

# Relations between the Urla peninsula and the Minoan world

*Hayat Erkanal & Levent Keskin*

From the moment Aegean Archaeology was defined as a special research subject, the west Anatolian region remained largely unknown in terms of prehistoric cultures. Due to the dearth of research, the potential of the region was totally ignored and our knowledge limited to a few sites such as Troy and Beycesultan. However, research carried out in the region, especially in the last quarter of the 20<sup>th</sup> century, has provided us with valuable information and changed the overall picture dramatically, demonstrating the existence of strong prehistoric cultures starting from the Neolithic until the end of the Late Bronze Age. Thus, data from both coastal and inland zones have helped us to define and reconstruct the prehistoric cultures of western Anatolia.

One of these investigations, the İzmir Region Excavations and Research Project (IRERP)<sup>1</sup>, a regional project begun in 1985, is conducting ex-

cavations and surveys in İzmir province to define the prehistoric character of the region. The finds from sites Çeşme-Bağlararası and Liman Tepe in the Urla peninsula (Fig. 1) have provided us with important data on the relations of the region with the Minoan world.

During the first half of the 2<sup>nd</sup> Millennium BC, Cretan merchants extended the influence of Minoan culture to the northern Aegean as well, form-

<sup>1</sup> İzmir Region Excavations and Research Project (IRERP) is continuing under 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 Research Fund Project Nr. 06B5358001; TÜBİTAK Project Nr. 108K263; INSTAP, Ankara University, Dil ve Tarih Coğrafya Fakültesi; INSTAP-SCEC; the Municipality of Urla and the Turkish Historical Society. For general information and a bibliography of the project see: [http://www.geocities.com/irerp\\_tr](http://www.geocities.com/irerp_tr)



Fig. 1. Map showing the sites, investigated by IRERP.



Fig. 2. Çeşme – Bağlararası, general view of the site.

ing the so-called “Minoan Colonies” in the south-west Aegean, the Cycladic islands and the western Anatolian coastal zones. Until recently, Miletus was the most northern settlement to represent such activities on the west Anatolian coast.<sup>2</sup> Now, the new site at Çeşme-Bağlararası has extended this line far to the north. The site (Fig. 2), located very close to the modern harbour of Çeşme, was inhabited at a time contemporary with the Middle Minoan III – Late Minoan I periods, when the so-called Minoanisation process achieved its highest point throughout the whole Aegean world.

The importance of the site derives mainly from its geographical location. Apart from the rich natural sources, the Gediz (Hermos) and Büyük Menderes (Great Meander) river valleys which connect the coastal zone to the inner Central Anatolian

plateaus and the location of the site advantageous for overseas activities made the site very strategic. Considering these facts, it should not be a surprise that it was a major harbour-town during the pre-historic periods, a fact demonstrated by a wealth of finds.

Despite being a relatively new excavation, after three years of fieldwork, the site provided many new data for the archaeologies of Anatolia and the Aegean.

The site was discovered by chance in 2001. We owe the discovery of this important site to Mr. Hüseyin Vural, assistant director of the Çeşme Archaeological Museum who lives next to the cur-

---

<sup>2</sup> See Niemeier & Niemeier 1997 and 1999.

rent excavation area. When foundation trenches were being dug for a new building, he realized that the excavated soil was full of pottery sherds. The Museum immediately took action and the construction work was halted to avoid further destruction. Next, the Museum conducted a small-scale excavation in the area and, upon the discovery of some architectural features, the IRERP team was contacted.

During an exploratory visit, we were able to identify much imported Minoan and Minoanising pottery as well as local western Anatolian wares dating to the end of the Middle Bronze Age, scattered across the site. Thus, after making all necessary applications to protect the area, systematic excavations started in 2002<sup>3</sup> and are still in progress, in collaboration with the Çeşme Archaeological Museum within the context of the İzmir Region Excavations and Research Project (IRERP).

Although the levels excavated so far point to a very short period of occupation, new evidence indicates that earlier and later levels might also have existed in the vicinity of the site. In 2004, a test sounding, dug by the Museum just 30 m from the excavation area, yielded Early Bronze Age architectural remains and pottery. Again, appropriate measures have been taken to protect the site which was scheduled for excavation in 2005.

The evidence for a later settlement comes from a pit, within the excavation area, which yielded material contemporary with the Late Helladic IIIA:2 – Late Helladic IIIB:1 periods. The pottery consists of both local buff slipped wares and imported painted Mycenaean ceramics. Kylixes, stirrup jars, bowls and spouted bowls are the most common forms. Unfortunately, due to the intensive later habitation in the area, no traces of a LBA settlement have been found.

The main excavation area is divided stratigraphically into three different phases, covering the MM III – LM IA periods (Table 1) The earliest phase of the settlement, ÇB 2b, was founded on sterile soil. The settlement plan was well-organized with streets between house-complexes. Almost every building consists of a single room with fairly standardized architectural features. A common and interesting feature found in many buildings is that the interior

Pit	LH III A:2 – LH III B:1
.....	Gap.....
ÇB 1	LM 1A
ÇB 2a	MM III
.....	earthquake.....
ÇB 2b	MM III
.....	Gap.....
Nearby settlement	Late EB 2

Table 1. Current Stratigraphy at Çeşme – Bağlararası.

walls were plastered, the plaster covering both the mud-brick and the stone foundations.

The effects of a strong earthquake which ended this phase can be traced throughout the whole settlement. The walls had collapsed into the houses sealing the archaeological level. Notably, the fact that the mud-brick walls were well-preserved points to a quick recovery and immediate re-building at the start of the succeeding period.

The architectural remains of this phase were mostly domestic in character, although one building complex, House 2, reflects an industrial function.

This complex (the ‘Wine House’) comprises a trapezoidal frontal structure with three rectangular, narrow rooms attached to it (Fig. 3)<sup>4</sup>. These additional rooms were probably used as storage facilities built partly below the main floor level. The architectural features indicate that the whole complex was planned and built at the same time. A series of features associated with wine production was un-

<sup>3</sup> For a preliminary report of the first season see Erkanal & Karaturgut 2004 and Şahoğlu 2007. A detailed publication is in progress.

<sup>4</sup> Erkanal & Karaturgut 2004, 157, resim 11-12.

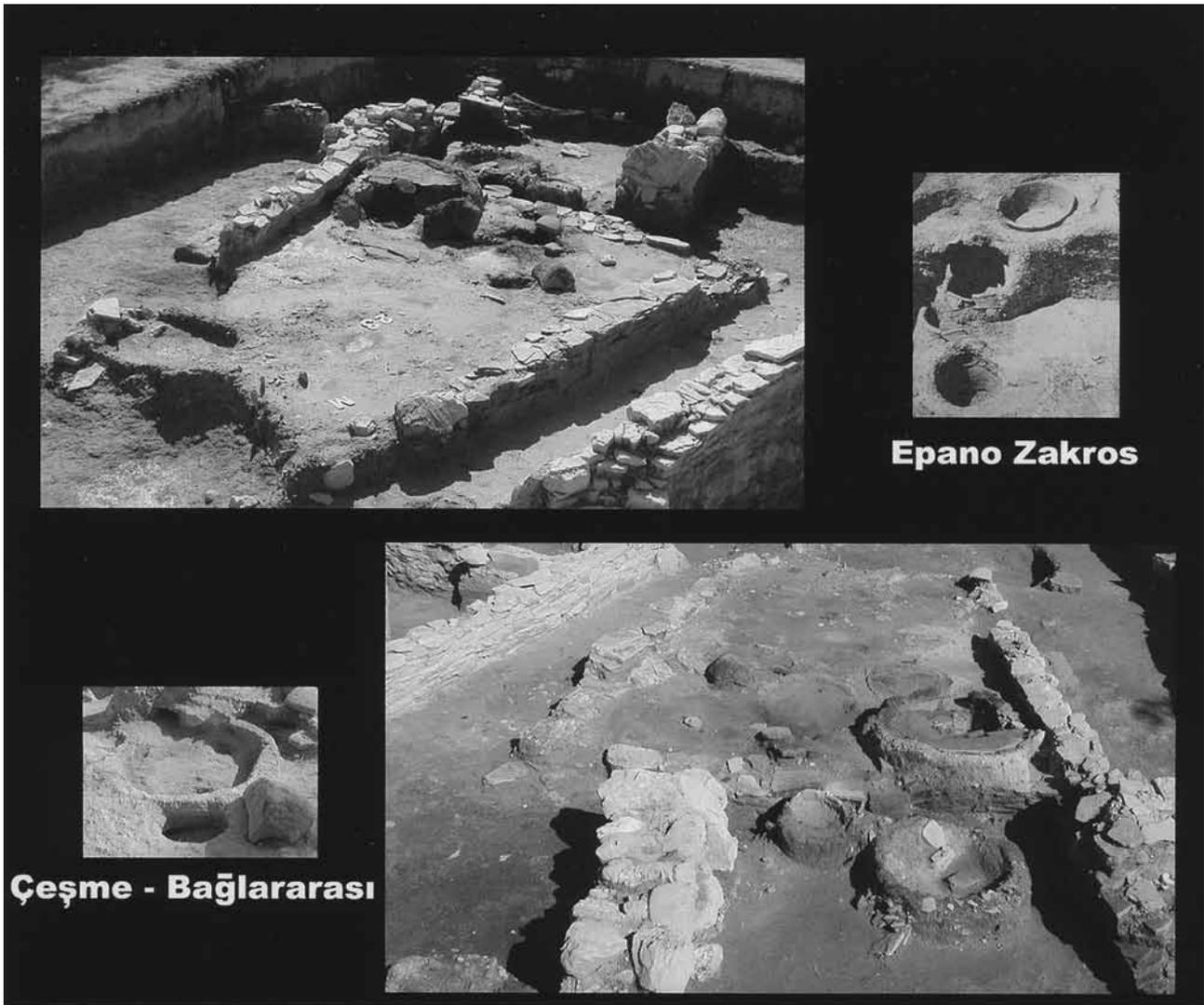


Fig. 3. ÇB, House 2 (Wine House).

covered in the front room. These consisted of a circular, plastered basin linked to a smaller pit, again plastered. This structure must have been used as a wine production facility where grapes were first pressed and the liquid went through certain phases ending up as wine. Thus, the two basins were used respectively for pressing and collecting. The storage rooms also help to identify the character of the complex. The southern room might have been domestic, used for storing pots and food. In the central room, all the walls and the floor were plastered. Entry was presumably gained from above since there were no doorways. The fact that it was completely plastered points to this room being used as a storage area in connection with the

wine production process. All these features suggest that this complex was a wine production facility. The numerous trefoil jugs and semi globular cups found in the third room also support this view. Similar installations are known from Epano Zakros and Vathypetro in Minoan Crete.<sup>5</sup> With its entire assemblage, this wine house represents one of the earliest examples in the Eastern Mediterranean.

The pottery of 2b phase consist of mainly local wares with a buff or red slip. High quality vessels and coarse wares for daily usage form two large groups.

<sup>5</sup> Hamilakis 1999, pl. 1.

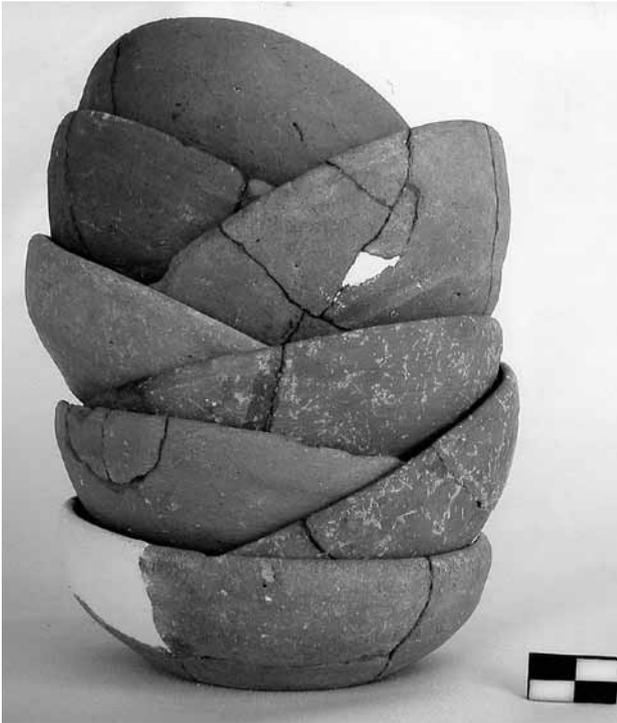


Fig. 4. ÇB, Semi globular cups from the Wine House.



Fig. 5. ÇB, Imported footed vessel, Phase 2b.

Another important group is the repertoire of the wine house. Trefoil jugs with a buff or red slip form the majority of this group which are well-known from sites, such as Liman Tepe,<sup>6</sup> Panaztepe<sup>7</sup> and



Fig. 6. ÇB, Imported dark-faced incised lid, Phase 2b.

Kocabaştepe<sup>8</sup> in the İzmir region. Semi-globular cups, found in large quantities, probably served as drinking vessels related to the function of the complex (Fig. 4). This form might be interpreted as a functional equivalent of the Minoan conical cups in the west Anatolian coastal zone.

Imports are few from this earliest phase of the settlement. Notable among them is a footed vessel (Fig. 5) found together with other examples associated with the Wine House. The mottled black slip of the vessel is severely worn. It has a yellowish and soft fabric. Other sherds, belonging to smaller vessels found in the same deposit are of the same fabric and have a similar thin and red/black mottled slip. Another imported find is a dark slipped lid of Thera origin belonging to the dark-faced incised pottery group (Fig. 6).<sup>9</sup>

The next phase, 2a, is very poorly preserved. It covered a short time period compared with the preceding one. The buildings were re-used with some additional installations and renovations. The settlement seems to have lost its organized layout and consisted of some simple dwellings and open-air work areas. Numerous clay and stone basins point

<sup>6</sup> Günel 1999a, 53, abb. 14, no. 16-17.

<sup>7</sup> Günel 1999b, 52, lev. 106, 162.

<sup>8</sup> Aykurt 2004.

<sup>9</sup> See Rambach 2004, 1237-38 for similar examples from the late EBA III period.



Fig. 7a-b. ÇB, Ivory seal, Phase 2a.

to a shortage of supplies and an increasing demand for storage facilities following the big earthquake.

The pottery assemblage continues the tradition of the preceding phase with no radical changes. Local west Anatolian wares with buff/red slip are abundant. Imported examples are few and have the same greyish yellow fabric of the previous phase.

An important find of this level is a short cylindrical, ivory stamp seal (Fig. 7, a-b). The designs at each end are, respectively, an eight-petal rosette and four spiral-like motifs within two circles. Both the motifs and the shape of the seal have similar counterparts in Minoan Crete,<sup>10</sup> a fact which might be interpreted as an indication of Minoan presence at the site.

Unfortunately, due to its close position to the surface, Level 1 of Çeşme-Bağlararası is largely destroyed and has only fragments of walls. This level, contemporary with LM 1A in Crete, is represented with many pits spread over the whole excavation area. The materials from the pits show that Çeşme-Bağlararası not only had strong relations with the Minoan world, but also actively took part in the Aegean trade networks, in a wider sense, during this period.

Again, the majority of the ceramics from the

pits are buff slipped, characteristic of west Anatolian wares. Among them, bead-rim bowls are the most common form. Another local pottery group comprises Anatolian Grey Wares, represented by medium to high quality examples. Another characteristic feature of this level is the abundance of 'S' profiled cups with flat bases. Obviously they replaced the semi globular cups of the preceding phase and had the same function.

Incense burners are noteworthy (Fig. 8). Very similar forms are known both in clay<sup>11</sup> and from Theran wall paintings<sup>12</sup> indicating that at least some religious elements of south Aegean origin were used or adopted at the settlement. A lid with many perforations from 2b phase might have been used with such an incense burner (Fig. 9).

The imported pottery from this level displays a wide variety of forms and origin. They can be classified as Minoan imports, Cycladic painted and Minoanising wares and imports from mainland Greece.

<sup>10</sup> Sakellarakis & Kenna 1969, nr. 121, 24D, 31D.

<sup>11</sup> MacGillivray 1998, fig. 2.24, pl. 47, 148-9.

<sup>12</sup> Marinatos & Hirmer 1976, fig. 153.



Fig. 8. ÇB, Incense burner, Phase 1.

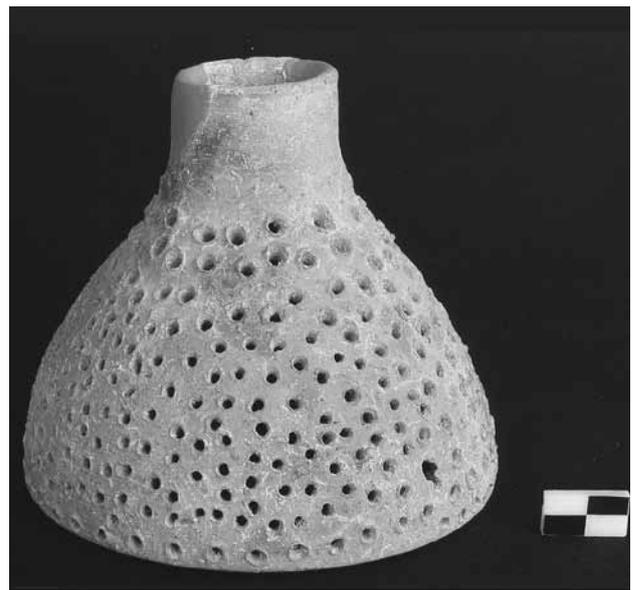


Fig. 9. ÇB, Perforated lid, Phase 2b.



Fig. 10. ÇB, Minoan imports, Phase 1.

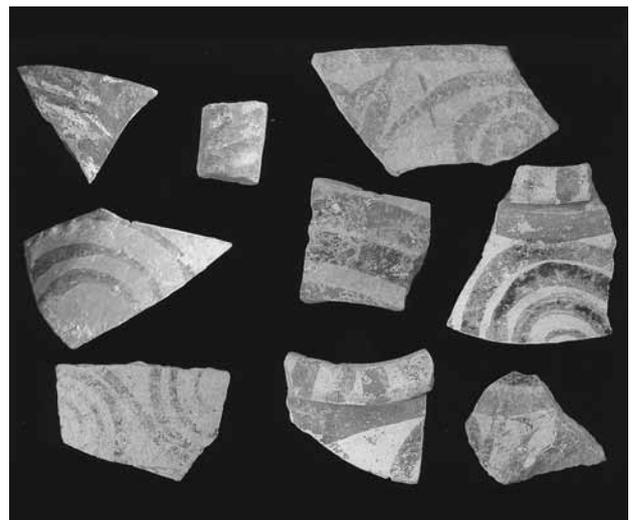


Fig. 11. ÇB, Minoanising wares, Phase 1.

The small group of Minoan imports are distinguished by their high quality (Fig. 10). They are of polychrome<sup>13</sup> and tortoise-shell/ripple wares<sup>14</sup> bearing spirals and band decorations.

Imports from the Cyclades form the largest group. They consist of Cycladic painted examples and of Cycladic Minoanising wares. Minoanising wares are represented mainly by Dark-on-Light examples; however some Light-on-Dark examples also occur (Fig. 11). Both monochrome and polychrome examples do exist. Running spirals and in some cases, floral motifs are used as decoration. Minoan and Cycladic type one-handed cups are the most common forms<sup>15</sup> (Fig. 12).

Among Cycladic wares, there are some fine,

wheel-made examples with brown decoration on a beige slip.<sup>16</sup> Another Cycladic import, a white

<sup>13</sup> Cf. Schiering 1998, 72, 74, 159, taf. 42, 3; MacGillivray 1998, 75-77, Type 4-7.

<sup>14</sup> Cf. Betancourt 1985, 113-14; Betancourt 1984, 89-91, fig. 2, C 2578.

<sup>15</sup> Cf. Caskey 1972, 393, pl. 93, G-52; MacGillivray 1998, 75-77, Type 4-7.

<sup>16</sup> Atkinson *et al.* 1904, pl. 20, 1; Overbeck 1989, 76, pl. 52.



Fig. 12. ÇB, Imported Cycladic-Minoanising cup.

slipped jug with geometric decoration (Fig. 13), represents a unique find in this part of the Aegean.<sup>17</sup> Imports from mainland Greece are represented by some sherds of Aeginetan wares<sup>18</sup> with a greenish

yellowish fabric with inclusions and by examples of Yellow Minyan.

Minoan-type loom weights with a characteristic groove on the upper edge,<sup>19</sup> produced locally, were also found in the pits.<sup>20</sup> This is another indication of the Minoan contacts of the settlement which might also be interpreted as a transfer of technologies considering their broad distribution in the wider Aegean and west Anatolian region,<sup>21</sup> in particular.

Parallel to the excavations, the geomorphological work, undertaken by E. Reinhardt and B. Goodman from MacMaster University, Canada, aims to trace and understand the changes in the coastline regarding the settlement's history. A core taken from about 20 m from the excavation area revealed the presence of an ash layer similar to Theran

<sup>17</sup> Erkanal & Karaturgut 2004, res. 7.

<sup>18</sup> Cf. Zerner 1993, 49.

<sup>19</sup> See Evely 2000, 498ff., figs. 202-3 for the technique and types of Minoan loom weights; for a different use as fishnet weights see Powell 1996, 116, fig. 74-5.

<sup>20</sup> Erkanal & Karaturgut 2004, res. 8.

<sup>21</sup> See Niemeier 2000, abb., Momigliano 2001, 15, fig. B, and Guzowska 2002, 587, for examples from Miletus, Iasos and Troy, respectively.



Fig. 13. ÇB, Imported Cycladic jug, Phase 1.

tephra. If this is the case (analyses are in progress), although it is still too early to link this discovery with the stratigraphy of the site, future work will no doubt help to clarify the effects of Thera eruption on the west Anatolian coastal zone and the associated chronological issues.

Another site, investigated in the context of the IRERP is Liman Tepe (Fig. 1).<sup>22</sup> The site, which was an important harbour town in the Urla peninsula from the Early Bronze Age, yielded important data for the overseas contacts of the region throughout the Bronze Age. Some recent finds, however, gain special importance in respect of Minoan relations.

First of these – a small fragment belonging to an open bowl – was found in the late EB II deposits of Liman Tepe which are contemporary with EM II B in Crete.<sup>23</sup> It may be a Minoan import.<sup>24</sup> If this is the case, this piece represents the northern limit for evidence of this culture. The second piece, discovered in 2004, is another Minoan import vessel (Fig. 14) in the form of a deep, spouted bowl which is well known from the EM II–MM I periods in Crete. Several loom weights of Minoan type with grooves on the upper edge are also found in the Middle Bronze Age levels (Fig. 15).

Although displaying a different character from that at Çeşme-Bağlararası, all these finds show that the relations of the region with the Minoan world had begun as early as the later part of the Early Bronze Age.

The Minoanisation process, based on the wide distribution of Minoan elements outside Crete during the first half of the 2<sup>nd</sup> Millennium BC, has already been defined and accepted as a cultural phenomenon and discussed by many scholars,<sup>25</sup> both from archaeological and theoretical points of view. However, there are still some open issues especially regarding the appearance, the dynamics and the overall character of this expansion. Some scholars want to see this in terms of **Minoan colonies**<sup>26</sup> throughout the Aegean for which there may be evidence at settlements **such as Phylakopi on Melos, Ayia Irini on Keos, Akrotiri on Thera and Trianda on Rhodes.**<sup>27</sup> However, others have tried to explain it as a result of one directional or reciprocal trade based on the circulation of raw materi-



Fig. 14. Liman Tepe, Imported Minoan spouted bowl.

als and particularly luxury items.<sup>28</sup> Recent investigations throughout the whole Aegean have much contributed to our knowledge. But, at this stage of research it seems more appropriate to focus on a local level and then apply the results to a wider, regional scale.

<sup>22</sup> Erkanal 1996.

<sup>23</sup> Şahoğlu 2002, pl. 116.

<sup>24</sup> This piece was first identified during the sampling work for the international joint project of “Kastri Group Pottery: The Transition of Style and Technology in the EBA Aegean”, analysis are still in progress.

<sup>25</sup> Branigan 1981, 1984 and 1989; Wiener 1984 and 1990; Melas 1991 and Berg 1999.

<sup>26</sup> Branigan 1981.

<sup>27</sup> Niemeier & Niemeier 1999, 552.

<sup>28</sup> Melas 1991; Davis 1979.



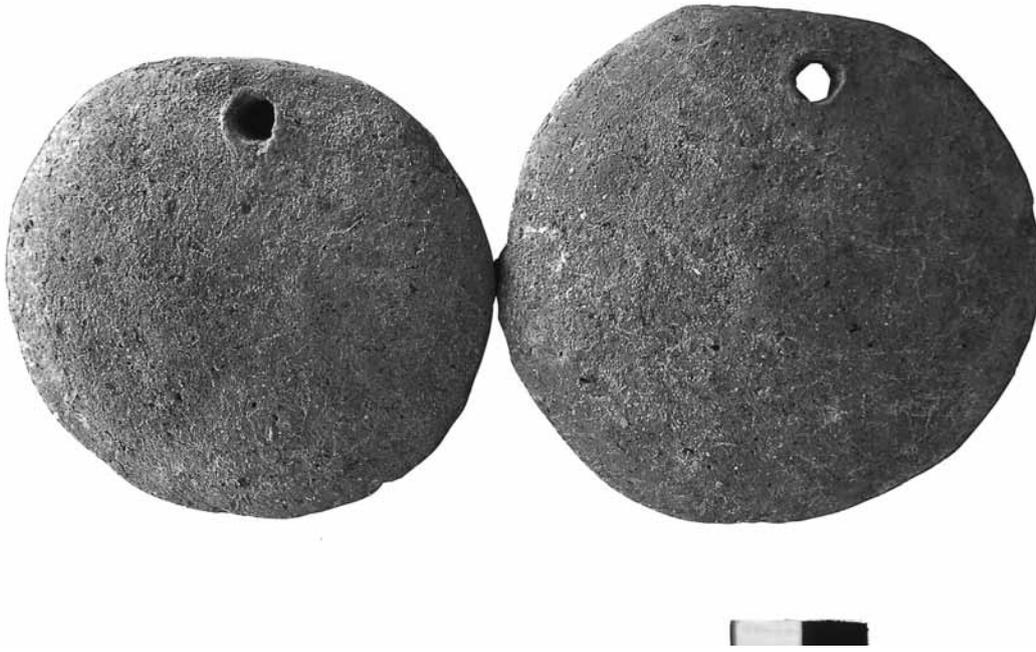


Fig. 15. Liman Tepe,  
Minoan type loom  
weights.

At the beginning it was thought that Minoan expansion was limited to the south Aegean world. However, Mikro Vouni on Samothrace shows clearly that it reached up to the far northern point of the Aegean.<sup>29</sup> Finds from settlements such as Miletus,<sup>30</sup> Iasos,<sup>31</sup> Bademgediği,<sup>32</sup> Teichiussa (Kömür Adası),<sup>33</sup> Tavşanadası,<sup>34</sup> Troy<sup>35</sup> and, more recently, Çeşme-Bağlararası, show that the west Anatolian coastal zone was also within the limits of this interaction. However, the scale and character of this interaction varies from site to site and it is usually not so easy to characterize each case using the same criteria.

The most common element in the archaeological record is pottery, and it forms the major group of Minoan elements found outside Crete. However, the presence of imported Minoan vessels or their imitations at a site does not necessarily mean the exact presence of Minoans. This can be interpreted as an imitation or adoption of the fashionable items of the particular period, a phenomenon referred to by Wiener as the “Versailles Effect”.<sup>36</sup> Thus, the existence of pottery must be supported with other archaeological evidences to trace Minoan presence.

So far, Miletus was the only settlement on the west Anatolian littoral to have shown strong and

solid evidence indicating the presence of a Minoan colony. Some of the features requiring investigation in order to define the level of Minoanisation at a particular site were listed by Niemeier.<sup>37</sup> In this respect, the discoveries at Çeşme-Bağlararası provide interesting results:

- 1) some features observed in the architecture (the plastering of the inner faces of the walls) and the Wine House with similar examples from Minoan Crete;
- 2) the seal with Minoan elements;
- 3) the use of incense burners and Minoan-type loom weights. These, considered together with Minoan and Minoanising imported vessels and locally produced Minoanising pottery, are strongly indicative of Minoan influence, and even presence, at the site.

<sup>29</sup> Matsas 1995.

<sup>30</sup> Niemeier & Niemeier 1997 and 1999.

<sup>31</sup> Momigliano 2000 and 2001.

<sup>32</sup> Meriç & Mountjoy 2002 and Meriç 2003.

<sup>33</sup> Voigtländer 1986 and 1988.

<sup>34</sup> Tül 1986, 722-4.

<sup>35</sup> Guzowska 2002.

<sup>36</sup> Wiener 1984, 17.

<sup>37</sup> Niemeier & Niemeier 1999, 544ff.

The fact that Minoan expansion or interest did not depend on geographical proximity has been already demonstrated by Mikro Vouni on Samothrace. Therefore, it must be explained in other terms. One of the reasons for Minoan expansion was obviously to gain access and control of the trade routes for metals and raw materials. In this respect, the Minoan presence at Miletus and Mikro Vouni, particularly in view of the administrative documents, fits very well into this picture. Çeşme-Bağlararası also must have had a special interest in trade given its geographical position on the axis of the main trade routes between the Aegean and Central Anatolia and its proximity to rich natural resources and metal sources within its territory.<sup>38</sup>

At the present state of our knowledge it is hard to determine the exact size of Minoan presence at Çeşme-Bağlararası. However, the archaeological evidence observed in architecture, administration and ritual behaviours indicate a strong presence of Minoan elements which can hardly be explained only in terms of interregional trade activities. In addition, the settlement displays a strong Anatolian character in terms of the settlement organization, architecture and pottery. It should also be noted that this is a relatively new excavation and that only

a small area has so far been excavated. Thus, future work at the site will help obtain more detailed results.

The settlement at Çeşme-Bağlararası was an important harbour town, inhabited at a time contemporary with MM III–LM IA on Crete, during the peak of Minoan power and expansion throughout the Aegean. It is the most northerly settlement of the west Anatolian littoral with intensive Minoan influence and contacts observable in architecture, small finds and pottery. The site, building on strong local traditions of west Anatolian character, displays a very important phenomenon where Anatolian and Aegean civilizations met and Minoan finds are found within the same contexts as Central Anatolian influenced materials.

Considering the whole evidence, future work at the site can be expected to clarify further the comparative chronologies of Anatolia and the Aegean during the 2<sup>nd</sup> Millennium BC presenting an opportunity for more accurate correlations.

---

<sup>38</sup> MTA 1981; Lengeranlı 2008.

# Bibliography

- Atkinson, T. D. *et al.* 1904  
*Excavations at Phylakopi in Melos* (Society for the Promotion of Hellenic Studies, Supplementary Paper No.4), London.
- Aykurt A. 2004  
*Kocabaş Tepe Orta Tunç Çağı Seramik Örneklerinin Ege Arkeolojisindeki Yeri ve Önemi*, Ankara 2004. Ph. D. Dissertation, Hacettepe University.
- Berg I. 1999  
‘The southern Aegean system’, *Journal of World-Systems Research* V, 3, 475-84.
- Betancourt P.P. 1984  
‘The Middle Minoan pottery of southern Crete and the question of a Middle Minoan thalassocracy’, in *The Minoan Thalassocracy: myth and reality. Proceedings of the Third International Symposium at the Swedish Institute in Athens, 31 May-5 June 1982*, R. Hägg and N. Marinatos (eds.), Stockholm, 89-92.
- Betancourt P.P. 1985  
*The history of Minoan pottery*, 1985.
- Branigan, K. 1981  
‘Minoan colonialism’, *BSA* 76, 23-33.
- Branigan K. 1984  
‘Minoan community colonies in the Aegean?’, in *The Minoan Thalassocracy: Myth and Reality. Proceedings of the Third International Symposium at the Swedish Institute in Athens, 31 May-5 June 1982*, R. Hägg R. and N. Marinatos (eds.), Stockholm, 49-53.
- Branigan K. 1989  
‘Minoan foreign relations in transition’, in *Transition. Le monde égéen du Bronze moyen au Bronze récent. Actes de la deuxième Rencontre égéenne internationale de l'Université de Liège, 18-20 avril 1988* (Aegaeum 3), R. Laffineur (ed.), Liege, 65-71.
- Caskey J. 1972  
‘Investigations in Keos. Part II: a conspectus of the pottery’, *Hesperia* 41, 357-401.
- Davis J. L. 1979  
‘Minos and Dexithea: Crete and the Cyclades in the Later Bronze Age’, in *Papers in Cycladic Prehistory*, J.L. Davis and J. F. Cherry (eds.), Los Angeles, 143-57.
- Erkanal H. & E. Karaturgut 2004  
‘2002 Yılı Çeşme – Bağlararası Kazıları’, *Kazı Sonuçları Toplantısı* 25, 2. Cilt, 153-64.
- Erkanal H. 1996  
‘Eski Tunç Çağı’nda Batı Anadolu Sahil Kesiminde Kentleşme/Early Bronze Age urbanization in the coastal region of western Anatolia’, in *Tarihten Günümüze Anadolu’da Konut ve Yerleşme/Housing and settlement in Anatolia, a historical perspective*, Y. Sey (ed.), İstanbul, 70-82.
- Evely R.D.G. 2000  
*Minoan crafts: tools and techniques. An introduction*, I-II, Jonsered 2000.
- Günel S. 1999a  
‘Vorbericht über die mittel- und spätbronzezeitliche Keramik vom Liman Tepe’, *IstMitt* 49, 41-82.
- Günel S. 1999b  
*Panaztepe II, M.Ö. 2. Bine Tarihlendirilen Panaztepe Seramiğinin Batı Anadolu ve Ege Arkeolojisindeki Yeri ve Önemi*, Ankara 1999.
- Guzowska M. 2002  
‘Traces of Minoan behavioural patterns in the north-east Aegean’, in *Mauerschau. Festschrift für Manfred Korfmann*, R. S. Aslan, Blum, G. Kastl, F. Schweizer and D. Thumm (eds.), Remschalden-Grunbach, 585-91.
- Hamilakis Y. 1999  
‘Food technologies/technologies of the body: the social context of wine and oil production and consumption in Bronze Age Crete’, *WorldArch* 31, 38-54.
- Lengeranli, Y. 2008  
‘Metallic mineral deposits and occurrences of the İzmir district, Turkey’, in *The Proceedings of the International Symposium ‘The Aegean in the Neolithic, Chalcolithic and Early Bronze Age’, 13-19 October 1997*, Urla-İzmir, 355-68.
- MacGillivray J.A. 1998  
*Knossos: pottery groups of the Old Palace Period* (British School at Athens Studies 5). London/Nottingham 1998.
- Marinatos S. & M. Hirmer 1976  
*Kreta, Thera und das mykenische Hellas*, 3. Auflage München 1976.
- Matsas D. 1995  
‘Minoan long distance trade: a view from the northern Aegean’, in *POLITEIA Society and State in the*

- Aegean Bronze Age, Proceedings of the 5<sup>th</sup> International Aegean Conference, University of Heidelberg, Archäologisches Institut, 10-13 April 1994*, R. Laffineur and W.-D. Niemeier (eds), Eupen, 235-47.
- Melas M. 1991  
‘Acculturation and social mobility in the Minoan world’, in *Thalassa. L’Egée Préhistorique et la Mer. Actes de la troisième Rencontre égéenne internationale de l’Université de Liège, 23-25 avril 1990*, (Aegaeum 7), R. Laffineur and L. Basch (eds.), Liège 1991, 169-88.
- Meriç R. & P.A. Mountjoy 2002  
‘Mycenaean pottery from Bademgediği Tepe (Puranda) in Ionia: a preliminary report’, *IstMitt* 52, 79-92.
- Meriç R. 2003  
‘Excavations at Bademgediği Tepe (Puranda) 1999-2002: a preliminary report’, *IstMitt* 53, 79-98.
- Momigliano N. 2000  
‘Bronze Age Carian Iasos’, *Anatolian Archaeology* 6, 12.
- Momigliano N. 2001  
‘Bronze Age Carian Iasos’, *Anatolian Archaeology* 7, 15.
- MTA 1981  
Apaydın N. & N. Erseçen, *Türkiye’nin Bilinen Maden ve Mineral Kaynakları/Known ore and mineral resources of Turkey*, Ankara.
- Niemeier B, & W.-D. Niemeier 1997  
‘Milet 1994-1995, projekt ‘Minoisch-mykenisches bis protogeometrisches Milet.’ Zielsetzung und Grabungen auf dem Stadionhügel und am Athenatempel’, *AA*, 189-248.
- Niemeier B, & W.-D. Niemeier 1999  
‘The Minoans of Miletus’, in *MELETEMATA Studies in Aegean Archaeology presented to Malcolm H. Wiener as he enters his 65<sup>th</sup> Year* (Aegaeum 20), P.P. Betancourt, V. Karageorghis, R. Laffineur R. and W.-D. Niemeier (eds), Liège, 543-54.
- Niemeier, W.-D.2000  
‘Milet: Knotenpunkt im bronzezeitlichen Metallhandel zwischen Anatolien und der Ägäis?’, in *Anatolian Metal I* (Der Anschnitt Beiheft 13), Ü. Yalçın (ed.), Bochum, 125-36.
- Overbeck J.C. 1989  
*Keos VII. Ayia Irini: Period IV. The stratigraphy and the find deposits*, Mainz am Rhein 1989.
- Powell J. 1996  
*Fishing in the Prehistoric Aegean*, (SIMA pocket-book 137), Jonsered.
- Rambach J. 2004  
‘Olympia im ausgehenden 3. Jahrtausend v. Chr.: Bindeglied zwischen zentralem und östlichem Mittelmeerraum’, in *Die Ägäische Frühzeit. 2. Band-Teil 1 and 2. Die Frühbronzezeit in Griechenland*, Alram-Stern E. (ed.), Wien, 1199-254.
- Şahoğlu, V. 2002  
*Liman Tepe Erken Tunç Çağı Seramiğinin Ege Arkeolojisindeki Yeri ve Önemi*, Ph. D. Dissertation, Ankara University, Ankara.
- Şahoğlu V. (in press)  
‘Çeşme – Bağlararası: a new excavation in western Anatolia’, in *Middle Helladic Pottery and Synchronisms. Proceedings of the International Workshop held at Salzburg, October 31st – November 2nd, 2004*, F. Felten, W. Gaus & R. Smetana (eds.), Vienna, 309-22.
- Sakellarakis J.A. & V. E. G. Kenna 1969  
*Iraklion, Sammlung Metaxas*, CMS IV, Berlin.
- Schiering W. 1998  
*Minoische Töpferkunst. Die Bemalten Tongefässe der Insel des Minos*, Mainz am Rhein 1998.
- Tül, Ş. 1986  
‘Prehistoric settlements on the Maeander plain’, in *Prehistoric Aphrodisias*, II, M. S. Joukowsky (ed.), Rhode Island, 713-24.
- Voigtländer W. 1986  
‘Umriss eines vor- und frühgeschichtlichen Zentrums an der karisch-ionischen Küste: Erster Vorbericht – Survey 1984’, *AA*, 613-67.
- Voigtländer W. 1988  
‘Akbük-Teichoussa. Zweiter Vorbericht-Survey 1985/6’, *AA*, 567-625.
- Wiener M.H. 1984  
‘Crete and the Cyclades in LM I: the tale of the conical cups’, in *The Minoan Thalassocracy: Myth and Reality. Proceedings of the Third International Symposium at the Swedish Institute in Athens, 31 May-5 June 1982*, R. Hägg and N. Marinatos (eds.), Stockholm, 17-26.
- Wiener M.H. 1990  
‘The Isles of Crete? The Minoan thalassocracy revisited’, in *Thera and the Aegean World III.1. Archaeology. Proceedings of the Third International Congress, Santorini, Greece, 3-9 September 1989*, D.A. Hardy, C.G. Doulas, J.A. Sakellarakis and P.M. Warren (eds), London, 128-61.

Zerner C. 1993  
'New perspectives on trade in the  
Middle and Early Late Helladic  
periods on the Mainland', in *Wace  
and Blegen: Pottery as Evidence for  
Trade in the Aegean Bronze Age  
1939-1989. Proceedings of the  
International Conference held at the  
American School of Classical Studies,  
Athens, Dec. 2-3, 1989*, C. Zerner,  
P. Zerner and J. Winder (eds),  
Amsterdam, 39-56.