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Portus and the Alexandrian Grain Trade Revisited

Introduction

Portus was first established as an extensive harbour complex to complement the port city of Ostia under Claudius and Nero and developed in the course of the 1st century AD. It was subsequently enlarged under the emperor Trajan, ostensibly between AD 103 and 111, although it is possible that it might not have been fully functional until later in his reign¹. In doing so he provided it with a hexagonal basin, a number of large *magazzini* and rebuilt its aqueduct, as well as facilitating land-based access to the Tiber with a major new canal and an extension of the Via Portuensis to Portus.

In seeking an explanation for this it has often been suggested that it is a development best understood as the consequence of a decision by Trajan to divert the Alexandrian grain fleet from Puteoli to Portus². Meiggs³ was one of the first to put forward this idea. However his hypothesis perhaps oversimplifies a far more complex reality and is ripe for review – not least in view of a greater range of evidence that was available in his time. While the Trajanic enlargement of Portus was undeniably important it was a single development that needs to be understood in the context of what was clearly a massive building programme by Trajan that encompassed nearby Ostia, as well as the river port of Rome, the construction of the new harbour at Centumcellae (Civitavecchia), major work at Tarracina (Terracina), the port of Ancona and possibly also Brundisium (Brindisi). In addition one has to take into account recent archaeological research that has demonstrated that Puteoli continued to flourish as a major port city during the later 2nd and earlier 3rd centuries AD and beyond.

It would be foolish to deny that Trajan's building work at Portus was not in some way related to the need to improve the efficiency of supplying Rome, and that there was indeed a diversion of the Alexandrian grain fleet from Puteoli to Portus in the course of the 2nd century. The aim of this paper, however, is to establish whether there was a causal relationship between the need for a more efficient delivery of Egyptian grain to Rome and the construction of the new facilities, or whether the re-direction of the grain fleet was something that happened gradually as a consequence of Trajanic reforms that sought to enhance the capacity and efficiency of Portus in supplying Rome in more general terms.

¹ This traditional date is based at least in part on that of the commemorative coin issue dating to between AD 103-111. However brick stamps from early (BLOCH 1947) and current excavations in the vicinity of the *Palazzo Imperiale* suggest that some of the buildings integral to the new Trajanic enlargement post-date this, and belong to the period from c. AD 114 onwards. Both MAR (2001, 100) and ZEVİ (2001, 176) suggest that the port may have already begun to function in the last years of Trajan's reign. BLOCH (1947) suggests that some buildings in the port may not have been completed until the early years of the reign of Hadrian. However this is based on a dating to the Hadrianic period of stamps which may in fact be of Trajanic date: this is an issue discussed by DELAINE (2002, 93-99).

² The port of Alexandria is the subject of a paper by KHALIL in this session

³ MEIGGS 1973, 58ff.

This is a complex issue that is the subject of much ongoing research⁴. The objective of the paper is not to provide definitive answers, which would be impossible given the fragmentary state of the current evidence from Portus, Ostia and Puteoli, so much as to look at the question again in the light of more recent information from all three ports. It begins by briefly looking at evidence for the amount of dedicated new storage space and the extent of Alexandrian influence at both Portus and Ostia. It also touches upon the possible impact that the diversion of the Alexandrian grain fleet upon Puteoli, focusing upon storage provision, contacts with the east Mediterranean and building activity during the later 2nd and 3rd centuries AD.

The Context

Ostia had been the key conduit for the feeding of Rome from the later Republic onwards and gained increasing importance into the early Empire, with grain as the principal commodity⁵. Its role in this is best exemplified by epigraphic evidence for the presence of officials responsible to the *praefectus annonae* at the port from the early 1st century AD onwards. It was enhanced by Claudius who created procurators specifically charged with managing the supply of foodstuffs to Rome and established Portus⁶ itself.

A starting point in understanding the primary role of the new Trajanic facilities at Portus is the creation by Trajan of a new official, an equestrian *procurator annonae et in portu*, who was succeeded by procurators with similar titles⁷ down to the 3rd century, and who was responsible to the *praefectus annonae*⁸. While his precise duties are unclear, it is likely that he was charged with supervision of the storage and transshipment of grain supplies to Rome through both Portus and Ostia. This official was the focus of a number of other lesser officials and *collegia* involved in different ways with the supply of grain to Ostia and, ultimately, Rome⁹. Although the new procurator was based at Ostia, not Portus, the creation of his post suggests that the new Trajanic complex at Portus was part of a wide-ranging initiative to ensure a steady supply of grain to the Capital. It is important to note, however, that the origin of the grain is not specified directly, and could have derived from a number of sources. While Egyptian grain would have made an important contribution there are good grounds to suggest that Africa was a far more important source, particularly from the later 2nd century AD onwards¹⁰.

A second issue concerns warehouse space at both Portus and Ostia. Provision of new *magazzini* was the hallmark of the new Trajanic harbour at Portus. Large elongated *magazzini* clustered around all six sides of the hexagonal basin, together with different structures running the north side of the Trajanic canal that connected the hexagonal basin to the Tiber. Others were also built (or re-built) along the north side of the Darsena¹¹. Indeed a recent study of warehouse provision at Portus suggests that the second century AD saw an increase from 32,790 to 92,278m² in the early 2nd century AD¹². The lack of any systematic excavation of these makes it difficult to understand the date and sequence of their construction¹³. However the study of stamps from the *Grandi Magazzini di Settimio Severo* by Bloch¹⁴ and ongoing excavations at the

⁴ Some of this is cited in the course of this paper.

⁵ RICKMAN 1980, 156-197 summarizes this.

⁶ See COARELLI 1994; MEIGGS 1973, 298-310; RICKMAN 1980, 60-93 and BRUUN 2002 amongst many others.

⁷ Such as *procurator ostiae annonae* and *procurator annonae ostis* etc (CEBEILLAC GERVASONI 1994, Annexe 1; CEBEILLAC GERVASONI 2002, 83ff).

⁸ For the situation under Claudius, see HOUSTON 1980, 157-158; MEIGGS 1973, 298-302; RICKMAN 1980, 222-223.

⁹ CEBEILLAC GERVASONI 1994, 49-59.

¹⁰ RICKMAN 1980, 196-197, 231-235.

¹¹ See discussion of known structures in LUGLI & FILIBECK 1935; TESTAGUZZA 1970; KEAY ET AL. 2005.

¹² KEAY ET AL. 2005, Table 9.1.

¹³ One exception has been the *Magazzini Traiane* on the north side of the Darsena, where there has been preliminary topographic work by VERDUCI (1996) which is now being followed up with a major study by Evelyne Bukowiecky and Giulia Boetto aimed at better understanding the structural sequence of the complex.

¹⁴ BLOCH 1947.

adjacent *Palazzo Imperiale* have identified a number of brick stamps from the *Bruttianae officina* owned by M. Rutilius Lupus, an individual who held the post of *praefectus annonae* in the later Trajanic period¹⁵. This kind of evidence tends to support the idea that they were built in the period between the inauguration of Trajan's reforms at Portus at some time between AD 103-111 and the end of the 2nd century AD, with some dating to the latter part of this period.

It is, however, difficult to know how many of these *magazzini* were actually used for the storage of grain, as opposed to other commodities¹⁶. A number of these, such as the *Grandi Magazzini di Settimio Severo*, may well have been used for grain. Their thick *cocciopesto* floors and ramps from ground to first floor similar to those in *magazzini* at Ostia, can still be seen and argue in favour of this. However the presence of *suspensurae* is one of the only sure ways of identifying with certainty those buildings that were used for grain storage, and this technique may not have been used at Ostia and Portus until the 2nd century AD¹⁷. On the basis of this alone grain would seem to have been stored in the *Magazzini Traiane* between the *Canale di Imbocco al Porto di Traiano* and the *Darsena*¹⁸, and in the *magazzini*¹⁹ between side III of the Trajanic basin and the Trajanic canal that linked the "*Fossa Traiana*" and the Tiber; in both cases the *suspensurae* were added some time after the original construction dates. While there is an understandable temptation to assume that many of the other Portus *magazzini* would also have been used for grain storage, one should not lose sight of the possibility that they could have housed many other commodities²⁰.

As is well known, the evidence for warehousing space at Ostia, is much more abundant on account of the greater intensity of excavation and academic study. A number of key analyses have allowed the development of this between the beginning of the imperial era and the 3rd century AD to be charted²¹. One recent estimate suggests that there was an overall increase in warehouse space at Ostia between the 1st to early 2nd century AD from 1,7667 to 31,882m²²². This is a development that needs to be understood in terms of the impact of the development of the Trajanic port at Portus and the consequent development and building programme at Ostia during the course of the second century, particularly the Trajanic and Hadrianic periods²³. The Trajanic *horrea* were located primarily in the area between the Decumanus and the Tiber²⁴. The buildings themselves, such as the *Piccolo Mercato*, the *horrea of the Mensores*, and the *horrea* adjacent to the *Serapeum* were on a larger scale than previous Ostian *horrea* and were built in part at some time after AD 112, with bricks from brickyards owned by the *Praefectus Annonae* of the time, M. Rutilius Lupus²⁵ amongst others. Mar has interpreted presence of Lupus' bricks as probably pointing to involvement of the *praefectus annonae* in construction work here and in other public buildings at Ostia following the Trajanic enlargement of Portus²⁶. An alternative interpretation²⁷ might be of the involvement of officials with close connections to the Emperor supplying in a rage of building projects at both Portus and Ostia, something that may suggest a degree of imperial funding.

¹⁵ See also BLOCH 1947, 100-102; excavations by Lidia Paroli and Giovanni Ricci suggest a second century AD date for the *magazzini* between the *Portico di Claudio* and the *Antemurale* at the western edge of the port (PAROLI & RICCI Forthcoming).

¹⁶ RICKMAN 1971, 123-132 provides an excellent summary of knowledge up to the early 1970s.

¹⁷ Grain was stored on thick *cocciopesto* floors until this date (RICKMAN 1971, 130ff);

¹⁸ *Suspensurae* can be seen on the northern side of this building. The chronology of the building is uncertain although VERDUCHI (2005, 248-257) seems to suggest a date between Trajan and the later second century AD.

¹⁹ LUGLI & FILIBECK 1935, 102-103; Carta N III: no. 36.

²⁰ Although there is no way of identifying specific commodities. There is thus no foundation for the identification of the *magazzini* on side III of the Trajanic hexagon as *oleari* (*pace* TESTAGUZZA 1970).

²¹ RICKMAN 1971, 15-86 and MEIGGS 1973 remain the key works, together with Mar 2002; see also the paper by Hienzelmann in this session.

²² KEAY ET AL. 2005, Table 9.1.

²³ MAR 2002, 144ff; note however that this work does not take into account the additional *horrea* discovered in the course of extensive geophysical work in the western and southern parts of the port. This evidence is still unpublished, although HEINZELMANN 2002, Tafel IV.2 gives some idea of the extent of these.

²⁴ MAR 2002, Fig. 13.

²⁵ DELAINE 2002, Appendix I; MAR 2001, 92-98.

²⁶ MAR 2001, 92-94; 334.

²⁷ DELAINE 2002, 64ff.

There is little doubt that all of these buildings were used for the storage of grain, although the geographical origin(s) of the commodity are not known. Construction of further warehouses continued through the 2nd century AD down to the Severan period, both within Ostia²⁸ and on the north side of the river in the *Trastevere Ostiense*²⁹. In addition to this there is also evidence for the existence of a *corpus* of the *mercatores frumentariorum*, members of which are recorded on a series of inscriptions dating towards the middle of the 2nd century AD³⁰, and whose *statio* was situated in the *Piazzale delle Corporazione* in the later 2nd century AD³¹. There are also abundant attestations of *mensores frumentarii*, who played a key role in measuring grain once it arrived at Ostia for storage, and again once when it was transported up river to Rome³². Epigraphic records of the *mensores* date to the period from AD 146 onwards and, as with the *horrea*, concentrate in the area of the river port between the *decumanus* and the Tiber³³.

Evidence for the Date of the Arrival of Egyptian Grain

There is no firm evidence for the date when the Alexandrian grain fleet began to arrive at Portus³⁴. The evidence used by Meiggs in his argument that the Trajanic facilities at Portus were created to cater for the Alexandrian grain fleet being diverted from Puteoli consists of two elements. The first was a coin of Antoninus Pius which has a reverse which mentions ANNONA AUG FELIX S.C. as well as a range of symbols whose connections with Alexandria are, at best, open to question³⁵. The second was an inscription from Portus³⁶ that records a dedication by an association of *naukleroï* of the Alexandrian fleet (*stolos*) in honour of Commodus in the late 2nd century AD³⁷, evidence that is also used by others in different ways³⁸. In addition to this there is papyrological evidence that records the arrival at Ostia of individuals who had travelled on Egyptian grain ships in the course of the 2nd and 3rd centuries AD³⁹.

Another line of argument, and one that builds upon Meiggs' research, is to distinguish evidence for the presence of the Alexandrian traders that one might expect to have established themselves at Portus and Ostia in order to help service the grain trade. As far as Portus is concerned this is slim. Firstly there are a few inscriptions that demonstrate the presence of Alexandrians at the site. One is an inscribed marble column⁴⁰ which can be dated to the early 3rd century AD on the basis of letter form and mentions a number of people of Alexandrian origin, who can be related to the cult of Serapis, while another is a marble slab of similar date⁴¹ that commemorates an Alexandrian citizen with links to the Serapis cult, while a further text mentions an Alexandrian of equestrian status of 2nd or 3rd century AD date⁴². Lastly there is a tombstone discovered in the vicinity of the *Episcopium* at Portus⁴³ which refers to an individual who had served in the fleet based at

²⁸ MAR 2002.

²⁹ ZEVI 1972.

³⁰ CEBEILLAC-GERVASONI 1994, 49-50.

³¹ CIL XIV 4549, 38; BECATTI 1961.

³² CEBEILLAC-GERVASONI 1994, 50-52.

³³ CEBEILLAC-GERVASONI 1994, Fig. 1.

³⁴ The only evidence comes from Egyptian papyri of 2nd and 3rd century AD date which mention the arrival of grain ships from Alexandria to Ostia, Portus and Puteoli: see for example those collected by CASSON 1995, 297-299.

³⁵ MEIGGS 1973, Plate XVIII.c.

³⁶ IG XIV, 918. The precise find spot at Portus is not known (SACCO 1984, 12-13).

³⁷ SACCO 1984, no. 2. Commodus's name was originally obliterated in act of *damnatio memoriae* but was reinscribed under Septimius Severus (SACCO 1984, 13).

³⁸ For example ZEVI 2000, 512ff; id. 2001: 175-72; MAR 2001, 100.

³⁹ CASSON 1995, 297-299.

⁴⁰ SACCO 1984, no.16.

⁴¹ SACCO 1984, no. 21.

⁴² SACCO 1984, 23. Less certain are SACCO 1984, no 39 from Sant Hippolito on the south bank of the Fossa Traiana, and SACCO 1984, no. 63.

⁴³ CIL XIV.239.

Misenum and who seems to have had some kind of Egyptian connection⁴⁴. There is also limited evidence for changes in the topography of Portus that might have derived from the establishment of an Alexandrine trading community. It takes the form of the so-called *Isaeum* that lies on the south side of the *Fossa Traiana* on the northern edge of the Isola Sacra near the ancient coastline. Excavations here⁴⁵ revealed a large complex that comprised a bath block of late 2nd century AD date, that was followed by a 4th century AD building with mid 5th century AD restorations. Its identification as an *Isaeum* derives from an association of the building with two pieces of sculpture found in the *Fossa Traiana*⁴⁶. One was a 2nd century AD basanite statue of Isis and the other a bearded serpent similarly in black marble. Furthermore an inscription on an architrave also from the *Fossa Traiana* records the restoration of a temple to Isis in AD 376-7 by the emperors Valentinian, Valens and Gratian⁴⁷.

The evidence from Ostia is similarly sparse. Despite his claim that the diversion of the Alexandrian grain fleet from Puteoli to Portus was the motive for Trajan's enlargement of Portus, Meiggs was only able to mention a few Alexandrians or Egyptians from the port⁴⁸, notably two people named on the roll of the shipbuilders guild (*corpus fabrum navalium*)⁴⁹, although other easterners are noted. To this should be added L. Valerius Firmus, an individual of Alexandrine origin, who was at once priest of Ostian Isis and the Mater Deorum from Trastevere⁵⁰. The most important evidence comes from the *Piazzale delle Corporazione*, around which were arranged sixty *stationes* belonging to different commercial groups most of which date to some time between the mid 2nd and end of the 2nd or beginning of the 3rd centuries AD. Amongst the earliest were two *stationes* belonging to Egyptian groups involved in the commerce of wild beasts and which dated to c. the mid 2nd century AD. The centrepiece of the mosaic floor of *statio* 27 appears to depict the Nile and its tributaries⁵¹ and dates to the mid 3rd century AD, while the mosaic floor of *statio* 26 depicts an elephant, stag and boar⁵². However, the mosaic of a third Egyptian *statio* bears the inscription *ale]XANDRIN* which has been interpreted as reading *navicularium Alexandrinorum*⁵³, and dates to the end of the 2nd and beginning of the 3rd centuries AD. Becatti refers back to Meiggs' arguments in suggesting that the function of this *statio* is best interpreted in light of the intensification of the contacts, predominately in the context of the commerce of grain, between Ostia and Alexandria after the creation of the Trajanic port at Portus⁵⁴. The comparatively poor showing of Egyptians in the epigraphic record of Portus and Ostia may be explained in part by a recent observation⁵⁵ that Egyptians at Rome lacked any form of communal organization. Cults to such deities as Isis and Serapis might have united those that were present – but only along with people of other backgrounds⁵⁶.

Changes to the urban fabric of Ostia, however, do provide clearer evidence for the establishment of an Alexandrine community. The *fasti ostienses* record the construction of a temple to Serapis at Ostia on the 24th January AD 127⁵⁷, a building which archaeological research has shown to have been located close to the river port in the western part of the site, close to Trajanic *horrea* associated with grain storage⁵⁸. Analysis of the epigraphic evidence from the site suggests that the temple was constructed at the expense of Caltillus

⁴⁴ The text reads: D.M./Q. Lusius.Rufus/III.Mercurio/Mil.Ci.Pr.Mis./[...a]egyptus (CIL XIV.4290)

⁴⁵ LAURO 1993, 171ff.

⁴⁶ ZEVİ 1997.

⁴⁷ ZEVİ 2006.

⁴⁸ MEIGGS 1973, 216.

⁴⁹ CIL XIV 256; RICCI 1993, 90.

⁵⁰ CIL XIV.429; NOY 2000, 250 and fn 376; FLORIANI SQUARCIAPINO 1962, 15, 30.

⁵¹ BECATTI 1961, no. 108, 74; BECATTI 1961a, Tav. CLXXXIV.

⁵² BECATTI 1961, no. 109, 74-75; BECATTI 1961a: Tav. XCIII.

⁵³ BECATTI 1961, no. 116, 78-79.

⁵⁴ BECATTI 1961, 79.

⁵⁵ NOY 2000, 250-251.

⁵⁶ NOY 2000, 245-251 discusses the relatively sparse epigraphic and literary evidence for Egyptians at Rome. Note, however, the existence of one individual with the cognomen Alexandrinus from a tombstone from Ostia: CIL XIV.478 (T. Flavio Alexandrino), while another tombstone (CIL XIV.479) mentions an individual who may have had an Alexandrian origo (/Aphrodisio.Arprocratonis. F/ Alex).

⁵⁷ BARGAGLI & GROSSO 1997.

⁵⁸ ZEVİ 2000; MAR 2001.

P[...], who belonged to an Alexandrian immigrant family⁵⁹ that may have moved to Ostia as a consequence of the economic activity ushered in with the Trajanic enlargement of Portus⁶⁰. It is an event that has been interpreted as the formal arrival of the Serapis cult at Ostia, and which is perhaps best understood in the context of the presence of a substantial group of Alexandrian followers at Ostia – something that was a consequence of the diversion of the Alexandrian grain fleet from Puteoli to Ostia⁶¹.

It is worth noting, however, that while there is good evidence for the existence of an Alexandrian community involved in servicing the grain trade at Ostia from the Hadrianic period onwards, other traded Egyptian goods are hard to find. A recent analysis of ceramic deposits at both Ostia and Portus shows that while Egyptian wine amphorae were present at both sites during the course of the 1st and 2nd centuries they were always in small quantities⁶².

The Evidence from Puteoli

The decline of Puteoli was another argument deployed by Meiggs in support of his hypothesis that the Trajanic enlargement of Portus was to be explained by the diversion of the Alexandrian grain fleet. He argued that this would have marked an important stage in the port's decline and that the limited epigraphic evidence for annona officials at Puteoli was best explained in terms of residual functions⁶³.

Other studies, however, have taken an opposing view. The most important of these was put forward by D'Arms⁶⁴ who reviewed the historical, archaeological and epigraphic evidence, particularly a 4th century text which referred to a *procurator portus puteolanorum* at the port⁶⁵ and argued that it retained some kind of annonary role after the completion of Trajanic works at Ostia and Portus. Camodeca⁶⁶ has taken this suggestion one stage further and argued that the post could have originated in the early principate. He has also reinterpreted the text of one inscription from Puteoli as commemorating a hitherto unknown *praefectus annonae*⁶⁷ of late 2nd century AD date. He supports this view with a review of other possible evidence for the existence of annonary organization at Puteoli. One key piece of evidence is an inscription⁶⁸ on a large marble statue base in the forum of the colony which was dedicated by an *Augusti servus dispensator a frumento Puteolis et Ostis* – which could be taken as evidence for the existence of representatives of the fiscus at Puteoli as well as at Ostia. Indeed as Tchernia⁶⁹ reminds us the continued annonary presence at Puteoli, as well as the establishment of the Trajanic port at *Centumcellae*, is logical and best understood in terms of Rome's continued need for as much warehousing space as possible during the 2nd and into the 3rd centuries AD.

Side by side with these arguments in favour of the existence of some kind administrative infrastructure for the annona during the principate, there is also evidence that public building continued to be constructed at Puteoli throughout much of the 2nd century AD. Sommella⁷⁰ for example, argues that Puteoli was continually monumentalized from the Neronian down into at least the Antonine periods, while

⁵⁹ For example another family member, Caltilia, makes a dedication to Isis Bubastis and styles herself as Bubastiaca etc (CIL XIV.21=ILS 4373=p.248, n. 534)

⁶⁰ MAR 2001, 98-100; this "economic upswing" is discussed by HEINZELMANN in this session (link).

⁶¹ Zevi 2000, 510ff; 2001, 176.

⁶² Rizzo 2009.

⁶³ Meiggs 1973, 60-61, 301.

⁶⁴ D'Arms 1975.

⁶⁵ D'Arms 1972.

⁶⁶ Camodeca 1994, 113-115.

⁶⁷ [...]Iulianus (Camodeca 1994)

⁶⁸ CIL X 1562.

⁶⁹ Tchernia 2000, 781-782.

⁷⁰ Sommella 1978, 80ff.

Camodeca⁷¹ suggests that the Antonine to Severan periods saw the construction of a number of major new public buildings at imperial expense as well as being a period of intense epigraphic activity.

Portus, Ostia and western Mediterranean Contacts

All of the above arguments referring to Portus and Ostia have been developed from indirect evidence owing to the fact that grain has only been very rarely documented in the archaeological record at both sites⁷². Their strength is that they inform us about the institutional changes that might have expected to have taken place as a consequence of the diversion of the grain fleet from Puteoli after the enlargement of Portus by Trajan. Brickstamps from Portus would seem to suggest that in terms of storage infrastructure this could not really have happened before the latter years of Trajan's reign, while the evidence from the Serapeum could be taken to suggest that Egyptian communities of the kind that one might expect to have been present at Ostia to help "service" the Alexandrian grain fleet points to a later date in Hadrian's reign. The only sure evidence, however, remains the inscription of Commodan date that refers to the Alexandrian *stolos* and still acts, therefore, as a good *terminus post quem*.

The weaknesses of these earlier arguments, however, is that they have not looked at other forms of evidence, such as imported ceramics. Since these are a very common proxy indicator for the movement of larger bulk cargoes across the Mediterranean, any significant changes in the proportions of Egyptian, or eastern, material to that from the central and western Mediterranean may have a bearing upon the movement of grain. Indeed they should act as a spur to review epigraphic and other evidence for individuals from the central and western Mediterranean, such as the Hispaniae and Africa, and the overall importance of these regions in supplying Portus and Ostia.

Recent excavations at both Portus and Ostia have begun to uncover ceramic deposits broadly dating to the 2nd and 3rd centuries AD. While the published sample is still small, and we are still a long way from being able to understand the "overall" pattern of supply to either centre, it does seem as if the market was very heavily dominated by imports from Africa and Tripolitania, with eastern imports playing a lesser role. The best evidence comes from Ostia. Recent DAI-AAR excavations provided a reasonable sample of material from three horizons⁷³. In Horizon 1 (AD 50-100) African amphorae accounted for 12% of the total and east Mediterranean amphorae for 3% of the total; in Horizon 2 (AD 100-150) African imports rose to 16% and east Mediterranean material to 5%; in Horizon 3 (AD AD 280-350), African imports rose to 50% of the total and east Mediterranean material to 20%. Material from Portus is less well published. However the amphorae from a surface collection in the area between the Trajanic basin and the Tiber were dominated by material of north African origin, with lesser amounts from the east Mediterranean⁷⁴. While it can be argued that surface material is a less reliable indicator of import trends than excavated deposits, a similar picture of north African dominance is evident in a large deposit of amphorae of Severan date from the eastern edge of the *Palazzo Imperiale*⁷⁵. Here 80% of the material derived from Tripolitania (Tripolitana II and III) and Africa Byzacena (Africana IA and IB). The same may be true of material from early deposits beneath the late antique Basilica Portuense⁷⁶.

This evidence is as yet a long way from being conclusive although it does have potential as a means of gauging the growth of the Egyptian, or at least the east Mediterranean, influence that one might have expected to have been contingent upon the supposed arrival of the Alexandrian grain fleet from the Trajanic period onwards. The strong presence of amphora imports from Africa and Tripolitania suggests that these regions may have been more important as a source of supply than Egypt or the east. One caveat however is

⁷¹ CAMODECA 1993.

⁷² Current excavations at the *Palazzo Imperiale*, however, have revealed good evidence in secondary archaeological contexts.

⁷³ MARTIN 2008.

⁷⁴ MELE 2005.

⁷⁵ ZAMPINI Forthcoming: US 1024.

⁷⁶ DI GIUSEPPE Forthcoming.

that since amphorae were a large bulk cargo they would have been unlikely to have been transported on the same ships as the Egyptian grain, although this needs to be demonstrated. This being so, the rarity of Egyptian and east Mediterranean amphorae at Ostia and Portus does not necessarily argue against the presence of the Alexandrian grain fleet from the Trajanic period onwards. The massive presence of marble from Egypt, Asia Minor, Greece and elsewhere in the east passing through Ostia and Portus to Rome⁷⁷ is also eloquent testimony to the significance of east Mediterranean trade, particularly from the later 1st century AD onwards.

Nevertheless the strength of commercial connections between north Africa and Portus and Ostia that is evident from the ceramics may be symptomatic of a significant commercial relationship. In the first instance there are grounds for suggesting that Africa would have been a more important source of grain for Rome than Egypt⁷⁸, particularly in the later 2nd century AD⁷⁹. Secondly, there is evidence that it is individuals of African, rather than Egyptian, origin that came to dominate the economic life of Ostia. In the later 2nd century AD reconstruction the *Piazzale delle Corporazioni* at Ostia most of the identifiable *stationes* along the eastern side refer to African traders and shippers⁸⁰, notably the *Naviculari Africani*⁸¹, *Naviculari Misuenses*⁸², *Naviculari Mu[s]lu[vit]a[ni]*⁸³, *Naviculari H(ippone)] Diarry(to)*⁸⁴, *Stat Sabratensium*⁸⁵, *Naviculari Gummitani de Suo*⁸⁶, *Naviculari Karthaginenses de Suo*⁸⁷, *N(aviculariis) F(eliciter)/[navic]ulari Syllecti[ni]*⁸⁸, *Naviculari Curubitani*⁸⁹, with a lesser number from other parts of the Mediterranean, including Gaul and Sardinia along the other sides, in addition to Egypt⁹⁰. While the precise relationship between the *collegia* that owned these *stationes* and the *Praefectus annonae* is unclear⁹¹, there is little doubt that they are symptomatic of the key role played by African shippers and merchants in supplying foodstuffs, including grain, to Rome. There were also *domini* of African origin resident at Ostia who were closely involved with the Ostian *collegia* involved in supplying foodstuffs to Rome, as well as families of African and Numidian origin who had representatives at Ostia that played key roles as the heads of *collegia*, magistrates and decurions⁹². Last but not least analysis of the broad body of inscriptions from the port makes it clear that Africans comprised a significant proportion of the large immigrant share of the population⁹³.

Conclusions

This paper reviews the argument that the Trajanic enlargement of Portus is to be explained in terms of the diversion of the Alexandrian grain fleet from Puteoli to Portus and suggests that at the reality may

⁷⁷ The provenance of marble from one part of Portus is explored by PENSABENE 1994, while PENSABENE 2009 explores aspects of marble supply and use at both Ostia and Portus.

⁷⁸ RICKMAN 1980, 231-235.

⁷⁹ When there is evidence, possibly apocryphal, for the creation of an African grain fleet: SHA Commodus pp.175: "He did organize the African fleet, which was to be in reserve if the Alexandrian grain-supply happened to fail. He even gave Carthage the name Alexandria Commodiana Togata, after naming the African fleet Commodiana Herculea as well." This issue and its possible impact upon the topography of the harbour at Carthage is discussed by HURST in this session.

⁸⁰ BECATTI 1961; CEBEILLAC GERVASONI 1996, 561-563.

⁸¹ BECATTI 1961, no. 82.

⁸² BECATTI 1961, no. 92.

⁸³ BECATTI 1961, no. 93.

⁸⁴ BECATTI 1961, no. 94.

⁸⁵ BECATTI 1961, no. 95.

⁸⁶ BECATTI 1961, no. 98.

⁸⁷ BECATTI 1961, no. 99.

⁸⁸ BECATTI 1961, no. 105.

⁸⁹ BECATTI 1961, no. 112.

⁹⁰ Details of the mosaics in many of the *stationes* are unclear making it hard to gain a true quantitative measure of the proportion of African shippers/merchants to those from other provinces.

⁹¹ PAVOLINI 1986, 83-90.

⁹² CEBEILLAC GERVASONI 1996, 561-563.

⁹³ SALOMIES 2002.

have been more complicated. Meiggs' original argument was based upon slim evidence that does little more than show that the fleet had arrived by the later 2nd century AD at the latest.

Nearly forty years after the publication of *Roman Ostia* and the accumulation of much new information, our understanding of the issue is still heavily reliant upon indirect evidence, much of which comes from Ostia, rather than Portus. While there is indeed evidence for the existence of an Alexandrian community at Ostia from the reign of Hadrian onwards, and for the arrival of Alexandrian grain in the course of the 2nd century AD, there is also evidence for a numerically far greater number of families from Africa and Numidia playing a key role as middlemen between African grain producers and the *Praefectus Annonae* at Rome. This markedly strong north African element in the population of 2nd century AD Ostia is paralleled by an abundant array of north African imports, with African fish sauce and olive oil amphorae, together with African Red Slip ware dominating the market at the expense of products from the Nile Valley in particular or the eastern Mediterranean in general. All of this evidence suggests that there is perhaps a danger in over-estimating the significance of Egyptian grain to Rome, and that we ought to perhaps reassess the strategic importance to Rome of grain from Africa, and indeed, other parts of the Mediterranean. As a consequence, an alternative reading of the reason for Trajan's enlargement of Portus might be that it was a response to the need for a general increase in the volume of the supply of grain and other commodities from across the Mediterranean, and greater efficiency in its transshipment to Rome, rather than simply a diversion of grain from Puteoli.

While it might be argued that this conclusion may be little more than a nuance, it is important in making us draw back from looking narrowly at a single commodity from a single region, and to focus instead upon the broader relationship of Portus to the Mediterranean as a whole. Indeed there are good grounds to suggest that the enlargement of Portus under Trajan created a huge market opportunity for producers, traders and shippers across the Mediterranean, thereby contributing to a growth in economic production in the Roman Mediterranean during the 2nd century AD⁹⁴.

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Bibliography

Abbreviations

CIL *Corpus Inscriptionum Latinarum*. (Berlin, 1863)
EPRO *Etudes Préliminaires aux Religions Orientales dans l'Empire romain* (Leiden)
IG *Inscriptiones Graecae* (Berlin, 1873)

⁹⁴ KEAY Forthcoming 2010.

ILS *Inscriptiones Latinae Selectae*
SHA *Scriptores Historiae Augustae*

References

- BARGAGLI B & GROSSO C., 1997. *I Fasti Ostienses. Documento della Storia di Ostia. Itinerari Ostiensi VIII*. Soprintendenza Archaeologica di Ostia, Rome.
- BECATTI G., 1961. *Scavi di Ostia. Mosaici e pavimenti marmorei. Volume quarto*. Istituto Poligrafico dello Stato/Libreria dello Stato, Rome.
- BECATTI G., 1961a. *Scavi di Ostia. Mosaici e pavimenti marmorei. Volume quarto (Tavole)*. Istituto Poligrafico dello Stato/Libreria dello Stato, Rome.
- BRUUN C., 2002. L'amministrazione imperiale di Ostia e Portus. In C. BRUUN and A. GALLINA ZEVI (eds.), *Ostia e Portus nelle loro relazioni con Roma (Acta Instituti Romani Finlandiae, 27)*, 161-192.
- BLOCH H., 1947. *I Bolli laterizi e la storia edilizia romana. Contributi all'archeologia e alla storia romana*. Comune di Roma, Rome.
- CAMODECA G., 1993. La società e le attività produttive. In F. ZEVI (ed.), *Puteoli*. Banca di Napoli, Naples, 31-50.
- CAMODECA G., 1994. Puteoli porto annonario e il commercio del grano. In *Le ravitaillement en blé de Rome et des centres urbains des débuts de la République jusqu'au Haut Empire. Actes du colloque internationale de Naples (1991). Naples-Rome: Collection Jean Berard 11/Collection de l'École française de Rome 196*. École française de Rome, Rome, 103-128.
- CASSON L., 1995. *Ships and Seamanship in the Ancient World*. John Hopkins Press, London/Baltimore.
- CEBEILLAC-GERVASONI M., 1994. Ostie et le blé au IIe siècle ap. J.-C. In *Le ravitaillement en blé de Rome et des centres urbains des débuts de la République jusqu'au Haut Empire. Actes du colloque internationale de Naples (1991). Naples-Rome: Collection Jean Berard 11/Collection de l'École française de Rome 196*. École française de Rome, Rome, 47-59.
- CEBEILLAC-GERVASONI M., 1996. Gli "Africani" ad Ostia, ovvero "le mani sulla città". In C. MONTEAONE (ed.), *L'incidenza dell'antico. Studi in memoria di Ettore Leppore III*. Naples, 557-567.
- CEBEILLAC-GERVASONI M., 2002. Rapports institutionnelles et politiques d'Ostie et de Rome. *MEFRA Antiquité*, 114(1), 59-86.
- COARELLI F., 1994. Saturnino, Ostia e l'annona. Il controllo e l'organizzazione del grano tra II e I secolo a.C. In *Le ravitaillement en blé de Rome et des centres urbains des débuts de la République jusqu'au Haut Empire. Actes du colloque internationale de Naples (1991). Naples-Rome: Collection Jean Berard-Collection de l'École Française de Rome 196*. École française de Rome, Rome, 34-45.
- DELAINE J., 2002. Building Activity in Ostia in the second century AD. In C. BRUUN and A. GALLINA ZEVI (eds.), *Ostia e Portus nelle loro relazioni con Roma. Acta Instituti Romani Finlandiae 27*. Institutum Romanum Finlandiae, Rome, 41-101.
- DE NUCCIO M. and UNGARO L., 2006. *I marmi colorati*. Marsilio, Rome.
- DI GIUSEPPE H., Forthcoming 2010. I contesti ceramici della Basilica Portuense. Dati preliminari. In S. KEAY and L. PAROLI (eds.), *Portus and its Hinterland. Recent Archaeological Research. Archaeological Monographs of the British School at Rome*. British School at Rome, London.
- D'ARMS J., 1972. A New Inscribed base from 4th century Puteoli. *Parola del Passato*, XXVII, fasc. 145, 255-270.
- D'ARMS J., 1975. Puteoli in the Second Century of the Roman Empire: A Social and Economic Study. *JRS*, 64, 104-124.
- FLORIANI SQUARCIAPINO M., 1962. I culti orientali a Ostia. *EPRO* 3. Leiden.
- HEINZELMANN M., 2002. Bauboom und urbanistische Difizite – zur städtebaulichen Entwicklung Ostias im 2. Jh. In C. BRUUN and A. GALLINA ZEVI (eds.), *Ostia e Portus nelle loro relazioni con Roma. Acta Instituti Romani Finlandiae 27*. Institutum Romanum Finlandiae, Rome, 103-121.

- HOUSTON G.W., 1980. The Administration of Italian Seaports during the First Two Centuries of the Roman Empire. In J.H. D'ARMS and E.C. KOPFF (eds.), *The Seaborne Commerce of Ancient Rome. Studies in Archaeology and History*. Memoirs of the American Academy in Rome XXXVI. American Academy in Rome, Michigan, 157-172.
- KEAY S., MILLETT M., PAROLI L. and STRUTT K., 2005. *Portus. An Archaeological Survey of the Port of Imperial Rome. Archaeological Monographs of the British School at Rome 15*. British School at Rome, London.
- KEAY Forthcoming 2010. Portus in Context. In S. Keay (ed.), *Port Networks in the Roman Mediterranean. Archaeological Monographs of the British School at Rome*. British School at Rome, London.
- LAURO M.G., 1993. Prospettive di ricerca e problematiche di tutela all'Isola Sacra, *Archeologia Laziale*, XI, 167-174.
- LUGLI G. and FILIBECK G., 1935. *Il Porto di Roma imperiale e l'Agro Portuense*. Officine dell' Istituto Italiano d' Arti Grafiche, Bergamo.
- MAR R., 2001. *El Santuario de Serapis en Ostia. Documents d'Arqueologia Clàssica 4*. Universitat Rovira i Virgili, Tarragona.
- MAR R., 2002. Ostia: Una ciudad modelada por el comercio. *MEFRA Antiquité*, 114(1), 111-180.
- MARTIN A., 2008. Imports at Ostia in the Imperial Period and Late Antiquity: The Amphora Evidence from the DAL-AAR Excavations. In R. HOHLFELDER (ed.), *The Maritime World of Ancient Rome. Memoirs of the American Academy at Rome. Supplementary Volume VI*. University of Michigan, Ann Arbor, 105-118.
- MEIGGS R., 1973. *Roman Ostia*. Clarendon Press, Oxford.
- MELE C., 2005. Amphorae. In S. KEAY, M. MILLETT, L. PAROLI, and K. STRUTT (eds.), *Portus. An Archaeological Survey of the Port of Imperial Rome. Archaeological Monographs of the British School at Rome 15*. British School at Rome, London, 223-235.
- NOY D., 2000. *Foreigners at Rome. Citizens and Strangers*. Duckworth, London.
- PAROLI L. and RICCI G., Forthcoming 2010. Scavi presso l'Antemurale' di Porto. In S. KEAY and L. PAROLI (eds.), *Portus and its Hinterland. Recent Archaeological Research. Archaeological Monographs of the British School at Rome*. British School at Rome, London.
- PAVOLINI C., 1986. *La vita quotidiana a Ostia*. Laterza, Rome.
- PENSABENE P., 1994. *Le vie del marmo. Itinerari ostiensi VII*. Soprintendenza archeologica di Ostia, Rome.
- PENSABENE P., 2009. *Ostiensium marmorum. Decus et décor. Studi architettonici, decorativi e archeometrici*. L'Erma di Bretschneider, Rome.
- RICCI C., 1993. Egiziani a Roma. *Aegyptus*, 73, 71-91.
- RICKMAN G., 1971. *Roman granaries and store buildings*. Cambridge University Press, Cambridge.
- RICKMAN G., 1980. *The Corn Supply of Ancient Rome*. Clarendon Press, Oxford.
- RIZZO G., 2009. Le importazioni romane ed ostiensi di anfore egizie tra il I e il VII secolo d.C. In S. MARCHAND and A. MARANGOU (eds.), *Amphores d'Égypte de la Basse Époque à l'époque arabe. Cahiers de la Céramique Égyptienne 8. Volume I*. Institut française d'archéologie orientale, Cairo, 657-666.
- SACCO G., 1984. *Inscrizione greche d'Italia. Porto*. Edizioni di Storia e Letteratura, Rome.
- SALOMIES O., 2002. People in Ostia: some onomastic observations. In C. BRUUN & A. GALLINA ZEVI (eds.), *Ostia e Portus nelle loro relazioni con Roma. Acta Instituti Romani Finlandiae 27*. Institutum Romanum Finlandiae, Rome, 135-159.
- SOMMELLA P., 1978. Fasi di sviluppo. Forma e Urbanistica di Pozzuoli romana. *Puteoli. Studi di Storia Antica*, II, 77-84.
- TESTAGUZZA O., 1970. *Portus: illustrazione dei Porti di Claudio e Traiano e della città di Porto a Fiumicino*. Julia Editrice, Roma.
- TCHERNIA A., 2000. Athènes, Rome et leurs avant-ports: "megapoles" antiques et trafics méditerranéens. In R. ILBERT and C. NICOLET (eds.), *Megapoles méditerranéens. Géographie urbaine retrospective*. Maison méditerranéenne des sciences de l'homme/École française de Rome, Paris, 761-801.

- VERDUCHI P., 1996. Il patrimonio archeologico monumentale di Porto: osservazioni preliminari sulle strutture architettoniche. In V. MANNUCCI (ed.), *Il parco archeologico naturalistico del porto di Traiano*. Gangemi Editore, Rome, 55-60.
- VERDUCHI P., 2005. Some thoughts on the Infrastructure of the port of Rome. In S. KEAY, M. MILLETT, L. PAROLI, and K. STRUTT (eds.), *Portus. An Archaeological Survey of the Port of Imperial Rome*. Archaeological Monographs of the British School at Rome 15. British School at Rome, London, 248-257.
- ZAMPINI S., Forthcoming 2010. La ceramica dello scavo del *Palazzo Imperiale* di Portus. In S. KEAY and L. PAROLI (eds.), *Portus and its Hinterland. Recent Archaeological Research*. Archaeological Monographs of the British School at Rome. British School at Rome, London.
- ZEVI F., 1972. Ostia (Roma) - Scoperte archeologiche effettuate casualmente nei mesi di Settembre e Ottobre 1968, nell'Isola Sacra, presso la sponda della fiumara grande tra il ponte della Scafa e l'ansa – (Pianta catastale Comune di Roma, foglio 1065 sez B – mappa 17 – particelle 53 e 33). *Notizie degli Scavi di Antichità*, XXVI, 404-431.
- ZEVI F., 1993. *Puteoli*. Banca di Napoli, Naples.
- ZEVI F., 1997. Il cosidetto "Iseo di Porto" e la sua decorazione. In E.A. ARSLAN (ed.), *Iside. Il mito, il mistero, la magia. Catalogo della mostra*. Mondadori, Electa, Milano, 322-323.
- ZEVI F., 2000. Traiano e Ostia. In J. González (ed.), *Traiano, emperador de Roma: 509-547*. L'Erma di Bretschneider, Rome.
- ZEVI F., 2001. Parte II. Inscrizioni e personaggi nel Serapeo. In R.MAR (ed.), *El Santuario de Serapis en Ostia*. Documents d'Arqueologia Clàssica 4. Universitat Rovira i Virgili, Tarragona, 169-224.
- ZEVI F., 2006. Statua di Iside. In M. DE NUCCIO and L. UNGARO (eds.), *I marmi colorati*. Marsilio, Rome, 302-304.