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Ankara University Research Center for Maritime Archaeology (ANKÜSAM) and its role in the Protection of Turkey's Underwater Cultural Heritage

Vasıf Şahoğlu
Ankara University, Turkey.
vsahoglu@gmail.com

Abstract

Turkey, surrounded by sea on three sides, has been a home to many powerful civilisations throughout its history. The rich cultural heritage on the land, is also reflected by an equally rich and exciting archaeological environment within the Turkish territorial waters. Although Turkey hosted some of the earliest scientific underwater archaeological research conducted in the world, this dicipline has failed to further flourish and get developed within the local institutions for many years. Ankara University Research Center for Maritime Archaeology (ANKÜSAM) is one of the pioneering institutions in Turkey aiming to counterbalance the deficiencies in the field of underwater archaeology in Turkey as well as to develop and help putting national and international policies into practice in this field. Underwater excavations of ANKÜSAM in Liman Tepe near İzmir, is one of the very few projects in Turkey dealing with the excavation and investigation of a submerged ancient structure. The project also reflects a unique international scientific co-operation among various institutions and departments from different Universities around the world.

Keywords: Turkey, Maritime Archaeology, Underwater Cultural Heritage, IRERP, Aegean, Liman Tepe,

Introduction

Turkey is situated on a unique location at an intersection point of both land and maritime trade routes of the prehistoric and historic periods. Surrounded by sea on three sides, Turkey is one of the richest countries concerning the underwater cultural heritage in the world. This region has been a home to many powerful civilisations throughout its history. Due to this rich cultural heritage on the land, the Turkish territorial waters also reflect an equally rich and exciting archaeological environment. The fact that the foundations of underwater archaeology as a scientific dicipline were formed in this region, by Prof. Dr. George Bass as early as 1960's, gives Turkey a unique position in this field (Bass 2003). The works of INA since then have revealed many shipwrecks from different periods along the

Turkish Coasts including the oldest known ones such as Gelidonya and Uluburun dating to the Late Bronze Age (Bass 1967; Pulak 2006, 57ff).

These pioneering works led by Prof. Bass and INA particularly contributed to the developement of excavation methods and documentation techniques in Underwater Archaeology. Unfortunately one of the biggest problems concerning underwater cultural heritage is the scarcity of sufficient work for inventorying this heritage and the difficulties on implying protective measures. Similar problems have certainly been faced throughout the world, and despite the fact that a lot of progress has been achieved; there still remains a lot of ground to cover in this field.

The establishment of Ankara University Research Center for Maritime Archaeology (ANKÜSAM) was grounded on this very fact. ANKÜSAM aims to counterbalance the deficiencies in the field of underwater archaeology in Turkey as well as to develop and help putting national and international policies into practice in this field. Systematic excavations and surveys conducted in and around İzmir region by the Izmir Region Excavations and Research Project forms the basis of ANKÜSAM's activities. This project, started in 1992 with Liman Tepe excavations led by Prof. Dr. Hayat Erkanal, aims to understand and define the overall character of prehistoric cultures of the region within a wider context of Anatolian and Aegean archaeologies.

Liman Tepe: A Major Bronze Age Harbour Settlement

Liman Tepe land excavations, headed by Prof. Dr. Hayat Erkanal of Ankara University have been continuing since 1992 within the framework of Izmir Region Excavations and Research Project (IRERP).

Liman Tepe is a major Bronze Age harbour settlement located in Urla, İzmir (Erkanal 2008a, 179 ff) (Fig. 1). The site is inhabited continuously from the Chalcolithic period onwards. Maritime contacts of Liman Tepe begin from the earliest period of occupation on the site. Imported Melian obsidian and various other finds show close contacts with the Cyclades and the Eastern Aegean islands during the Chalcolithic Period (Liman Tepe Period VII) (Kouka 2009, 143-144, Figs. 4-6; Tuncel (in press). The site transforms into a proto-urban settlement in the following Liman Tepe VI period and is surrounded by a strong fortification system with a monumental entrance gate (Erkanal 2008a, 180-181, Fig. 5-6; Erkanal et al 2009, 307; Kouka 2009, 144-146, Fig. 3) (Figs. 2 and 5). The site reflects the well known "Western Anatolian settlement plan" during this period consisting insulae of long houses attached to the fortification wall (Erkanal et al 2009, 307). Imported Melian obsidian and Cycladic pottery (Figs. 3-4) found in these houses along with the local material, further supports the continuation of maritime contacts of Liman Tepe during the first half of the Early Bronze Age (Şahoğlu 2008, 487-488, Figs. 7-9; Kouka 2009, 146, Figs. 7 and 9). Liman Tepe becomes an urban trading center by the middle of the 3rd Millennium BC (Liman Tepe Period V) (Şahoğlu 2008, 488) (Fig. 2). The size of the settlement increases during this period and the citadel was surrounded by a monumental fortification system enforced with horse-shoe shaped bastions (Erkanal 1999, 240-241, pl. LIIIa-b; Erkanal 2008a, 181-184, Fig. 4, 7-8; Erkanal et al 2009, 304). Communal and administrative structures within the citadel reflect the presence of an organized social and economic structure at the site (Şahoğlu 2005, 101-104, Fig. 2, 4-6, 9-10, 12-15; Şahoğlu 2008, 488-490, Fig. 6; Erkanal et al 2009, 307; Kouka 2009, 146-147). The lower town was also surrounded with a similar fortification system again enforced with horse-shoe shaped bastions. In light of a newly discovered bastion which is approximately 500 meters away from the site, the size of the settlement during this period is

approximately 20 hectares. The importance of Liman Tepe continues as a regional center during the Middle Bronze Age (Erkanal and Günel 1995, 266-270, Erkanal and Günel 1996, 307-309, Resim 5-7; Şekil 4-5, Resim 4-7; Erkanal and Günel 1997, 234-240, Resim 1-7; Erkanal 2001, 314) and the site reflects the presence of an important harbour settlement during the Late Bronze Age as indicated by rich Mycenaean finds (Erkanal and Günel, 1995, 264-265, Şekil 1-3, Resim 1-3; Erkanal and Günel 1996, Resim 3-4; Erkanal 2001, 315; Erkanal and Akyurt 2008, 226-236; Erkanal 2008b). Liman Tepe is inhabited after the Late Bronze Age and the habitation at the site continues undisturbed into the Classical Periods when the site is called Clazomenae.

Liman Tepe / Clazomenae Underwater Excavations

Upon the discovery of various submerged features adjacent to the site in 1995 from an old photograph (Erkanal 2008a, Fig. 2), first underwater investigations started at Liman Tepe with an intention of finding out the date and function of these features. Since all of the team members were land archaeologists and none of the team members were trained for underwater excavations, a couple of years passed with the training and organization of infrastructure for such an investigation.

Following a protocol signed by Ankara and Haifa Universities encouraging joint projects, an *Ankara – Haifa Universities Joint Liman Tepe Underwater Project* started in 2000 headed by Profs. Hayat Erkanal, Michal Artzy and late Avner Raban (Erkanal and Artzy 2002, 380-382, Çizim 3).

The underwater excavations at Liman Tepe started with an aim to date and identify the submerged architectural features. Especially the accordance of the submerged remains to the topography and fortification of the Bronze Age site led us to investigate a possible relation between them at the first stage. Within the course of the excavations it has now been clear that the submerged remains at Liman Tepe belong to one of the ancient harbour facilities of ancient Clazomenae dating to the 6th and 4th Centuries BC respectively (Fig. 6).

The joint Ankara – Haifa excavations focused on understanding the character of the big breakwater and the smaller pier attached to it. Work carried out in trench D which is opened on top of the big breakwater revealed material ranging from the 7th to the 4th Centuries BC. The earlier material includes "Orientalisan Style" pottery and this material may be taken as an indicator for a probable earlier construction date for the breakwater (Erkanal et al. 2003, 432, Çizim 1; Erkanal et al 2004, 173, Çizim 3).

The second joint excavation area is Area A which is opened next to the smaller pier for understanding the character and the construction date of this feature. Excavations revealed evidence that the smaller breakwater is constructed at a date later than the late 6th Century BC – probably in the 4th Century BC- (Erkanal et al. 2004, 172-173, Çizim 2; Erkanal et al. 2010, 363). A wooden anchor with an iron tip is discovered partly beneath the smaller breakwater on a late 6th Century BC harbour floor (Erkanal et al 2010, 362, Resim 3). This is one of the earliest of such discoveries in the Mediterranean (Fig. 7).

Excavations within the harbour have been continuing since 2008 in Area E as an ANKUSAM project. The aim of this ongoing work is to understand the stratigraphy of the harbour and find the earliest construction date of the breakwater (Fig 8). Work so far revealed the presence of a stratified 4th Century BC and a 6th Century BC harbour floors. In situ material from these harbour floors included many amphorae and smaller fine ware pottery (Fig. 9) as well as some bronze finds and plenty of organic remains including almond and hazelnuts. The focus of the future work will focus on understanding the earliest construction

date of the harbour facility and earliest use of this area as a harbour. The geomorphological soundings indicate that there are still meters of cultural deposit below the sea bed and the earliest use of the harbour may go back as early as the Bronze Age. ANKÜSAM excavations will continue in the following years to identify these probable earlier levels.

The Urla campus of ANKÜSAM is providing sufficient support for post excavation procedures with its developing laboratory and staff. The laboratory is functioning all year round and the long process of treatment of the finds from underwater is continuing at this lab. Additional buildings especially designed for underwater research have also been planned and will be completed during the next few years.

Liman Tepe Geomorphology Project

Geomorphological research at Liman Tepe concurrent with the underwater excavations is trying to document coastline changes throughout history and interpret possible effects these changes had on the settlement (Krezoski et al 2007; Goodman et al 2008; 2009; Müller et al. 2009). This Ankara – McMaster Universities joint project (Boyce et al. 2006), headed by Assoc. Prof. Dr. Joe Boyce of McMaster University (Canada) has so far established that the oldest coastline yet documented lies some 400 m to the north under the current sea level. Higher topographic features were also encountered during this research, which may be the remains of ancient settlements. These features will also be investigated in future years.

Experimental Archaeology

ANKÜSAM is also involved in various cooperations and provide scientific consultency to different groups and institutions. Among them are experimental archaeology projects such as the Uluburun II and Phokai – Marsailles Projects conducted by 360 Degrees Research Group[1] which included building replicas of a 14th Century BC and 6th Century BC boats and conducting experiments on ancient navigation and sailing techniques with them. The most recent experimental archaeology project of the center is called "Reanimation of the Early Cycladic Boats Project" which includes building 3 replicas of the longboats mainly depicted on the "frying pans" of the Early Cycladic Culture[2]. This project aims to reconstruct these boats in light of their representations on pottery[3], rock depictions and some small lead models. Since no remains of such boats survived to date so far, not much regarding their construction techniques is known. Main aims of the project will be to raise interest in archaeology, ancient seafaring and trade; also to create public awareness towards the protection of cultural heritage.

ANKÜSAM Certificate Program

The most recent project which we consider of great importance is a certificate program for training archaeologists for working in underwater projects. This program is being coordinated by ANKÜSAM and the Turkish General Directorate for Cultural Heritage and Museums. The program will include basic diving/SCUBA training with an intensive course schedule on underwater archaeology in terms of both theoretical and practical applications. For the moment we are at the final stages of signing a protocol and hope to initiate the first leg in 2011. The training of Ministry's personnel will definitely help to increase the quality and

[1] http://www.360derece.info

[2] This project is entirely funded by Ankara University Scientific Research Fund Project with Project No: 10Y6055002.

[3] See Broodbank 2000, Fig. 23 for a some examples of long boat depictions on "frying pans" and rock.

quantity of underwater research in Turkey. In the near future we also plan to initiate this certificate program for archaeology students who are willing to take part in underwater excavations.

Ankara University Research Center for Maritime Archaeology is a newly established center. Thanks to our supporting institutes, the center have now fulfilled its needs in terms of equipment in a very short period of time and started to form a well trained and experienced staff which in the near future will play a major role in the field of underwater archaeology in Turkey and in the Mediterranean.

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The Izmir Region Excavations and Research Project (IRERP) is continuing within the framework of Ankara University Research Center for Maritime Archaeology (ANKÜSAM) and is generously supported by the Ministry of Tourism and Culture, Turkey; Ankara University Scientific Research Fund Project No. 2006 – 0901024 and 10Y6055002; TÜBITAK, Project No. 108K263; Institute for Aegean Prehistory (INSTAP), Ankara University, Dil ve Tarih Coğrafya Fakültesi; INSTAP-SCEC; the Urla Municipality; Turkish Historical Society (TTK) and Turkish Institute of Nautical Archaeology (TINA). Fore more information on ANKÜSAM and IRERP Project see **http://ankusam.ankara.edu.tr**

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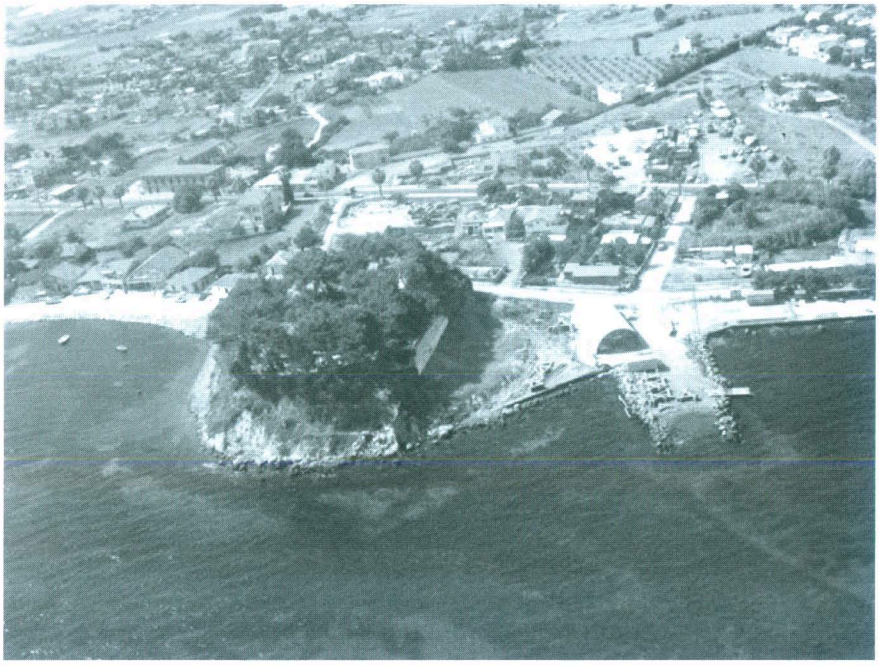

Fig. 1: Aerial view of Liman Tepe and submerged harbour remains

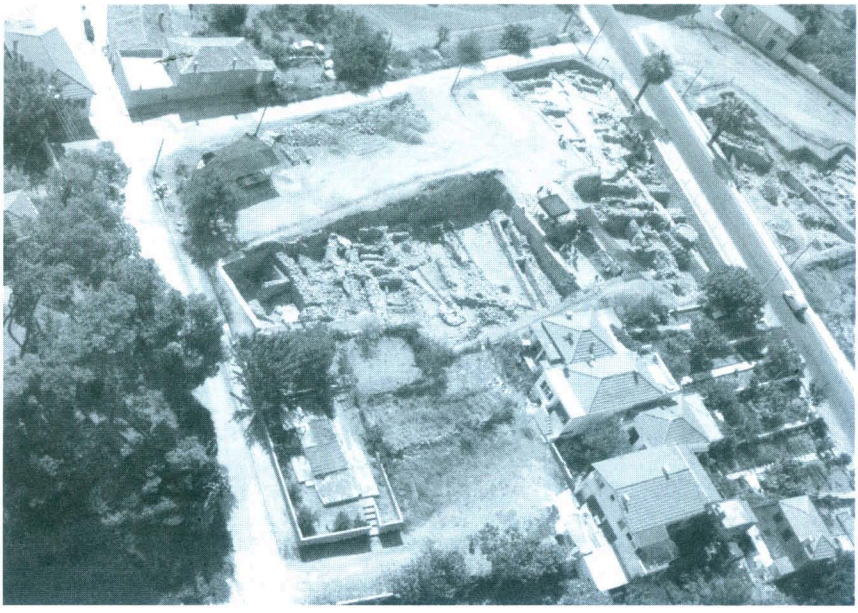

Fig. 2: Aerial photo of Liman Tepe Bronze Age settlement

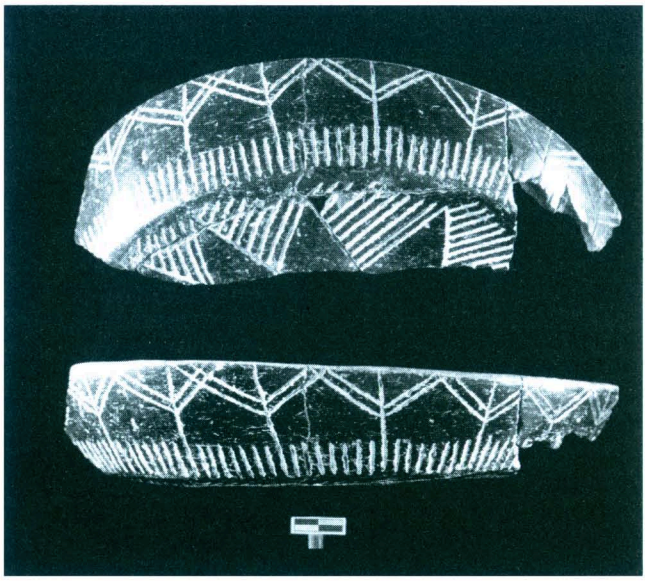

Fig. 3: A "Cycladic" Frying Pan indicating maritime contacts of Liman Tepe during the first half of the 3rd Millennium BC.

Fig. 4: An imported urfirnis sauceboat indicating the maritime contacts of Liman Tepe during the first half of the 3rd Millennium BC.

Fig. 5: Liman Tepe Period VI settlement. Fortification wall with gate and the long houses

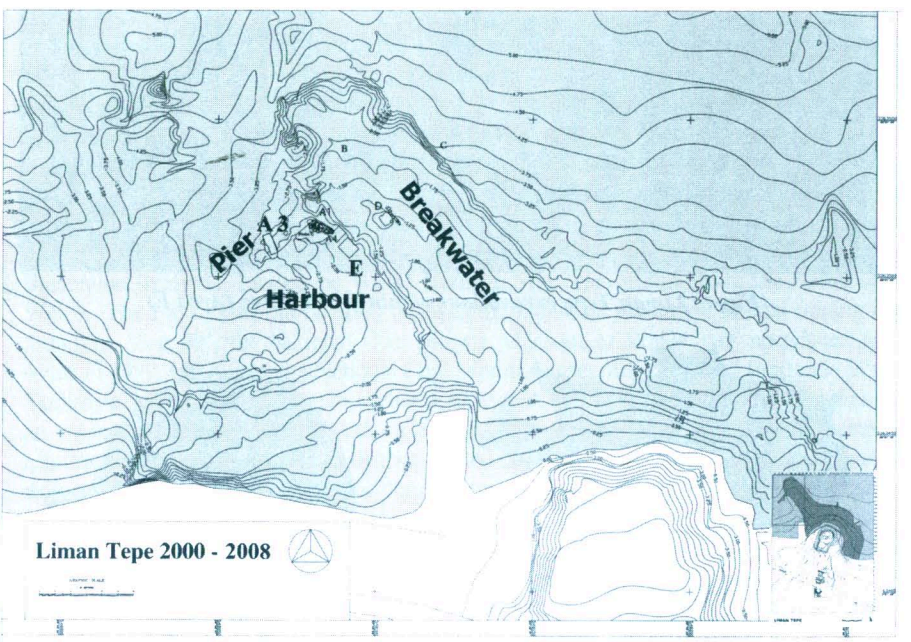

Fig. 6: Plan of the submerged harbour remains at Liman Tepe. (6^{th} – 4^{th} Centuries BC)

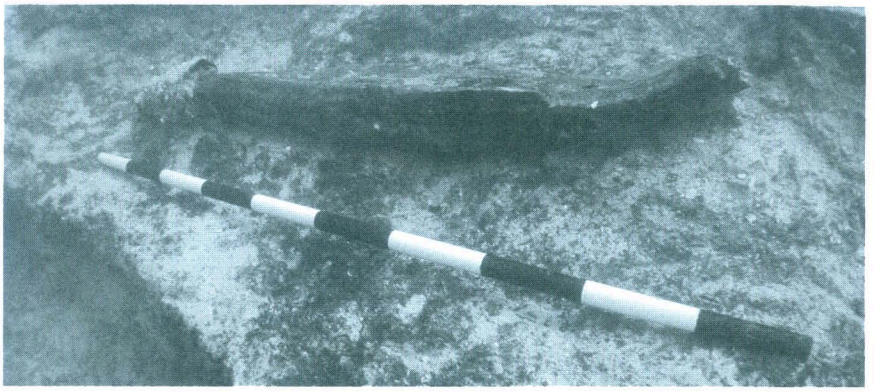

Fig. 7: Liman Tepe wooden anchor with an iron tip. Late 6th Century BC.

Fig. 8: Liman Tepe excavations within the harbour (Area E)

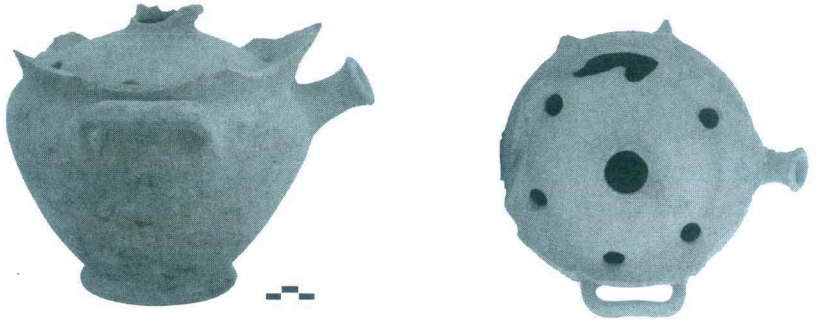

Fig. 9: A 4th Century BC pot from the harbour floor at Liman Tepe.