PROJECT MUSE

Eastern Mediterranean Fineware Imports to the Iberian Peninsula, 300–700 ce, and the Economic Impact of the Justinianic Pandemic

Henry Gruber

Journal of Late Antiquity, Volume 17, Number 1, Spring 2024, pp. 200-233 (Article)

Published by Johns Hopkins University Press
DOI: https://doi.org/10.1353/jla.2024.a926285

For additional information about this article
https://muse.jhu.edu/article/926285

[172.71.254.72] Project MUSE (2025-04-05 00:05 GMT)

Henry Gruber

Eastern Mediterranean Fineware Imports to the Iberian Peninsula, 300–700 CE, and the Economic Impact of the Justinianic Pandemic

Recent excavations in Spain and Portugal have recovered abundant fineware ceramics imported from the eastern Mediterranean and dating to the period after the fall of the western Roman Empire. The date of the latest sherds has been interpreted as showing the survival of trans-Mediterranean trade into the seventh century. However, archaeologists have tended to minimize a collapse in the volume of these imports around 550 CE. This article seeks to adjudicate between a survivalist interpretation (based on the continuity of some trade) and a catastrophist interpretation (based on decreased volume of trade). It analyzes the import volume and geographic distribution of ceramics at over 4,000 Iberian sites, 202 of which contain late Roman fineware imported from the eastern Mediterranean. The data suggest a steady increase in imports beginning by 450 CE, followed by a rapid drop in both import volume and network participation around 550 CE, with no observed recovery. This drop's magnitude has not yet been fully analyzed, and recent excavations in the eastern Mediterranean have allowed it to be fixed with greater chronological precision. Four causes are considered, three (warfare, shifting fiscal obligations, and changing tastes) that have been already proposed, and a fourth (pandemic disease) that has not.

One of the great feats of the last fifty years of archaeology has been the international effort to categorize, catalogue, and quantify ancient ceramics, especially the fine table ware modern scholars call terra sigillata.[1] These plates,

This article was initially intended for presentation at a workshop on Mediterranean ceramics, to be held in Bergamo, Italy, on March 11, 2020. I would like to thank Margaret Andrews, Nathan Pilkington, audiences at the 2021 Society for Classical Studies Meeting, and three reviewers for their contributions. Paulo Panaligan and Avinash Mandava helped build the data model. All calculations were done with material published before August 2022. Data available upon request.

[1] Van Oyen 2016 problematizes the category sigillata, first systematized in Dragendorff 1895, 16–21. For late Roman ceramics, see above all Hayes 1972; Hayes 1980; Carandini and Tortorella 1981; Fulford 1984; Bonifay 2004; for key dating contexts, see Cau et al. 2012.

[172.71.254.72] Project MUSE (2025-04-05 00:05 GMT)

bowls, cups, and serving dishes were produced in mass quantities and sold "piggyback" alongside bulk crops around and beyond the Roman Mediterranean.[2] Because sigillata ceramics were not traded alone, they serve (in a different metaphor) as a sort of ink-dye in the bloodstream of Roman commerce.[3] Shifts in relative imports are taken to indicate other aspects of the Roman economy, and "the chronological, geographical and quantitative distribution of table wares may be used as a criterion for the intensity of more general economic activity."[4]

This article studies the prevalence of eastern Mediterranean sigillata, imported into the Hispanias—roughly, today's Spain and Portugal—beginning in the fourth century CE. These provinces imported sigillata from Africa, Gaul, and the eastern Mediterranean, and they were also the home to several independent local industries, generally grouped under the category *terra sigillata hispánica tardía*.[5] The sigillata from the eastern Mediterranean most commonly found in Iberia is the type known as Late Roman C or Phocaean Red Slip Ware, which was produced in modern-day Turkey; the first production site to be discovered was near the ancient town of Phocaea, though now other production centers are known at nearby Grynion, Ephesus, and Çandarlı (ancient Pitane).[6] To a lesser extent, Late Roman D or (less appropriately) Cypriot Red Slip Ware is also found in Iberia.[7] These two types of fine table wares were produced from approximately 350 to 700 CE.

One of the most spectacular discoveries of sigillata in the last decades has been the concentration of Late Roman C (hereafter LRC) and Late Roman D (hereafter LRD) along the Atlantic coast of Portugal and (especially) Spain.[8]

[2] "Piggyback": Lewitt 2011, 323–29; McCormick 2002, 99; Wickham 2005, 711. Reynolds 2010, 100, writes that grain "underwrote" the ceramic trade. Bonifay 2018, 335: "it is commonly assumed that the tablewares [here: ARS] did not travel for their own value . . ."

[3] Greene 2005.

[4] Bes and Poblome 2007, 1. Large-scale study of ceramic trends to reconstruct economic history are now common. See, for the east, Bes 2015; in general, see Panella 1993; Martin 1998 and Gutiérrez Lloret 1998, both in Saguì 1998, are especially relevant. See Ward-Perkins 2005, 140–41, with caveats at 142, for ceramics as evidence for collapse.

[5] For imports to Spain, see Járrega Domínguez 1991; Reynolds 1995; Reynolds 2010. For TSHT, Rodríguez-Aragon 2019; for regional productions, see, for example, Orfila Pons 1993 and Morais 2010.

[6] Hayes 1972, 323–70, as "Late Roman C." Hayes 1980 uses Phocaean Red Slip Ware. For the production at Grynion, see Empereur and Picon 1986. For the production at Ephesus, see Ladstätter and Sauer 2005. For Çandarli, see, for example, the brief mention in Pirson 2021, 288–94.

[7] Hayes 1972, 371–86, as "Cypriot Red Slip Ware." See, however, Jackson et al. 2012 for production in southern Asia Minor (as opposed to Cyprus).

[8] For Iberia, surveys include Nieto 1984; Delgado 1984; Járrega Domínguez 1991; Alonso de la Sierra Fernández 1994; Serrano Ramos 1997–1998; Viegas 2007; Fernández Fernández 2014; Bustamante Álvarez 2015; Quaresma and Banha da Silva 2019. These are summarized in Fernández Fernández, 2019. Publications of individual sites are cited below, when relevant.

Some of this material, especially at Vigo, goes quite late, even into the seventh century. These more recent finds in Iberia also help to contextualize finds of contemporaneous LRC and LRD from Britain.[9] These finds have been seen as particularly important because the continuity of eastern Mediterranean ceramic imports to the Atlantic façade represents continued trans-Mediterranean commerce in a period that is largely defined by the cessation of long-distance exchange in bulk goods—a process that, following Pirenne, has often seemed to end Antiquity.[10] Most studies of these ceramics therefore operate within an interpretive framework that seeks evidence for the survival of trade, and the persistence of eastern sigillata in these western contexts is taken as evidence of that survival.[11] However, the story is not as simple as continuity into the seventh century because the focus on survival of any trade obscures a major mid-sixth-century crisis in the volume of imports. This crisis appears in much current literature on the distribution of these ceramics but is generally only acknowledged obliquely. Reynolds, for example, sees a major decline around 550 CE but frames it in terms of continuity: "the supply of LRC appears to have been continuous from c. AD 450–550."[12] Other scholars note the decrease in passing, while stressing the continuity of some trade.[13] This is an interpretive heuristic that foregrounds persistence rather than one that, focusing on volume, would foreground collapse.

Deciding between the persistence or volume heuristic for interpreting LRC and LRD imports to the Iberian Peninsula requires quantification. This article therefore attempts the first quantification of these imports to the Iberian Peninsula and argues that the major collapse in eastern imports between 530–550 CE represents a true break in patterns of economic exchange. This argument is based on a study of the presence, non-presence, and when possible, quantities of fineware ceramics at 4,231 archaeological sites in the late Roman Diocese of the Spains, that is, the Iberian Peninsula, the Balearic Islands, and the tip of Mauretania. Of these sites, 2,063 have late Roman fineware (defined as ARS-D, TSHT, ARS-C, DSP, LRC, and LRD, in that order of prevalence), and 202 have a form of late Roman eastern Mediterranean fineware

[9] LRC is often known as A-ware in Britain. Campbell 2007, 26; Campbell and Bowles 2009, especially 303–4; Kelly 2010; Duggan 2016; Duggan 2018; and Duggan 2020. Fulford 1989 argues for direct transport, which Duggan 2020 rejects. See the overview from an Iberian perspective in Reynolds 2010, 108–12, with new thoughts in Reynolds 2015. Wood 2023 appeared too late for full consideration in this study.

[10] First proposed by Pirenne 1939; for the debate, see Effros 2017.

[11] Járrega Domínguez 2013, 161; Reynolds 2010, 123; Duggan 2020, 440.

[12] Reynolds 2010, 35.

[13] Quaresma and Banha da Silva 2019, 96; Fernández Fernández 2014, 439, 452; Fernández Fernández 2015, 73; Fernandes et al. 2013, 211; Fernandes 2018, 106; Sánchez Pardo 2013, 150.

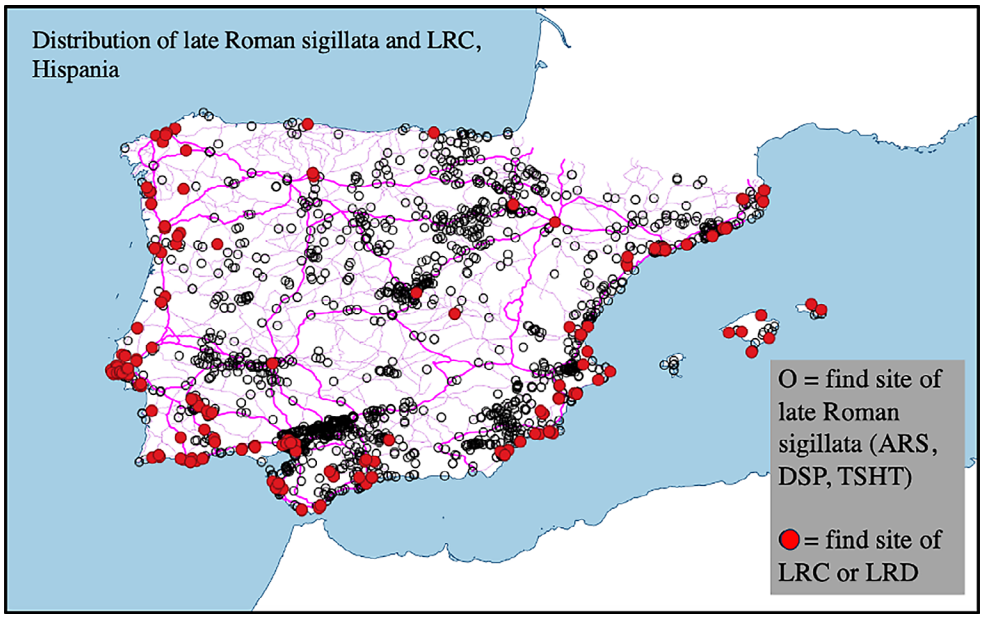

Figure 1: All Iberian sites with late Roman finewares. Open water base map: Barrington Atlas. Roads: courtesy of Pau de Soto.

(see figure 1).[14] Forms of finewares are generally recorded using the typology devised by Hayes, and his numbering system is used: LRC H 3, for example, is Hayes' form 3 of Late Roman C. The "sites" at which these ceramic forms appear are catalogued in a relational database and represent excavated monuments, urban rescue excavations, excavations of rural complexes (villas or farmsteads), and named entities reported in surveys.[15] The material primarily comes from regional archaeological journals, survey volumes, and monographs, though substantial material is drawn from the "gray" literature of government-published rescue reports.[16] Archaeological excavations are ongoing, and their publication will soon make the dataset used here incomplete. However, this survey brings together the currently available material for Iberia at the time of composition in reasonably complete form.

The evidence brought together here allows for both quantified study of the magnitude of the collapse and a "phase-based" analysis of shrinking distribution networks. These show a major decrease, with no recovery, in the

[14] Of these, 192 have LRC and 25 have LRD; 15 overlap.

[15] Though see Dunnell 1992, 21–22.

[16] Including, for example, the *Anuario Arqueológico de Andalucía;* the series *Mérida excavaciones arqueológicas*, and a systematic survey of forty-two different regional or national archaeological journals published in Castilian, Catalan, and Portuguese.

decades around 550 CE. This initially seems to reflect a crisis in production in the eastern Mediterranean, but although production recovered by the end of the century, imports to Iberia never did. Quantified totals from Albania, Britain, Italy, and Libya show a similar pattern: a sixth-century crisis, without a recovery. LRC and LRD's African competitors, discussed below, also show a decrease—but the collapse in the volume of eastern imports, as well as the shrinking geographic distribution of sites where eastern imports have been found, is unparalleled. The ceramic evidence therefore suggests a general economic crisis in the mid-sixth century that affected long distance trade more than local trade.

Volume and Chronology

Although the first step towards quantified ceramic analysis is to gather and count different types of vessels, merely counting forms does not accurately reveal trends. We need methods and models that correct for differences in how long ceramic forms were produced. The traditional statistical method to quantify ceramic imports was developed in the 1980s by Elizabeth Fentress and Philip Perkins for African Red Slip Ware (ARS).[17] This technique begins by summing either the minimum number of vessels (MNI) or total sherds of each ceramic form found at an archaeological site or in a region. The total number of sherds or individuals for each vessel form is then divided by the number of years that form was produced, arriving at the average number of vessels of each form imported per year. This may then be converted into an annual percentage of imports or left as a raw number. The annual percentages or totals of each different ceramic shape are then summed at a given interval—typically five or ten years—to determine comparative shifts in production or distribution.

The following calculations are based on the twenty-two quantified deposits in the Iberian Peninsula with at least five reported classified individuals or diagnostic sherds of LRC (see below, figure 2). In some cases, deposits from the same city have been combined in order to maximize the material studied.[18] The dataset includes only one deposit from Tarraconensis, which reflects the absence of large deposits there, despite the presence of small quantities of LRC at individual sites along the coast and in urban Tarraco, as well as the presence of eastern amphorae throughout the region.[19] A large (MNI 128) deposit in Seville has not been published as a quantified deposit and was therefore

[17] Fentress and Perkins 1988, with updates in Fentress et al. 2004.

[18] Especially Cartagena: Méndez Ortiz 1983; Madrid Balanza et al. 2000; Reynolds 1995, Appendix C.6.

[19] González López 2007 discusses LRC at 212–13 and presents important contexts throughout.

QUANTIFIED DEPOSITS OF LRC IN THE DATASET.				
Quantified Deposits	**Type of site**	**#LRC**	**As . . .**	**Reference**
A Coruña	Urban deposit?	12	MNI	López Pérez 2004, 471–78
Alto do Cidreira	Villa	33	MNI	De Sepúlveda et al. 2014–2015
Baelo Claudia	City (total)	31	MNI	Bourgeois and Mayet 1991, 373–82
Benalua	Urban deposit	71	Sherds	Reynolds 1987, 55
Braga	City (total)	60	MNI	Quaresma and Morais 2012, 374
Cabanas (São Marcos)	Villa	5	Sherds	De Sousa 2001, 207–15
Puerto de Santa María	City (total)	30	MNI	Lagostena Barrios et al., 1996
Cartagena	Urban deposits	25	MNI	See note 18
Conímbriga	City (total)	91	MNI	Reynolds 1995, 272
Crestuma	Fortified site?	9	Sherds	Silva et al. 2015, 410
Escadinhas de São Crispim	Urban deposit	20	MNI	Quaresma 2020
Freilas	Villa	19	MNI	Quaresma 2017a
Horta da Misericórdia	Urban deposit	15	MNI	Fernandes 2018, 100
Igreja do Bom Jesus de Gaia	Rural church	22	Sherds	Gonçalves Guimarães 1995, 274
Lisbon (exc. São Crispim)	City (total)	98	MNI	Quaresma and Banha da Silva 2019
Málaga (Theater)	Urban deposit	20	MNI	Serrano Ramos 1997–1998
Mértola	City (total)	27	MNI	Fernandes 2012, 106
Quinta de Bolacha	Villa	6	MNI	Quaresma 2017b
Santo André de Almoçageme	Villa	23	Sherds	De Sousa 2001, 207–15
Torre de la Audiencia 1B	Urban deposit	9	MNI	Remolà Vallverdú 2000, 49–50
Valencia – circus	Urban deposit	19	MNI	Rosselló Mesquida et al. 2010
Vigo	City (total)	604	MNI	Fernández Fernández 2014, 223–24

Figure 2: The quantified material (all LRC) that comprises my sample. Vigo (= 604) represents almost half of the total (= 1,249). The totals do not include unclassified individuals.

excluded.[20] And finally, special note should be made of the totals from Vigo, which comprise almost half the total.

There are three main dating systems available to date eastern late Roman finewares. The first are the dates used by the ICRATES project.[21] This project

[20] García Vargas and Vázquez Paz 2006 report that it includes (only?) late fifth-century forms LRC 3B, 3C, and 3D.

[21] With data available for download at https://archaeologydataservice.ac.uk/archives/view/icrates_lt_2018/downloads.cfm.

[172.71.254.72] Project MUSE (2025-04-05 00:05 GMT)

analyzed the distribution of fineware ceramics in time and space throughout the eastern Mediterranean, relying on a synthesis of previously published chronologies. Another system is the dates from the recent *Manual de cerámica romana IV*.[22] This volume closely follows the dates proposed by Hayes in *Late Roman Pottery*, with some adjustments made based on Hayes' and others' subsequent modifications. The final alternative would be a new dating scheme recently proposed by Guy Sanders, who argues that excavators of some of Hayes' key deposits missed small sixth-century coins, meaning that deposits from the Athenian Agora that Hayes dated to 460–475 CE are actually from after 550 CE.[23] As these new dates have yet to be fully articulated and are quite controversial, I only note them here.

I use the ICRATES project dates. This is due in part to the fact that the *Manual* dating system seems to create artificial "valleys" in the import curve that are due to the dating scheme rather than shifts in trade. For example, by dating forms LRC Hayes 3B and 3C to 450 to 490 CE, these common forms disappear a decade before forms like the LRC Hayes 3E begin production around 500 CE, or the 3F form around 525 CE.[24] This creates a dip in the import curve beginning around 490 CE that seems more likely to be an artifact of this ten-year gap rather than representing a real decline in imports (figure 3). In contrast, the ICRATES project dates the forms Hayes 3B and 3C to 425 to 500 CE, moving the first large-scale appearance of these wares in Iberia a quarter-century earlier and removing the drop around 490. The earlier start date seems plausible in the light of contexts from "the third quarter of the 5th century" at Beirut with abundant LRC Hayes 3B and 3C; the later end date seems more conservative, given the dramatic impact that the 490 CE end date has on the curve.[25]

The ICRATES dates for the forms LRC Hayes 3F and 3G also differ from those in the *Manual*. Hayes 3F is the most common LRC form in Iberia and the last to be widely distributed, and the major sixth-century drop in the import curve will occur at whatever date is chosen as the end of LRC H 3F production. Both 3F and 3G are dated by Hayes, and in the *Manual*, to roughly 525 to 575 CE, and by the ICRATES project to 500 to 550 CE.[26] The earlier date for form 3F seems most plausible. Recent excavations in Beirut show LRC Hayes 3F appearing commonly in contexts dated by coins of Anastasius (reigned

[22] Fernández Fernández 2019.

[23] Sanders 2020, 358–72.

[24] Fernández Fernández 2019, 242, dates both to "c. 450 al c. 480–490."

[25] Reynolds 2012a, 208.

[26] Fernández Fernández 2019, 242, dates Hayes 3F "genéricamente" to the period 525–575. The ICRATES project, as Standard form 978, dates it to 500–550. See the discussion in Reynolds et al. 2012, especially deposits numbers 61, 62, 69–72, and 78–80. Quaresma 2019 also suggests this earlier date.

KEY FORMS FOR CONSTRUCTING THE IMPORT CURVE: QUANTITIES AND DATE RANGES.					
Form	**Number**	**ICRATES**	**ICRATES**	**Manual start**	**Manual end**
LRC H 3F	444	500	550	525	575
LRC H 3C	184	425	500	450	490
LRC H 3E	166	475	525	475	525
LRC H 3G	59	500	550	540	575
LRC H 3B	55	425	500	450	490
LRC H 3 (unspecified)	54	300	600	450	575
LRC H 3B/C	44	425	500	450	490
LRC H 3D	41	475	500	470	500
LRC H 10A	31	575	625	550	600
LRC H 3H	31	525	600	500	550
LRC H 3/10	28	See discussion in Fernández Fernández 2014, 93, 252: "third third 6th c."			
LRC H 3 "reentrante"	11	See discussion in Fernández Fernández 2014, 252: "second half 6th c."			
LRC H 8	11	450	500	450	525
LRC H 5B	10	500	550	500	550
LRC H 3F/G	9	500	550	500	550
LRC H 5A	8	460	500	460	500
LRC H 3A	6	400	450	400	450
LRC H 3E/F	6	475	550	500	550
LRC H 4	6	425	450	425	450
LRC H "3D-G"	5	Fernandes 2012, 106, identifies and dates to c. 475–525			
LRC H 10B	5	575	625	575	625
LRC H 3/4 "precoz"	5	Fernández Fernández 2014, 223, treats as an early LRC H 3			
LRC H 5 (unspecified)	5	460	550	450	550

Figure 3: Key forms for quantification: all LRC forms with at least five examples found in the quantified samples. Given the prevalence of forms, subforms, and variant forms, those with fewer than five examples are not shown here.

491 to 518) which, even if deposited after his reign, suggest a production date early in the sixth century.[27] As the lifecycle of individual ceramic vessels could be more than twenty-five years, it is likely that occasional Hayes 3F forms

[27] Reynolds 2012a, 215, for example, context BEY 006 11081. Reynolds here notes that LRC H 3F is "present in the early 6th century."

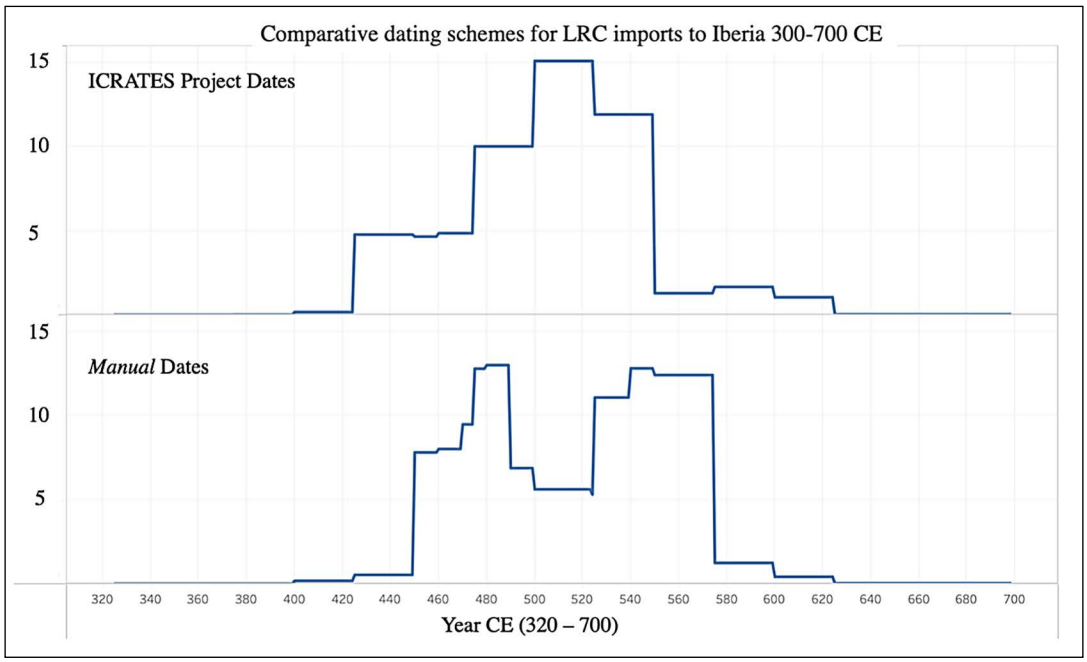

Figure 4: Import volume curves using two different dating schemes, vessels per year. The Manual dates lead to a dip between 490 and 525 CE. The date for the large, sixth-century drop depends on the end date for LRC H 3F, either 550 (ICRATES) or 575 (Manual).

found in deposits from, say, the 560s or beyond were produced before 550.[28] LRC H 3G, on the other hand, only begins to appear in contexts after around 530, or perhaps 540, suggesting an early to mid-sixth-century production date.[29] Key here are a series of deposits at Beirut, where LRC Hayes 3G first appears in redeposited contexts linked with the 551 earthquake.[30] Therefore, while I follow the ICRATES dates of 500 to 550 for both these forms, Hayes 3G may be slightly later than Hayes 3F.

The quantified dataset comprises mostly small deposits. Vigo, which represents approximately half of the material, therefore skews the data. While Vigo seems the most important peninsular importer of LRC, that should not obscure

[28] Peña 2007, especially diagrams at 329; further developed for finewares in Lund 2009.

[29] Fernández Fernández 2019, 242: Hayes 3G "parece comenzar a producirse an algún momento del segundo cuarto del siglo VI . . ."

[30] Reynolds et al. 2012, 20; see also Reynolds 2004b. Key contexts there are Butrint context 1152, at 224; Butrint context 1676, dated 550–575, though perhaps with residual material, at 237; from Reynolds 2012a, see the Beirut Souk (BEY 006 11081), dated 530–540; BEY 006 20214, from around 540–551; and various deposits from the 551 earthquake (for example, BEY 006 20201 / 20202). These suggest that Hayes 3G became more common in Beirut over the period 530–550, supplementing 3F.

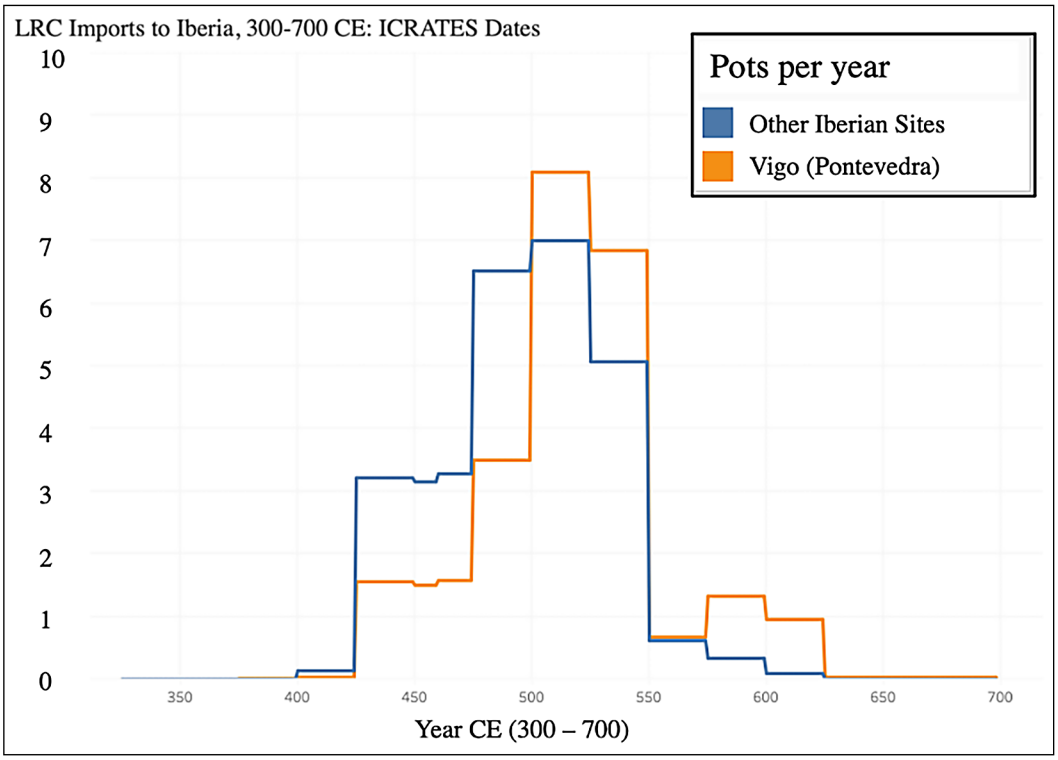

Figure 5: Two versions of the import curve for LRC in Iberia. While the general shape and chronology are similar, the spike at Vigo is greater, but later, than for the other Iberian sites.

potentially different trajectories at other sites. Figure 5 therefore depicts the LRC import curve in two ways. The material from Vigo is in orange; the material from all other sites is in blue. While the curves are broadly similar, the trade at Vigo seems to develop later and perhaps persist later. This has implications, discussed below, for the idea that Vigo represents continuity in trade from the late Roman world into the early medieval era. Regardless, the curves are broadly similar and show a dramatic decrease around 550 CE.

The Results of the Import-Volume Calculations

According to the import-volume data, LRC imports rose rapidly over the late fifth and early sixth centuries. Although LRC was first produced in the late fourth century, early forms such as Hayes 1, 2, 3A, and 4, are almost entirely absent from Iberia, representing less than one imported pot per year in the period before 425. Most LRC imports into the Iberian Peninsula therefore began after the introduction of the Hayes 3B and 3C bowls around 425 CE. They reached their apogee in the early sixth century: with 15.1 pots per year in 525, according to the ICRATES model, or 12.8 pots per year in 540,

according the *Manual*. In Iberia, LRC is therefore a post-Roman ceramic. Tellingly, a rich ceramic deposit in a Valencian destruction layer, dated to around 425 CE, has no LRC.[31] Deposits from the burn layers at Conimbriga, in Portugal, usually dated to around 468 CE, do.[32]

At some point somewhere near the middle of the sixth century, imports of LRC to Iberia collapsed. The ICRATES model shows a high of 15.1 pots per year in 525 CE, with a slight drop to 11.9 in 540, before cratering to 1.2 pots in 550. The *Manual* model shows a similar drop, from a high of 12.8 pots per year in 540 to just 1.2 in 575. The specific end date depends on the dating for the most common late eastern fineware found in Iberia, the LRC Hayes 3F bowl (444 out of 1,264 identified LRC sherds / individuals), which the ICRATES model dates from 500 to 550 and the *Manual* from around 525 to 575. This form is not just the most common form; it is also the last found in great quantities. There was perhaps a very small recovery, seen more at Vigo than at other sites, but by 625 CE the trade in LRC had entirely disappeared. As of this writing, there have been no sherds of the very late form LRC Hayes 10C reported anywhere in Iberia.[33] This is not to say that all trade with the Eastern Mediterranean ceased. The material from Vigo includes late eastern amphorae as well as distinctive eastern Mediterranean common and cooking wares, including a very late series from Antioch.[34] However, after around 550 CE few eastern finewares were imported.

Geographical Distribution

Quantifying sherds or pots to ascertain import volumes is just one way of representing ceramic imports. Studying aspects other than these ceramics' import volume elucidates other aspects of economic integration and commodity exchange. Chief among these is participation in exchange networks, which can be depicted and understood by mapping sites in space. Above, I calculated import volumes from quantified deposits. However, most sites I have collected were published in short journal articles or in the gray literature, often only noting the presence of certain forms. Recording and then mapping this data on presence or non-presence answers a different question from the one answered by import volume analysis: not how the quantity of imported eastern finewares changed over time but which sites (and how many sites) participated directly or indirectly in networks that allowed them access to *any* eastern finewares.

[31] Ribera i Lacomba and Rosselló Mesquida 2007.

[32] Delgado et al. 1975, 285–88.

[33] Though at Vigo, three individuals classified as "Hayes 10 variants" could possibly date to the seventh century.

[34] Fernández Fernández 2014, 128. All are from the UARCII excavations, contexts dated broadly to 570–630 CE.

[172.71.254.72] Project MUSE (2025-04-05 00:05 GMT)

The object of inquiry is therefore not the ceramic but rather the site, and it provides information about networks and integration rather than trade volume and intensity. The relatively precise dates for sigillata forms (as compared, for example, with amphorae) allow us to track these sites' participation in trans-Mediterranean networks on a scale of decades as opposed to centuries.

Figure 1 shows the distribution of all late sigillata, with those sites with eastern sigillata filled in red.[35] Due to the cluster of finds at certain key locations, the number of visible dots does not represent the actual number of sites: for example, at Málaga, five different excavations have produced LRC, while at Vigo, eight have. In both cases the dots overlap. The distribution appears primarily coastal, and log regression analysis found a decrease in the log odds of LRC / LRD presence equal to 0.25 per kilometer of distance—that is, the farther one gets from the coast, the much less likely it is that an excavated or surveyed site will have these wares. This suggests that, by the later fifth century, networks that had integrated the coast with the interior were broken—or at least were no longer being used to transport finewares. This does not mean that no LRC reached the interior, but rather that those cases in which it did were exceptional and therefore deserve special focus.

While the map in figure 1 represents a static view of all sites that participated in the networks that allowed them to access these wares, geographical distribution need not be fixed. In certain periods fewer or more sites might be incorporated in these networks. To measure shifting network participation over time, we cannot simply repeat the calculations used in the Fentress and Perkins model, replacing the number of individuals of each form with the number of sites at which that form was found. Although the data entered would look superficially similar, the results would be skewed towards periods in which multiple popular forms were in circulation at the same time. For example, there are twenty-four sites with Hayes 3B and forty-six sites with Hayes 3C, so summing the sites at which those forms were found would return seventy; however, these two forms circulated at the same time and are often found at the same site. Only fifty-eight sites have either form 3B or 3C but not the other, meaning that there is an overlap of twelve sites where both forms have been found. These sites would be double counted in a model that generated a time series by summing the sites at which each form were found. Similarly, LRC Hayes 3E and 3F are found at forty and forty-four sites, respectively, but are found at fifty-nine together (not the eighty-four they sum). The period when LRC Hayes 3B and 3C were circulating, therefore, did not have a meaningfully smaller number of participating sites (58) than the period of 3E and 3F (59), even though their summed totals, 70 and 84, show a greater disparity.

[35] There are seven sites with LRD but no LRC, concentrated in coastal Tarraconensis.

Horizons and Phases

A different way to conceptualize these ceramics' spread through the peninsula is to focus not on individual forms, but rather on coherent groupings, where clusters of forms appear together and suggest a certain (artificially constructed) package of imports arriving around the same time. Fernández Fernández's work at Vigo led him to identify six such import horizons.[36] Building on his model and using the data I have collected, I have identified five ceramic phases (called phases to differentiate from his horizons). The last phase, with LRC Hayes 10C and some late forms of LRD (9B, 9C), is scarcely represented in my data, barely registering at Vigo and found at few sites peninsula-wide. It is, however, common in the eastern Mediterranean and therefore should be included in the five phases. Figure 6 shows the ceramics that comprise these phases, and the number of sites at which each phase is found.[37]

The dynamics suggested by the import volume data are largely confirmed here. Before 450 CE, eastern finewares are rare. In the second and third phases, from roughly 450–550 CE, the eastern ceramics are abundant. Then, around 550 CE, the data show a massive decline in the number of sites participating in the eastern networks. The major difference between the volume data and the spatial data, however, is in my phases 2 and 3. While the period around 500–525 CE (and to a lesser extent 525–550 CE) represents a large increase in volume over the period 450–500 CE, this is emphatically not the case when it comes to the number of sites receiving ceramics. The divergence is explained by the sheer number of Hayes 3F and 3G sherds found at Vigo, which increases the volume of imports without expanding the number of sites at which LRC is found. This suggests that the increase in volume around 475–525+ CE was concentrated at the sites where ceramics were already being imported; that is to say, we are not seeing expanding networks but rather the intensification of imports at a relatively stable number of sites.

The five-phase distribution proposed here is not just helpful for calculating the extent to which eastern goods penetrated Iberian markets. Mapping the sites from each phase provides us with a series of snapshots of the geographic distribution of these eastern wares. This series allows us to see change over time from a different perspective. Figure 7 below maps a simplified set of three phases: before 450, 450–550, and after 550. The longer time horizons here allow certain common forms, such as LRD Hayes 2, to be

[36] Fernández Fernández 2014, 128–29.

[37] Certain common forms, such as the LRC Hayes 3 (unspecified subtype) and the LRD Hayes 2, cover the broad period around 450/475 to 550 and beyond, and therefore they do not feature into these phases, though they would fit in phases two and three. For the redating of the LRD Hayes 2 form, see Reynolds 2012b, 57–66.

HORIZONS AT VIGO, AND PHASES PENINSULA-WIDE.				
F. F. Horizon	Gruber phase	Approx. date (CE)	Gruber search terms	Number of sites
A	1	360–450	LRC H 1, 2, 3A, 4	15
B1	2	450–500	LRC H 3B, 3C, 3D	68
B2	3	500–550	LRC H 3E, 3F, 3H, 5, 6, 8	72
C	4	550–600	LRC H 3G, 3/10, 10A, 10B, LRD H 9A	14
NA	5	600–700	LRC H 10C, LRD H 9B, 9C, H 10	7

Figure 6: Sites receiving LRC or LRD in each of five temporally unequal phases. The inclusion of LRC H 3G in phase 4 is due to Fernández Fernández's observations that it does not appear at Vigo before around 550. If LRC H 3G were included in phase 3 as opposed to phase 4, then phase 4 would have even fewer sites: 10, not 14. Each site reporting LRC Hayes 3G reports phase 3 forms.

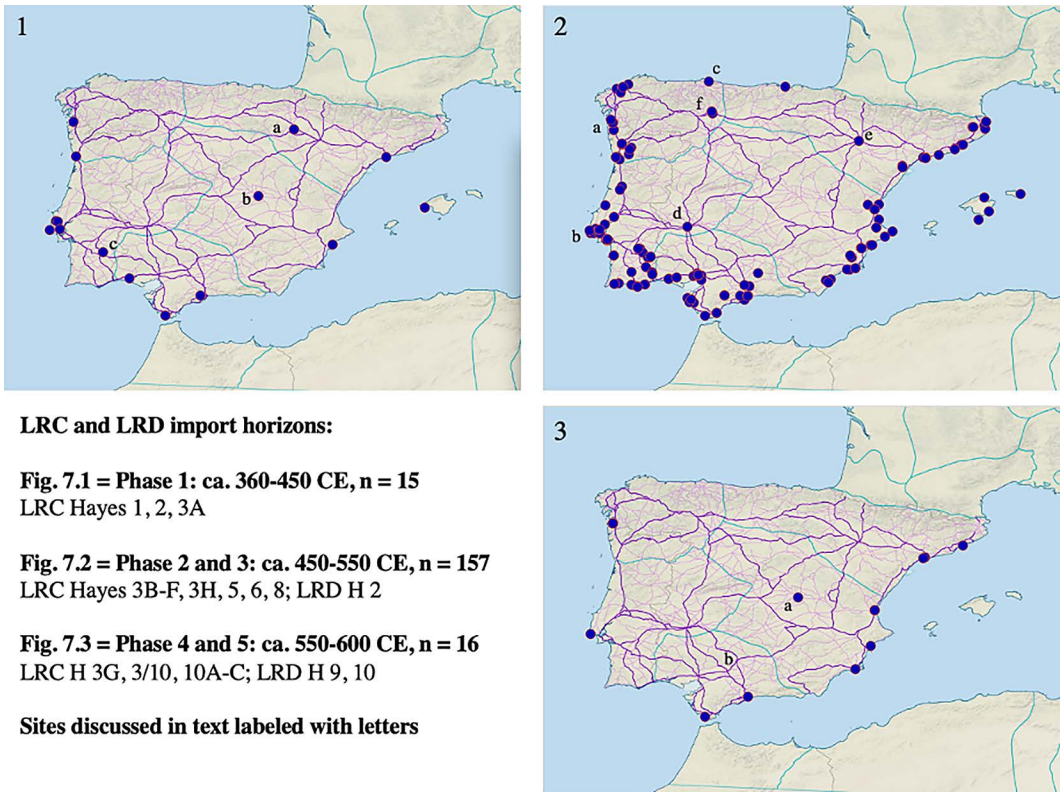

Figure 7: Geographical distributions of phases in Iberia, Late Roman C and Late Roman D. Points from the same city (Vigo, for example, with eight sites) cover each other; these areas of richer importation are captured by the quantified analysis, which studies the larger deposits separately.

mapped, although their production dates (in this case, 475–550 CE) would put them in more than one of my shorter phases, and they are not included in the table above.

Although the overall distribution of eastern finewares is coastal, ceramics from the first phase (figure 7.1) appear at several inland sites: LRC Hayes 1 at the Cerro del Romero in Cascante (figure 7.1a), far up the Ebro River to the north of Zaragoza; LRC Hayes 4 at Segobriga (figure 7.1b); and LRC Hayes 2 at the villa of Monte de Cegonha (figure 7.1c), at least partially abandoned in the mid-fifth century.[38] LRC arrived at these three inland sites before the collapse of Roman authority in the Peninsula and before the surge in eastern sigillata imports beginning around 425–450 CE. They suggest, perhaps, that with continued political stability, LRC would have found inland markets rather than be relegated to the mostly coastal distribution it would have in the period after west Roman governmental collapse.

The second and third phases (figure 7.2), from around 450–550 CE, are found almost entirely at coastal sites, including the Atlantic coast, especially at Vigo (figure 7.2a, a cluster of many dots) and around Lisbon and its countryside (figure 7.2b). According to my data, these Atlantic routes, which stretched to Britain, seem not to have incorporated Cantabria. The copious finds of LRC along the western Atlantic coast are not replicated at Gijón (figure 7.2c), where the abundant late fineware is mostly Gallic and there are almost no eastern Mediterranean vessels.[39] The same absence may be true in western Gaul.[40] It seems plausible that the few sherds of LRC at Gijón came back with merchants traveling between Gallaecia and Gaul, which would explain the presence of Gallic DSP and E-ware (produced in Aquitaine) at Vigo.[41] Vigo, situated as it is near the border of the often-invisible Suevic kingdom, seems to be a precocious emporium on the Atlantic coast more similar to the early medieval trading towns of the North Sea than to the Romano-Mediterranean port cities of Málaga, Cartagena, and Benalua / Lucentum.[42]

The second and third phases also represent the period in which eastern finewares appear at inland cities—although there were first-phase imports to inland sites, these sites were generally not urban. Zaragoza (figure 7.2e), halfway up the Ebro River, has revealed scant sherds of imported LRC Hayes

[38] Cerro del Romero: Gómara Miramón et al. 2016, 59; Segobriga: Sanfeliu 2000, 228; Cegonha: Delgado 1988, 45, and Lopes 1989.

[39] Contrary to Reynolds 2010, 59. Fernández Ochoa et al. 1992, 117, report one sherd of LRC H 3E; Fernández Fernández et al. 2019, 585–86 add another sherd and compare LRC unfavorably with DSP, represented at Gijón by forms Rigoir 1, 4, 16, possible 18, and 29.

[40] Wooding 1996, though now see Duggan 2020, who argues that these apparent gaps are being filled in.

[41] Fernández Fernández 2015, especially 73.

[42] Duggan 2018, 154. On the phenomenon more broadly, see McCormick 2013.

3 which cannot be dated with precision but almost certainly represent the 450–500 horizon.[43] There is also LRC (all Hayes 3E) at León (figure 7.2f) and at the nearby basilica of Marialba.[44] And at Conimbriga, sacked but seemingly not abandoned in 468 CE, sherds dating from my phase 2 and 3 (but not from phase 1, 4, nor 5) have been found, including the full Hayes 3 sequence from 3B through 3F.[45] In 2015, four sherds from Mérida (figure 7.2d) were published, all from phase 2 or 3.[46] Previously no eastern fine wares had been found there, and ARS imports in this period also seem to have been negligible.[47] Their discovery might also lend some credence, or at least context, to mentions of "Greek" (that is, eastern) merchants in sixth-century Mérida found in hagiographical accounts from the early seventh century.[48] It also raises important questions about the continued use of the Guadiana River for transport, which was only navigable by seagoing ships until the Pulo do Lobo waterfall, seventeen kilometers north of Mértola (Portugal).[49] But four sherds do not seem to represent a robust ceramic trade, especially compared with the hundreds of sherds found at contemporary coastal sites.

The final two phases of distribution (figure 7.3) suggest an almost complete collapse in these networks, especially along the Atlantic coast. The number of sites receiving eastern sigillata drops from 157 in phases 2 and 3 to just sixteen in phases 4 and 5. By my final phase, not included in Fernández Fernández's horizons, there is no evidence for Atlantic distribution of these eastern finewares at all outside of a handful of sherds from the UARC II excavations in Vigo: LRD H 9C and three late variants of LRC Hayes 10, which may date to the seventh century.[50] Included in the final phase, somewhat surprisingly, is LRD 9B (seventh century) in Segobriga (figure 7.3a); another unclassifiable sherd of LRC was found in a late context there, with ARS-D Hayes 91C (sixth century or later).[51] Segobriga stands at the center of a dense network of sec-

[43] Reynolds 2010, 212; Paz 2001, 552, clarifies that the LRC here is Hayes 3 and one other unidentified sherd, from a different vessel. See Paz Peralta 1991, 24–28, for the original context.

[44] Gutiérrez González and Miguel Hernández 2018, 50.

[45] Delgado et al. 1975, 286–88.

[46] Bustamante Álvarez 2015.

[47] Vázquez de la Cueva 1985, especially 56, shows a large drop in sherd count between late fourth- and early sixth-century forms: 79 sherds Hayes 61A, 34 sherds Hayes 67, 3 sherds Hayes 99, and 1 sherd Hayes 104.

[48] *V. patr. Emerit.* 4.3 (*CCSL* 116: 31): *negotiatores Grecos in nauibus de Orientibus aduenisse atque Spanie litora contigisse* ("Greek merchants coming from the east in ships arrived and landed on the shore of Spain"). The text suggests that the merchants left their ships at the coast, perhaps transferring their goods to riverboats or even wagons.

[49] Fernandes et al. 2013, 203–4.

[50] Fernández Fernández 2014, 70–113, with charts on 511–15. The dating of this form, originally seen as seventh century, has been pushed back to include the late sixth.

[51] Sanfeliu 2000, 228.

[172.71.254.72] Project MUSE (2025-04-05 00:05 GMT)

ondary Roman roads but was not connected to the Mediterranean by water. When we combine this late evidence from Segobriga with the earlier evidence from León, Conimbriga, and Mérida, cities still seem to have been able to attract limited imports from the coasts. However, these were not major riverine cities, and therefore these occasional exotic dishes may not represent the otherwise unseen transport of bulk commodities. Rather, they might result from some other process, perhaps originating as souvenirs, representing individuals or households moving, or even diplomatic exchanges or gifts between Byzantines and Visigoths.[52]

While some cities in the interior received LRC, no evidence for any late eastern finewares has appeared at Córdoba (7.3b) or anywhere inland along the mid- to upper Guadalquivir, despite LRC being common in the countryside around coastal Seville. The absence of LRC or LRD further up the Guadalquivir suggests that, by 450 CE, the fortunes of this river valley had shifted. Further investigation into the distribution of ARS upriver is warranted and will hopefully build upon and update the surveys by Ponsich, restudied by Carr.[53] This survey work suggests that the middle and upper Guadalquivir were saturated with fourth-century ARS but that sixth-century forms are quite rare. If true, this represents a major break in the links between this rich river valley and the Mediterranean world that had occurred, based on the absence of eastern wares, by 450 CE. The fifth-century crisis (whether seen in terms of military violence in Spain or the end of Roman fiscality) therefore struck this once-prosperous valley particularly hard.

And End of Imports, or an End to Production?

So far, changes in connectivity or trade have been implied as the cause of the changes in Iberian trends. However, rather than any rupture in distribution, an alternative explanation for declining imports might be declining production. In fact, in the eastern Mediterranean itself, Bes and Poblome see a "strong swift decrease" in LRC around 550 CE and note that LRD "plummets"; in both cases, they attribute this to a combination of "mechanical" effects of ceramic dating and, less mechanically, to shifts in state-sponsored trade: African grain, shipped to Constantinople, brought ARS with it and put the eastern fineware producers out of business.[54] Further research has confirmed that "LRC [production] had reached a low by the third quarter of the 6th century."[55]

[52] For diplomacy, see Wood 2010.
[53] Ponsich 1979–1991; Carr 2002; see García Vargas and Vázquez Paz 2013 for criticism of Carr.
[54] Bes and Poblome 2007, 6.
[55] Bes 2015, 129.

COMPARING EAST AND WEST.								
Totals from . . .	**LRC H 3B**	**H 3C**	**H 3D**	**H 3E**	**H 3F**	**H 3G**	**H 10A/B**	**H 10C***
Iberian sites (not Vigo)	23	124	26	97	182	18	4	0
Sherds at Vigo	30	60	15	69	262	41	32	0
ICRATES Project	89	131	43	169	600	162	354	423

Figure 8: Comparative totals between selected quantified Iberian deposits and the ICRATES Project sherd totals (not MNI) for the eastern Mediterranean. Hayes 3F is the most common form. Hayes 10 forms are common in the east but are rare in Iberia. Three examples of a potentially late "Hayes 10 variant" found at Vigo were not classified as Hayes 10C but may have a similar chronology.

However, any sixth-century drop in production was ephemeral. Later forms like LRC Hayes 10C were significantly more abundant in the east than forms from the late fifth or early sixth century, like the Hayes 3D and 3E (see below, figure 8).[56] Indeed, the low from 550–575 CE was followed by "an immediate and strong increase."[57] This rise does not seem like it can relate to a *cessation* in the supply of African grain to Constantinople—after all, as late as 608 Heraclius seized the throne in part by briefly cutting off the African grain supply.[58] Whatever its cause, the decline in production around 550 seems to have been sharp but brief.

No long-term decline in production or in distribution in the east matches the collapse and sustained absence of LRC imports to Iberia. Moreover, for each form, the relative abundance in east and west are similar—until the appearance of Hayes 10, when they part ways. Production and distribution therefore seem linked before 550 but not after. Late Roman C's disappearance in Iberia therefore seems not simply to reflect the circumstances of its production but rather barriers to at least one step in its path of distribution from the east to the Mediterranean and Atlantic shores of the Iberian Peninsula.

Other Markets: Libya, Italy, Britain

We can also detect a sixth-century caesura in other regions outside the LRC production zones. In Libya, as represented by Benghazi and Tocra, the most

[56] LRC Hayes 10C in ICRATES database as standard form 862; Hayes 3D and 3E as forms 971 and 975, respectively.

[57] Bes 2015, 129.

[58] For Heraclius: McCormick 2002, 104.

common forms are the Hayes 3D (24), Hayes 3E (36), Hayes 3F (52), and Hayes 9A (14). The Hayes 9A, produced perhaps 520–600, straddles the mid-sixth-century collapse seen in Spain; the other three are all early sixth-century forms, with the most common the Hayes 3F.[59] This compares with seven of the LRC Hayes 3G, for a decline from 3F to 3G of 86.5%. The late LRC Hayes 10 series is rare and declines over time, with just four examples of 10A, two examples of 10B, and one example of 10C. The pattern from Spain seems to be repeated in Libya: abundant importation before around 550, and very little after, with no late sixth-century recovery. Moving west, Italy can be analyzed through both sherd count and the phase model used above.[60] The most common forms are LRC Hayes 3C (39), 3E (19), 3E/F (14), and 3F (33); there is very little 3G (1) or 10A (3), and no 10B or 10C. Sherd count therefore matches Spain and Libya, with a decrease of approximately 90% before and after 550 CE. Next, the phase model shows four sites in my phase 1 (before 450), eleven sites in phase 2 (450 to 500), sixteen sites in phase 3 (500 to 550), three sites in phase 4 (550 to 600), and no sites in the last phase, 5 (after 600).[61] The major drop (~81%) between phase 3 and phase 4, with no recovery in phase 5, matches Spain. A possible exception is Classe, the port of Ravenna, where imported sherds supposedly reach a peak around 600 to 650.[62] However, these sherds only seem to be published quantified by stratigraphic phase, not by form (and are therefore not included in the above totals), and no published information indicates any Hayes 10.[63] If, however, Ravenna does have late LRC, it is perhaps the exception (an outpost of an east Roman state) that proves the general rule (western collapse). It therefore would match other Adriatic material from Butrint, which primarily includes contexts from the Triconch Palace and the basilica at Vrina, as well as some other sites; there, Hayes 3F is also the most common with twenty two, followed by 3G at seven.[64] This 66% decline from 3F to 3G is smaller at Butrint than in Libya,

[59] Benghazi: Reynolds 1995, 382 (Appendix D.36). Tocra: Reynolds 1995, 386–89 (Appendix D.37).

[60] All the Italian data is here taken from Archer 1998, as well as two other chapters in the 1998 *Ceramica in Italia* volume (Volpe et al. 1998 and Gandolfi 1998). Material from Ravenna, in Reynolds 2010, Table 23, shows an increase between the early and late sixth century.

[61] There may in fact be one site with a phase five rim, which is the Temple of Magna Mater in Rome; Reynolds 1995, 334 (Appendix D.21) reports a sherd of unspecified LRC Hayes 9; I include this along with LRC Hayes 9A and 9B in phase four, but if it is in fact 9C, this would be a phase five site, and the phase four sites would be reduced from three to two.

[62] Reynolds 2010, Table 23, reconstructs sherd counts by phases. Reynolds derives his numbers from Augenti et al. 2007, 282–83, where they are presented as bar graphs by stratigraphic phase, not ceramic form.

[63] Augenti et al. 2007, 273–74: "with the exceptions of four individuals . . . H5 and H8 . . . all the other examples from Classe are of the H3 type," with no subforms specified.

[64] See Appendix I of Reynolds 2004a, as well as Reynolds 2020; here I combine contexts Butrint 1112, 1152, 1194, 1274, and 1676 with the Vrina material. Reynolds (in preparation), *Excavations*

Italy, or Spain, and there is also evidence for some later forms (Hayes 10B/C and C) in the Forum.[65] Possibly, therefore, the further east and the closer to production sites, the less the pattern of mid-sixth-century collapse holds. The final western comparison is Britain.[66] Campbell's classification of the material, followed here, includes many unclear or transitional forms (for example, nine examples of "LRC H 3 C/E/F"); however, the group of LRC H 3C–F, that is, roughly 450–550, includes thirty-five individuals, and there are no LRC H 3G or any of the late sixth-century LRC H 10 forms. The mid-sixth-century cutoff seems to have affected Britain as well.

It is also important to recognize those places in the western Mediterranean with little or no LRC. These include the city of Rome, where only small amounts have been found, and Carthage, where (to my knowledge) none has. Similarly, Marseille-La Bourse, despite eastern amphora imports (especially LRA 1 and LRA 3, above all in Phase 1, 400–450), has few examples of LRC, with just ten.[67] Tarragona, despite the presence of some LRC, has comparatively little: the Torre de la Audiencia deposit, which contained something like 30,000 sherds, revealed just nine examples of LRC.[68] These absences therefore suggest to Reynolds a southern route in which LRC traveled more or less directly to southern Iberia and then out the Atlantic.[69] There may have been a second branch of the trade which went up the Adriatic towards Ravenna. However, at some point those eastern ships ceased to carry finewares to and beyond southern Spain. This happened at the same time that fineware production declined in the east. However, when that production rose again, those pots stayed in the east. Were they doing so because the ships themselves had stopped traveling, or because—for whatever reason—the ships no longer took them? This question requires comparison with the other cargoes with which the eastern finewares had once traveled.

Other Wares?

Sigillata ceramics were not the only, or even primary, cargo on the eastern ships that carried them to the west. Sigillata are generally considered "piggyback" goods on ships that traded foodstuffs, textiles, or other bulk commodities in

at Diaporit (Butrint, Albania): The Classical and Late Antique Pottery, mentioned in Reynolds 2020, is eagerly awaited.

[65] Reynolds 2017, 270–71, mentions, in various Forum contexts, LRC H 3G, 10A/B, 10B/C (two examples, one in context 149 and another in 772), and 10C.

[66] I follow the totals in Campbell 2007, 14; but see also Reynolds 1995, 273 (Appendix D.2) and Reynolds 1995, Appendix B.2.

[67] According to Reynolds 1995, 300 (Appendix D.11).

[68] See discussion of the deposit as a whole in Reynolds 1995.

[69] Reynolds 1995; Reynolds 2010; Reynolds 2015, 185–87 notes the possible importance of African ships.

amphorae, which survive archaeologically, and various types of skins, sacks, bolts, and bushels, which do not.[70] At Benalua, a possible emporium and stopping-point on the way to the Atlantic, LRC finds are accompanied by "local, Balearic, Tunisian, Levantine and Aegean amphorae."[71] Amphorae by themselves do not provide the chronological precision of finewares, but amphorae found in well-dated contexts can then be dated to that period. Do eastern amphorae, therefore, continue to show up in Iberian contexts after the end of LRC imports?

At Vigo, the most common eastern Mediterranean amphorae in early sixth-century contexts are the LRA 2A, which is the most common Horizon B container and, along with the similarly popular LRA 1, is found in "almost all" contemporary contexts.[72] The LRA 3A and LRA 4 amphorae are also present but less common. LRA 1 and 2 are also the most common eastern amphora forms in Britain, which makes the combination of LRC and LRA 2 therefore the key to the Atlantic route. In the layers from the mid- to late sixth century at Vigo (contexts 19–22), after the collapse I have identified, eastern amphorae are the most common amphorae (62%, sixty-three examples).[73] In these same late contexts, Fernández Fernández reports that LRC is the most common fineware (58%, 132 examples). In the seventh century, even given the rarity of LRC forms, some contact with the east therefore continued. However, it is unclear whether this represents the same trade: in the deposits from after 550 (contexts 19–22), there are forty-eight LRA 1 amphorae and just five LRA 2; given that LRA 2 was, with LRC, the other key to the pre-550 directed trade linking the Mediterranean, Vigo, and Britain, and more common than LRA 1, the changing proportions after 550 may suggest that the crisis seen in the quantities of LRC reflects an overall crisis on these routes as well.

Perhaps, then, a directed trade to Vigo brought amphorae to Gallaecia in the late sixth century. But the volume of this trade is difficult to assess. The only Vigo deposits whose amphorae were fully studied are the deposits dating to the latter half of the sixth century and into the seventh.[74] Without quantifying the eastern amphorae from earlier deposits it is difficult to know whether the high percentage of eastern imports in these contexts represents an overall increase in volume of imports after around 550, or whether, like the finewares, total import volume might have collapsed—perhaps precipitously—despite continued relative dominance over other wares. There is some evidence from other sites that perhaps amphora imports did as well.[75]

[70] See above, note 2.
[71] Reynolds 2015, 185.
[72] Fernández Fernández 2014, 433.
[73] Fernández Fernández 2014, 446, Table 5.1, with discussion 445–47.
[74] Fernández Fernández 2013, 333–34 explains why.
[75] García Vargas 2011, at 103: "Paradoxically, the absolute and relative number of oriental amphorae decreases [after 551] in the Byzantine areas and also in the Visigothic territories . . .".

[172.71.254.72] Project MUSE (2025-04-05 00:05 GMT)

Comparison of LRC with ARS

Questions of the relative position of LRC within the late and post-Roman world must eventually confront ARS, which was in most places at most times the most common imported fineware. While a full quantification of all or even most Iberian ARS deposits is out of the scope of this article, a schematic approach to the presence of these forms at sites using a variant of the "phase" model above can provide some material for comparison. As there are many more forms of ARS than there are of LRC, not all are included in the following phases, and the phases in some cases overlap.[76] However, the pattern of the ARS evidence is clear: I have identified 534 sites with ARS produced around 300–400 CE; 756 sites with ARS produced around 350–425; 316 with ARS produced around 425–500; 249 with ARS produced around 475–550; 124 with ARS produced around 550–600; and 95 with ARS produced after 600. We find abundant ARS in the fourth and especially early fifth centuries; then a rapid decline (58%) in the middle of the fifth; a slower decline (21%) between the late fifth and early sixth centuries; and then another collapse of approximately 50% between the early and late sixth century. The very late sixth or early seventh century sees another smaller decline (23%). While this pattern is broadly true for most regions, the coastal regions continued to have access to ARS after it disappears from inland sites. However, in all places where there were still imports, the mid-sixth century stands out as a particularly dramatic drop, after which the decline is minimal. In the case of Málaga, in fact, there seems to be a slight recovery (probably due to the presence of Byzantine troops and renewed links with Africa).[77]

When compared, the relationship between ARS and LRC is not consistent. The mid-fifth century, when LRC first becomes common on Iberian sites, sees ARS collapse. This is a plausible case of import replacement, as the chaos engulfing Roman (soon to be Vandal) Africa affected exports from there. However, the period of the greatest growth of LRC—the early sixth century—sees relative stability in ARS. Finally, the period around 550, when LRC almost disappears, is not associated with a recovery of ARS. Rather, this period also sees a major crisis for ARS imports. Whatever affected the trade of LRC in the sixth century, therefore, it was not competition from ARS that drove it out of Iberian markets. Rather, the crisis in imported finewares around 550 seems general and to have affected both eastern and African products. How we interpret this possible break, however, depends on whether we adopt a heuristic of survival or catastrophe.

[76] For the most part, I follow the dates put forward in Bonifay 2004, and have tried when possible to link forms not discussed there (for example, 103) with their appropriate contemporaries in Fernández Fernández's Vigo horizons.

[77] Málaga: Melero García 2003; Navarro Luengo et al. 1999a; Navarro Luengo et al. 1999b. A similar case can be made for Cartagena: Madrid Balanza et al. 2000; Reynolds 2012c.

Survival and Catastrophe

The data gathered here show rapid contraction in the networks that imported eastern sigillata to Iberia in the mid-sixth century. This collapse represents a significant change in some aspect of greater economic life. What that aspect was and what changed it has, in the words of González López, "generated a certain controversy."[78] Recent studies highlight three major possibilities. The first is a military-political explanation that focuses on Justinian's wars of reconquest in the western Mediterranean, especially the impact that this had on state grain shipments.[79] The second potential cause is a hardening of frontiers as the east Roman armies occupied southern Iberia and entered into conflict with the Visigoths.[80] The third argues that the end of sigillata imports reflect a shift in consumer tastes away from Roman-style eating.[81]

An often overlooked contributor to this mid-sixth-century crisis is the epidemic outbreak of bubonic plague that struck the Mediterranean world beginning in 541 CE.[82] A chronicler records that in the second or third year of the pandemic, it "ground down almost all of Hispania."[83] This disease recurred over the next two centuries in a series of epidemics, waves, or amplification events which struck populations at regular, if not always predictable, intervals.[84] Despite the attention that it has recently received in late antique scholarship, the plague is often overlooked in the Iberian sixth century, and its impact on trade has yet to be seriously considered.[85] This is despite a scholarly tradition linking plague with the end of the LRC imports to Britain.[86] Indeed Fernández Fernández, writing about the trends at Vigo, cites primary sources on the plague only for its impact on Britain and the end of LRC imports there but does not invoke it to explain any trends at Vigo, despite the similar

[78] González López 2007, 231; for an open-ended meditation on possible causes for the collapse in Lusitania, see Quaresma and Banha da Silva 2019, 96.

[79] Reynolds 2010, 100; Fernandes 2018, at 105–6; Quaresma 2017a, 445; Keay 1998, 149–50, for shifting *annona* obligations and the distribution of African amphorae. Wickham 2000, 822 argues that the Gothic Wars were a key factor in Italy.

[80] Nieto 1984, 547; for skepticism on correlation with political boundaries, see Lewitt 2011, 327.

[81] Gutiérrez Lloret 1998, 556–57; González López 2007, 232.

[82] Little 2007 is essential; among many recent articles, Sarris 2022 provides a balanced overview. For the case against the pandemic's measurable impact, see Mordechai et al. 2019.

[83] Vict. Tonn. 130b (ed. Cardelle de Hartmann 2001, 44): *his diebus inguinalis plaga totam pene contrivit Hispaniam*. "In those days" refers either to 542 or 543. See Kulikowski 2007, 150–51. For additional evidence of the first wave in Iberia, see Gruber 2018.

[84] Reconstructing the various "waves" (or similarly metaphored views of pandemic spread): Biraben and Le Goff 1969; Stathakopoulos 2004, 113–24; and Harper 2017, 304–15.

[85] Quaresma and Banha da Silva 2019, 96, include it in a list of possible causes for sixth-century disjuncture, framed as rhetorical questions.

[86] Campbell 2007, 132; see also Campbell and Bowles 2009, 312–13. Kelly 2010, 42 focuses on "devastation at the source of production."

drop-off between early and late sixth-century forms.[87] From the early 540s on, however, the written evidence points to plague as a major recurring agent in Iberian history.[88]

Our surviving written sources are explicit that a primary route of transmission included ships. Procopius writes that the disease started "from the coast," John of Ephesus links its arrival to the apparition of strange ships, and (for a later outbreak) Gregory of Tours blames the arrival of plague in Marseilles in 588 CE on "a merchant ship from Spain with its accustomed cargo."[89] Seaborne transmission is also implied by the path the disease took. Palaeogenetic studies of plague victims show that the disease struck both Spain (Valencia, though not the first wave) and Britain (Edix Hill); the British plague genome is quite early, plausibly following the very routes that brought eastern goods to the Atlantic façade of Iberia and beyond.[90] The archaeological evidence, as well as literary sources, have suggested that eastern finewares arrived in Iberia through direct shipping by skilled traders in eastern ships.[91] The plague, traveling by sea, may therefore have taken a special toll on those routes: indeed, as early as 544 CE Justinian issued a law lamenting the higher wages demanded by now-scarce sailors.[92]

We should be careful not to assign too much causative force to the reified entity now known as "the Plague of Justinian," and we should be wary of the fallacy known as the "suck-in and smear."[93] However, the data assembled here show an unambiguous decline in trans-Mediterranean fineware imports in the mid-sixth century that affected, to different degrees, both eastern and African goods. The plague, described in our written sources as universal, is a plausible candidate to explain this trend. The plague can also explain the divergent east-west trends. The mid-sixth-century pause in production of LRC seems a plausible outcome of the first waves, and the recovery of the Phocaean fineware industry by the late sixth century seems plausible, given the dynamics of pandemics: life goes on, eventually. That the recovered industry in Phocaea no longer sent any pots westwards, however, suggests that whatever rupture occurred around 540 was durable.

[87] Fernández Fernández 2014, 452. Wickham 2005, 548–49, explicitly rejects plague as a cause of "economic" decline.

[88] Kulikowski 2007.

[89] Proc. *BP* 2.22.9 (*Teubner*): ἐκ τῆς παραλίας. John of Ephesus, "Fragment on the Plague," (translation in Witakowski 1996, 77). Greg. Tur. *Libri hist. X*, 9.21 (MGH SS rer. Merov. 1:441–42): *navis ab Hispania una cum negutio solito*. See McCormick 1998 for arguments about seaborne transmission and the *annona*.

[90] Keller et al. 2019.

[91] For the archaeological evidence, see the arguments in Reynolds 1995, 2010, and 2015. For the texts on eastern ships, see analysis in McCormick 2002, 113–14.

[92] Just. *Nov.* 122 (23 March 544). Cited in McCormick 2002, 109.

[93] Sessa 2019, 236–37.

Conclusion

This article began by noting the recent focus on late Roman sigillata imported into the Iberian Peninsula from the eastern Mediterranean and argued that the time has come for preliminary quantification. Quantification to determine the volume of imports was supplemented by a geographic analysis by phases, showing changing network participation. The import-volume data and the presence and non-presence data represent two different ways of quantifying eastern imports. However, each provides information broadly consonant with the other. The data show an average of 15.1 imported pots per year in around 525 CE and 1.2 per year around 550; they show 157 sites receiving ceramics around 450–550 and just sixteen in the period after 550. Both analyses therefore suggest a major break in the ceramic sequence around 550. It is methodologically important that both approaches yield decreases of approximately 90%, suggesting that volume and geographical spread were tightly linked, except, perhaps, at Vigo, where there is evidence for a slight recovery (from 0.6 pots per year in 550 to 1.3 from 575 to 600). Moreover, while the initial decline around 550 is chronologically linked to a decline in production in the east, imports never recovered even as eastern production resumed and reached high levels by 600. After 550, average imports to Iberia only ever reach 1.6 pots per year, 10% of their high around 525 CE.

While the precise reasons that fineware imports collapsed approximately 90% in the mid-sixth century are only partially understood, several plausible candidates have emerged: war, shifting fiscal structures, and changing tastes. I have sought to raise the possibility of a fourth: pandemic disease. Whatever the cause of the drop, however, this is a significant and quantifiable metric for some form of crisis in the middle of the sixth century, with dramatic and longstanding impact on at least one type of Mediterranean trade. Given that this trade was in a class of goods long thought to signify a certain type of Romanness, its cessation is important and requires further careful study and consideration, especially as we ponder the end of the classical world.

University of North Carolina, Chapel Hill
hgruber@unc.edu

References

Alonso de la Sierra Fernández, J. 1994. "Cerámicas foceas de barniz rojo (Late Roman C) en el valle del Guadalquivir y el Estrecho de Gibraltar." In *III Reunió d'Arqueologia Cristiana Hispanica, Mao (1988)*, 391–95. Barcelona: Institut d'Estudis Catalans.

Augenti, A., E. Cirelli, M. C. Nannetti, T. Sabetta, E. Savini, and E. Zantedeschi. "Nuovi dati archeologici dallo scavo di Classe." In *La circolazione delle*

ceramiche nell'Adriatico tra Tarda Antichità e Altomedioevo. Documenti di archeologia 43, edited by S. Gelichi and C. Negrelli, 257–95. SAP, Mantova.

Bes, P. 2015. *Once upon a Time in the East: The Chronological and Geographical Distribution of Terra Sigillata and Red Slip Ware in the Roman East*. Roman and Late Antique Mediterranean Pottery 6. Oxford: Archaeopress.

Bes, P., and J. Poblome. 2007. "(Not) See the Wood for the Trees? 19,000+ Sherds of Tablewares and What We Can Do With Them." *Rei Cretariae Romanae Acta* 40: 1–10.

———. 2009. "African Red Slip Ware on the Move: The Effect of Bonifay's *Études* for the Roman East." In *Studies on Roman Pottery of the Provinces of Africa Proconsularis and Byzacena (Tunisia): Hommage à Michel Bonifay*, edited by J. H. Humphrey, 73–91. Journal of Roman Archaeology Supplement 76. Portsmouth, RI: Journal of Roman Archaeology.

Biraben, J.-N., and J. Le Goff. 1969. "La peste dans le haut Moyen Âge." *Annales* 24.6: 1484–510.

Bonifay, M. 2004. *Études sur la ceramique romaine tardive d'Afrique*. Oxford: British Archaeological Reports.

———. 2012. "Les céramiques sigillées Africaines et Phocéennes tardives." In *Un quartier de Bordeaux du I^er^ au VIII^e^ siècle: les fouilles de la Place Camille-Jullian 1989–1990*, edited by L. Maurin, 251–58. Bordeaux: Ausonius.

———. 2018. "The Distribution of African Pottery under the Roman Empire: Evidence versus Interpretation." In *Trade, Commerce, and the State in the Roman World,* edited by A. Wilson and A. Bowman, 327–51. Oxford: Oxford University Press.

Bourgeois, A., and F. Mayet. 1991. *Belo VI: Les sigillées*. Madrid: Casa de Velázquez.

Bustamante Álvarez, M. 2015. "Nuevos datos sobre el comercio de Augusta Emerita con Oriente: el caso de las Late Roman C." *Mérida: excavaciones arqueológicas* 11: 535–50.

Campbell, E. 2007. *Continental and Mediterranean Imports to Atlantic Britain and Ireland*. York: Council for British Archaeology.

Campbell, E., and C. Bowles. 2012. "Byzantine Trade to the Edge of the World: Mediterranean Pottery Imports to Atlantic Britain in the 6th Century." In *Byzantine Trade, 4th–12th Centuries: The Archaeology of Local, Regional, and International Exchange*, edited by M. M. Mango, 297–313. Farnham: Ashgate.

Carandini, A., and S. Tortorella, eds. 1981. *Atlante delle forme ceramiche*. Vol. 1, *Ceramica fine romana nel bacino mediterraneo (medio e tardo impero)*. Rome: Instituto Enciclopedia Italiana.

Cardelle de Hartmann, C., and R. Collins, eds. 2001. *Victoris Tunnunensis Chronicon: cum reliquis ex consularibus Caesaraugustanis et Iohannis Biclarensis Chronicon*. Turnhout: Brepols.

Carr, K. E. 2002. *Vandals to Visigoths*. Ann Arbor: University of Michigan Press.

Cau, M. A., P. Reynolds, and M. Bonifay, eds. 2012. *Late Roman Finewares 1: Solving Problems of Typology and Chronology*. Roman and Late Antique Mediterranean Pottery 1. Oxford: Archaeopress.

Delgado, M. 1984. "Contribuição para o estudo das ceramicas romanas tardias do Medio Oriente encontradas em Portugal." *Cadernos de Arqueologia* 2.5: 35–49.

[172.71.254.72] Project MUSE (2025-04-05 00:05 GMT)

Delgado, M., F. Mayet, and A. Moutinho de Alarcão. 1975. *Fouilles de Conimbriga*. Vol. 4. Paris: de Boccard.

De Sepúlveda, E., C. Bolila, and R. Santos. 2014–2015. "LRC (PRSW) e LRD (CRSW) provenientes da escavação de emergência efetuada na villa romana do Alto do Cidreira (Cascais)." *O Arqueólogo Português*, Série 5.4–5: 357–93.

De Sousa, E. 2001. "Contributos para o estudo da cerâmica foceense tardia ("Late Roman C ware") no municipium olisiponense: sua representatividade no contexto peninsular." *Conimbriga* 40: 199–224.

Dragendorff, H. 1895. *Terra Sigillata*. Bonner Jahrbücher 96–97: 18–155.

Duggan, M. 2016. "Ceramic Imports to Britain and the Atlantic Seaboard in the Fifth Century and Beyond." *Internet Archaeology* 41. https://intarch.ac.uk/journal/issue41/3/toc.html

———. 2018. *Links to Late Antiquity: Ceramic Exchange and Contacts on the Atlantic Seaboard in the 5th to 7th centuries* AD. Oxford: British Archaeological Reports.

———. 2020. "Correcting and Connecting Gaps on the Atlantic Seaboard: The Ceramic Evidence for Contact and Exchange between 4th and 8th Centuries AD." *Herom Rivista* 9.9: 421–45.

Dunnell, R. C. 1992. "The Notion Site." In *Space, Time, and Archaeological Landscapes*, edited by J. Rossignol and L. Wandsnider, 21–41. New York: Plenum Press.

Effros, B. 2017. "The Enduring Attraction of the Pirenne Thesis." *Speculum* 92.1: 184–208.

Empereur, J. Y., and M. Picon. 1986. "A propos d'un nouvel atelier de Late Roman C." *Figlina* 7: 143–46.

Fentress, E., and P. Perkins. 1988. "Counting African Red Slip Ware." In *L'Africa romana: atti del V Convegno di studio, Sassari, 11–13 dicembre 1987*, edited by A. Mastino, 205–14. Sassari: Dipartimento di Storia, Università degli Studi di Sassari.

Fentress, E., S. Fontana, R. B. Hitchner, and P. Perkins. 2004. "Accounting for ARS." In *Side-by-Side Survey: Comparative Regional Studies in the Mediterranean World*, edited by S. E. Alcock and J. F. Cherry, 147–62. Oxford: Oxbow.

Fernandes, E. 2012. "Cerâmicas finas norte-africanas e mediterrânicas orientais no Baixo Guadiana (séculos V a VII)." MA thesis, Universidade Nova de Lisboa.

———. 2018. "Fifth- and Sixth-Century African Red Slip and Late Roman C Wares from Ossonoba (Faro), Algarve, Portugal: The Assemblage from Horta da Misericórdia." *Journal of Roman Pottery Studies* 17: 92–109.

Fernandes, E., M. Almeida, and A. Gradim. 2013. "Le commerce méditerranéen sur les sites ruraux de la Lusitanie méridionale dans l'Antiquité tardive: le cas d'Alcoutim (Algarve, Portugal)." *Res Antiquae* 10: 173–221.

Fernández Fernández, A. 2014. *El comercio tardoantiguo (ss. IV–VII) en el Noroeste peninsular a través del registro cerámico de la ría de Vigo*. Oxford: Archaeopress.

———. 2015. "Algunas consideraciones sobre el comercio cerámico en el mare Cantabricum durante la antigüedad tardía." In *Ex officina hispana*. Cuadernos de la

SECAH 2, Vol. 1, edited by A. Martínez Salcedo, M. Esteban Delgado, and E. Alcorta Irastorza, 59–76. Madrid: La Ergastula.

———. 2019. "Producciones tardías orientales de vajilla fina: Late Roman C y Late Roman D." In *Manual de cerámica romana IV*, edited by C. Fernández Ochoa, A. Morillo Cerdán, and M. Zarzalejos Prieto, 229–84. Alcalá de Henares: Museo Arqueológico Regional.

Fernández Fernández, A., R. Bartolomé Abraira, A. Folgueira Castro, and E. Alcorta Irastorza. 2019. "Horizontes cerámicos tardoantiguos en Punta Atalaia (Cervo-Lugo): una revisión del comercio cantábrico entre los siglos IV y VI." *Anejos de Nailos* 5: 551–602.

Fernández Ochoa, C., A. Uscatescu, and P. García Díaz. 1992. "Gijón en el período tardoantiguo: las ceramicas importadas de las excavaciones de Cimadevilla." *Archivo Español de Arqueología* 65: 105–49.

Fulford, M. G. 1984. *The Red-Slipped Wares*. In *Excavations at Carthage: The British Mission*. Vol. 1, part 2 edited by M. G. Fulford and D. P. S. Peacock. Sheffield: University of Sheffield.

———. 1989. "Byzantium and Britain: A Mediterranean Perspective on Post-Roman Mediterranean Imports in Western Britain and Ireland." *Medieval Archaeology* 33: 1–6.

Gandolfi, D. 1998. "Ceramiche fini di importazione di VI–VII secolo in Liguria: l'esempio di Ventimiglia, Albenga e Luni." In *Ceramica in Italia, VI–VII secolo: atti del Convegno in onore di John W. Hayes (Roma 1995)*, edited by L. Saguì, 253–74. Florence: Edizioni All'Insegna del Giglio.

García Vargas, E. 2011. "Oriental Trade in the Iberian Peninsula during Late Antiquity." In *New Perspectives on Late Antiquity*, edited by D. Hernández de la Fuente, 76–117. Cambridge: Cambridge Scholars Publishing.

García Vargas, E., and J. Vázquez Paz. 2006. "Sevilla y el comercio transmarino en el Bajo Imperio y en la Antigüedad Tardía: el testimonio de la arqueología." In *La catedral en la ciudad II: desde San Isidoro a 'Abd al Rahman III*, edited by A. Jiménez, 44–99. Seville: Catedral de Sevilla.

———. 2013. "Rural Population of Farmlands South of the Guadalquivir Valley in Late Antiquity (Fourth–Sixth century AD)." In *The Theodosian Age (A.D. 379–455): Power, Place, Belief, and Learning at the End of the Western Empire*. British Archaeological Reports International Series 2493, edited by R. García-Gasco, S. González Sánchez, and D. Hernández de la Fuente, 99–122. Oxford: Archaeopress.

Gómara Miramón, M., B. Serrano Arnáez, A. Santos Horneros, and O. Bonilla Santander. 2016. "Resultados del seguimiento en la ladera norte del Cerro del Romero (Cascante, Navarra)." *Trabajos de Arqueología Navarra* 28: 51–70.

Gonçalves Guimarães, J. A. 1995. *Gaia e Vila Nova na Idade Média: arqueologia de uma área ribeirinha*. Porto: Universidade Portucalense.

González López, M. A. 2007. "Vajillas de importación no africanas en el noroeste peninsular (s. V–VII): distribución y tipocronología." *Archivo Español de Arqueología* 80: 207–38.

Greene, K. 2005. "Roman Pottery: Models, Proxies, and Economic Interpretation." *Journal of Roman Archaeology* 18.1: 34–56.

Gruber, H. 2018. "Indirect Evidence for the Social Impact of the Justinianic Pandemic: Episcopal Burial and Conciliar Legislation in Visigothic Hispania." *Journal of Late Antiquity* 11: 193–215.

Gutiérrez González, J. A., and F. Miguel Hernández. 2018. "La cerámica de temprana Edad Media en León y su territorio: un indicador económico y social." In *Cerámicas Altomedievales en Hispania y su entorno (siglos V–VIII d.C.)*, edited by I. Martín Viso, P. Fuentes Melgar, J. C. Sastre Blanco, and R. Catalán Ramos, 41–64. Valladolid: Glyphos.

Gutiérrez Lloret, S. 1998. "Il confronto con la Hispania orientale: la ceramica nei secoli VI–VII." In *Ceramica in Italia, VI–VII secolo: atti del Convegno in onore di John W. Hayes (Roma 1995)*, edited by L. Saguì, 549–67. Florence: Edizioni All'Insegna del Giglio.

Harper, K. 2017. *The Fate of Rome*. Princeton, NJ: Princeton University Press.

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

———. 1980. *A Supplement to Late Roman Pottery*. London: British School at Rome.

Járrega Domínguez, R. 1991. *Cerámicas finas tardorromanas y del Mediterráneo oriental en España*. Madrid: Consejo Superior de Investigaciones Científicas.

———. 2013 "Las últimas importaciones romanas de cerámica en el este de Hispania Tarraconensis: una aproximación." *Spal* 22: 143–72.

Keay, S. 1998. "African Amphorae." In *Ceramica in Italia, VI–VII secolo: atti del Convegno in onore di John W. Hayes (Roma 1995)*, edited by L. Saguì, 141–55. Florence: Edizioni All'Insegna del Giglio.

Keller, M., et al. 2019. "Ancient *Yersinia pestis* Genomes from across Western Europe Reveal Early Diversification during the First Pandemic (541–750)." *Proceedings of the National Academy of Sciences* 116: 12363–72.

Kelly, A. 2010. "The Discovery of Phocaean Red Slip Ware (PRSW) Form 3 and Bii Ware (LR1 Amphorae) on Sites in Ireland: An Analysis within a Broader Framework." *Proceedings of the Royal Irish Academy* 110C: 35–88.

Kulikowski, M. 2007. "Plague in Spanish Late Antiquity." In *Plague and the End of Antiquity*, edited by L. K. Little, 150–70. Cambridge: Cambridge University Press.

Ladstätter, S., and R. Sauer. 2005. "Late Roman C-Ware und lokale spätantike Feinware aus Ephesos." In *Spätantike und mittelalterliche Keramik aus Ephesos*, edited by F. Krinzinger, 143–201. Vienna: Österreichischen Akademie der Wissenschaften.

Lagostena Barrios, Lázaro G., J. Torres Quirós, and O. Lapeña Marchena. 1996. "Aproximación a la ocupación tardorromana en la desembocadura del río Guadalete (Puerto de Santa María. Cádiz)." *Anales de la Universidad de Cádiz* 11: 95–122.

Lewitt, T. 2011. "Dynamics of Fineware Production and Trade in the 1st to 7th Centuries AD: The Puzzle of Supra-regional Exporters." *Journal of Roman Archaeology* 24: 313–32.

Little, L., ed. 2007. *Plague and the End of Antiquity.* Cambridge: Cambridge University Press.

Lopes, M. da C. 1989. "Sigilata de Montans no Monte da Cegonha: (Vidigueira)." *Conimbriga* 28: 223–28.

López Pérez, C. 2004. "El comercio de Terra Sigillata en la provincia de A Coruña." *Brigantium* 16: 5–541.

Loseby, S. 2005. "The Mediterranean Economy." In *The New Cambridge Medieval History.* Vol. 1, *c. 500–c. 700*, edited by P. Fouracre, 605–38. Cambridge: Cambridge University Press.

Lund, J. 2009. "Methodological Constraints Affecting the Precise Dating of African Red Slip Ware." In *Studies on Roman Pottery of the Provinces of Africa Proconsularis and Byzacena (Tunisia): Homage à Michael Bonifay.* Journal of Roman Archaeology Supplement 76, edited by J. H. Humphrey, 65–72. Portsmouth, RI: Journal of Roman Archaeology.

Madrid Balanza, M. J., A. J. Murcia Muñoz, and F. Santaella Pascual. 2000. "Cerámicas importadas de los siglos VI–VII en las termas romanas de la Calle Honda, Cartagena." In *V Reunión de Arqueología Cristiana Hispánica: Cartagena, 16–19 de abril 1998*, edited by J. M. Gurt, 351–62. Barcelona: Institut d'Estudis Catalans.

Martin, A. 1998. "La sigillata focese (Phocaean Red-Slip / Late Roman C Ware)." In *Ceramica in Italia, VI–VII secolo: atti del Convegno in onore di John W. Hayes (Roma 1995)*, edited by L. Saguì, 109–22. Florence: Edizioni All'Insegna del Giglio.

McCormick, M. 1998. "Bateaux de vie, bateaux de mort: maladie, commerce, transports annonaires et le passage économique du Bas-Empire au moyen âge." In *Morfologie sociali e culturali in Europa fra tarda antichità e alto medioevo: 3–9 aprile 1997.* Settimane di Studio del Centro Italiano di Studi sull'Alto Medioevo 45. Vol. 1, 35–122. Spoleto: Spoleto Presso la Sede del Centro.

———. 2002. *Origins of the European Economy.* Cambridge: Cambridge University Press.

———. 2013. "Comparing and Connecting: Comacchio and the Early Medieval Trading Towns." In *From One Sea to Another: Trading Places in the European and Mediterranean Early Middle Ages,* edited by S. Gelichi and R. Hodges, 477–502. Turnhout: Brepols.

———. 2015. "Tracking Mass Death During the Fall of Rome's Empire (I)." *Journal of Roman Archaeology* 28: 325–57.

Melero García, F. 2006. "I. A. U. en calle San Telmo, No. 14, Málaga (casco histórico)." *Anuario Arqueológico de Andalucia 2003, III: Actividades de Urgencia.* Vol. 2, 46–54. Seville: Junta de Andalucia.

Méndez Ortiz, R. 1983. "Cerámica tipo Late Roman 'C' en Cartagena." *Pyrenae* 19–20: 147–56.

Morais, R. 2010. "Estudio preliminar de la terra sigillata hispánica tardía de Bracara Augusta." *Rei Cretariae Romanae Fautorum Acta* 41: 437–61.

Mordechai, L., M. Eisenberg, T. P. Newfield, A. Izdebski, J. E. Kay, and H. Poinar. 2019. "The Justinianic Plague: An Inconsequential Pandemic?" *Proceedings of the National Academy of Sciences* 116.51: 1–9.

Navarro Luengo, I., et al. 1999a. "Informe de la 1a fase de la excavación arqueológica de urgencia en Calle Molina Larios, 12 (Málaga)." In *Anuario Arqueológico de Andalucia 1995*, *III: Actividades de Urgencia,* 355–61. Seville: Junta de Andalucia.

———. 1999b. "Informe preliminar de la excavación arqueológica de urgencia en Calle Strachan, 12 (Málaga)." In *Anuario Arqueológico de Andalucia 1995*, *III: Actividades de Urgencia*, 350–54. Seville: Junta de Andalucia.

Nieto, F. J. 1984. "Algunos datos sobre importaciones de cerámica 'Phoecean Red Slip' en la Península Ibérica." In *Papers in Iberian Archaeology*. British Archaeological Reports International Series 193. Vol. 2, edited by T. Balgg, R. Jones, and S. Keay, 540–51. Oxford: British Archaeological Reports.

Orfila Pons, M. 1993. "Terra Sigillata Hispánica Tardía Meridional." *Archivo Español de Arqueología* 66.167–168: 125–47.

Panella, C. 1993. "Merci e scambi nel Mediterraneo tardoantico." In *Storia di Roma*. Vol. 3.2, edited by A. Carandini, L. Cracco Ruggini, and A. Giardina, 613–97. Turin: G. Einaudi.

Paz, J. A. 2001. "La antigüedad tardía." *Caesaraugusta* 75.2: 539–92.

Paz Peralta, J. A. 1991. *Cerámica de mesa romana de los siglos III al VI dC. en la provincia de Zaragoza*. Zaragoza: Institución Fernando el Católico.

Peña, J. T. 2007. *Roman Pottery in the Archaeological Record*. Cambridge: Cambridge University Press.

Pirenne, H. 1939. *Mohammed and Charlemagne*. New York, NY: Norton.

Pirson, F. . 2021. "Pergamon: Die Arbeiten in der Kampagne 2020." *Archäologischer Anzeiger* 2021.2: 231–323.

Ponsich, M. 1979-1991. *Implantation rurale antique sur les Bas Guadalquivir.* 4 vols. Madrid: Laboratoire d'archéologie de la Casa de Velázquez.

Quaresma, J. C. 2017a. "A villa de Frielas na Antiguedade Tardía: evolução estratigráfica entre c. 410 e 525–550 d.C." *Mediaeval Sophia* 19: 431–54.

———. 2017b. "Quinta da Bolacha (Amadora, Lisbonne): la céramique de la villa (dernier tiers du iii^{e} siècle au premier quart du v^{ie} siècle)." In *Late Roman Coarse Wares, Cooking Wares, and Amphorae in the Mediterranean 5*. Vol. 1, edited by D. Dixneuf, 43–92. Alexandria, Egypt: Centre d'Études Alexandrines.

———. 2019. "Some Hypothetical Evolutionary Lines Relating to the Phocean Red Slip Ware Types 3F/G, 3G and 3/10." *Pyrenae* 50.1: 133–50.

———. 2020. "Late Contexts from Olisipo (Lisbon, Portugal)." In *Ceramics and Atlantic Connections: Late Roman and Early Medieval Imported Pottery on the Atlantic Seaboard*. Roman and Late Antique Mediterranean Pottery 15, edited by M. Duggan, S. Turner, and M. Jackson, 108–34. Oxford: Archaeopress.

Quaresma, J. C., and R. Banha da Silva. 2019. "An Overview on Oriental Commerce in the Tagus Estuary Region: 5th and 6th century AD Late Phocaean (LRC) and Cypriot (LRD) Tableware." *Res Antiquitatis* 1: 82–103.

Quaresma, J. C., and R. Morais. 2012. "Eastern Late Roman Fine Ware Imports in Bracara Augusta (Braga, Portugal)." *Rei Cretariae Romanae Acta* 42: 373–84.

Remolà Vallverdú, J.A. 2000. *Las ánforas tardo-antiguas en Tarraco*. Hispania Tarraconensis. Instrumenta 7. Barcelona: Universitat de Barcelona.

[172.71.254.72] Project MUSE (2025-04-05 00:05 GMT)

Reynolds, P. 1987. *El yacimiento tardorromano de Lucentum (Benalua-Alicante): las ceramicas finas*. Alicante: Diputación Provincial de Alicante.

———. 1995. *Trade in the Western Mediterranean, A. D. 400–700*. British Archaeological Reports International Series 604. Oxford: British Archaeological Reports.

———. 2004a. "Appendix 1: Catalogue of Roman Ceramics and Selected Medieval Pottery from Butrint 1994–99." In *Byzantine Butrint: Excavations and Surveys 1994–99*, edited by R. Hodges, W. Bowden, and K. Lako, 327–83. Oxford: Oxbow.

———. 2004b. "The Roman Pottery from the Triconch Palace." in *Byzantine Butrint: Excavations and Surveys 1994–99*, edited by R. Hodges, W. Bowden, and K. Lako, 224–69. Oxford: Oxbow.

———. 2010. *Hispania and the Roman Mediterranean*. London: Duckworth.

———. 2012a. "Fine Wares from Beirut Contexts, *c.* 450 to the early 7th Century." In *Late Roman Fine Wares 1*, edited by M. A. Cau, P. Reynolds, and M. Bonifay, 207–30. Oxford: Archaeopress.

———. 2012b. "A Note on the Development of Cypriot Late Roman D forms 2 and 9." In *Late Roman Fine Wares 1*, edited by M. A. Cau, P. Reynolds, and M. Bonifay, 57–66. Oxford: Archaeopress.

———. 2012c. "A 7th-Century Pottery Deposit from Byzantine *Carthago Spartaria*." In *Late Roman Fine Wares 1*, edited by M. A. Cau, P. Reynolds, and M. Bonifay, 99–127. Oxford: Archaeopress.

———. 2015. "Material Culture and the Economy in the Age of Saint Isidore of Seville: The 6th and 7th Centuries." *Antiquité Tardive* 23: 163–210.

———. 2017. "Butrint in the Late 6th to 7th Centuries: Contexts, Sequences, and Ceramics." In *Encounters, Excavations, and Argosies: Essays for Richard Hodges*, edited by J. Mitchell, J. Moreland, and B. Leal, 262–74. Oxford: Archaeopress.

———. 2020. *Butrint 6: Excavations on the Vrina Plain*. Vol. 3, *The Roman and Late Antique Pottery from the Vrina Plain Excavations*. Oxford: Oxbow.

Reynolds, P., M. Bonifay, and M. A. Cau. 2012. "Key Contexts for the Dating of Late Roman Mediterranean Fine Wares." In *Late Roman Fine Wares 1*, edited by M. A. Cau, P. Reynolds, and M. Bonifay, 15–32. Oxford: Archaeopress.

Ribera i Lacomba, A, and M. Rosselló Mesquida. 2007. "Contextos cerámicos siglo V de Valencia y Cullera." In *Late Roman Coarse Wares, Cooking Wares, and Amphorae in the Mediterranean 2*. Vol. 1, edited by M. Bonifay and J. C. Tréglia, 189–98. Oxford: Archaeopress.

Rodríguez-Aragon, F. P. 2019. "La terra sigillata hispánica tardía: una propuesta de sistematización." In *Manual de cerámica romana IV*, edited by C. Fernández Ochoa, A. Morillo Cerdán, and M. Zarzalejos Prieto, 135–88. Alcalá de Henares: Museo Arqueológico Regional.

Rosselló Mesquida, M., A. V. Ribera i Lacomba, and E. Ruiz Val. 2010. "Cerámicas de los niveles de ocupación del circo romano de Valencia en la época tardoantigua (siglos VI y VII)." In *Late Roman Coarse Wares, Cooking Wares, and Amphorae in the Mediterranean 3*. British Archaeological Reports International Series 2185. Vol. 1, edited by N. Poulou-Papadimitriou, E. Nodarou, and V. Kilikoglou, 173–82. Oxford: Archaeopress.

Saguì, L., ed. 1998. *Ceramica in Italia, VI–VII secolo: atti del Convegno in onore di John W. Hayes (Roma 1995)*. Florence: Edizioni All'Insegna del Giglio.

Sánchez Pardo, J. C. 2013. "Power and Rural Landscapes in Early Medieval Galicia (400–900 AD): Towards a Re-incorporation of the Archaeology into the Historical Narrative." *Early Medieval Europe* 21.2: 140–68.

Sanders, G. D. R. 2020. "Spring Forward: Two Examples of How Shifting Chronologies Can Postpone the Dark Ages." *Herom Rivista* 9: 351–79.

Sanfeliu, D. 2000. "Cerámicas orientales de importación en el contexto de la antigüedad tardía en Segobriga." *AnMurcia* 16: 225–32.

Sarris, P. 2022. "New Approaches to the 'Plague of Justinian." *Past and Present* 254.1: 315–46.

Serrano Ramos, E. 1997–1998. "Hallazgos de terra sigillata focense tardía en territorio malacitano." *Mainake* 19–20: 171–83.

———. 2001. "La vajilla de mesa en el territorio malacitano a partir de la extinción de la T.S.H." *Baetica* 23: 377–423.

Sessa, K. 2019. "The New Environmental Fall of Rome: A Methodological Consideration." *Journal of Late Antiquity* 12.1: 211–55.

Silva, A. M. S. P., P. Pereira, and T. P. Carvalho. 2015. "Conjuntos cerâmicos do castelo de Crestuma (Vila Nova de Gaia, N. Portugal)." In *Actas do X Congresso Internacional a Cerâmica Medieval no Mediterrâneo*, edited by M. J. Gonçalves and S. Gómez-Martinez, 401–19. Cámara Municipal de Silves and Capo Arqueológico de Mértola.

Stathakopoulos, D. 2004. *Famine and Pestilence in the Late Roman and Early Byzantine Empire: A Systematic Survey of Subsistence Crises and Epidemics*. Birmingham Byzantine and Ottoman Monographs 9. Aldershot: Routledge.

Van Oyen, A. 2016. *How Things Make History: The Roman Empire and Its Terra Sigillata Pottery*. Amsterdam: Amsterdam University Press.

Vázquez de la Cueva, A. 1985. *Sigillata Africana en Augusta Emerita*. Mérida: Museo Nacional de Arte Romano.

Viegas, C. 2007. "Les céramiques tardives dans les sites du sud-ouest de la Péninsule Ibérique (Algarve—Portugal)." In *Late Roman Coarse Wares, Cooking Wares, and Amphorae in the Mediterranean 2*. Vol. 1, edited by M. Bonifay and J. C. Tréglia, 71–84. Oxford: Archaeopress.

Volpe, G., L. Casavola, F. D'Aiola, and L. Pietropaolo. 1998. "Le ceramiche tardoantiche della villa di Agnuli (Mattinata, FG)." In *Ceramica in Italia, VI–VII secolo: atti del Convegno in onore di John W. Hayes (Roma 1995)*, edited by L. Saguì, 723–34. Florence: Edizioni All'Insegna del Giglio.

Ward-Perkins, B. 2005. *The Fall of Rome and The End of Civilization*. Oxford: Oxford University Press.

Wickham, C. 2000. "Italy at the End of the Mediterranean World." *Journal of Roman Archaeology* 13: 818–24.

———. 2005. *Framing the Early Middle Ages*. Oxford: Oxford University Press.

Witakowski, W., trans. 1996. *Pseudo-Dionysius of Tel-Mahre, Chronicle (Known also as the Chronicle of Zuqnin), Part 3*. Translated Texts for Historians 22. Liverpool: Liverpool University Press.

Wood, J. 2010. "Defending Byzantine Spain: Frontiers and Diplomacy." *Early Medieval Europe* 18: 292–319.

———. 2023. "The View from the Edge: Gallaecia and the Byzantine Mediterranean in the Sixth and Seventh Centuries." In *A Plural Peninsula: Studies in Honour of Professor Simon Barton*, edited by A. Liuzzo Scorpo, 215–38. Leiden: Brill.

Wooding, J. M. 1996. *Communication and Commerce along the Western Sealanes AD 400–800*. British Archaeological Reports International Series 654. Oxford: Tempus Reparatum.