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CALLATIS AS A SEAPORT

Abstract: *The task of the following paper is to give some details of the ancient harbour of Callatis. Over the course of archaeological investigations, a reconstruction of the shoreline has been put together and many architectural and portable sources have been discovered. The archaeological coastal sites of the Black Sea are partially submerged and the research carried out within the port area of Callatis is therefore of great importance.*

Keywords: *Callatis; Black Sea ancient harbours; Greek colonisation; underwater research*

Introduction

Harbours played a crucial role in the lives of ancient maritime cities as their appropriate construction and effective working in many cases decided whether the settlement could continue to exist or not. A correctly functioning port was indispensable to a place's ability to trade on a large scale and as a result it was the site of much activity in the areas of logistics and shipping. First of all, a harbour gave shelter to ships and boats during storms, protecting the vessels from strong winds and waves. The geographic conditions (e.g. a bay sheltered from the wind) were therefore taken into special consideration when a city and its port were founded. Artificial constructions like breakwaves increased the safety of ships, whilst piers and wharves facilitated the transport of wares and the loading and unloading of vessels. In spite of this, shipwrecks still occurred very often due to human

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error or bad weather conditions.[1] Another serious threat to wooden vessels and buildings was fire. The most comprehensive ancient source concerning harbour architecture is Vitruvius' *De architectura* (5.12). It must be stressed, however, that this work was written after the revolutionary invention of hydraulic concrete in the 2nd century BC, whilst the beginnings of Greek colonisation of the western shore of the Black Sea occurred at least 400 years previously. Last but not least, the most troublesome problem of almost every port was the silting process, which could even halt the functioning of a harbour and in consequence lead to the abandonment of a city. On the western shore of the Black Sea, the abovementioned outcome occurred in the case of Histria. Unfortunately, a detailed reconstruction of the infrastructure of an ancient harbour or even of its basic engineering installations lies beyond the capabilities of contemporary archaeology in most cases. This situation primarily concerns cities with a centuries-old history of settlement. Almost every harbour with favourable natural conditions and trade routes situated nearby has been modified and constantly reshaped over the centuries. In addition, ancient coastal settlements have been destroyed and even the very shoreline itself has been anthropogenically changed. This situation is especially true of archaeological sites within the littoral Black Sea area. Throughout the Late Holocene period, the Black Sea experienced major fluctuations as the sea level regularly rose (Fouache *et al*. 2012, 171-172). Strong abrasion processes also occurred at this time and there were additionally traces of seismic activity. This paper attempts to show in brief the role of Callatis as a seaport from an archaeological point of view. Throughout the article, the term 'port' or 'harbour' will refer to the water area and the closest infrastructure to it around the basin. An analysis of the whole harbour quarter, which undoubtedly must have developed in the vicinity of the port (with its typical infrastructure of storehouses, markets, shipyards and administrative buildings) is beyond the scope of this paper. Such an approach would also involve more guesswork due to incomplete archaeological data.

Archaeology of the site

Callatis (contemporary Mangalia) and Messembria were the only two Doric colonies of the western shore. According to Pseudo-Skymnos (762-765), the city was established by Heraclea Pontica on the advice

[1] An unprecedented destruction of 200 ships took place in AD 62 at Ostia, which was one of the best designed ports of antiquity at the time (Tac. *Ann.* 15.18).

of an oracle in the middle or, more plausibly, at the end of the 6th century BC (Avram 2007, 245). Although the city was undoubtedly less significant than Messembria or Apollonia Pontica, it played an important role as a trade centre. In his *Periplous Ponti Euxini* (24.3), Flavius Arrianus describes Callatis as *ὅρμος*. Such an expression, according to scholars, was used in connection with naturally-formed harbours (Bounegru 1986, 270-271). At the beginning of the 4th century BC, the *chora* of Callatis formed, stretching as far south as Cape Shabla, in the north to Techirghiol Lake and to the west to the surroundings of modern Albeşti (Avram 2007, 246). Local production was largely agricultural and local trade enabled a road network to develop over time, especially during the times of the Empire. One of the most important of these was a coastline road which linked all the harbours from Histria in the Danube delta to the Bosphorus (Gudea 2005, 371). The earliest coin issues date back to the second half or the end of the 4th century BC (Avram 2007, 249). Scholars have thus far been able to settle on a list of about 20 cities which were Callatis' trading partners (Hind 1992, 88-89) and amphora stamps have been found here from many famous centres such as Thasos, Heraclea, Rhodos, Kos, Chios, Knidos, Chersonesus and Sinope. The maritime trade reached its peak between the 6th-1st century BC, but also continued into Roman and Byzantine times (Scarlat 1973, 529).

The first underwater research within the contemporary harbour was carried out between 1963 and 1972 by Constantin Scarlat (1973) and Vasile Cosma (1973). Under the communist regime, archaeologists had to cope with many difficulties concerning their work in the city for state secrecy reasons, since numerous discoveries took place in areas considered to be of crucial strategic importance. Undoubtedly, the port area was one of these and Scarlat's results were therefore marginalised and underappreciated (Munteanu and Vochiţu 2010, 407). Archaeological work also took place between the years of 1994 to 1998 thanks to cooperation between the Archaeological Museum of Mangalia and the 'Metamauco' association of Padua. In 2007, the museum finally carried out some research in cooperation with the Maritime Archaeological Association, 'Octopus', and the 'Bucureşti Diving Centre' (Ionescu *et al*. 2011).[2] The reconstruction of the harbour area completed by Scarlat combined with underwater research has enabled archaeologists to acquire some knowledge about the ancient port of Callatis, as well as the conditions for vessel traffic

[2] Notwithstanding her endeavours, the author of the present paper was not able to obtain any precise information about the publications mentioned above.

therein (Pl. 1). Over the course of the work, many architectural remains have also been discovered (piers, quays etc.), although a comprehensive and detailed reconstruction of the infrastructure has yet to be completed.

According to research, the length of the harbour basin of Callatis stretched for 3704km (2Mm) and was the same as its maximum width (Scarlat 1973, 532). Ancient engineers exploited the favourable natural conditions when designing the port area, although the present shoreline barely resembles the one of ancient times. This fact is partly due to the aforementioned abrasion processes (in particular on the southern part of the Romanian shore), a rise in sea level and seismic activity. The harbour in its present shape was rebuilt in 1979, causing the former Mangalia Lake to once again become an estuary (Pl. 2). The dotted line in the picture (Pl. 1) depicts the current shoreline and the continuous line represents the ancient one. In antiquity, the basin of salty Mangalia Lake was able to perfectly protect minor watercrafts and archaeological findings from the northern bank of the estuary seem to confirm the hypothesis that it formed an internal part of the harbour. Along the same northern bank, the remains of an aqueduct have also been discovered (Scarlat 1976, 62). Since the whole region of Callatis was rather lacking in drinking water (Tomas 2011, 61) (indispensable not only for the citizens, but also for ship crews), we cannot discard Scarlat's hypothesis that the port of Callatis was an important site due to its water supply (Scarlat 1976, 63). The external port was situated within the contemporary port area of Mangalia and was oriented from north to south. On the map, one can notice four breakwaters. Two of them flanked the quayside from the north and the south, while the two others resembled small islands. Installations of this type aimed to protect ships from the violent northerly and easterly winds and waves, which still remain very common in this region today.

The northern breakwater was a prolongation of fortification walls erected by Emperor Marcus Aurelius (Băjenaru 2010, 41). Oriented northwest to southeast, the next breakwater, which was island-shaped, provided two entrances to the bay to its left and right side. The other island-shaped one, oriented almost perfectly north to south, and the final southernmost breakwater flanked the only exit from the harbour. Taking into consideration the anti-clockwise current direction within the harbour basin as well as the dominant easterly wind, ship traffic was thus directed in the best possible way. In the central part of the quay, numerous partially submerged architectural fragments have been discovered. They are assumed to be parts of buildings connected with the harbour infrastructure. The system of breakwaters was

designed in order to direct the deep current and to flow from the north to the south. This current direction both minimalised the risk of the harbor silting up and also swept away waste. The rocky bottom was also a positive and to this day the port boasts suitable living conditions for molluscs of the *Mytilidae* species (Scarlat 1973, 538), a type of shellfish which form abundant colonies and filtrate seawater as part of their nutrition process.[3] When discovered, both the shipwrecks themselves as well as the numerous portable sources were not covered in silt, but only by sand and pieces of rock (Scarlat 1973, 535). This had been the goal of ancient engineers and they attained it perfectly. Numerous artefacts discovered on the sea bottom come from medieval and modern times and they mostly attest to the presence of Genoese people in Black Sea waters. Amongst them are vessels of everyday use, a cannon and a large anchor of the admiralty type from the 17th or 18th century AD (Scarlat 1973, 535).

Additional installations came in the form of cubiform stone blocks, which were found opposite the wharves and were oriented towards the harbour basin (Scarlat 1973, 535). According to scholars, they indicated mooring places where cargo could be unloaded. In Scarlat's reconstruction, one notices cobbled pavements, which facilitated free movement within the port area, for small boats, which could have been used to transport goods off the ships. Pottery pieces found amongst stone and brick debris within the architectural remains of the central promontory indicate the presence of storehouses. Another clue to the existence of intensive trade is given by the three shipwrecks. The most famous of them, Mangalia B, which is situated the furthest to the east, was discovered in 1967. Oriented with its bow to the west, it was attempting to find shelter in the port, perhaps after being surprised by a storm, but capsized instead because of human error (Munteanu and Vochiţu 2010, 407). The cargo consisted of amphorae and 12 of them have remained undamaged, some of which have since been published (Cosma 1973). They were partially of Rhodian origin and dated to the 3rd-2nd century BC (Cosma 1973, 51). It must be stressed, however, that the results of this research must be treated with caution (Munteanu and Vochiţu 2010, 408). One of the most interesting finds within the shipwreck were Corinthian and Laconian type roof tiles. One can assume that these tiles covered a roof structure adjacent to the mast of a large vessel, which could have carried a cargo of at least 50 tonnes (Munteanu and Vochiţu 2010, 408-412).

[3] Retrived from www.en.wikipedia.org/wiki/Mussel (status as of Feb. 8th, 2014).

When discussing finds from the harbour area, the anchor stocks found in 1967 near the modern lighthouse must also be mentioned. Two of them are especially interesting, the first made of lead and the other of iron (Scorpan 1970, 549). The lead stock was cast on a wooden core and typologically resembles specimens taken from the island of Gallinaria near Albenga and could thus be attributed to a Roman vessel. The Gallinaria shipwreck contained Campanian B black-gloss ware and hence it was dated to the 2nd century BC (Scorpan 1970, 643). Other anchors of a similar type came from Femine, but they were from a slightly earlier period as they date to the 3rd century BC. The specimen from Callatis could have been made in the 3rd or 2nd century BC during the Hellenistic period (Scorpan 1970, 643). The second anchor, 230cm long, was made of iron. It represents a rare type of one-armed anchor. On the Mediterranean, such specimens date from the 2nd to the 1st century BC and correlate with Dressel 1 amphorae. We cannot, however, define whether the vessels which used these anchors were military ships or mercantile watercraft.

Conclusion

Callatis represents a sophisticated approach to harbour design as it combines a suitable landscape with clever engineering solutions. Both the contemporary Mangalia Lake and the southern part of the present port seem to have been used as a natural harbour, but questions remain as to the extent of its use and for how long the lake was used as a port. Bearing in mind that in modern times the estuary has been closed off by a sandbar, a similar situation could have also happened in antiquity, which would have rendered this part of the harbor very difficult to maintain. The external basin was shaped using artificial construction techniques with the aim of protecting vessels, facilitating their loading and to assist natural dredging. One of the most important tasks for archaeologists is to create a new map of the harbour and the parts of the city investigated thus far in order to demonstrate the ancient connections between the port area and its urban hinterland.

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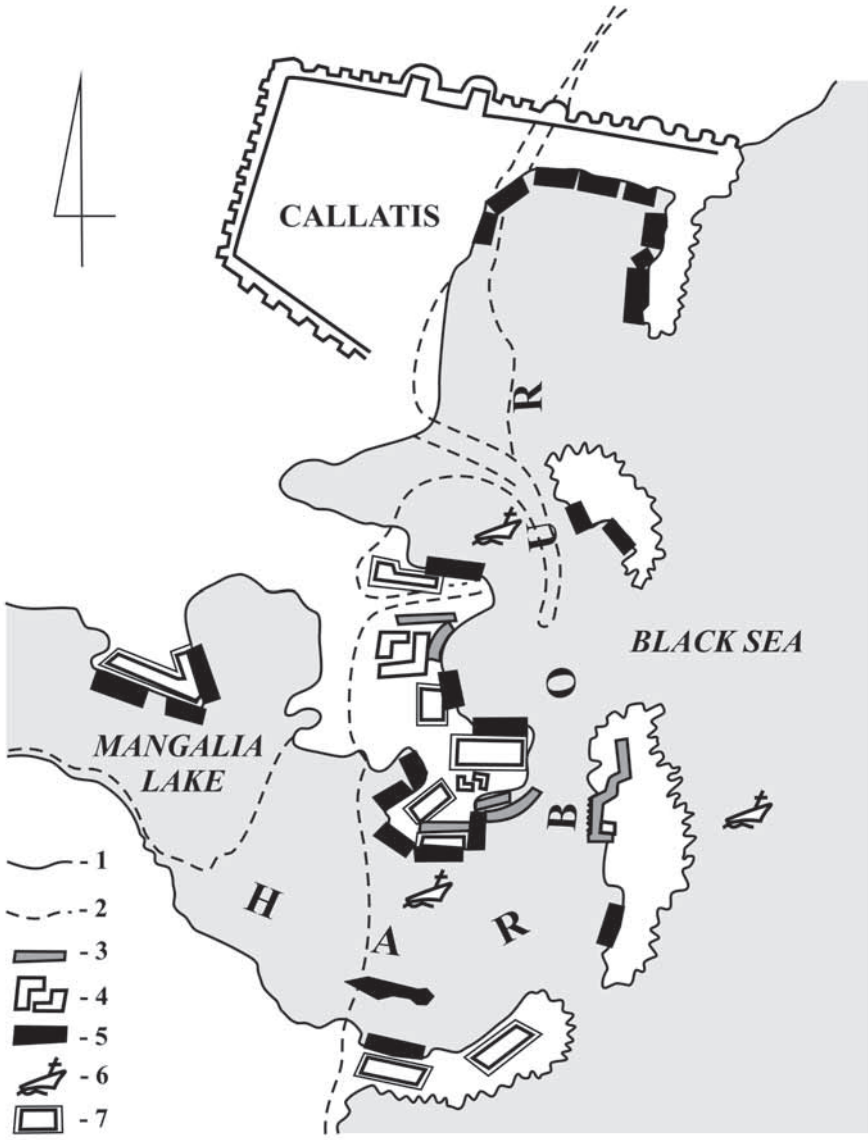

Pl. 1. Ancient port of Callatis. Reproduced from Scarlat 1973, 533

Pl. 2. Modern port of Mangalia. Retrived from www.wikimapia.org/1238579/ro/Lacul-Mangalia (status as of Feb. 8th, 2014)