

THE OVOID AMPHORAE IN  
THE CENTRAL AND WESTERN  
MEDITERRANEAN

BETWEEN THE LAST TWO CENTURIES OF  
THE REPUBLIC AND THE EARLY DAYS OF THE  
ROMAN EMPIRE

Edited by

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# Ovoid amphorae in *Hispania Citerior/Tarraconensis*: consumption contexts and main trade areas

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**Abstract:** This paper analyses the effect achieved by products packaged for marketing, imported in the extensive group of ovoid amphorae, based on the analysis of closed and well-dated contexts of *Hispania Citerior/Tarraconensis*, mainly of the Late-Republican period. The link between Brindisian and Ancient African amphorae, which constitutes the framework of the Hispanic ovoid amphorae, is also emphasised. From the middle of the 1st century BC, exports of Hispanic origin in ovoid amphorae are widespread: a major milestone that indicates the complete integration of Hispanic agricultural and commercial productions into the Mediterranean markets. The paper also looks at, first, the impact of different products, emphasizing the role of amphorae of the type Tarraconense 1 that were preferably distributed in the northeastern area of the Iberian Peninsula, and, then, the emergence of imports in ovoid amphorae from the Guadalquivir from the middle of the 1st century BC, especially that of Ovoid 1/LC67 amphorae, alongside the regular presence of the other ovoid amphorae in the contexts of the territories under scrutiny. It is also pointed out that there is a morphological connection between all these amphorae, and that such a connection could be due to a shift in economic interests from Italy to the provinces.

**Keywords:** Ovoid Amphorae, *Hispania Citerior/Tarraconensis*, Roman Republic, Roman economy and trade.

**Resumen:** A partir del análisis de contextos anfóricos cerrados y bien datados de *Hispania Citerior/Tarraconense*, principalmente de época tardorrepublicana, se analiza el calado que tuvieron las importaciones de productos comercializables envasados en la amplia familia de ánforas ovoides. Se remarca la asociación de las ánforas de Brindisi y las Africanas Antiguas, siendo los modelos de referencia de las ánforas ovoides hispanas. A partir de mediados del siglo I a.C. se generalizan las exportaciones de origen hispano en ánforas ovoides, un verdadero hito productivo que indica la plena integración de las producciones agrícola-mercantiles hispanas en los mercados mediterráneos. Se analiza el impacto de las distintas producciones destacando la distribución preferente de las ánforas Tarraconense 1 en el área nororiental peninsular, la eclosión de las importaciones ovoides del Guadalquivir a partir de mediados del siglo I a.C., especialmente de las ánforas Ovoides 1/LC67, así como la presencia regular del resto de ánforas ovoides en los contextos de los territorios analizados. Se destaca la conexión formal de todas estas ánforas cuya causa podría estar originada por desplazamientos de intereses económicos desde Italia a las provincias.

**Palabras clave:** ánfora ovoides, *Hispania Citerior/Tarraconensis*, República romana, economía y comercio romano.

## 1. Introduction

The analysis of amphorae contexts related to Roman Hispania has undergone a remarkable development, thanks to quantitative methods, as well as a deepening knowledge of and re-appraisal of the established typologies. The best example of such advances is the re-ordering of typologies and the analysis of ovoid amphorae from the Guadalquivir valley carried out by R. R. de Almeida (2008), which then forced a revision of contexts that had been already studied and led to the search for new evidence. In the same way, the main aim of this work is the revision and updating of amphorae contexts in *Hispania Citerior/Tarraconensis*, especially those of the Late-Republican period, to analyse the impact that imports of packaged products for the market had on the extensive group of ovoid amphorae (Italic, North-African and Hispanic).

However, this work is not limited to a detailed comparison of the contexts that show sets of ovoid amphorae. It also

includes – as is usual in our research (Molina Vidal 1997; Mateo Corredor 2016a) – quantitative aspects, so that the effect and importance of the arrival of these products can be proportionally measured. Therefore, the applied methodology has been focussed on the quantitative and proportional analysis of amphorae sets with a specific chronology. Whenever possible statistical analysis was carried out. When information allowed it, we have applied the method of rim-counts, as corrected with the Modulus of Rupture (Mateo Corredor and Molina Vidal 2016), which offers higher levels of reliability.

Necessarily, the work has been focussed on the contexts where imports are found, as too with the Tarraconense 1 amphorae, since the focus here is to assess the commercial impact of these products on consumption contexts; other research teams are developing research focussed on its production. It is not the aim of this study to propose new typologies, but to analyse the statistical, geographical and chronological influence of these types of amphorae and so, ultimately, to determine in which

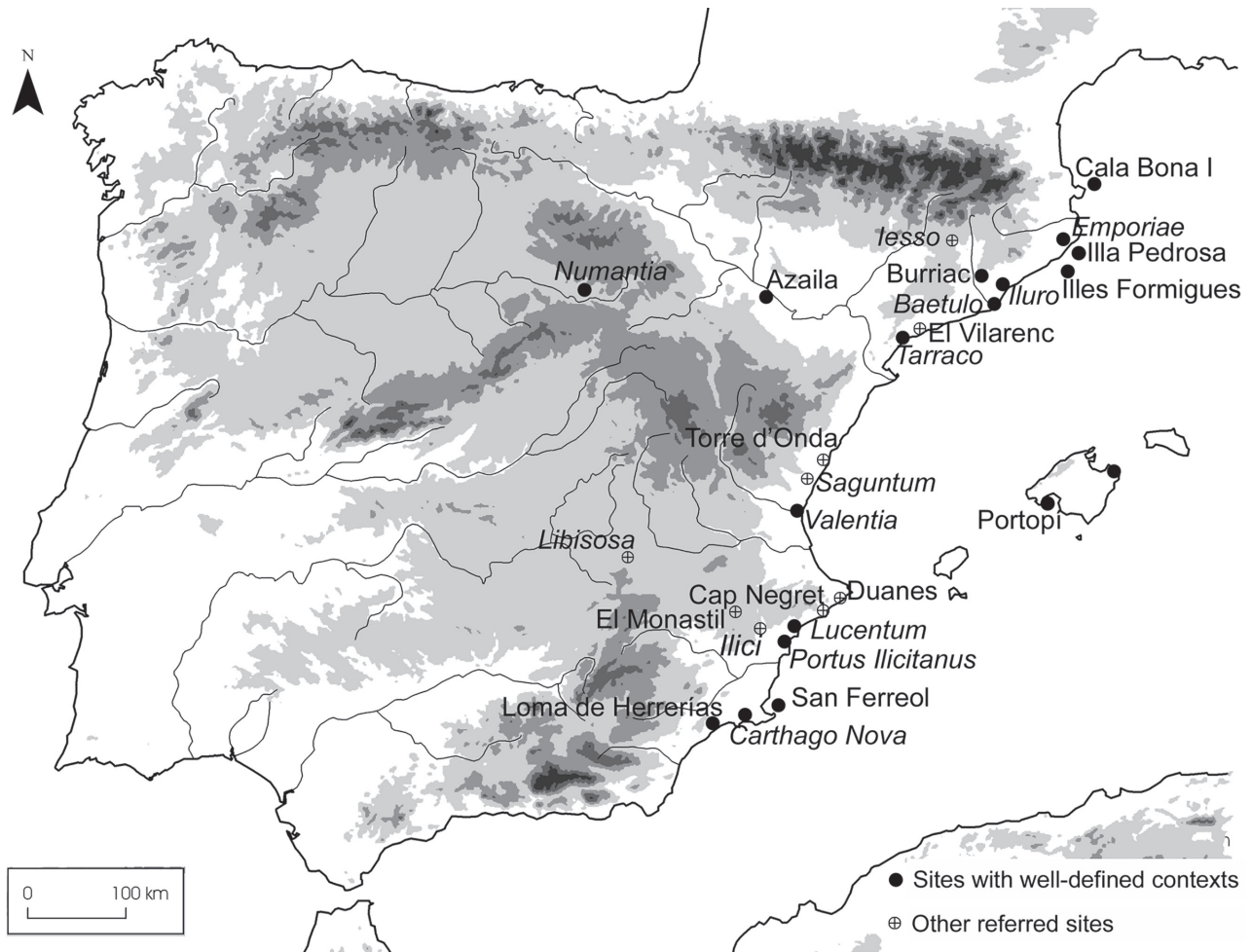


FIGURE 1. MAP SHOWING THE SITES MENTIONED IN THE TEXT.

trading areas and by what commercial routes those types were preferably involved.

## 2. Main contexts

For the purposes of this research, a detailed narrative is included of those specific archaeological sites showing contexts that are preferably limited to short chronological spans. In order to avoid the repetition of characteristics corresponding to each context, a brief description of their main chronological features and historical background is first set out (Figure 1).

### 2.1. Land contexts

#### *Emporiae* (Empúries, Girona)

For the ancient Roman city of *Emporiae*, different contexts are available from the excavations carried out in the area of the Forum. Those contexts illustrate the evolution of commercial imports over most of the Late-Republican and Augustan periods. However, the information gathered is not uniform since in some layers of the excavation only the origin and type of amphorae found in the site are mentioned, while in other instances a quantification of each type of amphora has been carried out. Accordingly,

those layers corresponding to the middle of the 1st century BC (40-30 BC), the last decade of the 1st century BC and from AD 10-15 (Aquilué Abadías *et al.* 2002, 2008, 2010; Tremoleda i Trilla and Castanyer i Masoliver 2013) are the most valuable ones.

#### *Ileso* (Guissona, Lleida)

The ancient city of *Ileso* was founded around 100 BC. From that exact founding period three trenches were discovered, containing a remarkable number of amphorae, more specifically of Italic origin that dated from 121 to 90 BC (Guitart Duran, Pera Isern and Carreras Monfort 1999). Additionally, the amphorae obtained from excavations carried out until 1999 have been the object of an interesting quantitative study (Carreras Monfort 2004). This group covers an extended period, encompassing the years from the founding period to the Late-Roman period, and mainly between the end of the 2nd century BC and the 1st century AD.

#### *Iluro* (Mataró, Barcelona)

The ancient city of *Iluro*, founded *ex novo* in the first half of the 1st century BC, has been the target of many excavations. It is concluded that the city was occupied

without interruption until the beginning of the 7th century AD. The work of J. García i Roselló, J. Pujol del Horno and M. D. Zamora Moreno (2000) presents a summary of materials of different amphorae contexts from the 2nd and 1st centuries BC from *Iluro*, Burriac and other surrounding archaeological sites. The main works available, and which include quantification of amphorae, are the following: that carried out in the *Cardo Maximo*, especially in the contexts of Plaça de la Peixateria and dated from 40 to 10/1 BC, in Can Castany dating to 20-1 BC (Cerdà i Mellado *et al.* 1997; Pérez Suñé and Revilla Calvo 2001), as well as the Roman cistern in C/San Francesc D'Assis with material spanning from 15/10 BC to the change of Era (Puerta 2010).

#### *Burriac* (Cabrera de Mar, Barcelona)

For the settlement of Burriac, our research is based first on the summary of some amphorae contexts from the 2nd and 1st centuries BC already mentioned for *Iluro* (García i Roselló, Pujol del Horno and Zamora Moreno 2000), and then on study of amphorae material from the cistern in the western area (Miró i Canals, Pujol del Horno and García i Roselló 1988). This cistern shows three different phases, offering a complete sequence for the first half of the 1st century BC: it thus represents a good standard for this period.

#### *Baetulo* (Badalona, Barcelona)

As far as *Baetulo* is concerned – founded in the first decades of the 1st century BC, our study is based on the work of Comas i Solà (1985), who wrote about the amphorae in this Roman city. An interesting amphorae series has been found from different contexts and archaeological sites, such as that of the silo from C/Pujol, dated to 40-30 BC. In addition to this, our research will also be supported by the small context, dated between 40 and 30 BC, from the stratigraphic unit 747 in Plaça la Font i Cussó, as well as by the stratigraphic unit 413 in C/Lladó, belonging to the last quarter of the 1st century BC (Comas i Solà and Padrós Martí 2010).

#### *Tarraco* (Tarragona)

For the city of *Tarraco*, there is available one of the best chrono-stratigraphic sequences that exist for the two centuries before the change of Era. Here, the recent work of M. Díaz García (2012) includes a detailed description of the Late-Republican amphora material from different excavations. Additionally, for the layers corresponding to the last quarter of the 1st century, information from the port warehouse documented under the Roman Theatre (Gebelli i Borràs 2008; Ruíz de Arbulo *et al.* 2010) has also been included, as well as information from stratigraphic units 4105 and 2139 of Conjunt Paleocristià del Francolí (Gebelli i Borràs 2008), and Phases 4 and 5 of the plot 2-UA 15 (Díaz García 2012). Thus a period running from the 2nd century BC to the change of Era is covered.

#### *Azaila* (Cabezo de Alcalá, Teruel)

In the case of the Iberian-Roman site of *Azaila*, the final phase of occupation is well documented. Most of the materials recovered belong to this period, and although a number of different dates have been proposed, two of them should be emphasised. On the one hand, M. Beltrán Lloris (2013), in the latest review of this site, argues that the destruction of the city would have occurred around years 75/74 BC to 69/68 BC, coinciding with the end of the Sertorian wars or the years immediately after. On the other hand, other authors propose as a date for the destruction the year 49 BC or thereabouts, and in relation to the conquest achieved by the Caesarian side (Ribera i Lacomba and Marín Jordá 2004-2005; Hourcade 2008; Ribera i Lacomba 2013). It is not the aim of the present research to argue about the chronology, thus, for the purpose of this study, this context will be dated to between 75-49 BC.

#### *Numantia* (Garray, Soria)

In spite of the fact that there is hardly any information available about the destruction layers of the *oppidum* in *Numantia*, the materials in the nearby Roman camps built by P. Cornelius Scipio Aemilianus for the siege of the city, ongoing for 134 and 133 BC (App. *Ib.*, 6, 84-98) are well known. Thus, although some of the camps in *Numantia* show activity assignable to both an earlier and later phase, it has been possible to identify the facies of Scipio's camps, although the amphora material has not been quantitatively analysed (Sanmartí i Grego 1985; Principal Ponce 2000; 2013).

#### *Valentia* (Valencia)

The ancient city of *Valentia* gives a context that is one of the best dated: this is due to the fact that both its foundation and its destruction took place at specific dates, as indicated by the historic and archaeological information alike. The foundation layers of *Valentia* (138 BC) are registered in archaeological sites such as L'Almoïna and Roc Chabàs (Ribera i Lacomba 1995; Ribera i Lacomba and Marín Jordá 2003; Álvarez *et al.* 2003). Likewise, the amphorae in the Pompeian destruction layers (80/75 BC) are well documented, especially in the excavations carried out in the Plaza Cisneros (Ribera i Lacomba and Pascual Berlanga 2015). After this destruction, the city was not rebuilt until the Claudio-Neronian period, although some occupation has been detected at least from Augustan period, probably related to the presence of a *mansio* (Ribera i Lacomba and Escrivà Chover 2015). Accordingly, there is information provided by the pit in C/Teneries that is dated to the last third of the 1st century BC and the large well of L'Almoïna dated between 5 BC and AD 5/10 (Ribera i Lacomba 2010).

#### *Lucentum* (Alicante)

The Roman city of *Lucentum* has been regularly excavated over the past decades. The research here applicable concerns data from a context belonging to closed layers of



the preparation of the Forum in the Augustan period with a precise chronology of 10 BC–AD 5. This stratigraphic set was formed before the change of Era; its final sequence of events is defined by the presence of thin walled pottery MXXXIII (10 BC) and Italic sigillata pottery (C.12.1, C.14.1, C.22.1) (15 BC–AD 15) (Guilbert Mas *et al.* 2010). The amphora set, studied by the authors of this paper, shows a wide variety of vessels from different origins and mainly belonging to the 1st century BC.

#### Villa C/Olimpo (Lucentum)

In the suburban area of *Lucentum*, only 500m away from the *urbs*, there is a site in which different phases of peripheral urbanism are detected: roads, *villae*, production and storage facilities (Martínez Martínez and Molina Vidal 2016). For the purpose of this research, the possibility of isolating a series of pre-Augustan layers was paramount: they comprise the base upon which an access road to the city was built. The stratigraphic set shows traces of black gloss fine pottery, but an absolute absence of *sigillata* pottery: this fact endows the sequence with a remarkable value for identifying the evolution of specific types of Late-Republican ovoid amphorae.

#### Portus Ilicitanus (Santa Pola, Alicante)

At the site of La Picola, there occurs the only archaeological complex that includes all the ancient occupation of *Portus Ilicitanus*, from the Iberian foundation of the town-fort (from the middle of the 5th century BC into the first quarter of the 4th century BC) until the final abandonment of the salting factory in the 4th–5th centuries AD (Molina Vidal 2005). The contexts at this site are interesting because the *Portus Ilicitanus* was founded in the Augustan period, with a sharp hiatus between the 3rd and the 1st centuries BC, as is shown by the absence of Late-Republican Italian Black Gloss ware. Initiated thus in the Augustan period (c. 25 BC) the site makes a very significant contribution to the identification both of those ovoid types of amphorae, still present at this phase, and those, which had already disappeared.

#### Loma de Herrerías (Mazarrón, Murcia)

This is a small town in the southwestern mining area of Cartagena. Its partial excavation (Ramallo Asensio 1983) yielded an interesting amphora set, mainly Late-Republican, originated in the metal processing area of the settlement. Although remnants of Italic *sigillata* pottery dating from the heyday of the Augustan period are present, most of the material indicates a Late-Republican phase of occupation (from the end of the 2nd century BC until the last quarter of the 1st century BC) (Ramallo Asensio 1983: 930). The amphorae set was studied quantitatively (Molina Vidal 1997: 66–69), but the emergence of new types of classifications, especially those referred to as ovoid amphorae, has led us to revise the material. Accordingly, one may now determine the proportional presence of a remarkable number of ovoid vessels from Southern Spain and, mainly, North African.

#### Carthago Nova (Cartagena, Murcia)

In spite of the fact that different studies of the amphorae material in the current Cartagena and its surrounding area have been carried out, this research will focus on the recent publication about the Late-Republican layers in the excavations of the Roman Theatre. Although the material here is a reduced amount, it shows an interesting chronological sequence in the second half of the 1st century, especially in the layers of the third quarter of the 1st century BC, both from the sacred area of Cerro de la Concepción (Murcia Muñoz *et al.* 2013) and from the construction fills in the wall (Murcia Muñoz, Ruiz Valderas and Ramallo Asensio 2013), as well as in the small context dated to the last decade of the 1st century BC when the *cavea* of the theatre and its perimeter accesses were being built (Ramallo Asensio *et al.* 2010; Murcia Muñoz, Ramallo Asensio and Ruiz Valderas 2013).

### 2.2. Underwater contexts

#### Illa Pedrosa (Estariit, Girona)

The wreck of Illa Pedrosa, which happened between the years 140 and 130 BC, offers an interesting amphorae set characterised by Italic Dressel 1A, Ancient African, and an example of T-9.1.1.1 amphorae and of Iberian amphorae (Vivar 2015).

#### Illes Formigues I (Palamós, Girona)

The wreck of Illes Formigues I has been the subject of different archaeological investigations over the second half of the past century. Among the material collected from this wreck, there is a large amount of ovoid amphorae from Hispania Ulterior/Baetica, along with Tarraconense 1 amphorae. A chronology dating to between 40–30 BC has been proposed (López Mullor and Martín i Menéndez 2008; Martín i Menéndez 2008).

#### Cala Bona I (Cadaqués, Girona)

The amphora material collected from this wreck consists of a set of Tarraconense 1 amphorae and 11 examples of ovoid amphorae from the Guadalquivir valley and the Southern coast of Spain. The shipwreck has been dated to around 50–30 BC (López Mullor and Martín i Menéndez 2008; Martín i Menéndez 2008).

#### San Ferreol (San Pedro del Pinatar, Murcia)

The wreck of San Ferreol has a cargo consisting of mainly Dressel 1B amphorae along with a lower amount of Adriatic Lamboglia 2, Rhodian, Ovoid 1-LC67 amphorae and one Dressel 2-4 (Mas García 1985). The excavator proposed a chronology between 40–20 BC, although recently a dating of around 75–65 BC has been proposed (Beltrán Lloris 2013: 398–399). Although it is not the aim of this paper to discuss in depth this question, we consider that both the tableware and the amphorae allow



a chronology of around 60-50/40 BC. The early date is indicated by the presence of Lamboglia 2 with archaic rim and of the smaller Ovoid 1/LC67 amphorae, which we place in the first stage of that shape's production, and also the fact that fine pottery is already present in contexts such as *Valentia* from the years 80-75 BC. Accordingly, the presence of just one sherd of Dressel 2-4 amphora, if is not a contamination from the excavation process, would lower the chronology a little and would support a dating from the middle of the 1st century BC.

### 3. Late Republican Ovoid Amphorae in Hispania Citerior

#### 3.1. Ancient African/Tripolitanian amphorae

Ancient African amphorae constitute a group with an ovoid morphology, produced in the central area of the North African coast. In addition to a possible production in Tripolitania, it is also confirmed that they were produced in the eastern area of Tunisia (Capelli and Contino 2013; Ben Jerbania 2013). This realisation is behind the proposal of replacing the name Ancient Tripolitanian by Ancient African (Capelli and Contino 2013). The production lifespan has been defined as between the second quarter of the 2nd century BC and the last quarter of the next century. Although it was produced in an area of Punic influence, this type of amphora was integrated into the Italic commercial networks, at least after the fall of Carthage. This proposal is supported by the recurrent association between this type of amphora and Italic materials in both land and underwater sets (Pascual Berlanga and Ribera i Lacomba 2002; Mateo Corredor 2012; 2016b).

In Hispania Citerior, its presence is already reported for layers from the years 160-140 BC in *Tarraco* (Díaz García 2012); this advent becomes consolidated in the following decades (c. 140-120 BC), as demonstrated by its remarkably prolific presence in the foundation layers of *Valentia*. Again, it has a most significant presence in the votive well in L'Almoína, where this type of amphora is the most represented after Iberian wine amphorae (Ribera i Lacomba 1995; Ribera i Lacomba and Marín Jordá 2003; Álvarez *et al.* 2003). Additionally, the Ancient Africans also appear in contemporary layers in other sites such as Burriac (García i Roselló, Pujol del Horno and Zamora Moreno 2000), *Tarraco* (Díaz García 2012), in the Numantian camps (Sanmartí i Grego 1985; Principal Ponce 2000), Puig Castellar (Pera i Isern *et al.* 2016), Can Tacó (Rodrigo i Requena, Carreras Monfort and Porcheddu 2015) and in the wreck of Illa Pedrosa, where, again, it is the best represented type of amphora after Iberian wine amphorae (Vivar 2015).

Similarly, its presence is persistent all through the next century, for example, in the Sertorian layers of *Libisosa* (Uroz Rodríguez and Uroz Sáez 2014) and of Plaza Cisneros in *Valentia*, where Ancient African represents 10% (Ribera i Lacomba and Pascual Berlanga 2015). In the cistern of

the *oppidum* in Burriac, it is not present in the layers dated to 100/90-80/70 BC, but it shows a 12% occurrence in the next phase (70/60 and 50/40 BC) (Miró i Canals, Pujol del Horno and García i Roselló 1988). Conversely, in the various layers of the first half of the 1st century in *Tarraco*, it only accounts for roughly 2% (Díaz García 2012). Additionally, the two samples found in the context of the second quarter of the 1st century BC in *Pollentia* achieve merely 5% (Equip d'excavació de Pollentia 1993), 2% in Azaila (Beltrán Lloris 2013), though in Loma de Herrerías it is healthier at 12.9%.

The end of its distribution into Hispania Citerior/Tarraconensis should be dated to the end of the 1st century BC. Thus, although it is still present in different Augustan contexts from the last quarter of the 1st century, such as *Baetulo* (Comas i Solà and Padrós Martí 2010), *Iluro* (Cerdà i Mellado *et al.* 1997; Puerta 2010), the port warehouse in *Tarraco* (Gebelli i Borràs 2008) or in C/Teneries in *Valentia* (Ribera i Lacomba 2010), two possible explanations may account for this phenomenon: either its presence is residual or what we have might be considered transitional forms into Tripolitanian 1.

#### 3.2. Brindisian amphorae

Brindisian amphorae or Apulian-Brindisian (Cipriano and Carre 1989) constitute a quite heterogeneous set of vessels, mainly ovoid and of Adriatic origin, associated with the Late-Republican period (Palazzo 1988, 2013; Manacorda 1988, 1994; Manacorda and Pallechi 2012). These are preferably oil-containing amphorae showing a wide geographical distribution, being present in all contexts of Roman occupation, although they were mostly distributed in the Eastern Mediterranean (Manacorda 2003; Bezeczky 2005).

In the contexts of Hispania Citerior presented in this paper, it is worth noticing its initial presence already in layers dated to 140-130 BC, as shown by the occurrence of Apani V amphorae, which represent 6% in the layers from 133-120 BC in *Tarraco* (Díaz García 2012) or in the foundational layers in *Valentia* (138-135 BC) (Ribera i Lacomba 1995; Ribera i Lacomba and Marín Jordá 2003; Álvarez *et al.* 2003). Similarly, Brindisian amphorae are documented in sites related to the Roman occupation in the Northeast over the second half of the 2nd century BC (Pera i Isern *et al.* 2016). Moreover, it is worth mentioning the presence of an Apani V in the layers from 160-140 BC in *Tarraco* (Díaz García 2012: 75), although the lack of a drawing prevents us from confirming such an early categorisation. Accordingly then, it is between the years 140-130 BC, when the initial presence of this vessel type is confirmed.

On the other hand, this type of amphorae is common in several Late-Republican contexts of Hispania Citerior, though a lower limit of usage in the last quarter of the 1st century BC would seem correct, since no traces are

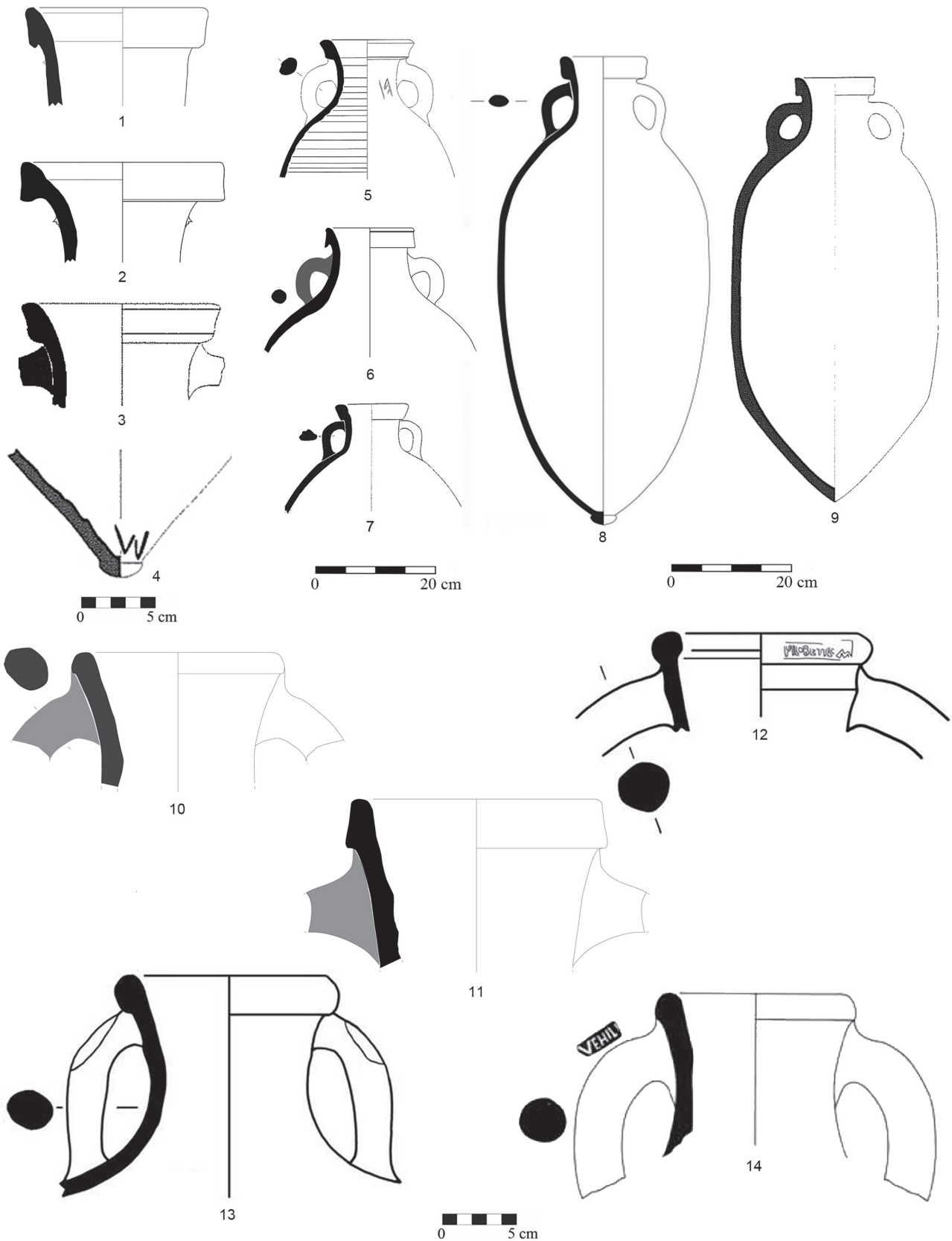


FIGURE 2. 1-9. ANCIENT AFRICAN AMPHORAE: 1. LOMA DE HERRERÍAS, 2. LUCENTUM, 3. POLLENTIA (EQUIP D'EXCAVACIÓ DE POLLENTIA 1993), 4-5. VALENTIA (PASCUAL BERLANGA AND RIBERA I LACOMBA 2002), 6. TARRACO (DÍAZ GARCÍA 2012), 7. NUMANTIA (PRINCIPAL PONCE 2000), 8. ILLA PEDROSA (VIVAR, 2015), 9. AZAILA (PASCUAL BERLANGA AND RIBERA I LACOMBA 2002); 10-14. BRINDISIAN AMPHORAE: 10-11. TARRACO (DÍAZ GARCÍA 2012), 12. LOMA DE HERRERÍAS, 13. ILICI (MÁRQUEZ VILLORA AND MOLINA VIDAL 2005), 14. EMPORIAE (AQUILUÉ ABADÍAS ET AL. 2008).

found in the foundation layers in the *Portus Ilicitanus* (Molina Vidal 1997; Márquez Villora 1999: 117-118) and its apparent presence in contexts such as *Tarraco*, dated between 20 and 10 BC (Díaz García 2012) and where 2.9% of Apani V and 2.9% of Apani VII are recorded, could be explained by a major presence of contaminating and residual material from the 2nd and 1st centuries BC.

It would seem that the particular period for the distribution of this type of amphora in Hispania Citerior was the first half of the 1st century BC: this is made manifest by such as a context dating to 116 and 90 BC in *Iesso* (Guitart Duran, Pera i Isern and Carreras Monfort 1999), where Brindisian amphorae constitute 23.4%, or another in *Azaila* (Beltrán Lloris 2013), where they represent 22%. However, elsewhere Brindisian amphorae attain the proportions more normally expected of them: as in the case of the layers 100/90-80/70 BC in *Burriac* with 4.7%, or the ones from 70-50/40 BC with 6.7% (Miró i Canals, Pujol del Horno and García i Roselló 1988). The amphora even reaches 8.5% (5.1% of Apani V and 3.4% of Apani VIIb) in layers dating back to between 60-50 BC in *Tarraco* (Díaz García 2012). Conversely, in the Forum of *Emporiae* in a context from 50 BC (Aquilué Abadías *et al.* 2008; Tremoleda i Trilla and Castanyer i Masoliver 2013) its presence is only 1.3%. Indeed, from the second half of the 1st century the proportions clearly decrease: for example, they are even absent in the layers of this period in the Forum of *Emporiae* or in *Carthago Nova* (Murcia Muñoz *et al.* 2013).

Since Ancient African and most types of Brindisian amphorae share a similar chronology and, initially, they would have been used to carry the same content, it is worth making a proportional comparison between them. In order to do so, the few contexts that are reliable will be considered (at least 10 such examples between the two types). As shown in Figure 3, the results are uneven and no clear pattern can be established. In some sites the presence of Ancient African amphorae is higher than that of Brindisian amphorae: as is the case in *Loma de Herrerías*, *Valentia* (Ribera i Lacomba and Marín Jordá 2003; Ribera i Lacomba and Pascual Berlanga 2015) and *Emporiae* (Aquilué Abadías *et al.* 2002, 2008, 2010). In other sites such as *Burriac* (Miró i Canals, Pujol del Horno and García i Roselló 1988), *Iluro* (Cerdà i Mellado *et al.* 1997; Puerta 2010) and *Tarraco* (Díaz García 2012), the values are very similar. Conversely, Brindisian amphorae prevail in *Iesso*, especially in the foundation layers (Guitart Duran, Pera i Isern and Carreras Monfort 1999; Carreras Monfort 2004), and in *Azaila* (Beltrán Lloris 2013), although it cannot be ruled out that some examples described as belonging to this type could actually be Ancient African amphorae. Accordingly, we understand that in what concerns the North African types, and although the absence of a regular pattern, if we could extrapolate the scenario to other sites, which were studied decades ago, almost for sure North African types could be more abundant than currently documented.

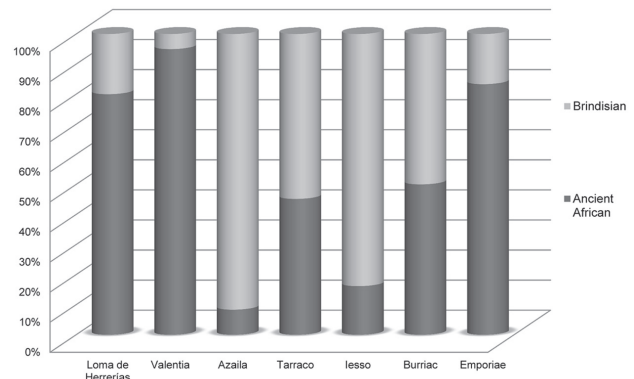


FIGURE 3. COMPARISON BETWEEN ANCIENT AFRICAN AND BRINDISIAN AMPHORAE.

Thus, if the comparison is extended to the territory of Hispania Ulterior, it is observed how the proportion between these types tends to be constant in places often set far away from each other and that a clear prevalence of Ancient African amphorae is noted (Mateo Corredor 2016a, 2016b), despite the fact that this type had only made its arrival very recently (Pascual Berlanga and Ribera i Lacomba 2002; Mateo Corredor 2012).

### 3.3. *Tarraconense 1*

This is a set of amphorae produced in the second half of the 1st century BC and mainly showing an ovoid morphology, except for the varieties 1B and 1E (Miró i Canals 1988, 2015) (see Figure 4). Its initial production is linked to the increase in production and export of northeastern wine, mainly Laietanian. This type has but a short lifespan, however, since its production ends in the last decade of the 1st century BC. Indeed, almost from the beginning it coexists with the Pascual 1 amphorae, starting around 40/30 BC and lasting to the third quarter of the 1st century. The analysis of this last will not be included in this paper.

The presence of *Tarraconense 1* in the wrecks of *Cala Bona I* and *Illes Formigues I*, which show a reliable dating from 50-30 BC (Martín i Menéndez 2008) should be stressed. Additionally, a site that allows a good tracing of the chronological evolution of this type of amphora is the Forum of *Emporiae*. Thus, this type appears in layers from the middle of the 1st century BC, with a slight prominence. In the contexts from 40-30 BC, though, the *Tarraconense 1* amphora is the most represented, with a 44.1% presence. This indicates the high point in its commercial success, and at a time in which the Pascual 1 amphorae had not yet emerged. The high presence of this type in *Emporiae* could be linked to the important role that this port played in the onward commercial distribution towards *Gallia Narbonensis*, a target market for this type of amphorae. The next reliable context found in this site is dated to the last decade of the 1st century, where the type *Tarraconense 1* is only represented now by one example, the equivalent of 2%.



FIGURE 4. 1-7. TARRACONENSE 1: 1-2. *LUCENTUM*, 3. TOSSAL DE LES BASSES (ROSSER LIMIÑANA AND SOLER ORTIZ 2015), 4. *SAGUNTUM* (MÁRQUEZ VILLORA AND MOLINA VIDAL 2005), 5. *TARRACO* (DÍAZ GARCÍA 2012), 6. ILLES FORMIGUES I (MARTÍN I MENÉNDEZ 2008), 7. CALA BONA I (MARTÍN I MENÉNDEZ 2008); 8-15. OVOID 1: 8. LOMA DE HERRERÍAS, 9. *CARTHAGO NOVA* (MOLINA VIDAL 2001), 10. SAN FERREOL (MAS GARCÍA 1985), 11. C/OLIMPO (MARTÍNEZ MARTÍNEZ AND MOLINA VIDAL 2016), 12. *LUCENTUM*, 13. *TARRACO* (DÍAZ GARCÍA 2012), 14. CAP NEGRET (BAYO FUENTES 2014), 15. CUEVA DE LAS PEÑAS BLANCAS (LILLO CARPIO 1986).



The complete absence of this type in the set of amphorae in *Iesso* (Carreras Monfort 2004) comes as a surprise. This might be due to the fact that the layers in the second half of the 1st century are underrepresented. Anyway, the prevalence of other regional amphorae such as Pascual 1 amphorae and Dressel 2-4 is also low. It has been proposed that this low volume of North Tarraconensis wine could result from a number of factors: a successful local wine supply, transport from the coast in containers that were not amphorae, or maybe to a higher consumption of beer along with the import of quality wines (Carreras Monfort 2004: 158).

In *Iluro*, this type represents 23.7% of the amphorae found in contexts of the last four decades of the 1st century BC (Cerdà i Mellado *et al.* 1997; Pérez Suñé and Revilla Calvo 2001; Puerta 2010). Similarly, in the silo from C/Pujol in *Baetulo*, dated between 40-30 BC (Comas i Solà 1985), Tarraconense 1 amphorae are the most represented type at 27.3%, and even although 18.2% of Pascual 1 was already to be found alongside it. Conversely, in the layers of the last quarter of the 1st century in *Baetulo*, the type Tarraconense 1 has shrunk to 6.3%, alongside 52.4% of Pascual 1. It must be taken into account too that this latter type of amphora was actually being produced in both settlements, which surely has boosted its considerable presence there.

The two forms appear together again in *Tarraco* from the middle of the 1st century BC (Díaz García 2012). They are already represented in the small set dated to 50-40 BC in C/Pere Martell 36-Jaume I 15. In the layers from 40-30 BC in Plaça de la Font, two examples are found, representing 4.8% of the set, the same percentage as Pascual 1 amphorae. A superior level of information is available in the layers of the last quarter of the 1st century BC from the port warehouse and from the Conjunt Paleocristià del Francolí (Gebelli i Borràs 2008): here the Tarraconense 1 type are still present with 6.7% and 3% respectively, clearly lagging behind the Pascual 1 amphorae. It can be seen that in *Tarraco*, contrary to what happened in other sites further north, the regional ovoid amphorae are less important, especially in the period of the heyday of the Tarraconense 1. Some reasons for such a low presence could be: a higher amount of imported products due to the status of *Tarraco* as capital or just its geographical location, since – as mentioned before – its main distribution area was Gallia Narbonensis.

In a similar way, in the amphorae set from Torre d'Onda, with a defined chronology from 50-45 BC, an ovoid amphora with the stamp MENO was registered and arguably classified as a Tarraconense 1 (Arasa i Gil 2001: 117, fig. 81). Such a classification should be questioned. It is our view that both the morphology and the fabric indicate that it is an Ovoid Brindisian amphora, possibly in the form of Giancola 3C. In the case of *Valentia*, the low presence of this type is mainly due to the chronological pattern of occupation of the settlement, which hardly

exhibits any material traces of the decades following the Pompeian destruction. However, it is present in the pit of C/Teneries, dated to the last third of the 1st century, with a representation of 3% (Ribera i Lacomba 2010).

Among the sets of amphorae included in this study from the current region of Alicante, it is worth noting that in the villa of C/Olimpo no examples of this type have been found, while in the nearby Forum of *Lucentum*, this type of amphora stands at 1.7% in a set where there is a clear prevalence of amphorae from the 1st century BC, and most of the amphorae are of the Baetican ovoid group. A similar scenario is found in *Carthago Nova* with only one sample of Tarraconense 1, representing 1.9% of the dated material in the third quarter of the 1st century BC, from the layers of wall filling in Cerro de la Concepción (Murcia Muñoz, Ruiz Valderas and Ramallo Asensio 2013: 122, fig. 16.6).

In conclusion, the information presented allows one to determine the existence of two distinct areas in the distribution of the amphorae, with a floruit period of high circulation around 20/40 BC. In the northern area of Tarraconensis, where this type is produced, it reaches a remarkable dominance in most of the sites, whereas in the south its presence is reduced. Understandably, this same situation becomes even more pronounced in the south of the Iberian Peninsula, where there is no record of this type (Bernal Casasola 2008; Mateo Corredor 2016a), except for an example in *Malaca* (Arancibia Román, Chacón Mohedano and Mora Serrano 2012: 409). With the appearance of Pascual 1 amphorae, the wine from Tarraconensis increases its distribution and exports. However, no remarkable changes are observed in its main markets and the distribution towards the southern half of Tarraconensis remains scarce.

### 3.4. Late-Republican ovoid amphorae from the Guadalquivir valley

The typological systematisation of ovoid amphorae from the Guadalquivir valley (Almeida 2008; García Vargas, Almeida and González Cesteros 2011) has opened a new situation in the analysis of the amphorae from the Late-Republican and Early Roman Empire. In the light of this new classification – which partly motivated this paper – we considered it necessary to attempt a revision of previous studies in which some ovoid products from the Guadalquivir valley were earlier categorised under a different name or registered as undetermined.

#### Ovoid 1/Lomba do Canho 67 (Figure 4)

This type of amphora – which has formal similarities with Adriatic ovoid prototypes (Molina Vidal 2001: 641-642) – was established first from its individual recognition in the Roman camp of Lomba do Canho, Portugal (Fabião 1989) and immediately after systematised at several consumption contexts (Molina Vidal 1995). Although it shows a wide morphological variety, the type Ovoid 1/

LC67 belongs to the complex formal category of ovoid amphorae from the Iberian Peninsula (Almeida 2008: 48; González Cesteros, Almeida and García Vargas 2016). This is one of the first Hispanic vessels showing a Romanised morphology and its distribution covers from the second quarter until the last decades of the 1st century BC, reaching its heyday of distribution in the third quarter (González Cesteros, Almeida and García Vargas 2016). Its presence has been widely documented all over the western Mediterranean, especially in the southern half of the Iberian Peninsula. Moreover, the arrival of this type has been also documented on the Mauritanian and French coasts, as well as in Italy, and it has even been detected in eastern areas such as Ephesus or *Caesarea Maritima* (Molina Vidal 2001; García Vargas, Almeida and González Cesteros 2011).

In consumption contexts in Hispania Citerior, this type seems to be absent until 60 BC: they are scarce in Cap Negret (Altea, Alicante), which was abandoned at the beginning of the second half of the 1st century BC (Sala Sellés 2003; Bayo Fuentes 2014); there are no traces in Azaila (75-68 BC), *Tarraco* (80-70 BC) or Burriac, and it is a minority in *Emporiae* (1.9%) in layers from the middle of the 1st century, a period to which the Ovoid 1 found in the wreck of San Ferreol (Mas García 1985) most probably belongs. Despite all this, it seems that these vessels were preferably used around 40-20/10 BC. Thus, in the case of *Emporiae* in the contexts from the second half of the 1st century, this type of amphora reaches values ranging from 4 to 12% (Aquilué Abadías *et al.* 2008), in *Iluro* it reaches 2.3% in layers from 40-1 BC (Cerdà i Mellado *et al.* 1997; Pérez Suñé and Revilla Calvo 2001; Puerta 2010), while in *Baetulo* it represents around 6% in the silo from C/Pujol (Comas i Solà 1985) dated to 40-30 BC, though it is still absent in the Augustan context in C/Lladó (Comas i Solà and Padrós Martí 2010). In addition to this, in the layer from 40-30 BC in Plaça de la Font in *Tarraco*, the values reach 7.1%, and again 5.1% in the context from the last quarter of the 1st century in the port warehouse (Díaz García 2012; Gebelli i Borràs 2008).

The high prevalence of this type in the Pre-Augustan layers in the villa of C/Olimpo, where values reach 22.2% (14.4% in the whole set of amphorae), deserves notice. Moreover, in the construction layers of the Forum in *Lucentum*, it represents 12.8%: most of the material belongs to the second half of the 1st century BC. Additionally, in the layers in *Carthago Nova* around the Roman Theatre, Ovoid 1 amphorae represents 3.7% in contexts from the third quarter of the 1st century and they are still present in the context from the last decade of the century. Generally, it seems that there is a higher presence of these vessels in the southern regions of Hispania Citerior, as is also indicated by Late-Republican layers in sets of amphorae such as El Molinete, in *Carthago Nova* (7.7%), *Ilici* (6.4%), *Lucentum* (12.6%), El Monastil (Elda, Alicante) (8.4%) and *Duanes* (Xàbia, Alicante) (10%) (Molina Vidal 1997).

Broadly speaking, it seems that these amphorae had gone out of use before the change of Era, as is shown, among other factors, by their low presence in *Portus Ilicitanus* (Márquez Villora 1999), as well as their absence in contexts from AD 10-15 in the Forum in *Emporiae* (Aquilué Abadías *et al.* 2008, 2010) or in layers from 5 BC to AD 10 in the votive well in L'Almoina in *Valentia* (Ribera i Lacomba 2010).

#### Ovoid 4 (Figure 5)

Ovoid 4 amphorae are those forms traditionally known as Haltern 70 'unusually small variant' produced in the Guadalquivir valley (García Vargas, Almeida and González Cesteros 2016a). Although it is currently known that this is not a small variety of Haltern 70, but a type that was produced in an earlier period, this name is still used to classify the few products of this type that originally came from the southern Spanish coast. In any case, the morphological similarities between Ovoid 4 and Haltern 70 have traditionally led to placing Ovoid 4 with this latter type. In addition to this, in the transition stage from one to the other, around years 30/20 BC, it is very difficult to differentiate them, especially if reduced to small sherds. Therefore, it is hard to assess its presence and importance in Hispania Citerior/Tarraconensis.

In Hispania Citerior there is no record of this type of amphora in any context that is certainly dated as earlier than the end of the second half of the 1st century BC. This type was widely distributed in the third quarter of the 1st century BC, although as already observed for the type Ovoid 1, the distribution was more prolific in the south of the region. One of the oldest examples is the one found in the *Cardo D* in *Emporiae*, dated back to around 50 BC (Aquilué Abadías *et al.* 2004: 114, fig. 68.6). It is worth mentioning the overall scarce presence of this type, since no traces have been found in the different contexts of the second half of the 1st century BC from the Forum in *Emporiae* (Aquilué Abadías *et al.* 2008; 2010). This almost merely symbolic presence of Ovoid 4 in *Emporiae* will be further continued with the Haltern 70 amphorae (Aquilué Abadías *et al.* 2004: 113).

In the *Cardo Maximo* in *Iluro*, two examples of Ovoid 4 from the site in Plaça de la Peixateria (40-10/1 BC) and from the site in Can Castany (20-1 BC) (Cerdà i Mellado *et al.* 1997; Pérez Suñé and Revilla Calvo 2001) have been identified among the material on display and classified as Haltern 70. Conversely, this type is not present nearby Burriac (Miró i Canals, Pujol del Horno and García i Roselló 1988), although in this case there is a clear reason why, since the layers in the Western cistern date no later than 50/40 BC. In addition to all this, in the silo from C/Pujol in *Baetulo* some examples showing similar morphology to Ovoid 4 are found (Comas i Solà 1985: fig. 9.6).

In *Tarraco*, in the layers from 40-30 BC in Plaça de la Font, there come four samples that have been classified as Haltern 70, but would actually correspond better to the



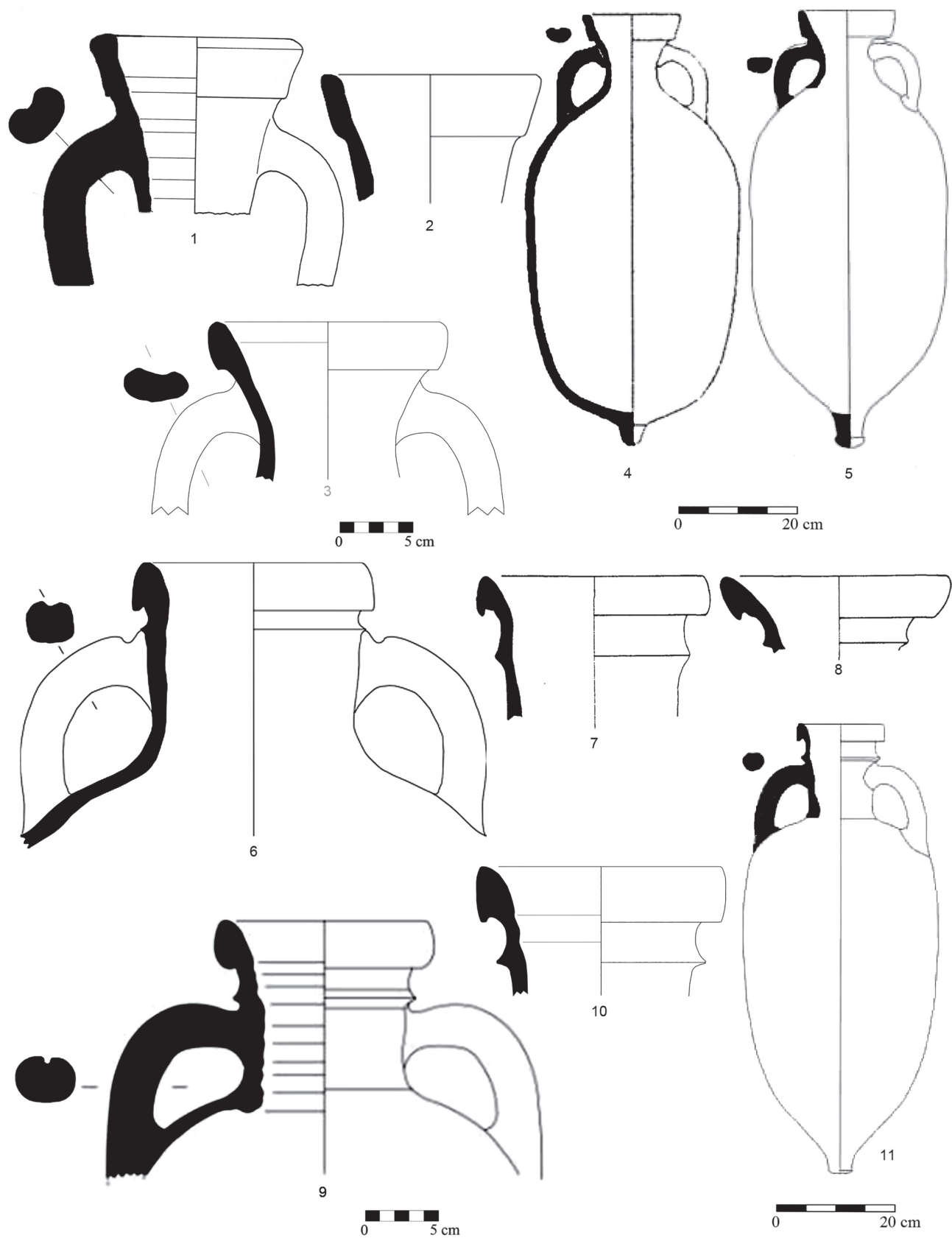


FIGURE 5. 1-5. OVOID 4: 1. *BAETULO* (COMAS I SOLÀ 1985), 2. *VILARENC* (REVILLA CALVO 2010), 3. *C/OLIMPO*, 4. *VALENTIA* (PASCUAL BERLANGA AND RIBERA I LACOMBA 2001), 5. *CALA BONA I* (MARTÍN I MENÉNDEZ 2008); 6-11. OVOID 5: 6. *C/OLIMPO*, 7-8. *CARTHAGO NOVA* (MOLINA VIDAL 1995), 9. *TOSSAL DE LES BASSES* (ROSSER LIMIÑANA AND SOLER ORTIZ 2015), 10. *LUCENTUM*, 11. *ILLES FORMIGUES I* (MARTÍN I MENÉNDEZ 2008).

Ovoid 4 type, thus generating a remarkable 9.5% (Díaz García 2012). In the last quarter of the century, this type is also found in the sites of *Tarraco* such as the one in plot A-2- UA 15, Phase 4 and 5 (20-10 BC) (Díaz García 2012) or in the port warehouse, where the presence – probably residual – of sherds of Ovoid 4 is observed among the material on display, although indeed here most of the examples do belong to the Haltern 70 type. There is also an example of Ovoid 4 (in transition to Haltern 70) in layers from the last quarter of the 1st century BC in Vilarenc (Calafell, Tarragona) (Revilla Calvo 2010: 215, fig. 7.48). It is also present in different wrecks from the third quarter of the 1st century BC, such as Illes Formigues I and Cala Bona I off the northeastern coast (Martín i Menéndez 2008), as well as in the wreck of Portopí off the island of Mallorca (Cerdà i Juan 2000).

Moving down to the central coast of Hispania Citerior, it is observed that this type has a low representation in *Valentia* since there is hardly any material from the third quarter of the 1st century BC, the main period of distribution of this type of amphora. However, in a well in Corts Valencianes, dated back to 30-10 BC, a whole amphora was found: although it was originally classified both as Dressel 7-11 and as Tarraconense 1 (Pascual Berlanga and Ribera i Lacomba 2001; Ribera i Lacomba 2010: 377), it would actually correspond to an Ovoid 4 type.

However, this type is well represented in *Lucentum*. Thus, in the foundation layers of the Forum, 21 rims have been found, representing 9%, while in C/Olimpo eight rims were found, reaching 4.4%. Indeed, if we focus on the layers dated mainly to the third quarter of the 1st century BC, the percentage increases to 15.2%. Finally, in the sacred area of Cerro de la Concepción in *Carthago Nova* two Ovoid 4 rims have been found, representing 3.7% (Murcia Muñoz *et al.* 2013: 91, fig. 18.5-6), in layers from the third quarter of the 1st century BC. The same chronology has been assigned to the destruction layer of the *castellum* in La Cabezueta de Barranda (Caravaca de la Cruz, Murcia), where an example of Ovoid 4 was found (Murcia Muñoz, Brotons Yagüe and García Sandoval 2008: 81, fig. 6). In conclusion, it seems that the trend observed in the Ovoid 1, namely with a higher presence in the south of the region as opposed to the north holds true here too.

#### Ovoid 5 (Figure 5)

The Ovoid 5 amphora from the Guadalquivir valley shows an arrival date in the second half of the 1st century BC (García Vargas, Almeida and González Cesteros 2011; 2016b). It must also be taken into account that its but recent individual recognition makes its study very difficult. An underrepresentation of its presence is certain to result. Despite this, the collected data indicate that there is a regular presence of Ovoid 5 amphorae in contexts of Hispania Citerior, although in lower proportions in comparison with the above mentioned types.

In the Forum of *Emporiae* there is already known one Ovoid 5 amphora (0.5%), dated to around 50 BC (Aquilué Abadías *et al.* 2008), which constitutes the earliest evidence of its commercialisation in Hispania Citerior. Similarly, the presence of this type has also been registered in the layers from 40-30 BC (Aquilué Abadías *et al.* 2002, 2008), but it has not been possible to determine its exact proportion. Its apparent early occurrence has been, however, confirmed by its presence in the wrecks of Cala Bona I and Illes Formigues 1, dated to between 50-30 BC (Martín i Menéndez 2008).

In addition to this, there is one example in *Iluro* that, although it was classified as a Dressel 12 (Pérez Suñé and Revilla Calvo 2001), would correspond more to an Ovoid 5 type. It only represents 2.2% of the amphorae context from Can Castany (20-1 BC). An example that could possibly correspond to an Ovoid 5 was found in *Tarraco* in the layers of a similar date, namely from 40-30 BC in Plaça de la Font; it represents 2.4% (Díaz García 2012).

Additionally, this type is widely represented in the southeastern coast area, in the territory of *Lucentum*, where the contexts have been recently revised. In this sense, the high presence of this type in the foundation layers of the Forum in *Lucentum* must consequently be emphasised: here 11 rims were registered, representing 6% of the whole set (Figure 6). Likewise in the villa of C/Olimpo, this type reaches 2.5% and it is present in the Augustan layers; it also turns up in the nearby site of Tossal de les Basses (Rosser Limiñana and Soler Ortiz 2015: 104, fig. 40.4).

Incidentally, in the recent study on the Late-Republican layers in the Roman Theatre in *Carthago Nova*, one example of Ovoid 5 and another rim sherd were recovered (Murcia Muñoz *et al.* 2013; Murcia Muñoz, Ramallo Asensio and

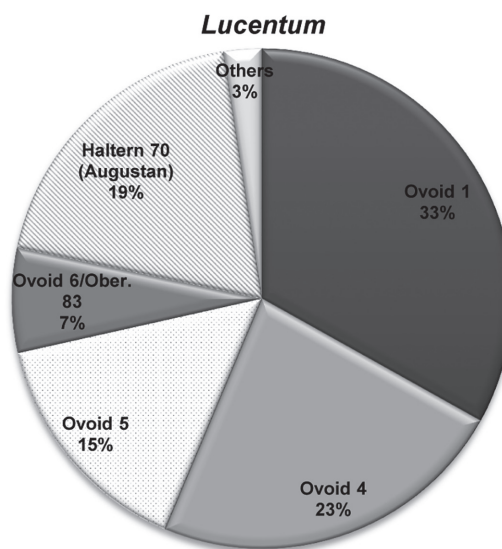


FIGURE 6. OVOID AMPHORAE FROM THE GUADALQUIVIR VALLEY, IN THE FOUNDATION LAYERS OF THE FORUM OF *LUCENTUM*.

Ruiz Valderas 2013), thus reaching a presence of 3.8%. Two further examples of this type were found in *Carthago Nova* among the material from Cerro de Molinete (Molina Vidal 1995: Lam 2.16-17).

Overall, in spite of the recent classification of this type, it can be observed that this amphora is present in a vast number of sites and often at significant percentages.

#### Ovoid 6 and Oberaden 83 (Figure 7)

The presence of Ovoid amphorae precursors of the Dressel 20 is persistent in different sites in Hispania Citerior over the second half of the 1st century BC. Although in well preserved examples it is possible to distinguish between Ovoid 6 and Oberaden 83 amphorae, such a distinction is not reliable where small sherds are concerned. Therefore, in most of the cases, we will analyse them together as a group.

The occurrence of oil amphorae precursors of the Dressel 20 begins with the Ovoid 6 type (García Vargas, Almeida and González Cesteros 2011, 2016c), whose presence is mainly concentrated in the third quarter of the 1st century BC, as shown by its appearance in different contexts in this period. This is supported by the occurrence of only one example (0.5%) of this type in the Forum in *Emporiae* in a context dated to 50 BC (Tremoleda i Trilla and Castanyer i Masoliver 2013), although it is absent altogether in the layers from the years 40-30 BC (Figure 7, no. 1). Similarly, in *Tarraco* one example of Ovoid 6 was found in the excavation of Plaça de la Font dated to 40-30 BC (Díaz García 2012), representing 2.4% of this layer. An example that resembles this form has also been registered in Vilarenc (Revilla Calvo 2010: 218, fig. 10.32). Additionally, the Ovoid 6 type is also present in two contexts of the third quarter of the 1st century BC of the sacred area in the Cerro de la Concepción in *Carthago Nova* (Murcia Muñoz *et al.* 2013), where two samples of this type were found, representing 3.7%. Finally, this amphora appears in the construction filling of cardo 2 in the Cerro de Despeñaperros (50-20 BC) in this same settlement (Ramallo Asensio *et al.* 2010: 310, fig. 4.7).

In the last quarter of the century, and as the transition to Oberaden 83 is already taking place (García Vargas, Almeida and González Cesteros 2011; González Cesteros, García Vargas and Almeida 2016a), it can be observed that the presence of Ovoid 6 is even more repeated and higher, a trend that will further increase in later decades. This can be seen, for example, in the case of the Forum in *Emporiae*, where a remarkably low presence of this type has been registered between the years 50 and the 30 BC, but where in the last decade of the century, the presence reaches first 4%, and then in the layers corresponding AD 10-15 ascends to 11.8%, although in this case examples of Haltern 71 type have been included, a type into which Oberaden 83 evolves from the change of Era (García Vargas, Almeida and González Cesteros 2011; González Cesteros, García Vargas and Almeida 2016b). This higher presence in the last quarter of the 1st century has also

been observed in the contexts of *Iluro* where Ovoid 6/Oberaden 83 amphorae reach 8.9% in the layers of 20-1 BC (Cerdà i Mellado *et al.* 1997; Puerta 2010).

On the other hand, in the layers of the port warehouse in *Tarraco* dated back to the last quarter of the 1st century BC, Ovoid 6/Oberaden 83 amphorae only represent 2.2% (Gebelli i Borràs 2008), a percentage far below those reached by other ovoid amphorae from the Guadalquivir. This percentage is even lower (1.8%) in the layers of the same time at Conjunt Paleocristià del Francolí (Gebelli i Borràs 2008), but this is partly due to a high presence of amphorae from a previous period.

It is also especially worth mentioning the absence of this type in the villa of C/Olimpo in *Lucentum*, because this set includes a wide representation of ovoid amphorae from the Guadalquivir. Likewise, in the layers of the Forum, though 2.7% of amphorae classified as Ovoid 6 has been actually documented, yet this amount is low in comparison to other Baetican ovoid amphorae found in this site. It must, however, be underlined that, in general, the presence of Baetican oil amphorae is very low in *Lucentum*, as shown by the scarce presence of Dressel 20 in the Early Imperial layers (Molina Vidal 1997).

It can be concluded that none of the contexts documented show a significant presence of this type, although an increasing trend in the presence of Oberaden 83 as opposed to Ovoid 6 is observed.

#### Other ovoid amphorae from the Guadalquivir valley

In addition to the already mentioned types of amphorae, there are other examples of ovoid amphorae known, although there is hardly any information available. This is the case for Ovoid 2, a possible example of which has been found in the Roman Theatre of *Carthago Nova* (Murcia Muñoz, Ruiz Valderas and Ramallo Asensio 2013: fig. 16.8).

Similarly, in the Guadalquivir valley copies of Dressel 7-11 type were produced. However, it is hard to identify where we are dealing with the first amphorae belonging to this family, which is the main focus of this study. Moreover, there is also the whole issue of their origin, which is often not specified. Even so, the presence of these amphorae in Hispania Citerior has been observed, for instance, in the construction layers of the Forum in *Lucentum*, where two rims have been found.

#### 3.5. Ovoid amphorae from the southern coast of Spain

##### Gaditan Ovoid amphorae/Ancient Dressel 7-11 (Figure 7)

When examining the types of ovoid morphology produced on the south coast of Spain, two main problems are encountered: on the one hand, there is a problem with the nomenclature, especially in the case of Gaditan Ovoid amphorae, since amphorae with a similar morphology

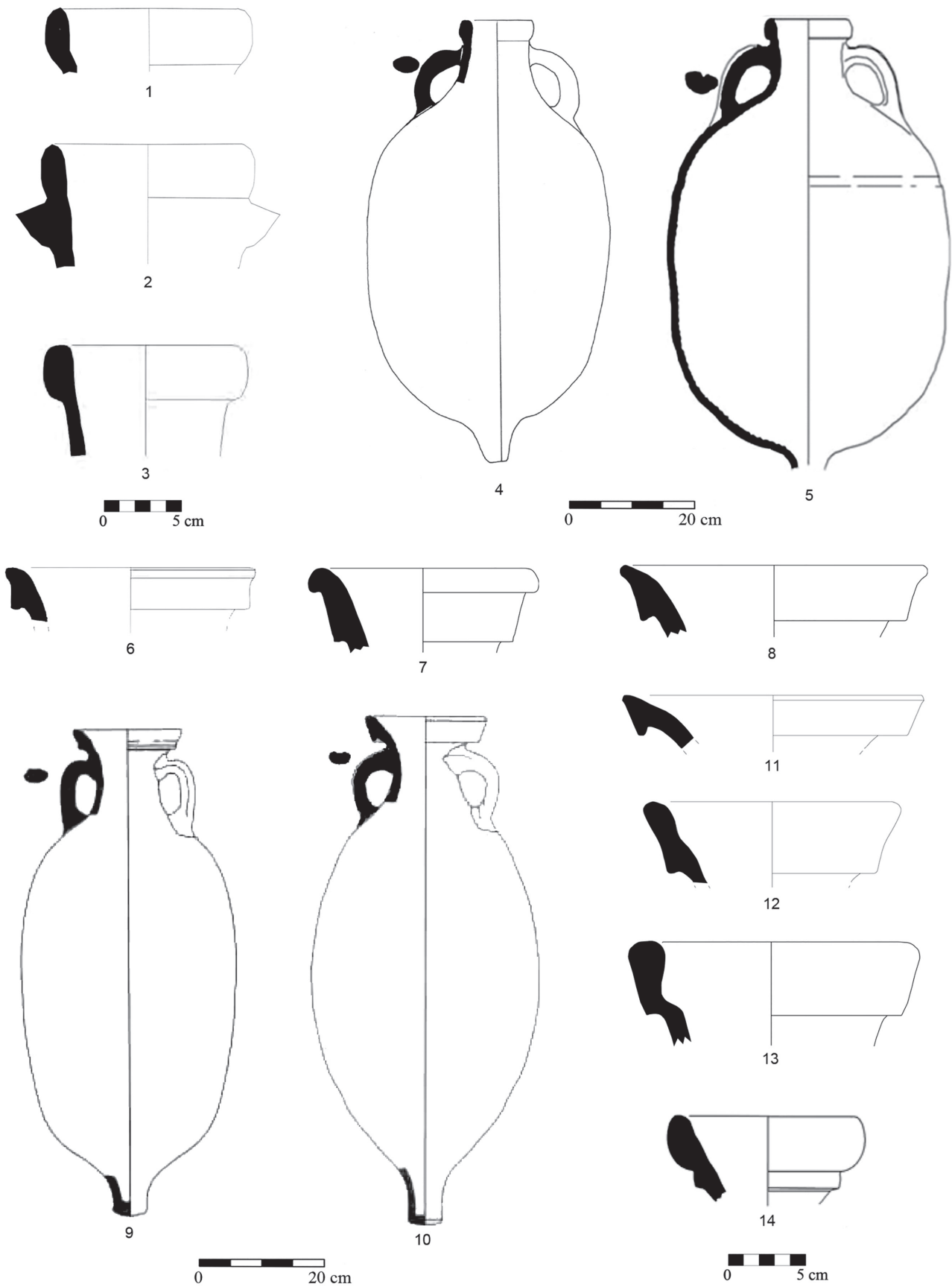


FIGURE 7. 1-5. OVOID 6/OBERADEN 83: 1-2. *LESSO* (CARRERAS MONFORT 2004), 3-4. *ILURO* (CERDÀ I MELLADO ET AL. 1997; PUERTA 2010), 5. *EMPORIAE* (BERNI MILLET 2008); 6-13. GADITAN OVOID AMPHORAE/ANCIENT DRESSSEL 7-11: 6. *BAETULO* (COMAS I SOLÀ AND PADRÓS MARTÍ 2010), 7-8. LOMA DE HERRERÍAS, 9. CALA BONA I (MARTÍN I MENÉNDEZ 2008), 10. ILLES FORMIGUES I (MARTÍN I MENÉNDEZ 2008), 11-12. *TARRACO* (DÍAZ GARCÍA 2012), 13. *LUCENTUM*; 14. LOMBA DO CANHO 67 BAETICA COAST: C/OLIMPO (MARTÍNEZ MARTÍNEZ AND MOLINA VIDAL 2016).



are also produced in other areas, such as the coast of Malaga (Mateo Corredor 2015).

On the other hand, different forms with distinctive features can be established within the set of amphorae. One group would be the Gaditan Ovoid amphorae, but there is also the group of ancient forms of Dressel 7 and Dressel 9 (García Vargas 1998). Moreover, differences among these ancient forms of amphorae and also in comparison with other forms of the Augustan period are not well defined, thus hampering their identification enormously, except for those cases located in clearly chronologically identified contexts or showing well preserved examples. Therefore, only a limited scenario can be presented here and the main criteria should be based on the chronological framework.

Accordingly, although their presence in Hispania Citerior might be earlier, we can only document their occurrence for sure from the middle of the 1st century BC, as occurs in the Forum of *Emporiae*, where only one example from the context dated to around 50 BC has been found, representing 0.8% (Tremoleda i Trilla and Castanyer i Masoliver 2013). In the next layer registered in this Forum (40-30 BC) again only one example was found, thus representing 0.7%, a percentage far below the 13.7% achieved by Dressel 7-11 amphorae in the layers corresponding to years AD 10-15 (Aquilué Abadías *et al.* 2008, 2010).

Examples found in the wrecks of Cala Bona I and Illes Formigues I, the latter one showing several whole samples (Martín i Menéndez 2008), and in the wreck of Portopí (Cerdà i Juan 2000) are more assuredly to be assigned to this type of amphorae, thus proving the prominence that the export of Gaditan Ovoid amphorae would have enjoyed in the Western Mediterranean over the third quarter of the 1st century BC.

In *Iluro*, the presence of ancient Dressel 7-11 in a context of the third quarter of the 1st century BC has been observed (García i Roselló, Pujol del Horno and Zamora Moreno 2000). Additionally, if focussing on the quantified contexts in this location, they only appear in a layer dated to the last two decades (Cerdà i Mellado *et al.* 1997; Pérez Suñé and Revilla Calvo 2001), where they represent 2.7%, a percentage that decreases to 1.4% if all amphorae dated between 40 and the change of Era are included. Their presence is more significant in a silo from C/Pujol in *Baetulo* (40-30 BC), where four examples have been found, representing 12.1% (Comas i Solà 1985). In the same period, they appear in Plaça de la Font in *Tarraco*, where seven examples represent 16.7% (Díaz García 2012). Their presence is even higher in the context of the last quarter of the 1st century BC of the port warehouse (Gebelli i Borràs 2008), where they reach a percentage of 24.2%, with the presence of some Gaditan Ovoid amphorae, but most of them being allocated to the Augustan Dressel 7-11 type.

In the southeast of the Iberian Peninsula, although no percentage data are available, it is interesting to point out the presence of at least one Gaditan Ovoid amphorae/

ancient Dressel 7-11 in the site of Cap Negret (Altea, Alicante), a location abandoned in the beginning of the second half of the century (Sala Sellés 2003; Bayo Fuentes 2014). In the pre-Augustan layers in the villa of C/Olimpo, this type represents only 2.9% as opposed to 6.1% of T-7.4.3.3. On the other hand, in the Forum of *Lucentum* various forms of the type Dressel 7-11 could be included in this group of ancient Dressel 7-11, with a prevalence of amphorae from the Bay of Cádiz and its surroundings, but also including a few ovoid examples from the coast of Malaga. However, again, it is very difficult to distinguish between the Late-Republican and the Augustan forms. In this way, if all of them are considered together, they represent 10.7% as opposed to the 1% shown by T-7.4.3.3 amphorae, which reflects the importance of layers corresponding to the late third of the 1st century BC.

Similarly, in the context of the third quarter of the 1st century BC of the sacred area in Cerro de la Concepción in *Carthago Nova* they represent only 3.7% (Murcia Muñoz *et al.* 2013: 92, fig. 18.10 y 12), in comparison to T-7.4.3.3 amphorae, which represent 26% in this period. Conversely, but similarly as to what happens in other sites, it is the Dressel 7-11 amphorae in the Augustan period that reach a higher prevalence (Ramallo Asensio *et al.* 2010). It is also worth noting that only one sherd has been found in the mining area of Loma de Herrerías, which represents only 0.3% against the 6.8% reached by T-7.4.3.3 amphorae. These values support our proposal of a pre-Augustan chronology for almost all the material from this site.

#### Lomba do Canho 67 from the Southern coast of Spain (Figure 7)

In addition to the ovoid amphorae precursors of Early Imperial Dressel 7-11, there are other ovoid profiles produced on the Baetican coast. There is the case of the Lomba do Canho 67 amphorae, whose production has been registered in the Bay of Algeciras (Fernández Cacho 1995; Bernal Casasola and Jiménez-Camino Álvarez 2004). The same type of amphorae with fabrics from the coast of Malaga (Mateo Corredor 2015) has also been identified, which might be related to the production of this type in the yet non-excavated pottery workshop of Toscanos (García Vargas, Almeida and González Cesteros 2011: 212). Additionally, and due to the lack of evidence from pottery workshops, though Lomba do Canho 67 amphorae from the Bay of Cádiz and its surroundings are known, it cannot be ruled out that they were originally from other production areas having similar fabrics, such as the Mauritanian coast, where its production has also been confirmed (Boube 1987-1988).

The Guadalquivir valley is, nonetheless, the main production area, since most of the finds are from that region. Conversely, the occurrence of amphorae in Hispania Citerior from the southern coast of Spain seems lower, in spite of the fact that such occurrence is hard to be determined, since the origin of those amphorae is often

not included in the scientific bibliography. Due to the already mentioned limitations, we can only establish their presence in the sites that we have directly studied. Thus, in the villa of *C/Olimpo* we found two examples (Figure 7, no. 14) with fabrics that we assigned as belonging to the Bay of Cádiz – 1.4% of the whole set of amphorae. In the Forum of *Lucentum*, we found four rims of this type with fabrics of Cádiz, 2.1% of the whole set, while five rims were identified as corresponding to the coast of Malaga, representing 2.7%. In the case of *Carthago Nova*, one example of *Lomba do Canho 67* has been identified as originally from the southern coast of Spain. This example is from the sacred area of Cerro de la Concepción (50-25 BC) and represents 1.9% (Murcia Muñoz *et al.* 2013: 92, fig. 18.11). Of a certainty though, the productions of *Lomba do Canho 67* registered in the Baetican coast are a minority in comparison to those in the Guadalquivir valley.

#### 4. Discussion

Ovoid amphorae constitute a group or family of vessels that show similarities in the shape of the body, although they have different rims and secondary features. This being said, the same dilemma constantly reoccurs: What is the cause for these formal similarities? Is it a trend? Is it the result of the stowage plan in the hold of the ship? Is it due to a craft or production connection between the different centres or kilns for the production of these amphorae? We are aware of the fact that no conclusive or indisputable answers can be found. We can only make assumptions that, according to different historiographic perspectives, will hopefully be more or less plausible. What seems incontestable is that such a morphological connection between amphorae must have a reason, as it does happen with other families of vessels scattered over different and distant production areas, for example, before this period with Dressel 1 amphorae and later with Dressel 2-4 amphorae.

The first ovoid amphorae found in Hispania Citerior in the Late-Republican period are Ancient African amphorae whose occurrence can be dated back to the middle of the 2nd century BC, followed soon after by Brindisian amphorae. Both vessels are associated in many contexts and, in any case, their channels of distribution would have been the same as those of Italic wine amphorae. Therefore, although they are present in all kinds of contexts, these types show a higher representation – as also happens with Italic wine amphorae – in contexts with a higher Italic presence, for example, in contexts linked to the Roman army or mining sites, or strongly Romanised sites. Thus, the first prototypes to be found are Brindisian and Ancient African amphorae, which constitute the standards for all the set of Hispanic amphorae.

It can be stated that from the middle of the 1st century BC a second period begins, in which ovoid vessels are directly produced in Hispanic areas. This is regarded as a notable milestone in the Hispanic production, because

fully Romanised archetypes are adopted, as opposed to the traditional Punic or Iberian-Turdetan models used in earlier periods. From the first copies of Italic vessels (Greco-Italic, Dressel 1 or Lamboglia 2) a progressive Romanisation is observed, which, in our opinion, is rather related to stowage conditions in the hold of the ship than to any other trends or non-functional factors. That is why we believe that the general dissemination of fully Romanised prototypes of an ovoid form in the Hispanic area constitutes a true production landmark. It has to be interpreted as an indicator of the full integration of agricultural and commercial Hispanic products into the Mediterranean markets.

In a geographical order, from North to South, it is observed how the production of *Tarraconense 1* amphorae in the northeastern area of the Iberian Peninsula emerges in the middle of the 1st century BC and that its main stage of commercialisation corresponds to the period covering the years 40 and 20 BC. It is a type of amphora mainly distributed in its nearby regional context and, especially, in *Gallia*, thus indicating the commercial pattern that North *Tarraconensis* wine will follow in the next decades. The lack and proportionally lower presence of ovoid *Tarraconensis* amphorae in the central and southern areas of Hispania Citerior/*Tarraconensis* confirm that these commercial dynamics are rather linked to the Gulf of Lyon or the northeast of the Iberian Peninsula.

At the same time in the middle of the 1st century BC, the occurrence of amphorae production from Hispania Ulterior/*Baetica* is detected, although it cannot be ruled out that some types were imported shortly before, as in the case of *Ovoid 1/Lomba do Canho 67*. Nonetheless, the preferential period of commercialisation for ovoid types in Hispania Citerior should be set at around 40/20 BC, aligned with what has been recorded in other areas in the Western Mediterranean and the Atlantic coast (García Vargas, Almeida and González Cesteros 2011). With the information currently available, the most successful vessels in this process would be *Ovoid 1/Lomba do Canho 67* and *Ovoid 4*, followed by *Ovoid 5*, which, as shown in the case of *Lucentum*, were distributed with a certain intensity, and the *Ovoid 6* oil amphorae and its evolved descendant, *Oberaden 83*. The presence of ovoid amphorae from the Guadalquivir is far from being as considerable as in contexts on the Atlantic coast.

Meanwhile, *Gaditan* Ovoid amphorae and the first versions of Dressel 7-11 amphorae also start to appear in Hispania Citerior around the middle of the 1st century BC. However, contrary to what happened with *Tarraconense 1* and ovoids from the Guadalquivir, they will remain a minority within the amphorae groups of their own production area, as opposed to Punic amphorae T-7.4.3.3, whose commercial success does not decrease until Augustan period.

Similarly, the study of distribution proportions of ovoid amphorae from the south of Spain in Hispania Citerior,



allows us to observe that their prevalence is higher in southern and central contexts than in northern areas – perhaps unsurprisingly. Such an uneven presence supports the existence of different areas of influence and supply routes. It is important to emphasise that a similar trend has been already observed in the 2nd century BC, when Punic amphorae from the south of Spain reach a comparatively higher incidence in the southern area (Molina Vidal 1997; Asensio Vilaró and Principal Ponce 2006: 140; Principal Ponce and Asensio Vilaró 2013: 346). Thus, we propose that a possible route would have as arrival ports *Emporiae* and/or *Tarraco*, from which the supply of the northeast coast and Gallia Narbonensis would be carried out. The other route would go through the south: here the main port of entry would be *Carthago Nova*. Thence, distribution will be carried out from *Carthago Nova* over an area that would most probably extend further north from Cabo de la Nao (Molina Vidal 1997), and – as supported by evidence of distribution of Lamboglia 2 amphorae – would include the southeast, at least the coast of Almería (Mateo Corredor 2016a).

As we have already stated elsewhere (Molina Vidal 2002), we believe that the widespread production of ovoid amphorae in Hispania should be regarded as exemplifying the actual emergence of Hispania in the production economy of the Roman Empire, as is clearly defined chronologically in the Civil Wars, and which has its roots in the economic transformations occurring in the last third of the 2nd century BC (Mateo Corredor 2016a: 532-533). Some of the main topics that needed further clarification, especially those concerning the nature of such economic transformations, still remain unsolved. However, research has progressed remarkably, at least as far as the elucidation of typological series and the contextualisation of the family of ovoid amphorae are concerned. Research is still in progress, more specifically on some proposals (Molina Vidal 2002) about the possible transfer of interests or capital, which would be reflected in the movement of groups of craftsmen, who were responsible for the massive dissemination of the ovoid types of amphorae. Those hypotheses were largely based on Caesarian limitations on the inversions in the provinces, an actual reference to capital flight towards the periphery, as indicated in written sources describing the well-known interventionist measures by Emperor Tiberius in the framework of the financial crisis in year AD 33 (Molina Vidal 2002: 305-306).

As has already been pointed out, major progress has been achieved in the field of typology, as well as in understanding the distribution of the family of ovoid amphorae: this study is an example of such progress. However, we should not lose sight of the next objectives and we need to keep a close focus on the roots of our research: most specifically in elucidating the characterisation and understanding of the nature of the Roman economy, in whose development the emergence of new actors, namely the provinces, come to play a major role from the 1st century BC.

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