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MAY 2014 - MÜNBER:1



Maritime Archaeology Periodical



TINA TURKISH UNDERWATER ARCHAEOLOGY FOUNDATION

FOUNDATION

Founded by a group of maritime-lover businessmen in 1999.

SCOPE

- ❖ To make the international society and scientists familiar with our abundant archaeological cultural heritage in Turkey and its seas. With this idea in mind, to make national and international publications, and organize conferences, panels, seminars, forums, symposiums, workshops, fairs, festivities, exhibitions, and artistic activities such as festivals, excursions and meetings.
- ❖ To support local and international scientific institutions, museums, and universities involved in activities of surveys, excavations, conservations and exhibitions under the approval and inspection of the Turkish Ministry of Culture and Tourism.
- ❖ To perform underwater surveys and excavations in our seas using scientific methods and current technological facilities under the approval and inspection of the Turkish Ministry of Culture and Tourism.
- ❖ To identify the archaeological artifacts lying underwater, reporting their whereabouts to relevant authorities for protection.
- ❖ To seek cooperation with the museums and institutions involved in the field and support their activities. To ensure enhancement of such museums and cultural activities, and take necessary steps to provide opportunities for new initiatives.
- ❖ To take necessary measures to prevent the pollution of our seas which becomes increasingly harder to fight back, ensure that such measures are taken, and cooperate with other institutions in this sense.
- ❖ To contribute to the educational and training institutions dealing with our scopes, and provide scholarships for dedicated students.

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TINA MARITIME ARCHAEOLOGY PERIODICAL

PERIODICAL PUBLICATION OF THE TURKISH UNDERWATER ARCHAEOLOGY FOUNDATION

ISSN:

TINA Maritime Archaeology Periodical is published bi-annually during the months of May and November. The papers to be published should be sent 3 months before the publication date. The coverage of TINA Maritime Archaeology Periodical includes primarily the Anatolian shores, the Mediterranean Sea, and the work performed in the field of maritime archaeology from every corner of the world.

OWNED BY: TINA Turkish Underwater Archaeology Foundation

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Papers sent to TINA Maritime Archaeology Periodical shall be published only if they comply with the format specified on the last page of this issue.

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PRESENTATION

UNRAVELING THE GLOBAL MARITIME HISTORY IS A SERVICE OF UTMOST SIGNIFICANCE FOR THE HISTORY OF HUMANITY

Being surrounded by sea on three sides, Turkey is one of the countries that possesses the richest underwater archaeological cultural heritage. It has always been a focus of interest by its archaeological assets, particularly the cultural heritage in the field of underwater archaeology. The most tangible evidence on this interest is the history of underwater archaeological explorations exceeding more than fifty years, and variety and quality of revealed findings. The most ancient underwater archaeological findings, unparalleled artefacts exhibited in museums, and abundant maritime history prove that it is one of the most important centers in the world. Unquestionably, behind this archaeological wealth there are world-renown competent scientists.

TINA (Turkish Foundation for Underwater Archaeology), reaching almost 15 years from the date of its foundation, aims to elucidate the world's maritime history and publicize the scientific studies in this field by publishing the works of scientists from all over the world working in the field of "underwater archaeology".

We hope that continuity and effectiveness of our journal will contribute to the targeted service initiative.

Oğuz Aydemir

*TINA Turkish Foundation for Underwater Archaeology
Chairman of the Board*

EDITOR

Greetings to everyone from the first issue of TINA Maritime Archaeological Periodical.

An excavation performed at Cape Gelidonya on the southern coast of Turkey 54 years ago helped us better imagine the advancement of humankind throughout the history. Being aware of the fact that it is possible to perform an archaeological excavation under the water similar to the land archaeology, the team carried out excavation of the world's oldest known shipwreck at that time. As of now, archaeologists around the world keep exploring the maritime history both underwater and on land.

Archaeological excavations performed throughout the years revealed Turkey's significant role in the world's maritime history. And in 1999 TINA (Turkish Underwater Archaeological Foundation) was established. The objective is to inform the world society and scientists about the abundant archaeological cultural heritage in Turkey and its seas.

TINA Maritime Archaeological Periodical

TINA Maritime Archaeological Periodical is a periodical which aims to provide scientific contribution through presenting information on the "maritime archaeological activities" performed around the entire world.

Our goal is to create a magazine that discusses the works of maritime archaeologists working at every corner of the globe. Our pages will cover maritime archaeological excavations, scientific projects, news, conferences held in this line of work, university programmes and scientific education in the field as well as the new technologies. Of course, this will become true with you, our colleagues. We invite you to the magazine that will be enriched in coverage with your contributions.

Chief Editor, Publisher

Mehmet Bezdán

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A NEW DISCOVERY IN THE MYNDOS HARBOR SURVEY:
THE WEST HARBOR



MUSTAFA ŞAHİN

Myndos, one of the important Carian ports, is among the cities with a single harbor according to ancient authors such as Herodotos¹, Polybius², and Strabo³. Based on underwater survey performed in 2012 the city appears to have had a second harbor. This paper is about the newly discovered harbor.

Most ancient coastal cities were built directly on natural harbors⁴. Myndos was founded on a coastline which geographically has the shape of a mound, called a tombolo (fig. 1). Pliny lists Myndos among the ancient cities with a tombolo connected to the mainland⁵.

The known harbor of Myndos is encompassed by Kocadağ-Aethusa, a 484 m high mountain to the southwest, and a tiny island (Tavsan) to the southeast (fig. 2). The two pieces of land that form the strait lea-

ding into the harbor also provided a natural defense system for the ancient harbor by narrowing the harbor's entrance.

Herodotos writes about Admiral Scylax, from Myndos and his support of Megabates, a cousin of Darius I, with a trireme or triremes during his campaign in 500 BCE to Naxos⁶.

¹ HERODOTOS, V, 33.

² POLYBIUS, XVI, 15.

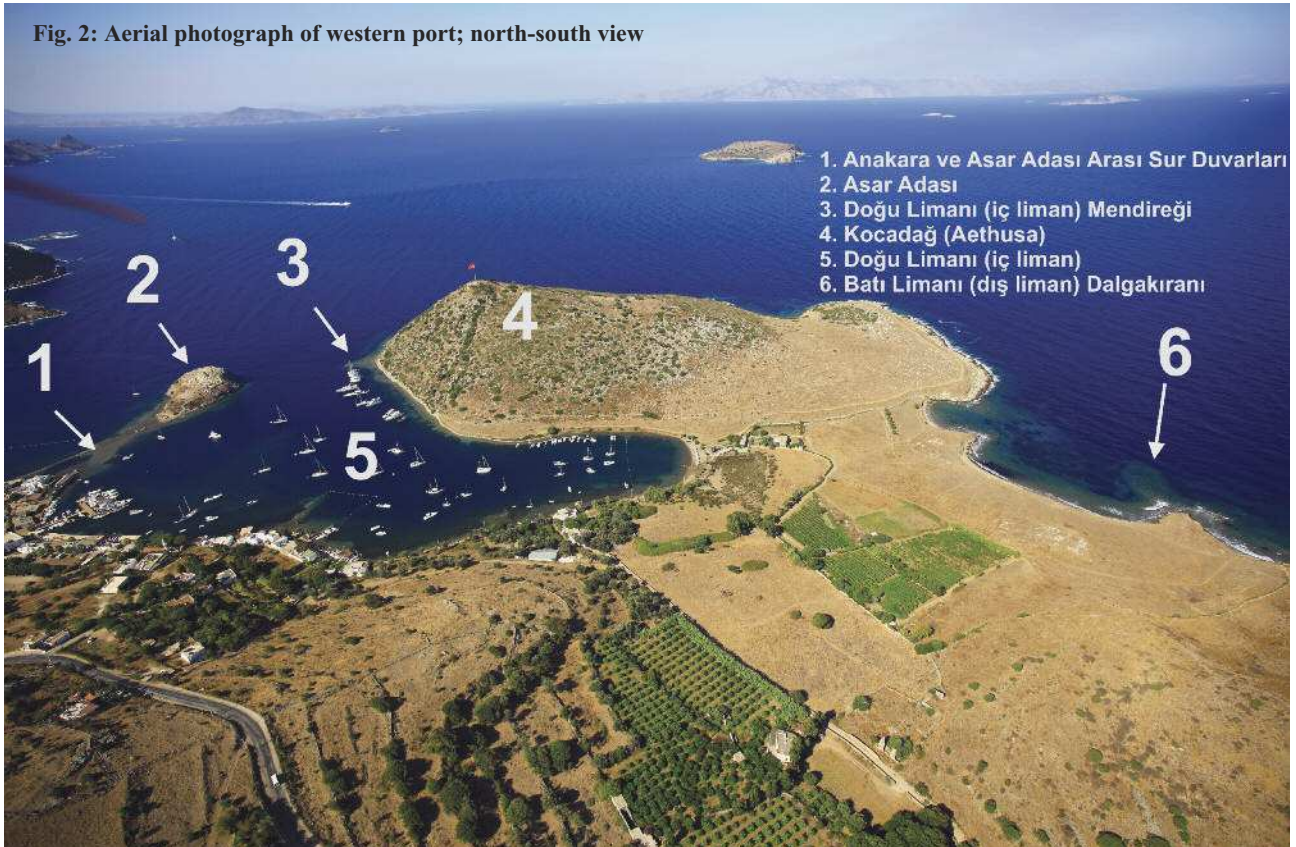
³ STRABON, XIV, 656.

⁴ CEYLAN 2010, 352 vd.

⁵ PLINIUS NH, III, 8, 89-92.

⁶ The navy of Megabates during Naxos Campaign consisted of 200 triremes. We found out that triremes from Myndos were also involved in the battle (HERODOTOS V, 33). Herodotos rather refers to the punishment of the Myndos trireme's captain Scylax. No detailed information is available about the number of Myndos ships involved in the naval battle.

Fig. 2: Aerial photograph of western port; north-south view



Polybius reports that during the naval battle of Lade in 494 BC, ships from Rhodes had to anchor at Myndos harbor overnight before traveling further to their final destination, the island of Kos⁷. Myndos was a member of the Delian League from 453/52 to 421/20 BC⁸. These data suggest that Myndos was among the city-states with significant naval forces. However, the location of the naval harbor of Myndos is still unknown.

In his book of Classical Age geography, Strabo also provides a description of the harbors of the cities. For example, while he described Knidos; *“Then to Cnidus, with two harbors, one of which can be closed, can receive triremes, and is a naval station for twenty ships.”* He clearly mentioned that Knidos had two harbors⁹. But then describing Myndos, he wrote: *“Then forthwith one comes to Myndus, which has a harbor; and after Myndus to Bargylia, which is also a city; between the two is Caryanda, a harbour, and also an island bearing the same name, where the Caryandians lived”*¹⁰. Here he uses the singular form of the term “harbour” when describing Myndos and Caryanda, and for Bargylia the term he used is “city”. We are unsure whether with the term “harbour” he actually wanted to emphasize Myndos and Caryanda were both port cities. But Bargylia is also a coast settlement, therefore a port city. Whether Strabo, when he mentioned the term harbor, wanted to emphasize that the city had only a single harbor, is debatable. Considering the descriptive detail that he gave for Knidos, apparently Myndos did not have a naval harbor. In other words, it would not be a far-fetched assumption to say that Myndos had a single harbor during the years when Strabo was alive (64 BC –24 AD).

Within the scope of the postdoctorate research of Dumankaya in 2012, a stacked rubble stone breakwater was found during the underwater survey performed at 2-3 m depth in the bay at the western shores of the city (fig. 3)¹¹.

⁷ POLYBIUS XVI, 15.

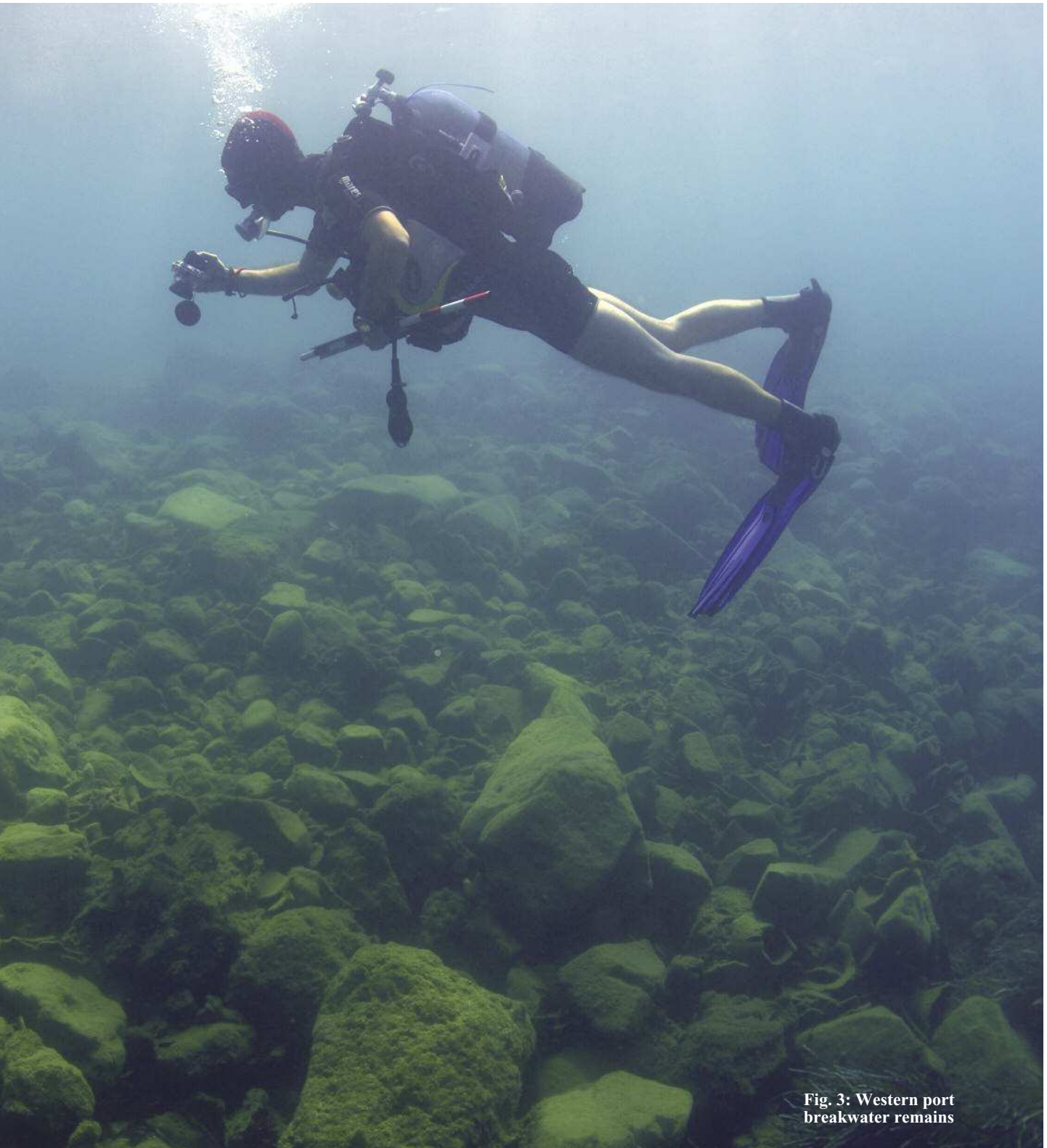
⁸ VARINLIOĞLU 1992, 18.

⁹ STRABON XIV, 2, 15.

¹⁰ STRABON XIV, 2, 20.

¹¹ DUMANKAYA 2013, Levha 55.





**Fig. 3: Western port
breakwater remains**



Fig. 4: Shipwreck remains on breakwater, general view



Fig. 5: Shipwreck remains on breakwater, detail



Fig. 6: Shipwreck remains on breakwater, detail

The new discovery exposed the presence of a second harbor in the city.

The harbor we referred to as the “Western Harbor” is to the northwest of Kocadağ, and in the bay called Dönmezler Cape (fig. 2)¹². The coastline of the bay where the harbor lies is 200 m long. There are many building remains and walls extending from the south end of the coast toward northwest¹³. The concave shaped harbor breakwater is entirely submerged (fig. 4). It is 76.56 m long, and 34.15 m wide. The breakwater was entirely built with stacked rubble stones. The uppermost height of the breakwater above the seabed is 6.67 m, which is 2.20 m below the surface. It is commonly believed that a height of at least 2 meters is required for a breakwater to offer effective protection from waves. Therefore, it appears likely that the breakwater has sunk, in relation to the ancient landscape, by approximately 4 m. The cause of sinking may be attributed to a number of possible events, including tectonic activity, seismic activity, a rise in the sea level due to climate change, or some combination of one or more of these events.

Currently, there are two shipwrecks on the breakwater (fig. 5)¹⁴. Preservation of the wrecks is poor. One of the shipwrecks is located on one end of the breakwater, and the other one is at breakwater's nearest point to the shore. We identified Egyptian and DR 2-4 amphorae that were used between 1st century BCE and 3rd century CE during the surveys (fig. 6)¹⁵. The presence of these sherds, and lack of any information about the presence of the west harbor in the records of Strabo, who lived between 64 BC and 24 CE, suggest that the harbor could have been built, at earliest, during mid-1st century CE¹⁶. Presuming this dating effort to be accurate, it seems very unlikely that it was a naval harbor based on current evidence of its construction date. If it were used for commercial purposes, it may be fair to claim that Myndos had a growing trade volume in the Mediterranean region from the 1st century CE.

¹² DUMANKAYA 2013, Levha 57.2.

¹³ DUMANKAYA 2013, Levha 56.1.

¹⁴ DUMANKAYA 2013, Levha 58.3.

¹⁵ DUMANKAYA 2013, 92.

¹⁶ STRABON XIV, 2, 20.

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