

One of the most important controversies in Roman history is the assessment of the Roman economy, Bücher-Meyer controversy that goes back to the end of the 19th century<sup>1</sup>.

Bucher regarded the economic level of the ancient world as the most primitive domestically produced level. His argue was criticized by Meyer et al., who considered the economic activities in those days are to be "capitalistic". The scholars who stand the former are called primitivists, and those who are close to the latter are called modernists. The controversy has long continued, and it is believed that primitivists have been evaluated as having an orthodox position by Finley's work published in 1973<sup>2</sup>.

In recent years, critical views on this orthodox theory have been submitted again. As one of these new modernists, Temin said:

The Pax Romana extended around the Mediterranean and allowed trade and commerce to move freely. These underlying conditions lowered the costs of transporting and arranging for sale or distribution of products, like food and pottery, to be grown or made one place and consumed another.<sup>3</sup>

Kay also said:

There can be little doubt that successful warfare produced a major increase in the growth potential of the Roman Republican economy of the second and first century BC, and there is abundant evidence for aggregate growth occurring in the volume of output and exchange<sup>4</sup>.

In the light of such research context, it seems worthwhile to re-examine the Republican Ostia. The reason is that if economic growth centering on the city of Rome in the late Republic is expected, the corresponding change is likely to have occurred in Ostia. However, if there are historical materials that show such changes, the question is, of course, expected to be dealt with in previous studies.

I would like to present two points in response to this question. First, from the point of historical source, most of the relics excavated from the Ostia site are of the

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<sup>1</sup> On this controversy, Bücher-Meyer-Kontroverse, in *Der Neue Pauly* 13, 1999, S. 551-555.

<sup>2</sup> M. I. Finley, *The Ancient Economy, Sather Classical Lectures 43*, University of California Press, 1973(2<sup>nd</sup> ed. 1984).

<sup>3</sup> P. Temin, *The Roman Market Economy*, Princeton University Press, 2013, passim, p. 218.

<sup>4</sup> P. Kay, *Rome's Economic Revolution*, Oxford University Press, 2014, p. 324, cf. p. 327.

imperial period. Relics of republican Ostia is limited, so it is inevitable that research tends to be concentrated in the imperial period, which is rich in high quality archaeological materials, and that republican research tends to be inefficient. Therefore, it seems that there are archaeological materials of the republic during the period not properly positioned in the historical context of that time. One such thing is the relics from La Longarina.

Second, the port function of the Republican Ostia has been less appreciated until the establishment of the Portia Ostiae port at the right bank of the Tiber River by Claudius and Trajan. Such a situation has been confirmed from the Strabon's "Ostia: it is harbourless on account of the silting up which is caused by the Tiber, since the Tiber is fed by numerous streams."<sup>5</sup> For the most part, this assessment would not be wrong. However, even if fundamental reforms to late Republican economic growth have to be carried out during the imperial period, there should be some form of temporary expedient. The reason why this has been overlooked is because of the superiority of primitivists mentioned above.

From the standpoint of primitivists, the trade level at that time may have been underestimated. However, as Kay says, if economic growth is already expected in the 2nd century BCE, Republican Ostia's assessment should be revised. With the expansion of the empire since the middle of the republic, the population of the capital city of Rome has also greatly increased<sup>6</sup>. In addition, it is possible that the changes in the economic structure would have resulted in the establishment of a brand of Italian wine, like Falernum wine from the middle of the first century<sup>7</sup>.

While the port function has been poor, Republican Ostia has been regarded as a bottleneck in the distribution to the city of Rome, while the old connection between Ostia and the city of Rome has long been known. Perhaps, this long-standing relationship has changed with the development of the Roman city in the late Republic. From this point of view, this paper seeks to investigate the possibility that the port function of Ostia in the

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<sup>5</sup> Strab. 231. However, note in following: "Now although it is with peril that the merchant-ships anchor far out in the surge, still, the prospect of gain prevails; and in fact the good supply of the tenders which receive the cargoes and bring back cargoes in exchange makes it possible for the ships to sail away quickly before they touch the river, or else, after being partly relieved of their cargoes, they sail into the Tiber and run inland as far as Rome, one hundred and ninety stadia."

<sup>6</sup> Population of the city of Rome had increased from about 200 thousands to 1 million in the last century of Roman Republic. N. Morley, *Metropolis and hinterland: the city of Rome and the Italian economy, 200 B.C. -A.D. 200*, Cambridge, Cambridge University Press, 1996, pp. 33-54.

<sup>7</sup> M. Washida, The Production of Brand-name Local Wines in Roman Italy, *Cultura Antiqua* 57-9, 2005, pp. 28-40.

Republic was higher than previously thought.

### Terrain around Ostia

As mentioned earlier, despite its importance, the study of Republican Ostia's trade was sluggish because there were few historical sources to indicate it. However, of course, research has not been conducted at all, and with regard to the location of the port of Republican Ostia, the northwestern part of the city area is considered to be dominant (see the background map)<sup>8</sup>.

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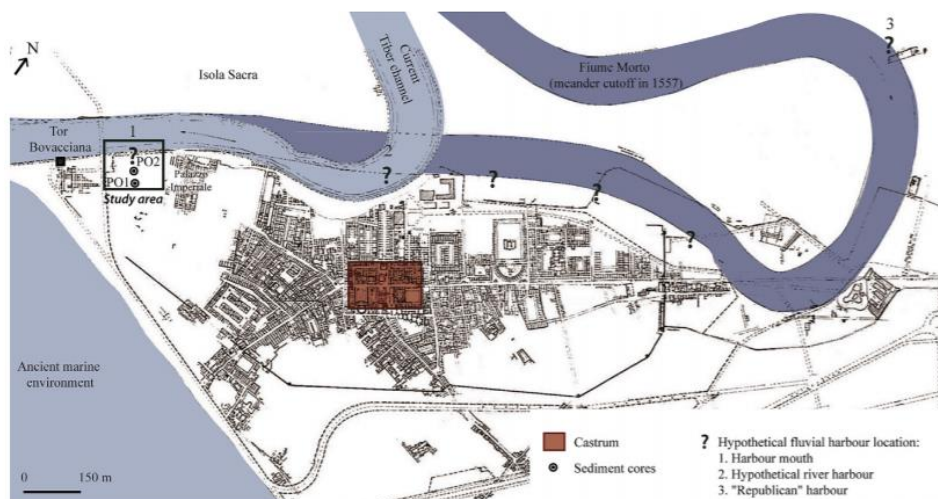


Fig. 3. Location map of Ostia Antica hypothetical river harbours.

However, it should be remembered that it is unclear whether there was only one republic port. It is assumed that port facilities may have been present at multiple locations, starting with archeological sites that were likely to be republic port facilities in the upper right of the figure above. However, more important than that, La Longarina mentioned above. In this article, I will focus on this area and proceed with the study.

Before we talk about La Longarina, we need to supplement Ostia's terrain. The area around Ostia was a wetland leading to the sea. This approximately 280 ha wetland is called Stagni di Ostia<sup>9</sup>. At the present position, via Agostino Chigi, which runs northwest along the FS Roma-Lido line, via del Fosso di Dragoncello, which runs southeast, via dei Pescatori, which faces the South, and Castell Fusano, which faces the western areas. This means that Ostia was surrounded by water not only in the Tiber

<sup>8</sup> M. Heinzemann and A. Martin, "River port, navalia, and harbour temple at Ostia: new results of a DAI-AAR Project", *Journal of Roman Archaeology* 15, 2002, pp. 5-19, J.-P. Goiran et al., "Geoarchaeology confirms location of the ancient harbor basin of Ostia (Italy)", *Journal of Archaeological Science* 41, 2014, pp. 389-398, p. 391, fig. 3.

<sup>9</sup> <http://iltaoaroma.altervista.org/stagni-di-ostia-longarina/>

River in the north, in the Tyrrhenian Sea in the southwest, but also in the east surrounded by Stagni di Ostia.

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Fig. 1. General location map of the Tiber Delta.

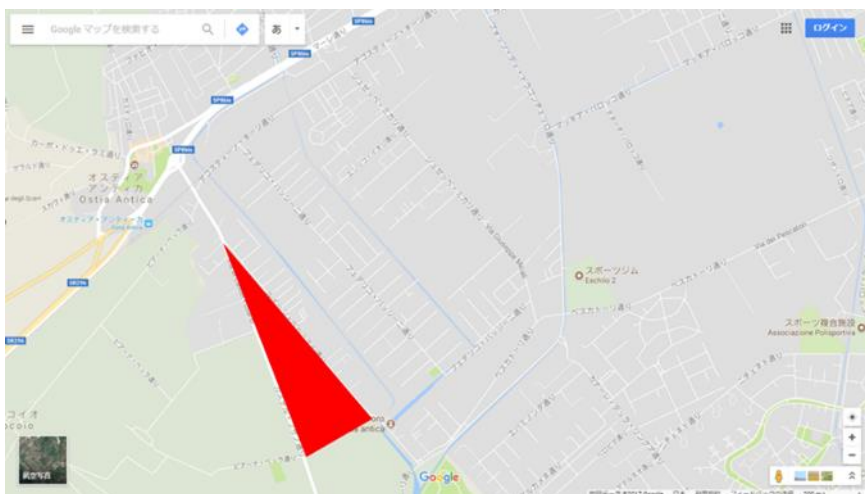
The wetland was also connected to the sea by the canal running along to the aforementioned via dei Pescatori. This area has been drained in the late 19th century, but it still needs constant drainage. Although there are many wetlands connected to the sea by natural and artificial waterways like this, along the coast of the Tyrrhenian Sea in the central part of the Italian peninsula, it can be also said to the Stagni di Ostia. According to the results of recent geography, the depth of the Stagni di Ostia is about 3.5-4.5m, and it is pointed out that it could function as a natural refuge port<sup>10</sup>. Although there is no evidence that the Stagni di Ostia plays a role as a port on a daily use, I would like to point out only that possibility.

### La Longarina<sup>11</sup>

<sup>10</sup> C. Vittori et al., Palaeoenvironmental evolution of the ancient lagoon of Ostia Antica (Tiber delta, Italy), *Journal of Archaeological Science* 54, 2015, pp. 374-384.

<sup>11</sup> On La Longarina: M. Heinzelmann, „Beobachtungen zur suburbanen Topographie Ostias, Ein orthogonales Strassensystem im Bereich der Panabella“, *Mitteilungen des Deutschen Archäologischen Instituts* 105, 1998, S. 175-225, Beilage 1. Cf., E. Rivello, “Terra Sigillata italica dalla Longarina (Ostia antica, Roma)”, *Rei Cretariae Romanae Fautorum* 38, 2003, pp. 69-72, S. Panuzi, La laguna di Ostia: produzione del sale e trasformazione del paesaggio dall'età antica all'età moderna, *Les Mélanges de l'École française de Rome - Moyen Âge* 125-2, 2013, <https://mefrm.revues.org/1507>, Goiran et al., op. cit., C. Vittori et al., op. cit., C. Pepe et al., Late Holocene pollen record from Fiume Morto (Dead River), a palaeomeander of Tiber River near Ancient Ostia (central Italy), *Journal of Paleolimnology* 56, 2-3, 2016, pp. 173-187, <http://iltaoaroma.altervista.org/stagni-di-ostia-longarina/>.

La Longarina is located in the eastern suburbs of the current Ostia Antica ruins, next to the northwest of the Stagni di Ostia. It is a triangular area surrounded by the current via Luigi Pernier, via di Castel Fusano, and via del Fosso di Dragoncello.



Excavations in this area have been conducted twice, in 1974-1975 and in 2005<sup>12</sup>. The former site(longarina1) is located at the northern end of the triangle, the latter one(longarina 2) lie near the bottom. Most of the research on La Longarina is based only on the former, and it is seldom to use the results of the latter survey<sup>13</sup>.

To supplement less information on longarina2, I have searched on July 3rd, 2008 of *Ostia Archeology News*<sup>14</sup> on the website operated by the Friends of Roman Ostia Foundation (represented by Mary Jane Cuyler, Honorary Associate at the University of Sydney)

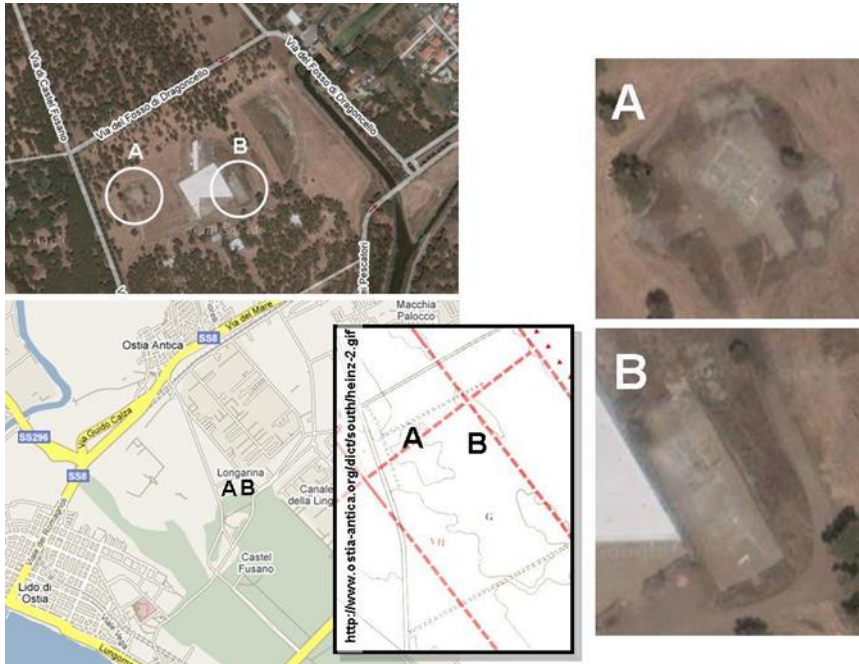
Discovery of a villa and a possible wharf: Inside Castel Fusano pine forest, Italian police blocked in April 2007 the building of a swimming pool and of a shopping centre. Near them were discovered a Roman villa rustica ("A" on the map) and another

<sup>12</sup> A. Hesnard, “Un Dépôt Augustéen D'amphores à La Longarina, Ostie (An Augustan Deposit of Amphoras at La Longarina, Ostia)”, in: J. H. D'Arms, E. C. Kopff, *The Seaborne Commerce of Ancient Rome: Studies in Archaeology and History, Memoirs of the American Academy in Rome* 36, 1980, pp. 141-156, L. D'Alessandro, S. Pannuzi, “Le anfore dello scavo di Longarina 2 ad Ostia antica (RM)”, in: R. Járrega, P. Berni(eds.), *Amphorae ex Hispania: paisajes de producción y consumo : III Congreso internacional de la Sociedad de Estudios de la Cerámica Antigua (SECAH) - Ex Officina Hispana (Tarragona, 10-13 de diciembre de 2014), Monografías Ex Officina Hispana III*, Institut Català d'Arqueologia Clàssica, 2016, pp. 530-537.

<sup>13</sup> E.g., A. Tchernia, *The Roman and Trade*, Oxford University Press, 2017, pp.307-309.

<sup>14</sup> <http://www.ostia-antica.org/archnews.htm> 3 July 2008.

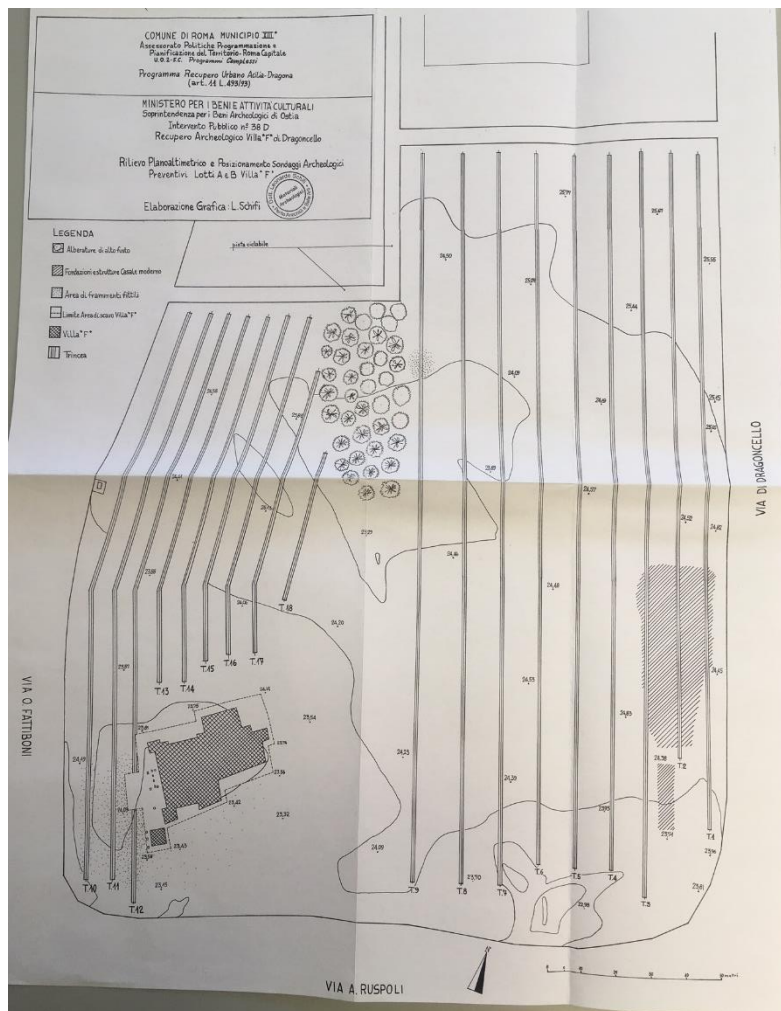
building, that might be a wharf of the ancient marsh of Ostia ("B" on the map). The area is included in the Capitol Camping, part of the Baia Holiday group. The discoveries have not yet been published. Source: Andrea Schiavone.



This discovery seemed to be interesting, because this villa could be seen as a trading hub that did not go through the port facilities (possibly also storage facilities) in the city of Ostia. Although this possible wharf seems to be interesting, there is not the follow-up report on this discovery. So I have checked the excavation daily report at the Ostia Archaeological Bureau<sup>15</sup>. According to folios (No. 1-7) on June 8-16 2008, it was the base of a modern building abandoned in the late 1980s<sup>16</sup>.

<sup>15</sup> Comune di Roma Municipio XIII, Assessorato Politiche Programmazione e Pianificazione del Territorio-Roma Capitale, U.O.2-S.C., Programmi Complessi, Programma Recupero Urbano Acilia-Draagona, (art. 11 L. 493/93), Ministro per i Beni e attività culturali, Soprintendenza per i Beni archeologici di Ostia, Intervento Pubblico N° 38D, Recupero Archeologico Villa "F" di Dragoncello, Rilievo Planoaltimetrico e Posizionamento Sondaggi Archeologici, Preventivi Lotti A e B Villa "F", Elaborazione Grafica: L. Schifi

<sup>16</sup> "Presso l'estremità centro orientale del sondaggio si riscontra, per una lunghezza di ca. mt. 30.00, la presenza al di sotto del banco di humus superficiale di strutture murarie (fondazioni in calcestruzzo, murature in mattoni e scaglie di tufo e travature metaliche) relative ad una casale modern demolito sul finire degli anni '80."



Unfortunately, this research resulted in vain. However, it is probable that villa near stagni or river work as trading hub because many amphora have discovered from La Longarina.

### Amphora from La Longarina

A lot of kinds of remains had excavated from La Longarina, but the previous studies have been mainly directed to Terra sigillata and amphora<sup>17</sup>. I will focus on the amphora in this paper.

La Longarina is second largest outposts of amphora from around Ostia, next to the Bath of the Terme del Nuotatore<sup>18</sup>. The number of amphoras that excavated from La Longarina is 345: 298 from L1, 47 from L2<sup>19</sup>. The remains from L1 had been narrowly

<sup>17</sup> Rivello, op.cit, D'Alessandro et Pannuzi, op. cit.

<sup>18</sup> Cf. C. Panella, G. Rizzo, *Ostia VI. Le Terme del Nuotatore*, L'Erma di Bretschneider, 2014.

<sup>19</sup> Cf. D'Alessandro et Pannuzi, op. cit., p. 536.

dated to the beginning of the 1st century because of the age of Italian Terra Sigillata. However, according to D'Alessandro et Pannuzi, it should have been widely dated from the latter half of first century BCE to the former half of first century CE<sup>20</sup>. As for L2, it is estimated the middle of first century BCE, from the end of the Republic to the early Augustus<sup>21</sup>.

Therefore, a part of the amphoras from L1 and whole of the amphoras from L2 are considered to be dated during the republican period, although whole of the amphoras from L1 are dated to the imperial period in former studies. In addition, on the ground of morphology of the amphora, the date assumption of both site is reinforced. Lamboglia 2 type amphoras are excavated only from L2, and Dressel 6A type are excavated only from L1. The latter type is estimated as the successor of the former.

It is interesting that the high proportion of Italian amphoras from L2 compared to ones from L1. In 47 amphoras from L2, 37 are from Italy, 3 from Spain, 2 from Africa, and 5 origin unknown. The proportion of Italian origin amphoras from L2 is about 88%.

On the other hand, in 298 amphoras from L1, proportion of amphoras from Italy comes out about 38%. It is characteristic that 168 Spanish amphoras account for the majority at 56%. This tendency is compatible with the result of my former monograph on Italian local wines. That is, although a brand of Italian wines like Falernum was born and prospered in the middle of the first century BCE, after the first century CE, Italian wine is prevailed by cheap western provincial wine in the quantitative point<sup>22</sup>.

Of course, all amphoras from La Longarina did not contain wine. So, this tendency only indicate the possibility of my hypothesis. However, it is reasonable to suppose that certain credibility in the quantitative information on the amphoras from the La Longarina.

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<sup>20</sup> D'Alessandro et Pannuzi, op. cit., p. 531, p. 534.

<sup>21</sup> D'Alessandro et Pannuzi, op. cit., p. 531, p. 535. No specific date is listed (60-20BCE?).

<sup>22</sup> M. Washida, op. cit.



TABELLA DI CONFRONTO TRA I RINVENIMENTI DI LONGARINA 1 (HESNARD, 1980, 149) E LONGARINA 2

PROVENIENZA	ANFORE	LONGARINA 1	LONGARINA 2
Italia	Lamboglia 2		34
	Dressel 2-4 ad.	4	
	Dressel 6A	42	
	Anfore di Brindisi	3	
	Dressel 1		3
	Dressel 2-4 it.	65	
Spagna	Pascual 1	15	
	Dressel 2-4 tarr.	11	
	Dressel 9 tarr.	3	
	Ovoide tarr.		1
	Ovoide gaditana		1
	Haltern 70	32	
	Dressel 7/11	96	
	Longarina 2-3		
Produzione non identificata	Dressel 12	5	1
	Dressel 20	6	
	Ovoidi		4
Africa e Tripolitania	Anfora a fondo piatto		1
	Anfore di tradizione punica		2
	cd. Tripolitana antica = Africana antica (Contino - Capelli, 2013, 199-208)	4	
Egeo-Oriente	Anfora rodia	8?	
	Anfora di Cos	4	
Totale		298	47

As the trend derived from the amphoras from La Longarina is compatible with the historical context of Roman wine from late Republic to early Empire. Therefore, it may be presumed that the amphora information of La Longarina may not be highly biased. Of course, since it is still a hypothesis stage, it is needless to say that the hypothesis needs to be reinforced from other excavated articles such as Terra Sigillata and other historical materials.

And if this hypothesis is correct, it is likely that La Longarina in the late Republic was not only used as a refuge port to avoid storms, but it was regularly used as a commercial port.

This article, on August 29, 2017, Colosseum, National Museum of Rome, Special Director of the Archeology Area of Rome, Soprintendenza Speciale per il Colosseo, il Museo Nazionale Romano e l'Area Archeologica di Roma and Foundation research ( B) "Working on the character information survey of Ostia and Antica ruins / relics with advanced optical instruments" (representative: Koji Toyoda) This is a working paper written based on the agreement exchanged with the group.