8 - GADES BAY; 9 - ALGARVE; 10 - TAGUS/SADO VALLEYS.

same regions, being subject to trade and loading in intermediary harbours, and responding to the changing demands of populations according to different patterns at various times.

Tourega's fine wares and amphorae are evidence for long-distance trade, following the trends of each period. A tendency for a lower proportion of maritime transport products is explained by its inland location, in the surroundings of a *civitas* capital rather distant from river routes.

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Bibliography

Alarcão, A. 1971, *Terra sigillata itálica em Portugal*, in *Actas do II Congresso Nacional de Arqueologia*, Coimbra, 421-432.

Alarcão A, and Mayet F. (eds.) 1990, *Ânforas Lusitanas. Tipologia, Produção, Comércio*, Actas das Jornadas de Estudo realizadas em Conímbriga em 13 e 14 de Outubro de 1988, Museu Monográfico de Conímbriga, E. de Boccard.

Alarcão J. 1988, *O domínio romano em Portugal*, Mem Martins, Publicações Europa-América.

Alarcão J., Étienne R., Mayet F. 1990, *Les villas romaines de São Cucufate (Portugal)*, Paris, E. De Boccard.

Almagro M. 1955, *Las Necrópolis de Ampúrias*, II, Barcelona.

Almeida M. J., and Carvalho A. 1998, *Ânforas da villa romana da Quinta das Longas (S. Vicente e Ventosa, Elvas): resultados de 1990-1998*, "Revista Portuguesa de Arqueologia", volume 1, número 2, Lisboa, 137-163.

Banha C. 1991-1992, *As ânforas da Villa romana de Povos*, "Cira: Boletim Cultural", 5, Vila Franca de Xira, 49-90.

Bémont C. and Jacob J.P. (dir.) 1986, *La terre sigillée galo-romaine. Lieux de production du Haut Empire: Implantations, produits, relations*. Documents d'Archéologie Française nº 6, Paris, Édit. de la Maison des Sciences de l'Homme.

Beltán Lloris M. 1990, *Guía de la Cerámica Romana*, Zaragoza: Libros Pórtico

Beltrán Lloris M. 1970, *Las ánforas romanas en España*, Zaragoza.

Coutinho H.M.R. 1997, *Terra sigillata Clara do Montinho das Laranjeiras (Alcoutim) 1990 e 1991*, Alcoutim, Câmara Municipal de Alcoutim.

Delgado, M., Mayet, F. and Alarcão, A. 1975, *Les sigillées*. Fouilles de Conimbriga, IV. Paris: De Boccard.

Diogo A.M.D. 1987, *Quadro tipológico das ânforas de fabrico lusitano*, "O Arqueólogo Português", Série IV, 5, 179-191.

Diogo D., and Monteiro N. 1999, *Ânforas Romanas de "Villa Cardílio", Torres Novas*, "Conimbriga", 38, 201-214.

Dragendorff, H. 1895, *Terra sigillata*, "Bonner Jahrbucher", 96, 18-155.

Dressel H. 1899, *Corpus Inscriptionum Latinarum, XV, 2: Inscriptiones Urbis Romae Latinae. Instrumentum domesticum. Partis posterioris fasciculus I*, Berlin.

Encarnação J. 1984, *Inscrições Romanas do Conventus Pacensis. Subsídios para o estudo da romanização*, Coimbra, Instituto de Arqueologia da Faculdade de Letras.

Etienne R., Makaroun Y., and Mayet F. 1994, *Un Grand Complexe industriel à Tróia (Portugal)*, E. de Boccard, Paris.

Ettlinger, E., Hedinger, B., Hoffman, B., Kenrick, P.M., Pucci, G., Roth-Rubi, K., Schneider, G., Schnurbein, S. von, Wells, C.M., and Zabehlicky-Scheffenegger, S. 1990, *Conspectus formarum terrae sigillatae Italico modo confectae*, Materialen zur römisch-germanischen Keramik, 10, R. Habelt, Bonn.

Fabião C. 1993-1994, *O azeite da Baetica na Lusitania*, "Conimbriga", 32-33, 219-245.

Fabião C. 1998, *O vinho na Lusitânia: reflexões em torno de um problema arqueológico*, "Revista Portuguesa de Arqueologia", volume 1, número 1, Lisboa, 169-198.

Faria, J., Ferreira M. and Diogo, A.M.D. 1987, *Marcas da terra sigillata de Alcácer do Sal*, "Conimbriga" XXVI, 61-76.

Ferrer Dias L. 1998, *Terra sigillata da villa romana de Povos (Vila Franca de Xira). Estudo preliminar*, "CIRA", Vila Franca de Xira: Câmara Municipal de Vila Franca de Xira.

Hayes J.W. 1972, *Late Roman Pottery*. London, British School at Rome.

Hayes J. W. 1980, *Late Roman Pottery*. Supplement. London , British School at Rome.

Keay S. J., 1984, *Late Roman Amphorae in the Western Mediterranean: a typology and economic study. The Catalan evidence*, Oxford, BAR Int. Series, 196.

Mayet F. 1990, *Mérida: capitale économique?*, in *Les villes de Lusitanie romaine. Hiérarchies et territoires*, Paris, Éditions du C.N.R.S..

Mayet F. and Schmitt A. 1997, *Les Amphores de São Cucufate (Beja)*, in J. Alarcão and R. Étienne (eds.), *Itinéraires Lusitaniens*, Paris, E. de Boccard, 71-109.

Mayet F., Schmitt A., Tavares da Silva C. 1996, *Les Amphores du Sado (Portugal). Prospection des fours et analyse du matériel*, Paris, E. de Boccard.

Nolen J. U. S., 1988, *A villa romana do Alto da Cidreira (Cascais). Os materiais*, "Conimbriga", 27, 61-140.

Nolen J.U.S., 1994, *Cerâmica e Vidros de Torre de Ares, Balsa*, (*s.l.*), Instituto Português de Museus, Museu Nacional de Arqueologia.

Norton J., Cardoso J. L., Tavares da Silva C., and Canilho M. H. 1993-1994, *Ânforas da Villa romana*

de Vilares de Alfundão (Ferreira do Alentejo), "Conimbriga", XXXII-XXXIII, 181-190.

Oxé A., and Comfort H. 1968, *Corpus Vasorum Arretinorum. A Catalogue of the signatures, shapes and chronology of Italian sigillata*, Bonn.

Peacock, D.P.S., Williams, D.F. 1986, *Amphorae and the Roman economy: an introductory guide*, London, Longman archaeology series, Longman.

Roca M., and Fernàndez (eds.) 1999, *Terra sigillata Hispánica, Centros de fabricación y producciones altoimperiales*, Jaén, Málaga.

Saènz and Saènz, 1999, *Estado de la question de los alfares riojanos: la terra sigillata Hispanica Alto Imperial*, in *Terra sigillata Hispánica , Centros de fabricación y producciones altoimperiales*, (Roca and Fernàndez, eds.) Jaén, Málaga, 61-136.

Sciallano M., Sibella, P. 1994, *Amphores. Comment les identifier?*, Aix-en-Provence, Edisud.

Tavares da Silva C., and Soares J. 1993, *Ilha do Pessegueiro. Porto Romano da Costa Alentejana*, Lisboa, Instituto da Conservação da Natureza..

Vaz Pinto I, and Viegas C. 1994, *Les Thermes de la Villa Romaine de Tourega*, "Les Dossiers de l'Archéologie", November.

Vaz Pinto I., Viegas C., Ferrer Dias L., 1997, *A Villa Romana da Tourega: umas termas em ambiente rural*, in *Paisagens Arqueológicas a Oeste de Évora*, Évora, Câmara Municipal de Évora.

Viegas, C., forthcoming, *Cerâmica, economia e comércio: a terra sigillata da Alcáçova de Santarém.*

Viegas C., and Vaz Pinto I., forthcoming, *As termas da villa romana da Tourega (Évora, Portugal)*, in *Actas do Colóquio Termas Romanas en el Occidente del Império*, Gijón, December of 1999.