

SHIPPING AND SHIPS

The Role of Ostia and Portus in Roman Seafaring – The Literary Evidence

CHRISTA STEINBY

This article discusses the ship types that are mentioned in our sources arriving in or leaving from Ostia and Portus, respectively. The ports played a key role in the long history of Roman trade and warfare at sea. Overseas food transports for the growing population of Rome are stated from the sixth century on. The navy was used in the Roman expansion in Italy and later on in the competition for power in the Mediterranean, when the Romans defeated the fleets of Carthage, Macedon, the Seleucid state and many lesser sea powers. Ostia along with the river port in Rome, was the base for these functions. In the Imperial period, the tasks were separated; Misenum housing the war fleet and Portus being built by Claudius and Trajan to enable the use of transport ships with larger tonnage. Archaeological evidence will also be discussed, as well as the co-operation and connectivity between Portus, Ostia and Rome.

Rome as a city of seafaring and trade

The traditional date for the founding of Rome was 753 BCE,¹ and the fourth king Ancus Marcius (642-617) is said to have founded a colony at the mouth of Ostia.² The data in archaeology, however, shows the earliest discoveries of cremation tombs from about 1000 BCE in Rome.³ The city of Rome emerged because of its good location: in the Tiber valley, it controlled the river traffic as well as the Via Salaria through which salt was transported from the salt beds at the mouth of the Tiber towards inland. Rome was also able to control the coastal route that run from Etruria to Campania, and at downstream from the Tiber island, crossed the Tiber at a natural ford. The Forum Boarium was located there as well as the Pons Sublicius – Rome's first bridge, and the Portus Tiberinus, the city's commercial port.⁴

Seafaring and commerce at the Italian coast were intensified in the ninth and eighth centuries thanks to the foundation of the Greek and Phoenician colonies. A number of intertwined economic factors lay behind the colonization: a need for land, a need for metals, an interest to expand trade, an interest to develop craft industries, the pressure on resources caused by increasing populations. The colonies were founded in strategic places that were easy to access by ship, by using winds and currents – from colonies one could monitor the sailing routes that run along the coast. The western Mediterranean was divided in areas controlled by the Phoenicians and the Greeks, respectively, and there was a strong competition on the possession of Sicily. The new innovations that came to Italy with the colonists included writing, coinage, art and intellectual pursuits, ports, the potter's wheel, olive oil, banking techniques and large-scale cultivation. The

¹ CORNELL 1995, 57-63.

² Liv. 1, 33. CORNELL 1995, 120.

³ CORNELL 1995, 48-49.

⁴ COARELLI 2007, 307.



Figure 1. A merchant-vessel and a war-galley depicted on a black-figured *kylix*. This drinking cup was produced ca 500 BCE, and it was found in Vulci in Etruria. British Museum, inv. 1867,0508.963. Photo: © The Trustees of the British Museum.

colonists explored not only the coasts but also the river valleys. There was a lively traffic in Latium and the Tiber valley, Rome made trade with the colonists gaining new wealth, and it has been estimated that by the end of the sixth century BCE, the population of Rome was about 35,000, making it the largest city north of Tarentum.⁵

The colonists used newly invented ship types, the triacontor and pentecontor that had been developed in the eastern Mediterranean. A triacontor required thirty rowers, placed on one or two levels. A pentecontor required fifty rowers with a similar placement. The ships had a detachable main mast in the middle with a rectangular sail. These types of ships could be used for commerce, warfare or piracy, according to the situation. The ships did not need any particularly built port but any natural bay would do. It was important to beach the ships after every voyage to let the timber dry out – this process kept the ships light and enabled their long life span – from twenty to thirty years. This method of maintaining ships applied with all the vessels in ancient seafaring. The ships had a bronze ram attached that was used to break the oars or to punch a hole in the hull of the enemy vessel. The ships had a pair of steering oars at the back, but besides these, the course of the ship was directed by the rowers as well – so every rower had to be skilful and a ship that had lost its oars was easy to conquer. The Greeks, Phoenicians, Etruscans and Romans used these ship types for centuries.

⁵ HOLLOWAY 1994, 166-73; CORNELL 1995, 204-08; PUGLIESE CARRATELLI 1996, 141-76; AUBET 2001, 159-65, 212-45; MOREL 2007, 488-97.

After Carthage had taken control of other Phoenician colonies in the 6th century, it made trade contracts with Etruria and Rome. Caere was the leading city in seafaring in southern Etruria. In 540 BCE, in the sea battle of Alalia at Corsica, the Etruscan fleet led by Caere together with the Carthaginian fleet fought the fleet of the Phocaeans colony. It has been assumed that since the reason for the battle was to reduce the influence of the Phocaeans in trade, some Roman ships took part in the battle too, as the Roman interests coincided with those of Caere.⁶ The contacts between Carthage and Etruria are also known from the golden tablets from about 500 found in Pyrgi, the port of Caere. The other port of Caere was called Punicum, which also refers to the presence of the Carthaginians.

The treaties Carthage made with Rome concerned trade and seafaring. In the first treaty concluded in 509, the western Mediterranean was divided into political spheres of influence. The area which extended 100 kilometres south from Rome and included the cities Ardea, Antium, Laurentium and Circeii, was under Roman protection and the Carthaginians were not allowed to build any fort in Latium. If they entered the land in arms, they were not allowed to pass a night therein. The Romans, on the other hand, had the permission to do business in the Carthaginian controlled part of Sicily, in Sardinia and in the Carthaginian area in Africa.⁷

There are reports of famine in Rome from 508 to 384 BCE caused by wars, epidemics and climatic irregularities. The senate arranged grain to be transported from Campania, Etruria and Sicily. In the fourth century Roman wars were fought further away from Rome, in the enemy territory and the Roman agriculture did not suffer that much.⁸

Rome extends its territory in Italy

There was a fierce competition for the control of the Tiber valley between Rome and Veii. The fleets clashed at Fidenae in 426 BCE.⁹ In 396, Rome conquered Veii, took its lands and thereafter the fort, *Castrum*, was built at the mouth of Tiber. It has been dated to 380-350¹⁰ and with it, Rome was able to control all the incoming river traffic in the Tiber valley. During the wars with Veii, the Romans visited the temple of Apollo in Delphi twice, in 398 asking for advice from the oracle for the war and in 394 taking a golden bowl to Apollo. It was placed in the treasury of Rome and Massilia.¹¹

The Romans made attempts to send a colony to Sardinia¹² and Corsica¹³ in the fourth century. The enterprises failed; however, the clauses in the Roman-Carthaginian treaties were changed. In the second treaty from 348, Sardinia and the Carthaginian area in Africa were closed to the Romans, apparently as the Carthaginians wanted to develop their trade there. The Romans were still allowed to visit the Carthaginian controlled western part of Sicily and they had access to the city of Carthage. The Carthaginians were

⁶ MAZZARINO 1966, 196; TORELLI 1981, 72; COARELLI 1997, 347. Hdt. 1, 166.

⁷ Polyb. 3, 22.

⁸ Liv. 2, 9-14; 2, 34, 2-7; 2, 41, 8; 2, 51, 2; 2, 52, 1; 3, 31, 1; 3, 32, 2; 4, 12; 4, 13-16; 4, 25, 2; 4, 52, 5-8; 5, 13, 4; 5, 31, 5; 5, 39-48; 6, 20, 15; 6, 21, 1-6; Dion. Hal. *ant. Rom.* 5, 21-27; 5, 32; 5, 65; 6, 17, 2-4; 6, 94; 7, 1-2; 7, 12-15; 9, 25; 12, 1-4; 13, 4; Plut. *vit. Cor.* 16; *vit. Cam.* 23, 1; Cass. Dio 5, 18, 4; Oros. *hist.* 2, 19, 8. OGILVIE 1965, 256-57; GARNSEY 1988, 168-81; CORNELL 1995, 268; MEIGGS 1997, 481.

⁹ Liv. 4, 33-34.

¹⁰ MEIGGS 1997, 9-23, 479-82; Zevi 2002, 15.

¹¹ Liv. 5, 15, 3; 5, 16, 8; 5, 28, 1-5; Diod. Sic. 14, 93; Plut. *vit. Cam.* 8, 3; App. *Ital.* 8.

¹² Diod. Sic. 15, 27, 4. TORELLI 1981, 72.

¹³ Theophr. *hist. pl.* 5, 8, 1-2.

welcome to do business in Rome.¹⁴ In the third treaty in 306, a clause was included that Corsica became a no-man's-land. Yet another division into political spheres of influence took place: this time the Romans were obliged to stay away from all of Sicily and the Carthaginians were obliged to stay away from all of Italy. The Carthaginian ambassadors, who had come to arrange the treaty, were treated with courtesy and given presents.¹⁵

In 348 BCE, the immediate Roman coastline was attacked by a fleet from Magna Graecia, possibly from Syracuse or Tarentum. The Romans prevented the Greeks from landing, and as they ran out of water and food, they left.¹⁶ It has been estimated that the *Castrum* and colony in Ostia played a role in defending the mouth of the Tiber, as our sources do not say anything about the Greek vessels sailing into the Tiber.

The Roman *navalia*, ship shed, is mentioned for the first time in 338, when Rome took Antium and burned some of its ships and confiscated some that were placed in the Roman *navalia*. The rams (Lat. *rostrum*) of the burned ships were placed at the Forum at the speakers' platform, which then was renamed as the Rostra.¹⁷ The public display of war booty was a common phenomenon in the ancient world. To mention one example, Athens celebrated the victory over the Persians by sending the *rostra* of the Persian ships to be put on display in Delphi, where all the visitors from the Greek world would see it. Antium and its fleet was defeated as it worked as a base for piracy, thereafter the Roman fleet had more possibilities to work at the coast of Italy, and continue with the expansion southwards. Rome took Naples in 326.¹⁸ Naples and Tarentum were the leading Greek seafaring cities in Italy.

Rome introduced triremes in its fleet probably in 311. According to Livy, two officials, *duoviri navales* were elected in that year and they were in charge of equipping and refitting the fleet.¹⁹ We can assume that until then, the fleet had mainly operated with pentecontors. The trireme was probably invented at Sidon and Corinth at the end of the eighth century and the first part of the seventh century BCE. The oarsmen were located on three levels on each side of the ship, one man pulling an oar. The triremes were light, efficient, highly specialized war ships and equipped with a ram. Skilful rowers were required to operate them.²⁰ Triremes are mentioned for the first time in Italian waters in the battle between the fleet of the Lipari islands and the Etruscans before 474²¹ and in 474 at the battle of Cumae,²² in which Syracuse deployed triremes as it defeated the Etruscan fleet.

Compared with pentecontors, a fleet of triremes was in every aspect more expensive to build and maintain: triremes needed four times the number of men that were required for pentecontors, permanent harbour and dockyard facilities were necessary, as well as a large stock of supplies, including timber. An efficient administration was needed for the recruitment of skilled crews. The financing of the trireme fleet can be explained with the economic growth which Rome experienced in the second half of the fourth century. Rome's wealth was based on its position as an important manufacturing and trading centre, taking part in

¹⁴ Polyb. 3, 24.

¹⁵ Polyb. 3, 26; Liv. 9, 43, 26; Diod. Sic. 22, 7, 5; Serv. *Aen.* 4, 628; Val. Max. 3, 7, 10; Just. 18, 2.

¹⁶ Liv. 7, 25, 4; 7, 26, 11; 7, 26, 13.

¹⁷ *Fast. triumph.*; Liv. 8, 13, 12; 8, 14. COARELLI 1996, 339-40; COARELLI 1999, 212-14; TUCCI 2006, 175-202.

¹⁸ Liv. 8, 26.

¹⁹ Liv. 9, 30, 3.

²⁰ CASSON 1971, 80-96.

²¹ Paus. 10, 16, 7.

²² Diod. Sic. 11, 51.

the ‘trade triangle’ formed by Rome, Carthage and Massilia. The new wealth is also reflected in the building of the Via Appia and the Aqua Appia in 312.²³

In 310 BCE, the Romans sent troops by ship to fight Nuceria, which was at the time the strongest city in Campania, and occupied by the Samnites. The Romans landed at Pompeii and the crew set out to pillage the territory of Nuceria.²⁴ This serves as an example of ancient mobile warfare and how the troops were transported by ship and landed at the intended location.

The Romans sailed to the Gulf of Tarentum with ten warships in 282, obviously to stir trouble. They were defeated by the Tarentine fleet in a sea battle, thereafter the Roman envoys set unacceptable demands to the Tarentines and the war broke out. Pyrrhos, the king of Epirus was hired by the Tarentines and he represented himself as liberator of the Greeks with such success that also the Greek cities in Sicily, led by Syracuse, invited him to defend the interests of the Greeks. In 278, the Carthaginian envoys arrived in Ostia with a fleet of thirty ships;²⁵ the fourth Roman-Carthaginian treaty was made in the situation when Pyrrhos was about to move over to Sicily and Rome and Carthage agreed on co-operation to stop him.²⁶ Our information about ships and shipments during the Pyrrhic war are limited, as Livy’s book 10 ends in 293 and the following ten books are missing, and Diodorus’ complete text ends with the year 302.

In 267 BCE, the number of *quaestors* was increased from four to eight. It is plausible that the job of these new officials was to oversee the supply of ships by the Roman allies to the Roman fleet. One of the *quaestors* was stationed in Ostia.²⁷ The excavations at the Egadi islands in west coast of Sicily have brought to light bronze rams from the sea battle that took place in 241. The rams come with Latin inscriptions that indicate that the *quaestor* (in Ostia) was in charge of approving – perhaps the ships or perhaps just the rams of war ships.

??-----S. C. QVAISTOR. PROBAVET

L. QVINCTIO L.F. QVAISTOR PROBAVET²⁸

The First (264-241) and Second Punic War (218-201)

At the beginning of the First Punic War, the Romans introduced the quadriremes and quinqueremes in their fleet. In these ship types, rowers were placed in two or three levels and there were two men pulling each oar. In the Hellenistic period the problem of finding skilful oarsmen became an increasing problem. When more than one man sat to an oar, then only one skilled rower was needed for each oar-gang, and the rest of the rowers were used for power. The tactic and method of fighting remained the same as in triremes. The Romans chose to build quadriremes and quinqueremes as the Carthaginians used them in their fleet. In the course of this war, the Romans built several fleets which included hundreds of ships and also captured Carthaginian ships. Interestingly, our sources do not mention Ostia or Rome as the place from where the ships departed or where they returned and we do not even know, where the ships were built – it is likely that they were built in

²³ MOREL 1989, 479-80; CORNELL 1995, 385-90.

²⁴ Liv. 9, 38, 2-4.

²⁵ Val. Max. 3, 7, 10; Just. 18, 2; Liv. *perioch.* 13; Diod. Sic. 22, 7, 5.

²⁶ STEINBY 2014, 47-49.

²⁷ STEINBY 2007, 71-72.

²⁸ Ram nos. 4 and 5. COARELLI 2014, 99-114.

Ostia and Rome.²⁹ This is due to the fact, that our main source for this war, Polybius describes the building process in a passive form, speaking of “those to whom the construction of the ships was committed” and “those who had collected the crews”.³⁰ Details are missing. Polybius wrote about this war to give his readers the background to his work, which he actually started from the Second Punic War with the purpose of explaining to his readers how the Romans were able to conquer nearly the whole inhabited world in just about fifty years. (from 218 to 167 – the end of the Third Macedonian War, when Polybius was taken to Rome as a hostage).³¹ Livy’s work on the first Punic War is missing. There must have been plenty of action in ports, as Rome sent fleets to Sicily, Sardinia and Corsica and made many invasions and raids to the Carthaginian territory in Africa.

In the Second Punic War, our main source is Livy and there is plenty of information about how ships left Ostia or arrived there: to mention some examples, in 217, the Carthaginian fleet captured transport ships, *navis oneraria*, off the port of Cosa. The ships had been sent from Ostia to carry supplies to the army in Spain. A fleet of 120 quinqueremes was gathered from ships that were in Rome or Ostia, a levy was conducted in Rome and the men who were under thirty-five years old were sent onboard the ships. This fleet then chased the Punic fleet.³² In 216, king Hiero of Syracuse sent transport ships to Ostia carrying 300,000 *modii* of wheat and 200,000 *modii* of barley.³³ In 215, the Romans patrolling at the coast of Calabria, caught a ship with envoys from Macedon and Carthage onboard. The envoys had just concluded negotiations with Hannibal at Capua and made a treaty of co-operation against Rome. The envoys were taken by ship to Rome and interrogated. The Romans sent a fleet of fifty ships from Ostia to Tarentum with purpose of protecting the Italian coast.³⁴ In 210, the Romans sailed with thirty quinqueremes from Ostia to Emporiae in Spain.³⁵ In 208, they prepared thirty old warships that were in Ostia and manned twenty new ships with crews to defend the coast near Rome.³⁶

The special position of Ostia is visible in the fact that when the status of some other coastal cities was changed in 207 and Alsium, Anxur, Minturnae, Sinuessa and Sena Gallica were given orders to furnish soldiers to the Roman army, Ostia and Antium were still exempt.³⁷

The above-mentioned rams are the only tangible evidence so far of Roman war ships. Generally, no hull of a war ship has been discovered anywhere in the Mediterranean, probably as they were expensive to build and were reused whenever possible. Ostia functioned as the main Roman fleet base until the era of Augustus; unfortunately, the port installations in Ostia have never been excavated, this is mainly due to the destruction caused by the change of the course of the Tiber in the sixteenth century.³⁸ The power of Ostia as a war harbour is reflected in the iconography of Roman Republican coins, where dozens of coins were minted depicting the prow of a war ship. The first coins of this type are from 225-217.³⁹

²⁹ Anyway, we learn from Polybius that the war booty, from which the *columnae rostratae* and temples etc. were built, was taken to Rome. See PIETILÄ-CASTRÉN 1987, 28-48.

³⁰ Polyb. 1, 21, 1-3.

³¹ Polyb. 1, 1.

³² Polyb. 3, 96, 8-14; Liv. 22, 1, 6-9; 22, 31.

³³ Liv. 22, 37.

³⁴ Liv. 23, 34; 23, 38.

³⁵ Liv. 26, 19, 11.

³⁶ Liv. 27, 22.

³⁷ Liv. 27, 38.

³⁸ KEAY 2012, 41.

³⁹ STEINBY 2014, 118.

Transport ships, generally called in Latin *navis oneraria*, come in many different types. The round hull makes them easy to recognize and separates them from warships. One could use oars, but the largest vessels travelled on sails. Among other things, grain, olive oil, vine, timber and rocks as building material were transported to Rome. In Roman overseas wars, the operations depended on the control of sailing routes, ports and safe coasts that enabled the transport of troops, grain, money and arms. Hundreds of transport ships were used; however, our sources do not mention them on regular basis, but tell only about them when something went wrong, when for instance ships were lost in a storm. In the Second Punic War, the looting of Syracuse started a new fashion, in which the Roman generals took the artefacts and other treasures from looted Greek cities to Rome.

Rome as a centre of international politics

The result of the Second Punic War granted Rome an important position in international politics. Rome had defeated the Carthaginians and dictated their position as a land-state in Africa with no right to independent foreign policy. Rome had waged war against Macedon in (211-205). The Second Macedonian War began in 200, soon after the end of the Second Punic War.

Now war ships departed from Ostia to participate in Rome's wars in the east. The departure of ships is mentioned at the beginning of the war or the return at the end of the war. For instance, in the war with Antiochus, (191-188) Livius narrates how *praefectus classis* Gaius Livius departed from Rome and on the way towards east, made stop-overs taking ships from allies.

*C. Livius praefectus Romanae classis, cum quinquaginta navibus tectis profectus ab Roma Neapolim, quo ab sociis eius orae convenire iusserat apertas naves, quae ex foedere debebantur; Siciliam inde petit fretoque Messanam praetervectus, cum sex Punicas naves ad auxilium missas accepisset et ab Reginis Locrisque et eiusdem iuris sociis debitas exegisset naves, lustrata classe ad Lacinium, altum petit.*⁴⁰

C. Livius was in command of the Roman fleet. He proceeded with fifty decked ships to Neapolis, where the open vessels which the cities on that coast were bound by treaty to furnish had received orders to assemble. From there he steered for Sicily and sailed through the strait past Messana. When he had picked up the six vessels which had been sent by Carthage and the ships which Regium and Locris and the other cities under the same treaty obligation had contributed he performed the lustration of the fleet and put out to sea.

Prisoners of war and war booty were transported to Rome. In 167, when Perseus was defeated, Macedon was thoroughly plundered.

*(Lucius Aemilius) Paulus ipse post dies paucos regia nave ingentis magnitudinis, quam sedecim versus remorum agebant, ornata Macedonicis spoliis non insignium tantum armorum, sed etiam regionum textilium, adverso Tiberi ad urbem est subvectus, completis ripis obviam effusa multitudine.*⁴¹

⁴⁰ Liv. 36, 42, 1-2.

⁴¹ Liv. 45, 35, 3.

A few days later Paulus himself sailed up the Tiber to the City in the king's ship, a vessel of enormous size propelled by sixteen banks of oars and adorned with the spoils of Macedonia in the shape of glittering armour and embroidered fabrics which belonged to the king. The river banks were crowded with multitudes who had streamed out to greet his arrival.

Ships such as the sixteen belong to the category of big ships that were developed in the eastern Mediterranean by the generals of Alexander the Great who competed for his legacy. In the arms race conducted by the Successors, ships such as the 'seven', the 'nine', the 'ten', etc. were constructed. We do not know their structure or how the oarsmen in them were arranged but it seems clear that they were a fleet phenomenon: they were used for ramming and needed the support of smaller vessels in the navy, which protected the larger ships. Only the wealthiest of the Successors could afford to have the whole range of ships. These vessels could also be used to carry catapults and siege engines – besieging cities from land and sea was a common feature in the Hellenistic period.⁴²

Rome's new position in international politics is also visible in its role of being the mediator in conflicts. Many Greek cities turned to the Romans in their disputes, and plenty of foreign envoys arrived in Ostia. This way the Romans got to interfere in the business of others, and the states thus eroded their independence even before Rome finally conquered them.

There is a description from the port of Ostia in 162, when Demetrius I Soter, then hostage in Rome, fled to Syria and then became the ruler of the Seleucid state. Polybius tells about the escape from Ostia:

[...] γενομένων δὲ πάντων καθὼς προεῖρηται, προῆγον εἰς τὴν Ὠστίαν νυκτὸς ἐπὶ τὸ στόμα τοῦ Τιβέριος [...] παρήσαν οἱ περὶ τὸν Δημήτριον κατὰ τρίτην φυλακὴν λήγουσαν, ὄντες ὀκτὼ καὶ παῖδες πέντε καὶ παιδάρια τρία. τοῦ δὲ Μενύλλου κοινολογηθέντος αὐτοῖς καὶ παραδείξαντος τὴν τῶν ἐπιμηνίων παρασκευὴν, ἔτι δὲ συστήσαντος τῷ ναυκλήρῳ καὶ τοῖς ἐπιβάταις ἐκτενωῶς, οὗτοι μὲν ἐπέβησαν, ὁ δὲ κυβερνήτης ἄρτι διαφάσκοντος ἄρας τὰς ἀγκύρας ἐτέλει τὸν πλοῦν, ἀπλῶς οὐδεμίαν ἔννοιαν ἔχων τοῦ πράγματος, ἀλλ' ὡς στρατιώτας τινὰς ἄγων παρὰ τοῦ Μενύλλου πρὸς τὸν Πτολεμαῖον.⁴³

[...] he and his friends went to Ostia, at the mouth of the Tiber, by night [...] Demetrius and his friends arrived about the third watch. There were altogether eight of them, besides five slaves and three boys. Menyllus entered into conversation with them, showed them the provisions in store for the voyage, and commended them earnestly to the care of the shipmaster and crew. They then went on board, and the pilot weighed anchor and started just as day was breaking, having absolutely no idea of the real state of the case, but believing that he was conveying some soldiers from Menyllus to Ptolemy.

In 87, in the Civil War, Marius occupied and destroyed Ostia. This is intriguing in the sense that in Rome's overseas wars not even the Carthaginians attempted to cut off the Roman food supply or to attack Ostia from the sea. Now the Romans were doing it! In 68 BCE, Ostia was attacked by pirates and in 67 Ostia is mentioned as a base where the fleet fighting the pirates was gathered.

⁴² See MURRAY 2012, *passim*.

⁴³ Polyb. 31, 14.

Portus

A great rearrangement of port capacity took place in the Imperial period. The war fleet was stationed at Misenum in the Bay of Naples. The grain and other transports destined to Rome needed more space. The need for a new port is already mentioned in the plans of Julius Caesar. He had seen cities in the east, including Alexandria and noticed that the capacity of Ostia was insufficient.

[...] καὶ τὸν Τίβεριν εὐθὺς ἀπὸ τῆς πόλεως ὑπολαβὼν διώρυγι βαθεῖα καὶ περικλάσας ἐπὶ τὸ Κιρκαῖον ἐμβαλεῖν εἰς τὴν πρὸς Ταρρακίην θάλατταν, ἀσφάλειαν ἅμα καὶ ῥαστώνην τοῖς δι' ἐμπορίας φοιτῶσιν εἰς Ῥώμην μηχανώμενος πρὸς δὲ τούτοις τὰ μὲν ἔλη τὰ περὶ Πωμεντῖνον καὶ Σητίαν ἐκτρέψας πεδίον ἀποδειξάι πολλαῖς ἐνεργὸν ἀνθρώπων μυριάσι, τῇ δὲ ἔγγιστα τῆς Ῥώμης θαλάσση κλειθρα διὰ χωμάτων ἐπαγαγών, καὶ τὰ τυφλά καὶ δύσορμα τῆς Ὠστιανῆς ἠϊόνος ἀνακαθηράμενος, λιμένας ἐμποιήσασθαι καὶ ναύλοχα πρὸς τοσαύτην ἀξιόπιστα ναυτιλίαν.⁴⁴

[...] he intended also to divert the Tiber just below the city into a deep channel, give it a bend towards Circeium, and make it empty into the sea at Terracina, thus contriving for merchantmen a safe as well as an easy passage to Rome; and besides this, to convert the marshes about Pomentinum and Setia into a plain which many thousands of men could cultivate; and further, to build moles which should barricade the sea where it was nearest to Rome, to clear away the hidden dangers on the shore of Ostia, and then construct harbours and roadsteads sufficient for the great fleets that would visit them.

Emperor Claudius (41-54 CE) built Portus, a basin enclosed by two artificial moles that lay 2 kilometres to the north of Ostia. Moreover, he encouraged and rewarded the building of transport ships capable of carrying at least 10,000 *modii* and which were used to transport grain for six years.⁴⁵ Emperor Caligula had the obelisk – which now stands in the St. Peter's square – transported from Alexandria to Rome in a superfreighter that was probably modelled after the great Alexandria-Rome grain carriers. The vessel must have been impractical for commercial use, as it was first kept on display and then Claudius had it filled with concrete and it was sunk to form a part of the mole in the new port.⁴⁶

Trajan enlarged the port so that it comprised the Claudian basin (depth up to 7m), a small rectangular basin Darsena (depth of 3,5m) and the new hexagonal basin (depth of 5m) with warehouses. It has been estimated that their area together, c. 233ha, would have been sufficient to absorb all of the ships bound for Rome, together with a proportion of those that subsequently were transported to Ostia. These interconnected basins were used to take in the ships from the sea, and deal with their cargo. First, they would wait in the safety of the Claudian basin and were then taken to the hexagonal basin to unload the goods. One could also transfer the goods onto smaller boats, Darsena seems to have had this function. We cannot estimate the scale of traffic that used Portus at any one time. Only nine Roman wrecks have been discovered from the site. Likewise, we do not know the anchorage capacities of the basins and which of the known ship types were used in any particular part of this port system.⁴⁷

⁴⁴ Plut. *vit. Caes.* 58.

⁴⁵ Gaius *inst.* 32c; Suet. *Claud.* 18-20. HOUSTON 1988, 553-64.

⁴⁶ CASSON 1971, 188-89.

⁴⁷ KEAY 2012, 44-48. According to some calculations, there was space for some 330 large ships in the two large basins, in addition to this, several hundred smaller ships berthed elsewhere.



Figure 2. Sestertius of Nero, 64 CE. The reverse of the coin shows a bird's-eye view of the artificial harbour built at Portus, with the legend *(Augusti) S(enatus) POR(tus) OST(iensis) C(onsulto)*. Nero issued bronze sestertii to celebrate the construction of the harbour commenced under the emperor Claudius. The image depicts the harbour with a lighthouse, surmounted by a statue holding a sceptre, possibly Claudius or Neptunus. At the bottom, the river-god Tiber is shown reclining, right hand holding a rudder, leaning on a dolphin. To the left, crescent-shaped pier with portico, terminating in a building, to the right the breakwaters. In the centre a large merchant ship, surrounded by seven smaller boats. Cf. *RIC I* (second edition), Nero, no. 178; WEISS 2013. Photo: Parco Archeologico di Ostia Antica, Archivio Fotografico.



Figure 3. Sestertius of Trajan, 112-114 CE, with the legend *PORTUM TRAIANI S C (senatus consulto)*. The bird's eye view shows the hexagonal harbour basin built by Trajan, warehouses and porticoes flanking the basin on five sides and three ships anchored in the centre; the sixth side is open. Cf. *PARISI PRESICCE et al.* 2017, 421-22; below, **Cat. no. 6**. Photo: Parco Archeologico di Ostia Antica, Archivio Fotografico.

The co-operation of ports was arranged by a network of roads and canals. Northern canal built by Claudius connected the sea shore to the Tiber, another canal connected Portus to Ostia and the Fossa Traiana connected Portus to the Tiber.⁴⁸ In the second century CE, the network of roads was fully developed: Via Flavia ran from Portus to Ostia, and Via Severiana connected Ostia, Laurentum and Antium. An extension was built to connect Via Campana to Portus - Via Campana had existed since the Republican period connecting *Campus Salinarum Romanarum* and the city of Rome.⁴⁹

In 359 CE, storms prevented the grain ships from arriving in Portus and famine was anticipated. The city prefect Tertullus made an offering:

[...] *dum Tertullus apud Ostia in aede sacrificat Castorum, tranquillitas mare mollivit, mutatoque in austrum placidum vento, velificatione plena portum naves ingressae, frumentis horrea refererunt.*⁵⁰

⁴⁸ KEAY 2012, 40, 51.

⁴⁹ KEAY 2012, 48-49.

⁵⁰ Amm. 19, 10.

[...] while Tertullus was sacrificing in the temple of Castor and Pollux at Ostia, a calm smoothed the sea, the wind changed to a gentle southern breeze, and the ships entered the harbour under full sail and again crammed the storehouses with grain.

Conclusions

Information drawn from the literary sources – and supported by discoveries in archaeology – give in general the idea that there was constant traffic through the mouth of the Tiber to Rome; however, there is surprisingly little direct evidence of ships sailing in or leaving Ostia or Portus. This is noteworthy, given the many functions of that traffic: the colonists visiting, the Romans making and utilizing treaties with Carthage about trade and areas of influence in the western Mediterranean, the Roman food transports, the use of warships in Rome's expansion in the Tiber, along the Italian coast and around the Mediterranean, war booty taken to Rome, Rome as the hub of international relations etc.

Rome went through the usual development of ship types: first probably using triacontors and pentecontors, then upgrading the fleet to triremes and adding quadriremes and quinqueremes. As Rome never adapted the strategy popular in the eastern Mediterranean with the big ships involved, the Romans only got to witness the arrival of a sixteen as war booty from Macedon. Transport ships were deployed in hundreds in Roman overseas wars, but we only learn about them in our sources when something went wrong. Besides the literary evidence, coins with the ram depicted show the might of the Roman Republican navy and Ostia as its base – as do the rams with the inscriptions about the *quaestor*'s approval. Moreover, the mosaics give an idea of everyday life at the port dealing with cargo. Finally, it would be of huge interest to be able to excavate the Roman war harbour at Ostia.