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Short Communication

The Impact of the Industrialization and Urbanization on the Quantity and Diversity of amphorae in the museums: The Case of İzmit Gulf

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Abstract

This article examines assemblage of amphorae kept at the Kocaeli Archaeology Museum, in the light of their findspots in order to establish the external relations of the Gulf of İzmit. The statistical analysis of amphorae from the Kocaeli Museum shows that 17% of the amphorae were found in İzmit, 29% from South of the Gulf of İzmit and the shores of Helenopolis, 54% from the western Black Sea Sections (Kefken- Kerpe). No amphorae were retrieved from the shores in this area for the construction of D100 highway. This means that harbors of the city Nicomedia were also lost during these filling activities. Old photographs related to Pertev Paşa Mosque confirm this. This may explain the lack of shipwrecks and amphorae on the shores of Nicomedia. Rich assemblage of amphorae retrieved from the shores of Helenopolis clearly shows that such may have also been the case for Nicomedia. The high ratio of amphorae at Kocaeli Archaeology Museum originating at Black Sea region resulted from modern fishing. In this context, this presentation evaluates the impact of pollution and urbanization on the number and diversity of amphorae found at the museums, such as the Kocaeli Archaeology Museum.

Keywords: Underwater archaeology, İzmit Bay, Amphora, Trade, Nicomedia, Kocaeli Museum

Introduction

The amphora assemblage kept at the Kocaeli museum nearly represents a reference collection for the city of Nicomedia, a key site for the Gulf of İzmit. The Gulf of İzmit presented optimal advantages for settlers for humans ever since the Paleolithic period. This is surely due to the location of the gulf on a strategic transitional route that tied the communities of Anatolia and Thrace. The Gulf of İzmit was also part of an important maritime route following the shoreline in the southern Marmara between the Aegean and Black Sea routes particularly during the classical antiquity, if not earlier (Gökaşan, et al., 2001; Gazioğlu, 2017). For instance, most commercial ships entering into the Sea of Marmara through the Hellespontos when the wind conditions allowed safe passage there visited the harbors of the Gulf of İzmit before reaching to the sea of Black Sea through the Strait of Istanbul (Bosphorus) (Figure 1), (Ulugün, 2009; Dönmez and Kaya; 2020). Among 52 amphorae from Kocaeli Archaeology Museum, the provenance of 24 could easily be identified on the basis of their typological characteristics. Of these 24, 13 examples originate in western Black Sea region of Anatolia (Kefken- Kerpe), while 7 examples originate in the city of Helenopolis on the coast of the Sea of Marmara. The remaining 4 amphorae were reported from the center of İzmit.

During the article process, the comparisons of old archive photographs and today's satellite photographs formed the basis of our research. 52 amphorae preserved

in Kocaeli Museum exhibition area and warehouses guided us in our research.

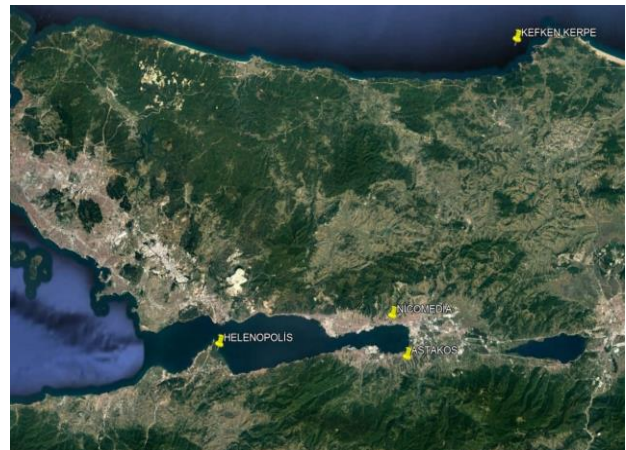


Fig.1 İzmit Bay and amphora sites

Findings of amphoras clearly demonstrate the impact of industrial pollution and rapid urbanization on museum collections. Findings of an amphora were found at many points in the Gulf of İzmit. However, no amphora was found on the shores of İzmit Center. This data helped determine our focus. Besides, statistics on the find places of amphoras also supported our view. Amphoras have been typologically evaluated. In this way, we have been enabled to develop a discourse about its origins.

Results

As is well known, the modern city of Kocaeli has been one of those cities that witnessed the most negative impacts of industrialization and urbanization. These two factors determined the quantity and typological diversity of amphorae that exist at the Kocaeli Archaeology Museum. The number of amphorae from the Marmara Region exceeds the one from the Black Sea region, which could be related to the intensity of fishing activities there.

Even those who float in the sea for entertainment purposes can reach the wrecks in the Black Sea. We reached such a shipwreck with the notification made to the Museum Directorate in 2015. It was located off the Kumcağız settlement 500 meter inside the sunken shore belonging to the Ottoman period carrying a shot put. With the impact of industrial pollution and rapid urbanization, it is not possible to reach the wrecks in İzmit Bay. Rıdvan GÖLCÜK, the Director of Kocaeli Museum, published the information about this shipwreck under the title of Ottoman Shipwreck: Slurry of the Storm (Gölcük, 2015).

The number and find places of amphorae at Kocaeli Museum is as follows: 4 examples from the excavated area at İsu, 13 examples from western Black Sea region (Kefken, Kerpe), and 6 examples from the off shore of Hellenopolis. According to the inventories of Kocaeli Museum, 6 amphorae were found near the lagoon of Hersek Cape on the shoreline of the city of Hellenopolis. Therefore, their provenance is certain. These 6 amphorae from the area of Hellenopolis belong to Rhodes, Sinop, LR2 and Forlimpopoli. This would indicate that multiple shipwrecks dating to different periods exist at the shores of Hellenopolis.

Another place where amphorae with a provenience are the area what is known as ISU (Kocaeli Water and Sewerage Administration). This area is basically a necropolis. Excavations were conducted by Rıdvan Gölcük, then the director of Kocaeli Museum, under the guiding of Şengül Aydınğün from Kocaeli University between 2017 and 2019. The excavations conducted at this necropolis yielded total of 58 graves, namely 51 graves formed of rood tiles, 5 sarcophagi, 2 amphora burials.

It is also important to mention where these amphorae kept at Kocaeli museum were collected from. In general, the amphorae from the shores of Black Sea constitute the 62 %, while the 38 % of the amphorae were of the Sea of Marmara origin. There are several reasons why no amphorae turn out from the shorelines of the Gulf of İzmit. The pollution of the shores and the accumulated silt evidently buried most shipwrecks that once carried amphorae in their cargoes. This also prevented fishery activities, which often provided the museums with amphora and the knowledge of the location of the ancient shipwrecks.

Discussions and Conclusions

No amphorae were also collected from the shores around the city of İzmit. This may have been in part derived from fillings of the shorelines in this area for the construction of D100 road. Old photographs documenting the Pertev Paşa Mosque confirm that the shoreline was closer than the present day. Aerial photographic and satellite images also clearly demonstrate the impact of the filling of the shorelines with earth for road construction (Figure 2-3).

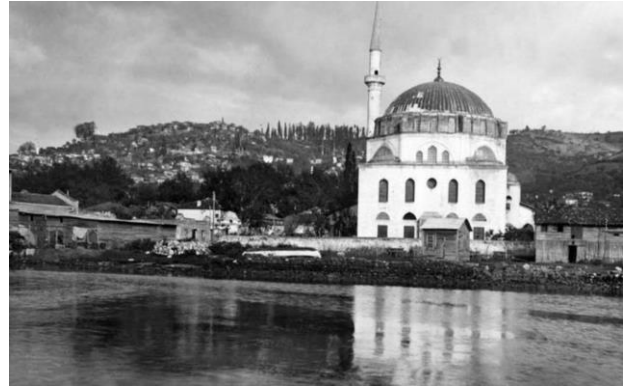


Fig. 2 The location of the Rüstem Paşa (Yeni Cuma) Mosque close to the coast in the 1950s

This road construction activity probably resulted in the burial of the harbors of ancient city of Nicomedia along with the shipwrecks with amphorae. Rich assemblage of amphorae collected from the shores of Hellenopolis indicates that such may have been once the case for Nicomedia.

To sum up: it is reasonable to state that industrialization and rapid urbanization played a major role in the absence of amphorae in the area of the Gulf of İzmit. Thus, most amphorae from Kocaeli Museums are of Black Sea origin. The pollution of seas caused by industrial installations resulted in the loose of shipwrecks and their amphora cargoes. This will create a major weakness in future archaeological studies aiming to investigate the external relationships of a city like Nicomedia and its role in maritime network of interactions and trade.



Fig.3 Rüstem Paşa (Yeni Cuma) Mosque (Google Earth)

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