# NOSTOI

# INDIGENOUS CULTURE, MIGRATION + INTEGRATION IN THE AEGEAN ISLANDS + WESTERN ANATOLIA DURING THE LATE BRONZE + EARLY IRON AGES

NOSTOI: INDIGENOUS CULTURE, MIGRATION + INTEGRATION IN THE AEGEAN ISLANDS + WESTERN ANATOLIA DURING THE LATE BRONZE + EARLY IRON AGES Edited by Nicholas Chr. Stampolidis, Çiğdem Maner, Konstantinos Kopanias

Project editor: Defne Karakaya Proofreader: Kate Mottolla Page design: Sinan Kılıç Cover design: Gökçen Ergüven

Inside cover and section illustrations: Suzan Aral

Printed by Sprintcenter (certificate no: 13779)

Sanayi Mah. Libadiye Sok. No: 3 4. Levent İstanbul, Turkey • P: +90 212 371 0300

© Koç University Press, 2011 1st print: Istanbul, May 2015

Koç University Press (certificate no: 18318)

Istiklal Caddesi No: 181 Istanbul, Turkey • P: +90 212 393 6000

kup@ku.edu.tr • www.kocuniversitypress.com • www.kocuniversitesiyayinlari.com

## Koç University Suna Kıraç Library Cataloging in Publication Data

Nostoi: indigenous culture, migration + integration in the Aegean Islands + Western Anatolia during the late bronze +early iron ages / Edited by Nicholas Chr. Stampolidis, Çiğdem Maner, Konstantinos Kopanias.

1002 pages; 16.5 x 24 cm.

Includes bibliographical references and index.

ISBN 978-605-5250-49-2

1. Turkey, Western. 2. Aegean Sea Region--Antiquities. 3. Bronze age--Aegean Sea Region. 4. Historic sites--Aegean Sea Region. 5. Excavations (Archaeology)--Aegean Sea Region. 6. Aegean Sea Region--History. 7. Historic sites--Turkey. 8. Turkey--Antiquities. 9. Turkey--Civilization. I. Stampolides, Nikolaos Chr. II. Maner, Çiğdem. III. Kopanias, Konstantions.

DF261.A177 N67 2015

# **NOSTOI**

INDIGENOUS CULTURE, MIGRATION +
INTEGRATION IN THE AEGEAN ISLANDS +
WESTERN ANATOLIA DURING THE LATE BRONZE +
EARLY IRON AGES

EDITED BY

Nicholas Chr. Stampolidis – Çiğdem Maner – Konstantinos Kopanias



# Contents

Introduction	11
part 1: GENERAL	
1 The Political Geography of Arzawa (Western Anatolia) J. DAVID HAWKINS	15
2 The East Aegean-West Anatolian Interface in the 12th Centu Some Aspects Arising from the Mycenaean Pottery PENELOPE A. MOUNTJOY	эгу ВС: 37
3 Between the Aegeans and the Hittites: Western Anatolia in the 2nd Millennium BC PETER PAVÚK	81
4 Settlement Patterns and Socio-Political Landscape of Western Anatolian in the Middle and Late Bronze Age: A Geoarchaeological View RALF BECKS	115
5 The History of the Arzawan State during the Hittite Period METIN ALPARSLAN	131
PART 2: MIGRATION	
6 Migrations in Anatolian Narrative Traditions MARY R. BACHVAROVA	145
7 Migration and Integration at Troy from the End of the Late Bronze Age to the Iron Age CAROLYN CHABOT ASLAN – PAVOL HNILA	185
8 The Mushki/Phrygian Problem from the Near Eastern Point of KONSTANTINOS KOPANIAS	of View 211

9	Ionian Migration: Certainties and Underlying Uncertainties FLORENTIA FRAGKOPOULOU	227
10	Violence and the Ionian Migration: Representation and Reality NAOÍSE MAC SWEENEY	239
PAF	rt 3a: FIELDWORK: AEGEAN	
11	Bridging North and South: The Dodecanese Islands and the "Eastern Insular Arc" between Crete and Anatolia during the Late Bronze Age FANI K. SEROGLOU – DIMITRIS SFAKIANAKIS	263
12	The 'Mycenaeans' in the Southeast Aegean Revisited: An Inter-Regional Comparison JACOB EERBEEK	289
13	The Koan Tradition during the Mycenaean Age: A Contextual and Functional Analysis of Local Ceramics from the "Serraglio", Eleona, and Langada SALVATORE VITALE – ARIANNA TRECARICHI	311
14	The Cyclades and the Dodecanese during the Post-Palatial Period: Heterogeneous Developments of a Homogeneous Culture ANDREAS VLACHOPOULOS – MERCOURIOS GEORGIADIS	337
15	Mycenaeanization on Melos: A View from the Phylakopi Pantries JASON W. EARLE	369
16	Minoanisation, Acculturation, Hybridisation: The Evidence of the Minoan Presence in the North East Aegean between the Middle and Late Bronze Age LUCA GIRELLA - PETER PAVÚK	387
17	Greek Ethnics in –ηνος and the Name of Mytilene ALEXANDER DALE	421
18	Hephaestia: New Data on the Mycenaean Presence on Lemnos during the Late Bronze Age	445

19	The Indigenous Culture of Hephaestia (Lemnos) at the beginning of the Iron Age:	
	Ancient Sources, Mythical Tradition, and Archaeological Data LAURA DANILE	461
PAR	t 3b: FIELDWORK: ANATOLIA	
20	A Monumental Middle Bronze Age Apsidal Building at Alalakh K. ASLIHAN YENER	485
21	Kizzuwatna in the Bronze Age and in Later Periods: Continuity and/or Discontinuity? REMZİ YAĞCI	499
22	Late Bronze-Early Iron Age Painted Pottery from the Northeast Mediterranean Settlements ELİF ÜNLÜ	517
23	Notes on Cultural Interaction in Northwest Pisidia in the Iron Age BİLGE HÜRMÜZLÜ – PAUL IVERSEN	531
24	Lycia Before Lycians:	
	The Elusive Second Millennium BC in Southwest Turkey and the Çaltılar Archaeological Project  NICOLETTA MOMIGLIANO – BELGIN AKSOY	539
25	Late Bronze Age Miletus: The Anatolian Face IVONNE KAISER – JULIEN ZURBACH	557
26	Geometric Miletus MICHAEL KRUMME	581
27	Çeşme-Bağlararası: A Western Anatolian Harbour Settlement at the beginning of the Late Bronze Age VASIF ŞAHOĞLU	593
28	Bademgediği Tepe (Puranda) Near Metropolis RECEP MERİÇ – ALİ KAZIM ÖZ	609

29	Çine-Tepecik: New Contributions on Late Bronze Age Cultures in Western Anatolia SEVİNÇ GÜNEL	627
30	Liman Tepe during the Late Bronze Age SILA MANGALOĞLU-VOTRUBA	647
PAR	T 4: TRADE	
31	Profit Oriented Traders in the Aegean and Anatolia in the 2nd Millennium BC: Inter-Cultural Concepts of Measurement and Value ANNA MICHAILIDOU	671
32	Study of Imports in Late Bronze Age Anatolia: Identification, Definition, Chronological, and Spatial Analysis EKİN KOZAL	693
PAR	T 5: CULT, SOCIAL, AND INTERCULTURAL ASPECTS	
33	Songs by Land and Sea Descending: Anatolian and Aegean Poetic Traditions ANNETTE TEFFETELLER	709
34	Arzawan Rituals and Greek Religion ALICE MOUTON – IAN RUTHERFORD	737
35	The Aegean-Type Sword Found at Hattuša and the Written Sources about the Exchange of Technology at the Late Bronze Age KONSTANTINOS GIANNAKOS	749
36	From Western to Eastern Anatolia:  Reconsidering the Aegean Presence in the Peripheries of the Hittite World  GIOIA ZENONI	767
3 <i>7</i>	Against the Identification of Karkiša with Carians ZSOLT SIMON	<i>7</i> 91
38	The Ionian Migration and Ceramic Dynamics in Ionia at the End of the Second Millennium BC: Some Preliminary Thoughts RIK VAESSEN	811

39	When East Meets West: The Social Identity of Western Anatolia ÇİĞDEM MANER	835
40	Cross-Cultural Interaction in the Eastern Mediterranean during the Early Iron Age: A View from Seal Engraving, with Special Reference to the Lyre-Player Group MANOLIS MIKRAKIS	849
41	At the Crossroads: Dress and Body Ornaments in the Northeastern Aegean MAGDA PIENIĄŻEK	871
42	Something Old, Something New: Non-local Brides as Catalysts for Cultural Exchange at Ayia Irini, Kea? EVI GOROGIANNI – JOANNE CUTLER – RODNEY D.FITZSIMONS	889
43	Klazomenaeans of Three Continents: Emphasis on the 7th c. BC ANAGNOSTIS PAN. AGELARAKIS	923
Edi	tors	983
Со	ntributors	985
Ind	ex	989

# Liman Tepe during the Late Bronze Age

#### SILA MANGALOĞLU-VOTRUBA

#### **Abstract**

Excavations at Liman Tepe have been conducted since 1992 by IRERP (The Izmir Region Excavations and Research Project). The site was inhabited from the Late Neolithic Period through the end of the Bronze Age, and continued into the Classical Period when it was known as Clazomenae. The uncovered LBA architectural remains consist of domestic and workshop structures divided by streets, and several pottery kilns indicating intense pottery production at the site. Besides the local Western Anatolian pottery, which makes up the majority at the site, imported and locally made Mycenaean pottery demonstrates the existence of intense trade connections with the Aegean world, as is observed elsewhere in Western Anatolia during this period. The site was inhabited continuously down to the Protogeometric Period, as one of the LBA walls was then rearranged and reused. This uninterrupted use of the site provides new perspectives on some questions about post-Bronz Age Western Anatolia, including those concerning the Ionian migrations.

Owing to the recent excavations in Western Anatolia our knowledge of the local cultures of the region is increasing. However, many aspects, including its pottery, are still in the process of being analysed, and chronological comparisons based on the neighbouring regions have yet to be completed. As our knowledge of Western Anatolian cultures expands through continuing excavations, we should be aware that our current information and conclusions will also change during this process.

PART 3B CHAPTER 30

#### Acknowledgments

I would like to express my gratitude to Hayat Erkanal, the director of the Liman Tepe excavations, for allowing me to study the site's Late Bronze Age settlement and its material for my doctoral studies at Ankara University, and publish this preliminary report. I would also like to thank Ayşegül Aykurt, who supervised the 2006 land excavations and identified the stratigraphy. Special thanks to Armağan Erkanal, Vasıf Sahoğlu and Rik Vaessen for their comments, Buket Aladağ and Michel Roggenbucke for restoration of the finds, INSTAP-SCEC staff members Chronis Papanikolopoulos for the photographs and Douglas Faulmann for the drawings used in this article. The Liman Tepe excavations, part of the Izmir Region Excavations and Research Project, are generously supported by the Ministry of Culture and Tourism of the Republic of Turkey, Ankara University Faculty of Language, History and Geography, the Turkish Historical Society, the Turkish Institute of Nautical Archaeology, the Institute for Aegean Prehistory (INSTAP), INSTAP-SCEC, and the Urla Municipality.

FIELDWORK 647

#### Introduction

Liman Tepe occupies a unique strategic location and this is evident in its material culture. It is situated between the Gediz (Hermos) and the Küçük Menderes (Kaystros) Valleys and therefore one of the most accessible areas from inland Anatolia (see map). Also, being located on the Urla Peninsula in the middle of coastal Western Anatolia, Liman Tepe serves as a bridge between the northern and southern Aegean. Liman Tepe, being a coastal site, owes its existence to sea trade ever since it was first settled in the Neolithic Period. This situation was the same in the LBA.

The LBA remains of Liman Tepe (Layer II) are mostly destroyed due to later time period structures, as well as a result of soil removal to lower the hill in the 1950s. Until recently, there have only been limited LBA remains at the site, but the 2006 excavations revealed stratified and preserved remains dating to the LH III period (Fig. 1).  $^{1}$ 

Apart from a few pottery sherds from the beginning of the LBA, <sup>2</sup> the archeological remains and small finds are dated to the LH III period, which has three phases in Liman Tepe; the LH IIIA2 (II.3), IIIB (II.2), and IIIC (II.1). The current sparsity of earlier LBA remains in Liman Tepe might be explained by the limited research area, as well as the destruction that took place on the surface layers.

The pottery in Liman Tepe is predominantly local, and shows similarity with neighboring sites' pottery groups and forms, such as Troy, <sup>3</sup> Panaztepe, <sup>4</sup> Bademgediği Tepe, <sup>5</sup> Kadıkalesi, <sup>6</sup> Beycesultan, <sup>7</sup> and Çine–Tepecik. <sup>8</sup> The majority of the pottery throughout the LBA has a reddish–buff clay color, either self–slipped or red–slipped. The second most common group is gray ware, which has a long tradition and rather disputed origins on coastal Western Anatolian sites. <sup>9</sup> The third largest group is Mycenaean pottery, which appears first in Liman Tepe's II.3 layer, contemporary with the LH IIIA2 period. <sup>10</sup> Both imported and locally made examples have been found

- 1 Erkanal 2008; Erkanal and Aykurt 2008.
- 2 Günel 1999a, 59-60, 79-80, fig. 20, pl.14, 1-5.
- 3 Blegen et al. 1953, 33-76; Blegen et al. 1958, 19-44.
- 4 Günel 1999b, 29-71.
- 5 Meriç 2003.
- 6 Akdeniz 2006, 7–10.
- 7 Mellaart and Murray 1995, 1–88.
- 8 Günel 2008, 135 fig. 9; Günel 2010, 28–9 fig. 6a–b.
- 9 Forsdyke 1914; Childe 1915; Mellaart 1960; Bayne, 2000, 15–20; Pavúk 2007a; 2007b; Aykurt 2008, 10–1.
- 10 Twenty-five Mycenaean sherds, including a piece of an Ephyrean goblet of the LH IIB period, are reported to have come from Oikonomos' excavations in Clazomenae, which are in the Athens National Museum today; Erkanal and Erkanal 1983, 164; Günel 1998a, 27, fn.15; Mee 1978, 125; Özgünel 1983, 716–717. However, there is no mention of them in his reports, nor discussion of their context; see Oikonomos 1921; 1922.



Map Sites mentioned in the text, produced by the author.

together, as is the case for the other settlements on the Western Anatolian coast. <sup>11</sup> Locally produced Mycenaean pottery shows the same clay characteristics of the local reddish–buff pottery, and has a cream–colored slip applied on its surface. Imported Mycenaean pottery has a finer pinkish–buff clay and, unlike the locally produced examples, it does not include any mica. However, these observations were made by macroscopic examination, and clay analysis is needed to confirm these statements. Much smaller in number is the so–called "goldwash" ware, whose tradition goes back to the EBAII period in Liman Tepe, <sup>12</sup> and "silverwash" ware examples, both of which are known from the other sites in Western Anatolia from the MBA onwards. <sup>13</sup>

<sup>11</sup> See Mountjoy 1998.

<sup>12</sup> Erkanal et al. 2003, 429 pl. 8.

<sup>13</sup> Akurgal 1950, 5; French 1967, 65; French 1969, 72; Mellaart and Murray 1995, 1, 103 map. 3, 105–6; Meriç 2003, 91 fig. 18; Akdeniz 2006, 7–8; Erkanal–Öktü 2008, 78–81 fig. 10 a– c, 11a: Çınardalı–Karaaslan 2008, 64–5 fig. 8; Aykurt 2010, 35.

## Phase II.3

The building structures of Phase II.3 are mainly underlying buildings of the succeeding II.2 and II.1 phases. There are a total of five buildings (B–66, B–54, B–64, B–61, and PB in Fig. 1) that are rectangular in shape, divided by one main and two narrow streets, and covering a 320 square meter area. Some of the buildings' functions may be interpreted by associated findings. One of the buildings on the southwest part of the area (marked as B–61 in Fig. 1) enclosed a round pit with ash found in it, and some parts of its floor were covered with large flat stones. Further ash remains and large pithos fragments in the building indicate that this area may have been a workshop. <sup>14</sup> Fragments of an octopus–decorated kylix (Fig. 3) and a net pattern decorated alabastron (Fig. 4), also uncovered from this structure, help dating it to the LH IIIA2 period.

To the east of that building, there is the so–called "Pithos Building" (marked as PB in Fig. 1), which had been used throughout the LBA phases with some changes and additions to its plan. The eastern part of the building was destroyed. There were numerous pithos fragments found in the building, and some of them were almost intact. On the building's floor, there were some round small stone arrangements which served as pithos stands. Twelve of those arrangements have been identified, and thus, there were at least 12 pithos in the building. Therefore, this building is assumed to have been used for storage purposes during this phase. <sup>15</sup>

Apart from the streets and the buildings, there are two pottery kilns in this area, as well as two further examples from the northern part of the site (PK-1 and PK-4 in Fig. 2).  $^{16}$  One of the kilns on the northern side of the main street has a round shape (PK-3 in Fig. 1) and it is made of clay. The kiln was found filled with pottery, mostly local reddish-buff clay colored pots (Fig. 5).  $^{17}$  Some of them were not completely baked, suggesting that it may have collapsed during firing. After removing the pots, long stones were found oriented diagonally in the kiln (Fig. 6). There were no eschara remains to place the pottery.

The second pottery kiln within the buildings is located to the south of the main street (PK-2 in Fig. 1). It has an oval shape and is also about 1.3 meters in diameter. When the kiln was built, first, some stones were laid on the ground as a base, and then mudbrick blocks were placed vertically side-by-side on the stones serving as the kiln's walls (Fig. 7).  $^{18}$  The kiln has a single pillar in the middle and a stone on each

<sup>14</sup> Erkanal 2008, 94; Erkanal and Aykurt 2008, 229.

<sup>15</sup> Erkanal 2008, 95; Erkanal and Aykurt 2008, 230.

Later excavations at the site revealed a fifth pottery kiln from the same layer. See Erkanal et al. 2014, 501, 509, fig. 5.

<sup>17</sup> See Erkanal 2008, 94, fig. 4; Erkanal and Aykurt 2008, 240, fig. 4 for the *in situ* position of the pottery found in the kiln.

<sup>18</sup> Erkanal 2008, 95, Fig. 6; Erkanal and Aykurt 2008, 241, fig. 5.

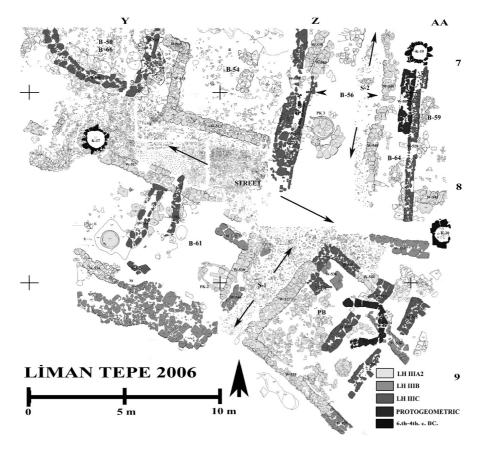


Fig. 1 Stratified Late Bronze Age layers, with later remains. IRERP archive.

side of the pillar. There were no eschara remains found in this kiln. Unlike the PK-3, abundant pottery was not found with the other kilns, but what was found mostly belonged to similar cooking pots.

The other two pottery kilns on the northern part of the site were found 5 meters away from each other and there were no other architectural remains around them (Fig. 2).  $^{19}$  They also have oval shapes. Oval– or round–shaped pottery kilns are known since the MH Period in the Aegean, and there are many comparable examples from the LBA.  $^{20}$ 

<sup>19</sup> Erkanal and Erkanal 1983, 166, Fig. 1; Erkanal 2008, 96; Erkanal and Aykurt 2008, 231.

<sup>20</sup> Schierig 1959/60, 11, pl. 2.2, 3.1–2, 4.1–2; Blegen and Lang 1960, 155, pl. 40, fig. 9; Cook 1961, 65; Davaras 1980; Gesell et al.1987, 290–3 Fig. 5 pl. 79; Seifert 1993, 99–100; Niemeier 1997: 348–9, pl. CXLII–CXLIV; Schallin 1997; Sjöberg 1997; Hasaki 2002, 210, 214–9 pl. IV.17.

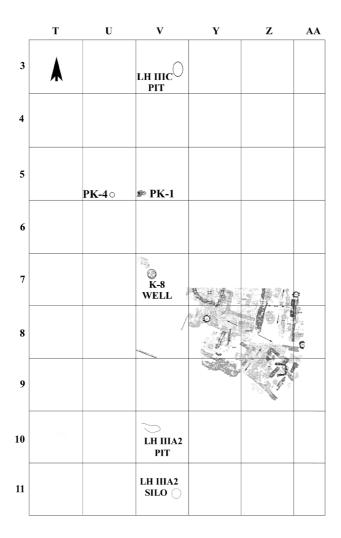


Fig. 2 LBA remains of Liman Tepe. IRERP archive, produced by the author.

Another important context for this phase is a well (K-8 Well on Fig. 2).  $^{21}$  It is 2.1 meters in diameter and its bottom had been reached at 1.75 meters below sea level. Many local Western Anatolian and Mycenaean pottery examples were found together in the well.  $^{22}$  One particularly important find that came from the well is the head of a Mycenaean figurine, which is thought to be an import.  $^{23}$ 

<sup>21</sup> Erkanal and Günel 1995, 264; Erkanal and Günel 1996, 307; Erkanal and Günel 1997, 232–3; Günel 1999a, 59–62.

<sup>22</sup> Erkanal and Günel 1995, 274, fig. 2, 277 pl. 2–3; Erkanal and Günel 1996, 316, fig. 3–4; Günel 1999a, 59–62, 81, fig. 21.52–4, 56–7 pl. 14, 6–7, 9–10; Özgünel 2006.

<sup>23</sup> Erkanal and Günel 1995, 265, 274, fig. 3, 277, pl. 3; Günel 1998a; 1998b.

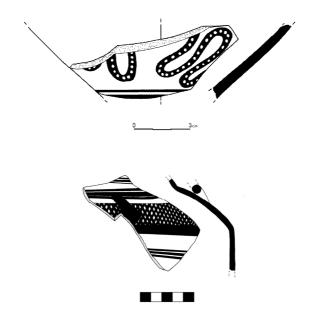


Fig. 3 Octopus decorated kylix from Phase II.3, B-61. IRERP archive, drawn by D. Faulmann.

Fig. 4 Net pattern decorated alabastron from Phase II.3, B-61. IRERP archive, drawn by the author.

There are numerous examples of steatite "conuli" during this phase, and they were found throughout the settlement (Fig. 8). Other important finds are two Aegean style loom weights (Fig. 9). One of them, uncovered from B–66, has a flat and discoid shape, and is of the so–called "Minoan type." <sup>24</sup> It has a single perforation and a distinctive groove on its upper edge. This type has also been found in the MBA levels of Liman Tepe. <sup>25</sup> Although the shape is known in Crete from the EM II period onwards, <sup>26</sup> they were widely used since the MM period and continued to be used until the LM III period. <sup>27</sup> Examples from the Western Anatolian coast are known from the MM/LM I contexts of Miletos, <sup>28</sup> Iasos, <sup>29</sup> and Çeşme–Bağlar-

<sup>24</sup> Erkanal 2008, 92; Erkanal and Aykurt 2008, 227.

<sup>25</sup> Tütüncüler 2005, 183; Erkanal and Keskin 2009, 105 Fig. 15.

<sup>26</sup> Warren 1972, 243, fig. 96, nos. 7, 75, 77, 78 and 79; Carington-Smith 1975, 276, figs. 42–46, pls. XL b–c, XLII a–b; Barber 1991, 104–5, fig. 3.23.

<sup>27</sup> For the find sites see Becks and Guzowska 2004, 102.

<sup>28</sup> Niemeier and Niemeier 1997, 236-7 fig. 72d; Gates 1997, 268.

<sup>29</sup> Momigliano 2001, 15; Tütüncüler 2005, 173 cat. no. 263, 265–75, 277–8.

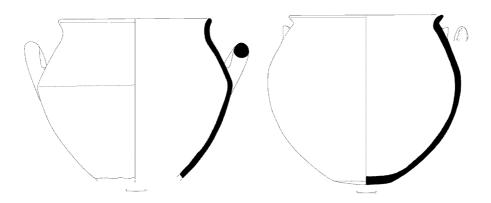


Fig. 5 Pots from the Pottery Kiln-3. IRERP archive, drawn by D. Faulmann.

arasi,  $^{30}$  and contemporary examples with Liman Tepe were found in Troy.  $^{31}$  The other example, uncovered from B–61, is triangular in shape. It is related to the Minoan–type loom weight, also having a single perforation and a groove on one edge. This type of loom weight is popular in Mainland Greece, seen from the LH II until the LH III period, and contemporary examples were also found in Troy.  $^{32}$  It is therefore apparent that since the MBA, Liman Tepe as well as the other coastal Western Anatolian settlements' inhabitants were using the same or similar weaving methods as the rest of the Aegean.

One of the most important finds of this phase is a mushroom–shaped gold object (Fig. 10). It was found lying on top of the southern wall of B–54 (Fig. 1). Similar examples are known from Panaztepe,  $^{33}$  Müsgebi,  $^{34}$  and Maşathöyük  $^{35}$  in Anatolia and Kalavasos–Ayios Dimitrios  $^{36}$  in Cyprus. The exact function of these objects is not known. Only the Liman Tepe and Maşathöyük finds are from settlement contexts,

<sup>30</sup> Erkanal and Karaturgut 2004, 156, 163 pl. 8; Tütüncüler 2005, 174 cat. no. 234–7, 241, 243–8, 250–1.

Blegen et al. 1953, 31, 232, 272, 381 Fig. 305; Becks and Guzowska 2004, 101–3 fig. 1–2; Tütüncüler 2005, 175.

<sup>32</sup> Blegen et al. 1958, 57, 79 fig. 221; Becks and Guzowska 2004, 1023 fig. 3-5.

<sup>33</sup> Erkanal and Erkanal 1986, 73, 78.

Boysal 1967, 8; Akyurt 1998, 33 fig. 33e. The grave, where the object was found, is one of the three cremation burials in Müsgebi and it was dated to the LH IIIA2–IIIB periods by Y. Boysal (1969, 4–5, 8, 14–5, 19, 22).

<sup>35</sup> Özgüç 1982, 44 pl. 55, 14.

<sup>36</sup> Swiny 1985, 48 pl. 4 fig.10; Knapp 2008, 192–3 fig. 37. This grave was dated to LC IIA period, see Goring 1989, 98.



Fig. 6 The Pottery Kiln-3. IRERP archive.

and the rest were found in tombs. Both Panaztepe and Kalavasos–Ayios Dimithrios examples were found in pairs. The fact that the Panaztepe examples were found under the skull of a skeleton  $^{37}$  and the Müsgebi example was found near the bones in the grave  $^{38}$  suggests that they may have a function related to the human body.

#### Phase II.2

Remains of this phase are very limited. The main street, the southern street, and the Pithos Building continued to be used in this phase with some changes (PB in Fig. i). To the west of the southern street, where B–61 was located, a part of a building, a partially preserved silo, and an area paved with flat stones were uncovered.  $^{39}$  The western part of this paved area was excavated and, beneath it, five grinding stones and pieces of a spouted basin were found.  $^{40}$  These remains, when considered together with the paved area, are thought to be a workshop of wine production, similar to the wine workshop found in Çeşme–Bağlararası, dating to the beginning of the LBA.  $^{41}$  Although it is certain that the Pithos Building lost its storage function during this phase, the evidence of grinding stones and the spouted basin clearly indicates the continuation of the site's production character.

<sup>37</sup> Erkanal and Erkanal 1986, 73.

<sup>38</sup> Boysal 1967, 8.

<sup>39</sup> Erkanal 2008, 96; Erkanal and Aykurt 2008, 231.

<sup>40</sup> Erkanal et al. 2009, 301, 317 pl. 2.

<sup>41</sup> Ibid; Erkanal and Karaturgut 2004, 156–7 pl. 11–2; Şahoğlu 2007, 314–5 fig. 1–2, 4–6.



Fig. 7 The
Pottery Kiln-2.
IRERP archive.

Owing to the very poor architectural evidence of the phase, it is difficult to make an assemblage of the pottery. A kylix with whorl–shell decoration  $^{42}\,({\rm Frg.~rr})$  is one of the characteristic examples of this phase and has many contemporary parallels from the LBA Aegean sites.  $^{43}$ 

## Phase II.1

The structures dated to this phase were built on preceding phases' remains (B–50, B–56, B–59, and PB in Fig. 1). One of the structures from this phase was built on top of a Phase II.3 building, and only its southern part was uncovered (B–50 in Fig. 1). <sup>44</sup> It has an entrance on its eastern wall. Its southern wall has a curvilinear form, suggesting that it may have an oval or an apsidal form.

Apsidal and elliptical formed structures have a very long tradition in the Aegean region, going back as early as the Late Neolithic on Mainland Greece and the Late Chalcolithic Period in Anatolia.  $^{45}$  Although they lost their popularity at the end of the MBA and regained it in the EIA, there are examples from Greece,

<sup>42</sup> Erkanal 2008, 96, Fig. 7.

<sup>43</sup> Mountjoy 1999a, 142 fig. 35 no. 266, 340 fig. 115 no. 84, 551 fig. 200 no. 242, 668 fig. 254 no. 101, p. 769 fig. 300 no. 120, 844 fig. 340. no. 82, 1096 fig. 447 no. 56.

See Erkanal 2008, 97 fig. 8, fig. 9 right; Erkanal and Aykurt 2008, 241, pl. 6, right, 242, pl. 7, right; Mangaloğlu–Votruba 2011, 68 fig. 1a–b for the pottery examples found in the building.

<sup>45</sup> Warner 1979; Mazarakis–Ainian 1989, 269; Erkanal and Özkan 1999b, 341–2, 348 fig. 2.



Fig. 8 Conuli examples from phase II.3. IRERP archive, photographed by C. Papanikolopoulos.



Fig. 9 Loom weights from phase II.3. IRERP archive, drawn by the author.

Crete, and Western Anatolia dated to the LBA, especially the LH III period.  $^{46}$  Oval houses are a very well–known form of structure in Liman Tepe/Clazomenae, and there are, so far, at least seven examples from the MBA layers  $^{47}$  and two examples from the EIA layers.  $^{48}$  In this regard, this building from the Phase II.1 might be considered as evidence of a continuing tradition.

A hearth was uncovered to the east of the curvilinear structure. Numerous examples of the so–called "Aegean style" cooking pots, with either single or double handles, were found around the hearth.  $^{49}$ 

<sup>46</sup> Mazarakis-Ainian 1989; Schiering 1959/60, 7-8 fig. 3.

Hearth and oven remains, as well as lead rings and moulds for metal making found inside, indicate a workshop character for these structures: See Erkanal and Günel 1995, 267–9, 275 fig. 4 pl. 4–5; Erkanal and Günel 1996, 307–8 pl. 5; Erkanal and Günel 1997, 238–9 pl. 3; Erkanal 2000, 255 pl. 5–6; Erkanal et al. 2009, 302–3 pl. 6; Erkanal et al. 2011, 448-9, 459, pl. 6, 460, pl. 7.

<sup>48</sup> Erkanal 2000, 253 pl. 3; Erkanal 2001, 259; Bakır et al.2001, 27–32 pl. 3, 5; Bakır et al. 2002, 41–4 pl. 2; Aytaçlar 2004, 17-25, fig. 1-3, 8.

<sup>49</sup> Mangaloğlu-Votruba 2011, p.47, 69, pl. 2a-b.



Fig. 10 Mushroom-shaped gold object from phase II.3, B-54. IRERP archive, photographed by C. Papanikolopoulos.

The rest of the buildings are of rectangular form, and all of them have been partially preserved. The "Pithos Building," which had lost its storage function in the previous phase, (PB in Fig. 1) was re–arranged and re–used in this phase. Pieces of a krater with heavy panel and bird decoration were uncovered from this building. <sup>50</sup> This style of decoration has many parallels from the Eastern Aegean <sup>51</sup> where, during the LH IIIC Early and Middle periods, it seems to have formed a koine, named by P. Mountjoy as "the Eastern Aegean Koine." <sup>52</sup> Based on the pottery evidence, Liman Tepe seems to be a part of this koine. Fragments belonging to a large stand, another characteristic form of the Eastern Aegean Koine, <sup>53</sup> were also found in this phase (Fig. 12). Other forms of pottery typical for this time period, such as deep bowls <sup>54</sup> (Fig. 13) and one–handled conical bowls <sup>55</sup> (Fig. 14), were also found. It is interesting to note that the deep bowl, a typical Mycenaean shape, is unpainted and was made with a grayish fabric. This shows that the local Western Anatolian and Mycenaean pottery traditions continued to mingle during this phase, as was the case in the previous phases. <sup>56</sup> Besides pottery, there are numerous spool examples in this

- 50 For a detailed study of the krater, see Aykurt 2014.
- 51 Mountjoy 1998, fig. 14; Aykurt 2014.
- 52 Mountjoy 1998, passim.
- 53 Mountjoy 1998, 53–4, 57 fig. 3.4, 12.2–3. Also see Blegen et al. 1958, 43–4 pl. 242.5–9; Mountjoy and Mommsen 2006, 108, 110, no. 70-1, fig.8 for Troy; Schiering 1959/60, pl. 15 for Miletos, and Erkanal and Özkan 1999a, 16, 186 pl. 11 for Baklatepe examples.
- 54 Mountjoy 1986, 117 fig. 143, 130–1 fig. 161–2, p. 150–2 fig. 189–93, p. 177–9 fig. 227–31, p. 192 Fig. 254.
- 55 Hood 1982, 584 fig. 264 pl. 117, 2704–5; Mountjoy 1999a, p. 597–8 fig. 222, no.464–5, p. 719–20 fig. 276 no. 86–7, p. 721 fig. 277 no.93–4, p. 958–9 fig. 391 no.61–3, p. 1060–1 fig. 434 no.229; Mountjoy 2007, 587–9; Mountjoy 2009, p. 292, 306 fig. 10, 4–10, p. 307 fig. 11, 3–8, p. 308 fig. 12, 1–10.
- There are also undecorated kylix fragments made in local reddish-buff clay with no cream slip from the LH IIIA2 layers of Liman Tepe. See also Günel 1999b, pl.

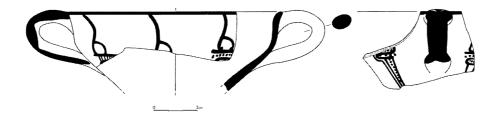


Fig. 11 Whorl-shell decorated kylix from Phase II.2, Pithos Building. Drawn by D. Faulmann.

phase, especially from the building B–59, which are known from the Aegean to the Eastern Mediterranean from the 12th c. BC.  $^{57}$ 

Another important context of this phase is a pit located on the northern part of the site (Fig. 2) in which a Mycenaean figurine, thought to be locally produced, was found.  $^{58}$  The tip of its arms and head are missing, but the preserved arm stubs indicate that they were rising towards the head, and it must belong to a late Psi type.  $^{59}$  An amphora with twisted handles and a scroll decoration was also found in the pit (Fig. 15). Its parallels are known in the Aegean from the LH III C middle and late phases.  $^{60}$ 

Two child burials that were found in 1997 at Liman Tepe are important for their use of Handmade Burnished Ware pots, which is foreign to the region.  $^{61}$  Further Handmade Burnished Ware examples were identified by the Clazomenae team during the recent systematic surveys in the region, in a cemetery near Tatarderesi–Hacıgebeş Tepe, to the southwest of Liman Tepe; Pithos fragments of Handmade Burnished Ware were scattered around three cist graves and two pithos burials, all of which were robbed.  $^{62}$  Although limited in numbers, these fragments indicate northern connections and they must have arrived to the region via Northwestern Anatolia.

165.2, 166, 168-170, 171.1; Mountjoy 1999b, 289, fig. 1, for Mycenaean shapes made in local wares with no decorations from Panaztepe and Troy, respectively.

- 57 Mangaloğlu-Votruba 2011, 71, fig. 4e; Rahmstorf 2003; 2005; 2008, 65 fig. 27.
- 58 Erkanal et al. 2003, 426, 436 pl. 7; Mangaloğlu-Votruba 2011, 51-51, fig. 6a.
- 59 French 1971, 133-40, 175 pl. 20-2.
- 60 Catling 1996, 302–303, fig. 128, pl. 112, no. 38–9; Mountjoy 1999a, 176 fig. 50 no.377, 583 fig. 216 no.408–9, 606 fig. 226 no.523, 688 fig. 264 no.206, 712 fig. 273 no.66, 947 fig. 385 no.20, 1154 fig. 474 no.15; D'agata 2007, 118 fig. 20; Mountjoy 2009, 300 fig. 4.2–4; There is also a similar example from Phokaia, dated to the Submycenaean Period, see Özyiğit 2005, 48, pl.10.
- 61 Erkanal 1999, 327 pl. 3-4.
- 62 Erkanal-Öktü 2008, 83; Ersoy and Koparal 2009, 77-8, 87 pl.5.



Fig. 12 Stand from Phase II.1. IRERP archive, drawn by the author.

The settlement in Liman Tepe continues into the Protogeometric Period without a break; there were structures built on top of the Pithos Building and Building B-56 (Fig. 1) during the PG period, and the eastern wall of B-56 was reused.

# Conclusion

During the II.3 phase of Liman Tepe, which is contemporary with the LH IIIA2 period, five contemporary pottery kilns in a relatively small area, the Pithos Building, and other above—mentioned evidence indicate that this part of the site must have functioned as a workshop area. Considering the oval houses with their workshop character in the previous MBA in the same area, it can be said that this part of the site's workshop character persisted, perhaps unchanged, through the centuries.

Although there is very limited evidence for the II.2 layer of Liman Tepe, which is contemporary with the LH III B period, the stone–paved area with grinding stones and a spouted basin indicate that at least for that part of the area, the site's production character had continued. However, for the last phase of Liman Tepe's LBA layer II.1, which is contemporary with the LH IIIC period, the site seems to have buildings for domestic purpose.

When considering the material evidence and majority of its pottery, Liman Tepe shows local characteristics as one of the Western Anatolian LBA sites. The small amount (no more than 10 percent) of Mycenaean pottery in the total pottery assemblage indicates intense connections with the Aegean world and this provides synchronisms with the local Western Anatolian pottery.

An important distinction regarding the pottery is that within the II.3 layer, the amount of gray ware, goldwash ware, and imported Mycenaean ware was



Fig. 13 Deep bowl from Phase II.1. IRERP archive, photographed by C. Papanikolopoulos.

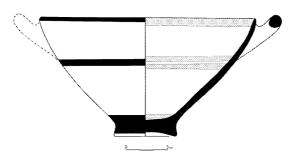


Fig. 14 One handled conical bowl from Phase II.1 IRERP archive, drawn by D. Faulmann.

higher than the II.1 layer. The nature of the pottery assemblage of the II.2. layer of Liman Tepe is uncertain due to limited evidence. However, based on the few examples, it can be said that there is no major change compared to the previous layer. The character of the small finds of II.3 and II.2 layers, such as the figurines, loom weights, or conuli show similarities with other coastal Western Anatolian and Aegean settlements. Liman Tepe's main trade connections, being overseas, is hardly surprising, when one considers that the reason for the settlement's existence and location is sea trade. Mycenaean influence to inner Anatolia must have been reached through river valleys from coastal settlements like Liman Tepe, which is conveniently located between the Gediz and Küçük Menderes river valleys.

Within the II.1 layer, contemporary with the LH IIIC period, there are several changes observed both on pottery as well as small finds. There was an increase in the locally made Mycenaean pottery, while the imported Mycenaean pottery decreased. Furthermore, new forms appear during this period, such as kalathos, Aegea—style cooking pots, handmade burnished ware, as well as spools. These changes are not only observed in Liman Tepe or Western Anatolia, but are part of a much bigger phenomenon, as they are also seen in the rest of the Aegean, Cyprus, and the Eastern Mediterranean. The collapse of the Mycenaean palaces, as well as the Hittite Empire, hence the halt to the LBA Mediterranean trade system, must

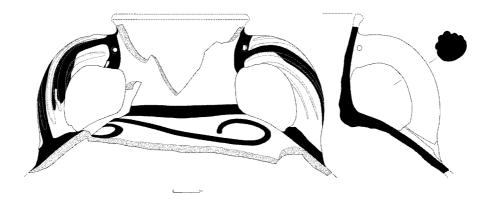


Fig. 15 Amphora with twisted handles and scroll decoration, from Phase II.1, the LH IIIC pit. IRERP archive, drawn by D. Faulmann.

have played a major role in those changes seen in the wider Mediterranean. As a result, different and more independent trade networks were established. However, one must keep in mind that there are many other factors involved for each geographic area contributing to its situation, including its background, and therefore each should be investigated from micro-perspective. For Liman Tepe, it can be said that the settlement continued into the PG period without a break, as apparent from the site's unbroken sequence of the pottery and reuse of LH IIIC architectural remains. As the recent excavations focusing on the prehistoric periods of Western Anatolia continue to increase our knowledge of the local cultures, we might also review our perception of the "Ionian migration" in Liman Tepe–Clazomenae as well as the rest of the Western Anatolian coast.

## **CITED WORKS**

- Akdeniz, E. 2006. "A New Excavation in Western Anatolia: Kadıkalesi (Ancient Anaia)." *OLBA* XIII:1–33.
- Akurgal, E. 1950. "Bayraklı Kazısı Ön Rapor" DTCF Dergisi 8/1-2:1-51.
- Akyurt, M. 1998. MÖ. 2. Binde Anadolu'da Ölü Gömme Adetleri. Ankara: Türk Tarih Kurumu.
- Aykurt, A. 2008. "Batı Anadolu'da Gri Seramiğin Kökeni ve Gelişimi." In *Batı Anadolu* ve *Doğu Akdeniz Geç Tunç Çağı Kültürleri Üzerine Yeni Araştırmalar*, edited by A. Erkanal-Öktü, S. Günel and U. Deniz, 9–22. Ankara: Hacettepe Üniversitesi Yayınları.

  ———. 2010. "İzmir Bölgesi Orta Tunç Çağı Seramiği" *Belleten* LXXIV(269): 1–69.
- ———. 2014. "An Example of Mycenaean Pictorial Pottery: Crater from Liman Tepe" In *Armağan Erkanal'a Armağan: Anadolu Kültürlerine Bir Bakış. Compiled in Honor of Armağan Erkanal: Some Observations on Anatolian Cultures*, edited by N. Çınardalı-Karaaslan, A. Aykurt, N. Kolankaya-Bostancı and Y. Erbil: 55-73. Ankara: Hacettepe Üniversitesi Yayınları.
- Aytaçlar, N., 2004, "The Early Iron Age at Klazomenai." In *Klazomenai, Teos and Abdera: Metropoleis and Colony. Proceedings of the International Symposium held at the Archaeological Museum of Abdera, Abdera, 20-21 October 2001*, edited by A. Moustaka, E. Skarlatidou, M.-C. Tzannes, and Y. Ersoy, 17-41. Thessaloniki: 19th Ephorate of Prehistoric and Classical Antiquities at Komotini under the Auspices of the Greek Ministry of Culture.
- Bakır, G., Y. Ersoy, İ. Fazlıoğlu, N. Aytaçlar, H. Cevizoğlu, B. Hürmüzlü, and Y. Sezgin. 2001. "1999 Klazomenai Kazısı." 22. *Kazı Sonuçları Toplantısı*. Vol. II, 27–38.
- Bakır, G., Y. Ersoy, İ. Fazlıoğlu, N. Aytaçlar, B. Hürmüzlü, F. Özbay, Y. Sezgin, G. Özbilen, 2002. "2000 Klazomenai Kazısı." 23. Kazı Sonuçları Toplantısı. Vol. I, 41–54.
- Barber, E.J.W. 1991. *Prehistoric Textiles. The development of cloth in the Neolithic and Bronze Ages.* Princeton: Princeton University Press.
- Bayne, N. 2000. The Grey Wares of North–West Anatolia in the Middle and Late Bronze Age and the Early Iron Age and their Relation to the Early Greek Settlements. Asia Minor Studien Band 37. Bonn: Dr. Rudolf Habelt GMBH.
- Becks, R, and M. Guzowska. 2004. "On the Aegean–Type Weaving at Troia." *Studia Troica* 14:101–15.
- Blegen, C.W., J.L. Caskey, and M. Rawson. 1953. *Troy. The Sixth Settlement*. Vol. III, Part I: Text, Part II: Plates. Princeton: Princeton University Press.
- Blegen, C.W., C.G. Boulter, J.L. Caskey, and M. Rawson. 1958. *Troy. Settlements VIIa, VIIb and VIII.* Vol. IV, Part 1: Text, Part II: Plates. Princeton: Princeton University Press.
- Blegen, C.W., and M. Lang. 1960. "The Palace of Nestor Excavations of 1959." AJA 64(2):153-64.
- Boysal, Y. 1967. "Karya Bölgesi'nde Yeni Araştırmalar/New Excavations in Caria." *Anadolu* XI:1–56.

- ———. 1969. *Katalog der Vasen im Museum in Bodrum*. Vol. I, *Mykenisch–Protogeo-metrisch*. Ankara: Dil ve Tarih Coğrafya Fakültesi Yayımları No. 190.
- Carington-Smith J. 1975. Weaving, Spinning, and Textile Productionin Greece: The Neolithic to Bronze Age. PhD diss., University of Tasmania.
- Catling, H.W. 1996. "The Subminoan Pottery" In *Knossos North Cemetery. Early Greek Tombs*, edited by N.J. Coldstream and H.W. Catling, 295–305. Supplementary Volume no. 28. London: British School at Athens.
- Childe, G. 1915. "On the Date and Origin of the Gray Minyan Ware." *JHS* 35:196–207. Cook, R.M. 1961. "The 'Double Stoking Tunnel' of Greek Kilns." *BSA* 56:64–7.
- Çınardalı–Karaaslan, N. 2008. "Recent Investigations at Panaztepe Harbour Town." In *Batı Anadolu ve Doğu Akdeniz Geç Tunç Çağı Kültürleri Üzerine Yeni Araştırmalar*, edited by A. Erkanal–Öktü, S. Günel, and U. Deniz, 57–68. Ankara: Hacettepe Üniversitesi Yayınları.
- D'agata, A. L. 2007. "Evolutionary Paradigms and Late Minoan III. On a Definition of LM IIIC Middle." In *LH III C Chronology and Synchronisms II. LH III C Middle. Proceedings of the International Workshop held at the Austrian Academy of Sciences at Vienna, October 29th and 30th*, edited by S. Deger–Jalkotzy, and M. Zavadil, 89–119. Wien: Verlag der Österreichschen Akademie der Wissenschaften.
- Davaras, C. 1980. "A Minoan Pottery Kiln at Palaikastro." BSA 75:115-26.
- Erkanal, H. 1999. "1997 Liman Tepe Kazıları." 20. Kazı Sonuçları Toplantısı, Vol. I, 325–36...
- ———. 2000. "1998 Yılı Liman Tepe Kazıları." 21. Kazı Sonuçları Toplantısı, Vol. I, 251–62.
- ———. 2001. "1999 Liman Tepe Kazıları." 22. Kazı Sonuçları Toplantısı, Vol. I, 259–68...
- ———. 2008. "Liman Tepe in the Late Bronze Age." In *Batı Anadolu ve Doğu Akdeniz Geç Tunç Çağı Kültürleri Üzerine Yeni Araştırmalar,* edited by A. Erkanal–Öktü, S. Günel, and U. Deniz, 90–100. Ankara: Hacettepe Üniversitesi Yayınları.
- Erkanal, A., and H. Erkanal. 1983. "Vorbericht über die Grabungen 1979 im prähistorischen Klazomenai/Liman Tepe." *Hacettepe Üniversitesi Edebiyat Fakültesi Dergisi* 1: 163–83.
- ———. 1986. "A New Archaeological Excavation in Western Anatolia: Panaztepe." *Turkish Review Quarterly Digest* 1(3): 67–76.
- Erkanal, H. and S. Günel. 1995. "1993 Liman Tepe Kazısı." 16. Kazı Sonuçları Toplantısı. Vol. I, 263–79.
- ———. 1996. "1994 Liman Tepe Kazıları." 17. Kazı Sonuçları Toplantısı. Vol. I, 305–27. ———. 1997. "1995 Liman Tepe Kazıları." 18. Kazı Sonuçları Toplantısı, Vol. I, 231–60.
- Erkanal, H. and T. Özkan. 1999a. "Excavations at Bakla Tepe." In *Tahtalı Dam Area Salvage Project*, edited by T. Özkan, and H. Erkanal, 12–42, 185–7. İzmir: TC Kültür Bakanlığı. Anıtlar ve Müzeler Genel Müdürlüğü, İzmir Arkeoloji Müzesi Müdürlüğü.
- Erkanal, H. 1999b. "1997 Bakla Tepe Kazıları." 20. Kazı Sonuçları Toplantısı, Vol. I, 337–55.
- Erkanal, H., M. Artzy, and O. Kouka. 2003. "2001 Yılı Liman Tepe Kazıları." 24. Kazı Sonuçları Toplantısı, Vol. I, 423–36.

- Erkanal, H., and E. Karaturgut. 2004. "2002 Yılı Çeşme–Bağlararası Kazıları." 25. Kazı Sonuçları Toplantısı, Vol. I, 153–64.
- Erkanal, H., and A. Aykurt. 2008. "Liman Tepe 2006 Yılı Kazıları." 29. *Kazı Sonuçları Toplantısı*, Vol. III, 223–242.
- Erkanal, H., V. Şahoğlu, R. Tuncel, O. Kouka, L. Keskin, and İ. Tuğcu. 2009. "Liman Tepe 2007 Yılı Kazıları." 30. Kazı Sonuçları Toplantısı, Vol. I, 299–322.
- Erkanal, H., and L. Keskin. 2009. "Relations between the Urla Peninsula and the Minoan World." In *The Minoans in the Central, Eastern and Northern Aegean–New Evidence. Acts of Minoan Seminar* 22–23 *January* 2005 in collaboration with the Danish Institute at Athens and the German Archaeological Institute at Athens, edited by C. Macdonald, E. Hallager, and W.–D. Niemeier, 97–110. Athens: The Danish Institute at Athens.
- Erkanal, H., V. Şahoğlu, R. Tuncel, O. Kouka, L. Keskin, İ. Tuğcu. 2011. "Liman Tepe 2009 Yılı Kazıları" 32. *Kazı Sonuçları Toplantısı*, Vol. IV, 446-462.
- Erkanal, H., A. Aykurt, K. Büyükulusoy, V. Şahoğlu, İ. Tuğcu. 2014. "Liman Tepe 2012 Yılı Kara ve Sualtı Kazıları" 35. Kazı Sonuçları Toplantısı, Vol. III, 499-513.
- Erkanal-Öktü, A. 2008. "The Late Bronze Age Cemeteries of Panaztepe." In *Batu Anadolu ve Doğu Akdeniz Geç Tunç Çağı Kültürleri Üzerine Yeni Araştırmalar*, edited by A. Erkanal-Öktü, S. Günel, and U. Deniz, 69–90. Ankara: Hacettepe Üniversitesi Yayınları.
- Ersoy, Y., and E. Koparal. 2009. "Urla ve Seferihisar İlçeleri Yüzey Araştırması 2007 Yılı Çalışmaları." 26. Araştırma Sonuçları Toplantısı, Vol. III, 73–90.
- Forsdyke, E.J. 1914. "The Pottery called Minyan Ware." JHS 34:126-56.
- French, D.H., 1967. "Prehistoric Sites in Northwest Anatolia I. The İznik Area." *AnatSt* 17:49–100.
- ———. 1969. "Prehistoric Sites in Northwest Anatolia II. The Balıkesir and Akhisar/Manisa Areas." *AnatSt* 19:41–98.
- French, E.1971. "The Development of Mycenaean Terracotta Figurines." BSA~66:101-87. Gates, M.-H. 1997. "Archaeology in Turkey." AJA~101(2):241-305.
- Gesell, G.C., L. Preston, and W.D.E. Coulson. 1987. "Excavations at Kavousi, Crete, 1987." *Hesperia* 57(4):279–301.
- Goring, E. 1989. "Death in Everyday Life: Aspects of Burial Practice in the Late Bronze Age." In *Early Society in Cyprus*, edited by E. Peltenburg, 95–105. Edinburgh: Edinburgh University Press.
- Günel, S. 1998a. "Liman Tepe'de Ele Geçen Bir Myken Figürin Parçası." Belleten 62:25-30.
- . 1998b. "Ein mykenisches Figurenfragment aus Liman Tepe." *IstMitt* 48:445-9.
- ——. 1999a. "Vorbericht über die mittel- und spätbronzezeitliche Keramik vom Liman Tepe." *Istmitt* 49:41–82.
- ———. 1999b. Panaztepe II. MÖ. 2. Bine Tarihlendirilen Panaztepe Seramiğinin Batı Anadoluve Ege Arkeolojisindeki Yeri ve Önemi. Ankara: Türk Tarih Kurumu Basımevi.

- ———. 2008. "Çine-Tepecik Kazıları ve Bölge Arkeolojisine Katkıları." In *Batı Anadolu* ve *Doğu Akdeniz Geç Tunç Çağı Kültürleri Üzerine Yeni Araştırmalar*, edited by A. Erkanal-Öktü, S. Günel, and U. Deniz, 129–139. Ankara: Hacettepe Üniversitesi Yayınları.
- ———. 2010. "Mycenaean Cultural Impact on the Çine (Marsyas) Plain, Southwest Anatolia: the Evidence from Çine–Tepecik." *AnatSt* 60:25–49.
- Hood, S. 1982. Excavations in Chios 1938–1955. Prehistoric Emporio and Ayio Gala. Vol.
  London: The British School of Archaeology at Athens Supplementary Volume 16, Thames and Hudson.
- Hasaki, E. 2002. "Ceramic Kilns in Ancient Greece: Technology and Organization of Ceramic Workshops." Ph.D. diss., University of Cincinnati.
- Knapp, A.B. 2008. *Prehistoric and Protohistoric Cyprus. Identity, Insularity, and Connectivity*. Oxford: Oxford University Press.
- Mangaloğlu–Votruba, S. 2011. "Liman Tepe'de Geç Hellas III C Dönemi" *Anadolu/ Anatolia* 37: 43–73.
- Mazarakis-Ainian, A. 1989. "Late Bronze Age Apsidal and Oval Buildings in Greece and Adjacent Areas." *BSA* 84:269–88.
- Mee, C. 1978. "Aegean Trade and Settlement in Anatolia in the Second Millennium BC." *AnatSt* 28: 121–156.
- Mellaart, J. 1960. "The Origin of Minyan Ware." V. Türk Tarih Kongresi, 146–56.
- Mellaart, J. and A. Murray. 1995. *Beycesultan,* Vol. III, pt. II, *Late Bronze Age and Phrygian Pottery and Middle and Late Bronze Age Small Objects.* London: The British Institute of Archaeology at Ankara.
- Meriç, R. 2003. "Excavations at Bademgediği Tepe (Puranda) 1999–2002: A Preliminary Report." *IstMitt* 53:79–98.
- Momigliano, N. 2001. "Bronze Age Carian Iasos." Anatolian Archaeology 7:15.
- Mountjoy, P.A. 1986. *Mycenaean Decorated Pottery: A Guide to Identification*. Göteborg: Paul Åströms Förlag.
- ———. 1998. "The East Aegean–West Anatolian Interface in the Bronze Age: Mycenaeans and the Kingdom of Ahhiyawa." *AnatSt* 48:33–67.
- ———. 1999a. *Regional Mycenaean Decorated Pottery*. 2 vols. Rahden/Westf.: Verlag Marie Leidorf GmbH.
- ———. 1999b. "The Destruction of Troia VIh." *Studia Troica* 9: 253-293.
- ———. 2007. "The Dating of the LC IIIA Phase at Enkomi." In *The Synchronisation* of Civilisations in the Eastern Mediterranean in the Second Millennium BC III. Proceedings of the SCIEM 2000–2nd EuroConference, Vienna 28th of May–1st of June 2003, edited by M. Bietak, and E. Czerny, 583–94. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- ——. 2009. "LH III C Late: An East Mainland-Aegean Koine." In LH III C Chronology and Synchronisms III. LH III C Late and the Transition to the Early Iron Age. Proceedings of the International Workshop held at the Austrian Academy of Sciences at

- *Vienna, February 23rd and 24th, 2007,* edited by S. Deger–Jalkotzy, and A. E. Bächle, 289–312. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- Mountjoy, P.A, and H. Mommsen. 2006. "A Neutron Activation Analysis of Mycenaean Pottery from Troia (1998-2003 Excavations)." *Studia Troica* 16: 97-124.
- Niemeier, B., and W.–D. Niemeier. 1997. "Milet 1994–1995. Projekt minoisch–mykenisches bis protogeometrisches Milet: Zielsetzung und Grabungen auf dem Stadionhügel und am Athenatempel." *AA* 112:189–248.
- Niemeier, W.-D. 1997. "The Mycenaean Potter's Quarter at Miletus." In *TEXNH. Craftsmen, Craftswomen and Craftsmenship in the Aegean Bronze Age. Proceedings of the 6th International Aegean Conference, Philadelphia, Temple University,18–21 April 1996,* edited by R. Laffineur, and P.P. Betancourt, 347–51. Aegaeum 16. Liège: Université de Liège, Austin: University of Texas.
- Oikonomos, G.P. 1921. "Klazomenon." Praktika 1921: 63-74.
- Oikonomos, G.P. 1922, "Anaskafai en Klazomenais toi 1922." Praktika 1922: 34.
- Özgüç, T. 1982. Maşathöyük II. A Hittite Center Northeast of Boğazköy. Ankara: Türk Tarih Kurumu Basımevi.
- Özgünel, C. 1983. "Batı Anadolu ve İçlerinde Miken Etkinlikleri." *Belleten* XLVII(187): 697–743.
- ———. 2006. "Urla-Liman Tepe (Klazomenai) Kazılarında Gün İşığına Çıkarılan Miken Seramiğine Bakış." İn *Hayat Erkanal'a Armağan. Kültürlerin Yansıması/ Studies in Honor of Hayat Erkanal. Cultural Reflections*, edited by A. Erkanal-Öktü, E. Özgen, S. Günel, A.T. Ökse, H. Hüryılmaz, H. Tekin, N. Çınardalı-Karaaslan, B. Uysal, F.A. Karaduman, A. Engin, R. Spieß, A. Aykurt, R. Tuncel, U. Deniz, A. Rennie, 594-601. İstanbul: Homer Kitabevi.
- Özyiğit, Ö. 2005. "2003 Yılı Phokaia Kazı Çalışmaları." 26. Kazı Sonuçları Toplantısı Vol. II: 43–50.
- Pavúk, P. 2007a. "What can Troia tell us about the Middle Helladic Period in the Southern Aegean?" In *Middle Helladic Pottery and Synchronisms. Proceedings of the International Workshop held at Salzburg October 31st–November 2nd, 2004,* edited by F. Felten, W. Gauss, and R. Smetana, 295–308. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- ———. 2007b. 12.06.2007. *Grey Wares as a Phenomenon*. http://www.aegeobalkan-prehistory.net/article.php?id\_art=5 (15 June 2011).
- Rahmstorf, L. 2003. "Clay Spools from Tiryns and Other Contemporary Sites. An Indication of Foreign Influence in LH IIIC?" In *2nd International Interdisciplinary Colloquium. The Periphery of the Mycenaean World, 26–30 September, Lamia 1999,* edited by N. Kyparissi–Apostolika, and M. Papakonstantinou, 397–415. Athens: Hypourgeio Politismou, 14. Ephoreia Proistorikon kai Klassikon Archaioteton.
- ———. 2005. "Ethnicity and Changes in Weaving Technology in Cyprus and the Eastern Mediterranean in the 12th century BC." In *Cyprus: Religion and Society*

- from the Late Bronze Age to the end of the Archaic Period. Proceedings of an International Symposium on Cypriote Archaeology, Erlangen, 23–24 July 2004, edited by V. Karageorghis, H. Matthäus, and S. Rogge, 143–69. Möhnesee–Wamel; Bibliopolis.
  ———. 2008. Tiryns XVI: Kleinfunde aus Tiryns. Terrakotta, Stein, Bein und Glas/Fayence, vornehmlich der Spätbronzezeit. Wiesbaden: Reichert Verlag.
- Sjöberg, B. 1997. "Two Possible Late Helladic Kilns at Asine: A Research Note." In *Trade* and *Production in Premonetary Greece. Production and the Craftsman. Proceedings* of the 4th and 5th International Workshops, Athens 1994 and 1995, edited by C. Gillis, C. Risberg, and B. Sjöberg, 89–100. SIMA 143. Jonsered: Paul Åströms Förlag.
- Schallin, A–L. 1997. "The Late Bronze Age Potter's Workshop at Mastos in the Berbati Valley." In *Trade and Production in Premonetary Greece. Production and the Craftsman. Proceedings of the 4th and 5th International Workshops, Athens 1994 and 1995,* edited by C., Gillis, C. Risberg, and B. Sjöberg, 73–88. SIMA 143. Jonsered: Paul Åströms Förlag.
- Schiering, W. 1959/60. "Südabschnitt." IstMitt 9/10:4-30.
- Seifert, M. 1993. "Pottery Kilns in Mainland Greece and on the Aegean Islands." *RdA* XVII:95–105.
- Swiny, S. 1985. "Recent Developments in Cypriot Prehistoric Archaeology." *AJA* 89(1): 39–51.
- Şahoğlu, V. 2007. "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, edited by F. Felten, W. Gauss, and R. Smetana, 309–22. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- Tütüncüler, Ö. 2005. "M.Ö. 2. Bin Ege Bölgesi Dokuma Aletleri." PhD diss., Ankara University.
- Warner, J. 1979. "The Megaron and Apsidal House in Early Bronze Age Western Anatolia: New Evidence from Karataş." *AJA* 83 (2): 133–47.
- Warren, P. 1972. *Myrtos: An Early Bronze Age Settlement in Crete*. The British School of Archaeology at Athens. Thames and Hudson.