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## Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean

Archaeology and archaeometry

The Mediterranean: a market without frontiers

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# LATE ROMAN AMPHORAE IN THE EASTERN *TARRACONENSIS*. SOME CHRONOLOGICAL AND QUANTITATIVE APPROACHES

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*Since the classic study of Simon J. Keay published in 1984, knowledge of late Roman amphorae has progressed markedly, thanks to scholars such as Michel Bonifay and Paul Reynolds, amongst others. The area studied by Keay was Catalonia, the ancient Eastern *Tarraconensis*. The overview here offered for this same region reveals the central role played by African imports in late Antique times, with a minor presence of the Eastern-Mediterranean and South-Hispanic (both Baetican and Lusitanian) productions. Progress in research in the last 25 years has been centred on a series of new and well-dated contexts: the data they have yielded has clarified more precisely the chronology and the proportions of the different imports. On occasion a quantitative approach may even be applied. At the same time the relationship between town and country with respect to the late Roman amphorae is proving of interest and providing results of significance.*

**KEYWORDS:** LATE ROMAN AMPHORAE, EASTERN *TARRACONENSIS*, CATALONIA, CHRONOLOGY, QUANTIFICATION IN CONTEXTS, AFRICAN, EASTERN-MEDITERRANEAN, SOUTH-HISPANIC AND *TARRACONENSIS* PRODUCTION.

## Introduction

In this paper we consider the matter of the presence of different groups of amphorae found in the coastal zone at the east of *Tarraconensis* in late Antiquity (4th to 7th centuries AD): the work is based on a review of some archaeological contexts and the percentage of amphorae they contain.

The zone of modern Catalonia (which corresponds roughly to the east part of the ancient *Hispania Tarraconensis*) has long been one of the areas in which late Roman amphorae have been better studied, thanks to the fundamental work of Simon Keay (1984). The recent increased research on late Roman amphora (mainly reflected in the three previous meetings of LRCW) has allowed us to update, revise and if necessary reject or improve the initial parameters established in the pioneering work of Keay.

With regard to data management, it is a given fact that the study of the evidence is conditioned by the nature of its every component deposit. Thus, the study of Keay (1984) showed a great preponderance of African amphorae on the Catalan coast, which observation subsequent studies have refined. One reason for this prevalence is that much of the evidence comes from study of necropoleis (the cemetery of Francolí in Tarragona, those of Plaza del Rey and Santa Maria del Mar in Barcelona, and the various burial grounds of Ampurias): one of the characteristic fates of late antique amphorae is their reuse as coffins in burials. Indeed, in the above places the use of African amphorae is dominated by its fusiform profile at the expense of other amphorae (mainly, South-Hispanic and Eastern-Mediterranean) that only occasionally were

reused for infant burials. While it remains true that African amphorae were always in the majority during the late antiquity, the data from these cemeteries distorts the overall results (as happened in the study of Keay), exaggerating the role of said amphorae.

In considering these problems, we propose in this paper to compare the data of these contexts in order to quantify and verify the presence of the amphorae according to their origins. We will omit the cemeteries, for the problems mentioned above. We will consider the percentage ratio between urban and rural sites. Although the latter have a lower number of individuals, it is important to check whether the proportional relationship between city and country in terms of the volume of their imports was maintained or altered during late Antiquity.

## Contrast of the data. Percentages

We will base this account on particularly well-dated deposits with an acceptable number of fragments. However, in formulating more general quantifications (either in total or for urban-rural comparisons) there were considered some deposits lacking a clear stratigraphy.

## 4th Century

Although lacking 4th century contexts, we see an absolute predominance of African amphorae (African 1, 2, and African 3—Keay 25), with a distribution of Mauritanian amphorae (Keay 1). This can be exemplified by the deposit from 7 Apodaca street, in Tarragona (Macías *et al.* 1997, 165; Remolà 2000, 87-88), where

African amphorae are 74% of the total, while 19% are South-Hispanic (Keay 16, Almagro 51 C-Keay 23 and Beltran 68) and some Empolitan (Italic) amphorae comprise the remaining 7%. Although further comparative data is lacking from *Tarraco* and other sites, the presence of African amphorae is significantly higher than that documented in the 4th century contexts of Ostia and Rome, where its presence is approximately 50% of total of the amphorae, while South-Hispanic are around 7-8% and the Eastern-Mediterranean contributes between 2% and 9% (Reynolds 2010, 201, table 2c).

### 5th and early 6th Centuries

A greater diversification of imports now pertains, which affects the percentage representation of the amphorae. Thus, in the excavation of a landfill located in the main square (Plaça Gran) of Sant Martí d'Empúries, African amphorae correspond to 45.46%, Eastern-Mediterranean to 30.90%, while South-Hispanic provide only 3.18%, with 0.46% of Italic amphorae (Keay 52) and a high level (20%) of indeterminate amphorae (Aquilué 1997; Reynolds 2010, 216, table 16). The representation of South-Hispanic amphorae (Dressel 23, Almagro 51 A/B and C) is very low relative to other contexts, which fact could suggest a falling away of its distribution in the northernmost zone of the *Tarraconensis* province, but its appearance in the South of Gaul advises caution on this point.

In *Barcino* (Barcelona) some contexts exist, although the reliability of the percentage levels of the amphorae should be treated with care, as these are cemetery areas (Plaza del Rey, necropolis of Santa Maria del Mar), or old excavations without known stratigraphy (the area of Tinell). Thus, from fifteen deposits (most of which are problematic because their stratigraphy is not reliable, or even nonexistent) where the percentages are detailed, Carreras and Berni (2005, 173) considered an overall percentage presence of 84.93% for African amphorae, with only 4.17% for the Eastern-Mediterranean, 2.64% for the South-Hispanic, 3.22% for the *Tarraconensis* and a meager 0.89% for the Italic products. Taking into account all the amphorae found and the fact that there is no clear chronology of contexts (and even those given are not very reliable), the quantification produced by the authors should be considered with great care. They are included here only as an illustration. The numbers are very different from those provided by the other contemporary contexts.

Thus, in the Vila-roma street deposit of Tarragona, African amphorae make up 24.5%, Eastern-Mediterranean 25.5% and South-Hispanic another 25% (TED'A 1989, 316), leaving a further 25% of unknown provenance. From the Old Court of the Cathedral, also in Tarragona, African amphorae correspond to 61%, with the rest from South-Hispanic, Eastern-Mediterranean and indeterminate sources (Remolà 2000, 56). In the dump of the so-called *Cardo Maximus* of *Iluro* (Mataró), African

amphorae correspond to 56% of the total, South-Hispanic to 23% and the Eastern-Mediterranean set to 12% (Cerdà *et al.* 1997, vol. II, 140). Compiling all the finds at *Iluro*, these amphorae groups yield 57.2%, 36.3% and 5.1% respectively (Cela and Revilla 2004, 353): a very low percentage for Eastern-Mediterranean amphorae.

In the ancient town of *Iesso* (Guissona, Lleida), located in the interior of the territory, in a context of the advanced first half to mid-5th century, African imports account for 67% of the amphorae, the Eastern-Mediterranean has 15% and the South-Hispanic 17% (Uscatescu 2004).

Further to the South, in the Valencian region, although some data have been published about the city of *Valentia* (Valencia), they lack quantification. The results from a level of abandonment or destruction in *Portus Sucrone* (currently Cullera, in the province of Valencia), dated in the first half/mid-5th century, are very interesting: here amphorae of African, Eastern-Mediterranean and South-Hispanic origins constitute 37.10%, 6.45% and 33.58% respectively, while the later *Tarraconensis* amphorae (Keay 68/91) have a high percentage of 17%. The remaining 5.72% is represented by the amphorae from Ibiza (Keay 70 and RE 0101) (Hurtado *et al.* 2008, 107, fig. 13). This is representative of the high percentage of South-Hispanic amphorae (forms Dressel 23, Keay 16, 19 and 23, and Beltran 72) in this context.

Comparing this with the situation as documented in Ostia and Rome, we see that here in the 5th century and the beginning of the 6th, African amphorae range between 35% to about 58%, while South-Hispanic vary between 2% and 9%, with a greater presence of the Eastern-Mediterranean at between 9% and 30%. Italic amphorae (form Keay 52) have but a discreet presence, between 10% and 17% (Reynolds 1995, 184, Appendix B.6; 2010, 201, table 2c; 217, table 17a).

As for the cities of Southern Gaul, the data of Narbonne, Arles and Marseille provide tallies of between 20% and 56% for African amphorae, between 4% and 44% for the Eastern-Mediterranean (with tendency towards the upper end) and a very uneven presence of South-Hispanic amphorae. This last may vary from 1% in Marseille, and between 3.8% and 15% in Arles: notably different is Narbonne, with 44% and 77% in two contexts. The Italic amphorae (form Keay 52) have a much smaller presence, with a percentage of 2% in Narbonne, between 2% and 5.6% in Arles and up to 10% in Marseille (Reynolds 2010, 219, table 18). Therefore, we conclude that the Italic and South-Hispanic products have a pattern of diffusion that falls away according to the distance from their areas of production. Thus the Italic are more abundant in Marseille and rarer as we move towards the West, whilst the presence of South-Hispanic amphorae are scarce in Marseille, has a significant presence in Arles and is abundant in Narbonne. This latter pattern corresponds with the relative boom of South-Hispanic

imports experienced in the area of Catalonia during the first half of the 5th century (Járrega 2000; Berni and Moros 2012).

At this stage (especially in the late 4th and beginning of the 5th centuries), the import of ceramics reached its maximum volume in the countryside (Járrega 2010, 171-172). There is also a significant penetration of the South-Hispanic production into rural settlements, with percentages ranging between 11% and 40% of the late Antique amphorae totals (Járrega 1993/2009, 1311-1313). This growth is in the import of oil products from the river *Baetis* area (in the form Dressel 23) into the rural areas of Catalonia, although they were themselves possibly areas of production. We must examine, therefore, the reason for this relatively large presence of the Baetican products in Catalan rural sites, considering the turbulent events of this period, as mentioned in the written sources.

### 6th-7th Centuries

We consider here both centuries together, because there is a lack of well dated contexts in the 7th century. Now there is a much higher proportion of African amphorae. In the first half of the 6th century we still have more balanced results. In the excavations of the Plaza Petita of Sant Martí d'Empúries, in a context of the first half of the 6th century, African items comprise 59.53% of the total amphorae, the Eastern-Mediterranean stand at 21.43%, with 19.04% remaining indeterminate, a considerable percentage. South-Hispanic amphorae are simply absent (Aquilué *et al.* 2008, 59-60; Reynolds 2010, 216, table 16). In *Baetulo* (current Badalona, in the province of Barcelona), in a context datable to the middle or second half of the 6th century, African amphorae form 77% of the total, with here only 8% from the Eastern-Mediterranean but instead the South-Hispanic are now at 14% (Comas and Padrós 1997). We must bear in mind that the whole amphorae corpus consists of only 22 pieces, and so it is not quantitatively reliable.

The proportion of African amphorae increases as the 6th century progresses. In a landfill next to the road to Ampurias, dated to the second quarter/mid-6th century, African amphorae look to represent 90.99% of the amphorae (Reynolds 2010, 216, table 16). However, from a group of 8635 amphora fragments, 111 individuals were able to be assigned to a typology: this gives somewhat different results (Llinàs *et al.* 1997, 65 – now the African amphorae comprise 72.07%, the Eastern-Mediterranean 19.81%, the South-Hispanic 7.20% and 0.90% from Ibiza. Although much of the materials could be residual, these results show the importance of African amphorae. This picture is in agreement with the results from the context documented in the Torre de l'Audiència, in Tarragona, where 86% of the amphorae are from kilns located in the western Mediterranean, mainly African amphorae. From this western Mediterranean group, the African make up 90%, and of them the amphorae Keay 62 comprises 68% (Remolà 2000, 60). We must keep in

mind that this context belongs to the advanced 6th and 7th centuries. The impression produced by these data is that, in the advanced 6th century and especially in the 7th, African amphorae imports overwhelmed the others.

In contrast, the results of the context of Benalua (Alicante), in the Valencian countryside, read otherwise, although it should be noted that most were not found in stratigraphical excavations. These materials, dated from well into the 6th century, provided very balanced rates: 29.7% for African amphorae, 22.6% for the Eastern-Mediterranean, 4.2% for South-Hispanic, 6.3% for productions from Ibiza, 2.8% for indeterminate amphorae and a high 34% for regional productions (Reynolds 1993, 1995, 194-196, 196-197 Appendix C.1; 2010, 227, table 22). It is important to note that among the last are the *spatheia*-type amphorae, of which some at least may be of African origin.

If we compare the situation with other contexts outside the area of this study, a mixed picture emerges. Thus, in Marseille, in various contexts of the 6th and 7th centuries, African amphorae have a more discreet presence, as they vary between 49% and 56% with an average (calculated from 8 contexts) of 53%. In contrast, in San Antonino di Pertini (Italy), African amphorae reach 76%. The amphorae from the Eastern-Mediterranean in Marseille range between 8% and 42%, with an average of 27% (Reynolds 2010, 225, table 21). Therefore, as already stated by Keay (1984), the percentages of African amphorae are far superior on the Hispanic coasts, which implies a preferential market for the producing areas. Its commerce was not affected by the rivalry between the Visigoths and the Byzantines, after the conquest of Carthage in the year AD 439 by the Vandals (Járrega 2010, 175-178).

In the rural site of Els Mallols (Cerdanyola, in the province of Barcelona), where the materials are dated to the 6th and 7th centuries, the African amphorae (1143 fragments) constitute 61.76%, the Eastern-Mediterranean 10.18% and the South-Hispanic 18.62%. The amphorae with a possible origin in the region of Tarragona are but 0.98%, with those of undetermined origin 8.44%. This pattern can be explained by the presence of residual materials (it is rather unlikely to find South-Hispanic amphorae in the mid 6th and 7th centuries), but one should consider there that there might also exist very late globular amphorae (Járrega 2007b, 126-137), which date back to the 7th century.

Another rural site, La Solana (Cubelles, in the province of Tarragona), located on the coast (Barrasetas and Járrega 2008), presents some interesting results which are somewhat different from those of Els Mallols. While some residual materials may be present, most belong to the 6th century: 35 pieces of form Keay 62 out of 269 specimens with a definable form, of which 122 correspond to African amphorae. At this site (considering only the fragments with a form), African amphorae

correspond to 45.35% of the total, the Eastern-Mediterranean to 18.21%, the South-Hispanic to 6.69% and the Ibiza production to 0.74%. But the remaining 28.99% (the second largest group after the African) corresponds to a late *Tarraconensian* production with an umbilicated flat bottom, about which little is yet known (Járrega 2007a), but that appears in along the Catalan coast in the 6th century.

The Visigoth village of Puig Rom (Roses, Girona) permits the documentation well on into the 7th century the presence of amphorae (Keay 61 and 62, and globular amphorae with umbilicated bottom) and African lamps (type Hayes II - Atlante X). No African red slip (Nolla and Casas 1997) was found, so this might have ceased production (or export) some time before then. However, the limited knowledge of the materials of this deposit prevents us from providing any quantitative data for this site.

## Conclusions

- Despite the difficulties in seeking quantification (definition of reliable contexts, difficulties in assessing with small deposits the provenance of the amphorae, residual problems, biases in the evidence from the type of deposit) we believe that, given stratigraphic contexts with a sufficient number of materials, it is possible to comprehend of flow of trade through the percentages of the amphorae types.

- Despite the lack of 4th century contexts (we have considered here only one from Tarragona), the African amphorae are clearly dominant, followed by the South-Hispanic (Baetican and Lusitanian); the rest of the production (basically Italic) has a very small presence. This coincides with the general trend in the western Mediterranean, and is explained by the expanding force of African trade at this time. Our thinking on the products should be diversified: not only oil but also salted fish and perhaps wine.

- The 5th century, in contrast, offers a wide variety of contexts (the most abundant of the late Antique period). This century corresponds to a time of diversification (as in the appearance of the Eastern-Mediterranean amphorae) that seems to reflect a very active trade, which appears in marked contrast with the historical data provided by written sources referring to a period very turbulent politically and militarily. The percentage of African amphorae in general decreases towards a more evenly balanced level (generally below 50%), still higher but not disproportionately so than the productions of Eastern-Mediterranean and South-Hispanic amphorae. This situation clearly reflects the breaking of the dominance of African products, alongside the maintenance (and even increase) of South-Hispanic and an important input now from the eastern Mediterranean. The reasons can be sought in part by the political upheavals of this century, but also by the increased

efforts of the Eastern traders, well documented by written sources.

- The South-Hispanic products (Baetican oil and Baetican or Lusitanian salted fish) experienced a surge in their presence in the Catalan region in the 5th century, which is consistent with the data from Narbonne, while at other sites placed more to the east in coastal Gaul (Arles, Marseille) their presence had been progressively reduced. This is a phenomenon that contrasts with the data from written sources: new explanations need to be sought in the light of economic history drawn from an archaeological basis. The present explanations are far from satisfactory in claiming that the Baetican oil exports had practically disappeared during the 3rd century, when most of these excavated finds are the oil amphorae Dressel 23.

- In the 5th century the rural sites have a lot of imported pottery deriving from varied origins (like the urban). However, due to the lack of stratified evidence, it is impossible to provide quantified comparisons. Even so, the total quantities are themselves very revealing here. On the other hand, it is interesting to note the significant presence now of South-Hispanic productions in the rural settlements. This implies local trading within the territory, and thus a fluid commercial interchange between town and country, no less now than in the Early Empire.

- The 6th century did not present any rupture with the African trade, despite the successful invasion of the Vandals at Carthage (which actually caused in a medium-term a revival of this trade) and the rivalry between the Visigoths and the Byzantines who invaded the producing areas in the years AD 533-534. The proportion of African amphorae, more evenly balanced with respect to the Eastern-Mediterranean and South-Hispanic amphorae (even considering that the latter may be partially residual in their contexts) increases as the 6th century passes, to become clearly dominant again as they had been in the 4th century. The importance of African trade is probably due largely to the economic policy of the Vandal kingdom, although its continuity in Byzantine times should not be undervalued. The lack of specific and diagnostic features in many contexts of the 6th century makes them often difficult to assign to one of the two periods.

- Throughout the 6th century appears a type of amphora with a flat umbilicated bottom, whose story is little known. It seems to occur in the coastal area of the former province of *Tarraconensis* where it reaches quite high values: for example in the coastal site of La Solana, it forms the second largest group after the African amphorae, with 28.99% percent of the total of the amphorae, compared to 45.35% represented by the African. We still lack data for the form from other sites: probably as it is hard to identify because of its ready confusion with common pottery.

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Late Roman sites in Catalonia mentioned in the text



## TABLES

**4th century**

Site	African	East-Med.	South-Hispanic	Tarraconensian	Italic	Ibizan	Other
<i>Tarraco</i> (Tarragona) Apodaca street, 7	74%	—	19%	—	7%	—	—

**5th century**

Site	African	East-Med.	South-Hispanic	Tarraconensian	Italic	Ibizan	Other
<i>Emporiae</i> - Sant Martí d'Empúries, Plaça Gran)	45.46%	30.90%	3.18%	—	0.46%	—	20%
<i>Barcino</i> (Barcelona) (various sites)	84.93%	4.17%	2.64%	3.22%	0.89%	—	—
<i>Tarraco</i> (Tarragona) Vila-roma street	24.5%	25.5%	25%	—	—	—	—
<i>Tarraco</i> (Tarragona) Old Court of the Cathedral	61%	?	?	—	—	—	?
<i>Iluro</i> (Mataró) <i>Cardo Maximus</i>	56%	12%	23%	—	—	—	—
<i>Iluro</i> (Mataró) (various sites)	57.2%	5.1%	36.3%	—	—	—	—
<i>Iesso</i> (Guissona)	67%	15%	17 %	28.99%	—	0.74%	—

**6th-7th Centuries**

Site	African	East-Med.	South-Hispanic	Tarraconensian	Italic	Ibizan	Other
<i>Emporiae</i> - Sant Martí d'Empúries, Plaça Petita)	59.53%	21.43%	—	—	—	—	19.04%
<i>Emporiae</i> - Carretera de Empúries.	72.07%	19.81%	7.20 %	—	—	0.90%	19.04%
<i>Tarraco</i> (Tarragona) Torre de l'Audiència	90 %	?	?	—	—	—	—
Els Mallols (Cerdanyola)	61.76%	10.18%	18.62%	0.98%	—	—	8.44%
La Solana (Cubelles)	45.35%	18.21%	6.69%		—	—	