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THE MEDITERRANEAN FOOD TRADE AT COLONIA ULPIA TRAIANA (XANTEN): SOME REMARKS ON A RECENT BOOK OF AMPHORA STUDIES

J. Remesal Rodríguez (ed.),
Colonia Ulpia Traiana (Xanten) y el Mediterráneo: el comercio de alimentos
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The volume, which is published in the *Instrumenta* series of the University of Barcelona under the auspices of the Real Academia de Historia and the Centro para el Estudio de la Interdependencia Provincial en la Antigüedad Clásica (CEIPAC) directed by Prof. José Remesal Rodríguez, was written within the frame of a research program financed by the European Research Council under the European Union's Seventh Framework Programme (FP7/2007–2013; ERC Grant Agreement No. ERC-2013-ADG340828). Edited by Remesal Rodríguez, it undertakes key issues related to the study of both local ad imported amphorae from Colonia Ulpia Traiana (modern Xanten in Germany), the alimentary trade, import of olive oil in Baetician containers, their production origins, the epigraphy of inscriptions found on amphorae and quantitative data on the import of these goods to the Germanic territories.

The introduction and afterword are by José Remesal Rodríguez. The research methodology is presented by Cèsar Carreras Montfort and Pau De Soto, who also discuss the data in quantitative terms. The different amphora categories found at Xanten are taken up successively: Orietal vessels (Daniel J. Martín-Arroyo Sánchez), amphorae and goods imported in these containers from Italy (Daniel Mateo Corredor and Jaime Molina Vidal), Gallic wine amphorae (Pau Marimon Ribas and Sergi Calzada Baños), imitation Gallic amphorae (Marimon Ribas), imported amphorae fro Lipari (Jordi Pérez González), containers produced locally in the Germanic province (Carreras Montfort, Anna Gutiérrez, Aureli Alvarez and Anna Doménech), North African amphorae (Victor Revilla Calvo), Guadalquivir valley production (Carreras Montfort). Processed fish products imported to Xanten are described by specialists in this subject, Lázaro Lagóstena Barrios and Revilla Calvo, while Remesal Rodríguez focuses on amphorae for transporting olive oil, including the inscriptions on these containers, which he prepared together with Jordi Pérez González. Remesal Rodríguez is also the author of the conclusions presented in the volume, which encompasses 513 pages with appendices. Its significance lies in the extensive factual data on amphorae presented

as drawing documentation, charts and tables, and catalogs of stamps and inscriptions. Reference lists are appended to each article. The total amphora material considered encompasses more than 18,000 sherds with a combined mass of 8000 kg from different excavations, lending credence to the statistics and conclusions regarding the volume of ancient trade in Xanten and its significance.

Most of the authors are known from other publications in the *Instrumenta* collection, others have published on amphorae production and ancient commerce (texts of historical significance in the field) with the Universities at Cadiz and at Alicante. Some of the authors are longtime collaborators of José Remesal Rodríguez and have worked with him at Monte Testaccio and on a monumental catalog of amphora stamps edited by CEIPAC, which is regularly updated as in the case of the amphorae from Xanten and their epigraphic apparatus (pp. 305–383) and conclusions on the source of stamps on Dressel 20 amphorae in Germania Superior and Germania Inferior in reference to particular *conventus* (pp. 385–419). A map of production sites, generated on the basis of stamps found at Xanten, is of particular importance in this case (p. 395, Fig. 7b). It shows 48 different workshops from the Baetis valley being represented in this Roman colony. Other charts from this chapter present quantitative data on Baetic trade to the Germanic provinces, comparing the intensity of stamps occurring on olive oil containers from different sites in the region (pp. 388–389, Fig. 4a–c; pp. 398–402, Fig. 9a–c-3).

The book is an impressive record of Remesal Rodríguez's research, which he has been involved in regularly undertaken since the early 1980s. His studies have been dedicated to the import of Baetic olive oil to Germania and to the workshops producing amphorae on the Guadalquivir. Remesal Rodríguez has also been the longtime head of the Monte Testaccio project in Rome, which this reviewer had the opportunity to participate in at the close of the 1990s. Moreover, he established an archaeological school preparing his collaborators for work in his specialty, that is, research on the ancient economy focused on studies of ancient written sources and material culture, the latter comprising amphorae with the telling stamps, *tituli picti* and graffiti found on them. Remesal Rodríguez summarizes these issues with regard to olive oil containers in the chapter "Las ánforas olearias béticas Dressel 20" (pp. 275–303). He applies a typological evolution of Dressel 20 and Dressel 23 amphorae proposed several years ago for Augusta Raurica by Stefanie Martin-Kilcher and updated in 1998 by Pier Berni Millet (p. 278, Fig. 3a). The dating of the stamps is based wherever possible on comparison with stamps from Monte Testaccio and data in the CEIPAC archive of Dressel 20 amphora stamps with bibliographic references (pp. 305–383). This is important supplementary data on the Roman limes market for Baetic olive oil exports. Most of the stamps are in raised relief; those from the Baetis valley usually on the handles and in Greek letters for different parts of the amphorae, as proposed by Heinrich Dressel. Stamps on vessel bodies are for the most part of third-century-AD date and are associated with other stamps impressed on the handles.

The Xanten study is a point of departure for presenting an overall view of trade between a limes town and other cities in Germania and the Mediterranean world. According to Remesal Rodríguez (p. 463), food provisions could have been issued to Roman soldiers on the limes as part of their pay. In his opinion, the *praefectura annonae* was separate from the *annona militaris*. The state would pay the olive oil traders a transportation fee (*vectura*), leaving transport in private hands, a system evidenced in the reign of Augustus. Goods like olive oil and processed fish products from Baetica flooded the markets in Germania and Britannia, presumably aided in this by the first *praefectus annonae,* who came from Cadiz and was well aware of the range and capacity of Baetica's production.

It is this reviewer's opinion, based on her research, that Aquileia in Cisalpine Gaul was the only port in the northern Adriatic receiving large deliveries of olive oil and processed fish products from Baetica. Other municipia and *mansiones* along the Roman roads in this province have yielded

barely a handful of examples of olive oil amphorae, occasionally with a content of processed fish products from the Atlantic and Mediterranean coasts of Baetica. Single examples of olive oil amphorae are noted in the territory of *regio XI Transpadana*, while in *regio X Venetia et Histria* finds follow the Adriatic coast, lining the road headed in the direction of Aquileia. A larger group of amphora for fish products from the Cadiz region has been noted in Verona, where the reviewer found them to make up about 1% of the assemblage coming from a storehouse at the mouth of the Adige. One should also keep in mind products from the Po and Istria valleys, which constituted the main supply source for wine and olive oil for Cisalpine Gaul. The different climatic and demographic conditions of the Germanic province decided about the intensity of Baetician food imports.

The progress of research on trade relations in the Roman provinces is paralleled by a dynamic development of studies on amphora production in the Iberian peninsula. The corpus of data on production sites and the alimentary content of these vessels for the provinces of Hispania Tarraconensis, Baetica and Lusitania has doubled in recent decades. Studies by Daría Bernala Casasoli from Cadiz, Enrique García Vargas from Seville and Daniel Mateo Corredor from Alicante, among others, have presented Baetician and Tarragonian imitations of Italic amphorae for storing other products than those originally intended. Recent research on early products from the Guadalquivir Valley has recognized new forms of so-called ovoidal amphorae derived from Apullian types and the development of these vessels toward the already known Haltern 70 and Dressel 20 containers. The reviewer's research on *spatheia* produced on the southern coast of Murcia has also demonstrated that the identification of amphorae from shipwrecks studied in 2001 by Bernard Liou is in need of verification. Considering the existence of Baetic imitations of Italic and Lusitanian amphorae, the explicit assigning of amphora shapes to content has resulted in a situation in which the proper identification of the production origin of an amphora is no longer possible without minute examination of the fabric.

Remesal Rodríguez presents yet another hypothesis on the use of the Atlantic route for trade between the Mediterranean and northern Europe. The issue of coastal navigation along the Atlantic shores of the Iberian peninsula was already discussed by José Millán León in a monograph published by the University of Seville in 1998. Carreras Montfort's study of 2000 on the distribution of Baetic goods in Roman Britain also suggested the possibility of oceanic navigation, confirmed by finds of olive oil amphorae near the island of Guernsey which is located off the coast of Britain and at the mouth of the English Channel. Transport by water was always more profitable in the case of Cadiz and the mouth of the Rhine, and did not take longer than a month (p. 465, note 1). Remesal Rodríguez notes the similarities of amphora stamps in Germania and Roman Britain in contrast to stamps from the Rhone valley.

Remesal Rodríguez goes on to assume that soldiers transported the army supplies. According to the author, an analysis of Tacitus' *Histories* indicates that cargo would have been offloaded from the sea-going vessels to river boats at *insula Batavorum* (p. 466). Ancient Xanten was supplied for the most part with wine from Greece, Italy, the Iberian Peninsula and Gaul, and was not subject to state control. Olive oil and processed fish from Baetica reached Xanten, Nijmegen, Mainz and Augst from the Augustan period on. Import of Gallic wine predominated from the Flavian period. The author notes the same for supplies of Gallic wine to Britain and Raetia. This reviewer's research did not show any such dependence for Cisalpine Gaul, where local wine from Picenum prevailed from the first through the third century AD. Remesal Rodríguez concludes that Spain and Gaul were the main suppliers of the southwestern European provinces and the new Roman limes territories from the reign of Vespasian until the mid-third century AD, and points to the need for research on material from Trier for this period.

The study of thousands of amphorae from 337 excavations carried out at Xanten through the end of the twentieth century demanded a considered methodological approach which is described

in the volume by Carreras Montfort and De Soto (pp. 24–57). Petrographical analyses were carried out on 40 of the samples taken from selected amphorae. Using concepts of Minimal and Maximal Number of Individual vessels (introduced by Molina Vidal already in 1997 and continued by Mateo Corredor in his work of 2016), the authors present an estimate of the studied collection in the form of tables of base and handle fragments and their combined weight by types. They note the lack of standardized research on amphora sherds, which could affect the dating for the region in question.

Carreras Montfort and De Soto also map the provenance distribution of the amphorae from Xanten in relation to other regions of Western Europe (pp. 50–53). They note the low number of North African vessels from the first–third centuries AD. Martín-Arroyo Sánchez's study of Oriental amphorae from Xanten, making up 6.82% of the collection from the site, shows the predominance of wine imported from Crete mainly in the first century. The picture of imports from Italy, presented by Mateo Corredor and Molina Vidal (pp. 79–98), differs in that they observed a change in the source of Italic wine delivered to Xanten in the first century AD. Imports from Campania are confirmed, but they constitute barely a little over 1% of the total, whereas the number of amphorae for Gallic wine is twentyfold. Tarragonian wine containers make up less than 1% and the flat-bottomed Italic amphorae and Adriatic amphorae are entirely absent. Imports of Gauloise 1–5 amphorae predominate quantitatively. The subject of Gallic wine vessels is elaborated by Marimon Ribas and Calzada Baños (pp. 99–115), who present the Gauloise 1–5 and Gallic Dressel 2–4 forms discovered at Xanten (p. 108). Marimon Ribas also discussed a related topic of Gallic amphora imitations from Xanten (pp. 117–133), including Haltern 70 *similis* and Augst 21 (similar to Dressel 17) and Dressel 9 and 10 *similis*. Fréjus-Lenzburg containers are also recognized, present at Xanten in the first–second centuries AD like other Gallic imitations of Baetic amphorae.

Alum imported from Lipari to Xanten in Richborough 527 amphorae is an interesting topic, discussed in the volume by Jordi Pérez González (pp. 135–142). These 45 sherds, which is a very small group, are proof of long-distance trade (p. 145). The exploitation and distribution of alum is discussed. One should mention the exploitation of alum in the region west of Mazarrón (Murcia). Alum comes in either crystalloid or liquid form and it cannot be excluded that in the area of Puerto de Mazarrón it was packed in locally made *spatheia*; further detailed research is needed to verify this idea.

The issue of Dressel 20 imitations in Germania is undertaken by José Remesal Rodríguez. Carreras Montfort, Gutiérrez, Alvarez and Doménech map the production of imitations of Dressel 20 *similis* (pp. 143–169). A quantitative look at the data (p. 144, Fig. 2) indicates almost the same number of Germanic amphorae as containers imported from Baetica. The authors are inclined to consider beer as the content of these Dressel 20 *similis* vessels. They present examples of the fabric, based on microphotography of samples petrographically confirmed as local Xanten production. They also show Niederbieber 74/75, Niederbieber 68, form Stuart 132-B, Niedebieber 67 amphorae, all presumably used for wine and beer. They publish previously unrecognized forms belonging to the Xanten production, giving microscopic magnification images of the nine petrographical groups that have been distinguished. The Xanten group I to IV amphorae are for the most part from the first–second century AD.

North African amphorae are poorly represented in Xanten and this is confirmed in Revilla Calvo's study (pp. 171–179). These are Africana 2A Grande, Africana 2C Grande and Dressel 30 fragments. The function of North African containers was frequently quite varied, with the exception of Dressel 30, which was most likely for wine. These imports are first recorded in Xanten in the second–third century AD. The authors compare other North African imports found in Lyon. This reviewer will add that North African amphorae in Mazarrón bay are a numerous and typo-

logically diverse group of imports from the first century BC through the early seventh century AD. From the fourth century AD they occur alongside locally made *spatheia* intended for fish sauces and other preserves.

Revilla Calvo's study of the dynamics of wine imports from Hispania Citerior at Xanten (pp. 181–209) gives an overview of grapevine cultivation and vessel production in this region from the last quarter of the second century BC, identifying production sites (p. 187, Fig. 1) in the region from Emporiae to Dertosa. Revilla Calvo also recalls the issue of imitations of Italic Dressel 1 and Dressel 2–4 types, Gauloise 4, Baetic forms from l'Almadrava and own production of amphorae of the Layetana 1 and Oberaden 74 types. He emphasizes changes in exports from the Iberian peninsula and the provisioning of the Roman limes noted from the reign of Augustus. While imports from the Guadalquivir valley and the region of Cadiz constitute about 40% of the total, the example of the camp at Oberaden demonstrates that amphorae from Hispania Citerior (mainly for wine) make up only slightly over 4%. Supplies of this wine to the limes were much smaller than that of Italic and Gallic wine (p. 196) and were related to the supply of army camps mainly in the times of Augustus. Starting from the first decades of the first century AD, Galia Narbonensis became the chief supplier of wine to the Germanic province.

Carreras Montfort, who is an expert on amphorae exports to Roman Britain, undertakes in this volume a study of imports of amphorae from the Guadalquivir valley to Xanten (pp. 211–238). Looking at areas of production in Baetica, he gives a detailed description of the production on the Baetis river (p. 221, Fig. 8; p. 222, Fig. 9; p. 223, Fig. 10). Apart from Dressel 20, the types produced in Baetica included Dressel 2–4, Dressel 7–11, Dressel 28, Haltern 70 and Verulamium 1908 (a variant of Haltern 70). Carreras Montfort draws attention to the distribution of Dressel 2–4 amphorae along the Atlantic route and indicates finds from the eastern coast of Spain; several fragments found in Xanten are all dated to the early first century AD. Dressel 7–11, which is known to have been produced on the coast of Baetica, was also being made in the Baetis valley and is often associated with the Haltern 70 type. Xanten produced a significant collection: more than 1300 rims specifically from the Guadalquivir Valley from the early first century AD. These containers, specifically for the transport of fish preserves, were made alongside Dressel 28 amphorae for wine, which are sometimes mistaken for the so-called *urcei* forms. The Dressel 28 were produced from the end of the first century BC through the first half of the second century AD and they are found in Baetican cargos as indicated by the content of shipwrecks from the Bonifacio strait. As for Haltern 70 containers, Carreras Montfort considers them as either wine amphorae or multifunctional and discusses their evolution in relation to the Dressel 20 container. The origin of this form, which is known from the Rhenish Roman army camps and which was made from the last quarter of the second century BC through the middle of the second century AD, was established thanks to the discovery of the Port-Vendres II shipwreck from Claudian times. Carreras Montfort distinguishes four chronologically distinct variants including Verulamium 1908 and recalls the existence of Gallic imitations (Haltern 70 *similis*) already disussed by Marimon Ribas. The production from Cadiz was studied in 1998 by Enrique García Vargas, whereas production in Mérida, Lusitania and the area of Lixus has recently been confirmed. Haltern 70 containers are present in limes assemblages from the Augustan period. Carreras Montfort has traced the amphora on 188 sites in Europe (p. 228, Fig. 13). They reached the northern territories of Europe together with other Baetic products via the Atlantic route, although they were also distributed to Gaul and through the Bonifacio strait to Italy. The reviewer records the presence of Baetic Haltern 70 containers among the amphorae from the Puerto de Mazarrón bay.

Lázaro Lagóstena Barrios has studied fish preserves production and the workshops producing the amphorae in which they were carried for many years and he joins forces with Revilla Calvo to consider the import of fish sauces and preserves from Baetica to Xanten (pp. 239–274). Together

they present the typology and chronology of the Dressel 7–11 and Beltrán II amphorae in which these products were imported, going into the geography of the production of these vessels and their importance for the economy of Baetica. Pointing out the long tradition of making fish preserves in Baetica which goes back to the fifth century BC, the authors acknowledge stimuli from Italy shaping the development of this industry from the Republican period. Some of the saline deposits on the coast of Baetica, presented in a localization table (p. 242, Table 1) are still operating today. The authors also map the salines of Andalusia (p. 243, Fig. 1) and draw attention to the spatial and economic ties between *salinae maritimae* and *salinae cetariae*, connected for the most part with the Atlantic coast and Gibraltar. Their localization affected the distribution of salt via the sea route. The fish processing industry of the early Roman Empire is described by them as urban and suburban, linked to the coastal cities and harbors. Considering amphora production workshops, the authors note the formal differentiation of contemporary production and similar operations carried out by many village *figlinae* in the same period. They give as examples the Dressel 28 amphorae from Cadiz and Malaga, and the Beltrán IIB from Cadiz and Huelva.

As part of their study, the authors present a formal identification and typological characteristic of Baetic amphorae for fish preserves found in Xanten, encompassing Dressel 7–11, Beltràn IIA and II B, Pompei VII (Beltrán II form from the Flavian period), and Dressel 12. The predominant forms are those from the Julio-Claudian and Flavian dynasties. A tabular presentation is included of amphora types and their purpose attested by epigraphic sources (p. 250, Table 2; p. 252, Table 3). Workshops producing Dressel 7, Dressel 8, and Beltrán IIA and IIB amphorae have been listed (p. 254, Table 4), including also localization maps of workshops making particular types, giving in effect a very useful review of the current state of research on the *conventus Gaditanus* production. The authors conclude with the observation that Dressel 8 amphorae, which held fish sauces of the highest quality, are more numerous in the Xanten assemblage than the Beltrán IIB type, which was presumably intended for *muria* and *liquamen*. The Dressel 7–11 amphorae in Xanten are dated to the reigns of Augustus and Tiberius, and they constitute about 20% of all of the finds, in similarity to the Rhenish finds. The Dressel 7 amphorae in Xanten come from workshops in the Cadiz Bay with only 10% being from the Malaga coast. The same is true of Dressel 8, 9 and 12 amphorae. Most of the Beltrán IIA and II B containers are also from Cadiz. Consequently, it is clear from the listings that most of the imports to Xanten were from the area of Cadiz with Huelva and Malaga participating in lesser degree. Fish preserve imports peaked under the Julio-Claudian and Flavian emperors, dropping off in numbers by the end of the first century AD.

The research on amphorae from Xanten are crucial to an understanding of the alimentary supply system of the camp. The results indicate directions of trade and the intensity of the commerce in Xanten. At the other end, they provide data for an assessment of the economic situation and the development of production on the coasts of Baetica in the early Roman Empire. The book as it stands contributes significantly to studies of the ancient economy. To quote Remesal Rodríguez (p. 13), the manner of presentation of the amphora assemblage in the monograph vividly demonstrates that the provisioning of the Rhenish limes came largely from other, often distant provinces. Highlighting the economic dependence between Roman provinces, the volume is a very satisfactory complement of general studies in ancient history.

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