

LRCW 4

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

Archaeology and archaeometry

The Mediterranean: a market without frontiers

Edited by

Natalia Poulou-Papadimitriou,
Eleni Nodarou and Vassilis Kilikoglou



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PATTERNING LATE ROMAN CERAMIC EXCHANGE IN SOUTHERN TUSCANY (ITALY): THE COASTAL AND INLAND EVIDENCE, I.E. CENTRALITY VS. MARGINALITY

EMANUELE VACCARO

McDonald Institute for Archaeological Research (University of Cambridge)

ev259@cam.ac.uk

A large sample area of southern Tuscany, including both coastal and inland territories, has been investigated since 2000 by integrating systematic field-walking surveys with excavations at key sites. Over ten years of research have produced a large quantity of data concerning patterns of production, trade and consumption of late Roman pottery. Consistency of data collection and quantification now allows for a comprehensive comparative study of the late Roman pottery circulating in the well-connected coastal areas and more marginal inland territories. This paper seeks to offer a broad picture of late Roman economies in the micro-region by integrating quantified ceramic assemblages from different site types (towns, sea-ports and rural settlements), with data extracted from ploughsoil assemblages. Traditionally, the late Roman period in southern Tuscany has been depicted as a time of progressive economic decline, mainly on the basis of decrease of settlement density as emerged from field surveys. This contribution represents an attempt to re-address the interpretation of late Roman economy in the study-area through a comparative use of pottery.

KEYWORDS: SOUTHERN TUSCANY, FIELD SURVEY, EXCAVATION, OVERSEAS AND REGIONAL CONNECTIONS, REDISTRIBUTION PROCESSES, REGIONAL AMPHORAE, REGIONAL TABLEWARE AND COARSEWARE

Introduction¹

This paper compares trade patterns for late Roman pottery in coastal and inland areas of southern Tuscany (central Italy) to readdress the general interpretation of economies and settlement in this sub-region, often viewed in the light of models of decline of economic complexity and sophistication given the demographic regression emerging from field survey projects (Francovich and Hodges 2003, 31-43; Valenti 2009). To do so this paper will use and combine the large datasets provided by regional field-walking surveys and focused excavations (Fig. 1).

Since the late 1980s the University of Siena has undertaken extensive and systematic field surveys in the province of Grosseto, concentrating on four major river valleys (Alma, Bruna, Ombrone and Osa) covering an area of 846km². Field research in this territory has not been constant over time and we can identify two main phases: one in the late 1980s and a more recent one begun in the early 2000s. Initially, field work centred on the countryside between the Etruscan to medieval town of Roselle and that of Grosseto, whose urban status was recognized in AD 1138 after a long period of proto-urban development in the early medieval period (Citter and Arnoldus 2007, 134-152). During that pioneering phase of research some 16Km² were systematically surveyed yielding a significant dataset of surface sites supporting a preliminary analysis of settlement patterns between the Etruscan and medieval periods. A second phase of more extensive and intensive field surveys was undertaken in

the early 2000s as part of the larger project *Carta Archeologica della Provincia di Grosseto* whose aim was to cover the entire province over a few decades. Between 2000 and 2006 a further c.52km² were systematically surveyed in the coastal area between the Alma and Osa valleys using large transects. If we add up the areas field-walked during earlier archaeological surveys and those surveyed more recently a total of c. 68km² was covered within the broader context between the Alma and Osa valleys. Considering the new and preceding surveys which centered or touched on the coastal study area, a total of 750 surface archaeological sites, plus 114 off-sites, were discovered, making a substantial contribution to the understanding of settlement patterns in the *longue durée* (Vaccaro 2008, 2011).

As mentioned, research initially centred mainly on coastal areas, although in 2006 the field project was extended towards the interior and specifically to the Cinigiano area, some 30km from the central Tyrrhenian Sea. In an area of about 160km², as many as 54km² were sampled using transects and a total of 16km² were systematically surveyed between 2006 and 2008 yielding 334 surface sites and 137 off-sites (Ghisleni *et al.* 2011).

Alongside field surveys, new site-based pottery studies were carried out to shed light on late Roman and early medieval ceramic trade and consumption patterns at a series of excavated sites, allowing us to better contextualize systems of economic connections, and compare and combine these with surface datasets. Since the relationship between regional and interregional exchange is a key theme in site-based research, this involved the large late Roman ceramic assemblages from two previously excavated areas in the town of Roselle, the late Roman excavated contexts from the cave-site at Scoglietto and from the large settlement at Paduline-

¹ The research providing these results was partly funded by the [European Community's] Seventh Framework Programme [FP7/2007-2013] under grant agreement n° 236093.

Serrata Martini as well as, thanks to a collaboration with the *Soprintendenza per i Beni Archeologici della Toscana*, those from two underwater sites recently discovered during rescue archaeology work in the northern sector of the coastal study area. Data from the underwater assemblages recovered at the sea-port of *Portus Scabris* and the site of Cala del Barbieri, where a new 4th century AD shipwreck was located, mostly composed of a Tunisian cargo, offer remarkable evidence for the cabotage routes which enabled the trade of overseas goods from major sea-ports to small coastal consumption sites (Vaccaro 2011).

Another crucial body of evidence has been produced by the Excavating the Roman Peasant Project, underway in inland southern Tuscany since 2009, specifically in the area largely surveyed between 2006 and 2008. This project, an international collaboration between the Universities of Pennsylvania, Cambridge and Siena, is the first in Italy designed to shed light on the architecture, material culture, lifestyle, social and economic networks of Roman and late Roman peasants through the systematic excavation of a sample of small and medium-sized rural sites recently identified during a field walking survey (Ghisleni *et al.* 2011).

This paper combines the results of field surveys and excavations to shed new light on patterns of ceramic production and trade in this sub-regional territory and hence offer a reconsideration of late Roman economic complexity based on fresh data. The combined use of surface and excavation data is potentially useful although great caution is needed as surface materials cannot be used for quantitative analysis unless they are collected and processed using identical analytical methods. With this in mind, we used pottery from ploughed assemblages to define the distribution of some ceramic classes while we relied mainly on excavated materials to calculate relative proportions.

A necessary clarification concerns the application of the bipolar centrality versus marginality paradigm in this sub-regional area. Anyone familiar with late Roman southern Tuscany is well aware that no area here can be considered economically central in the broader Mediterranean context: southern Tuscany lost its centrality as early as the 1st or early 2nd century AD (Carandini and Cambi 2002, 196-217; Vaccaro 2008). Nevertheless centrality and marginality do apply to the common perception of the relationship between coastal and inland territories in the globalised late Roman world, where proximity to sea-routes contributed significantly to determining how economically well-connected each region was. The chronological framework is the 4th to the 6th century AD, although in a comparative perspective the period AD 300-500 is more promising given the shortage of 6th-century AD data from inland areas.

The coastal area

Mediterranean finewares

In the late Roman period, the demand for imported Mediterranean finewares was almost exclusively met by ARS, both at the urban site of Roselle and in the countryside. So far, no evidence for trade in LRC or other Mediterranean finewares has been found in the sample coastal area, with the exception of the maritime villa site at Santa Francesca, near Talamone, and the fortified hilltop site at Talamonaccio, which both yielded a few forms of *Dérivées-des-Sigillées Paléochrétiennes* (henceforth DSP) fired under reducing conditions with a dark-gray slip (Vaccaro 2011, Plate XIX). Two large fragmentary bowls bear a stamped decoration in the shape of palm branches within concentric circles and may belong to form Rigoir 1, typical of Marseille in the 5th to early 6th century AD (Bonifay *et al.* 1998, 394) and ascribable to Provençal workshops. The presence of DSP only at these two sites may indicate that these materials were redistributed from the port of Cosa, given the significant presence of this class among the non-stratified materials from Brown's excavations on the *Arx* and a minimum number of at least one individual in the construction phase of the 6th-century *castrum* (Fentress *et al.* 1991, 215).

In the coastal study area, apart from these exceptions, the remainder of the Mediterranean finewares consisted of ARS. The study of this ceramic class, based on the use of individual weighted means (Fentress *et al.* 2004), draws on the combined use of surface data from the territory which yielded a total of 179 identifiable ARS vessels and excavated data from the North Hill in Roselle and late Roman *Portus Scabris*² which yielded 190 and 128 identifiable vessels respectively (Fig. 2).

The analysis of ARS distribution during the period AD 300-500 at rural and urban sites reveals more similarities than differences: the trend is generally positive, although with some brief periods of decline perhaps resulting from adverse political conditions. These occur in the 430s and at the end of the 5th century and coincide with the Vandal conquest of Carthage, which suddenly interrupted the flow of fiscal goods from Tunisia to Rome, and with the collapse of the western Empire (on the importance of the fiscal route connecting Carthage and Rome see Wickham 2005, 720-728). Later, the most interesting period, when the distribution curve for ARS in rural areas is out of line with that in the town, is between the 530s and 550s. At Roselle, attestations of ARS increased slightly from the 520s and 530s and remained constant until mid-century. Probably this was thanks to the site's strategic and military role during the Gothic war, giving the state a vested interest in ensuring that supplies remained as constant as possible (Celuzza and Fentress 1994). The picture for rural areas at this time is different. From the 530s we see a sudden drop in ARS which appears to be closely linked to a general contraction in trade due to the

² At *Portus Scabris* the study of ARS focused only on the 5th to 7th-century AD specimens.

widespread devastation caused by the Greek-Gothic war, which had a dramatic impact on economies and settlement in most of the Italian peninsula. From the mid-6th century onwards both town and countryside again present similar trends. The progressive crisis in acquisitions of ARS in both countryside and town is a structural phenomenon. This trend began long before the 590s, when the Lombard conquest of the area merely interrupted links with the Mediterranean world that had already lost stability and continuity, and become merely episodic. After the 580s/590s ARS forms no longer reach rural areas, not even contexts in direct contact with the coast. ARS had become a rare and valuable product and although it continued to circulate along cabotage routes, as we know from the data from *Portus Scabris*, it was no longer redistributed to rural sites.

The evidence from *Portus Scabris* is particularly important as it provides information on the flows of pottery and amphora-borne foodstuffs which continued to use *cabotage* routes between AD 300 and 700. Though the underwater material was recovered by machine, not stratigraphic excavation, it nonetheless sheds light on the kind of economic connections touching on this stretch of the Tyrrhenian Sea and can be compared with the goods redistributed to the interior. *Portus Scabris* was not just a place where overseas products were redistributed to surrounding areas but may also have been used as a temporary mooring place for boats in difficulty whose cargoes were destined for other ports. The removal from the hull of materials broken during the voyage thus led to the presence in the underwater deposit of pots and transport containers not destined for this site or for inland contexts.

The ARS trend at *Portus Scabris* reveals that trade flows recovered in the 530s and 540s, followed by another sudden decline from the 550s onwards. The increase in ARS in the Portigliani harbour, as at Roselle, may be related to the events of the Greek-Gothic war. During military operations, the coastal areas of the *Tuscia* were of enormous strategic importance to the Byzantines. They used the ports which had fallen under their control to send the necessary supplies to troops deployed in central Italy. The Tuscan ports also played a fundamental role in providing foodstuffs to Rome, as we know from an episode in 544 related by Procopius (*De Bello Gothico*, *Lib. III*, X). The trade reaching the harbour at Portigliani was not primarily commercial, as indicated by the significant decrease in volumes of ARS and transport containers reaching nearby areas during the Gothic war. Rather, trade was encouraged by the reorganization of the fiscal system decided by the Byzantine state (Zanini 1996). Essentially, there does not seem to have been a large-scale redistribution of overseas products towards nearby areas. After the mid-6th century, *Portus Scabris* also saw a fairly marked decline in volumes of ARS; however, this decrease was less dramatic than in the area between the Alma and Osa valleys and the town of Roselle itself. This suggests that the harbour retained a role of some importance in maritime trade through the central and northern Tyrrhenian at the end of the 6th century (Vaccaro 2011, 235).

Amphorae

The amphora trend in the coastal area reflects that for ARS. The vast majority of amphorae are Tunisian, whilst other areas are represented to a limited extent with the exception of the Portuguese Almagro 51C, abundant in some 4th- to early 5th-century AD contexts in the town of Roselle, namely those from the North Hill and Room 21 in the *Domus dei Mosaici*. These assemblages come from two different areas, one to the south of the Forum (*Domus dei Mosaici*) and one to the north, which underwent similar functional transformations in the late Roman period. A large metal junk shop was established on the *Domus dei Mosaici*, probably in the late 3rd AD and at the same time some rooms, previously part of a now abandoned bath complex at the foot of the North Hill, were reused for a similar function, although on a smaller scale. Contexts 5147=5170, and to a far more limited extent context 5141, from the area near the North Hill, yielded a total of 24 identifiable amphorae (Vaccaro 2011, 57-59). Except for four individuals which are definitely residuals (two Dressel 14, a Pelichet 46 and a Dressel 7-13), the others are compatible with their presence in phase in a context of the 4th to early 5th century AD (Fig. 3). However, some doubts persist about six Tunisian amphorae of types Africana I/Keay 3B and Africana IIA/Keay 5, with three specimens each (Fig. 4, 5-7). The Africana IIA/Keay 5 variants reveal close affinities with those produced at the El-Assa workshop (Bonifay 2004, 39-41) whose chronology does not seem to go beyond the second half of the 3rd century AD (Bonifay 2004, 111). The specimens of Africana I/Keay 3B are more likely to be in phase as the late variants of this typology were produced up to the second half of the 3rd or 4th century (Bonifay 2004, 107; see also Keay 1984, 106, Fig. 40, no. 3). Overall, given the large proportions with which both types are documented in these assemblages we may also be dealing with the large-scale reuse of these containers in a period following that of their main circulation. The other Tunisian amphorae documented are three specimens of Keay 25, two of which are generically referable to this type and one (Fig. 4, 8) belonging to the variant Africana IIIC, dating to between the late 4th and mid-5th century AD (for the date Bonifay 2004, 122).

Two types of amphorae reflect a peak in the consumption of Portuguese fish sauces: Almagro 51A/B and especially Almagro 51C, with one and five specimens respectively (Fig. 4, 1-2). This is a significant difference in the consumption of imported bulk commodities between the town of Roselle and the coastal countryside, as the Almagro 51C type is occasionally documented only at the large Roman and late Roman site of San Martino de plano. By contrast, this type is fairly common in the 4th- to early 5th- urban assemblages as confirmed by the study of the late Roman assemblages from the *Domus dei Mosaici* currently underway. The analysis of a 4th-century AD assemblage from Room 21 revealed a small amphora record: five out of a total of 52 in-phase vessels. Interestingly four are of the Portuguese Almagro 51C type and one is a Mauretanian Dressel 30/Keay 1 (Fig. 4, 3-4 and 10). Though mostly absorbed by urban

consumption, rather than redistributed to the countryside en masse, the coastal circulation of Portuguese amphorae must have been quite intense as revealed by the so-called “A” shipwreck at Punta Ala, which has been dated to the mid-3rd AD, and whose heterogeneous cargo consisted of Africana II amphorae, Portuguese Almagro 51A/B, Almagro 51C and Beltran 72, and finally Baetic Dressel 20 and Dressel 23 amphorae (Dell’Amico and Pallarés 2007; Vaccaro 2011, 164-165).

The late Roman assemblage from the North Hill in Roselle provides interesting data about the variegated amphora supply to this urban site. Southern Spain contributed some oil, although in negligible quantities, as revealed by a single specimen of Dressel 23 (Fig. 4, 11). Context 5147=5170 also yielded a specimen of the fairly rare Keay 24B (Fig. 4, 9), recently suggested to be a Tripolitanian amphora introduced between the mid-4th and the mid-5th century, definitively replacing the well-known types of Tripolitanian amphorae documented from the early imperial period (Macías-Remolà 2005, 127).

Although the consumption of wine is documented only by three amphora specimens, these nonetheless reveal a fairly varied picture for the wines reaching the Rosellan market, with at least three sources: an Empoli type from the middle Arno valley or the Volterra area (Fig. 4, 14), a MRA1 variant can be assigned to an eastern Sicilian production (Fig. 4, 13), while a rim fragment belongs to either a late Dressel 24 or an early LRA 2 (Fig. 4, 12) thus suggesting occasional eastern Mediterranean connections.

Moving on to the countryside we immediately note the predominance of Tunisian amphorae from c. AD 300 onwards. Between the 4th and mid-5th AD, at least 20 out of 32 rural settlements yielded fragments of Tunisian amphorae, mostly Keay 25 and the *spatheion* 1/Keay 26. The high availability of Tunisian amphorae during the 4th to mid-5th century is evident from the large numbers of Keay 25 amphorae at *Portus Scabris* and a possible 4th-century AD shipwreck at Punta Ala, whose partly recovered cargo consisted almost exclusively of Keay 25 amphorae, Hayes 50 A/B dishes and Tunisian kitchenware (Vaccaro 2011, 157-166).

The amphora trend changes between the mid-5th and 6th centuries when far fewer rural sites yielded large cylindrical Tunisian amphorae produced from the Vandal period onwards. Keay 35, 55 and 62 amphorae are documented only at about 36% of occupied sites (12 out of 33) (Fig. 5).

The late Roman ceramic evidence from Roselle is still quite uneven as we are missing well-quantified contexts dating to between the second quarter and the end of the 5th century AD. Nevertheless it is worth noting that the excavation at the foot of the North Hill yielded two assemblages allowing us to track patterns of pottery trade and consumption until the late 6th and early 7th century AD (Vaccaro 2011, 63-70). One of these contexts appears to be particularly meaningful as it reveals the continuity of trade in overseas amphorae until c. AD 600, despite the absence of in-phase ARS. Context 1260 yielded a total of

110 minimum number of individuals. Although the amphora record is tiny, with three vessels, it reveals persisting connections with at least three areas of supply: north-eastern Sicily or *Bruttium* with a Keay 52, Tunisia with a Keay 61D/B and finally Cilicia with a LRA 1. Interestingly, the attestation of Mediterranean amphorae not associated with late ARS is paralleled by another context dating to c. AD 550-600 yielded by the excavation at the villa of Paduline-Serrata Martini, at the mouth of the Bruna river (Vaccaro 2011, 105-110). Here a small assemblage composed of 35 vessels (22.8% are residual) mainly from regional and central/southern Tyrrhenian sources provided no certain evidence for in-phase ARS, although in the amphora record, with 10 individuals, two vessels are represented by a spike of a generic Keay 62 large amphora and a small *spatheion* devoid of handles (Vaccaro 2011, 105-106), similar to Bonifay’s type 3A (Bonifay 2004, 128). Another possibly in-phase vessel is attested by some walls of a LRA 2, whilst the other containers are either residuals or unidentifiable given the absence of diagnostics.

As regards amphora-borne foodstuffs in the coastal area we shall also consider two other classes which shed light on patterns of redistribution from sea-ports to coastal consumption sites: the Empoli wine-amphora and LRA 1. The regional Empoli type, with 94 identified specimens out of a total of 207 transport containers dating to between the 4th – 7th/early 8th century AD, is by far the best documented type at *Portus Scabris*. This high proportion may be partly explained by the presence of a beached shipwreck carrying Empoli amphorae which has created an imbalance in the proportions of wares from different sources (Vaccaro 2011, 141-143). Clashing with the evidence from *Portus Scabris* is the very limited redistribution of this type not just to the countryside but also to urban sites. The Empoli amphora is documented with a handful of specimens in 4th- to early 5th-century AD contexts at the towns of Roselle and Vetulonia, whilst only three late Roman rural sites yielded one individual each. This low density of terrestrial finds and the strikingly high concentration at *Portus Scabris* supports a major use of this regional type to supply wine to Rome given its concentration here, especially in some 5th-century AD contexts (see for example the *mithraeum* of the Crypta Balbi: Saguì and Coletti 2004, 244 and the *Magna Mater*: Panella *et al.* 2010, 66). As a result, its inland penetration in southern Tuscany is sporadic. The distribution of LRA1 tells a similar story to that of the Empoli type at least in a broad sense. The LR1 with its 5th- and 6th-century variants is documented in the underwater dump at *Portus Scabris* with c. 6% of the total late Roman amphorae, indicating that the site was used as an intermediate port of call for Tyrrhenian cargoes including eastern Mediterranean amphorae (Vaccaro 2011, 148-149). Again if we look at our study area, the re-distribution of this amphora type is minimal: only two surface and two excavated sites yielded a few fragments of this type. The presence of a LR1 amphora in a mid-6th- to early 7th- AD excavated context in Roselle (*supra* context 1260) testifies to the occasional import of

this type after the Greek-Gothic war, coinciding in this area with the massive reduction of overseas trade.

Overseas commodities as a late Roman socio-economic marker?

If we combine the distribution of ARS and Tunisian amphorae with the typologies of rural sites in two main phases (4th to mid-5th and mid-5th to mid-6th) we see that access to Tunisian products decreases markedly from one phase to the next, with access to overseas products becoming a prerogative of villa sites, villages and a few well-connected sites along the coast, while they are almost completely absent at farmsteads. The fact that all types of site accessed overseas products between the 4th to mid-5th AD while this access later became limited to larger and better connected sites requires further explanation. The supply of ARS and overseas foodstuffs still reaching major settlements, albeit in smaller quantities, may not indicate simply the continuity of the distribution network for these products. Above all it may suggest the presence of weak elites still active in the study area who expressed their socio-cultural status in part through the consumption of overseas goods, whereas the peasants living at the last few farmsteads were now completely dependent on the regional market for tableware and amphora-borne foodstuffs.

Regional Red Slip and other Tablewares

Whilst trade patterns for overseas products show a progressive decline from the beginning of the 6th AD, the circulation of local and regional products suggests a wide variety of regional connections which, as we will see, linked coastal and inland areas especially in the 4th and 5th centuries AD and possibly beyond.

In coastal areas the distribution of regional tableware is overwhelming compared to imports from as early as the 4th-early 5th AD, as the quantifiable excavated data from Roselle demonstrates. Considering the two groups of ceramic assemblages respectively from the area at the foot of the North Hill and Room 21 in the *Domus dei Mosaici*, the vast majority of table vessels consists of regional colour-coated ware characterised by a thin, non-sintered or semi-sintered red slip and a class of products with an higher-quality sintered red slip named *sigillata chiara tarda dell'Italia centro settentrionale*, sometimes bearing a brown over-painted decoration on the bottom of large open vessels (Vaccaro 2011, 53-56). These two classes together account for respectively five and over seven times the ARS specimens in the two datasets. The intensive supply of regional tablewares can be explained by the wide variety of functional forms in the repertoires, such as different-sized bowls, flat-based dishes, basins and closed vessels, better able than imported ARS vessels, mostly represented in the 4th and early 5th century AD by flat-based dishes and large bowls, to provide a complete set of table vessels. Colour-coated and slipped tableware circulated throughout the region (Cantini 2009; Menchelli and Pasquinucci 2012) and the

general fineness of the clays makes it difficult to trace trade routes from production to consumption sites.

The primacy of regional tablewares becomes even more overwhelming in the 6th century AD. As shown by the combined evidence of the 5th-century AD contexts from the inland study area and some 6th-century assemblages from Roselle, the production of *sigillata chiara tarda dell'Italia centro settentrionale* does not continue after the mid- or late 5th AD. However, a new class of regional tableware is introduced in the 6th century AD: the *colature rosse* ware, whose coating presents either red slip drippings or a more careful red brush-painting. Given the similarity of fabrics often encountered, these two sub-classes likely belong to the same workshops and the same craft tradition, although the different degrees of care taken in applying the red coating may suggest an intentional differentiation. It is also worth considering that, whilst the *colature rosse* ware appears in the first half of the 6th century AD alongside the traditional colour-coated ware, the more carefully red painted ware is never found before AD 550 in this area.

One small context near the North Hill in Roselle (US 1262) yielding only 27 vessels is significant as it reveals that regional products were even more overwhelming than in the 4th and early 5th century: apart from a total of 12 kitchenware vessels, the rest of the material is regional colour-coated ware (11 specimens), *colature rosse* ware (three specimens) and only one Hayes 99B bowl in ARS (Vaccaro 2011, 63-64). The functional repertoire had by then lost the series of large flat-based dishes common in the 4th and early 5th century AD and a new form, the flanged bowl, was introduced. At the same time, different-sized bowls and jugs continued to be produced. All this suggests some significant transformations in dining habits with a possible shift from the use of large collective plates to individual deep vessels more suited to the consumption of semi-liquid foods and small cuts of meat than large cuts (on this see also Fontana 1998, 96).

Two other contexts, from Roselle (US 1260) and Paduline-Serrata Martini, provide additional evidence for the long lasting production of regional tableware well into the second half of the 6th and early 7th century AD. Context 1260 from Roselle yielded a total of 110 minimum vessels, 88% of which are very likely in phase. Interestingly this context yielded no ARS apart from some residual forms whilst regional colour-coated and *colature rosse* wares accounted for 38 and eight vessels each. The variety of functional forms is still quite broad although less so than in the 4th and early 5th century AD: the absence of large flat-based dishes in the late contexts is corroborated by this data, whilst the presence of flanged-bowls, small bowls and jugs is consistent with the pattern observed in the first half of the 6th AD (Vaccaro 2011, 66-68). At the villa site of Paduline-Serrata Martini a mid-6th to early-7th rubbish dump sealed the *prae-furnium* of the bath complex and marked the final abandonment of the site. It yielded a total of nine vessels including colour-coated (four individuals) and *colature rosse*/painted (five individuals) wares accounting for c. 33% of all in-phase pottery. The persisting variety

of the ceramic repertoire offers a range of open and closed vessels, including different-sized flanged bowls, basins and occasional closed vessels. The latter are also common in the class of non-slipped regional tableware (Vaccaro 2011, 107-108).

Kitchenware

The kitchenware evidence has potential which will be further exploited in the continuation of this comparative study between coastal and inland territories of southern Tuscany. As part of the Excavating the Roman Peasant Project, we plan to extensively apply thin section analysis to cooking wares in the sub-region to define production areas and trace the routes which supported regional and local trade with specific emphasis on the rural sites of the interior. So far, the study has been mostly based on the chrono-typological and functional approach, of limited use in defining circulation patterns. Nevertheless it is worth outlining some trends. The 4th- and early 5th-century evidence from Roselle shows that the functional repertoire of cooking vessels is very varied, with cooking pots, lids, casseroles/large cooking bowls, bowl/lids and cooking dishes/*tegami* (Fig. 6) and a very balanced ratio of open to closed vessels, complementary as they serve different cooking purposes, such as braising/frying and boiling food (Arthur 2007). Interestingly, the whole 4th- and early 5th-century repertoire of kitchenware documented in Roselle was likely produced regionally given the capillary distribution of these types in late Roman urban and rural sites throughout Tuscany (Vaccaro 2011 with bibliography). The only possible exception is a total of three individuals of Tunisian kitchenware, two dish/lids and a casserole, which might be still in phase. The surface evidence from field-walked sites indicates a similar pattern, with the most common types documented in Roselle regularly yielded by the ploughed ceramic assemblages (Vaccaro 2011, 92-94).

Moving on to the 6th century, the picture of kitchenware variety offered by contexts 1262 (first half of the 6th) and 1260 (mid-6th to early 7th) does not radically change in Roselle, although the primacy of cooking pots becomes overwhelming among open vessels (Fig. 6). Casseroles, bowl/lids and cooking dishes/*tegami* continue to be documented but in far smaller quantities than a century before (Vaccaro 2011, 64-65 and 68-70). There is no specific evidence for extra-regional kitchenware. However, the combination of morphological and thin section³ analysis applied to the kitchenware repertoire reveals that some interregional trade existed along the coast, probably taking advantage of *cabotage* routes and reaching two sites in particular: the cave site of Scoglietto, right on the ancient mouth of the Ombrone river, and the villa site of Paduline-Serrata Martini.

Recent excavations at the cave site yielded a coherent ceramic assemblage dated to between the mid-5th and

mid-6th AD in association with as many as 66 small bronze coins whose chronologies ranges from the mid-3rd to 5th centuries AD and two bronze coin weights corresponding respectively to the *solidus aureus* and perhaps the *tremissis*. The complexity of this ceramic assemblage, a total of 59 vessels with some 10% ARS and, to a lesser extent, Tunisian coarseware and amphorae, the presence of many *nummi* which continued to be used for daily transactions well after the date of their issue, the two bronze coin weights and the location of the site in a spacious cave directly on the Roman rivermouth suggests that it served as a small beach-site supporting coastal routes and intimately connected to them (Vaccaro 2011, 94-95).

The rich kitchenware evidence (44 of a total of 59 vessels) is particularly meaningful. In addition to a few Tunisian forms (a casserole Fulford CW 18.1, and two dish/lids similar to types Fulford CW lids 4.3 and Fulford CW dishes or lids 4 and 8), two generically extra-regional/western Mediterranean vessels and eleven local/regional forms, a group which includes both open and closed vessels was assigned to workshops in Latium or Campania, with the former far more likely given the widespread presence of similar vessels in late Roman contexts in Rome (Fig. 7). The typological study combined with the minero-petrographic analysis, revealing the presence of volcanic inclusions in a sample of three particularly distinctive types, corroborated the presence of a large group of extra-regional kitchenware possibly from Latium, previously suggested in light of the morphological study of the vessels and macroscopic characterisation of the fabrics (Vaccaro 2011, 100-103). The wide repertoire documented in this group offers a variety of cooking pots. One type, with a thickened rim, of pseudo-rectangular section, squared or pointed on the outer face (Fig. 8, 10-12), is particularly common in late Roman contexts in Rome (Conservatory of San Pasquale: Fogagnolo 2004, 594, Fig. 9, no.73; *Basilica Hilariana*: Vatta and Bertoldi 2004, 466-465). Other types, also common in Rome (Vaccaro 2011, 100-103), are equally well documented in the Scoglietto deposit (Fig. 8, 13-14). The repertoire of closed vessels is completed by a cooking jug (Fig. 8, 15). Open vessels are also well documented with a wide variety of functional forms suitable for braising and frying food. A highly distinctive type of casserole with flaring walls and a thickened incurving rim (Fig. 8, 1-4) which finds many parallels in Rome in the 5th and 6th centuries (e.g. *Schola Praeconum I*: Whitehouse et al. 1982, 75, Fig. 9, no.116; Crypta Balbi: Sagui and Coletti 2004, 251, Fig. 6, no.31; *Basilica Hilariana*: Pacetti 2004, 451, Fig. 8, no.62) is widely attested. Another type of casserole, one type of cooking dish/*tegami*, two bowl/lids and seven lids are documented as well, all from the same area of production (Fig. 8, 5, 6-7 and 8-9). Particularly interesting is the absence of a significant distribution of these vessels towards coastal consumption sites, such as Roselle, where the distinctive types of cooking pot with a thickened rectangular rim and the casserole with incurving rim are apparently absent. Possibly these

³ Thin section analysis is carried out in collaboration with Claudio Capelli, to whom I express my thanks for the preliminary results presented here.

vessels were traded sporadically from Rome to a few coastal sites to the north.

The little kitchenware evidence from the mid-6th- to early 7th-century dump at the villa site of Paduline-Serrata Martini some 17km north of Scoglietto corroborates this tendency of Latium kitchenware to circulate along the coast. Four vessels (of a total of 10 kitchenware forms) have fabrics with volcanic inclusions similar to those of Scoglietto and their morphology suggests close comparisons with Latium. Two cooking pots with thickened and rectangular more or less everted rims (Fig. 8, 16-17) are a variant of the type already seen at Scoglietto, whilst a cooking jug and a bowl/lid (Fig. 8, 18-19), find parallels respectively in the late Roman and early medieval *vicus* at Madonna del Passo in Sabina (Patterson and Roberts 1998, 431, Fig. 8, no.4) and in Rome in 6th- and 7th-century contexts (Crypta Balbi: Saguì and Coletti 2004, 266, Fig.15, no.83; *Basilica Hilariana*: Pacetti 2004, 448, Fig.6, nos 43-44 and 456, Fig.11, no.83).

The interior

Our analysis of late Roman pottery trade and consumption systems in the interior is based on a combination of field survey data, a series of well-stratified contexts from the small farmstead at Pievina (late 4th-late 5th AD) and a large rubbish dump at Case Nuove (late 4th-mid-5th AD), related to a peasant site near a villa.

ARS, amphorae and regional tablewares

As regards overseas products, 4th and 5th centuries ARS was collected, in very low percentages, at almost every late Roman surface site while the evidence for Tunisian amphorae was limited to a smaller number of settlements (Fig. 1). In the 6th century only the villa site at Santa Marta indicated episodic links with overseas trade (Ghisleni 2009).

The excavated ceramic contexts from the sites of Pievina and Case Nuove reveal that the vast majority of wares were manufactured regionally. At Pievina, 11.5% of imported pottery is documented across all the late Roman contexts from the late 4th to the end of the 5th century, with ARS, occasional Tunisian kitchenware, Tunisian amphorae Keay 25 and 26, Portuguese Almagro 51 A/B and C, and LR1 (Fig. 9, 1-13). Interestingly, all the Mediterranean amphora types documented are also attested in the town of Roselle, but more important is the high percentage of Portuguese amphorae in roughly contemporary urban contexts. This, alongside the presence at Roselle of all the ARS forms documented at Pievina may suggest that the town was a redistribution point for small inland farmsteads. Amphora finds at Pievina included a hitherto-unknown regional or local

amphora⁴, probably for wine. Although no whole vessels have hitherto been found it seems to combine the grooved handles of the early to mid-imperial Spello type, a rounded rim and the characteristic base of the late Roman Empoli type (Fig. 9, 14-15). The production of a similar amphora may have started at a local or sub-regional scale in the 3rd century AD, as a partially preserved individual from a mid-Roman dump at Case Nuove suggests (Fig. 10, 1).

At Case Nuove, overseas amphorae are only documented by walls belonging respectively to a Tunisian and a Portuguese specimen, while one identifiable individual is a regional Empoli type. Here the overall quantity of ARS is just over 4% of 72 minimum vessels, while at Pievina ARS accounts for over 8% across all the late Roman contexts analyzed so far (195 MNI). At Case Nuove, ARS is documented only with three MNI, two in C3 production and one in D2. C3 products are represented by a dish Hayes 50B and a small bowl of type Hayes 71B (Fig. 10, 2-3). The only D2 product is a large bowl or dish Hayes 64 (Fig. 10, 4). The lower proportion of overseas fineware, then, is counterbalanced by the higher quality of the regional tablewares dumped at Case Nuove. At both sites we found a very varied repertoire of regional table vessels with a broad range of functional types. While at Pievina tableware is represented by colour-coated ware with a low-quality slip which often makes it impossible to distinguish it from non-slipped productions, this is never the case at Case Nuove. Here, not only does the colour-coated ware have a better quality slip, but the site is also well supplied with *Sigillata chiara tarda dell'Italia centro-settentrionale* (about 15% of the total), with a lustrous sintered or semi-sintered slip, occasionally over-painted. Interestingly this class is absent at Pievina. The *sigillata chiara tarda dell'Italia centro-settentrionale* from Case Nuove includes a wide range of different open vessels of which the best documented are large flat-based dishes imitating the ARS prototype Hayes 61A/B3 and A/B4 respectively dated to the first half of 5th and first third of 5th AD (Fig. 10, 5-6) and above all the series of flat-based dishes and bowls deriving from Hayes 50B in ARS (Fig. 10, 7-8). Also documented in this class are small bowls like that illustrated in Fig. 10, 9 which refers to a production not influenced by ARS models but probably deriving from autonomous morphological repertoires. Interestingly this class occasionally has an over-painted decoration which in one case presents concentric circles surrounded by dots (Fig. 10, 10), deriving from the single or concentric circles with dot-fringe typical of styles A (ii) or A (iii) of the mid-4th through to mid-5th AD ARS repertoire (Hayes 1972, 236-237). Finally one base of a large open vessel is characterised by a peculiar ante-cocturam graffito in the shape of a small hand (Fig. 10, 11). Closed forms are documented by only one small vessel, possibly a table flask (Fig. 10, 12). The varied repertoire of table

⁴ Two samples were analysed in thin section: one revealed generic inclusions which do not exclude a local/regional source and one is again generically regional, although it may be tentatively referred to the Arno valley.

vessels provided by *sigillata chiara tarda dell'Italia centro-settentrionale* is further enriched at Case Nuove by the wide variety of forms in colour-coated ware. Compared to regional fineware, the repertoire of colour-coated ware reveals an even more varied range of functional open vessels, introducing a series of new forms such as a large deep basin (Fig. 10, 14), a large bowl with notched lip, possibly deriving from an original rethinking of the prototypes Hayes 67 and Hayes 68 (Fig. 10, 15), two tiny sauce-bowls (Fig. 10, 18-19) and finally an hemispherical grooved bowl (Fig. 10, 16). Also of interest is the larger number of closed vessels represented by large table jar and handled table jugs (Fig. 10, 21-22). On the other hand the very varied series of large bowls and dishes imitating the ARS prototypes Hayes 61 with variants A/B3 and A/B4 and Hayes 50B (Fig. 10, 13 and 17) unites colour-coated ware and *sigillata chiara tarda dell'Italia centro-settentrionale*.

The presence of high-quality regional fineware at Case Nuove and not at Pievina is remarkable as in the coastal area it has hitherto been identified only in towns, two major late Roman villa sites and one well-connected settlement on the sea. To explain this, we must consider the position of Case Nuove. The settlement is located just 500 metres as the crow flies from the only villa site identified in this inland area. The site served in the Augustan and late Roman periods as an agricultural facility and after the end of each phase of utilization, was intermittently used as a garbage dump. The presence of the villa site, used at least up to the 6th century, is likely to have encouraged the establishment of a more sophisticated demand for high quality regional pottery which consequently became more easily accessible to peasants using the site of Case Nuove and dumping their late Roman ceramics there. Thus the somewhat more sophisticated repertoire of regional tablewares at Case Nuove compared to Pievina should be interpreted in light of its proximity to the villa site.

Kitchenware

Both at Pievina and Case Nuove, kitchenware seems to come from local or regional workshops. As shown in Fig. 6 the ratio of closed to open vessels is totally in favour of the former (lids, given their size, are all compatible with the cooking pots) revealing a predilection for boiled food (Fig. 9, 27-34 and Fig. 10, 23-32). Although the morphological and functional repertoires do not support any marked distinction between the two sites, a closer analysis of cooking pot fabrics reveals a significant predominance at Case Nuove of vessels tempered with spathic calcite, which may have ensured higher resistance to thermal shock than cooking pots manufactured with other fabrics (Tite *et al.* 2001, 322). Interestingly about 55% of the cooking pots from this site are calcite-tempered whereas only 24% of the cooking pots from the late Roman farmstead at Pievina present this technological feature. This difference requires further explanation. Were consumers at Case Nuove aware of the thermal shock resistance of different types of cooking pots? The possible higher technological quality of the

kitchenwares documented at Case Nuove and the greater homogeneity of fabrics, compared with the wider variety of Pievina, tentatively suggest a more targeted and possibly centralized selection of local and regional products, also supported by the large quantities of *sigillata chiara tarda dell'Italia centro-settentrionale*, perhaps determined by proximity to the villa site and hence the possibility of accessing better quality pottery (Vaccaro and MacKinnon forthcoming).

Conclusions

The comparative analysis suggests that the relationship between coastal and inland areas may be closer than expected. During the late 4th to late 5th AD, when the evidence from our two areas is more homogeneous we observe intensive regional exchange and the supply of overseas products to sites far inland like Pievina, which could not even rely on proximity to major roads or large and wealthier sites. The overseas products widely available at coastal sites and especially in the town of Roselle were more or less regularly re-distributed towards the interior. Possibly the items to be shipped inland on overland routes were selected on the basis of size: the smaller the item the cheaper its transport cost. ARS vessels and small amphorae were particularly suited to this trade system. Probably it is no accident that heavier 5th- and 6th-century cylindrical Tunisian containers, documented at a series of coastal sites, are completely absent from the excavated peasant sites inland. Evidently size, weight and shape made this kind of products unsuited to overland transport, preventing their distribution inland except to the only Roman and late Roman villa attested in this inland area. This all tells us clearly that if inland peasants still engaged some wide-distance trade connections, these were opportunistically limited to foodstuffs transported in small containers. At the same time the distribution of regional tablewares and kitchenwares reinforces the connections between coastal and inland territories, with some differences. In the interior, the comparative analysis of Pievina and Case Nuove revealed differing access to the higher quality regional tablewares which parallels the attestation in the coastal area of *sigillata chiara tarda dell'Italia centro-settentrionale* almost exclusively in the urban sites of Roselle and Vetulonia and a few villa sites. The sizable presence of this class at Case Nuove has been linked to its proximity to the villa site at Santa Marta.

To sum up, the late Roman trade connections between coastal and inland areas of southern Tuscany suggest the existence of a still sophisticated exchange system which, well into the 5th century, involved both overseas and regional products and continued to make large-scale use of late Roman small denomination bronze coins, as the evidence from the small inland peasant sites reveals (Ghisleni *et al.* 2011).

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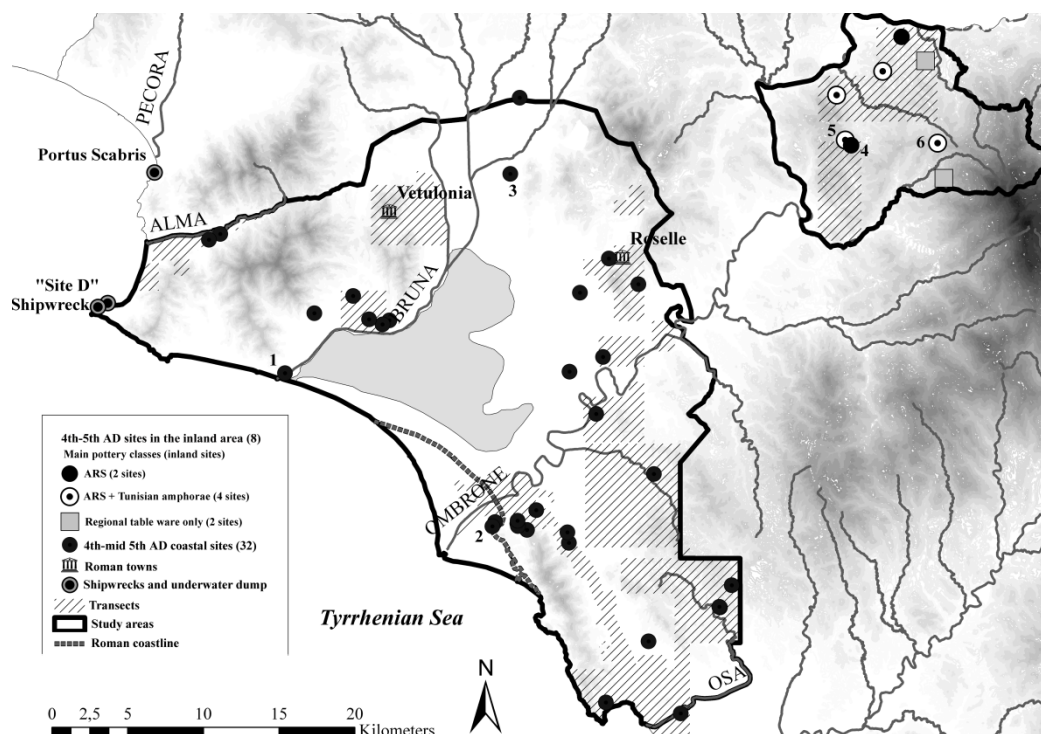


Fig. 1. The coastal and inland sample areas in southern Tuscany (province of Grosseto).

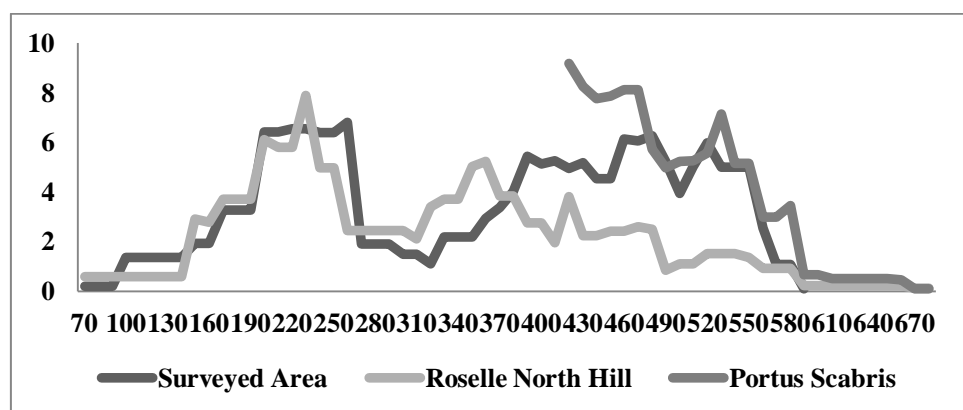


Fig. 2. The ARS trend in the sample coastal area, at Roselle (North Hill) and *Portus Scabris*. The ARS evidence from the latter site refers to the period AD 400-690.

Amphora type	MNI
"Empoli" type	1
MRA 1	1
Early LRA 2 or late Dressel 24	1
Keay 13A	1
Almagro 51C	5
Almagro 51 A/B	1
Keay 24B	1
Africana III/Keay 25	3
Africana IIA/Keay 5	3
Africana I/Keay 3B	3
Residuals	4

Fig. 3. Quantified amphorae (minimum number of individuals) from a selection of 4th to early 5th century AD contexts from the North Hill in Roselle.

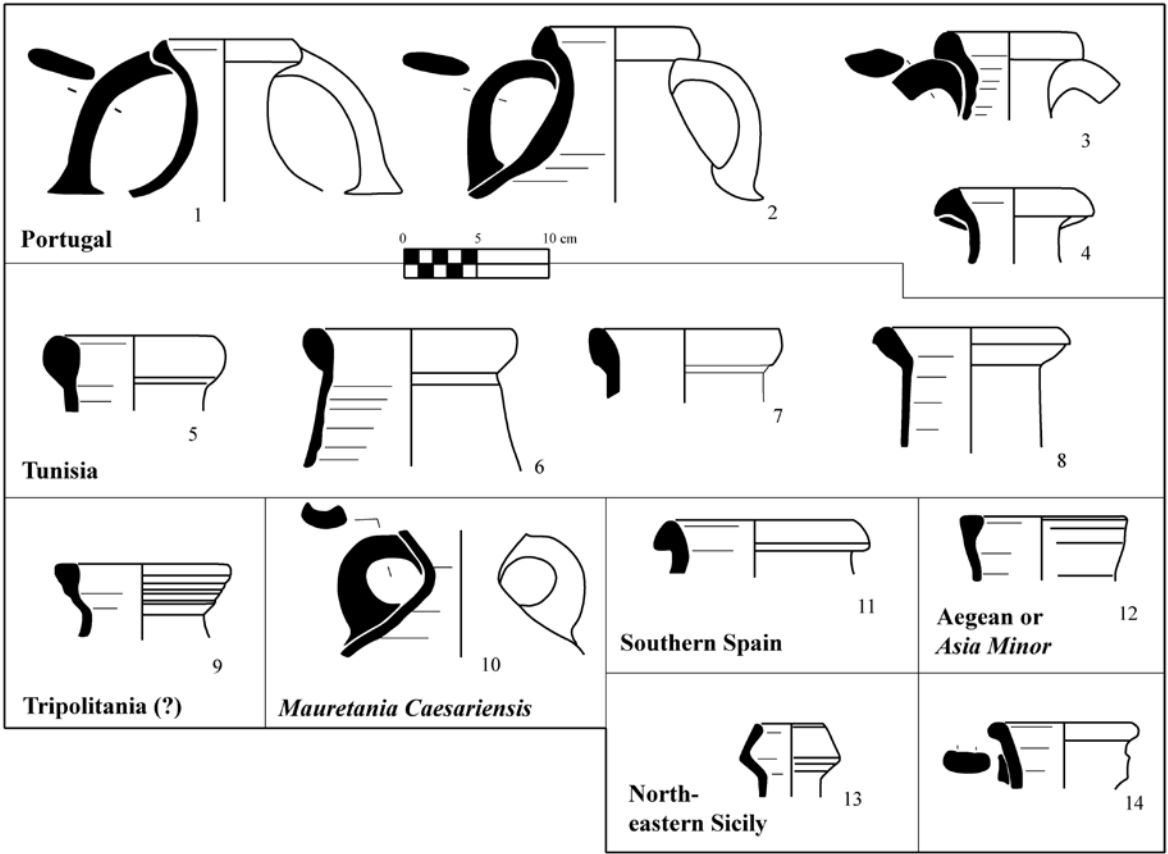


Fig. 4. Selection of amphorae from 4th- and early 5th-century contexts in Roselle (all from the area of the North Hill, with the exception of numbers 3-4). Nos 1-4: Almagro 51C; no.5: Africana I/Keay 3B; nos 6-7: Africana IIA/Keay 5; no.8: Africana IIIC/Keay 25; no.9: Keay 24B; no.10: Dressel 30/Keay 1; no.11: Dressel 23; no.12: late Dressel 24 or early LRA2; no.13: MRA1; no.14: Empoli type.

4th to mid 5th c. AD sites	Sites with Tunisian amphorae	Sites with ARS		Mid 5th to mid 6th c. AD sites	Sites with Tunisian amphorae	Sites with ARS
32	20	27		33	12	16

Fig. 5. Relationship between rural sites, ARS and Tunisian amphorae in the two periods 4th-mid 5th and mid 5th-mid 6th AD.

Forms	Roselle. Room 21, <i>Domus dei Mosaici</i> (4th) MNI	Roselle. North Hill (4th-early 5th) MNI	Pievina SU 1019, 1026 (late 4th-mid 5th) MNI	Case Nuove (late 4th- mid 5th) MNI	Pievina SU 1018 (mid 5th?) MNI	Pievina SU 1006 (mid- late 5th) MNI	Roselle NH US 1262 (first half of the 6th) MNI	Roselle NH US 1260 (mid 6th to early 7th) MNI
Casseroles (TKW)	0	1	0	0	0	0	0	0
Dish/lids (TKW)	0	2	0	0	0	0	0	0
Cooking pots (KW)	7	15	11	19	11	7	9	24
Casserole/cooki ng bowls (KW)	4	13	1	1	2	1	2	3
Lids (KW)	7	13	2	5	7	3	0	2
Bowl/lids (KW)	0	2	0	0	0	0	0	1
Cooking dishes/ <i>tegami</i> (KW)	3	4	0	2	1	1	0	2
Cooking dishes/ <i>testi</i> (KW)	0	0	1	1	0	0	0	0
Cooking jugs (KW)	0	0	0	0	1	0	1	0
Flanged bowl (KW)	0	0	0	0	0	0	0	1

Fig. 6. Kitchenware from a series of analyzed contexts (TKW=Tunisian Kitchenware; KW=regional or local kitchenware): forms and MNI

Forms/sources	Scoglietto cave (mid 5th to mid 6th) MNI
Casseroles (TKW)	1
Dish/lids (TKW)	2
Cooking pots (generic W Mediterranean?)	1
Lids (generic W Mediterranean?)	1
Cooking pots (Local/regional)	6
Cooking lids (Local/regional)	4
Cooking dishes/ <i>tegami</i> (Local/regional)	1
Cooking pots (Latium)	9
Casseroles (Latium)	8
Cooking dishes/ <i>tegami</i> (Latium)	1
Bowl/lids (Latium)	2
Lids (Latium)	7
Cooking jug (Latium)	1

Fig. 7. Kitchenware from the site at
Scoglietto cave (mid 5th-mid 6th AD):
forms and MNI. TKW=Tunisian kitchenware.

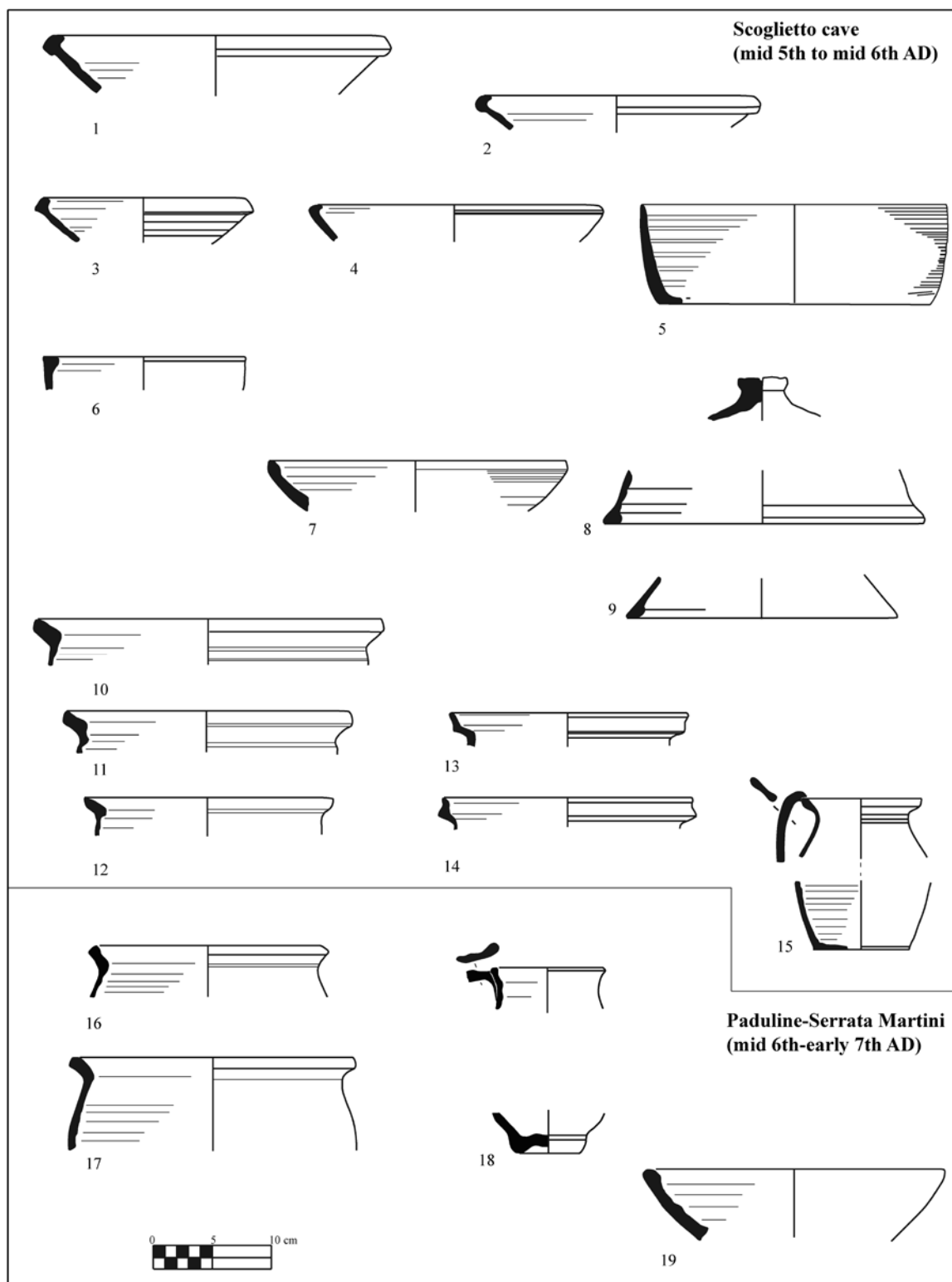


Fig. 8. Kitchenware from Latium documented at the two sites of Scoglietto cave and Pauline-Serrata Martini.

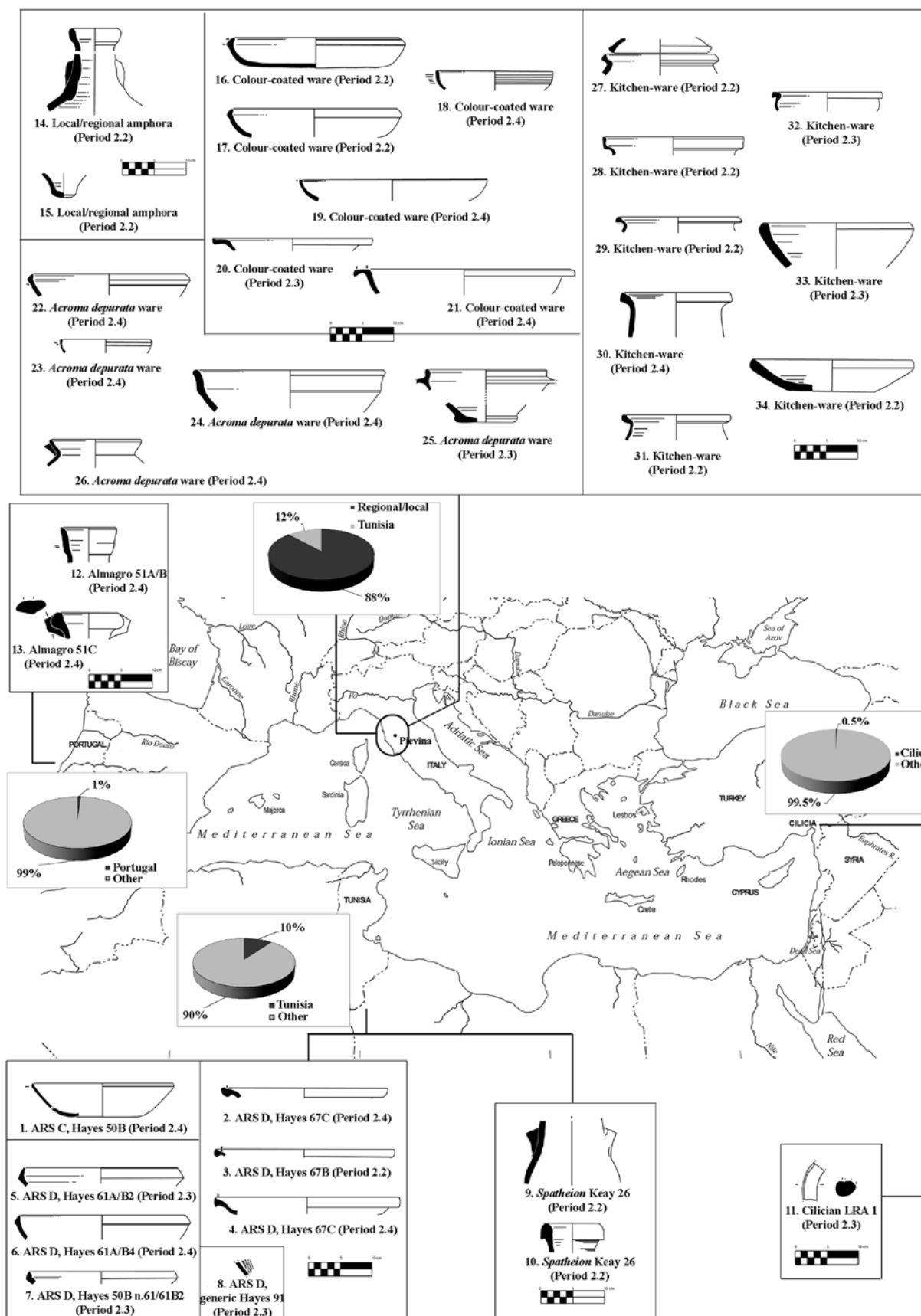


Fig. 9. The late Roman pottery “connections” of the farmstead at Pievina (Phase 2.2 = late 4th-mid 5th; Phase 2.3 = mid 5th; Phase 2.4 = mid to late 5th).

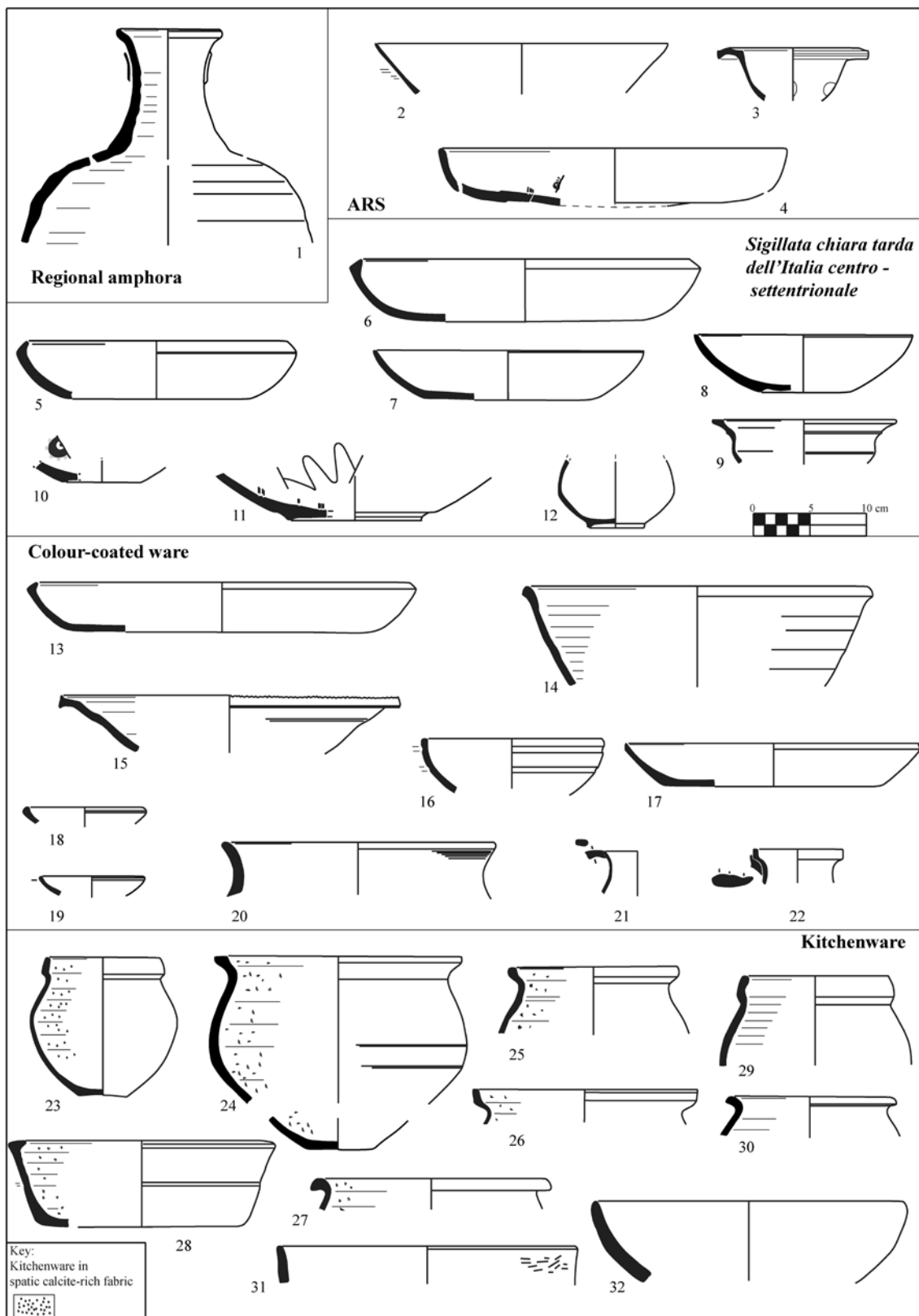


Fig. 10. Selected pottery from the late 4th-mid 5th AD rubbish dump at Case Nuove, with the exception of regional amphora no.1 from a context dated to the first half of the 3rd AD.