

The Minoans in the central, eastern and northern Aegean – new evidence

Edited by

Colin F. Macdonald

Erik Hallager &

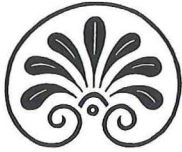
Wolf-Dietrich Niemeier



Monographs of the Danish Institute at Athens
Volume 8

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– new evidence

Acts of a Minoan Seminar 22-23 January 2005 in
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Preface

The idea for this symposium came to me after a lecture that Christos Boulotis gave in the autumn 2004 on his excavations in Koukonisi – why not make a small seminar, *i.e.* Minoan Seminar Colloquium, on the Minoans in the central, eastern and northern Aegean and discuss the problems of trade, thalassocracy, colonization, etc.? As time passed it proved that there were more archaeologists than originally thought who had found yet unpublished evidence for the Minoans in these areas. Thus, a one-day symposium became a two-day event, and Wolf-Dietrich Niemeier kindly offered to be its co-organizer, placing the facilities of the German Archaeological Institute at our disposal. I would like to thank Wolf for this, and for our good collaboration. I would also like to thank all the speakers for coming to give their lectures and I am grateful that they agreed to have their papers published.

At the conference, there was no fixed length for individual presentations. The organizers felt it was important for each participant to be the judge of the time needed for a proper presentation of her/his material. The discussions following each paper should then be limited to concrete matters concerning the excavation and their finds, while the larger issues on trade, international relations, etc. should be reserved for the final discussion on Sunday afternoon.

Special thanks go to Colin Macdonald, who has not only been invaluable in helping to organize all Minoan Seminars under the auspices of the Danish Institute, but has also undertaken the task of reviewing and editing the papers presented here. I am grateful to Maria Xanthopoulou, who typed the discussions from video recordings.

As far as the publication is concerned, I would like to stress that, paradoxically, in this digital world it is not always possible to acquire images of a high enough quality for optimal printing. Many images have been returned to the authors with a request for new images at a higher resolution or for the original images to be submitted for new scans. I wish to thank all authors for their patience with my requests and I wish also to thank them for their patience with the delay in publication.

I would like to extend my thanks to INSTAP that has most generously provided the organizers with a grant without which the symposium would never have taken place. Last, but not least, I would like to express my sincere gratitude to INSTAP and to the German Archaeological Institute for generous financial support of the publication.

Athens, August 2009
Erik Hallager

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Opening address

Yannis Sakellarakis

Dear colleagues and friends of Minoan Crete, I welcome you as chairman of the first session of the Seminar, *The Minoans in the central, eastern and northern Aegean – new evidence*, organized by the Danish and German Archaeological Institutes. I imagine that the new evidence on this subject relates to everything found since the symposium, *Minoan Thalassocracy, myth and reality*, held in 1982 by the Swedish Institute at Athens. It is clear that the northern Europeans are more interested in their southern neighbours. Since 1982, much evidence has come to light for Minoan expansion, bringing reality and myth closer together, closer indeed to a few words written by Thucydides, as well as by Sir Arthur Evans and, more recently, Sinclair Hood. I have been fortunate to have been able to add something new on Minoan religious influence in the Aegean through my excavation at the peak sanctuary on Kythera; its publication, with 14 good colleagues and specialists on different topics, is imminent.

I have been asked by some why Kythera was not included in the seminar; my partly tongue-in-cheek answer was that the island appears to belong more to the west, to the Ionian Sea since its occupation by the last Thalassocrats, the British, and not to the Aegean, certainly not the central Aegean. On the other hand, certain other Aegean islands, Melos and Keos, belong to the so-called Western String. Much further west is really too far west for the Minoans. Although one of the Minos rings was re-found in recent years, Minos's tomb has not been found in Sicily. Although from Homer onwards, Crete lies in the middle of the sea, we

shall leave to one side, during these two days, the astonishing finds of Tel-el-Dab^a in the south and, of course, Tell Kabri in the east. Let us leave the Minoans travelling only to the north and northeast.

Before opening today's session of our seminar, I would like to welcome our colleagues from Turkey, Messrs Erkanal and Keskin. We can be certain that this first Turkish contribution to Minoan scholarship will be expanded in the future, since we all recognize how rich Minoan earth can be. I would also like to congratulate those colleagues who had the initiative to start a Minoan Seminar and we all hope that it will be as fruitful and long-lived as its forerunner, the London Mycenaean Seminar. We have to thank, of course, Erik Hallager, the host of the first two years of seminars. All Minoan scholars in Greece and abroad are delighted to have not one but two eminent Minoan archaeologists as directors of foreign schools at Athens. Positions are not eternal and rotation is the agreed European rule of the Seminar. The organizing committee, therefore, decided that the 2006 Minoan Seminar should be organized by a Greek institution such as one of the three Cretan Ephoreias of Antiquities, or the Archaeological Institute of Crete, or the Archaeology Department of the University of Crete. I am happy to announce that the Greek Ministry of Culture is willing to support the Minoan Seminar, and more particularly, the Archaeological Society at Athens, as host, will be able to offer the best facilities available in Athens.

We thank our friends Erik Hallager and Wolf Niemeier and I ask them to introduce the seminar and explain its aims.

“Minoanisation” *versus* “Minoan thalassocrassy” – an introduction

Wolf-Dietrich Niemeier

The contributions in the proceedings of this conference present new evidence from various island sites of the central (Ios, Thera), eastern (Karpathos, Rhodes) and northern (Lemnos, Samothrace) Aegean, as well as from sites in western coastal Asia Minor (Teichiussa, Miletus, Çeşme, Troia) on the phenomenon generally referred to in recent literature as “Minoanisation”. According to C. Broodbank, who provided an important and highly analytical article on the subject, “Minoanisation” is to be understood as “a modern term of sometimes deceptive convenience for a heterogeneous range of ancient material culture traits and practices that indicate the adoption in places beyond Crete, through whatever means, of ways doing things that originated directly or indirectly within this island. Examples include artefact styles and consumption, cooking habits, writing, weight systems, weaving, wall-paintings, design and use of built space, burial practices and ritual action”.¹ The problems raised by such a term become clear, when one considers related expressions, most notably “Romanisation”, which has traditionally been used to subsume the complex cultural processes in the provinces of the Roman Empire and has therefore come under serious critique in recent years.²

The new finds presented here complement and significantly enrich what was known from previous investigations in the area.³ There is, however, a steady influx of information from ongoing archaeological discoveries, *e.g.* the Heraion of Samos and the islet of Tavsanadasi, between Miletus and Didyma, which in the Bronze Age was most probably a peninsula. At the time of writing, in the summer of 2009, both sites are in the process of being excavated.

New excavations in 2009 by the German Archaeological Institute under the author’s direction and in co-operation with Ou. Kouka (University of Cyprus) at the Heraion of Samos aim to the origins and early history of the sanctuary by investigating the sequence of phases of the important Early to Middle Bronze Age settlement that lay under the sacred precinct of the historic period⁴, as well as the question of the origin of the sanctuary of Hera. New soundings in the area of the early altars⁵ have shown that the sanctuary originated as early as Late Bronze I and that its earliest phase demonstrates strong Minoan traits, such as a presence of conical cups. Conical cups came to light in significant numbers during the early excavations at Heraion but, with one exception, remained unpublished.⁶ To the extent that such early finds are still available for study,⁷ they will now be fully recorded and documented for publication, together with other Minoan vessel types such as cups, bridge-spouted jars, lamps and rhyta from the same context. Further pottery of this type was discovered during the 2009 campaign, most notably an assemblage of conical cups, which were found *in situ* turned upside down on the oldest paved surface in

¹ Broodbank 2004, 46.

² For a synopsis of Romanisation theory and its recent critique, see Woolf 1998.

³ On this, see the papers in Hägg & Marinatos eds. (1984), *passim*, Broodbank 2004; Davis 2008.

⁴ On the prehistoric settlement, see Milošević 1961; Isler 1973; Weisshaar 1985; Kouka 2002, 285–94.

⁵ On the older excavations, see Buschor & Schleif 1933; Walter 1990, 21–2, fig. 8.

⁶ Buschor & Schleif 1933, 150, 158–9; Walter 1957, 36.

⁷ The finds from the 1933 excavations were lost during the Second World War.

a position similar to that known from ritual contexts in Crete.⁸

In a paper several years ago, I argued, on the basis of a conical cup and a grill stand discovered by S. Tül during surface survey on Tavsanadasi, that the site could represent another “Minoanising” settlement on the western coast of Asia Minor.⁹ Excavations carried out there by F. Bertemes (University of Halle) have revealed further evidence in the form of Minoan imports as well as “Minoanising” pottery similar to the finds from Miletos IV. Cretan imports include an amygdaloid Minoan seal of rock crystal with the depiction of a sailing ship.¹⁰

The term “Minoanisation” derives from the expressions “Minoan” and “Minoans”, which, from the time of A.J. Evans who referred to the traditions concerning King Minos, the mythical king of Knossos, came to be used to describe the culture and inhabitants of Crete during the Bronze Age.¹¹ As such, these terms are modern constructs. Indeed, we are in no position to know whether Bronze Age “Cretans” used a generic expression to describe themselves. In Egyptian sources, Crete is referred to as “Keftiu”,¹² and in those of the Near East, as “Kaptaru”.¹³ In recent years, terms such as “Minoan” and “Minoans” have come in for a great deal of criticism to the extent that some favour their complete abandonment.¹⁴ As pointed out by C. Broodbank, however, such a move would have little meaning in the absence of a better terminology.¹⁵ It is nevertheless important to be aware of the fact that the term “Minoans” does not represent any named ancient ethnic entity but rather a modern conventional term for the Bronze Age inhabitants of Crete,¹⁶ similar to the term “Mycenaeans” used to describe the inhabitants of southern and central mainland Greece, who were referred to by later generations as “Achaioi” and “Danaoi” and probably called themselves accordingly.¹⁷

Since the rise of “new” or processual archaeology, the “Minoanisation” of a series of Aegean islands and settlements on the western coast of Asia Minor, especially at the start of the Late Bronze Age, has come to be interpreted as a rather peaceful process; amongst other things, it has been taken to

involve the expansion of Cretan diplomatic control over a series of otherwise – at least in the case of Thera – independent islands, organized politically in the form of a republic, in which Cretan agents settled (K. Branigan’s model of “community colonies”),¹⁸ according to another model, this process was solely based on native developments of cultural emulation,¹⁹ in the course of which rising elites or factions competed for prestige, which they derived by establishing associations in a “new environment” with power centres on Crete,²⁰ in other words, at least some of the phenomena described under “Minoanisation” were not the result of direct Cretan intervention or control networks in the New Palace Period but rather became the manifestations of a cultural status vocabulary for many communities of the south Aegean.²¹ Scholars who are inclined to attribute to Neopalatial Crete a political and military supremacy in the Aegean and explain “Minoanisation” also in these terms²² – a pattern consistent with most of the models discussed above – run the danger of being branded

⁸ On the ritual use of conical cups in Crete, see Wiener 1984, 20; Wiener 1990, 137–8; on inverted conical cups, Hogarth 1899–1900, 76, pl. 6.1–2; Evans 1928, 548 fig. 348; Marinatos 1951, 260–1, fig. 2; Platon 1957, 90.

⁹ Tül 1986, 722–4, nos. 28–29, fig. 516; Niemeier 2005, 10.

¹⁰ I wish to thank F. Bertemes for permission to mention these discoveries in the present paper.

¹¹ MacGillivray 2000, 134–5. For the use of the term “Minoan” before Evans see Karadimas & Momigliano 2004.

¹² Vercoutter 1956, 33–123; Sakellarakis & Sakellarakis 1984; Wachsmann 1987, 93–9.

¹³ Heltzer 1989; Cline 1994, 126–8.

¹⁴ Hamilakis 2002a, 2002b; Whitley 2006; see also the critical remarks by N. Momigliano and M. Melas in the present volume.

¹⁵ Broodbank 2004, 54.

¹⁶ Renfrew 1996, 21: “The Minoans were the prehistoric inhabitants of Crete. Nothing more, and nothing less.”

¹⁷ Renfrew 1996, 1.

¹⁸ Doumas 1982; On the ‘community colonies’ model, see Branigan 1981, Branigan 1984.

¹⁹ Davis 1979; Davis 1980; Davis 1984; Davis & Lewis 1985.

²⁰ Davis & Gorogianni 2008.

²¹ Broodbank 2004, 65. For a similar earlier account see, Melas 1991. See also Melas, this volume.

²² For example Cadogan 1984; Hood 1984; Niemeier 1984; Niemeier 1986; Wiener 1984; Wiener 1990; Niemeier 1998a; Niemeier 2004; Niemeier 2005, 4–10; Niemeier 2007a, 10–3; Niemeier 2007b, 47–50.

“latter-day Minoan imperialists”²³ that subscribe to a “Knossos-centric ideal”, which „carries with it the whole package of largely romantic, Eurocentric ideas and stereotypes perpetuated since Evans times and which clearly echo his social and historical, context”²⁴ and “offers an excuse for the colonialism of the Victorian era”.²⁵

A.J. Evans, following his grand discoveries at Knossos and based on a combination of source material, including the finds at Knossos and other sites in Crete,²⁶ the discoveries from older excavations on Thera and Therasia²⁷ and Phylakopi on Melos,²⁸ as well as the later Greek literary tradition of King Minos’s thalassocracy,²⁹ did indeed conjure a vision of a Minoan Empire, which extended well beyond the Aegean islands and over wide areas of mainland Greece.³⁰ Evans and subsequent scholars saw this Minoan domination of the mainland as the result of military conquests.³¹ Such overstatements, which stressed the later Greek tradition beyond its limits and could hardly be borne out by the archaeological evidence, were rightly challenged in the years following the Second World War,³² however this led to overstatements in the opposite direction to such an extent that even one of Evans’s critics, the great Swedish archaeologist, A. Furumark, felt the need to retort:³³ “One must protest against the tendency of recent writers to reduce at all costs the importance of Crete and the Minoan civilization. Only because Evans and his school have exaggerated the importance of Crete in some respects and underestimated the Helladic element, there is no reason to go to the opposite extreme and to turn things upside down. Every attempt to deny the fundamental fact of the great indebtedness of Mycenaean culture to the Minoan, and to put a Helladic label on things which can be shown by ambiguous evidence to have originated in Crete, is bound to fail. To state this is not to be, pro-Minoan’ (as I have been accused of being) but to speak in the interest of historical truth”. Based on his interpretation of the archaeological discoveries at the time, Furumark, who authored two fundamental works on Mycenaean culture,³⁴ clung firmly to the idea of Minoan domination of the Cyclades in the New Palace Period,³⁵ for which

he received reproach, even recently, for his work being “still couched in the language of empire”.³⁶

Research over several decades on Minoan Crete has rendered the existence of a settlement hierarchy on the island highly likely,³⁷ at the top of which stood multifunctional monumental architectural complexes, which, despite Evans’s interpretation as palaces, could perhaps be better understood as “temple palaces” or “palace temples”, as they had not only political and economic but also religious and ritual functions.³⁸ These also included an urban settlement and a territory, within which lay smaller centres or ‘mini-palaces’, surrounded by settlements and ‘villas’,³⁹ certainly in the New Palace Period but perhaps also as early as the Old Palace Period. This model has recently been called to question by Y. Hamilakis, who has argued for an extreme fragmentation of Crete into factions – informal, very fragile, organisations centred on leading individuals – which presumably resulted in a short-lived local or regional political authority.⁴⁰ It is not the purpose of this paper to dwell on this unconvincing model,⁴¹ for which Hamilakis himself acknowledges that:⁴² “As with previous inter-

²³ Schofield 1984, 45.

²⁴ Hamilakis 2002b, 182–3.

²⁵ M. Melas, this volume.

²⁶ Excavations at Phaistos also began in 1900.

²⁷ Dumont & Chaplain 1888.

²⁸ Atkinson et.al. 1904.

²⁹ On this, see below.

³⁰ Evans 1928, 626. 757; Evans 1929, *passim*; Evans 1935, 283, 754–5.

³¹ For instance, Hall 1928, 215–7; Pendlebury 1939, 230–1.

³² Kantor 1947, 50–3; Furumark 1950, 182–3, 185–92.

³³ Furumark 1950, 254 n. 1. One such scholar was Kantor 1947 – see Furumark 1950, 214 n. 1, 253–4.

³⁴ Furumark 1941a; Furumark 1941b.

³⁵ Furumark 1950, 192–201.

³⁶ Broodbank 2004, 54.

³⁷ In lack of further legible written sources there is little certainty to be achieved.

³⁸ See several contributions in Hägg & Marinatos (eds.) 1987; Castleden 1990.

³⁹ Cherry 1986; Poursat 1987; Poursat 1989, 213–4; Cadogan 1994; see also the papers in Hägg (ed.) 1997; Kanta 1999; Driessen 2001; Warren 2002; Warren 2004.

⁴⁰ Hamilakis 2002b.

⁴¹ Warren 2002 has already stated what is necessary.

⁴² Hamilakis 2002b, 199.

pretations, this one is also a product of its time”, and indeed it seems to me that the concept of factions is very much a phenomenon that characterizes the division of Western contemporary societies into interest groups, although this is not to say that Cretan society, as every other human society for that matter, was without internal divisions or competing interests or devoid of conflict. It is without doubt that Evans, in creating his vision of the Minoan past, was significantly influenced by his time,⁴³ as we might be by our own. It is therefore possible that terms such as “palaces”, “kings”, “princes” or “aristocracy” were applied in the light of contemporary Victorian, or rather Edwardian, institutions,⁴⁴ although they were also used to convey meanings derived from his deep knowledge of Near Eastern and Egyptian cultures. As G. Cadogan aptly remarked,⁴⁵ “In the role then of religion, and generally the arrangement of space and function, Crete’s palaces would appear to be at the West end of a long line of palaces, palace-temples and temples stretching to the East as far as the Euphrates and the Tigris”.

Was Knossos in the New Palace Period ever *the* power centre of the entire island?⁴⁶ Knossos was certainly an extremely ancient and established centre in Crete in all spheres and moreover constituted probably a cosmological centre of the island.⁴⁷ In the New Palace period, Knossos was by far the largest of the known Minoan palaces, almost double the size of that at Malia and two and a half times larger than that of Phaistos.⁴⁸ Regarding the architecture of the New Palace period, the rest of the palaces as well as a series of elaborate buildings in Crete and beyond in the Aegean followed the “School of Knossos”.⁴⁹ The same is true for the fresco paintings of ceremonial/ritual character.⁵⁰ The imitation of Knossian architecture and frescoes could possibly also mean that local elites were emulating Knossos in a “Versailles effect”.⁵¹ However, finds of Neopalatial clay sealings made of apparently local clays and impressed by the same or nearly identical Knossian gold rings, many of them with the representations of bull leaping scenes, from sites in central, western, southern and eastern Crete appear to indicate that administrators were sent out from the palace at Knossos to manage eco-

nomic activities in different parts of the island, as first argued by J.H. Betts.⁵² Arguments against the function of Knossos as a monarchic power centre have stressed that, in contrast to Egypt or the Near East, there is a lack of established ruler iconography in Bronze Age Crete.⁵³ While this is indeed the case,⁵⁴ it has to be remembered that the same applies to Mycenaean Greece,⁵⁵ where the Linear-B texts testify to the existence of monarchic rulers.⁵⁶ Furthermore, the bull motif was closely connected to Knossos. Large bull scenes adorned the entrances to the palaces as well as official halls.⁵⁷ The Hallagers have convincingly argued that the bull formed the power symbol of Knossos.⁵⁸ Thus, they confirm the conclusion reached by Betts that the Knossian administration used signet rings with bull leaping scenes as their main insignia. All this corresponds to an Egyptian inscription of the time of Thutmoses III mentioning the king of Keftiu (Crete) together with the kings of other countries⁵⁹ as well as to the later Greek tradition of an overlordship by the Knossian rulers of dynasties in other parts of the island owing allegiance to them.⁶⁰

Outside Crete, of those “Minoanising” sites identified so far – and with the exception of

⁴³ Niemeier 1982, 268–71; Nixon 1983; Bintliff 1984; Zois 1994; MacGillivray 2000; several papers in Hamilakis (ed.) 2002 and in Hamilakis & Momigliano (eds.) 2006.

⁴⁴ As argued by Hamilakis 2002b, 180–1.

⁴⁵ Cadogan 1986, 169.

⁴⁶ *Contra*: Hamilakis 2002b, 182–3.

⁴⁷ Soles 1995; Manning 1999.

⁴⁸ Graham 1987, pl. 7; Wiener 1987, 266.

⁴⁹ Wiener 1990, 140–1.

⁵⁰ Rehak 1997; Shaw, M.C. 1997.

⁵¹ For the term ‘Versailles effect’ see Wiener 1984, 17; Wiener 1987, 266.

⁵² Betts 1967; Hallager 1997, *contra* Weingarten 1986, 296–7 n. 25.

⁵³ Hamilakis 2002b, 183–4.

⁵⁴ Niemeier 1987; Davis, E. 1995, 11–8.

⁵⁵ Davis, E. 1995, 18.

⁵⁶ Palmer 1963, 83–95; Ventris & Chadwick 1973, 120, 264–7, 280, 300, 408–9, 478–80; Carlier 1984, 3–134; Palaima 1995; For a new intriguing interpretation of the *wanax* as the Great King of Ahhiyawa of the Hittite texts see Kelder 2008.

⁵⁷ N. Marinatos 1993, 51, fig. 40.

⁵⁸ Hallager & Hallager 1995.

⁵⁹ Vercoutter 1956, 64.

⁶⁰ Poland 1932, 1898–1902; Huxley 1968, 14, n. 65.

Kythera – none can be securely identified as a Cretan “settlement colony”, in accordance with Branigan’s definition.⁶¹ For Kythera, such an identification, first proposed by S. S. Benton,⁶² has been remarkably confirmed by the results of the investigations at the Bronze Age settlement at Kastri⁶³ and the peak sanctuary of Agios Georgios sto Vouno,⁶⁴ as well as by the intensive Kythera Survey:⁶⁵ the first Cretan settlers arrived in Phase 2 (c. 2500 BC); in Phase 3 (which generally coincides with the Old Palace Period in Crete) – or perhaps somewhat earlier – the peak sanctuary of Agios Georgios sto Vouno was established;⁶⁶ Phase 4 (which generally coincides with the New Palace Period in Crete) is characterized by an explosion in the variety of available evidence: Kastri increased in size to a settlement of at least 6–7 ha and had a series of satellite communities in its environs. The hinterland which up to then was empty now became dotted with small rural sites, almost over 100 in the survey area and perhaps therefore about 500 on the whole island, suggesting another wave of immigration from Crete.

The Bronze Age site of Trianda/Ialysos on Rhodes, which A. Furumark in 1950 based on his reassessment of the earlier Italian excavations of 1935–36 regarded as a newly-founded settlement at the beginning of the Cretan New Palace Period,⁶⁷ has according to the results of more recent investigations a history stretching back to the Middle Bronze Age, even if the location of the Middle Bronze Age settlement is rather different and the area it covers does not correspond completely to the settlement of the Late Bronze Age.⁶⁸ Similarly at Miletus, the results of excavations in the 1930s and 1950s of the Bronze Age strata underneath the temple of Athena – based on finds of Minoan and ‘Minoanising’ pottery – had then suggested the existence of a settlement founded for the first time at the beginning of the New Palace Period on Crete.⁶⁹ The recent excavations between 1994 and 2004 have now demonstrated that the site at the temple of Athena has a continuous settlement record dating back to the Late Chalcolithic.⁷⁰

Except for Kythera, it is thus impossible to identify any other Cretan ‘settlement colony’; it is however conceivable that a significant share of the

population in settlements with predominantly Minoan material traits, which at the beginning of the Late Bronze Age replaced Middle Bronze Age sites, such as those Trianda/Ialysos on Rhodes and Miletus (Miletus IV) were of Cretan background, as in Phase 4 at Kythera.

An economic predominance of New Palace period Crete in the Aegean is indicated by the occurrence of balance weights of the Minoan weight system beyond Crete – at Akrotiri on Thera, Phylakopi on Melos, Ayia Irini on Keos, Heraion on Samos and Miletus as well as at Vapheio in Laconia and Mycenae;⁷¹ the existence of Linear A inscriptions on locally produced pottery from Akrotiri, Phylakopi, Ayia Irini, Kastri on Kythera, Miletus and Tiryns;⁷² the local use of Linear A clay tablets at Akrotiri, Phylakopi and Ayia Irini;⁷³ and, finally, by a hoard of sealings of non-local, probably Cretan, clay recently discovered at room Delta 18b at Akrotiri,⁷⁴ of which three were impressed by a gold ring which had been also impressed on sealings at Hagia Triada and Sklavokampos,⁷⁵ and several others by a gold ring with a bull-leaping scene.⁷⁶ The sealings belong to the type of the ‘flat

⁶¹ Branigan 1981.

⁶² Benton 1931–32, 245–6.; see also Furumark 1950, 201.

⁶³ Coldstream & Huxley 1972, 275–303, 309; Coldstream & Huxley 1984.

⁶⁴ Sakellarakis 1996; Banou 2003.

⁶⁵ Broodbank 2004, 73–81; Broodbank & Kiriati 2007.

⁶⁶ Sakellarakis 1996, 87.

⁶⁷ Furumark 1950, 180 dated the beginning in LM IA; Papazoglou-Manioudaki 1990, 149–51 in MM III.

⁶⁸ Marketou 1998a, 41–5; Marketou, this volume.

⁶⁹ Schiering 1984; Niemeier & Niemeier 1997, 192–4.

⁷⁰ Niemeier 2005, 1–4; Raymond, this volume.

⁷¹ Niemeier 1986, 248–9, fig. 9; Petruso 1992; Niemeier 2005, 8, Fig. 21. Two lead balance weights from the earlier excavations in the Heraion of Samos are to be published by M.E. Alberti.

⁷² Palaima 1982; Niemeier 1996; Owens 1999; Karnava 2008. Further Linear A inscriptions from Miletus to be published by W.-D. Niemeier & J. Zurbach.

⁷³ Palaima 1982; Boulotis 1998; Owens 1999; Doumas *et al.* 2000, 32, 34, fig. 24; Karnava 2008.

⁷⁴ Doumas 2000; Doumas *et al.* 2000, 34–5, figs. 30–1; Doumas 2004, 574–91, nos. 391–405; Karnava 2008, 378–9, fig. 36.3.

⁷⁵ Doumas 2004, 574–5 no. 391.

⁷⁶ Doumas 2004, 576–7 no. 392.

based nodules' (or better 'parcel-nodules' – Päckchenplomben⁷⁷) which had sealed parchment documents.⁷⁸

Was there a connection between trade and flag and was there also a political and military predominance of New Palace Period Crete in the Aegean? In lack of relevant written sources, this question cannot be answered with certainty on the basis of archaeological finds alone. As stated by Ch. Doumas, the sealings from Akrotiri "demonstrate the association – direct or indirect – of the owner or user of room Delta 18 with Crete".⁷⁹ Ch. Boulotis considers it a possibility that a Minoan could have been present at Akrotiri as a commercial supervisor.⁸⁰ A Linear-A tablet from Phylakopi III was discovered in the ruins of a "mansion", which may have been the administrative centre of the settlement⁸¹ or the "governor's residence", as anticipated by Branigan in his model of a 'governed colony'.⁸² Another potential candidate for a 'governor's residence' is House A at Ayia Irini on Keos,⁸³ which "occupied a central and conspicuous place in the ancient town ... and was almost certainly the largest single building and presumably the most important in the economic life of the community".⁸⁴

Common sense suggests that Crete in the New Palace Period controlled extended regions in the Aegean in both political and military terms. In the Aegean, Minoan bronze smiths were leading in bronze weapon technology.⁸⁵ Important new weapons such as long swords,⁸⁶ spearheads of different types,⁸⁷ probably also helmets and large body shields⁸⁸ were first developed in Crete. The great number of bronze weapons which have must been available in New Palace period Crete is illustrated by the masses of bronze swords from the Arkalochori cave deposit.⁸⁹ Minoan weapons were exported to the Mycenaean mainland⁹⁰ and – further away – to Egypt⁹¹ and the Near East.⁹² In Crete, there existed 'warrior burials' which precede any evidence for a, Mycenaean conquest' of Crete,⁹³ and there are combat scenes in Minoan art.⁹⁴ The numerous representations of sailing ships on Minoan seals from the Old Palace Period onwards demonstrate a great interest in seafaring.⁹⁵ Moreover, between the end of Early Cycladic II and the LH IIIB and C periods, "evidence for

Aegean ship architecture is dominated by a linear succession of ship types defined by the artefact distribution as Minoan".⁹⁶

There is no doubt that Crete possessed the requisite power to control the Aegean islands. As M.H. Wiener has stated, "the difference in population, resources and scale of organization between a unified Crete and various Cycladic islands is evident".⁹⁷ And J.L. Davis, who is sceptical about the "Minoan thalassocracy" admits:⁹⁸ "It is not hard to imagine that authorities in a Cretan palace could forcibly have imposed their will abroad, had they so chosen". As stated by Ch.G. Starr, there is no reason why the Minoans should have been completely different from the other early civilizations in Egypt, the Near and the Far East or central America, for which warfare and expansion are characteristic features.⁹⁹ Palatial Crete had an important reason to expand its power beyond the island: it was dependent on the overseas imports of metals, above all copper and tin and had undoubt-

⁷⁷ See Müller 1999, 349–56.

⁷⁸ Hallager 1996, 136–58; Müller 1999, 349–56.

⁷⁹ Doumas 2000, 65.

⁸⁰ Boulotis 1998, 411.

⁸¹ Renfrew & Brice 1977; Renfrew 1978, 411–2; Renfrew 1982, 39; Davis, J.L. 2008, 197. Sceptical: Karnava 2008, 383.

⁸² Branigan 1981, 25. For the Mansion of Phylakopi III as a possible 'governor's residence' see Niemeier 1986, 249.

⁸³ Publication: Schofield & Cummer 1984; possible 'governor's residence': Niemeier 1986, 249.

⁸⁴ J.L. Caskey in: Schofield & Cummer 1984, V.

⁸⁵ Hiller 1984, 27–8.

⁸⁶ Sandars 1961, 17–22; Branigan 1968, 195–8; Pelon 1982.

⁸⁷ Höckmann 1980.

⁸⁸ Hiller 1984, 29; Niemeier 1990, 276.

⁸⁹ Hazzidakis 1912–1913; Wiener 1990, 151.

⁹⁰ Mylonas 1973, 314–7; Catling & Catling 1974, 252; Hood 1980.

⁹¹ Vercoutter 1956, 359–61; Wachsmann 1987, 71–2.

⁹² As is evident from the Mari texts – see Cline 1994, 126–7, D 5.

⁹³ Kilian-Dirlmeier 1985, 209; Muhly 1992, 129–31; Dimopoulou 1999.

⁹⁴ Evelyn 1996, Hiller 1999, Peatfield 1999.

⁹⁵ Yule 1981, 156–66; Basch 1987, 93–114; Wedde 2000.

⁹⁶ Wedde 1991, 87.

⁹⁷ Wiener 1990, 150.

⁹⁸ Davis 2008, 205.

⁹⁹ Starr 1984.

edly to secure its sea-routes.¹⁰⁰ Therefore it is not surprising that the most intensively 'Minoanised' settlements were situated along the trade routes connecting Crete with regions rich in metal sources: Kythera on the route between western Crete and Laconia which also has the sources of rosso antico and lapis laeodamionius,¹⁰¹ Phylakopi, Akrotiri and Keos on the 'Western String' route between Crete and Attica,¹⁰² and Karpathos, Kasos, Rhodes, Telos, Kos, Kalymnos and Samos on the route between Crete and the west coast of Asia Minor with the 'Minoanising' settlements of Miletus, Tavasanadasi, Teichioussa, Iasos and Knidos and contacts to Çeşme and Bademgedigi Tepe, and – via Rhodes – Cyprus, the Levant and Egypt.¹⁰³

What E. Linder has said for Ugarit, applies also to Minoan Crete:¹⁰⁴ "Peace at sea is essential to any political entity whose economy is based on maritime trade and communications... The sea must be free of pirates who have plagued the sea routes since the earliest maritime commercial ventures, looking for the easy prey of isolated and unprotected merchantmen". There is no doubt that piracy also existed in the Aegean during the Bronze Age.¹⁰⁵ Our perception of this practice has been, nevertheless, a romanticized one, largely influenced as it were by representations in modern films such as those starring Errol Flynn. Contemporary experiences, such as the recent incidents off the coast of Somalia, have brought in sharp focus the problems associated with piracy and the difficulties in dealing with it.

C. Broodbank argues that "none of the polities envisaged ... (including even the most optimistic estimates for Knossos) are remotely comparable to the contemporary, proto-imperial conquest states operating out of the Nile valley, Mesopotamia and the Anatolian plateau".¹⁰⁶ All these had, however, small beginnings, and a longer history of expansion than New Palace Period Crete until the LM IB destructions. Furthermore, Broodbank is of the opinion that, in the Linear B tablets, "there is no indication that areas overseas were in any sense controlled" by a mainland Mycenaean polity.¹⁰⁷ Although this is true for the texts on the Linear B tablets, the content of which is restricted to issues of the local palatial administrations, the Hittite

written sources offer a different picture. It is today generally accepted that the land referred to in these documents as "Ahhiyawa" represents a Mycenaean kingdom with its centre, whether Mycenae or Thebes,¹⁰⁸ situated on the Greek mainland. "Millawanda", which can now be securely identified with Miletus,¹⁰⁹ was a stronghold of the Ahhiyawa on the coast of Asia Minor.¹¹⁰ Archaeological evidence suggests the existence of Mycenaean ("Ahhiyawan") characteristics on site since the second half of the 15th century BC (Miletus V).¹¹¹ There are repeated references to islands belonging to "Ahhiyawa", which became the places of refuge for enemies and renegades attempting to flee Hittite persecution, most notably in the case of Piyamaradu who fled via Millwanda/Milet.¹¹² It is likely that the islands referred to included the Dodecanese and possibly also Samos, in other words, places where from the

¹⁰⁰ Niemeier 1986, 247, 250–1; Wiener 1987, 262–4; Wiener 1990, 145–50; Wiener 1991, 327–8; Niemeier 1998a, 36–8.

¹⁰¹ Stos-Gale & Gale 1984, 61.

¹⁰² Davis 1979; see also Schofield 1982a; Schofield 1982b; for the important role of the metal sources of Laurion in this trade route see Gale & Stos-Gale 1981, 213–7; Gale and Stos-Gale 1982; Stos-Gale & Gale 1984, 59–61; Gale 1991.

¹⁰³ Niemeier 1984, 206–7; Niemeier 1998a. For the rich metal ores of Asia Minor see Müller-Karpe 1994, 11, fig 1; for new evidence from Karpathos, see Platon, L. & Karantzali 2003; Melas, this volume; from Rhodes, Marketou 1998a, Marketou 1998b and this volume; from Miletus: Niemeier 2005; from Teichioussa: Voigtländer, this volume; from Iasos: Momigliano, this volume, from Çeşme: Erkanal & Keskin, this volume; from Bademgedigi Tepe; Meric, 2003, 91. For the sea route to Cyprus, the Levant and Egypt, see Niemeier 1986, 250–1, figs. 19–23; Watrous 1992, 169–83, fig. 10.

¹⁰⁴ Linder 1981, 38.

¹⁰⁵ Renfrew 1972, 262–4, 398–39.

¹⁰⁶ Broodbank 2004, 70.

¹⁰⁷ Broodbank 2004, 71–2.

¹⁰⁸ Mycenae: Niemeier 1998b, 44; Hope Simpson 2003, 233–7. Thebes: Niemeier, 1999, 144; Latacz 2003, 285–94; Niemeier 2005, 18; Niemeier 2007b, 68–73; Niemeier 2008, 304–6.

¹⁰⁹ See Niemeier 1998b, 21–3; Niemeier 2005, 19–20; Niemeier 2007b, 67–8; Niemeier 2008, 302–3, 307–8.

¹¹⁰ Heinhold-Krahmer 1993–97; Niemeier 2005, 19–20; Niemeier 2007b, 77, 79–85.

¹¹¹ Niemeier 2005, 10–3; Niemeier 2007a, 13–6.

¹¹² Bryce 1998, 211, 322; Niemeier 2007b, 77–8, 81; Niemeier 2008, 316.

second half of the 15th century BC the pre-existing “Minoanising” settlements begin to demonstrate Mycenaean traits.¹¹³

Furthermore, it seems most likely that the establishment of such territorial control did not proceed by means of founding new Minoan colonies, the evidence for which, with the exception of Kythera, is very scarce. Similarly, one should entertain the possibility that governors according to Branigan’s model of ‘governed colonies’ were not necessarily of Cretan origin but rather local vassals appointed by Cretan rulers, as was common practice for the Egyptians and Hittites.¹¹⁴ If such local vassals existed, then it is reasonable to assume that they would want to advertise their connections to Crete for the purpose of prestige and legitimation. Without any legible contemporary texts from the Aegean it is difficult to identify the relationship between these individual “Minoanising” settlements and Knossos and among each other. There certainly existed regional trade networks and settlement hierarchies, and therefore it is conceivable that Milet IV, as the strongest ‘Minoanising’ settlement in SW Asia Minor functioned as a central place and/ or secondary centre for other Minoanising settlements in the immediate region, such as Tavsanadasi, Teichioussa and Iasos.

The only surviving contemporary written sources that make reference to Crete of the New Palace Period are those of XVIII Dynasty Egypt. There, in addition to “Keftiu”,¹¹⁵ the term „the islands in the midst of the Great Green (Sea)“ is also used.¹¹⁶ Sakellarakis & Sakellarakis have convincingly argued that “by distinguishing the Keftiu from all other anonymous inhabitants of the “islands in the middle of the Great Green (Sea)”, the Egyptians clearly indicate the leadership of Crete, the so-called ‘Minoan thalassocracy’”.¹¹⁷

To conclude, we now come to consider the later Greek tradition about Minos’s thalassocracy.¹¹⁸ This has been seen as reflecting a historical reality¹¹⁹ until Ch.G. Starr argued in 1955 that the „myth of the thalassocracy of Minos“ was a concept invented in the 5th century BC to make political capital for the justification of the supremacy of Periclean Athens in the Attic-Delian League.¹²⁰ After the publication of Starr’s article, this tradition has been

mostly considered as irrelevant and has been largely ignored in discussions concerning the role of Minoan Crete in the Bronze Age Aegean.¹²¹ Unfortunately, none of the papers presented at the important Symposium in 1982 at the Swedish School at Athens „The Minoan Thalassocracy: Myth and Reality“ discussed the literary sources of the myth.¹²² To my knowledge, the only serious critical responses to Starr came from two Italian scholars, namely F. Cassola and A.M. Jasink.¹²³

Clearly, the relevant later sources must be treated with caution;¹²⁴ however, it may be argued that their contribution still has some value. As F. Cassola rightly pointed out, one should ask why should 5th century BC Athenians choose an unpopular figure such as Minos, a mythical foe who had imposed a savage and debilitating annual tribute on their state –specifying that seven young men and women be sent to the Minotaur on Crete for sacrifice¹²⁵ – as a legendary forebear of their own hegemony.¹²⁶ Newly fabricated myths tend to glorify local heroes,¹²⁷ as for example in the case of the use of Theseus by the Athenians, who aimed to project their supremacy over Delos back to a glorious heroic age.¹²⁸ Moreover, the tradition of Cretan supremacy is much older than the 5th century BC As early as c. 700 BC, Hesiod

¹¹³ Niemeier 2005, 13–4 with fig. 35; Niemeier 2007b, 52–4 with fig. 2

¹¹⁴ See Moran 1992; Beckman 1996; Bryce 2003.

¹¹⁵ See *supra* with n. 11.

¹¹⁶ Sakellarakis & Sakellarakis 1984, 201–2; Wachsmann 1987, 98–9.

¹¹⁷ Sakellarakis & Sakellarakis 1984, 202.

¹¹⁸ see Poland 1932, 1907–11.

¹¹⁹ For instance by Glotz 1925, 157–60; Meyer 1928, 216–7; Pendlebury 1939, 225, 271, 285–7.

¹²⁰ Starr 1955, 289–91. See also Finley 1981, 38; Baurain 1991.

¹²¹ An exception is Davis, J.L. 2008, 187–8 who mentions some of the sources without, however, discussing them in more detail.

¹²² Hägg & Marinatos (eds.) 1984.

¹²³ Cassola 1957; Jasink 1983, 49–51.

¹²⁴ Furumark 1950, 182–3; Cassola 1957, 344; Wiener 1990, 152.

¹²⁵ For the myth see Poland 1932, 1913–15

¹²⁶ Cassola 1957, 345.

¹²⁷ Jasink 1983, 51.

¹²⁸ Cassola 1957, 345.

wrote about Minos: “He was the most royal of all mortal kings and rules over most of mankind who dwelt about, holding the sceptre of Zeus; with it he was the king of multitudes”.¹²⁹ Since paramount kingdoms of this kind did not exist in the time of Hesiod or in the (so-called) Dark Age of Greece, and since there is no textual or archaeological evidence that the Mycenaean kingdom of Knossos expanded beyond the island, this passage must reflect Crete’s most glorious period before the Mycenaean supremacy in the Aegean.

There is no doubt that Thucydides, Herodotus und Diodorus based their remarks on the sea power of Minos on earlier sources. According to Thucydides (I. 4.1; I.8.2), Minos was the oldest ruler known to have owned a fleet. Diodorus points out that Minos achieved a noteworthy (IV.60.3) and great (V.78.3) power at sea, which could be supported by land forces of equal size (V.84.1). Thucydides (I.4.1; I.8.2) relates how Minos cleared the sea from the pirates, a fact that, on the one hand, resulted in a more stable flow of income (I.4.1), and, on the other, the growing safety and welfare of the population (I.8.3).

The population of the Aegean islands referred to as Kares or Leleges¹³⁰ were, according to Herodotus, (I 171, see also Strabo XIV 2, 27, 661) subjects of Minos, whom he used to man his ships whenever necessary without raising tribute. In contrast, Thucydides (I 4.1) narrates that Minos forced out the Kares from the islands and became thus the first settler (*oikistes*) of most islands of the Cyclades. Diodorus (V 84,1) reports the existence of many colonies sent out from Crete and also that Minos settled most of the Cyclades and arranged for the distribution of land. F. Poland has suggested that this incongruity can be bridged by assuming that both views may be valid to a certain extent, namely that some of the islands were conquered, while the others were settled,¹³¹ as also stated by Aristotele (Politics II 10 p. 1271 b, 37ff.). According to Thucydides (I 4,1), in order to strengthen his domination, Minos placed his sons as governors (*hegemones*) of the islands.

There are many local traditions about Cretan supremacy in the Aegean in the time of king Minos. About 500 BC, the first Ode of Bacchylides

of Keos (I.113–23) recounts how: “On the third day warlike Minos came, bringing fifty ships with gleaming sterns and a company of Cretans. By the grace of Zeus who grants glory, he took the low-girded maiden, Dexithea, and left half of his contingent-soldiers. He allotted the craggy land to them and sailed to the lovely city of Knossos”. This is no idyllic scene.¹³² Minos is described as “warlike”, as he arrives to occupy the island. Moreover he takes Dexithea by force, as is indicated by the verb *damasen*.¹³³ Diodoros (V.54.4) reports that the first settlers of Karpathos were companions of Minos. According to Ephoros of Kyme, Miletus was founded by Sarpedon, a brother of king Minos, who brought settlers from Crete.¹³⁴ Herodotos of Herakleia reports, that, at the time of the foundation of Miletus, Cretans also settled on Samos.¹³⁵ According to Diodoros (V.84.1), Minos not only occupied most of the Cyclades but also seized no small part of the western coast of Asia Minor.

How are we to assess the validity of the sources on ‘Minos’ thalassocracy? Surely, one cannot fail to acknowledge that much ‘invention’ has replaced historical tradition, as already noted by the renowned historian Eduard Meyer.¹³⁶ Yet the knowledge about the power of Minos is too old, going back to the time of Hesiod, and too widely distributed to represent mere invention. In this respect, it is perhaps no surprise that four of the places associated in these local traditions with the conquest and settlement by Cretans in the age of king Minos – Keos,¹³⁷ Karpathos,¹³⁸ Samos¹³⁹ and

¹²⁹ Cassola 1957, 347; Huxley 1968, 2–3,

¹³⁰ Poland 1932, 1909.

¹³¹ Poland 1932, 1909.

¹³² As suggested by Poland 1932, 1915.

¹³³ Maehler 1982, 16.

¹³⁴ Jacoby 1929 79. F 27.

¹³⁵ Jacoby 1923, 224. F 45.

¹³⁶ Meyer 1928, 215.

¹³⁷ Wiener 1984, 19; Wiener 1990, 134–9, 141. See also Maehler 1982, 7–8, who in connection with Bakchylides’s first Ode points to the close connections between Keos and Crete as evident in the finds from Ayia Irini.

¹³⁸ Melas 1985; Melas, this volume.

¹³⁹ Furumark 1950, 200–1; Niemeier 1984, 206–7; Niemeier 1998a, 31–2; see also the remarks on the new excavations in the Heraion of Samos at the beginning of this paper.

Miletus¹⁴⁰ – belong to the settlements with the strongest indications of ‘Minoanisation’. Moreover, as J.L. Davis thinks,¹⁴¹ in a time of accelerated population growth in the New Palace period¹⁴² the prospect of available land may have attracted Minoans to the islands of the Aegean.

A series of scholars have emphasized the existence of open, unfortified harbour settlements on the coasts of Crete, which should only indicate the lack of any threat from the sea or, in other words, that Crete exerted maritime domination in the Aegean¹⁴³. Such harbour settlements include, for example, Amnisos,¹⁴⁴ Nirou Chani,¹⁴⁵ Malia,¹⁴⁶ Pseira,¹⁴⁷ Palaikastro,¹⁴⁸ Kato Zakros¹⁴⁹ and Kommos.¹⁵⁰ To Eduard Meyer, the territorial expansion of the empire of Minos as described in the sources appeared as a plausible scenario.¹⁵¹ “The image that the tale preserves is in its main features correct; the fact that the tradition knows of raids to the Greek mainland but does not have anything to say about Minos’s domination of the same territories strengthens the value of this tradition and attests to its reliability in an almost surprising manner.” In fact, literary tradition seems to be consistent with the available archaeological evidence: the Greek mainland shows to a large extent distinctively separate cultural dynamics.¹⁵² Broodbank points to the fact that “in the southern Peloponnese, an area that lies as close to Crete as do Thera and Melos”, at Ayios Stephanos in southern Laconia, “a major Minoanising element in the pottery is documented”.¹⁵³ This is true for the painted fine ware in local clay in which Minoan style and technique of MM III-LM I is sufficiently common to suggest the possible presence of Minoan or Kytheran potters.¹⁵⁴ Conical cups are, however, rare,¹⁵⁵ in contrast to the superabundance of conical cups at Minoanised sites like Kastri on Kythera, Akrotiri on Thera, Phylakopi on Melos, Ayia Irini on Keos, Trianda/Ialysos on Rhodes, Seraglio on Kos, Heraion on Samos and Miletus,¹⁵⁶ a superabundance, which was – in the words of J.N. Coldstream¹⁵⁷ – “essential to the well-being of any Minoan society of this period”.

It is therefore my opinion that future studies of the phenomenon referred to as ‘Minoanisation’, should not only investigate material culture dynam-

ics, as suggested by Broodbank,¹⁵⁸ in areas such as manufacturing traditions, pottery styles, kitchen wares, loom technology, architecture, inter-regional and regional trade networks, or in Minoanising landscapes (like that studied by the Kythera Survey), including ideologically-charged landscapes with peak sanctuaries (such as Ayios Georgios on Kythera¹⁵⁹ or Troullos on Keos,¹⁶⁰ other possible examples¹⁶¹) and – as I would like to add – other sanctuaries (such as Miletus¹⁶² and the Heraion on Samos¹⁶³) but also keep clearly in mind the question of political and military supremacy of New Palace Period Crete. This is a particularly topical question, since cult and religion are known to have played an important political role in the expansion

¹⁴⁰ Niemeier & Niemeier 1999; Niemeier 2005, 4–9; Kaiser 2005; Kaiser, this volume.

¹⁴¹ Davis, J.L. 2008, 201.

¹⁴² See Warren 1984.

¹⁴³ For instance Weber 1925, 16–7; Wilcken 1926; Karo 1927; Rostovtzeff 1941, 84–5.

¹⁴⁴ Schäfer 1991; Niemeier & Schäfer 1992.

¹⁴⁵ Xanthoudides 1922; Evans 1928, 233, 267–85, 552.

¹⁴⁶ Hue & Pelon 1991; Raban 1991, 139–40.

¹⁴⁷ Seager 1910, 6. For the results of the new excavations at Pseira see the volumes of the Pseira series edited by Ph.P. Betancourt.

¹⁴⁸ For Palaikastro as harbour see Evans 1928, 253, 508. For the results of the new excavations under the direction of H. Sackett & J.A. MacGillivray see preliminary reports in *BSA*.

¹⁴⁹ Platon, N. 1971, 245–6, 248; Raban 1991, 140–1.

¹⁵⁰ Shaw, J.W. 2006, 51–9.

¹⁵¹ Meyer 1928, 216 (translation by D. Grigoropoulos).

¹⁵² Dickinson 1977; Dickinson 1984; Korres 1984; Dietz 1991.

¹⁵³ Broodbank 2004, 48.

¹⁵⁴ Rutter & Rutter 1976, 3. 64–5; Wiener 1984, 19.

¹⁵⁵ Rutter & Rutter 1976, 65.

¹⁵⁶ For Kastri see Coldstream & Huxley 1972, 285; for the Cycladic sites Wiener 1984; Wiener 1990, 137–9; for Trianda/Ialysos Marketou 1998a, 50; for Kos Morricone 1972–1973, 282–3; for Heraion on Samos the remarks at the beginning of this article; for Miletus Niemeier 2005, 6; Kaiser 2005; Kaiser, in this volume.

¹⁵⁷ Coldstream and Huxley 1972, 285.

¹⁵⁸ Broodbank 2004, 59–67.

¹⁵⁹ Sakellarakis 1996.

¹⁶⁰ Caskey 1971, 392–5; Wiener 1984, 19 n. 20.

¹⁶¹ Sakellarakis 1996, 92–7.

¹⁶² Niemeier 2005, 6–7; Niemeier 2007a, 11–2.

¹⁶³ See the remarks on the Heraion at the beginning of this paper.

of various cultures throughout the ages. J.L. Davis thinks:¹⁶⁴ “It may be a safer strategy to abandon any attempt to write a political history for this episode in Aegean prehistory and to concentrate our efforts on explicating the processes by which, in the New Palace period, the Cycladic islands, the Dodecanese, and southwestern Turkey became parts of the same highly integrated social and economic system”. I may be old-fashioned, but I consider it impossible to investigate these processes without taking into account the political matters of the period. And I

would agree with Furumark:¹⁶⁵ “Still, the reconstruction of the earliest Greek history remains the most important task of modern historical science. In my opinion it is even the principal *raison d’être* of Aegean archaeology”.

¹⁶⁴ Davis 2008, 205.

¹⁶⁵ Furumark 1950, 183.

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“Beware Cretans bearing gifts”

Tracing the origins of Minoan influence at Akrotiri, Thera*

Irene Nikolakopoulou

Introduction

The final stages of the Middle Bronze Age and the beginning of the Late Bronze Age are periods of crucial transformation for southern Aegean polities. This is the flourishing time of the Neopalatial period in Crete, a period marked by significant changes in political systems within the island and also by the intensification of off-island influence. While research on the phenomenon of “Minoanisation” in Late Minoan I has played a central role in Aegean studies, its initial stages have been poorly explored until recently. A fresh look at Bronze Age cultural dynamics would be particularly welcome in order to promote our understanding of the context in which such interaction took place.

This paper first reviews the significance and the implications of the term “Minoanisation”. It then presents new evidence for interaction between Akrotiri and Crete, discussing the interplay over time between Minoan attributes and the local material culture and practices at Akrotiri. Finally it contextualises such interaction within social and cultural landscapes of the Bronze Age southern Aegean.

“Minoanisation”, a term brought into common use by Arthur Evans, has become a blanket term which is conveniently used to describe both the process and the effects of adopting practices from the cultural sphere of Bronze Age Crete by off-island communities.¹ While few would disagree on a general level with the brief definition of the term as outlined here, it has become evident in the course of recent research that a refinement of the term and its applications is needed. Indeed, the issue of whether the term “Minoan” should be used in the first place has been strongly questioned in current

debate, but this is not the place to dwell on these arguments. For the purposes of this paper, a distinction is made between the “Minoanising” process, to refer to the mechanisms through which the influence expanded and “Minoanising” effect, to refer to the nature and degree of influence in material elements and practices. In temporal and spatial terms, the “Minoanising” effect is thought to have become established during the period which coincides with the Neopalatial period in Crete, mainly in communities on the islands and coastal areas of the central-south Aegean.

The need to reconsider our concepts on the “Minoanising” process and effect derives from advances mainly in three fields of study:

- (1) The formation and operation of Cretan state polities in the Old and New Palace periods.
- (2) The establishment of local sequences and understanding of cultural practices in individual Aegean communities.
- (3) The exploration of the nature and the extent of networks operating in the Bronze Age Aegean.

The first field of research lies at the heart of the issue. It is related to the extent that our perception of the “Minoans” as a homogeneous group in cultural, political and even genetic or ethnic terms determines the explanatory approach of the “Mi-

* This paper presents some thoughts on material currently studied by the author in collaboration with C.J. Knappett, P.M. Day and D.E. Wilson, to all of whom I am very grateful for fruitful discussions and valuable comments on earlier drafts.

¹ For a recent and stimulating discussion see Broodbank 2004. See also Momigliano this volume.

noanising” process. While the genetic and ethnic approaches require a different line of argument well beyond the scope of this paper, it has become evident that the cultural attributes and the political organisation of the Bronze Age Cretans are variables in direct association with regional and temporal contexts, *e.g.* the differences between contemporary assemblages in various parts of the island or the contrasts between the organisation of Protopalatial and Neopalatial polities. It is a question of how uniform the “way of doing things” was for the Cretans themselves in the first place; when, if ever, this notion developed in the past; and, how it was perceived by or forced upon off-island communities which exhibit traits attributed to the generic “Minoanising” effect.

How and when attributes of Cretan provenance and/or Minoan concept reached Aegean communities is a different issue than the phenomenon of a society adopting and adapting “Minoanising” practices in material and non-material culture. In the case of the former, we refer to contact (*e.g.* the presence of imported material) or superficial influence (*e.g.* the imitation of a decorative motif). In case of the latter, we refer to impact on local production and practices, a more long-lasting and crucial effect which caused radical changes on a practical and conceptual level of “doing things”.

This is a point that relates to the origins of the “Minoanising” effect and can be traced through the reconstruction of local sequences and cultural horizons in individual settlements. This line of argument is useful in order to assess the nature of relations of an Aegean settlement with one or more Cretan polities at a given time and the degree of reception and emulation of Minoan elements. Pottery is one of the most revealing indicators for contact and change, as the latter can be followed through stylistic, technological and functional traits. A quantitative and qualitative study of Cretan imports and their impact on local production and practices appears to serve our purposes. In this context, the third field of research listed above sets the theoretical framework within which the movements of goods, people and ideas are monitored in the Bronze Age Aegean. A complex

system of trade, exchange and affiliation networks, direct and indirect contact, core and periphery interdependence, all define the modes of interaction at work, with any one component being the main driving force at different periods and different scales.

This introduction only touches upon the general issue of Minoan influence on communities in the Aegean and beyond. The main purpose of these remarks is to provide questions to bear in mind during the presentation of new ceramic material from Akrotiri, Thera. There, the most important asset is the unique state of preservation of the LC I settlement, which has enabled scholars to discuss in great detail aspects of the Minoan impact. Naturally, a contextual and diachronic approach to the issue requires a combined examination of all kinds of material correlates, but this is a task to be undertaken on a synthetic level in the future. However, even at this preliminary stage we can afford a glimpse at the other activities during the formative period of the Minoan impact at the settlement.

New ceramic evidence from Akrotiri, Thera

Excavations conducted at Akrotiri, Thera, during the period 1999–2001, have provided us with a wealth of new evidence for the history of the site and the activities of the community from the Neolithic period until the volcanic eruption in Late Cycladic (LC) I. Over 120 trenches were excavated for the foundations for the pillars of the new roof over the site. For this reason, the excavation reached the bedrock, which was encountered at a great depth, especially at the eastern part of the site. It is mainly from this area that the evidence for the different phases of the settlement is better preserved due to the thickness of the deposits. The first stage of sorting the ceramic material from the trenches, which includes more than 1700 large crates of pottery and more than 3000 catalogued complete and partially preserved vases, was completed at the end of autumn 2004.

Substantial deposits of EBA material were re-

trieved during the excavation of rock-cut chambers. Some of the chambers comprised closed, single phase deposits, which show a clear local development, as well as strong contacts with surrounding islands in the Cyclades and Crete.² The EM imports at Akrotiri are the first certain Prepalatial Cretan ceramic exports to be found in the Cyclades and offer the possibility of tracing the early history of contact with Crete. The EM sherds identified thus far mainly date to the EM IIA and EM IIB periods.

The EM IIA material recovered so far occurs primarily in deposits of the early part of the EC II period (Keros-Syros assemblages) and seems, therefore, to be contemporary with the earliest EM IIA in north-central Crete, as suggested also by evidence from Knossos and Poros.³ Cretan imports dating to EM IIB are more numerous and varied. These occur in deposits of the later EC II, which contain rich Kastri Group assemblages.

The EM imports at Akrotiri identified so far constitute only a very small percentage (much less than 1%) of the assemblages which contain much larger quantities of local and pottery imported from other Cycladic islands. The rarity of the Cretan imports does not allow much room for interpretation, but the quantity and quality of material imported from other islands demonstrate that in this early stage the community at Akrotiri is actively involved in exchange networks operating within the southern Aegean, but local preferences favour imports from other Cycladic islands rather than Cretan sites.

The classification of the deposits following the Kastri Group horizon until the end of the MC period into four phases facilitates the examination of the evidence.⁴ A preliminary quantitative assessment for the Minoan imports during phases A–D has been presented elsewhere.⁵ The next pottery phase at Akrotiri after the late EC II Kastri Group horizon appears to be largely contemporary with Phylakopi I–iii, dating to the beginning of MH and MM based on stylistic synchronisms with the Greek mainland deposits and imports from Crete.⁶ In Phase A, Dark-on-Light matt-painted ware in the geometric style continues from an earlier tradition, while White-on-Dark decoration is now brought

in. Carinated shapes are introduced in this phase, as also is the “Cycladic cup” type, ovoid pithoi with ribs and “barrel jars”. The deposits contain Cretan imports which seem no earlier than Middle Minoan IA in date⁷ and again make up only a small proportion of the assemblages. These imports consist of drinking and pouring vessels with a few small storage jars.

The Protopalatial and the beginning of the Neopalatial periods in Crete correspond roughly with phases B–D at Akrotiri.⁸ Our knowledge of Phase B is limited, both in terms of identified assemblages and the imports they contain. The local material consists of vessels in a variety of shapes, mainly in Dark-on-Light, Slipped and Burnished and Plain wares. There seems to be a range of imported Minoan vessels for drinking, pouring and storage similar to the previous phase. Wares include monochrome, white-on-dark and some polychrome examples. A generic date would plausibly fall into the MMIB–MM II period, but the diagnostic sherds are extremely rare.

The most representative of Phase C deposits come from selected trenches on the eastern part of the site, which have provided the most substantial evidence for the MBA period. The main local wares in this phase are Dark-on-Light and Bichrome. Dark-on-Light ware is popular in drinking and pouring vessels. In Bichrome ware, the decoration comprises a large variety of motifs, mainly naturalistic/pictorial, of which the most impressive

² The identification of Cretan imports in these assemblages was made during fieldwork at the site by P.M. Day and D.E. Wilson in collaboration with the author and S. Kariotis, who is studying the EC material for his doctoral thesis. Preliminary results were presented in Day *et al.* 2005; Kariotis *et al.* in press. Publication of stylistic and analytical studies of this material is in preparation.

³ Wilson *et al.* 2008; Wilson *et al.* 2004.

⁴ Nikolakopoulou *et al.* 2008.

⁵ Knappett & Nikolakopoulou 2005.

⁶ *Supra* n. 2 and 4. Nikolakopoulou 2007.

⁷ The material is under study in collaboration with P.M. Day and D.E. Wilson.

⁸ The Cretan imports from these phases are under study, including petrographic analyses by C.J. Knappett and the author.

include birds, animals, griffins and human figures.⁹ In Plain ware, the most characteristic vase types in fineware are the “Cycladic cups” and bowls. A variety of vase types appears in Red or Black Slipped and Burnished ware.

In contrast to the previous phases, substantial quantities of Cretan imports are found in Phase C deposits.¹⁰ They consist of drinking, pouring and storage vessels. In both shape and decoration, cup types have good parallels in examples from Crete – and especially Knossos – from MM IIIA contexts. Imports also include an occasional conical cup and ledge-rim bowl, which appear for the first time at Akrotiri, undecorated and rather crudely made. The pouring vessels include some large bridge-spouted jars with black slip, precision grooving, white dots and single red band and a few smaller bridge-spouted jars and ewers decorated with ripple, a very common feature in MM III assemblages on Crete. It is clear that some of the pouring vessels are designed to accompany some of the drinking cups mentioned above and may have been imported as drinking sets.

Amongst the storage vessels imported to the site from Crete, there are oval-mouthed amphorae – usually with a dark slip and often with some simple white-on-dark decoration – pithoid jars and pithoi. The same polychrome decorative scheme which occurs across a range of types may suggest an emphasis on importing value-added products. However, imported plain ware, such as coarse large vases, conical cups and also the appearance of tripod cooking pots are elements that show that the imports cover a varied range of requirements.

Macroscopic assessments indicate fabrics consistent with north-central Cretan fabrics, while there also seem to be some Mesara fabrics represented, as also a fabric distinctive of the Malia region and another from the area of Mirabello. It is evident that Cretan imports are reaching Akrotiri from a number of locations, a pattern that continues in the LM IA/LC I levels at the site.

The question of what happens between phase C / MM IIIA and the well-known situation of LC I / LM IA is still difficult to answer. The phase D deposits are quite different to those of phase C in that they are almost always just scrappy fills,

so comparisons are tricky; nonetheless there is enough datable material to suggest that they are in fact quite close in date to phase C, perhaps still MM IIIA in Cretan terms. These phase D deposits are connected with rebuilding activities and a reorganization of the settlement following the phase C destruction. The LC I city suffers a minor destruction early in LC I (“Seismic Destruction level”¹¹) and lives through to the volcanic eruption rich in Minoan attributes. Of particular interest are Cretan vases, apparently of earlier MM IIIA and IIIB traditions, which are possible heirlooms found in secure LC I contexts.

With regard to LC I, new ceramic material from the recent excavation of rooms and open areas of the settlement broadly confirms conclusions reached by earlier studies. The predominant local ware is Dark-on-Light, often with details in white, followed by Slipped and Light-on-Dark wares.¹² While distinctive motifs in Minoan pottery, such as the ripple and the running spiral, are widely adopted in the decorative schemes of Thera vases, a predilection towards specific naturalistic motifs is evident on a large proportion of the local products. Accordingly, a similar situation is attested in the wide variety of vase types produced, where diversification within the same functional category came as a result of complementing, rather than replacing, traditional vase types with those of Minoan concept. The wide adoption of the wheel fashioning technique is another distinctive feature of local pottery manufacture in LC I. This tendency of merging and adapting Minoan attributes into a long established tradition was already at work during the last stages of the MC period, but it appears to have been consolidated during LC I, for reasons apparently more compelling than those existing in the previous stage. The standardisation of vase shapes and sizes,¹³ as also

⁹ Nikolakopoulou *et al.* 2008. Papagiannopoulou 2008.

¹⁰ The most representative of the Cretan imports are presented in Knappett & Nikolakopoulou 2005; Knappett & Nikolakopoulou 2008.

¹¹ As defined in Marthari 1984.

¹² Marthari 1987; 1990a.

¹³ Katsa-Tomara 1990.

the recurrent combination of specific types with particular decorative schemes, are attributes of the LC I ceramic output.

With reference to the Cretan imports, it is estimated that they constitute no more than 10% of the total assemblage uncovered thus far.¹⁴ They consist of vessels of a wide range of types from all functional categories. Macroscopic observations suggest that the provenance of the vases is equally varied. However, it is not yet possible to ascertain whether a specific area was favoured over the others in terms of quantities or specific types of imports.

Ceramic change at Akrotiri in context

In summarising the evidence for Cretan ceramic imports at Akrotiri, emphasis should be placed on three points: the quantities, the nature of the imports and their provenance. The evidence suggests that this is not a simple case of a gradual and steady progression from EM period through to LM I. The Cretan imports during the time of the Prepalatial period in Crete are much less than 1%, while they occur in limited quantities until the MM IIB-MM IIIA period. It is during Phase C at Akrotiri that we witness a significant increase in the numbers of the Cretan imports, making up about 11% of the vessel totals, broadly comparable to the quantities estimated for LC I period assemblages. This quantitative increase, in combination with an increase in the variety of range of imported vessel types, marks a watershed in the relations between Akrotiri and Cretan sites. From a Cretan perspective, this is the period of time which marks the transition between the First and Second Palace Periods. Forthcoming results of petrographic analysis will allow us to specify the links between Akrotiri and Cretan polities in different periods of time and examine how the political situation in Crete may have affected localised ties, such as those which probably existed between the two areas during the Prepalatial and Protopalatial period.

Having presented a diachronic account of the Cretan imports at Akrotiri we have hardly touched

upon the issue of the beginning of the “Minoanising” effect, so evident in many aspects in the LC I period. The indications of this process are not directly related to the number of imports at each phase, but rather to the impact they had on local production and practices.

In the local pottery production of Akrotiri, we can identify almost no evidence for Minoan influence in the phases corresponding to the Prepalatial period and limited evidence for influence in those corresponding to the early Protopalatial period. A characteristic example is the rare production of imitations of Light-on-Dark and Kamares wares during the earlier stages of the MC period.¹⁵ The situation changes radically in Phase C, roughly corresponding to the MM IIIA period. What is of considerable interest is the impact on technological practice.¹⁶ In this phase, ledge-rim bowls begin to be imported from Crete and are imitated in local buff fabrics, manufactured using the same wheel-fashioning technology. While the wheel technique had already been in use on Crete for some considerable time, at Akrotiri it is used in local production only at a late stage of the MBA, for very few shapes (the ledge-rim bowl, a few plain straight-sided cups and some plain handleless piriform cups). Otherwise the technique has hardly any impact on local production. In other cases, Minoan shapes and styles are imitated but without great precision. This is the case for bridge-spouted jars and ewers with local versions of ripple, some more faithful to Minoan prototypes, others with a combination of local bichrome ware and Minoan ripple. Some local cups have added white dots, applied in a style distinct from the Minoan norm. These remarks point to the beginning of the “Minoanising” effect that is fully established only in the LC I period. So, what does the evidence from the formative period tell us about the ways we are to perceive the Minoan impact at Akrotiri?

A comparative approach to the ceramic evidence

¹⁴ Marthari 1980, 208; Marthari 1990b, 61.

¹⁵ Noted also in Papagiannopoulou 1991.

¹⁶ Knappett & Nikolakopoulou 2005; Knappett & Nikolakopoulou 2008.

from the formative period before the end of MC and from the fully Minoanised period of LC I is helpful for our purposes. It is worth emphasising that the quantities of Cretan imports in the two phases do not differ significantly, a remark that should warn us against reaching conclusions at any site without considering the local production. The shift in the degree of the Minoan impact in the LC I period is evident in three major fields: the wide application of wheel-fashioning technique, the adoption of a larger variety of vase types and of decorative schemes of Minoan origin within the same functional categories, *e.g.* drinking and pouring vessels, and the standardisation of shape, size and decoration. Evidence for the initial stages of the first two practices is found in the formative period, while standardisation is a predominantly LC I feature. Until the end of the MC period the local tradition remains strong and prevalent, especially in the domain of pottery manufacture. The new drinking and pouring vessel types do not replace traditional types, not even in the LC I period. Local tripod cooking pots are made in Phase C after Minoan prototypes, but cooking vessels such as the one-handle jar persist and continue in LC I, occasionally in a hybrid form. The most impressive example is the range of storage vessels that retain a strong local character, in many ways unique to the island, incorporating Minoan forms selectively in LC I.¹⁷

Non-ceramic evidence at Akrotiri

Further examples to illustrate the nature of these marked changes can be found in other fields. The architecture of the LC I settlement and its Minoan attributes have been extensively studied.¹⁸ The nature of the recent excavations, conducted in trenches of limited size, allows only for a glimpse into the situation during the formative period of the later stages of the MC. The evidence retrieved certainly calls for more thorough study. Two preliminary remarks are of relevance for our purposes, stated with due caution: firstly, in terms of technologies of building construction, no ashlar masonry has been found in

the MC levels; secondly, large public spaces seem to have been formed only after the destruction of the MC city through levelling activities over pre-existing domestic areas. The innovations in technology and the new concept of the organisation of space, which may comprise a response to specific needs related to ritual activities, may be related to the Minoan impact.

Turning to wall paintings, only a few aniconic fragments of lime plaster have been retrieved from MC levels. No wall paintings were found on the preserved walls of MC buildings and the stuccos which were covering the walls appear quite different in consistency to the lime plaster used in LC I buildings. As attested by pottery, the inhabitants of MC Akrotiri were familiar with the representations of human, animal and mythical figures, even on a large scale with an impressive range of details,¹⁹ a tradition conspicuously missing in EBA and MBA Crete. It was the learning of the technology of making lime plaster and obviously the acquired need for large scale paintings in houses that led to the creation of figurative wall paintings in LC I.

No Linear A or Cretan Hieroglyphic script in any medium has been retrieved from MC levels. Seals are also extremely rare; one remarkable piece, a 'talismanic' seal of MM III date was found discarded in the construction layers of the floor of the MC building in Pillar Pit 67.²⁰ Certainly it provides insufficient evidence for the origins of the administration system at work in LC I Akrotiri, as evidenced by a considerable number of finds, which include locally produced Linear A tablets and vase inscriptions, as well as seals and sealings of Cretan manufacture.²¹ Another component related to bureaucratic and trade activities lies in the adoption of weight and capacity systems,²² of which there is no convincing evidence for the MC period. Loom

¹⁷ Cf. Nikolakopoulou 2002; Nikolakopoulou 2006.

¹⁸ Palyvou 1999.

¹⁹ *Supra* n. 9.

²⁰ CMS VS.3, 390.

²¹ Boulotis 1998. Karnava & Nikolakopoulou 2005; Doumas 2000; CMS VS.3, 391–405; GORILA, THE 1–4.

²² On LC I evidence see Michailidou 1990; Katsa-Tomara 1990.

weights of the discoid type only make a concerted appearance in LC I buildings.²³ Further evidence is expected as the study by experts advances in each field.

Discussion

To summarise the argument: contact between Akrotiri and Cretan sites starts early in the EB period and continues without major interruptions or changes until roughly the phase equivalent to MM IIIA in Crete, when a shift takes place in the scale and the nature of contacts between Cretan sites and Akrotiri. It is suggested that this is the formative time for the Minoan impact on Akrotiri, when emulation is attested on a higher level than that of mere influence and reproduction, involving aspects of technology transfer and acquaintance with cultural practices which were to be fully adopted and adapted during LC I. Therefore, the Minoan impact goes much further than the mere reproduction of prototypes for aesthetic reasons and involves more complex processes than the simple adaptation of fashionable innovations.

The main point is that the “Minoanising” effect is more evident in fields related to practices, such as the learning and application of a new technology (*e.g.* wheel-fashioning) and the response to increased consumers’ requirements linked to new and diversified needs in the economic and cultural domains (*e.g.* standardisation and the adoption of types such as the conical cup and the rhyton). The process starts during the time of transition between the First and Second Palace Periods, when Akrotiri appears to have diversified its contacts with Cretan polities, either directly or via Knossos. In a broader context, a transformation is attested in the nature of interaction networks operating in the southern Aegean. The emphasis shifts from exchange through contact to affiliation by selective emulation; this could be the contextual framework for the “Minoanising” process,²⁴ which only really de-

velops from MM IIIA onwards. At the same time Cycladic imports are attested on Crete, but in limited quantities.²⁵ This material testifies to a very different context of consumption from the Minoan material in Akrotiri.

In this context we may consider the impact on local communities beyond Crete through the degree of integration in affiliation networks, which involves the aspects we discussed for Akrotiri above. Local communities may well have had the scope to choose exactly how they would participate, therefore allowing much space for local patterns and community choice evident in comparative studies of the “Minoanising” effect in different sites. The community at Akrotiri participated in the new scheme by adopting and adapting consumption patterns and practices. Local choice, for example, is evident in the performance of ritual activities, where it seems that the key issue is the negotiation of identity. From a similar perspective, Akrotiri also participated in regional exchange networks operating in the Cyclades and the southeast Aegean at the same time and probably without direct Cretan supervision. A remarkable example from Akrotiri of a “Minoanising” jar of Dodecanesian(?) provenance emphasises the point that the interaction process in the southern Aegean is more complicated than we think.²⁶

From the new evidence presented from Akrotiri, as also from other Aegean sites, it is becoming increasingly evident that the study of local sequences and pottery deposits of sites in the southern and eastern Aegean is an essential component of research seeking to clarify the origins and the nature of the phenomenon described as “Minoanisation”, especially in its less well known initial stages.

²³ Cf. Tzachili 1990.

²⁴ A point raised in Knappett & Nikolakopoulou 2005; Knappett & Nikolakopoulou 2008.

²⁵ Cf. MacGillivray 1984; Knappett 2006.

²⁶ Cf. Knappett & Nikolakopoulou 2005.

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Middle Cycladic and early Late Cycladic cemeteries and their Minoan elements: the case of the cemetery at Skarkos on Ios*

Marisa Marthari

Cycladic cemeteries in the MB and Early LB: a synopsis

Our knowledge of the Early Bronze Age in the Cyclades, and of the EC (Early Cycladic) I and II periods (Grotta-Pelos and Keros-Syros cultures), in particular, is rooted to a large degree in cemeteries, even though many of these have been found looted. This is due to the identification and excavation of a considerable number of cemeteries, both large and small, scattered throughout the Cycladic islands; to the publication of a number of these sites; and to the combined study of both the cemeteries and burial customs by Doumas.¹ During these periods, cemeteries were situated outside, but close to, settlements. Two main types of graves were used: the cist and the corbelled grave. Some examples of platforms, where funerary rites were conducted, have been found in the cemeteries.²

In EC III (Phylakopi I culture), the evidence for burials starts to become poor. The cist and corbelled types of graves continue to appear, as is shown by occasional examples from sites on Amorgos³ and Syros.⁴ At the same time, two new burial types appear in the Cyclades. On the one hand, infant pithos burials were dug under the floors of houses in the towns at Phylakopi and Paroikia.⁵ On the other, chamber tombs have been recovered on Melos at Aspro Chorio, Spathi and possibly Phylakopi,⁶ and on Thera at Ayios Ioannis Eleemon;⁷ these are rock-cut on the former, and under-dug into the loose volcanic soil on the latter.

The available evidence concerning Cycladic cemeteries in the Middle and early Late Bronze

Age is even poorer. First, they have only been excavated on three islands, at three sites: Ayios Ioannis Eleemon on Thera, Ayia Irini on Keos, and Ailas on Naxos. Second, only the cemeteries at Ayia Irini, have been excavated extensively. At Ayios Ioannis Eleemon, only one tomb has been recovered by excavation, whereas the material from some others has been handed in to the Archaeological Service following destruction caused at the site by the Karageorghis quarry, which was operating in the area. Likewise at Ailas, only two graves have been brought to light by excavation. Third, only the cemeteries at Ayia Irini chronologically cover the whole period under discussion, *i.e.* the Cycladic

* The illustrations were drawn by the painter K. Mavragani (Figs. 7, 9, 12-17, 19, 21, 22-23, 25-27) and the surveyor-engineer Th. Chatzitheodorou (Fig. 4). Most of the photographs of the movable finds were taken by the photographer G. Patrikianos. I thank them all. The illustrations of Figs. 32-33 were drawn by the writer. I would also like to thank the archaeologist K. Karseras for amending the English of my paper and the designer E. Papadea for her help in the presentation of the paper.

¹ Doumas 1977.

² Doumas 1977, 35-52.

³ Barber 1987, 152.

⁴ Barber 1981.

⁵ For the pithos burials at Phylakopi, see Atkinson *et al.* 1904, 15; Dawkins & Droop 1910-11, 6-9; Renfrew with Scarre, Whitelaw & N. Brodie 2007, 49-50, pls. 5a, 7a-b. For the pithos burials at Paroikia, see Rubensohn 1917, 12. On this subject, see also Barber 1987, 83-5, 140.

⁶ Atkinson *et al.* 1904, 23, 234-7; Papadopoulou 1965, 513; Renfrew 1972, 189; Doumas 1977, 49, 53; Barber 1987, 83-5, 140.

⁷ Marthari 2001c, 109-11, 116.



Fig. 1. Map of the Cyclades showing the locations of MC and early LC cemeteries.

dic MB and early LB. The Ayios Ioannis Eleemon cemetery is restricted chronologically to EC III and the early MC, while the Ailas graves date from the end of the MC or the very beginning of LC I. However, the available excavation data demonstrate that the chief EC features of cemeteries and graves survive into the MC and the early LC, although usually altered to a degree, or combined in new ways.

At Ayios Ioannis Eleemon on Thera (Fig. 1),⁸ the aforementioned EC III cemetery of chamber tombs dug into the soft volcanic soil continues to be used in the early MC period, as shown by the pottery recovered from it. This pottery includes characteristic EC III types and wares, such as Dark

Burnished Incised and Geometric pottery, as well as MC types and wares, such as Cycladic White which, however, is in the early phases of its development. As regards the Cycladic White vases from the cemetery, both the continuation of the Cycladic tradition in the beaked jugs and the feeding bottles, and the influence of Minoan types (adapted however to the local style) in the bridge-spouted jar, are apparent.⁹

It seems that some of the chamber tombs at Ayi-

⁸ For the cemetery at Ayios Ioannis Eleemon on Thera, see Marthari 2001c, 109-11, 116.

⁹ Papagiannopoulou 1991, 321-3; Marthari 2001c, 110-1.

os Ioannis Eleemon were used for multiple burials, since three skulls were found in the excavated tomb.¹⁰ This brings to mind the concept of the permanent use of the same tomb for members of a family, which also occurs in the EC cemeteries with cist graves.¹¹ The Ayios Ioannis Eleemon cemetery in the middle of the Caldera probably succeeded the EC cemetery of cist graves, which lay a short distance to the north.¹² It seems likely that the chamber tomb type was only prevalent on the volcanic islands of Thera and Melos, where the ground was favourable to their construction.¹³ This, at least, is the picture that emerges through comparison with the cemeteries at Ayia Irini on Keos (see below), which were largely contemporary with the one at Ayios Ioannis Eleemon on Thera, but which do not contain chamber tombs.

The early MC town at Ayia Irini on Keos (period IV) (Fig. 1) has yielded three extramural cemeteries and one intramural tomb. A variety of grave types were in use there, "largely determined by the physical environment, which is rocky with thin soil cover but with ready access to an abundant supply of stone," according to Overbeck.¹⁴ They are pit, regular cist, built-cist and pithos graves, most of which have their distant precursors at the Neolithic Kephala cemetery. Towards the end of period IV, larger, more elaborate built tombs make their appearance, resembling some of the small shaft graves at Mycenae. Platforms containing graves also appear at Ayia Irini. It has been suggested that they were also used to make grave offerings or conduct funerary rites. The pottery from the Ayia Irini period IV cemeteries is local, similar in style to that found at the Ayios Ioannis Eleemon cemetery, but also includes some few Minoan and other imports.¹⁵ Only two cist graves, one extramural, the other within the Great Fortification Wall, date from late MC, *i.e.* Ayia Irini period V; this shows the continuation of the cist grave type into this period.¹⁶

In LC I / LM Ia, Ayia Irini period VI, there is continuity but also change in terms of grave types and burial customs. Jar burials continue with three examples, but they are now intramural and in plain coarse jars. A four-slab cist grave was found in the area of the old West Cemetery North. No plat-

forms of this period have been brought to light. Three large stone-built tombs, nos. 28, 29 and 30, have been excavated in the East Cemetery, showing that the construction of monumental tombs, which began as early as late Ayia Irini period IV, continues into period VI.¹⁷

Grave 28 is a vertical shaft covered with three slabs set into a tumulus bordered by upright slabs. Tomb 29 is a rectangular tomb consisting of two compartments, a vertical shaft and an inner chamber. Tomb 30 was similar in construction to 29.¹⁸ All three tombs had been looted but, fortunately, the robbers left 10 clay vases in tomb 29; photographs of this pottery have not been published. According to Overbeck, the vases include conical cups dating to no later than the LC I / LM Ia period, and two vases imitating Minoan stone vases of earlier date, which look to have been heirlooms from earlier periods.¹⁹

Finally, Klon Stephanos excavated two cist-graves, considered to be of MC date, at Ailas on Naxos (Fig. 1).²⁰ The first²¹ of these graves contained bronze metal tools, the second,²² pottery. It is the pottery which dates this latter grave to the end of the late MC, or to the very beginning of the LC I period²³ at the latest, but in any case to before

¹⁰ Marthari 2001c, 110.

¹¹ Doumas 1977, 55-58; Marthari 2001c, 116.

¹² For this EC cemetery, see Karo 1930, 135.

¹³ Marthari 2001c, 109-10, 116; Barber 1987, 140.

¹⁴ Overbeck 1989, 204.

¹⁵ For the Ayia Irini on Keos period IV cemeteries see, Overbeck 1989, 184-205.

¹⁶ For the Ayia Irini on Keos period V graves see, Overbeck 1986, 79-80.

¹⁷ For the Ayia Irini on Keos period V tombs see, Overbeck 1984, 116-7.

¹⁸ Overbeck 1984, 116-117; Schallin 1993, 94-7.

¹⁹ Overbeck 1984, 117.

²⁰ For the chronology of the graves in MC, see Stephanos 1903, 57; Renfrew 1972, 519, no.25; Fotou 1983, 47-8.

²¹ Stephanos 1903, 57; 1905, 224; Papathanasopoulos 1963, 129-30, pl. 62, grave no. 23.

²² Stephanos 1903, 57; 1905, 221, 225; Papathanasopoulos 1963, 130-131, pl. 63-4, grave no. 24; Maragou (ed.) 1990, 179, no. 191.

²³ Barber dates the Ailas graves to the late MC or early LC, Barber 1987, 152-3.



Fig. 2. Map of Ios showing the site of Skarkos.

the Seismic Destruction at Akrotiri, Thera. According to the excavator, eleven clay vases were unearthed, eight of which have been identified in the National Archaeological Museum and published by Papathanassopoulos.²⁴ They are as follows: six, one-handled conical cups (five dark-coated and one with tortoise-shell ripple pattern decoration), a one-handled, semi-globular cup (also with tortoise-shell ripple pattern), and a plain, handleless conical cup. These vases are imports from Minoan Crete and/or local imitations of Minoan prototypes and, consequently, are indicative of the Minoan influence on Naxos, the island of Ariadne, in the late MC and early LC period. This idea of a close relationship between Naxos and Crete is further bolstered by the relatively recent investigations at settlement sites on this island and the adjacent Kato Kouphonisi.²⁵

Furthermore, it is interesting that the graves under discussion were found together with at least another cist grave, although this dates to EC I.²⁶ Thus, the Ailas cemetery is the second cemetery, after Ayia Irini, to display the use of the same site for the burial of the dead over a long period of time

in the prehistoric Cyclades, as well as the survival of the traditional Cycladic grave type, the cist, into late MC, or even to the very beginning of LC I.

Skarkos on Ios (Fig. 1), which has been uncovered in a series of excavations since 1986, is the fourth site that enriches our knowledge of the cemeteries and burial habits in the Cycladic MB and early LB periods. It offers a considerable corpus of new evidence for late MC and early LC cemeteries, particularly of the south western Cyclades, taking into account that cemeteries of these periods of the important towns at Akrotiri on Thera and Phylakopi on Melos have yet to be investigated.

The Skarkos cemetery on Ios: preliminary presentation

Introduction

The site of Skarkos is on a low hill surrounded by a fertile plain near the cove of the large natural harbour of Ios (Figs. 2-3), an island situated at a key point on the network of sea communication routes linking the northern Aegean and mainland Greece with Crete. The excavation has so far uncovered an EC (early EB II, Syros group of the Keros-Syros culture) settlement and the later cemetery under discussion.²⁷ The important EC settlement is bet-

²⁴ See above, note 22.

²⁵ Barber & Hadjianastasiou 1989; Hadjianastasiou 1989; 1993.

²⁶ For the EC grave, see Stephanos 1903, 57; 1905, 221; Papathanasopoulos 1963, 131-132, pl. 65, no. 25; For the chronology of the grave in EC I (Grotta-Pelos culture), based on a cylindrical pyxis found in it, see Renfrew 1972, 519, no.25; Fotou 1983, 36-37; For the possible occurrence of more EC graves, see Fotou 1983, 37 with note 114.

²⁷ For the excavations at Skarkos, see Marthari 1990; 1999; 2001b. For the sealed oblong terracotta objects. from EBA Skarkos, see Marthari 2004. For a study comparing Skarkos to the EBA settlements on the northeast Aegean islands, see Marthari 1997. For the pottery imported to the EBA settlement, see Marthari 2008. For the exhibition of movable finds from Skarkos at the Ios Archaeological Museum, see Marthari 1999, Marthari 2001a; Marthari 2002.



Fig. 3. The hill of Skarkos and the surrounding area.

ter known, given its excellent state of preservation: two-storey buildings have been brought to light, a feature without precedent among Cycladic settlements of the EB. However, the later cemetery is also of great interest for research into the MB and LB Cyclades.

The occupation record of the site is gradually being understood by means of a complex and difficult research project, as it is usually necessary to excavate the earlier settlement and the later cemetery simultaneously. The tombs are usually uncovered high up, at plough level down to a depth of 35 cm, although certain tombs are revealed lower down in the destruction level of the EC site, which they disturb to a depth of 90 cm. The graves have been noted in areas corresponding to open spaces in the EC settlement (Squares 1, 2 and 4), the rooms of EC buildings (Buildings B

and M) and the surviving tops of the walls of these buildings (east wall of Building M) (Fig. 4). Thus it seems very likely that when the area began to be used as a cemetery the EC settlement had been buried to any great extent.

The systematic excavation at Skarkos has, to date, focused on the eastern and northern slopes of the hill, although test trenches have also been opened up on the western slope. The EB settlement is spread across the whole excavated area, whereas the later cemetery lying above it is limited to the north part of the eastern slope of the hill (Fig. 4). The settlement to which the cemetery belongs has yet to be located.

Two groups of graves have been brought to light, group 1 in the north and group 2 in the east of area 26 of the excavation grid (Fig. 4). The graves are of two types: pit-graves and jar burials.

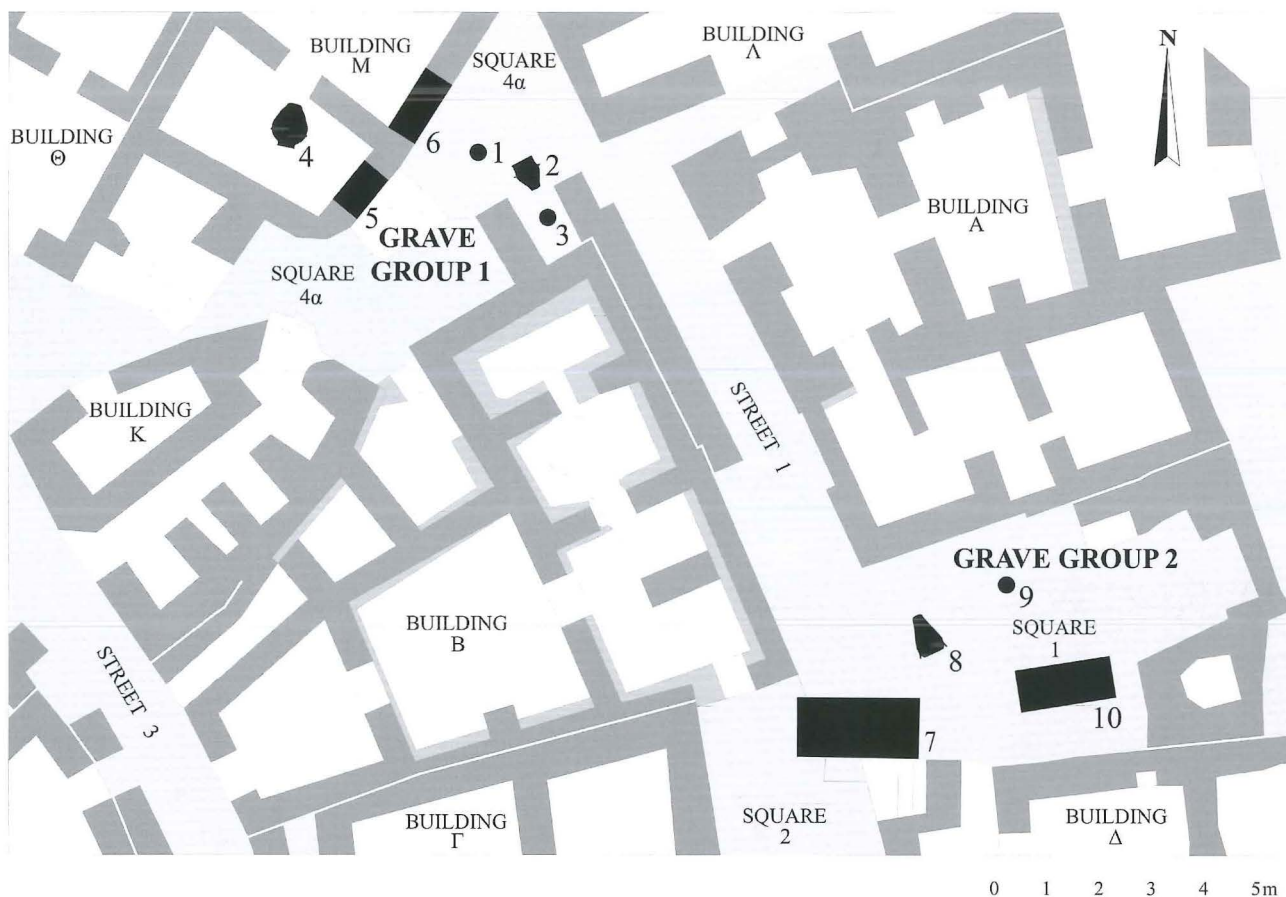


Fig. 4. Plan of the Skarkos site showing part of the EC II settlement (in grey) and the late MB and early LB grave groups (in black) above it.

The graves and their chronology

Grave group 1

Grave group 1 lies above Square 4 and Buildings M and B of the EC settlement. It includes six graves, four of which are jar burials (nos. 1-4), with the remaining two in pits (nos. 5-6).

Jar burial graves 1-3 were found in a row, at depths of between 30 cm and 70 cm, above the west part of Square 4 and the northern room of Building B of the EC settlement. The burial jar of grave 1 (Figs. 4 and 5) was set upright in a cavity dug in the destruction debris of the EC settlement. No human bones or grave goods were found inside it, indicating that this was probably an infant burial. The precise shape of the burial jar is uncertain since its upper part is missing. Therefore, any attempt to date this vessel seems dicey.

The burial jar of grave 2 (Figs. 4 and 6) was

found lying on its side. No human bones or grave goods were found inside this vessel either, meaning that it too probably held an infant burial. The bi-conical shape and crescent-shaped (Fig. 7), in combination with the imprint of a circular mat on



Fig. 5. Grave 1.



Fig. 6. Grave 2.

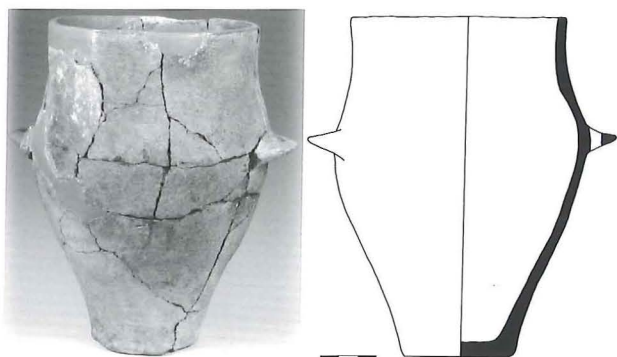


Fig. 7. Grave 2, burial jar (IM 814).

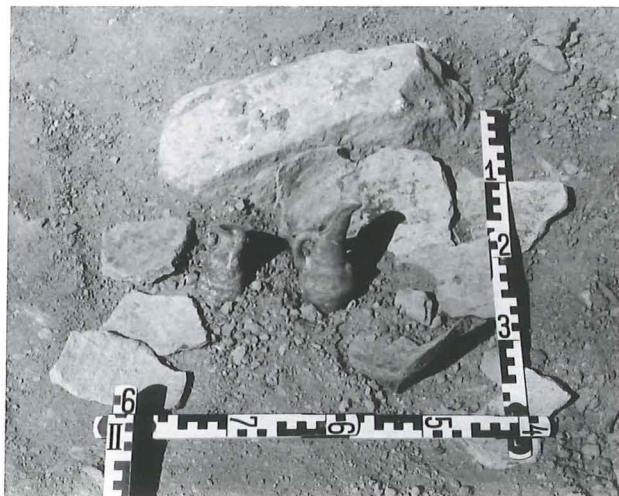


Fig. 8. Grave 3.

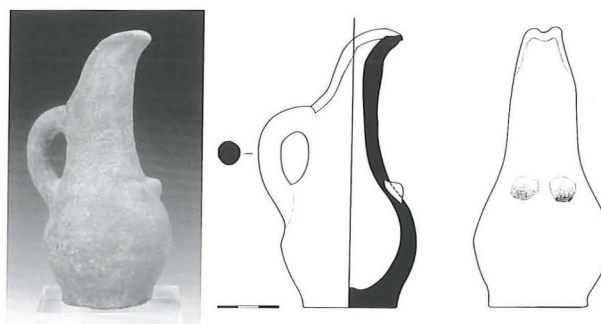


Fig. 9. Grave 3, nipples ewer (IM 606).

its base, suggests a MC date for this medium-sized burial jar. As for the date of the burial, it may be contemporary with or later than the jar.

The burial jar of grave 3 (Figs. 4 and 8) was found smashed by cultivation of the plot. However, large fragments of its lower part, parts of the skeleton, and the grave goods were preserved. A miniature nipples ewer (Fig. 9) and a hollow-mouthed miniature jug (Fig. 10), both local, were found intact among the fragments of the jar. The miniature nipples ewer, a characteristic Cycladic type, has counterparts in the LC I / LM Ia Akrotiri Volcanic Destruction Level,²⁸ even if the broad spout, the thick neck and the absence of painted decoration distinguish it from those examples (Figs. 32 right, 33 right). The hollow-mouthed miniature jug is a minoanising shape,²⁹ which has an abundance of parallels at Akrotiri, Phylakopi and Ayia Irini in early LBA levels.³⁰ Consequently, an early LBA

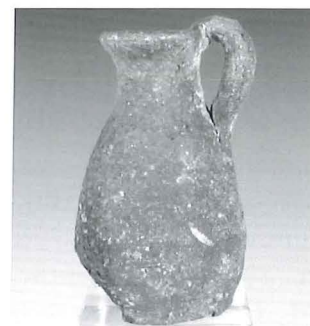


Fig. 10. Grave 3, hollow-mouthed miniature jug (IM 607).

²⁸ Marthari 1993, type 23:4.

²⁹ For Minoan examples from LM Ia levels, see for instance Catling, Catling & Smyth 1979, no. 237, fig. 35, pl.8i; Popham 1984, pl.131j.

³⁰ Akrotiri, Thera, LC I / LM Ia Volcanic Destruction Level, Marthari 1993, type 28, Phylakopi, Melos (Atkinson *et al.* 1904, 139, pl. XXXV, 6, 9) and Ayia Irini, Keos, LMI a/ LH I and LM Ib/ LH II levels (Cummer & Schofield 1984, no. 92, pl., 48, nos. 429-430, pl. 56, nos. 688-689, pl. 60, no. 851, pl. 65, no. 1442, pl. 81).



Fig. 11. Grave 4.

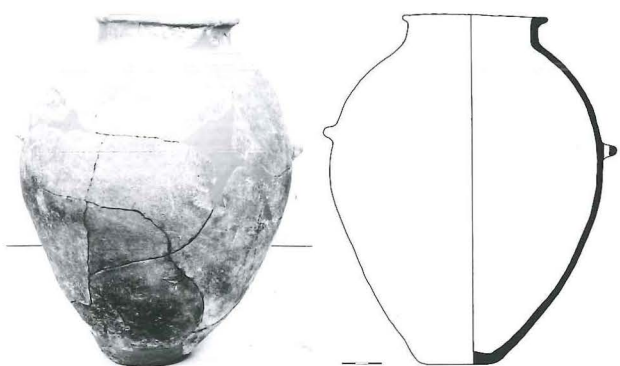


Fig. 13. Grave 4, small beak-spouted jug (IM 910).

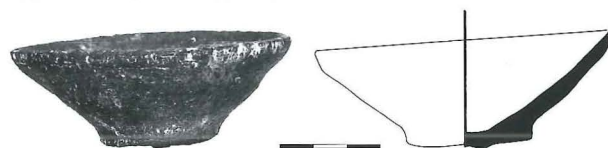
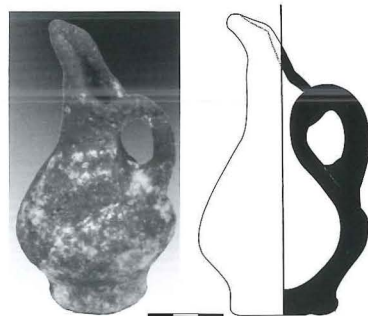


Fig. 14–15. Grave 4, conical cups of low type (IM 906) and of high type (IM 909).



Fig. 16. Grave 4, goblet (IM 666).

date may be suggested for this burial. The small size of the vases used as grave goods most probably indicates that this was a child grave.

Pit-graves 5 and 6 (Fig. 4) have been unearthed north of graves 1 to 3, in a second row and above the surviving top of the east wall of EC Building M. They contained skeletal remains, but no grave goods. As a result, no date can be suggested for these graves.

Grave 4 (Figs. 4 and 11) lay to the west of graves 5 and 6, above the southern room of building M of the EC settlement. This grave is, relatively speaking, quite rich. The burial pithos was found *in situ*, lying on its side and deviating only slightly from the north-south axis, with its mouth facing south and sealed with a roughly cut circular schist slab. It is an ovoid pithos with two crescent-shaped handles, a low cylindrical neck, and a flattened lip (Fig.

12). A rectangular slab of schist was placed under the mouth of the pithos. The upper side of the pithos was recovered directly beneath the cultivation layer at a depth of 34 cm, while the lower side was at a depth of 90 cm, that is to say within the destruction layer of the EC settlement. It is clear that a fairly large pit had been dug to bury this pithos, since it is a large vessel (80 cm high, with a diameter of 60 cm). The funerary pithos was found broken into a number of large pieces which, however, had not been moved out of position; the find had retained its form.

The removal of the slab sealing the mouth and

the upper pieces of the pithos allowed the investigation of the inside of the vessel, which revealed the following: although the bones were found to have been quite disturbed, their positions show that the dead person had been placed inside the pithos in a contracted position, with the head towards the bottom. It seems that during the burial it had been necessary to break the wide lip of the pithos, which had a diameter of 30 cm. (Fig. 12), at certain points in order to manoeuvre the dead person inside. This is indicated by the fragments of the lip found around and beneath the slab that sealed the pithos. The grave goods were all found between the centre and the mouth of the pithos, apparently because they were inserted after the dead person had been placed inside.

The grave goods included six clay vases: a small beak-spouted jug (Fig. 13) along with four conical cups (two of the low type, and two of the high) (Figs. 14–15) and a goblet (Fig. 16). The small beak-spouted jug and the conical cups (Figs. 13–15) are made of the same local red-brown fabric with marble and micaceous inclusions, and seem to have constituted a set. The goblet (Fig. 16) is made of light brown fabric with micaceous inclusions, most probably imported from another Cycladic island.

The hair of the dead person, possibly a girl, seems to have been adorned with a bronze hairpin (Fig. 17), which was uncovered in a slanting position beneath the skull. The hairpin is fairly elaborate in form due to its slender shaft and rolled up head. The external side of the roll is decorated with a series of tiny circular protrusions, which lend a certain grace to the piece. The hairpin belongs to a type, which is also known from other areas in the Aegean and appeared throughout the BA.³¹ An example of the type was found in the Cyclades at Phylakopi, though in a much later context.³²

The way hairpins were used is shown to us on the Altar Fresco decorating the lustral basin in Xeste 3 at LC I Akrotiri.³³ In the Akrotiri fresco, one of the three female figures (the seated figure) wears, according to Televantou, two pins in her hair, one the shape of a lily blossom and the other in the form of a myrtle branch, which are made of sheets of gold and silver.³⁴ The Skarkos example is one

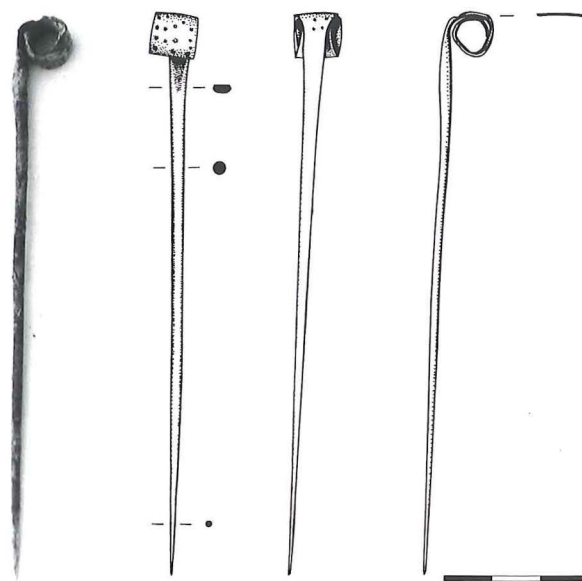


Fig. 17. Grave 4, bronze hairpin (IM 121).

of the finds which document and prove, through excavation, the actual use of hairpins in the Aegean world which were otherwise merely noted in iconography.³⁵

The pottery dates the burial to no later than early LBA. The small beak-spouted jug (Fig. 13) is reminiscent of the numerous miniature beak-spouted jugs from the LC I / LM Ia Akrotiri Volcanic Destruction Level,³⁶ even though it is much more bi-conical in form than those examples. The minoanising shape of the conical cup (Figs. 14–15) had appeared in the Cyclades by the Middle Bronze Age, and continued to be produced until LM IB in Minoan terms, as shown by evidence from Akrotiri, Thera, and Ayia Irini

³¹ Kilian-Dirlmeier 1984, 59–60, pl.5, 146–151.

³² Cherry & Davis 2007, 413 with fig. 10.4, no. 707, 414–415.

³³ For other representations, as well as figures showing the way hairpins were used, see Konstantinidi 2001, 25–26; Sakellarakis & Sakellarakis 1997, 667.

³⁴ Televantou 1984, 26–27, 45–46, *επρ.* 7: 48, 49; According to Doumas 1992, 129, figs.105–106 this female figure wears a pin and a myrtle branch upon her head.

³⁵ For such finds, see Konstantinidi 2001, 25–26.

³⁶ Marthari 1993, type 22e.



Fig. 18. Grave 4 and surrounding area from the east: burial pithos (IM 904) on the right, and cooking pot in the shape of a wide-mouthed jug (IM 636) on the left.

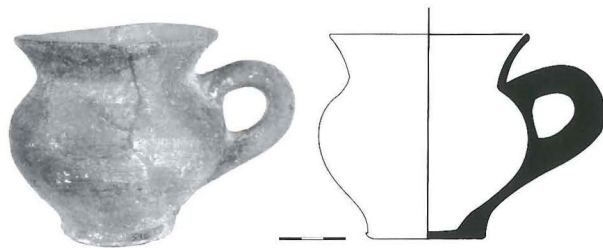


Fig. 19. Area surrounding grave 4: cooking pot in the shape of a wide-mouthed jug (IM 636).

on Keos.³⁷ The goblet (Fig. 16), quite individual in profile, is broadly reminiscent of goblets from Grave Circle B at Mycenae.³⁸ The ovoid-shaped funerary pithos (Fig. 12) can be dated, on the basis of morphological features and the imprint of a mat on its base, to late MC. It can be supposed that it was made in late MC, and that it survived down to the period in which it was used as a burial vessel.

Traces of intense activity associated with the cemetery, and probably with grave 4 in particular, have been noted in the area surrounding the burial pithos of this grave, at a depth of between 30 and 40 cm (Fig. 18). A small cooking pot in the shape of a wide-mouthed jug, a type of vessel common at LC I Akrotiri as well as late MH and LH I Greek Mainland and Aegina (Fig. 19),³⁹ and two conical cups, one of which was filled with animal bones, have been found to the south of, and close to, the sealed



Fig. 20. Grave 7, nipples ewer (IM 610), upside down.

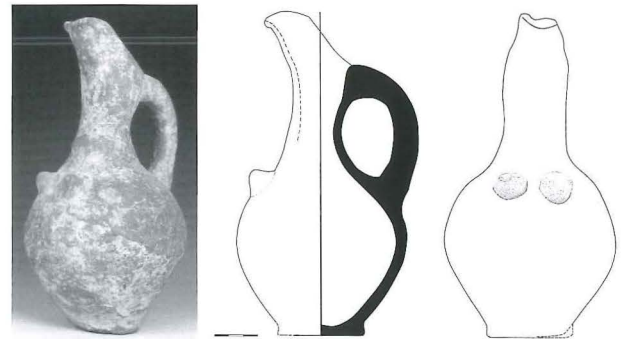


Fig. 21. Grave 7, nipples ewer (IM 610).

burial pithos. Traces of two fires have also been detected in the wider area of the burial at the same depth. This excavation data supports the hypothesis that ritual meals were organised and food offerings were made at the cemetery.

³⁷ For Akrotiri, Thera, see Gillis 1990, 75, fig. 28; Marthari 1993, types 2a and 2b. For Phylakopi, Melos, see Atkinson *et al.* 1904, 133, no. 6, 139, figs. 103–4, pls. XXV, 11, XXVII, 11, pl. XXVI, 3, 5–6, 8–10, 12, 13, 17, 18; Barber 1974, 40–1, fig. 8 (225), pl. 5a, c. For Ayia Irini, Keos, see Overbeck & Overbeck 1979, Davis 1986, pl. 38a; Cummer and Schofield 1984, 47–8, 140, pl. 47, Preston 1972, nos. 28, 29, 30.

³⁸ Mylonas 1972, no. Γ-24, 56, pl. 231 and no. M-148, 154, pl. 231.

³⁹ Marthari 1993, type 56; Dietz 1991, 297; Zerner 1988, 5 (C, IX, no.18), fig. 23, no. 18.



Fig. 22. Grave 7, semi-globular cup with pulled-rim spout (IM 609).



Fig. 23. Grave 7, semi-globular cup with pulled-rim spout (IM 637).

Grave Group 2

Grave group 2 consists of four graves, nos. 7 to 10 (Fig. 4). Grave 7 is thought to be a pit-grave. Graves 8 and 9 are jar burials. Grave 10 is a pit.

The contents of pit-grave 7 (Fig. 4), and the material associated with it, was brought to light above the point where Squares 1 and 2 of the EC settlement meet, northwest of the stairs of EC Building Delta. The grave had been completely destroyed because the layers in this area had been heavily disturbed. None of the grave goods, which were either sepulchral offerings or formed part of the clothing or toiletry implements of the dead, were



Fig. 24. Grave 7, faience bead (IM 1112 a).

uncovered *in situ*. Even so, it appears to have been one of the richest graves at the Skarkos cemetery excavated to date.

Parts of the skeleton, including the skull and bones from the upper and lower limbs, and a considerable number of grave goods were found scattered between the depths of 27 cm and 60 cm. A clay nipples ewer, undoubtedly a local, Iotic product, was found upside down in an almost vertical position and lodged between two slabs (Figs. 20, 21); this is indicative of the heavy disturbance of the grave contents. Two fine imported Minoan semi-globular cups with pulled-rim spouts, the one with dark-on-light decoration and the other simply red-coated, were recovered beside the nipples ewer (Figs. 22, 23). The cups date the burial to no later than the Neopalacial period in Minoan terms.⁴⁰

A faience bead was also found (Fig. 24). The faience bead is of compacted bi-conical shape and decorated with incisions in torsion. Similar beads with radial incisions form part of the Aidonia treasure.⁴¹

Bronze artefacts were also brought to light, such as a punch, (Fig. 25), a pair of tweezers (Fig. 26) and a double-edged, tongue-shaped razor blade (Fig. 27). The bronze punch (Fig. 25), which accompanied the burial of pit-grave 7, is square in section and tapers to a sharp end that is circular in section. It is badly corroded, and as a result looks thicker than it would have been originally.⁴²

The bronze pair of tweezers (Fig. 26) is of a type

⁴⁰ Cups of this shape occur in Neopalacial pottery assemblages in Minoan Crete, see for instance Barnard & Brogan 2003, 46, 48 with no. IB.216 and fig. 8.

⁴¹ Demakopoulou 1996, 67, no. 57.

⁴² For punches and their distribution in BA Aegean, see Branigan 1974, 27.

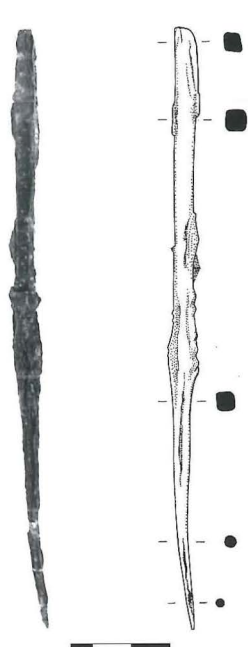


Fig. 25. Grave 7, bronze punch (IM 613).

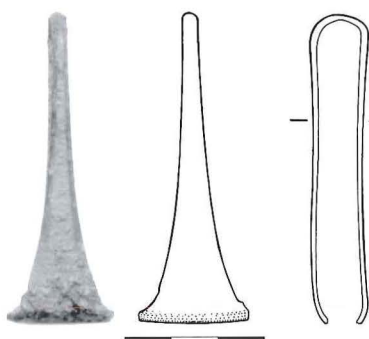


Fig. 26.
Grave 7,
bronze pair
of tweezers
(IM 617).

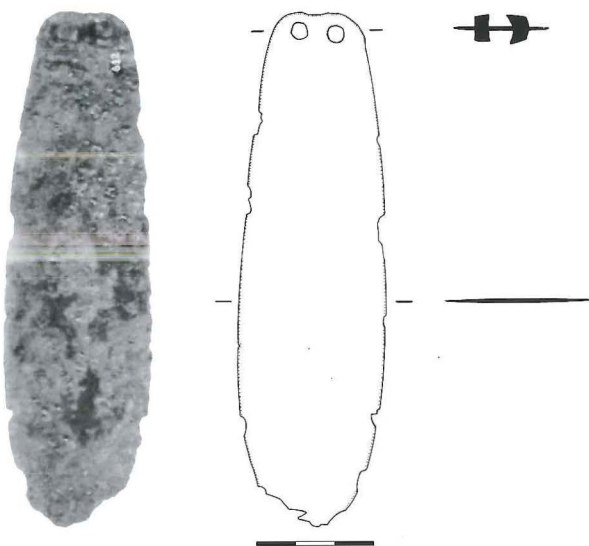


Fig. 27. Grave 7, double-edged tongue-shaped razor blade (IM 612).

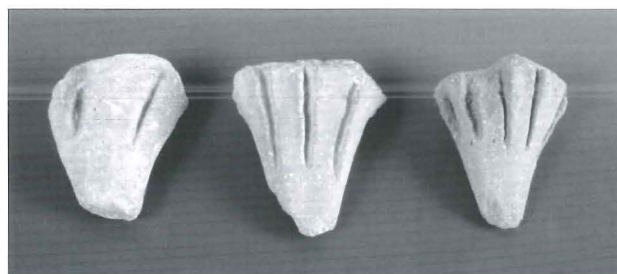


Fig. 28. Wider area of grave 7: legs of tripod cooking pots (IM 207, 1110, 364).

formed by bending a single sheet, widened towards the tips, into two arms, and is close to Branigan's type II. This type is attested on Crete, Mainland Greece, and the islands of the Aegean from the Early to the Late Bronze Age.⁴³

The double-edged tongue-shaped razor blade (Fig. 27) has convex sides and swells to a maximum width not far from the tip; it has two holes in its shoulder for the rivets that secured the handle. The Skarkos razor is reminiscent of Branigan's razor type III. The known examples of this type date from the MB and occur on Crete and the Greek Mainland.⁴⁴ As regards the Cyclades, the closest parallels for the Skarkos razor come from LC I Akrotiri on neighbouring Thera. Two razors of this type were found there, but they are wider than the Skarkos example near their ends, and their handles were attached with three rivets as opposed to two.⁴⁵

The tongue-shaped razor and the pair of tweezers found in Skarkos pit-grave 7 allow us to better understand a group of four artefacts in the Goulandris collection, which are recorded as having been found together on Naxos, and for which an EC II date has already been proposed.⁴⁶ The group includes: 1) a double-edged tongue-shaped razor with two holes at its shoulder for attaching the handle that is similar to Branigan's type IIIa,⁴⁷ and reminiscent of the Skarkos (Fig. 27) and Akrotiri razors (see above);

⁴³ Branigan 1974, 31, 174-5, pl.15; Sakellarakis & Sakellaraki 1997, 602, fig. 629.

⁴⁴ Branigan 1974, 33-34, 177, pl.16.

⁴⁵ Marinatos 1971, 38, pl. 89a; Doumas 2002, 164, fig. 98β.

⁴⁶ Doumas 2000, 211, nos. 357-9, 219, no. 378.

⁴⁷ Branigan 1974, 33, 177, pl.16.



Fig. 29. Grave 8.



Fig. 30. Grave 8, burial jar (IM 608).



Fig. 31. Grave 9.

2) a pair of tweezers of exactly the same type as the one from Skarkos (Fig. 26); 3) a dagger suggestive of LC I Akrotiri examples;⁴⁸ and 4) a bone handle shaped like a truncated cone, which belongs either to the razor or the dagger.⁴⁹ By comparing this group of bronze items in the Goulandris collection to the objects recovered from Skarkos pit-grave 7, it can be suggested that these objects were derived from a group, probably funerary and dating to the late MC or the early LC.

In the wider area of pit-grave 7, and above it, a complete cooking pot in the shape of a wide-mouthed jug was found at a depth of 25 to 27 cm. In addition, legs of tripod cooking pots, which also occur as surface finds at Skarkos, were encountered at a depth of just 27 cm (Fig. 28). This evidence, taken together with the aforementioned evidence from the area of grave 4 in grave group 1, strongly suggest that rituals including the preparation, offering and consumption of food took place at the Skarkos cemetery.

The other three graves of grave group 2 were brought to light a little to the north of pit-grave 7, at a depth of 30 cm (Figs. 4 and 29). The burial jar of grave 8 was found almost intact, lying on its side. No human bones or grave goods were found inside it. The burial vessel is a piriform jar, a type very common at LC I Akrotiri (Fig. 30).⁵⁰

The burial jar of grave 9 was set upright, supported by slabs (Figs. 4 and 31). The upper part of the jar had been smashed during the cultivation of the plot. No human bones or grave goods were found inside this vessel either. The burial vase is a conical jar of medium size. Pit-grave 10 contained human bones, but no grave goods.

Conclusion

The study of the Skarkos cemetery leads to the following conclusions:

This cemetery shares elements with other MC

⁴⁸ Marinatos 1971, 38, pl. 89a.

⁴⁹ Doumas 2000, 219, no. 378.

⁵⁰ Marthari 1993, type 40a.

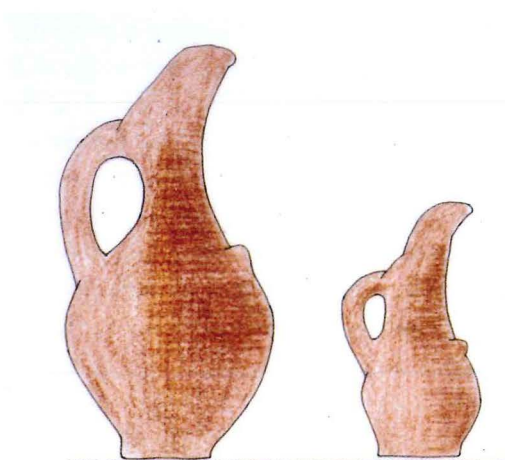


Fig. 32. Iotic nipped ewers.



Fig. 33. Theran nipped ewers.

and early LC cemeteries. As regards the plan and range of grave types, it is reminiscent to a degree of the Ayia Irini, period IV and VI, cemeteries (grave groups, pit-, jar- and pithos-burials); in terms of pottery, it recalls to some extent the Ailas grave (Minoan and Minoanising pottery, conical and semi-globular cups).

It is clear that only a part of the Skarkos cemetery has been detected and excavated to date. The surface finds show that the cemetery may also extend over other areas of the Skarkos hill. To the best of our knowledge, the grave groups brought to light date to the late MC and early stages of LC, given that most of the pottery is coarse, and fine vases, which are valuable for ascertaining precise chronology, are rare.

The Skarkos cemetery included primarily infant and child burials, indicating that the mortality rate of infants and children was high during its period of use. Most of the graves have no grave goods, or are poorly provided for; the exceptions of some rather rich graves show that differences in wealth and status existed in the settlement associated with the cemetery.

Two grave types, pit and jar/pithos, were in use, and inhumation was the only form of burial practice. Each grave contained one body placed in a contracted position. These general features of graves and burial practices show continuity from the EC and early MC cemeteries.

According to the excavation data, rituals took

place in the Skarkos cemetery involving the preparation of food and its offering, particularly in conical cups, as well as the possible organisation of meals in the cemetery. This evidence on the one hand points to a continuation of the rituals occurring in the EC and early MC cemeteries, and on the other reflects certain aspects of Minoan burial habits.

The majority of the pottery is local, made of a characteristic coarse, red-brown fabric with mica and marble inclusions. A great variety of shapes are of the Cycladic tradition. They include the nipped ewer (Fig. 21), the miniature nipped ewer (Fig. 9), the small beak-spouted jug (Fig. 13), and a range of open jars which are bi-conical (Fig. 7), or piriform (Fig. 30) in profile. One form, the cooking pot in the shape of a wide-mouthed jug, is of the Cycladic-Helladic tradition (Fig. 19). However, Minoanising shapes, such as the conical cup (of both high and low type) (Figs. 14-15), the hollow-mouthed miniature jug (Fig. 10), and the tripod cooking pot (Fig. 28), are also represented. The closed ovoid jar (Fig. 12) is a rather unique type that combines Cycladic elements, such as crescent handles at its shoulder, with others of Minoan derivation, such as the cylindrical neck and flat lip. Most of these shapes have counterparts at the three extensively-excavated prehistoric Cycladic towns, namely Akrotiri on Thera, Phylakopi on Melos, and Ayia Irini on Keos, in levels of the late MC and early stages of LC, which correspond

chronologically to the New Palace period on Crete.

It is noteworthy that the local, Iotic, nipples ewers (Fig. 32) recall similar jugs from other Cycladic sites (Fig. 33); however, they display individual features, such as the broad spout, which set them apart. Thus, it is once more suggested that in the late MC and early LC the pottery of every Cycladic island still bore its own special characteristics.

In addition to the local, Iotic pottery there are also vases imported to Ios. They comprise the Minoan, fine one-handled semi-globular cups with pulled-rim spouts on the side (Figs. 22, 23), and the semi-coarse goblet (Fig. 16), which gives the impression of being the product of a Cycladic, but not Iotic workshop. It should be noted that surface finds from Skarkos corresponding chronologically to the horizon of grave groups 1 and 2

of the Skarkos cemetery include imports from the adjacent islands of Thera and Melos, as well as the Greek Mainland.

The moveable finds, and the clay vessels in particular, reflect the co-existence of local and Minoan elements, as is usual for Cycladic sites of the late MC and early stages of LC. Consequently, the pottery evidence from the cemetery at Skarkos shows us that the Minoanisation of Ios advanced in tandem with that of other investigated Cycladic islands, including Keos, Melos, Thera, Naxos, Kato Kouphonisi, and Delos. In addition, the moveable finds, and in particular the bronze artefacts, also present parallels with Crete, Thera and the Greek Mainland, showing strong interconnections throughout the Aegean area during the period under discussion.

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The Afiartis Project: excavations at the Minoan settlement of Fournoi, Karpathos (2001–2004) — a preliminary report*

Manolis Melas

Topography and geographical background

The settlement of Fournoi is located in the southern part of the island of Karpathos (Latitude 35° 26' 35" E, Longitude 27° 8' 49" N; altitude *c.* 43 metres a.s.l. — Figs. 1–2). It is only a few hundred metres from the sea lapping the broad, flat and fertile plain of Kato Afiartis. Selective surface survey in the plain identified several prehistoric and especially Minoan sites¹ (Figs. 1–2). One of these is in the process of being excavated at Fournoi, while another, at Kontokephalo, has already been dug.²

The coastline and corresponding (prehistoric)

harbours to the east, south and southwest are visible from the settlement. A preliminary examination of the pottery indicates that the settlement spanned a period of about 250 years (late Protopalatial — end of Late Minoan IA, *c.* 1750–1500 BC).

The inhabited area was confined to the eastern fringes of a low hill and to its northern, flat and

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¹ Melas 1985.

² Melas & Karantzali 2000.

Fig. 1. (left)
Evidence for
Middle Minoan —
Late Minoan I set-
tlement on
Karpathos as
revealed from
extensive survey.

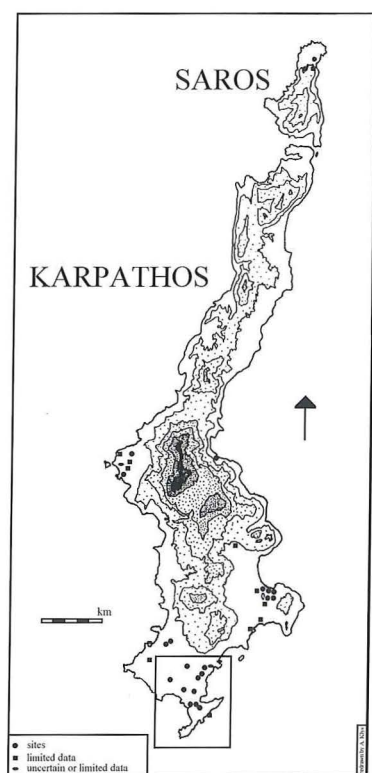
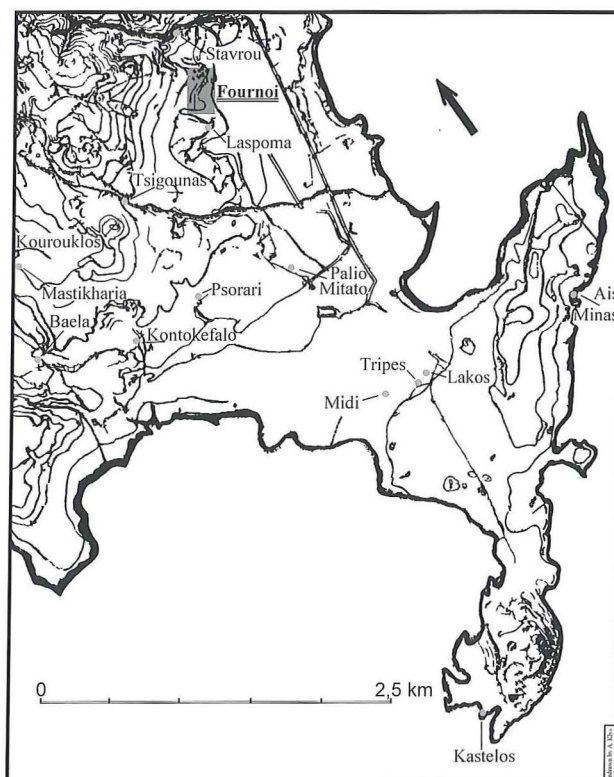


Fig. 2. (right)
Middle Minoan —
Late Minoan I
sites on the coastal
plain of Afiartis,
southern
Karpathos.



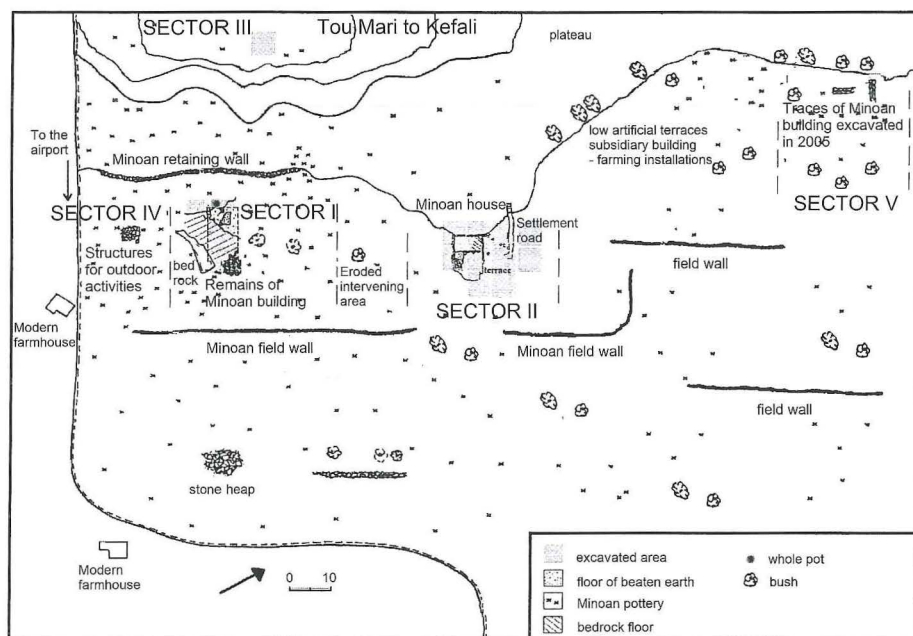


Fig. 3. Sketch plan of Fournoi settlement at Afiartis, Karpathos.

infertile extension, immediately below and east of a low and rocky cliff (Fig. 3). The settlement covered an elongated area of about 5 acres. The location and layout of the settlement indicates that the main criteria for its situation were the following: a) access to physical resources (mainly water and cultivable land and avoidance of its usage for building activities); b) easy access to, and good view of, the sea; c) direction of the sun, and, lastly d) protection from the winds.

Excavation and study of Minoan houses and field walls (2001)

Sector I

The 2001 excavation was carried out in three sectors.³ In sector I, situated in the southern part of the settlement, the remains of a dwelling, whose eastern part rested on a rubble stone terrace, were brought to light. Only part of the clay floor and the structure of a stepped entrance in the south-west corner of the edifice have been preserved (Fig. 4). The total absence of wall foundations, as well as of associated fallen stones on the floor is due to two reasons: Firstly, erosion has meant

that remains are found almost on the surface; and secondly, plundering over a long period by local people who needed stones for their field-walls, has particularly reduced those walls associated with the excavated settlement, the diachronic use of which (already from Minoan times) was demonstrated by this year's excavation.

The floor of the excavated room rested on fine rubble bedding and comprised a dense-grain earth, light grey in colour and containing small-sized stones and lumps of soft, light coloured, calcareous stone. In the east and SE part of the room, the soft bedrock, which resembles the rest of the floor in texture and colour, had been cut into and levelled for use as a floor. The floor bedding is composed of darker and looser earth, mixed with small stones (Fig. 4).

Due to the inclination of the ground, the floor's extension to the east, part of which may have been a courtyard, rested upon a rubble terrace composed of stones of all sizes and small quantities of potsherds in an earth matrix (Fig. 8, behind the field wall).

On the SE side of the floor area an oblong heap of very fine sand was found, the origin of which is of great interest (Figs. 3-4). From the first, it

³ see Melas 2002.



Fig. 4. Sector I. The floor substructure is composed of darker and looser earth, mixed with small stones.



Fig. 5. Sector II. Part of the floor (2001) with the rock, which rolled down from the cliff.

was thought to have arrived here due to the tsunami caused by the Thera eruption. Evidence of tsunami also seemed to be indicated by the rock found lying on a floor in Sector II, which apparently rolled down from the overlying cliff during an earthquake, probably that associated by some with the Thera eruption (Fig. 5).

Evidently the floor level on the southwest part of the edifice was lower than the base of the wall foundations, a phenomenon also found at the nearby Kontokefalo. The way the doorway was constructed at the southwest corner of the dwelling does indeed demonstrate that, upon entering, one had to go down two steps, one hewn in the soft rock, the other one built. The cutting of the rock carries on immediately to the right of the entrance in a south-easterly direction, and this apparently formed the base on which the south wall of the house rested.

On the left just inside the entrance, in the southwest corner of the room a wide-mouthed, bridge-

spouted jar was found *in situ* (Fig. 6). It was located high up, over a metre above the floor. The edge of its base rested against the natural bedrock which had evidently been cut at this point and used as part of the western side of the room, with a wall built upon or against it. The lower part of the jar's body was leaning upon two stones in such a way that it lay at an angle towards the centre of the room. A similar situation was, until recently, common in the traditional houses of Karpathos, where the so-called water-jar stand, a niche built into the wall about one metre above the floor level, was located immediately to the right or left of the entrance, with the water-jar leaning at an angle on a wooden support.

Sector II

As the 2001 excavation showed, Sector II was a relatively large, inhabited area (Figs. 3, 7, 9). This space is delineated on the north and south by trans-



Fig. 6. Sector I. West part of building, top layer. The edge of pot's base rested on the natural bedrock. The pot is here seen *in situ* after its excavation.

verse (following the direction of the slope) walls, 0.60–0.70 cm thick and about six metres apart (Fig. 7). The size of the area and the quantity and nature of the finds from the fill of the floor terrace indicate that we probably have to do with a courtyard rather than an interior. It was thought that this courtyard was an annexe to an adjoining dwelling, all traces of which have now disappeared. Only the SE side of the “courtyard” has so far been excavated. Two distinct archaeological deposits, separated by a floor, were revealed. The lower deposit was the fill of an artificial terrace and varied in thickness due to the irregular formation of the slope, with the greatest depth, at the bottom of a shallow bedrock pit, reaching over one metre (Figs. 7, 9). Excavation showed that this layer formed the bedding of a floor which, due to the sheer drop of the cliff, took the form of a thick terrace. The construction of the latter is interesting, since it is far from traditional and modern practice.

A strong retaining wall would certainly have been constructed in the front of this terrace in a north–south direction. However, this wall has not been preserved due to erosion, as was the case with the dwelling to the south of the “courtyard”. What do remain and are of interest are three low, irregular, transverse walls built on east–west or southwest–northeast axes. The intervening spaces were filled

with debris so that the floor acquired a strong, compact and long-lasting substratum, which has been preserved intact.

The fill consisted of different sized stones mixed with earth and abundant potsherds (e.g. Figs. 12–15). Many of the stones appear to have been worked and presumably came from a house that preceded the one under discussion. Millstones were also among the debris.

The date of the associated pottery seems to offer a plausible solution to the question of the debris' origin. A preliminary examination of the pottery shows that so far recognisable sherds belong to the Protopalatial period (MM II). Among these, the most distinct ones are post-Kamare ware angular (carinated) cups, conical cups with straight string marks on their base, and cooking pot legs, flat-ovoid in section. However, at least some of the pottery from the floor deposits appears to be later, dating to the Neopalatial period. Some of the surface pottery from the site (including the complete pot from Sector I, Figs. 6) also belongs to this period.

We can conclude that the debris probably came from one or more nearby, or even adjoining, Protopalatial buildings. This building was probably located to the south of the terrace in the now completely eroded “intermediary space” (see below). It appears that the debris was moved and re-used during the wider building programme which involved the construction of a new cluster of houses and courtyards to replace of the old ones (including that in the “intermediary space”) that had been destroyed, apparently by an earthquake.

A great part of the floor of what we have labelled a courtyard seems to have been destroyed with only its western part preserved and now partly excavated. The floor comprises of trodden, light coloured earth mixed with tiny stones and potsherds. A flat stone found *in situ* on the floor presumably indicates the existence of a paved area. To the north of this, an east–W stone feature of unknown purpose was revealed resting on the floor. It could perhaps have divided activity areas or even the location of animals within the “courtyard”. A medium sized, dark grey stone found nearby may have been a whetstone.

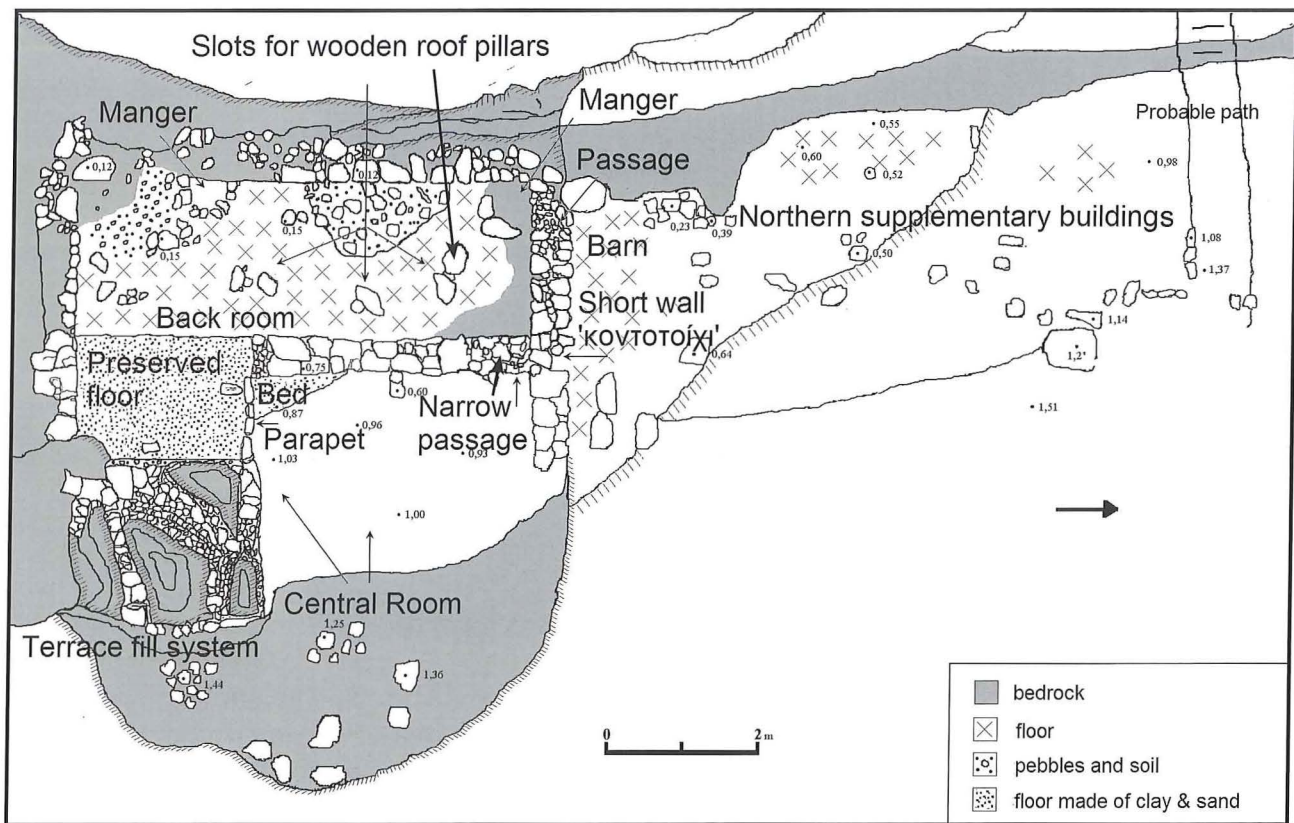


Fig. 7. Plan of Sector II after the excavation in 2004.

The intermediary space

Sector II is located some twenty metres to the north of Sector I. The intervening space is archaeologically empty and is comprised of a slightly sloping ground (Figs. 3, 8). It is bordered on the west by the abrupt cliffs of the hill, called “Tou Mari to Kefali”, and on the east by a narrow agricultural field which runs alongside the settlement (Sectors I – II). In the south it is delimited by the northern, destroyed, part of the floor of Sector I, and in the north by the W-E thick wall (attached to the terrace and associated floor), bordering the south of Sector II. The surface of this intermediary space is composed of the disintegrated soft white-yellow bedrock found in the area and no trace of human presence or activity remained, even though it was certainly used in the prehistoric period.

It seems most likely that this used to be the centre of the settlement based on the suitability of its location and the fact that dwellings have been

found on either side. However, weathering, erosion, stone looting and its use (on the leeward side) for animals and beehives, all resulted in the total obliteration of remains.

Sector III

This sector includes a narrow field on the top of the hill (Fig. 3). On its east side, it is supported by the massive (“cyclopean”) Minoan terrace wall (see below). A trial trench was opened in the centre of this area. The shallow (c. 10–20 cm) deposit between the surface and the bedrock contained nothing but sparse pottery sherds. The surface of the field, however, has produced a relatively larger quantity of potsherds, including pithos and cooking pot fragments, as well as two fine imported sherds (Kamares). The latter could be connected to some worship rituals probably held on the top of the hill, a hypothesis that could be reinforced by the interpretation of the present geological forma-



Fig. 8. Sector I. A section of one of the Minoan field walls (2001).

tion on the west side of the small plateau as indicative of the existence of rock-shelters in the past. In Minoan Crete, the presence of Kamares ware in caves and rock-shelters has often been linked to cult activities.

The organisation of the fields

The 2001 investigation offered impressive results on the dating and organisation of the agricultural fields just next to the settlement being excavated. These fields would have been important as essential means agricultural production for the prehistoric inhabitants of the area. The modern farmers, who lived until recently in similar settlements, call these fields “αυλές” (courtyards), because they were attached to the house or were located very near. They were thus taken to be extensions of the house courtyards.

The terrace walls (Fig. 8) of three of these fields, which comprised parallel stepped terraces facing east, were cleaned and studied. The uppermost one skirts the top of the hill. It borders Sector III on the east and consists of massive (“cyclopean”) masonry built in a line. The associated pottery is exclusively Minoan, as is the pottery from the other two walls. The middle wall is located in front of the excavated section of the settlement

(Sectors I – II, Fig. 8). The third lies about forty metres further to the east and encloses a large flat field which extends up to the northernmost extension of the settlement (Sector V). In the latter two cases we have two different types of walling.

The first type uses higher quality (more compact) boulders for the foundations and base of the wall compared to those used in Sector III. They are better and more firmly placed and positioned upright, a feature that seems to characterize the walling of the ‘Minoan’ era on Karpathos. There are more examples from other Minoan sites on the island, including several others at the Afiartis region and a couple more at Lefkos. There are hundreds, if not thousands of other examples, all over the extensive plain of Afiartis.

The other type of masonry is supplementary to the last in that it overlies the ‘megalthic’ substructure. It comprises rubble masonry of much smaller stones (Fig. 8, bottom left).

According to the above information, it is almost certain that we have here at Afiartis a strong indication of continuity in the agricultural system’s function and field exploitation for about four thousand years. The data indicate that the abandonment of the settlement at Fournoi and elsewhere at Afiartis did not necessarily bring about abandonment of the associated fields. The latter appears to have been cultivated without interruption until the modern

Fig. 9.
Sector II
2004. The
main building
seen from the
south, includ-
ing the com-
plete layout
of the terrace
and the possi-
ble position
of the eastern
wall (bottom
right).



era, a hypothesis that presupposes the constant maintenance of the terrace walls to keep the earth (“*βασταλοι*”) in place. However, due to a number of external factors *e.g.* piracy, there do appear to have been certain periods of abandonment as indicated by later, rough repairs to the Minoan walls.

Excavation of Minoan building complex (2004)

The target of the 2004 season was to establish the north, west and east limits as well as the plan, character and function of the built features uncovered in 2001.⁴

The unexcavated slope west and north of the excavated area was investigated. After removing the deposits overlying the floor level (surface strata and destruction layers) the depth of which fluctuated between *c.* 10 and 40 cm depending on the slope, new architectural features came to light, which link structurally with those already identified (north and south walls, floor, terrace).

Building – residence

The western edge of the floor portion and of the stone parapet (revealed in 2001) coincides with the beginning of a low (maximum height *c.* 40 cm) artificial terrace produced by a longitudinal cutting made into the sloping soft rock of the hill. This terrace is bordered by the south and north housewalls found in the 2001 and by the eastern and western walls discovered in 2004 (Figs. 7, 9).

To the west of the western end of the floor (excavated in 2001) and *c.* 2.5 m from it, a transverse wall appeared that joins with the two others already known, making a Π-shape, which surely continued eastwards to meet the now vanished transverse east wall of the building. It now appears that the large terrace wall was probably built at a distance of *c.* 8 m from that on the west (Figs. 7, bottom left, 9 bottom right).

To roof a building of such a size in this period required suitable supports *e.g.* interior walls and/or pillars. Indeed an appropriate transverse wall

⁴ *Cf.* Melas 2005, fig. 41.

(*kontotoichi* in local ethnography) c. 60 cm wide was unearthed in 2004 (Figs 7, med-left, 9 mid-bottom). It has a north-south orientation with its lower courses buttressing the west low terrace already mentioned. Its length covers about two thirds of the narrow side of the building. It begins from the west end of the bed stone parapet and the associated northwest edge of the 2001 floor, and ends up at the northern wall. Before abutting the latter, it leaves a narrow passage for communication between the rooms on either side.

The central room

This is a relatively large space c. 6.5 x 5.5 m, the roofing of which would not have been possible without the use of a central pillar, unless part of the space was an open courtyard. In this case, the stylobate would have been founded upon the eastern artificial terrace, the sophisticated and solid construction of which may have been related to this possibility.

Owing to the nature (soil composition and inclination) of the ground and the serious erosion, the overall ground-plan of the room eludes us (Figs 7 bottom left, 9 bottom right). Only the western side has been partly preserved, including the buttress wall (*kontotoichi*) and part of the north and south walls. It is certain that the latter continued eastwards and that their foundations rested not upon the terrace (which is bordered by the two walls), but on a solid ground. We also established the eastern borders of the artificial terrace, which should rather have signalled the position of the eastern wall, where the entrance to the house should have been located (Figs. 7, 9).

For the reasons stated above, only the western side of the room has been partially preserved. In its southwest corner, part of the clay floor has survived. This rests on the deep artificial terrace that covers the slope to the east. A low stone bench (parapet) rests upon the north side of the floor next to a whetstone which was found *in situ*.

The parapet points to the east, but its length is unknown. This year's work has shown that this feature may have been part of the edge of a clay sleeping platform (Figs. 7, 9 mid bottom), similar

to that known in Karpathian ethnography as σοφάς (sofa in English) and frequently encountered in traditional houses in the area.

The fine clay surface of the 'bed' is a few centimetres lower than the top of the stone surrounds, apparently so that it could hold the mattress. Traces of this surface seem to survive in the northwest corner of the room. The bed was attached to the transverse wall (*kontotoichi*) which appears to have had one or two niches in its lower courses overlying the pillows of the sleeping people. This is deduced from the evidence provided by one of the stones of the wall, which has an artificial shallow hollow on its upper surface. Such fixtures above sleeping platforms are also a common feature in the local traditional farmhouses.

The eastern and northern limits of the sleeping platform cannot be established. It seems likely that in the north it terminated at the point where two adjacent stones abut the buttress wall and run parallel to the parapet further south. The few traces of a clay floor that survive between these stones and the north wall were probably part of the floor of the room rather than of the sleeping platform. At the junction between the buttress and the north wall, a narrow passage was constructed connecting the rooms on either side.

The back room

This is a long, narrow space (c. 6.5 x 2.5 m) easily roofed (Figs. 7 top left, 9 bottom left). The roofing would be constructed by transversal wooden beams resting, on one side, on the back wall and the buttress, and on the other southern side, on a horizontal wooden beam which would have substituted the missing part of the partition wall as a supplement for *κοντοτοίχας*.

The space communicates with the central room, which lies at a lower level, mainly through the wide opening between the southern termination of the buttress (*kontotoichi* = short wall) and the south wall. In local ethnography this arrangement is common, and the interior room is called *kontothouki*. Here, however, the existence of one more entrance, like that in the northeast corner of the *kontotoichi*, would have been inconceivable.

The rear western wall has one face only, consisting of a single row of large and unworked blocks which lean back onto the abruptly sloping soft rock. The interstices were filled with smaller stones and clay. The floor was formed in the following way. First, the soft uneven surface of the slope was roughly smoothed. Next, rubble was introduced into the hollow space to construct an even low terrace. Then, the protruding parts of the bedrock were levelled, mainly in the north side, and the rest of the surface was covered with beaten earth mixed with small stones and pebbles. The floor ('παύνη' in local ethnography) is not well preserved.

On the ground, in the northwest corner of the room, two relatively large stones may have been as a manger rather than intended for supporting a pithos. A similar construction was found on the floor further south, adjacent to the west wall. Here the edges of the construction seem to intrude into an earth deposit at the point where the stones of the west wall are missing. This feature seems to point to a later, secondary use of the room (Figs. 7, 9, 10).

To this later phase belong three other small stone constructions, along the middle long axis of the room (Figs. 7, 9, 10), which seem to have been slots for slim wooden roof pillars. It seems that the roof of the initial structure, a considerable time after its construction, had suffered serious damage requiring hasty repairs. Effectively, the use of the space must have changed, perhaps to animal sheltering (barn).

Northern supplementary buildings and street

To the north and northwest of the main building, on the stony slope that extends nearly ten metres northwards, below and along the almost flat and rocky continuation of the hill (the centre of the settlement), the badly preserved remains of some small buildings were uncovered (Figs. 3, 7). Here the slope of the ground is rather steep and it was necessary for it to be levelled by means of a terrace similar to that of the central building, but without strengthening transverse walls. Instead, the terrace wall was made of massive stones, some of which



Fig. 10. Sector II 2004. The back room from the north. Rough stone bases of wooden roof posts can be observed along the longitudinal axis.

have survived immediately north of the preserved end of north wall of the building. At this point, and in a narrow space (c. 2.30 x 5 m), next to and at the north end of the north wall, a few building remains were preserved.

A wall on the west side of this space, associated with a large rock which later shifted destroying it, bordered the north wall of the main building. Its full length cannot be determined but it probably reached as far as the presumed street, which runs at an angle some ten metres further north. A couple of stones from the foresaid wall can be seen under the rock. Immediately to the east, we came across a slightly sloping surface of levelled soft rock that had obviously been a floor. From the point where the slope ends, the floor continues east as a trodden earth surface. A large closed vessel was found on this surface. The floor is best preserved on the east side next to the end of the north wall. The



Fig. 11. Base and belly fragments from late or post-Kamarea pottery. The top left bears traces of white decoration.

Fig. 12. Fragments from plain and decorated carinated cups.

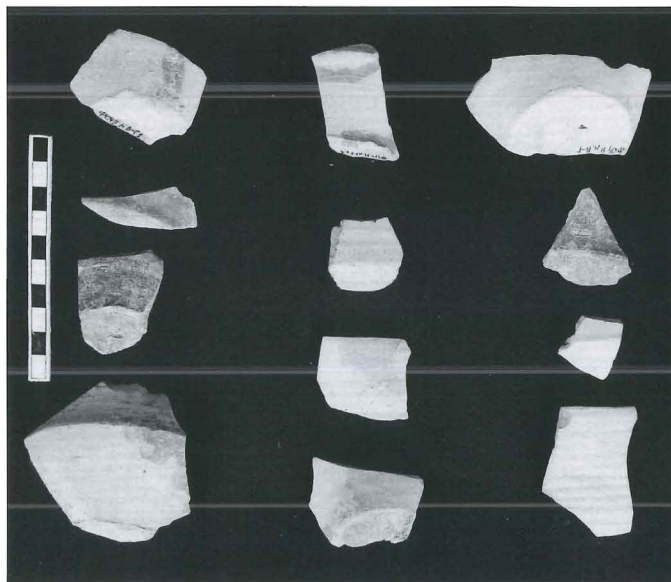
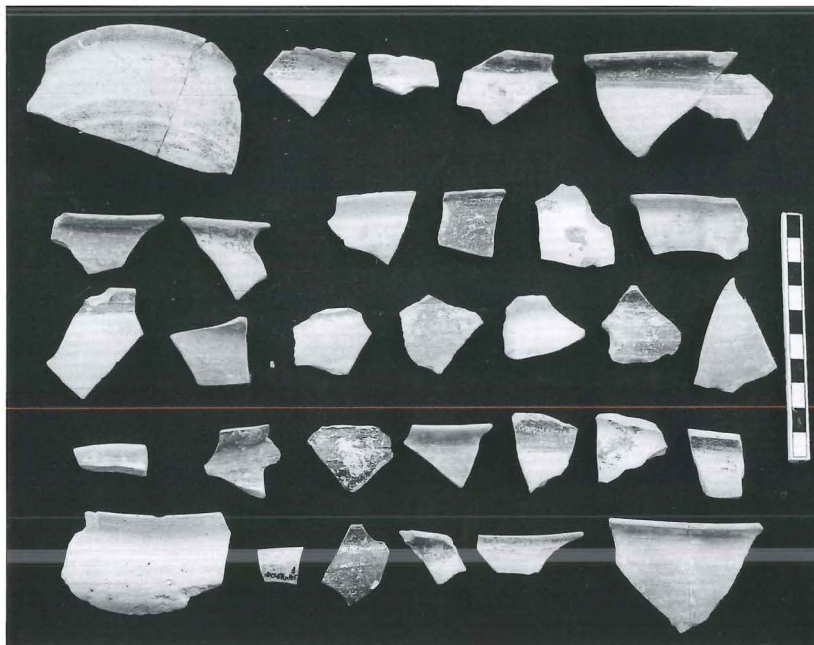


Fig. 13. Rim and belly fragments from hemispherical cups with everted rim.



evidence points to a narrow room attached to the northern wall of the central building. It was probably a barn which communicated with the back room through a passage, a convenient means for hay accommodation. In local ethnography this kind of hayloft is called 'κούρπιθας'.

Further north, only part of the terrace's fill is preserved, consisting of earth and stones of various sizes. These remains appear to finish in a shallow gully that emerges from a low rocky plateau in the west, creating by erosion a natural passage with steps on its west side, and making its way east

through the fields northeast of the main building. Some old stones set in a row across the hill could be possibly taken as parts of steps of a street. This natural formation was used until recently as a path.

Pottery and stratigraphy

Further investigation to east, west and north of the 2001 excavation has allowed us to confirm that the overwhelming majority of the pottery is located in the layers of the main terrace in the central room of

Fig. 14. Jar shoulder fragments decorated with splash and trickle patterns and bands.

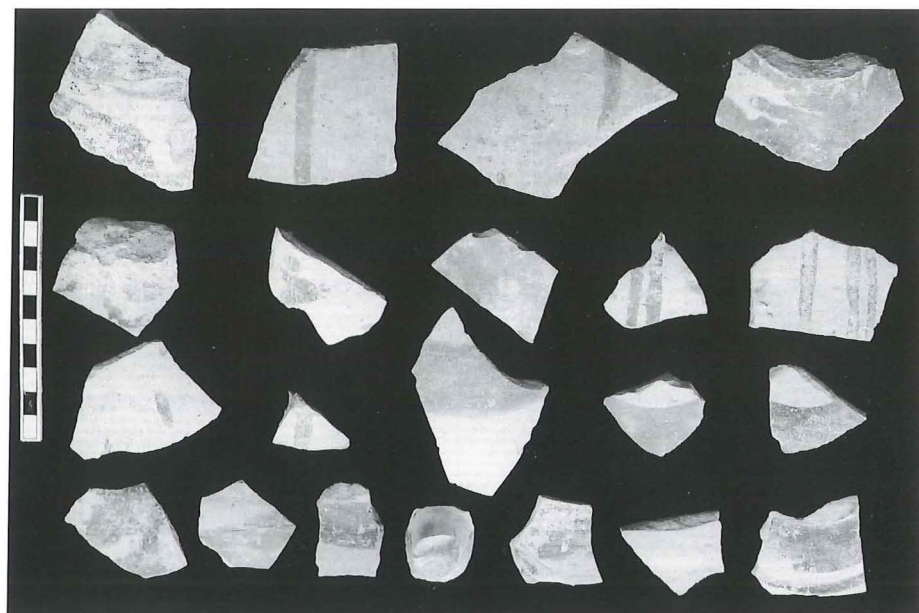


Fig. 15. Rim and belly fragments from hole-mouthed jars.



Sector II. This forms a stratigraphically important group that will be of great value in dating the finds and associated architecture. We are dealing with a “closed deposit”, that is a sealed, and stylistically and chronologically homogeneous concentration of artefacts, since they were deposited at the same time.

By using vertical and horizontal stratigraphy, assuming that the debris originated in a destroyed building nearby, it can be concluded that the pottery of the closed group is older than the pottery from the deposits of the building on top of the terrace. Their relative chronological relationship will be further clarified through stylistic analysis.

What eludes us is the absolute chronology of the pottery and its deposition in the terrace and in the later building. If the time difference was great enough, there must have been a stylistic variability between the pottery groups. If not, it will be difficult to identify differences in style.

Generally, the pottery's state of preservation is not good, the fragments being small with little or no decoration preserved. This is, of course to be expected in the case of the terrace where the pottery formed part of a fill. A preliminary glance at the ceramic repertoire (especially from the terrace) shows that there exist characteristic Protopalatial types (many Middle Minoan IIB-III A), most of

them imported. We illustrate here some of the characteristic shapes: Cups (Kamares, carinated, rounded, with straight marks underneath base etc.); jars (oval-mouthed, hole-mouthed, with splash and trickle decoration); cooking vessels with thin section (Figs. 11–15). The pottery of the second building period, post-dating the terrace assemblage, needs further study, but it seems that part of it carries on the old palace tradition, whereas the rest falls within the Neopalatial period (*e.g.* the complete spouted jar from Sector I, Fig. 6).

Discussion: Minoan acculturation *versus* colonialism

The plenary session of the Colloquium on “The Minoans in central, eastern and northern Aegean” (22nd–23rd January 2005) was intended to be a discussion of the nature of Minoan presence at sites where the represented investigations were conducted. Empirical and analytical matters of manufacture, provenance, distribution, style and chronology were discussed after each individual paper. The longstanding historical question of the Minoan penetration overseas is complex and needs to be addressed with appropriate and up-to-date theoretical and methodological tools.⁵

The present author emphasized this at the outset by suggesting two avenues of approach. The first concerned the need to ask the speakers to express their views on how they envisage the origins and development of Minoan presence at their sites. In my view, this line was not adequately pursued.

The second was more substantive and concerned critical and theoretical approaches. The author suggested that for more than 100 years, indeed since the Evans era, the problem we still face is one of stalemate. Victorian ideals and neo-evolutionary ideas still prevail. These promote anachronistic models serving the interests of the present. ‘Minoan’ is nothing but a myth, an invented culture diachronically incorporating an imperialist generic code. It offers an excuse for the colonialism of the Victorian era, whose imperial grandeur found expression through palaces, both at home and in

the colonial centres. These, in turn, have provided models for unsubstantiated interpretations of the Minoan “palaces” in neo-evolutionary terms, as seats of states and empires. The notion of the latter has inevitably been linked with another misinterpretation, that of Minoan colonialism and the so-called thalassocracy.

If we can rid ourselves of empiricist methodologies and of modern – including nationalist – and politically suspect preoccupations, we can move towards critical and theoretical approaches. This involves an engagement with contemporary, new and interesting ideas deriving from such intellectual fields as philosophy, sociology, critical theory, anthropology, social and cultural theory, phenomenology, structuralism, and realism. The two latter are anti-empiricist, implying that what is important is invisible to the eye and that we thus need to go beyond appearances searching for the essence.

I had hoped to discuss how these ideas might be applied to the issues under discussion at a later point in the proceedings. However, no opportunity presented itself since the too much time – in my view – was taken up by discussions of sites and pottery, and whether the presence of Minoan material cultural traits and technology (architecture, artefacts, potter’s wheels and kilns or loom weights, murex dyes) should necessarily be equated with arrival of outsiders *i.e.* colonialism!

Here, however, I can examine very briefly how the theoretical inspirations stated above might prove useful in the present discussion. The Aegean has always been an open system of contact and interaction. As such it has favoured the relatively easy and quick transmission of goods, practices (including cultural and technological) and ideas, as well as the formation, on several occasions in prehistory, of cultural homogeneity across its domain. On every occasion, there has without exception been a hierarchy (systems and subsystems, cores/centres and peripheries) among the cultures involved, based on power and cultural radiation. The Cyclades, for example, were the centre in the Early Bronze Age, whereas Crete and the Argolid prevailed during

⁵ Cf. Melas 1988.

the second millennium, with Knossos and Mycenae being the core sites. Any examination of particular phenomena within the Aegean system must be conducted within the context of this broader geographical, socio-economic, cultural and political framework.

During the first half of the second millennium the palatial culture of Crete expands to the southern Aegean and to a lesser extent further north. This process seems to begin in MM II and culminates in LM I. Minoan penetration brings about a radical change in the receiving cultures. This change is a cultural phenomenon that has to be explained, no matter what it is called: acculturation,⁶ minoanisation or something else. Any change in material culture must always be seen in relation to socio-economic and/or political structure and change.

Rather than employing empiricist premises and unnecessary models involving the movement of peoples (colonization, invasion, etc.) or diffusion not based on a theoretical model (simple cultural adoption with no social underpinnings), it would be more fruitful to see change in the context of underlying principles, structures and processes. To start from the material evidence of Minoan penetration, it can be hypothesized that both the incoming and the imitated material culture was used by locals. If this is correct, the question arises as to how and why this occurred. Certainly, commercial exchange and other processes, such as possible exchange of services (e.g. maritime transport by Cycladic islanders, Karpathanian masons in Crete) may account for the transmission. The question why requires a deeper discussion.

Change cannot occur in a vacuum. It presupposes social need, innovative spirit and individual aspiration. At this time the local societies were hierarchical, and owing to the gradual increase of wealth in a period of prosperity in the Aegean, their structures must have become more complex, and social mobility (threatening the existing elites)

more effective. Evidently, both the ruling classes and their challengers (emulators) needed new legitimating strategies and powerful ideologies to assist their contradictory social aims (stability for the first, change for the second). This was offered by the adoption or close imitation of the superior and "international" Minoan culture, in all its manifestations, from elaborate architecture and religious transmission (e.g. Thera and Rhodes), and super luxurious artefacts (Mycenae), to more ordinary artefacts, social habits and technology/industry.

Whether this process could be called a "Versailles effect" or otherwise is not important. The undeniable fact is that Minoan materials and practices (luxuries or everyday objects and technologies, the latter with equal social value) were imported, imitated and used for social ends, that is for social display and as status symbols within the context of antagonism and power games.

The weakness of the "colonies" model⁷ is further demonstrated by the contradictory relationship between architecture and artefacts at the "Minoan" sites. With the exception of Thera and Rhodes, where apparently some of the elites were wealthy enough to adopt luxurious architectural features ("Versailles effect"), the architecture is local, in contrast to the Minoan character of all (e.g. Karpathos: Kontokefalo, Fourni) or most part of the movable finds. A general or extended transmission of Minoan house forms and architecture to the Aegean would certainly have a bearing on our interpretations in view of relevant arguments provided by ethnographic analogy.

⁶ see Melas 1991.

⁷ see Branigan 1981.

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Ialysos and its neighbouring areas in the MBA and LB I periods: a chance for peace

Toula Marketou

Mt. Phileremos in the MBA period

When some years ago, Prof. Y. Sakellarakis, with his deep knowledge of Minoan Crete and its religion, suggested there might have been a 'peak sanctuary' on Mt. Phileremos,¹ the hill that dominates the landscape occupied by the prehistoric settlement at Trianda (Ialysos), all that was known of the prehistoric installations on the summit of Mt. Phileremos was the material published in 1984 by M. Benzi.² This evidence alone did not appear sufficient to support the hypothesis of a peak sanctuary on the mountain.³ However, among the great mass of Geometric, Archaic and Classical offerings from the votive deposit of the Athena sanctuary in the ancient acropolis of Ialysos on Mt. Phileremos, there are still other, prehistoric, finds worthy of notice.⁴

According to a most careful and comprehensive examination by Benzi, a date "not earlier than MM IB and not later than MM II"⁵ has been suggested



Fig. 1. The ravine of Prophetes Elias on Mt. Phileremos.

for the interesting group of MBA finds. The pottery comprised four carinated cups, three bridge-spouted jars, a bridge-spouted basin and a high-necked cut-away jug, all found on a floor of beaten earth west of the temple of Athena. In addition, four MM stone vases were found among the many offerings of the historical periods in the votive deposit west of the temple.⁶ Fragments of other cari-

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¹ Sakellarakis 1996; Mt. Phileremos is seen on fig. 18b.

² Benzi 1984.

³ Sakellarakis 1996; Marketou 1998b, 62.

⁴ Martelli 1988; 1996a; 1996b; 2000. The material is currently under study by Prof. M. Martelli, and therefore not illustrated here.

⁵ Benzi 1984, 98.

⁶ Benzi 1984, figs. 13, 14, 16–30. A Cypriote origin may be suggested for the stone of the one-handed cup no. 6835 (idem 104 no. 20, fig. 29) which is, therefore, excluded from the group of MM imported Cretan stone vases. The rather rough cup is made of Cypriote limestone, a material macroscopically very similar to the statuettes of Cypriote limestone figurines, dated to the second half of the 7th–mid 6th cent. BC, which according to analysed samples proved to be Cypriote imitations made of Cypriote limestone for special distribution to the Aegean sanctuaries, Kourou & Karageorghis 2002.



Fig. 2. MBA pottery from Prophetes Elias on Mt. Philereimos.

nated cups were found between the stones of a Late Archaic/Classical platform in the cella of the temple of Athena.⁷

This evidence suggested the existence of an MBA installation on the plateau of the ancient acropolis as indicated by the pottery, while the more luxurious finds of the same period, namely the imported stone vases, were found in the votive deposit of the sanctuary. Since the area around the temple of Athena has never been thoroughly excavated, we are not yet in a position to define the character of the MBA installation nor to imply a definite contextual connection between the MBA pottery and the MM IB-MM II stone vases.

In the light of another group of MBA pottery found in the ravine of Prophetes Elias, on the northeast peak of Mt. Philereimos⁸ (Fig. 1), it can be deduced that there were at least two separate installations on Mt. Philereimos: one extending onto the plateau and another, further east, on the eroded northeast peak of the mountain. The presence of typologically similar high-necked jugs and carinated cups (Fig. 2) at both sites suggests that they



Fig. 3. Scuttle from the LB I settlement at Trianda, similar to the scuttle from Mt. Philereimos.

are broadly contemporary. The stone vases of the votive deposit in the sanctuary may indicate that the period in question overlaps with MM IB-II in Crete.

Mt. Philereimos in the LB period: The evidence for LM IA and Mycenaean offerings

The published finds from the votive floor of the Athena sanctuary on Philereimos include a scuttle⁹ (Fig. 3), a plain spindle whorl and a discoid loom weight,¹⁰ probably from the LB I period, although the character of these finds and the lack of stratigraphy do not allow them to be securely dated. However, similar artefacts from the settlement are dated to LM IA. Some of the unpublished prehistoric finds from the same votive deposit furnish fuller evidence for the character of the LBA presence on Mt. Philereimos:

a) A marble discoid weight, similar to another

⁷ Benzi 1984, 94.

⁸ Marketou 1988, 28, figs. 2-3; Marketou 1998a, 42, fig. 2a.

⁹ II 13120 from the excavation in the Markos plot. See Georgiou 1986, 28-30. The young priestess in the fresco of the West House at Akrotiri holds a similar scuttle, Doulas 1992, 46, figs. 24, 25; Doulas 1983, 83-84, pl. XIII; Sapouna-Sakellarakis 1981, 501; Televantou 1994, 173-180.

¹⁰ Benzi 1984, 97-98, 103, fig. 15. Similar braziers and loom weights were found in the LM IA levels of the settlement at Trianda.



Fig. 4. A marble weight from the LB I settlement at Trianda, similar to the example found in the votive deposit of the Athena temple on Mt. Phileremos.

found in the LB IA strata of the settlement at Trianda¹¹ (Fig. 4).

b) Two cast bronze adorants of the typical Minoan type,¹² already known from the settlement at Trianda.¹³ The male adorant is reminiscent of the example from the Giamalakis collection in Athens,¹⁴ while the female example has some similarities to the schematic female adorant (M 1071) from Trianda.¹⁵ Like the Kalymnos example (K 166),¹⁶ her face is rounded, although lacking any facial characteristics. The hairstyle of the female adorant is modelled in the same way as the Trianda statuette 1071, while their skirts are of an analogous triangular and flat form. The female Phileremos statuette, however, is less schematic than the example from the settlement. The breasts of the figure are depicted and the skirt is decorated with horizontal incisions – a parallel to the skirt of a female bronze adorant from Aghios Georghios at Kythera.¹⁷

However, the votive character of the later Mycenaean finds, found in the deposit of the sanctuary of the historical period, is stronger. In addition to the published material, (two marble pommels and a Cypriot bronze tanged mirror,¹⁸ which are common offerings in Mycenaean tombs and otherwise have a ritual character) the finds in the deposit also included a few fragments of painted pottery, two terracotta animal figurines and an elaborate elephant-ivory mirror handle¹⁹ (Fig. 5), along with four cylinder-seals, two seals of steatite and some cornelian beads from Mycenaean necklaces. Thus, apart from the votive character of the bronze statuettes and the possible non-domestic nature of the rest of the LB I finds within the deposit, it seems fairly clear that the Mycenaean objects from the

votive deposit on Phileremos should not be associated with domestic use. Moreover, a hypothesis that suggested so many objects could have been brought as heirlooms by the families of the votaries is weak. Nor does it appear likely that their ancestors in the surrounding areas could have found all these ob-

¹¹ The marble weight with an incised circle in the centre is also paralleled at Knossos and Akrotiri, Michailidou 2004, 311, 215, figs. 26.2, 26.6.

¹² Minoan adorants nos. 8072, 8064: Martelli 1988, 107. The gesture of both the bronze adorants, the male (8072) and female (8064), follow the typical Minoan gesture with their upraised arms touching the forehead.

¹³ Marketou 1998b.

¹⁴ Lembesi 2002, 53, *etc.* 19, see also *eadem* for further references.

¹⁵ Marketou 1998b, 60–61, fig. 8, 10.

¹⁶ Marketou 1998b, 63–64.

¹⁷ Sakellarakis 1996, pl. 13d, the fourth idol in the 4th row.

¹⁸ Catling 1964, 224; Benzi 1984, 100, 104, fig. 33; Benzi 1990, 182, pl. 180 g–h.

¹⁹ Rhodes Museum 7939. Ivory plaque with one face in relief and the other flat and polished. Heraldic lions sitting on their hind legs and with their forepaws resting on an altar with concave sides. The head of the lion on the left is missing. Both the lions and the altar are placed on the façade of tripartite opening; the middle is inner and wider, flanked by two rather narrow openings or elaborated pillars, Shaw 1978. Three holes bored in the middle of the relief indicate riveting to the lower part of a bronze (now missing) mirror (end of 14th–early 13th century BC). Barnett 1939, 13, n. 4; Barnett 1982, 37, pl. 33a; Kantor 1947, 88–89; Poursat 1977, 69, n. 29; Benzi, 1990, 193–194; Martelli 2000, 105, fig. 1. The iconography is reminiscent of the famous relief on the Lion Gate at Mycenae, Wace 1949, 52–53, fig. 73a–b, 74 a; Mylonas 1966, 173176. The relief is dated to the end of LH III A:2 and beginning of LH III B, Wace *op.cit.*, 22, 50, 89, 132; Åström & Blomè 1964. Other pairs of animals, or hybrids, either antithetic or in an heraldic syntax resting on concave altars are plentiful on Mycenaean seal-stones, see Yavis 1949, 29, fig. 16; Sakellariou 1966, 37–38, 93, 96–97, 39, 40, 75, 92, 97, 73, pls. 2 no. 46, 3 no. 98; *eadem* 1964, Nr. 46; 98; 73. For other concave altars see also, Yavis 1949, 30, fig. 17, PM II:i, 187, fig. 100; PM II:ii, 607, figs. 380, 381. A similar round altar with incurving sides is to be seen on a plaster tablet from Mycenae, Mylonas 1966, 162, fig. 131, and the relief rhyton from Kato Zakros, Shaw 1978, 432–437. A date later than the LH period for the iconography, however, seems doubtful, since altars with concave sides are typical of the Mycenaean period and do not appear in the historical periods, Yavis 1949, 167–168. In the 7th century BC heraldic animals are not divided by concave altars, Kunze 1950, 24–5, fig. 3.



Fig. 5. Mycenaean ivory plaque of mirror handle from the votive deposit of the Athena sanctuary on Mt. Phileremos.

jects by chance. Meanwhile, some analogous finds in settlements, such as the bronze adorants²⁰ from the settlement at Trianda, may be connected with domestic cult equipment (if they are not products of local manufacture), kept at home or at workshop sites.

Until now, the plateau of Phileremos has provided no evidence for LBA settlement or burial. There is, however, evidence for MBA occupation, as illustrated by the domestic pottery (carinated cups and high-necked jugs). On the other hand, the majority of the early material found in later Greek contexts usually occurs at sites with long occupation sequences, *e.g.* within the contexts of Geometric cemeteries situated above prehistoric settlements. The example of a LH IIIB piriform amphora²¹ discovered among the Protogeometric offerings of a tomb on Kos is typical.

The quantity of the prehistoric objects found among the 5000 offerings²² discovered in the votive deposit of the Athena sanctuary, one of the richest sanctuaries in the Aegean, is unusual and unique. Prehistoric finds among the Geometric and Archaic offerings at other sanctuaries in the Aegean are limited to one or two examples.²³ The

presence of such numerous prehistoric finds runs contrary to the theory of dedicated heirlooms, or chance finds derived from looting earlier strata.

The nature of the Mycenaean finds,²⁴ as well as the two LM IA adorants, at least suggests BA ritual rather than domestic activity on Phileremos, and since there is no funerary evidence on the summit, they may have been associated with a cult place, similar to the peak sanctuaries of Kythera and Crete, as suggested by Prof. Sakellarakis and considered by Prof. Benzi.²⁵ Thus, early worship, not later than the mature phase of the LM IA, may have taken place in the earliest phases of the Athenaion of Ialysos, continuing at least until the LH IIIA:2–IIIB, reappearing in the Protogeometric/Early Geometric and later activity on the acropolis.

In contrast, the characterization of the MBA installation on Phileremos is a matter for further investigation, since, apart from the imported stone vases, the rest of the material appears similar to the domestic finds from the settlement at Trianda. However, a MBA settlement on Mt. Phileremos had already been suggested by Benzi,²⁶ and associated with the installation on Prophetes Elias,²⁷ where a group of characteristic MBA finds was found. Nevertheless, the four MM IB–MMII stone vases found on Phileremos still remain a group of luxurious imports within the local assemblages of artefacts from MBA Ialysos.²⁸

²⁰ Marketou 1998b.

²¹ Morricone 1950, 322, fig. 90; Desborough 1972, 175.

²² Martelli 1988, 104.

²³ This is obvious in the catalogue recorded by Benson 1970, 115–8.

²⁴ The bronze mirror, of a type occurring in the LH III C contexts of the Mycenaean cemeteries of Ialysos, is the only find that may be interpreted as an heirloom, or chance find, as appropriately observed by Benzi 1984, 100, 104; see also Sakellarakis 1996, 93, n. 131.

²⁵ Sakellarakis 1996, 93–4, and 93, n. 131.

²⁶ Benzi 1984, 100; see also his letter in Sakellarakis 1996, 94, n. 136.

²⁷ Marketou 1988, 27–28; Marketou 1998a, 42.

²⁸ As stated by Benzi in his letter (n. 26).

The case of the Daskalio Cave at Vathy, Kalymnos

Another location in the Dodecanese connected with cult is the Daskalio Cave on Kalymnos. The cave was used during the Late/Final Neolithic and the EBA periods as for rather permanent installations,²⁹ as were other caves on the island. A group of LM I and LH III pottery indicated periodic use of the cave in the Late Bronze Age. The presence of fine imported pottery, including three rhyta and a stone ladle, is more 'in keeping with a cult place than a dwelling place', according to Benzi;³⁰ a recent find of a bronze Minoan adorant³¹ has reinforced his hypothesis. However, the later LM IB and Mycenaean finds (until LH IIIC) are not obviously ritual in character, but still do not confirm continuous habitation of the site. The MBA finds include a fragment of an imported MC beaked jug in the Curvilinear Style, a carinated cup, a shallow straight-sided bowl, and a large Minoanising MM I-II pedestalled lamp.³² The small amount of MBA finds within the cave, compared with the larger quantity of EB 3 material, points to a change in the use of the cave, or a period of slow abandonment combined with a change in settlement patterns on the island during the MBA. It seems certain, however, that the cave was used as a cult place in the LM IA period. The MBA material does not conclusively indicate cult activity. Thus, Philereiros on Rhodes and the Daskalio cave on Kalymnos are the only sites in the Dodecanese with evidence for Minoanising cult activities in the LM IA period.

Recent MBA evidence from Ialysos

The recent evidence for the earlier periods of occupation of the site should lead to a more comprehensive analysis of the LB IA material culture of Ialysos society and its relations with neighbouring areas during this Minoanising period of the Aegean. The on-going rescue excavations on Rhodes, mainly at Ialysos, have also provided new evidence for the period before the LM IA era of



Fig. 6. MBA jug in the Kavalieros plot, east of the main LB settlements at Trianda *in situ*.

the Trianda settlement. The MBA occupation in the area of the Athena Temple on Philereiros is clearly pertinent, in terms of culture and chronology, to MBA settlement patterns in the northern part of the island where five other locations have yielded relevant material.

- i. The group of MBA pottery, discussed above, found near the modern chapel of Prophetes Elias on the low north-eastern peak of Mt. Philereiros, has suggested a second MBA site on the mountain.
- ii. At the northernmost site of the island, approximately 10 km from the LBA settlement of Trianda, an MBA installation has been uncovered beneath the levels of the Hellenistic city of Rhodes.³³ The site, located not far from the port of Akandia (one of the five ports of the ancient city of Rhodes), is the only known MBA site next to the sea. Based on the presence of a great number of loom weights associated with a carinated cup and a fragmentary

²⁹ Benzi 1997.

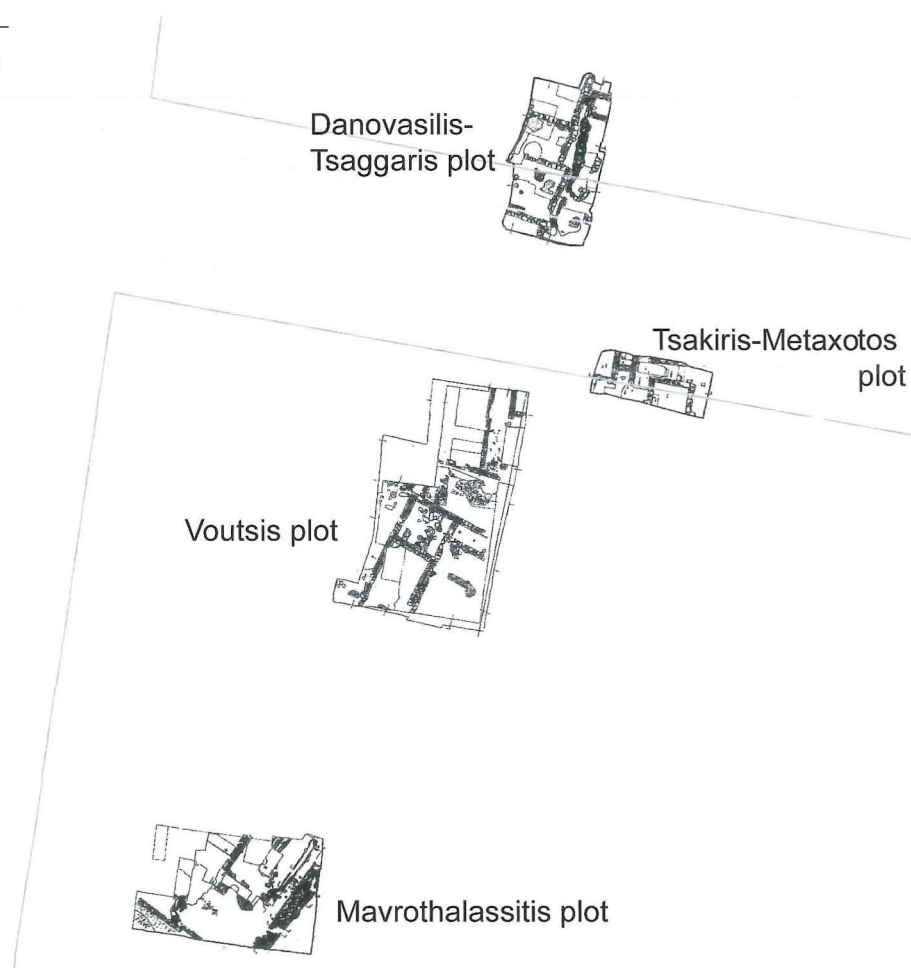
³⁰ Benzi 1993, 279-80, pl. 37a-b.

³¹ Marketou 1998b, 63-4, fig. 12.

³² Benzi 1993, 279-81, pls. 36c, 37a, 37b.

³³ Dreliosi-Irakleidou 1999, 24-5.

Fig. 7. Plan of the MBA installations revealed south of the main LB I settlement at Trianda.



high-necked jug,³⁴ the installation is MBA in date. Numerous loom weights, found *in situ*, suggest a site or structure connected with textile production. Nevertheless, there is no other evidence of prehistoric habitation in the surrounding area, presumably lost as a result of the intensive building activity of later periods.

iii. Local MBA production of textiles is also associated with another installation found 600–620 m. east/southeast of the main prehistoric settlement at Trianda: large numbers of similar loom weights were found scattered around the area. Their association with fragments of characteristic MBA pottery, along with a coarse example of a one handled cup³⁵ (Fig. 6), suggested broad contemporaneity with the other MBA installations in the northern part of the island. The site is located a short distance from the most recently uncovered section of a rather poor dwelling, and close to an isolated MBA pithos burial.³⁶

iv. The most important MBA evidence, however, was found in an area 812 m west of iii, and approximately 193 m. south of the southernmost known limit of the main LB settlement of Trianda.³⁷ At least six different buildings, set out in insulae and aligned across pebble-paved streets, have been revealed in that area (Fig. 7). The pisé walls, erected on low foundations of irregular, unworked stones

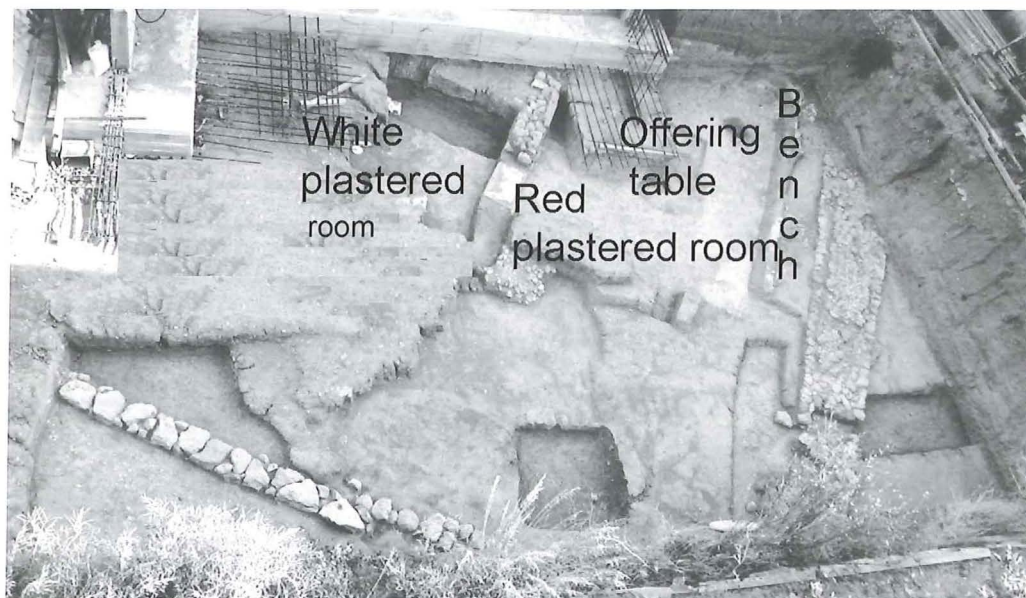
³⁴ Dreliosi-Irakleidou 1999, pl. 1b-2a-b. The material is exhibited in the permanent exhibition 'Rhodes 2400 years on from the foundation of the City' in the Palace of the Grand Masters, Rhodes.

³⁵ Lloyd & Mellaart 1965, 87, fig. P. 6-4.

³⁶ The isolated pithos burial was found in the Giannikouris plot, where there were no other features or architectural remains. Marketou 1998a, 45, pl. Ib.

³⁷ The installation at Mavrothalassitis' plot is located at a distance of around 250 m. from the southernmost part of the LB I town, Marketou, T., ArchDelt (1999) *Chronica* (forthcoming).

Fig. 8. General view of the excavation at Mavrothalassitis plot from the south-southwest.



of different size and type, seldom are more than 0.40 m wide. Judging from the depth of the MBA architectural remains further south below the LM IA settlement, 4 m from the surface, and the depth of the foundations of these buildings, approximately 1.20–2.00 m below the present surface, it is apparent that this early settlement was established on a natural slope of the Bronze Age landscape, higher than the later, main LB I settlement.

Scant evidence of both white and reddish plaster within the MBA strata indicated that the interiors of these early houses were plastered. This has been confirmed by the excavation of the southernmost MBA building of the area (within the Mavrothalassitis plot), where an important building – very different from the rest – has been partly revealed (Fig. 8). It comprises two rooms with plaster on all the internal wall faces (preserved to height of *c.* 0.30 m), as well as on the floors.

The largest room, painted red, (4.50 x 6.15 m) was entered through a doorway, with a monolithic bluish-grey plastered threshold, from a smaller, white plastered room (2.30 x 2.65 m). A pinkish plastered bench, built at the far end of the red room, rests against the internal face of the east wall. In front of the bench, the remnants of a rectangular construction, set in the floor as a kind of an offering table also covered by red plaster, were preserved (2.05 x 1.05 m). This red plastered feature is remi-

niscient of some fixed offering tables at Phaistos and Malia associated with cult activity.³⁸ The red paint applied over the entire surfaces of the walls and the floors of the room were carefully polished, most probably by a stone implement, such as one found at Phaistos.³⁹

Some vases, most probably placed on the bench, were found lying in front of it (Fig. 9). A probable open-air area, scattered with pottery fragments, was revealed to the south of this group of rooms. Another wall and a section of pebbled pavement found at the southwest part of the excavation belong to an additional building.

The importance of this architectural complex is reinforced by the presence of a thick, elongated construction, exposed to a length of 7.90 m, orientated NE–SW, and made of large pebbles aligned along a row of flat stones. This wide (1.2 m) structure is parallel and attached to the internal mudbrick filling of the east wall of the red room, which presumably reaches a thickness of 0.70–0.75 m, and formed the foundation of an enclosure or the fortification wall of the settlement (Fig. 8). This construction lays on the virgin soil. The different style of building in mudbrick, either with low or

³⁸ Gessel 1985, 106–7, 120–4; Gesell 1987, 120–5.

³⁹ Levi 1955, 411, fig. 37, no. 573.



Fig. 9. MBA pottery, *in situ*, near the bench of the red plastered room in the Mavrothalassitis plot.

higher stone sockles, or even without, is probably influenced by the scarcity of stones in the area.⁴⁰

The partly excavated building in the Mavrothalassitis plot has sophisticated elements as thresholds, clay benches⁴¹ against walls, a built square construction (table) and floors all carefully covered with polished plaster. This kind of strong and shiny plaster made the walls harder and damp-proof.⁴² The superstructure of the last phase of the EBA 3B occupation at Asomatos was also made of mudbrick, resting upon a low sockle of unworked stone. The sockle at Asomatos stands at floor level such as in the case of the Mavrothalassitis plot. However, the walls of the EBA 2B phase at Asomatos were con-

structed of pisè, above a stronger, undressed stone sockle.⁴³ Similar building techniques appeared in western Anatolia as early as the EBA, *e.g.* at Beycesultan and Karataş.⁴⁴

The buildings found north of the above complex belong to at least four or five houses that look rather uniform but are quite different from the red and white plastered houses (Fig. 7, 10). The southernmost house is divided into at least six spaces. A pebbled paved street runs across its western long side. A similar



Fig. 10. MBA houses in the Voutsis plot from the east.

⁴⁰ Similar explanation is suggested for the style of EM building methods at Myrtos, Phournou Koryphe see Warren 1972, 257.

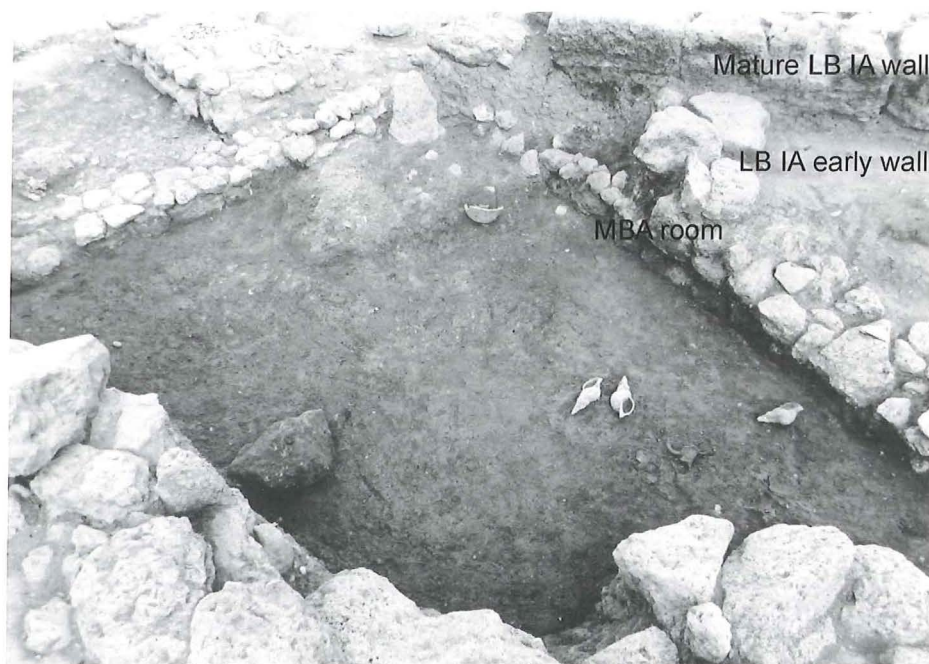
⁴¹ A MM II shrine west of the palace of Malia, Warren 1988, 4.

⁴² Warren, 1972, 307, n. 1. The thick wall against the east wall of the red room most probably protected also the room from humidity. A thick layer of pebbles used to prevent moisture from seeping up from below was added to the exterior of some MBA walls in the Paraskevas plot.

⁴³ Marketou 1997, 396, fig.1. The exterior walls of the megaron at Asomatos are covered with a mixture of limestone to prevent humidity to enter into the building.

⁴⁴ The only method to reveal the real width of the walls, which in the case of the red room and the adjacent white one reached a thickness of *c.* 75 m, was to follow their exterior lines according to the outer limits of the remaining debris, or by the absence of pottery fragments or other objects, see Warner 1994, 139; Lloyd & Mellaart 1962, 59-62; 1963, 62-6.

Fig. 11. MBA architectural remains in the Paraskevas plot at Trianda. View from the south.



house appears further north of an open pebbled area, which looks to be either a street or a corridor. Two other similar houses have also partly excavated; the smaller rooms may have served as storage areas.

The lowest levels of the main LB I settlement at Trianda have provided some evidence for habitation before the early LM IA or the MM IIIB periods. This observation was mainly based on pottery and some scattered walls found at the Markos plot in the NW sector of the settlement and in the deepest levels of the Bournis plot in the SE sector. Nevertheless, these strata did not extend under the whole excavated area of the Late Bronze Age settlement. Thus, Furumark⁴⁵ does not mention this period. Papazoglou, in her comprehensive article dealing with Furumark's discussion, assigns some carinated cups to her Trianda I phase.⁴⁶ It is not certain, however, whether the architectural phase corresponds to the transitional MM III/early LM IA or to the earlier MBA phase, a distinct architectural phase under the walls of the MM III/early LM IA period.

The MBA architectural remains, which exist below the walls of the early LM IA phase of occupation at Trianda belong to a single phase of occupation, similar to the other remains further south of the main LB I settlement, although there are some architectural rearrangements within the same

ceramic phase, as there is no change in the characteristic local pottery forms.

In the south sector of the LB I settlement, below the early LB IA walls, three rooms, on an orientation different from the above LB I walls, have been revealed in the deepest layers of the excavation in the Paraskevas plot⁴⁷ (Fig. 11). Of greatest importance were the floor deposits, comprising assemblages of the characteristic, mainly local, MBA pottery, similar to some finds already known from the MBA context on Philereimos and the peak of

⁴⁵ The first stratum according to Furumark is dated to LM IA, Furumark 1950, 179, n. 1 and he does not mention any pottery earlier than MM III; To the contrary there is evidence for MBA pottery found in the Italian excavations, Coldstream 1969, 1, n. 6; Monaco 1941, 52-3, fig. 5.

⁴⁶ According to the excavator, Papazoglou-Manioudaki 1990, 144, 181-2, the first stratum of Trianda is dated to MM III. The pottery from this first stratum, however, includes both transitional MM III /early LM IA semiglobular cups, such as *eadem*, no. 156, 149, fig. 5a, pl. 61b, as well as some fragments of earlier MBA carinated cups, *eadem*, 149-50, figs 5b, pl. 62a-63a. The associated architectural remains, however, seem to belong rather to the MM III/early LM IA period than to the earlier MBA stratum. Cf. also Driessen & Macdonald 1997, 248.

⁴⁷ Marketou, T., *ArchDelt* 52 (1997) Chronica 1102-3; *eadem*, *ArchDelt* (1999) Chronica; (2000) Chronica (forthcoming).

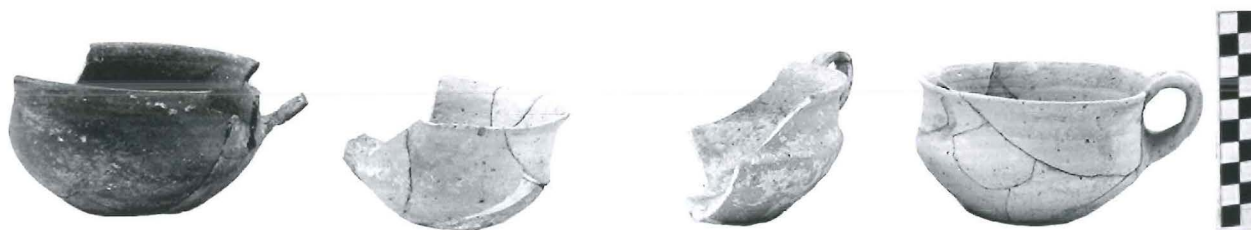


Fig. 12. MBA carinated cups from the deepest layers of the settlement at Trianda.

Prophetes Elias. Remains of the same period were also found in all our deep sections of the above excavation.

The MBA pottery

Typical local MBA pottery comprises carinated cups, with the upper attachment of ribbon handles laid on the interior of the rim (similar to the examples from Phileremos and the Vathy cave on Kalymnos) (Fig. 12), straight-sided cups, shallow handleless bowls, high-necked jugs (either plain, like the Phileremos example, monochrome or painted⁴⁸), spouted-jars, sherds of bridge-spouted jars (e.g. the Phileremos examples), and a red crossed plate. MBA jugs are frequently shaped in similar forms to the earlier EBA3 jugs from Asomatos⁴⁹ (Fig. 13).

The carinated cup, as a shape, is widespread and is typical of MM IB-II Crete. However, the Rhodian examples, west Anatolian or local and are

derived from from the EBA 3 red slipped carinated bowl⁵⁰ rather than from the Cretan, MM IB-II, carinated cups.

Anatolian elements may also be seen in the large, carinated, red-slipped stemmed bowl⁵¹ recently found in a typical MBA floor deposit (Fig. 14a). Within this deposit, along with local pottery that includes the red-slipped pedestalled carinated bowl just noted, there was also a group of some Kamares ware: fragments of small hole-mouthed jars (Fig. 14b), and other polychrome painted fragments. This is one of the most important MBA floor deposits at Trianda in terms of chronology and the cultural affinities demonstrated by local production.

The LB I settlement at Trianda (Ialysos plain)

The clear stratigraphies of the settlement at Trianda and at the Serayia on Kos suggest that the foundations of the early LB IA phase were built above

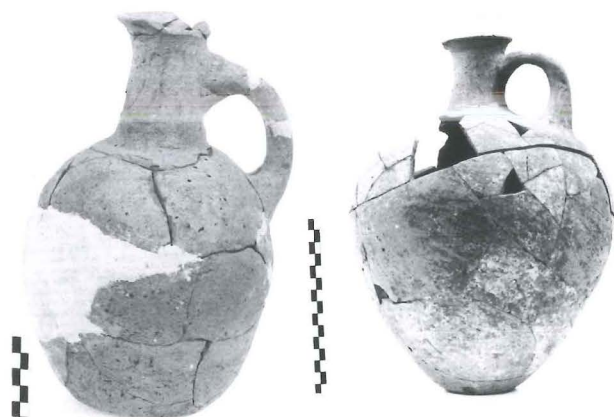


Fig. 13. MBA jug from Trianda and EBA jug from Asomatos.

⁴⁸ Marketou 1998a, 44–5, fig. 2a.

⁴⁹ The EBA 3 Rhodian jugs being more elongated and with higher necks are closer to different from the EM II/EM III parallels, Walberg 1983, 6.

⁵⁰ For the evolution of the form of the MBA carinated cups from the EBA3 carinated bowls see Marketou 1990, 102, fig. 5.

⁵¹ The deposit ifound at Danovasilis-Tsaggaris plot south of the main LB I settlement and north of Mavrothalassitis plot included carinated cups and high-necked jugs. Marketou, T., *ArchDelt Chronica* (2004) (forthcoming). Similar red slipped pedestaled bowls are common at Beycesultan IVC, Lloyd & Mellaart 1965, 103, fig. P.14, P. 15.



Fig. 14. MBA red-slipped carinated stemmed bowl and light on dark pottery from the Danovasilis plot at Trianda.

those of the MBA phase.⁵² From the few fragments of a white-painted and polychrome wheelmade pottery which have been found recently, the MBA period at Trianda seems to have overlapped with the MM IB-MMII Cretan phase, a date which suits



Fig. 15. LM IA early and mature walls in the Xenakis plot at Trianda.

the chronology of the Minoan stone vases from Philereimos. Nevertheless, the town planning and other characteristics of this phase, are still obscure due to later intensive building activity of the mature phase of the LB IA, but it seems that it retained its own local tradition in terms of both building techniques and pottery manufacture.

The mature LM IA buildings incorporated some of the earlier walls and rearranged some of the previous spaces (Fig 15). The interiors of the buildings were plastered, but since most of the walls were either damaged or reused, the majority of the frescoes from the early phase of the LB IA period have vanished; some very fine whitish plaster fragments with a shiny surface were preserved

⁵² Marketou 1990, 104-7.



Fig. 16. LM IA post-holes in the Margaritis plots.

in the middle of a room at Paraskevas plot.⁵³ There is also some evidence to indicate that the inhabitants used rows of wooden columns⁵⁴ (on stone bases over floors that were perfectly made of beaten earth and pebbles), most probably continuing a tradition from the MBA; two post-holes were found in a MBA room in the Paraskevas plot and another in the Danovasilis–Tsaggaris plot, similar to those found in the Liamis and Margaritis plots (Fig. 16).

The fact that the mature LB I A town was completely rebuilt on the same scale after an earthquake, shows the dynamic nature and organizational abilities of the society. The new town was characterized by its monumental and impressive ashlar masonry. The massive buildings share common characteristics with the Xestae at Akrotiri. A paved street divides two large insulae within the Paraskevas plot, each insula comprising one large building which included at least one polythyron or pier-and-door partition (Fig. 17).

Although the hypothesis that connects polythyra rooms with ritual is still under consideration, it is important to note that all the polythyra rooms found at Trianda were abandoned after the tephra fall (the tephra layer that fell on their pavements was never removed). Similarly, the impressive streets were also left forever sealed by the fallen tephra, a fact indicating that they were never reused. Some openings (mainly wells) were also found to have been opened in one or more corners of the polythyra, as if the inhabitants purposely dug new wells after the tephra fall. We also noticed other activities near the polythyra, such as the blocking of the door

⁵³ This is one of the most impressive destruction layers of the early phase of the LB I period, which proved that high quality plaster and frescoes with white reserved areas, like the Akrotiri frescoes existed before the mature LB I phase at Trianda. The find is still under the process of conservation, Marketou, T., *ArchDelt* 53 B3 (1998) Chronika, 953.

⁵⁴ Marketou 1998a, 46.



Fig. 17. The north polythyron in the Paraskevas plot.

of the ante-room in front of the south polythyron at the Paraskevas plot (Fig 17), or a crouched burial on a pebbled paved layer to the north of the north polythyron.

These activities were most probably related to the environmental destruction caused by the earthquake and the tephra fall. These catastrophes also seem to be associated with the rather poor cemetery near the Bronze Age shoreline of the settlement,⁵⁵ as well as with the presence of two animal skulls (of a bull and a goat) in the same cemetery, the skulls being indicative of some ritual activities in the cemetery.

The Bronze Age landscape of Ialysos

The landscape of Ialysos looked different in the Bronze Age. Today's shoreline is approximately 500 m north of the ancient line, as revealed by the

level of sandy and pebbled earth in the LB I cemetery and the formation of the present large flood plain. The BA harbour may have had the form of a Delta in the area of the ancient Schedia.⁵⁶ Mt. Philereiros dominates the rather flat landscape of the alluvium coastal plain of Ialysos to a height of 267 m.; the hill has three curved peaks (the chapel of Prophetes Elias, where MBA pottery has been found, is located on the easternmost curved peak), and its distinctive west slope descends to the sea forming a peninsula (Fig. 18 b). This is the picture of Philereiros today as viewed from the sea. On the site itself, some of the uncovered LB IA architectural remains are bordered by streams: The main stream (Potamos of Trianda) emerges from the east side of the mountain descending to the sea. It flows behind the prehistoric settlement coming down to the NW sector of the excavated part⁵⁷ (west of the Paraskevas plot with the ashlar buildings and the two polythyra, and west of the Markos plot with the other polythyron). Small streams, like the Potamouli tou Peristeriou, which runs west to the Papaemanouil-Chalkiopoulos plot and the area of the Italian excavations, also occur (Fig. 18 c). Most of these watercourses have been now converted into roads, a cause of the very frequent modern flooding at Trianda. Nevertheless, some of these streams do not coincide exactly with the Bronze Age beds. A trial trench in modern bed of the Trianda stream, west of the Markos plot, showed that the LM I ruins did continue below the western modern bed of the stream and only the eastern bed of the modern stream coincides with ancient stream.⁵⁸

Interestingly reminiscent of Philereiros is the mountain depicted in the Miniature Frieze of the Departure Town of the West House at Akrotiri⁵⁹

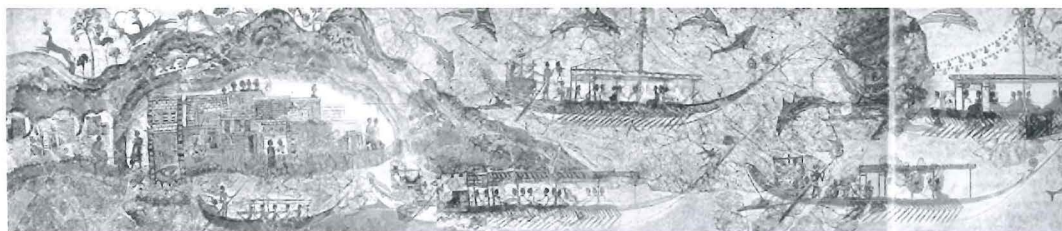
⁵⁵ The suggested ancient shoreline is in agreement with the analysis of some cores taken by Sewell 2001. Core 3 appeared to be similar to the modern beach sand. Cf. idem, 192, 208, 359.

⁵⁶ Papachristodoulou 1989, 87, n. 404.

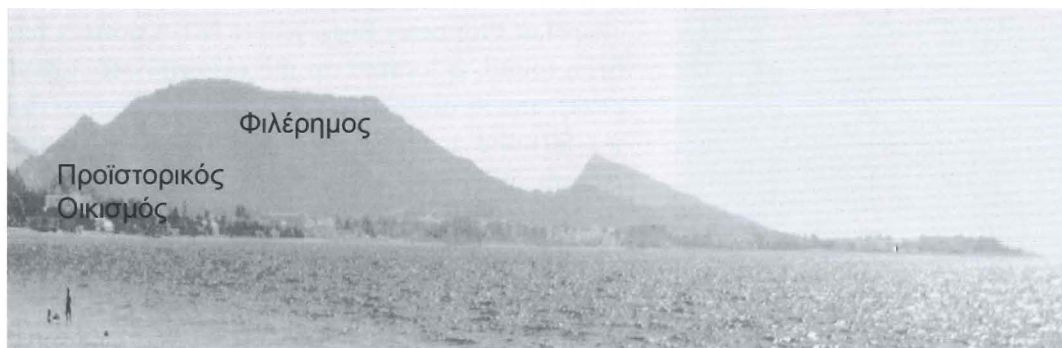
⁵⁷ Marketou 1998a, 61-2.

⁵⁸ Marketou, T., *ArchDelt* 44 (1989) *Chronica*, 502, pl. 277 β.

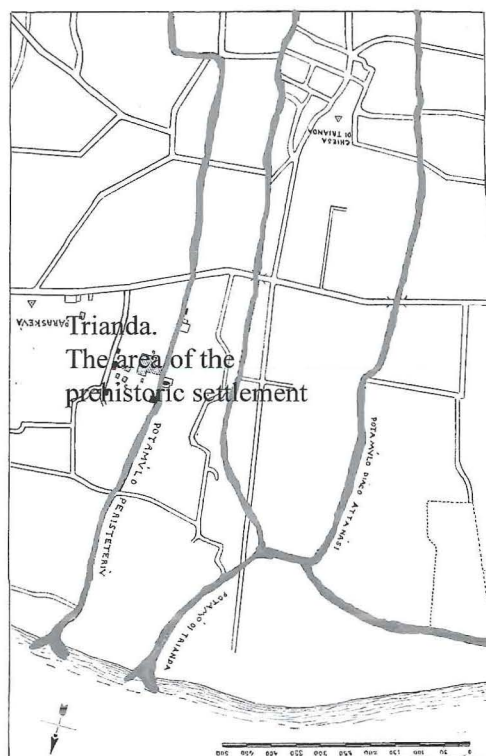
⁵⁹ Marinatos 1974, 30-45; Warren 1979; Morgan 1988, 161; Televantou 1994, 97-112.



a



b



c

Fig. 18. a-b. The West House Miniature fresco and Mt Phileremos at Ialysos. c. the streams bordering the LB I town at Trianda (after Monaco 1941).

(Fig. 18a-b). The distinctive mountain with the three peaks and its left (west?) hillside descending down to the sea, forming a peninsula, is a good reason for thinking that the Bronze Age Philer-

emos and its surroundings gives the impression of a sub-tropical landscape around the coastal LB IA town of Trianda. Thus, the river on the miniature fresco is reminiscent of the Trianda stream⁶⁰ (Potamos of Trianda), which flows from the east to the north-northwest. The land of the departure town, according to the comprehensive description of L. Morgan,⁶¹ “with its divided river creating a marshy island built up from its alluvial deposits indicates the way in which small rivers...reach the sea through deltas”.

Much of the upper part of Phileremos is made of Late Triassic limestone,⁶² and this is in agreement with the homogenous appearance of the land around the Departure Town of the miniature fresco.⁶³ This muddy appearance of the Rhodian land (due to the presence of these streams and brooks) is described by Diodorus.⁶⁴ Nevertheless, either by coincidence or not, the modern streams at Trianda are appropriately surrounded by marsh reeds like

⁶⁰ Monaco 1941, pl. I

⁶¹ Morgan 1988, 38

⁶² Higgins & Higgins 1996, 155, fig. 14-4; Morgan 1988, 34, 39.

⁶³ Morgan, 1988, 39.

⁶⁴ “κατὰ τὴν ἐξ ἀρχῆς σύστασιν τῆς νήσου πελώδους οὐσης ἔτι καὶ μαλακῆς”, Diodorus Siculi V56.

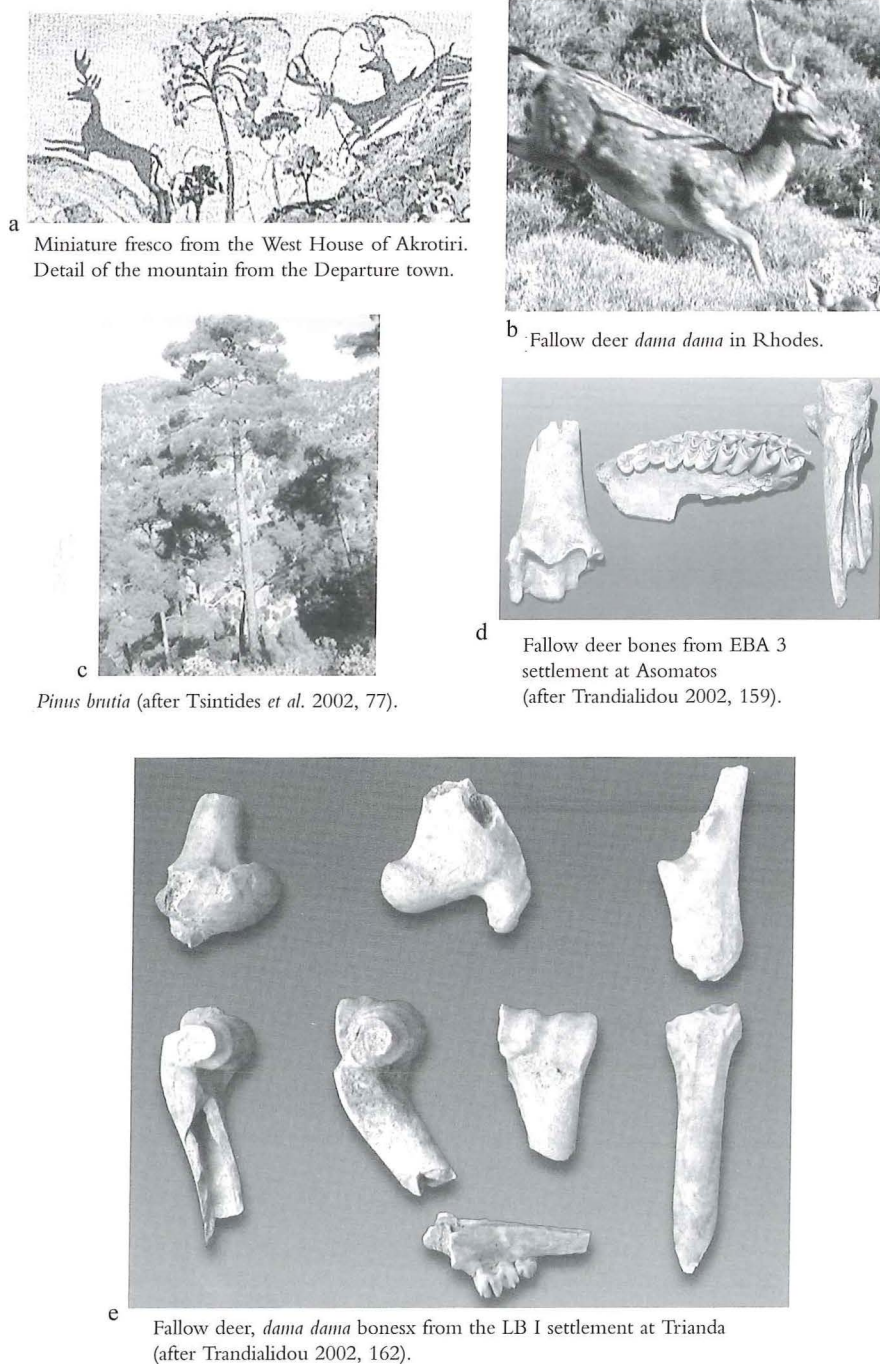


Fig. 19. a. The deers and the *pinus brutia* trees from the Miniature fresco from the West House of Akrotiri. b. Fallow deer in modern Rhodes. c. *Pinus brutia* tree. d-e. Bones of fallow deers from Asomatos and Trianda.

the reeds of the fresco, the present hill also being covered with a similar type of pine tree. *Pinus brutia* (Calabrian pine)⁶⁵ is the indigenous dominant forest species of the mountain (Fig. 19 a, c). The rocky part below the left curved peak coincides with the deeply eroded slope of the mountain at

the location of the chapel of Prophetes Elias extending further west.

Red fallow deer (*Dama dama*) bones, already

⁶⁵ Kitsos 1962, 32, 48, Tsintides *et al.* 2002, 77.



Fig. 20. The painted stucco floor in the Paraskevas-Pilateri plot at Trianda.

known from the late 6th–early 5th centuries BC, are also present in the EBA 3 settlement at Asomatos⁶⁶ (Fig. 19 d, e). They are completely absent at Akrotiri.⁶⁷ The animal was imported to Rhodes to be hunted, since it appears in the rather symbolic hunting scene on the top of the mountain, where a striding lion is depicted chasing three red fallow deer. The lion is merely symbolic representing the successful outcome of the deer hunt, the most important source of nutrition of the prehistoric Ialysians.⁶⁸ Certainly the significance of the lion as a symbol of power⁶⁹ (an element which gives a Mycenaean flavour⁷⁰ to the scene) and the hunting itself is associated with the ritual character of the mountain peaks.

As we have excavated just 5,280 m² of LB I Trianda, a full reconstruction of the town is impossible. However the settlement is estimated to measure more than 17.52 hectares. Looking at the Theran fresco, one can observe similarities in the ashlar masonry (xestai) between the fresco and the isodomic façades at Trianda. It is also worth noting that, in common with houses that look plastered in the Theran miniature fresco, there is at least one isodomic façade at Trianda (the south façade of the large building in the Paraskevas plot), which is plastered on the exterior. Looking also at the buildings of the river (right) in the fresco, one can observe

some topographical affinities with the west part of the Trianda settlement.⁷¹

Religion, the frescoes and catastrophes

Further evidence of a possible Minoanising religion is provided by the ‘horns of consecration’ found in the well opened in the NE corner of the polythyron (in the Markos plot⁷²). A religious association may be given (as on Crete) to the fresco fragment depict-

⁶⁶ Trandalidou 2000a, 122; 2000b, 720; 2002, 161.

⁶⁷ The animal appears in the offshore islands of the NE Aegean, Trandalidou 2002, 160; similarly, Rhodes being an offshore island shows a long presence of the fallow deer, which was imported to Rhodes and the other islands to be hunted.

⁶⁸ Trandalidou 2002.

⁶⁹ Morgan 1988, 44–9; Niemeier 1990a, 268; Televantou 1994, 292. For other Mycenaean elements in the miniature fresco see Niemeier 1990a.

⁷⁰ Morgan 1990, 257.

⁷¹ Trial trenches to the north of the Theocharis plot and the modern road from Rhodes to the Kremasti did not reveal any LB I architectural remains in that area. It could be suggested that the western part of the settlement was more narrow than the rest, limited to the area near the Bronze Age seashore.

⁷² Marketou 1988, 30; Cf. also Driessen & Macdonald 1997, 250.



Fig. 21. Solidly and trickle painted pottery from the LB IA town at Trianda.

ing a double axe with a sacral knot,⁷³ found in the debris of the same polythyron. It has been assumed by Davis⁷⁴ that the frescoes at Trianda were closer to the Minoan tradition chiefly on the basis of the red painted examples; the red on white lilies, however, despite the clear separation of their petals, which distinguishes them from the lilies of Crete, look closer to the Theran and other Aegean frescoes. In addition, some rosettes found at the settlement of Trianda look similar to the Akrotiri designs. Interestingly, there are also numerous fresco fragments with white reserved areas (some with elegant painted lines), a technique also found on Thera. Other iconographic analogies between the Theran wall paintings and Trianda are depicted in the identical hairstyle of the female figurines from Trianda.⁷⁵

In general, judging by the fragments of frescoes found in almost every insula or house at Trianda, it could be assumed that the situation is very similar to that at Akrotiri.⁷⁶ However, red plastered floors were also found, apparently a Cretan trait. The most impressive example a stucco floor decorated with red and black spots (imitating pebbles) was uncovered in the Paraskevas Pilateri plot⁷⁷ (Fig. 20). The large corpus of plaster fragments from Trianda is now in the final stage of a comprehensive analysis, including chemical analysis of the different pigments; this will reveal the extent of their affinities to other Aegean centres (Thera, Ayia Irini on Keos and Phylakopi on Melos) as well as to Crete.

Within the thriving town of Trianda during the mature phase of the LB IA, some vases from the Messara plain of Crete and a great amount of pottery in the light-on-dark and dark-on-light styles from Serayia occurred, wares that were in use simultaneously with the thousands of conical cups and local imitations of Cretan pottery.⁷⁸ Conversely, local Trianda ceramics, such as some askoi and jugs, solidly painted with some trickles of paint (Fig. 21), were most probably exported to Iasos.⁷⁹ All this evidence may imply that Trianda participated in Aegean maritime trade along with the Koans (from Serayia), Cretans, Therans⁸⁰ and people from

⁷³ Marketou 1998a, 60. The sacral knot itself has been most recently identified as a stylized plant-pendent motif. cf. Boulotis 2005, 33.

⁷⁴ Davis 1990, 225.

⁷⁵ Marketou 1998b, 66.

⁷⁶ Morgan 1990, 252.

⁷⁷ A polychrome painted floor with black and red spots on a blue painted stucco floor is known from Malia, Chapouthier & Charbonneaux 1928, 13; A room with ceremonial function found in Tel Kabri, Israel, is decorated with irregular shapes in red, blue and black, imitating the Minoan rockwork. Niemeier 1990b, 123–4. For the Trianda stucco floor similarly imitating rockwork, see, Marketou, T., *ArchDelt* 52 (1997) Chronica, 1103, n. 77.

⁷⁸ Marketou, Karantzali (forthcoming).

⁷⁹ Personal communication with N. Momigliano.

⁸⁰ This is in agreement with the scene of maritime trade depicted in the Miniature fresco of the West House at Akrotiri, see also Doulas 1983, 130; 1986, 236; Boulotis 1992, 90, n. 27.

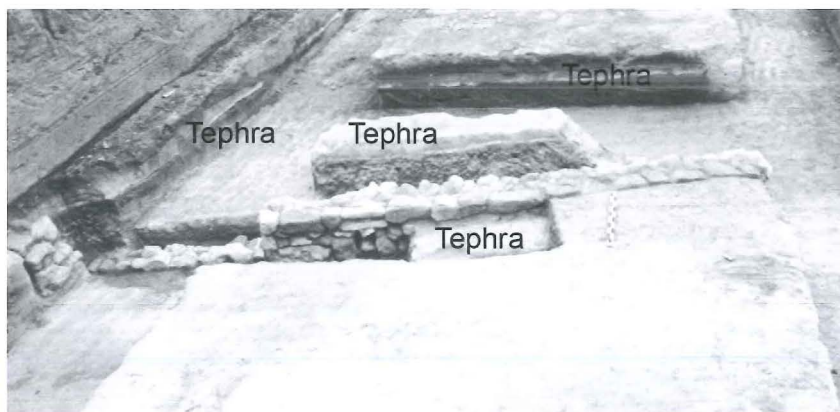


Fig. 22. LB IA elongated walls at Kremasti.

Aegean centres. One of the common characteristics between Trianda and Akrotiri is the presence of imported Koan light-on-dark and dark-on-light pottery.⁸¹

During this flourishing phase of the settlement, and as a result of the hardships caused by the earthquakes, tephra fall and floods of the LB IA, the inhabitants of Trianda expanded to other locations of the island, including the nearby area of Kremasti. A small deposit of conical cups, the first (and unexpected) evidence of LB I presence within the city of Rhodes, was found recently near the Venetokleion School.⁸² The site is on a low hill, where most probably a LB I site may have existed in parallel with the Trianda settlement, and the site at Kolymbia.⁸³ Most recently two parallel elongated and unfinished walls were found covered with tephra at the area of Kremasti⁸⁴ (Fig. 22). The structure unearthed to a length of 14 m. is part of a retaining wall, as indicated by its revealed length and the channel that was opened vertically across one of the walls to allow rainwater to drain away. The unfinished walls at Kremasti show the efforts of the inhabitants to erect a new structure, beginning with a retaining wall, to protect themselves from floods: extra evidence that they had already experienced flooding after the earthquake and before the tephra fall. This expansion coincides with the movement of the population to safer areas after the earthquake and before the tephra fall. As well as severely harming both agriculture and cattle breeding, these disasters also significantly altered the environment. It was at this stage, after the tephra fall, that the inhabitants constructed the impressive

flood-control system in the NW sector of the settlement.⁸⁵ Similar thick walls continued to be constructed until the very end of LH III A:2–LH III B, when, following another devastating flood, homes were abandoned forever.

During these periods of successive natural disasters the inhabitants of Trianda might well have sought refuge again on Mt. Phileremos, as has been indicated by the presence of LM I A–LH III A:2–III B and LH IIIC finds in the area of the Athena temple on the acropolis of historical times. The devastating earthquakes, tephra fall and flooding – phenomena that touched more or less the whole of the Aegean – may have caused the inhabitants to undertake ritual activities at different locations, both within the settlement and on the mountain. There is a possibility that such activities may also have been influenced by Minoan religion.

Conclusions

The examination of the MBA at Trianda, Phileremos and the surrounding areas shed new light on the background of the long tradition of the area before the Minoanising era of the LB IA in the

⁸¹ Marthari *et al.* 1990.

⁸² Mpairami, K., 'Οικ. Φώτη', *ArchDelt* (2000) *Chronica* (forthcoming).

⁸³ Marketou 1998a, 63.

⁸⁴ Marketou, T., 'Οικ. Τσιτσιμοίρη', *ArchDelt* (2000) *Chronica* (forthcoming).

⁸⁵ Marketou 1988, 31, fig. 9; 1998a. 61–2, pl. II.

Aegean and the development of the large town at Trianda. During the MBA period, a period with many local characteristics continued from the prosperous EBA 3 period at Ialysos, a few imports from MM IB–MM II Crete do not suggest any strong and tangible Middle Minoan influence on the island.

It is during the mature phase of the LB IA settlement, that the new town at Trianda adopted many Cretan characteristics, as happened at most Aegean sites: Ayia Irini, Phylakopi, Akrotiri (but see Nikolakopoulou, this volume) and Miletus. This evidence is not so strong at Serayia on Kos, where the MBA period appeared similar to Ialysos on Rhodes, whilst in Asia Minor, Iasos appears much less Minoanised than Miletus. However, Minoan imports and Minoanising artefacts have been found at all these sites which, however, attained different levels of Minoanisation. The most prominent Minoan architectural element at Serayia on Kos is a 'provincial' polythyron. Minoan imports also occurred on Kos alongside massive amounts of local light-on-dark and dark-on-light pottery that was exported to several sites of the Aegean, Crete and most probably to Asia Minor.

The town planning at Trianda has some similarities with Akrotiri. Sharing a common fate with the Therans, the Rhodians experienced two earthquakes followed by the tephra fall, events which changed their lives. Though it seems a monumental task to define the local society according to data derived from an excavated area of 5,280 m², there is enough evidence for a general definition of the role played by the members of the society of Ialysos and Serayia in this Minoanising period of the Aegean.

The ritual evidence from Philereimos, dated to the LM IA and the LH III A:2 and III B periods, occurs in periods when the Ialysians were in danger (because of the earthquakes and the tephra fall). During the period of the first catastrophe in the mature phase of the LM IA the inhabitants of the Trianda plain retained their strong local character while developing a Minoanising way of life more or less like the other Aegeans. It seems therefore that the locals, with their strong local cultural background, did not develop in isolation, but rather they

participated in the phenomenon known as the Pax Minoica, not only as an expression of elitism, but as a need to survive after the environmental destructions. They needed a kind of political organization to re-organise their homes and their individual social system. Thus, when their agricultural and cattle raising organizations could not meet the environmental change after the tephra fall they might have accepted a kind of help from the rest of the Aegean people, perhaps notably the Cretans.

During this period and under such circumstances Aegean maritime trade developed a process⁸⁶ in which the Rhodians participated peacefully with the Minoan traders. It seems possible that they may have adopted some aspects of Minoan religion, to face danger and catastrophe. In a period of serious environmental damage and changes, Ialysos played an important role in the so-called Pax Minoica of the Aegean, by adopting some of the Minoan elements and by participating in the exchange patterns as a member of the maritime organizations. This period definitely could not be a period of war. As long as the Theran fleet with the merchants (either Therans, Cretans, or other Aegeans) sailed to Crete or Cyprus the participation of the Ialysians seems possible, and Trianda might have played a role of a station or emporeion. The similarities of some Trianda frescoes to those on Thera are indicative of this relationship.

This concept reinforces the hypothesis that the Miniature fresco painter might have seen a settlement like Trianda, either working there, or obtaining a sea-farer's view from the sea.

Moreover religion, along with their other beliefs and their long local tradition, might have also played an important role during the days of the natural catastrophes. The long standing question of a Minoan Thalassocracy and the existence of Minoan colonies, or not, in the Aegean may be re-examined in the light of the data from the most recent excavations, and the new evidence for cult places in the area.

The subtropical landscape surrounding the coastal town IV in the West House at Akrotiri could

⁸⁶ Doulas 1986.

also be discussed in the light of the new evidence presented here and in relation to the role of Ialysos in maritime trade in the area, before the eruption of the Thera volcano. Thus, sea-farers could have visited their sanctuaries, open air or not, on Mt. Phileremos to devote the precious and exotic objects mentioned above. The sanctuary might have been visited again in the LH IIIA–IIIB during the period of the floods. And when the flood caused serious erosion of the mountain, its earth being soft and clayey, according to Diodorus,⁸⁷ they left their homes for ever.

The paradigm of Hellenistic Rhodes, which controlled the seas for a long time, destroyed pi-

racy, and became a friend to the Romans and to Greeks, provides a clear picture of the maritime role of the island in the historical periods,⁸⁸ which seems analogous with the circumstances in the Aegean Bronze Age. Consequently, in both instances, Rhodes preserved its independence.⁸⁹

⁸⁷ "...and during their lifetime there came a great deluge and Cyrbe was buried beneath the flood and laid waste.". (Diodorus Siculi V57-13-15 and V58)

⁸⁸ Gabrielsen 1997.

⁸⁹ According to Strabo, Γεωγραφικά, 14.2.5[C652].

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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 20th 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)¹, 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 2nd Millennium BC, Cretan merchants extended the influence of Minoan culture to the northern Aegean as well, form-

¹ 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

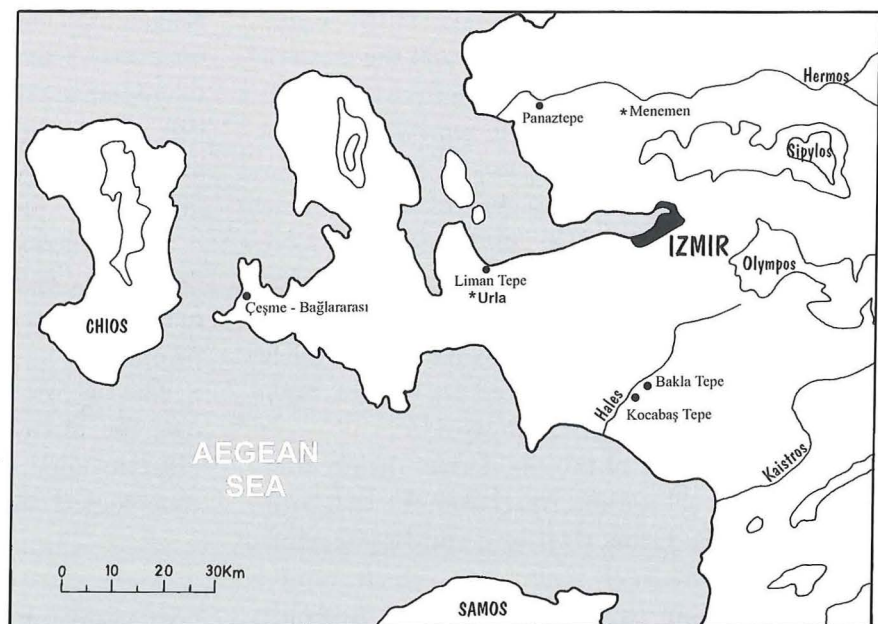


Fig. 1. Map showing the sites, investigated by IRERP.



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.² 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-

² 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 2002³ 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)⁴. 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-

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

⁴ 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.⁵ 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.

⁵ 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,⁶ Panaztepe⁷ and



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

Kocabaştepe⁸ 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 Theran origin belonging to the dark-faced incised pottery group (Fig. 6).⁹

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

⁶ Günel 1999a, 53, abb. 14, no. 16-17.

⁷ Günel 1999b, 52, lev. 106, 162.

⁸ Aykurt 2004.

⁹ 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,¹⁰ 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 clay¹¹ and from Thera wall paintings¹² 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.

¹⁰ Sakellarakis & Kenna 1969, nr. 121, 24D, 31D.

¹¹ MacGillivray 1998, fig. 2.24, pl. 47, 148-9.

¹² Marinatos & Hirmer 1976, fig. 153.

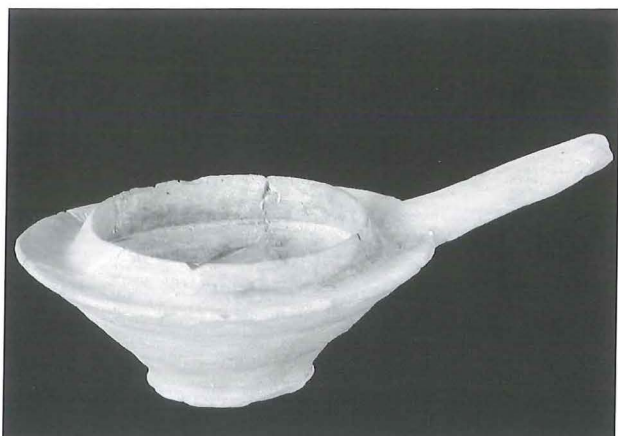


Fig. 8. ÇB, Incense burner, Phase 1.



Fig. 10. ÇB, Minoan imports, Phase 1.

The small group of Minoan imports are distinguished by their high quality (Fig. 10). They are of polychrome¹³ and tortoise-shell/ripple wares¹⁴ 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-handled cups are the most common forms¹⁵ (Fig. 12).

Among Cycladic wares, there are some fine,

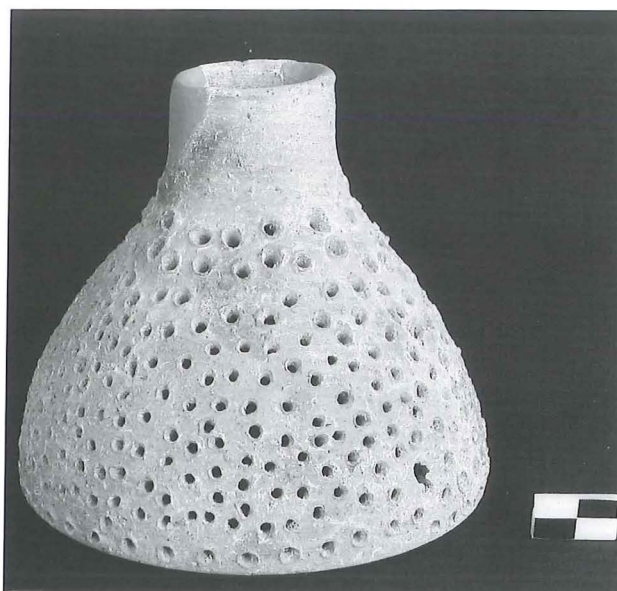


Fig. 9. ÇB, Perforated lid, Phase 2b.



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

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

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

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

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

¹⁶ 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.¹⁷ Imports from mainland Greece are represented by some sherds of Aeginetan wares¹⁸ 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,¹⁹ produced locally, were also found in the pits.²⁰ 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,²¹ 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 Thera

¹⁷ Erkanal & Karatugut 2004, res. 7.

¹⁸ Cf. Zerner 1993, 49.

¹⁹ See Evelyn 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.

²⁰ Erkanal & Karatugut 2004, res. 8.

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

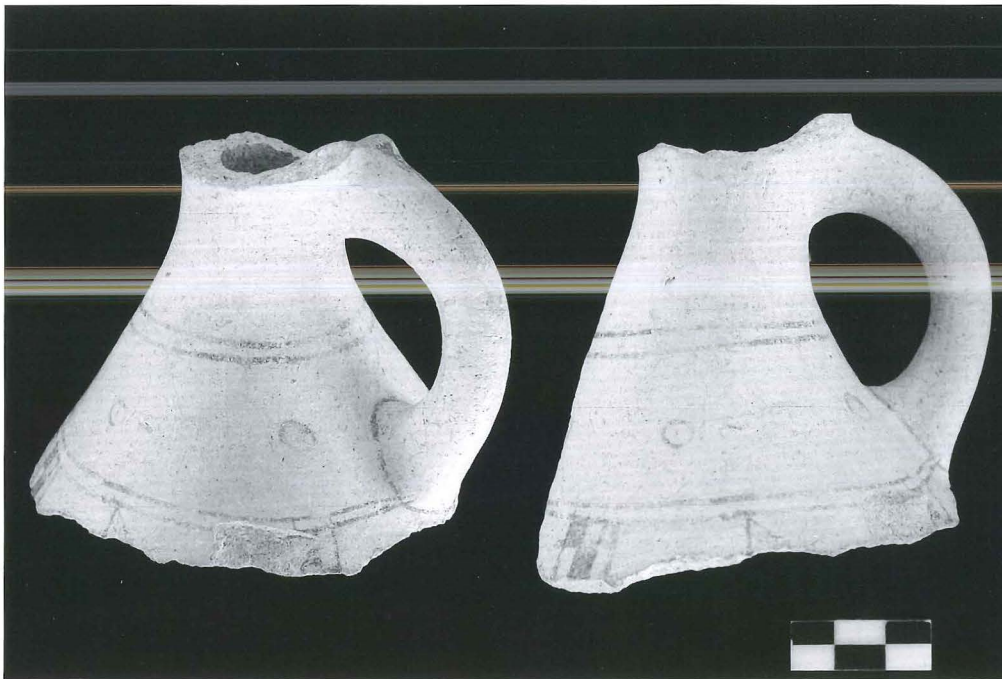


Fig. 13. ÇB, Imported Cycladic jug, Phase 1.

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 affects of Theran 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).²² 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.²³ It may be a Minoan import.²⁴ 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 2nd Millennium BC, has already been defined and accepted as a cultural phenomenon and discussed by many scholars,²⁵ 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 colonies²⁶ 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.²⁷ 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.²⁸ 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.

²² Erkanal 1996.

²³ Şahoğlu 2002, pl. 116.

²⁴ 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.

²⁵ Branigan 1981, 1984 and 1989; Wiener 1984 and 1990; Melas 1991 and Berg 1999.

²⁶ Branigan 1981.

²⁷ Niemeier & Niemeier 1999, 552.

²⁸ Melas 1991; Davis 1979.

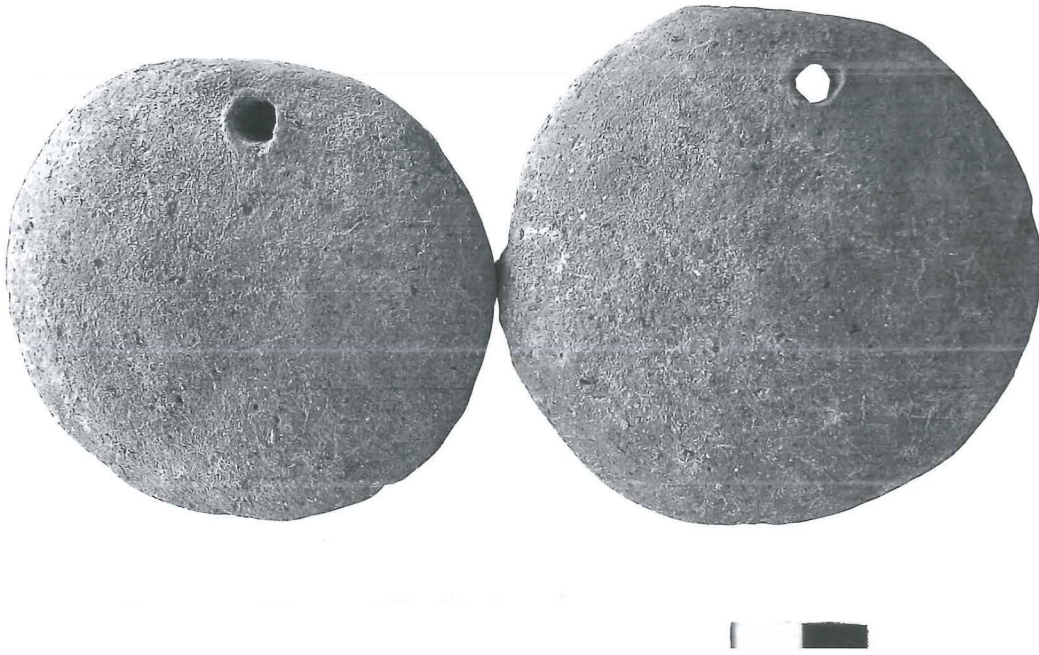


Fig. 15. Liman Tepe,
Minoan type loom
weights.

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.²⁹ Finds from settlements such as Miletus,³⁰ Iasos,³¹ Bademgediği,³² Teichiussa (Kömür Adası),³³ Tavşanadası,³⁴ Troy³⁵ 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".³⁶ 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.³⁷ 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.

²⁹ Matsas 1995.

³⁰ Niemeier & Niemeier 1997 and 1999.

³¹ Momigliano 2000 and 2001.

³² Meriç & Mountjoy 2002 and Meriç 2003.

³³ Voigtländer 1986 and 1988.

³⁴ Tül 1986, 722-4.

³⁵ Guzowska 2002.

³⁶ Wiener 1984, 17.

³⁷ 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.³⁸

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 2nd Millennium BC presenting an opportunity for more accurate correlations.

³⁸ MTA 1981; Lengeranlı 2008.

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The Bronze Age settlement of Teichiussa

Walter Voigtländer

This paper gives a summary of what is discussed and written in a recent published monograph.¹

Thucydides mentioned Teichiussa. He wrote² how Alcibiades, the famous, well loved and hateful Athenian, came on horseback from Miletus to Teichiussa to meet a commander of the Peloponnesian fleet which lay at anchor there. Alcibiades did not need a ship for this short trip and the fleet was hidden in the neighbourhood of the Milesian metropolis after entering the Bay of Mandalya. This ancient reference is one of several arguments used to support the identification of our archaeological area as Teichiussa.³ G. Bean preferred a location at Doganbeleni,⁴ an idea repeated by E. Olshausen.⁵ Other authors like P. Le Bas and W. H. Waddington⁶ were thinking in terms of a location situated south of Didyma.

The Teichiussa area is situated between Miletus and Iasos on the southern shore of the Milesian peninsula and more or less half way between Crete and Beycesultan in Lydia (Fig. 1). Springs of the Maiandros River are located near Beycesultan with its well-known architecture dating from Chalcolithic to the first half of the second millennium BC.⁷ At that time, the famous Maiandros ran into the Aegean Sea at the northern shore of the Latmian Gulf not far from the Milesian peninsula.

In the course of our investigation, we found three settlements of different periods close together at the coast (Fig. 2):

1) Neu-Teichiussa, now under a modern holiday camp. We supposed it was founded in the late Classical or early Hellenistic period, the date based only on photographs of small finds. These finds were excavated in the area of Neu-Teichiussa by the mu-

seum authorities of Aydin (ancient Tralleis), some years before we started our work.⁸

2) Teichiussa, the early-Antique town built on a peninsula some one hundred metres east of Neu-Teichiussa; it was not rebuilt after its destruction in about 500 BC.⁹

3) Alt-Teichiussa, a Bronze Age settlement situated on a magula between both; it was not built upon in later periods.¹⁰

Last, we discovered and explored, in the surroundings of these three settlements, monuments of Archaic phases, which are important to the history of culture in general and of architecture in particular in this area between the Aegean and Asia Minor.

The newly discovered ruins and finds from Bronze Age and Pre-Classical phases give an impression of an early, highly cultivated and independent territory continuing there to the end of the 6th century BC.

¹ Voigtländer 2004, 113–31. Thanks to Jim Smeader for proof reading the English manuscript.

² Thuc. 8.26.

³ Voigtländer 2004, 2. 297.

⁴ Bean 1976, 890–1.

⁵ Olshausen 1979, 557.

⁶ Le Bas & Waddington 1888, 238, 242.

⁷ Seton Lloyd & Melaart 1962 *passim*.

⁸ This Neuteichiussa can corresponded with a village (kome) of Miletus mentioned in a Hellenistic inscription: Rehm & Harder 1958, 6, 6. 228, I. 231, I 2. 275.

⁹ Teichiussa is first mentioned in an inscription on the Chares statue of the earlier 6th century BC: Tuchelt 1970, 78 ff. K 47 (= BM 278).

¹⁰ See note 1.



Fig. 1. Map of Caria.

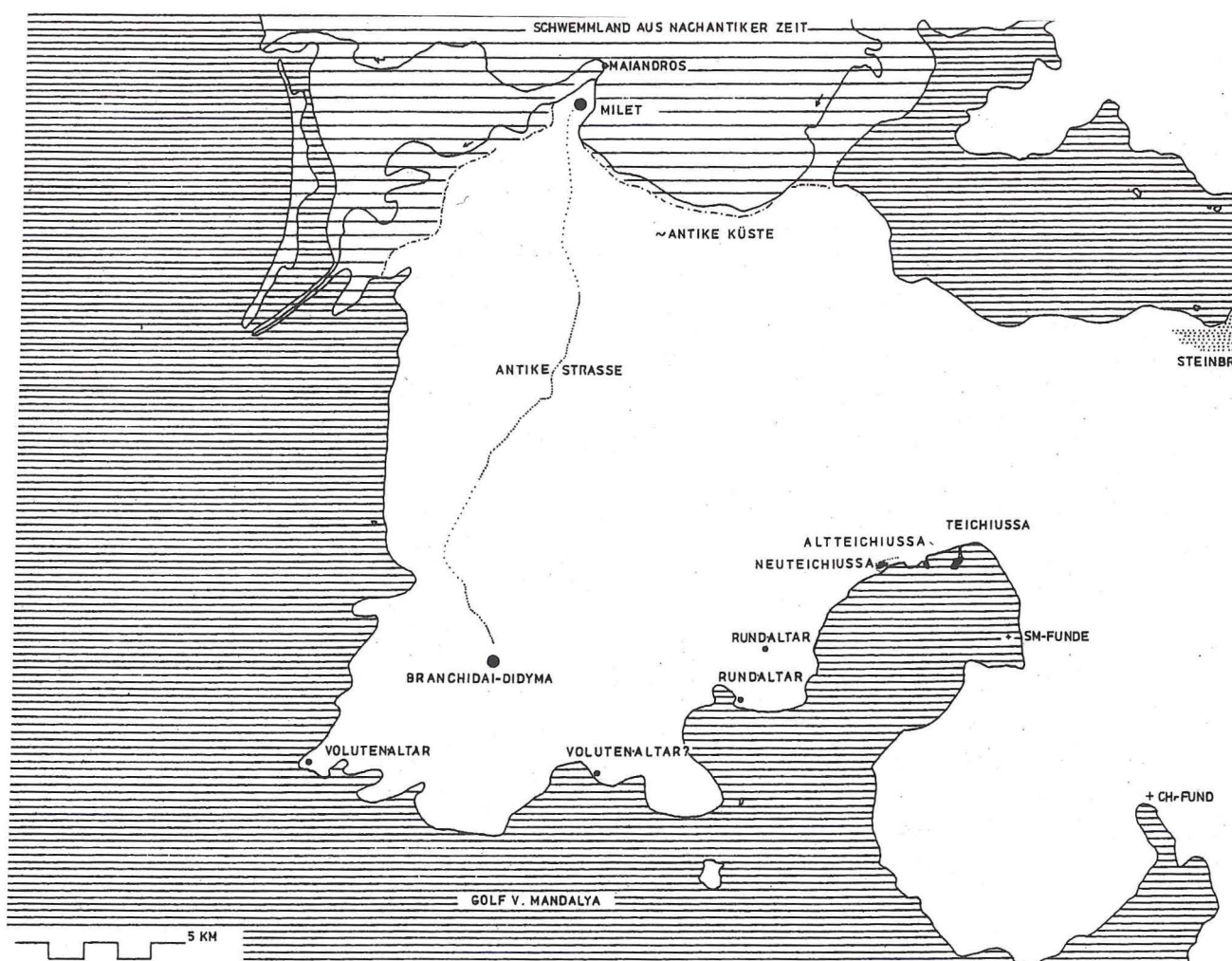


Fig. 2. Map of Miletia.

Since 1984, when our field-work at Teichussa began,¹¹ our main problem was the question of whether Teichussa should be described as an Aegean bridgehead or as a harbour location for Asia Minor as Lisbon, for example, is for Europe. In other words, how could we describe the position of that area in the border zone between the Aegean and Asia Minor? How could we ascertain the origin or descent of the inhabitants of the settlements? What of local production and the direction of trade in portable finds? What of the cultural context of the architecture that we discovered?

We had to assess each phase and period in terms of the relative levels of eastern and western influence. In addition, how independent of these influences was the site and were there other influences from all points of the compass?

But what kind of influence could come from the 'west', chiefly the north and south Aegean and all the islands in between? How can we identify what is local and what is eastern (Lydian, middle Anatolia, Isparta region) during the Bronze Age? We encountered difficulties in applying accepted terminologies in this relatively unknown area.

During our work we became more and more certain that the accepted view of Anatolian people as more or less mere spectators, while Minoans, and later Mycenaeans, made history during the Bronze Age in Asia Minor was wrong. Also the concept that Carians and Lelegians were

¹¹ Mellink 1985, 551-2, 558; Voigtländer 1986, 613-67; Mellink 1987, 16-7; Voigtländer 1988, 567-625.

only uncultivated and passive peoples when, later, the Greeks arrived on the coast, is not at all helpful when trying to interpret the complex state of affairs in Caria. We needed different methods to come closer to historical and prehistoric realities. We also learned to be cautious when using terms such as evidence, influence and immigrants, as well as modern name labels such as Minoans, Carians and Cycladians.

It became clear to us that it is not enough to look merely at the condition and types of vases and other portable finds associated with uncovered walls in order to determine the identity of the settlers, their origin and their cultural and civilising background.

Alt-Teichiussa occupies *c.* 1.5 hectares. Some walls were partly lower than sea level which was surely more than two metres lower during the second millennium BC. This is based on an observation in the bay 4 km east of our settlement, where we found, at a depth of 2 metres, very large vessels which could have been produced during the period of habitation of Alt-Teichiussa.

Finds from the settlement and discussed here can be divided in to three groups:

- 1) Implements of stone and obsidian, fragments of vessels from the Chalcolithic and EBA periods with no stratigraphic connection to any of the architecture.
- 2) Implements in clay and fragments of vessels found beside unbroken vases of LM I, as well as good, solid architecture with courts, halls, rooms and passages such as narrow streets and public areas.
- 3) Fragments of vases from Protogeometric to Late Archaic from destroyed tombs dug into the LBA layers and walls.¹²

Alt-Teichiussa was occupied during the later Chalcolithic. It is enough to mention typical baking plates. Similar material was found in Pythagorion on Samos and is published as Chalcolithic III¹³ and in Doganbeleni¹⁴ between Teichiussa and Iasos. We cannot see clear differences between Late Chalcolithic finds and the EBA material at Teichiussa. EBA – dated material from Alt-Teichiussa is comparable to well-known and published finds from Iasos and the Samian He-

raion, from the first settlement of Miletus and from Killiktepe nearby.¹⁵

The material is typical of the west coast settlements of Asia Minor from Mysia to Caria and the Aegean sites from Samos to Kos, especially of sites around the Carian Sea. This simple and homogeneous pottery is surely not imported but produced close to the settlements where it is found, and therefore can be used to identify members of a population throughout this region after the end of the Neolithic period. However, it is not clear for how long these people of unknown origin produced their handmade, red monochrome, straw-tempered clay vases.

EBA material excavated in the centre of Miletus came from an undisturbed, grey clay layer.¹⁶ Marija Gimbutas¹⁷ suggested that the so-called Kurgan people destroyed Miletus in about 2300 BC. Even if doubts remain, this may indicate the reason for the end of such an early occupation in Miletus. If similar destructions can be identified in the area under consideration, it is possible that the whole culture identified by its red monochrome vessels ended at that time along with the first occupation of Alt-Teichiussa.

There are no clear signs of habitation in the period between the end of the production of red monochrome ware and the time when architecture occurred in Alt-Teichiussa. We only found some fragments of black burnished pottery. It could be EBA III or earlier, because similar pieces of this ware were found together with the EBA material at Miletus. And from Alt-Teichiussa, came a dark grey, burnished sherd with incised decoration filled with white.¹⁸ It could be Cycladic (Syros ware) or from Asia Minor, in the tradition of Yortan pottery production.

¹² Voigtländer 2004 pl. 65-8, 142-77 (small finds). 2-15. 94-6 (architecture).

¹³ Felsch 1988 pl. 31, 3. 6 nr. 280. 31, 7. 35, 8 nr. 68. 40, 2 nr. 424-5.

¹⁴ Voigtländer 2004, 62 fig. 6, 332.

¹⁵ Voigtländer 1983, 5-39.

¹⁶ Voigtländer 1982, 36-8.

¹⁷ Gimbutas 1973, 133.

¹⁸ Voigtländer 2004 pl. 143, 10.

All the vessel and implement types with clear signs of south Aegean influence are well known. The inhabitants acquired this material through trade, since we could not find any sign of a production centre in or near Alt-Teichiussa.

Among the implements are loom weights with grooves on flattened upper part and Spinnwirtel (spindle whorls), a grate or grill, a small shovel and a kind of incense burner or firebox. Among the closed vessels are some with simple decoration of horizontal bands or wavy lines in light-on-dark ware. Among open shapes were examples of so-called red washed ware with typical, thin profiles. Unpainted vessels with buff surfaces, e.g. jugs with knobs at the rim and handles, are very common. A jug from Thera with Linear A signs is similar in form and decoration and may be used as a chronological indicator.¹⁹ In addition, coarse ware lids, vessels with horizontal incised bands and cooking pots came to light at Alt-Teichiussa. Open shapes included cups with several profiles, conical cups and the lower part of a large closed vessel that was used in this fragmentary state as a dish or bowl. Lastly, there was one example of a hybrid jug with spout, one vertical and two horizontal handles, two simple horizontal relief bands and three feet in the form of simple volutes known from burned vessels in Keos.

This small selection of portable finds is sufficient to get a picture of the chronological range and production techniques of domestic wares at Alt-Teichiussa. The material is related to the architecture and gives an impression of life and lifestyle in the settlement. All these vessels were found on the latest floors of the houses and in the streets.

Although a specialist may be able to divide the material into earlier and later pieces, the precise time range represented cannot be defined with certainty. All the vases and implements are of the 2nd millennium BC and were in use up to the moment the settlement was abandoned. This is a single phase settlement in architectural terms and we suggest that it is contemporary with Late Minoan IA.

We found no human or animal bones in the sectors investigated. Nor could we recognize clear signs of destruction by war or fire. However, it

is difficult to find such signs in an area near the water line. Stones beside some walls could have fallen or were perhaps moved there. But a decision as to whether such stones fell down because of earthquakes, human activities or sea erosion in a space of more than 3500 years is impossible. But all observations and evaluations lead to the interpretation that the inhabitants in the explored area left their houses at a single moment and did not return.

There are some more observations about the last phase in Alt-Teichiussa:

1) We found eleven vessels in a group with a quern-stone at a shallow depth below the existing ground level upon the uneven loamy, earthy floor of house V. Two interpretations are possible. Either the vases were part of the domestic assemblage of house V or the group is a distinct sign of departure when people hurriedly left and forgot to take these collected vessels.

2) In the street between house VI and VII two vases were found *in situ* under a thin red-yellow clay layer in grey soil. Particles of ash coloured the soil. One vase has a basket handle, perhaps used as a pail; the other vase was a jug with light-on-dark decoration. These vases stood in the street during the last hours of the settlement's occupation; they remained, tilted over and broken, as we found them. They could be again signs of an unexpected event.

3) We found white grey and crystalline ash outside the entrance of house II. Some small lumpy pieces appeared to have needles on their surfaces and are probably tephra. Sea water had disturbed the rest.²⁰

4) We observed ash in a fireplace inside house IV. This was dark grey like the ash of carbonized material. Thus, there were two different kinds of ash present at the last moment of the settlement, one in a room under cover and another in an open area.

¹⁹ Marinatos 1971, 128 fig. 23.

²⁰ It is interesting to note that comparable „crystallic“ and light grey ash formed in lumps with needles on the surfaces and with diameters up to 10 cm have been found west of the bouleuterion in Miletus above the destruction level of early 5th cent. BC.

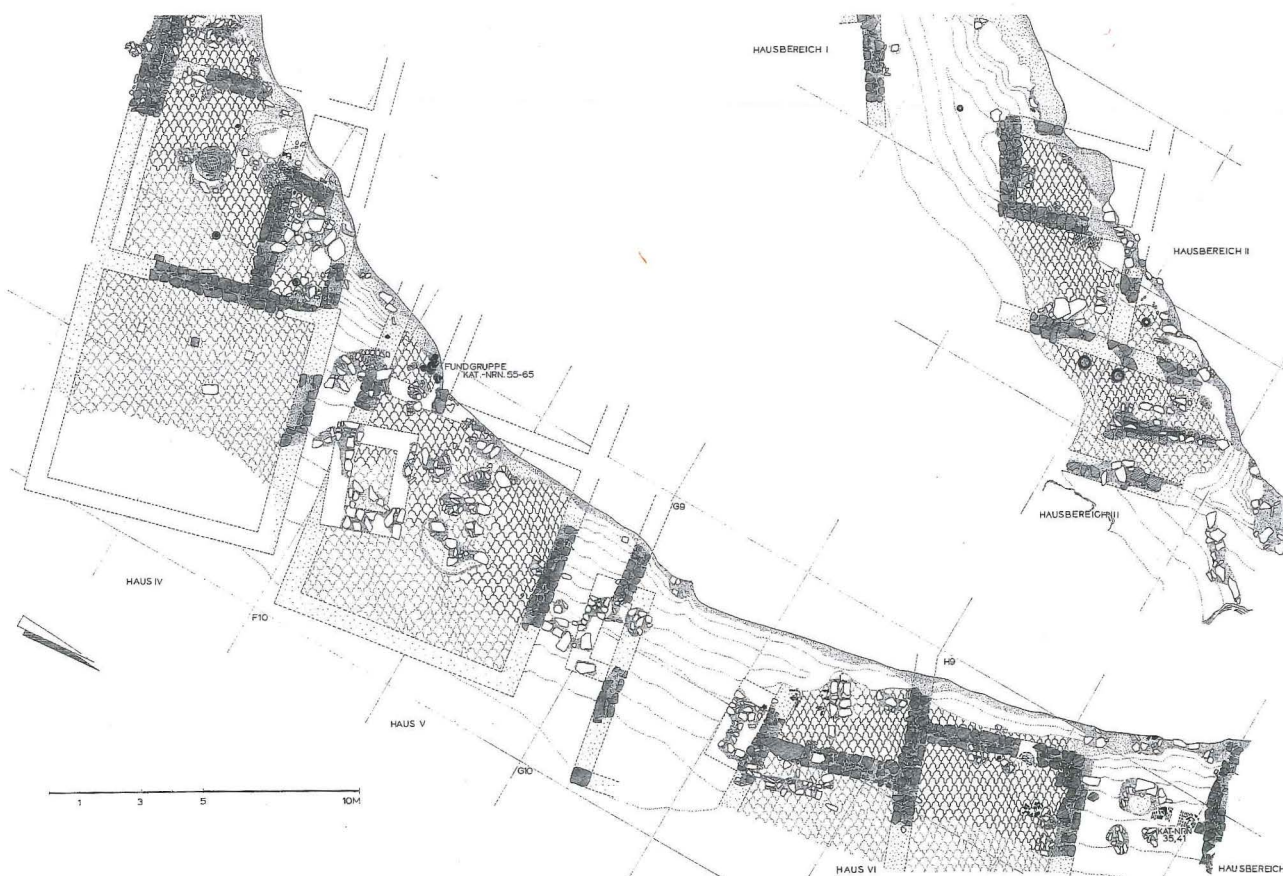


Fig. 3. Alt-Teichiussa. Ground plans of houses.

These last observations may indicate that tephra-fall had something to do with the end of the settlement. However, the tephra layer was not thick (0.05–0.10 m thick) and may not have presented a real danger. Nevertheless, people did leave and did not come back. There is no evidence of any settlement during the rest of the 2nd millennium BC. The reasons for this are unknown. However, it is remarkable that our region remained deserted, while Miletus and Iasos received an influx of new inhabitants.

Attempting to put this event into a historical context, in terms of what was happening between Beycesultan, Thera and Crete, we can say that this moment marked an end to the period of peace in the Aegean, west Caria and Lydia where fortifications were unnecessary. Tephra was also found at Sardis but not in a secure context. The date for the end of occupation at Beycesultan suggested by S. Seton Lloyd and J. Mellart is not far removed from the eruption on Thera now dated by some to the

later 17th century BC. Whatever the final outcome of the Thera eruption debate, there are excellent indications for a synchronism between the end of Alt-Teichiussa on the Carian coast and of Akrotiri on Thera.

The last part of this paper concerning this small village of some 20 houses at the interface between the Aegean and Asia Minor, is reserved for some remarks about the architecture and its context. The buildings were large with solid foundations up to 0.80 m. thick, often rectangular in plan made of unhewn stones with a framework of clay and wood in the upper parts. Ceilings or roofs were flat. Loamy earthy floors predominated in courts, rooms and streets. No steps were recovered.

These buildings belong to two traditions:

1) Houses IV and V (Figs. 3 and 4) represent a single tradition. Both are rectangular and measure more than 8 by 14 meters. They have courts on

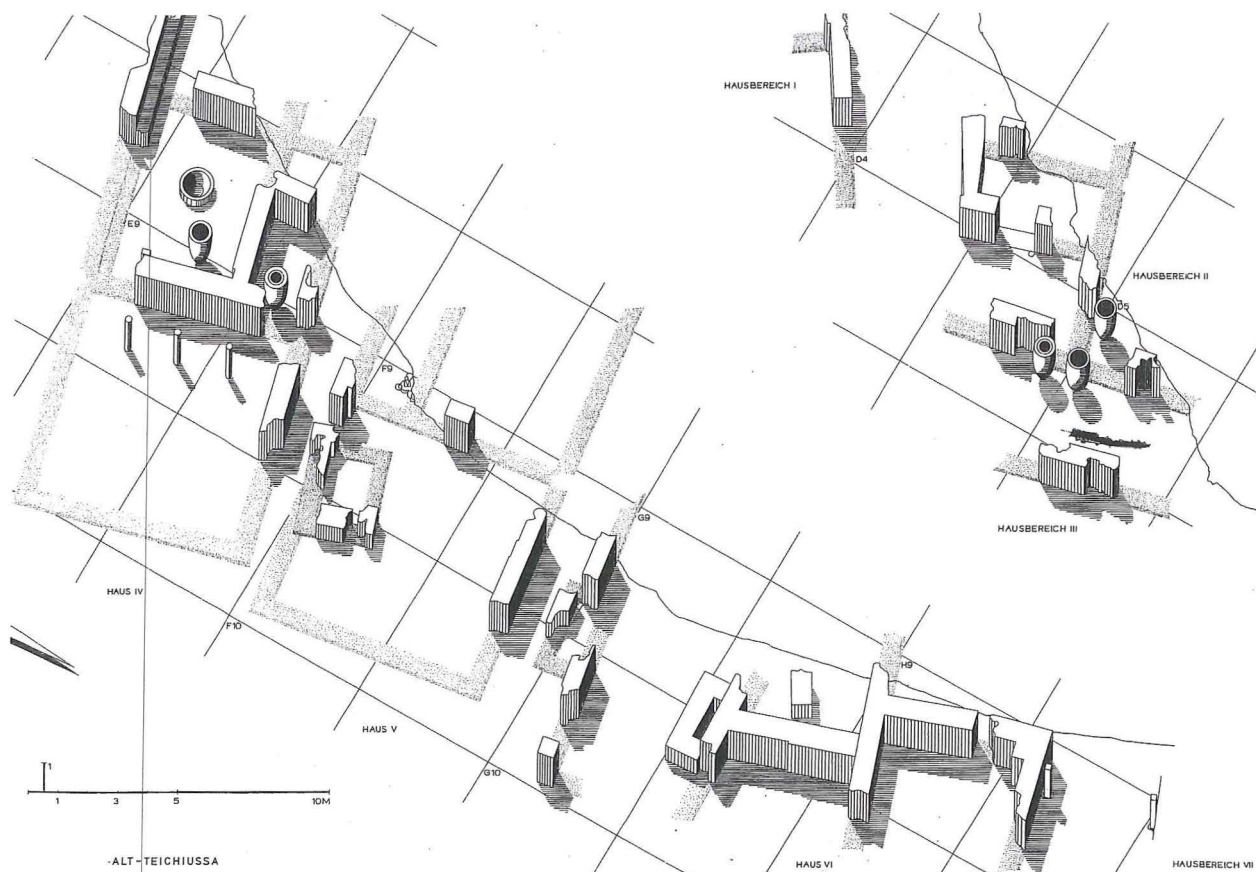


Fig.4. Alt-Teichiussa. Partly reconstruction of the houses.

their east sides and a hall in front of two rooms situated side by side. Other rooms follow behind. The ground plans of both buildings are not aligned with one another but rather converge at their east sides. M. Korfmann would have said that the houses represent a modified Anatolian village plan. The arrangements of the rooms in both houses appear to display a kind of symmetry. For example, the main room of house IV is on the left while that in house V is on the right.²¹

House IV has a long bench against its south wall and a hearth in the middle of the main room. The bench is built of stones, the round hearth of clay. This combination of a bench and hearth is known from the EBA Megaron A at Beycesultan. However, the bench at Alt-Teichiussa leads from the main room through a passage into a second chamber. Only Room of the Throne at Knossos and its antechamber display this architectural arrangement. A single wall separates two rooms with such benches at Knossos; at Alt-Teichiussa,

textile hangings could have separated the two rooms.

However, neither building at Alt-Teichiussa really has anything to do with south Aegean architecture. They reflect a tradition that goes back to EBA although convincing predecessors or comparisons are hard to find, either in the Aegean, Mainland Greece, the Troad or Lydia. However, we can be sure that the remains in no way reflect south Aegean owners or builders.

It is unknown when these people arrived at the site. Both houses could have been constructed earlier than the other buildings in Alt-Teichiussa even though they were ultimately inhabited at the same time as the other buildings in LB I.

2) The other buildings: On either side of the double complex comprising Houses IV and V, the houses are in no way humble like fishermen's cottages.

²¹ Voigtländer 2004, 117-9, 123-7.

The ground plan of one of the buildings could have been as large as the plan of the well-known West House at Akrotiri on Thera. The architecture seems generally Mediterranean, but not specifically Thera, Cretan or Aegean. Good comparisons are missing.

Nor is there any obvious relationship to the known architecture of Asia Minor. It should be noted that at Beycesultan great architecture arises during the first half of the second millennium BC, belonging to different traditions. There are buildings with rooms side by side that belong to the local tradition that goes back to the EBA. At this time, people brought the idea of the Megaron to Beycesultan, a feature which was then mixed with local ideas. The result was a typical plan of rooms set side by side.

The famous residence in Beycesultan with more than forty excavated rooms and courts follows other ideas. Its design has nothing to do with local architecture. Again, this building has some features that are more Mediterranean than Anatolian, although there are no good comparisons in the Aegean or in Anatolia.²²

This is exactly the same situation found at Teichiussa with well-designed buildings containing rooms, halls and courts. But halls, for example, have also been found at Troia, Cretan Kommos and perhaps at Beycesultan. The same phenomenon occurs near the springs and delta of the River Maiandros, beginning at about the same time as south Aegean trade reached the west coast of Asia Minor. Both the residence at Beycesultan and the well-designed houses at Teichiussa give an impression of aesthetic considerations. However, the origin of the Lydian residence and Carian houses remains obscure. Certainly the origin does not lie to the north or east of Beycesultan. Rather, the ideas came from the south or west in the areas north and south of the Maiandros River. We leave it to others to discover the precise origin of the architecture – Phoenician territories, Rhodes, Thera or the centre of the south Aegean? From an independent perspective, it is presently impossible at this time to label this architecture typically Anatolian or Aegean; it may be a combination of different influences combined with local ideas.²³

We make a final remark about an interesting phenomenon. In the Bronze Age cemetery of Phourni-Archanes in central Crete freestanding tombs belonging to different traditions have been excavated.²⁴ Some were built during the time of Mycenaean influence; others were built using techniques related to Cretan villas, palaces and town houses. However, the large burial complex B has its own tradition.

Its façades are constructed in a regular manner, while the inner arrangement of a dromos, a tholos and other chambers on different levels are very different. The builders used hewn stones only for the foundations, façades and vaults. During the long period of use, the owners changed the inner arrangement. The architecture of complex B is far removed from any “Versailles effects”. However, the owners of this burial building ordered the same beautiful pottery as the owners of the tombs nearby and the inhabitants of local palaces and towns.

We found no tombs in the time of Alt-Teichiussa. We did discover many freestanding tombs of the Archaic phases in the surrounding area.²⁵ The tombs are built on bedrock, the ground plans measuring between 40 and 100 m² with heights up to about 3 m. The façades of some are constructed in a regular manner. The interior arrangement consists of corridors and different chambers like bee-hives and niches. Again, hewn stones are used only for vaults and walls. There can be no doubt that complex B in Phourni is the prototype of our tombs. It is improbable that such a developed type would be created twice independently.

Two possible explanations for this phenomenon spring to mind. First, Cretans continuing to live with a Bronze Age tradition came to the southern coast of Miletus at the beginning of the first millennium BC bringing to Caria this idea for tomb building. Secondly, some of the inhabitants at Alt-Teichiussa one thousand years before brought this

²² Voigtländer 2004, 87–90, 107–13.

²³ Voigtländer 2004, 12–7.

²⁴ Sakallarakis 1973, 168 fig. 1.

²⁵ Voigtländer 2004, 236–60, 267–72.

special custom to Asia Minor and the idea survived. Whatever the correct conclusion, a close connection between the history of architecture in Crete during the LBA and Caria in the 6th century BC can be argued with some conviction.

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Minoans at Iasos?¹

Nicoletta Momigliano

In this paper, in compliance with the title of this Minoan Colloquium, I shall briefly examine the evidence for 'Minoans' at Iasos, a substantial multi-period coastal site in Caria, SW Turkey, located at the head of the Gulf of Güllük (also known as the Gulf of Mandalya), and halfway between Miletus to the north and Bodrum (ancient Alikarnassos) to the south.

The first modern archaeological exploration of this site began with Doro Levi's excavations in 1960,² which had the specific aim of investigating the relationship between prehistoric Caria and the Aegean civilisations, and the related issue of the 'Minoan Thalassocracy'. In the early 1970s, Clelia Laviosa, who shared Levi's aims and prehistoric interests, succeeded him as director of the excavations. After about a decade at the head of the Italian Archaeological Mission at Iasos, Laviosa was succeeded by Fede Berti, whose work has focused on later periods. Although no longer director of the Italian Mission, Laviosa maintained a close interest in Iasos until her untimely death in 1999. My own work at this site, which started at Laviosa's invitation, just before her death, has consisted so far of the study for publication of the MBA and LB I levels from her and Levi's excavations.

As is well known, Levi and Laviosa had no doubts about the presence of 'Minoans' at Iasos, whom Laviosa explicitly saw in terms of Middle Minoan colonists bringing urbanisation to the SW shores of Turkey.³ Thus, given the title of this Colloquium – 'The Minoans in the central, northern and eastern Aegean' – it seemed obvious that all I needed to do was to follow in Laviosa's footsteps. As I started thinking about my task, however, I immediately stumbled on a number of problems.

The first problem was: what do we really mean by 'Minoans'? At first, I thought I could find a solution in the article promisingly entitled 'Who were the Minoans?' by Colin Renfrew, in which he gave the (deceptively) simple answer: '[T]he Minoans were the prehistoric inhabitants of Crete. Noth-

¹ Acknowledgments: I should like to thank the organizers of the Minoan Seminar (E. Hallager, W-D. Niemeier, and C. Macdonald) for inviting me to speak at this 'Minoan Seminar', and especially Wolf Niemeier for gently twisting my arm ... Many friends and colleagues have been generous in sharing ideas, advice, and criticism: I should like to thank, in particular, Andy Bevan, Cyprian Broodbank, Jack Davis, Don Evely, Evi Gorogianni, Carl Knappett, Toulia Marketou, Peter Warren, and Marika Zeimbekis (and I hope to be forgiven by those whose names I have inadvertently omitted). My research at Iasos would not have been possible without the financial support of the Institute for Aegean Prehistory, the British Institute for Archaeology at Ankara, the Istituto di Studi sulle Civiltà dell'Egeo e del Vicino Oriente (C.N.R., Rome), and the University of Bristol (Arts Faculty Research and Conference Funds). I am grateful to the Director of the Italian Archaeological Mission at Iasos, to the members of the mission, and especially to members of the BACI (Bronze Age Carian Iasos) project between 1999 and 2004. I also wish to thank all the Turkish friends and colleagues who have helped me over the years (especially Hayat Erkanal, Vasif Şahoğlu, Nilüfer Güllü, O. Şimşek and Hüsseyin Köktürk. Special thanks are due to Mrs. Sue Grice (University of Bristol) for producing the illustrations.

I should like to dedicate this paper to Oliver Dickinson, in the hope that he might forgive me for failing to contribute to his *Festschrift* on time: he may find an echo of his paper 'Minoans in Mainland Greece, Mycenaeans in Crete?' (*Cretan Studies* 5, 1996) in my title and in some of the issues discussed here.

² See Levi 1962, 505–71.

³ As illustrated by the following passage: 'Iasos ... was ... a large settlement already in the Middle Bronze Age, showing a developed urbanization to be attributed to Minoan colonists ...' (Laviosa 1984, 183–5).

ing more and nothing less'.⁴ This is an answer that both Levi and Laviosa may have agreed with (at least at a basic, superficial level),⁵ and which, at first, I also found somewhat reassuring. There is something appealingly simple and logical in Renfrew's definition (especially in his rejection of the ethnic connotations that the term Minoan has acquired in the writings of some scholars).⁶ But what would happen if I applied it literally in this paper? Clearly the phrase 'Minoans in the central, northern and eastern Aegean' and my specific remit, 'Minoans at Iasos', would imply that I should present evidence from this site that could only be interpreted in terms of demic or ethnic movements of people from Crete – and this in itself is in fact rather difficult, for at least two reasons.

First, to interpret the presence of Minoan and Minoanising objects or other traits at Iasos simply and exclusively as the result of the presence of Bronze Age Cretan emigrants or colonists is not only too simplistic, but also sometimes downright impossible or demonstrably wrong.⁷ I do believe that we can find some evidence of 'Minoans' at Iasos, but only in the sense, as recently suggested by Broodbank, of people behaving or doing things in a way closely comparable to the behaviour and ways of doing things that ultimately originated in Crete.⁸ This, of course, does not necessarily imply some kind of ethnic affiliation with (or descent from) the inhabitants of that island. In addition, although I believe that there may have been 'Minoan' emigrants in Iasos, I also believe that demic movements or migrations, while a constant feature of Mediterranean life,⁹ are only a partial explanation for a much more complex set of processes that underlie the Minoanisation of the Aegean, and consequently the Minoanisation of Iasos.

The second difficulty I encountered in accepting Renfrew's definition at face value was the following: even assuming, for argument's sake, that I could find evidence of 'Minoan'-looking emigrants in Iasos, how could I tell that they were actually people from Crete and not from Miletus, or Trianda on Rhodes, or Seraglio on Kos, or some heavily Minoanised Cycladic islands? And this, of course, made me realize that Renfrew's apparently reassuring answer that 'Minoans' is a conven-

ient shorthand for 'the prehistoric inhabitants of Crete', was perhaps not so reassuring after all. If that was the case, what are we to make of some of the prehistoric inhabitants of Kastri on Kythera or Miletus in western Turkey or Ayia Irini on Keos? Are they really not 'Minoan' and more different, for example, from the Knossians or Phaistians than the inhabitants of Vrysses and Nerokourou in west Crete or Achladia and Petras in east Crete? In other

⁴ Renfrew 1996. Renfrew's title echoes, of course, John Myres's book *Who Were the Greeks?* – in which Myres famously answered this question as follows: 'the general conclusion is that the Greeks never wholly were "one people", but were ever in process of becoming; that they achieve such unity as they enjoyed in their "great age," under austere regional controls eliminating, selecting, fostering qualities, faculties, and aspiration, in an originally diverse and heterogeneous population; and that in the last crisis it was this very diversity and chaotic intermixture which became the most potent stimulus in the struggle to "live well," and, through reasonable accommodation between social order and personal initiative, to achieve maturity, in a self-mastering freedom.' (Myres 1930, 538–9).

⁵ I do not wish to speculate, here, as to whether Levi and Laviosa (unlike Renfrew) would have preferred to attribute ethnic connotations to the term.

⁶ See, e.g. Renfrew 1996, 2: '... when we ask ourselves "Who were the Greeks?" we muddy the waters considerably by talking of the Mycenaean as if they were already in the late bronze age an established nation or an ethnic group. It is open to question also whether the bronze age Cretans were either of these things. The term "Minoan", in the strict sense, simply means "pertaining to the prehistoric inhabitants of Crete", and does not (or should not) imply any necessary collective awareness of corporate identity on their part'. See also Renfrew 1996, 5–6: '[I]t is not just the name "Minoan" which is invented. The underlying ethnic awareness and identity which it might be thought to imply cannot in fact be assumed.'

⁷ The limitations of this culture-historical approach are too well known to be reiterated here (cf. e.g. Jones 1997; Shennan (ed.) 1989; Trigger 1989, esp. 148–206).

⁸ Cf. Broodbank 2004, 46: 'Minoanisation ... is a modern term of sometimes deceptive convenience for a heterogeneous range of ancient material culture traits and practices that indicate the adoption in places beyond Crete, through whatever means, of ways of doing things that originated directly or indirectly within that island'.

⁹ On human mobility as a common feature of Mediterranean populations, especially coastal ones, and on movements of goods that include people see Horden & Purcell 2000, especially 342–400.

words, what are we to make of cultural variations within Crete? And, above all, what are we to make of the creation of new 'Minoan' identities (not to be confused with 'Minoan ethnicity', which probably never existed)?¹⁰ The creation of new 'Minoan' identities must have constantly occurred in the 20th–15th centuries BC (and indeed earlier) both in Crete and throughout the Aegean.¹¹ I began to wonder whether the more inclusive definition in the Oxford English Dictionary could perhaps be more suitable, since this states that 'Minoan' signifies a 'native or inhabitant of Minoan Crete or other parts of the Minoan world [my italics]', in which 'Minoan' has essentially a chronological and cultural meaning.

In addition to the problems mentioned above, I could not ignore the fact that 'Minoan' and its corollary 'Minoans' are in fact labels and concepts that are largely modern constructs, ultimately originating in the late 18th–early 19th century Altertumswissenschaft of Karl Hoeck and Carl Otfried Müller of the University of Göttingen.¹² Originally, the term 'Minoisch/e' (translated into English as 'Minoan' since 1830) had indeed an essentially chronological (and cultural) meaning (such as 'Victorian' or 'Pharaonic'). With subsequent scholarship, the term went through significant semantic shifts, especially since Evans's excavations at Knossos in the early 20th century. Since the early excavations of Knossos, Phaistos and other Bronze Age sites in Crete, a material culture has been turned into a lost people: 'the Minoans'. This is not such a totally illogical enterprise, as some scholars may wish to suggest, given that some people must have produced this material culture, but one that is not quite so straightforward, and entails a number of theoretical and methodological problems, especially when the correlation of material cultures and ethnic groups is involved – problems that are well known to archaeologists, but are sometimes forgotten.

Although I believe that the modern invention of the term 'Minoan', of its corollary 'Minoans', and their varied meanings are issues deserving further investigation, this is beyond the scope and aim of this paper.¹³ Nevertheless, what we mean by 'Minoans' and the possible relationship between 'Mi-

noanising' material culture and 'Minoan' emigrants are two of the prickly issues that one should bear in mind when looking at the evidence from Iasos, or indeed any other site. I shall return to these issues later on in my paper, after discussing some of the empirical evidence, which attests to some kind of relationship and connexion between Iasos and Crete and/or between Iasos and the 'Minoan world' more generally.

I shall discuss this evidence in chronological order, but before this, I must remind the reader that Iasos is a site that has been occupied (although not necessarily continuously) from the final Neolithic or Chalcolithic period to the present day.¹⁴ Later building activities have seriously affected the Bronze Age levels – pieces of the same pot can be found in Bronze Age and in Geometric or Archaic or even later levels. Objects, especially sherds, are not particularly photogenic: they can be tiny and also very worn, because in some cases they have been under water for a couple of millennia (for at Iasos, as at Miletus, the water table has changed since antiquity: cf. Niemeier, this volume).

¹⁰ As one can have a 'British' identity which is different from an English, Scottish, or Welsh ethnicity or any other ethnic identity. On the difference between cultural and ethnic identities see Hall 2002, 9–19, esp. at 17.

¹¹ On variation of Minoan culture(s) and creation of new 'Minoan' identities see Davis & Gorogianni, in press. See also Broodbank 2004, at 51–2; cf. also Dickinson 1996, at 67: 'to adopt customs that resemble them [Mycenaean burial customs] so closely is arguably to be proclaiming oneself in some sense "Mycenaean", but equally to adopt important elements of high-status Minoan dress is to be proclaiming oneself in some sense "Minoan", so that the ruling class of the Knossos state could be argued to be creating an identity for itself that drew on both previous traditions, and by following Minoan custom in an important respect was emphasising its legitimacy.' For a useful comparison with discourses about 'purity' and 'variations' of Greek culture see Dougherty & Kurke (eds.) 2003.

¹² Karadimas & Momigliano 2004.

¹³ Karadimas, in preparation.

¹⁴ All the finds discussed in this paper come from the area beneath the Geometric Cemetery by the West Porch of the later Roman Agora, with the exception of Fig. 22, which is from the area of the so-called Basilica by the East Gate (for the location of these areas see Belli 1999).



Fig. 1. Middle Minoan import, probably from north central Crete (Iasos AG/NM/94) (MM IIB-III B).

Iasos and 'The Minoans' in the protopalatial period

The earliest evidence of direct or indirect contacts between Iasos and Minoan Crete or the 'Minoan world' is provided by three fragmentary vessels, which could date, in Minoan terms, to the Protopalatial period (Figs. 1-3). Two (Figs. 1-2) are represented by small fragments of Minoan drinking cups comparable to material found at Knossos and other Cretan sites and mostly datable to MM IIB-MM IIIA, but also MM III B: one is decorated with white spots/sprays; the other is another cup fragment with a bevelled base, possibly also in white-spotted ware.¹⁵ The third vessel (Fig. 3) is represented by a number of non-joining fragments from some kind of jar, and is comparable to pots from the Old Palace at Phaistos (mostly Levi's phase IB), a parallel also supported by the petrographic analysis of the fabric carried out by Carl Knappett, which suggests a Mesara provenance for this piece.¹⁶

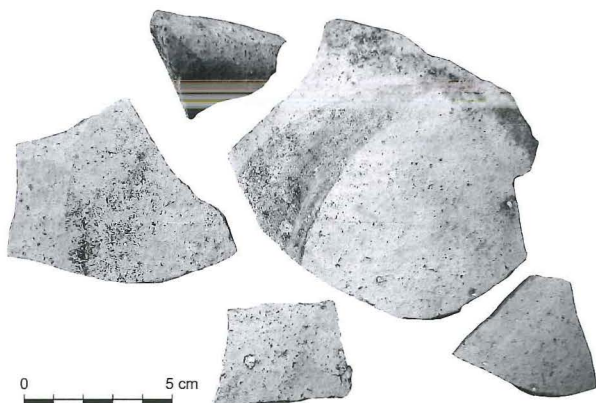


Fig. 3. Iasos, Middle Minoan import from the Mesara (AG/NM/341) (MM IB-IIA).

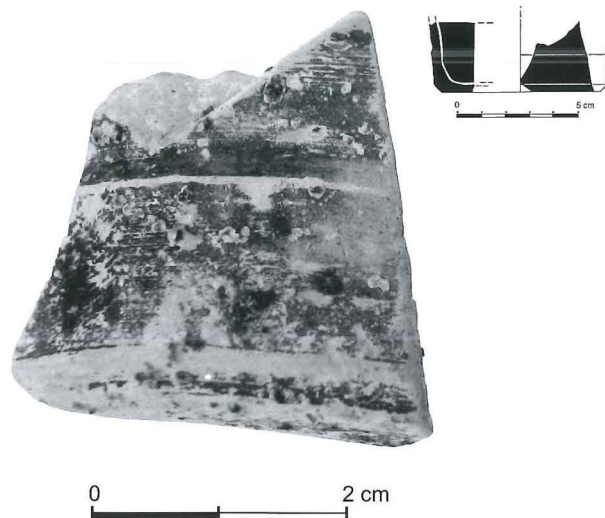


Fig. 2. Middle Minoan import, probably from north central Crete (Iasos AG/NM/20) (MM IIB-III B).

Unfortunately, no pure level datable to a phase equivalent to the Cretan Old Palace period has yet been excavated at Iasos, and these three sherds were found in later levels, datable between MM III B and LM IA in Minoan terms.¹⁷

Doro Levi's and Laviosa's 'Kamare' and 'Kamare imitation' pottery from Iasos, which turned out to be the SE Aegean Light-on-Dark ware of the Neopalatial period, was also found in

¹⁵ Iasos nos. AG/NM/20 and AG/NM/94 (also illustrated in Momigliano 2006, fig. 3; Momigliano 2005: fig. 2). These sherds are closely comparable with MM IIB-III A Knossian material: see, e.g., MacGillivray 1998, pl. 17: 404-7, but also find comparanda with MM III B pottery (*cf.* Warren 1991, esp. fig. 9: B, F). *Cf.* also Betancourt 1990, 1316; Levi 1976, pls. 105: a, 118: b, 123: a, 127: c, 132: p, 138: f, 178: a, 179: h, all from 'Fase 1b' and 'Fase II'. See also Levi 1976, pl. 198: c, 201: b and h, pl. 210: g-m, from 'Fase III', which include Knossian MM IIIA and III B; *cf.* also Muhly 1992, 48 fig. 4: nos. 32, 34, 35. Petrographic analysis of AG/NM/94 (by Carl Knappett) is in process.

¹⁶ Iasos no. AG/NM/341 (the largest fragment is also illustrated in Momigliano 2005, fig. 3): *cf.* Levi 1976, pl. 53: c-d; pl. 66: g; pl. 67: f; pl. 73: a, c, and d. I am very grateful to Carl Knappett for his preliminary reports on the petrographic analyses of this and other sampled pots from Iasos, which he will fully publish in due course.

¹⁷ In this context, it is intriguing to see that a number of MM IIIA pots have been found in LM IA destruction levels at Akrotiri: see Nikolakopoulou, this volume.

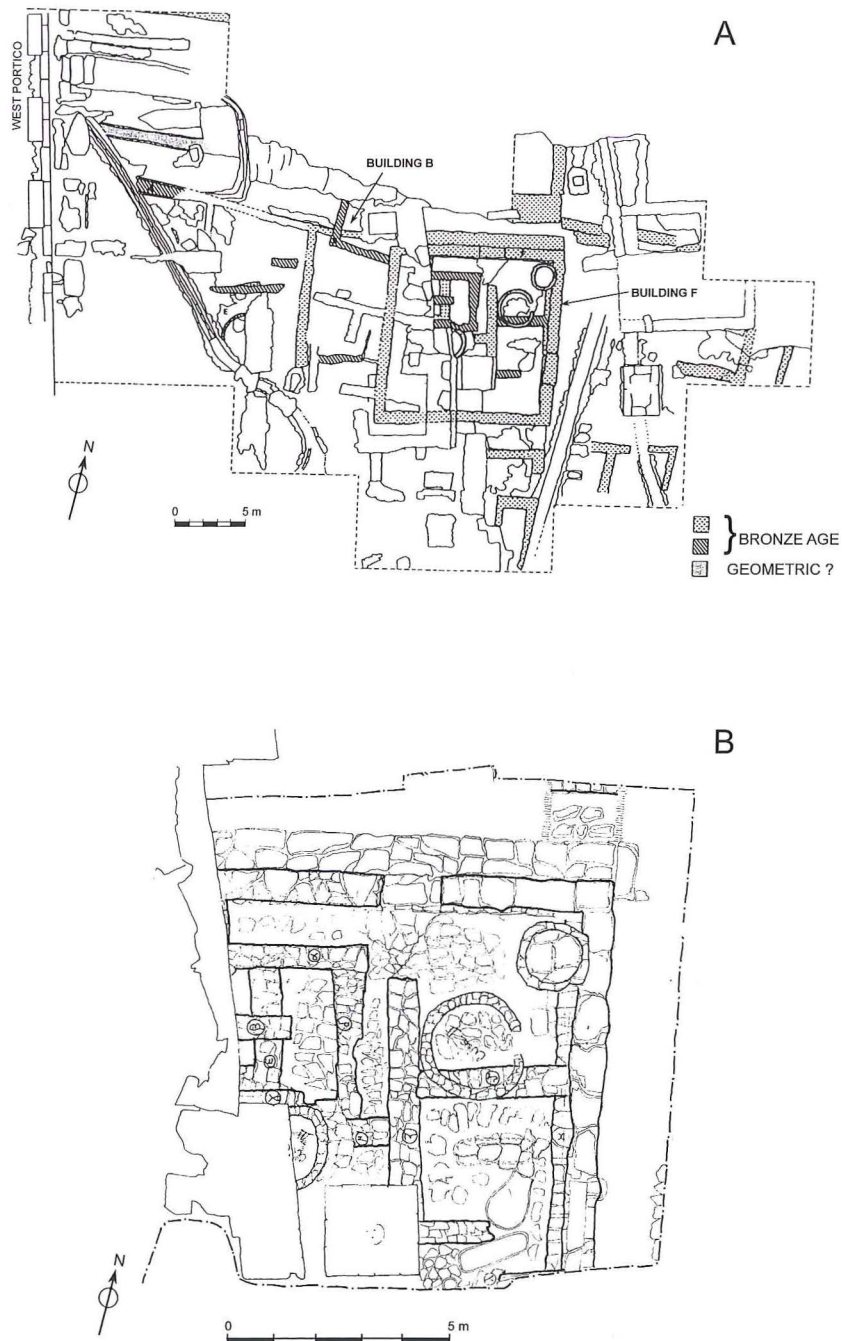


Fig. 4. A: general plan of the Bronze Age levels by the West Portico, area of the Roman Agora (courtesy of Paolo Belli). B: detail showing plan of Building F at the time of the 1971 excavations (courtesy of Paolo Belli).

levels datable between MM IIIB and LM IA in Minoan terms.¹⁸

Thus, to sum up, the three pots discussed above are surely not enough evidence to suggest the presence of 'Minoans' at Iasos in the period equivalent to the Cretan Protopalatial (whatever meaning one

assigns to the term 'Minoans'!), although they suggest the presence of MBA levels earlier than those recognized so far.

¹⁸ Davis 1972; Benzi *et al.* 2000; Momigliano 2000; Momigliano 2005; Momigliano 2006 and 2007.



Fig. 5. Building F: north wall and adjacent pavement ('marciapiede').

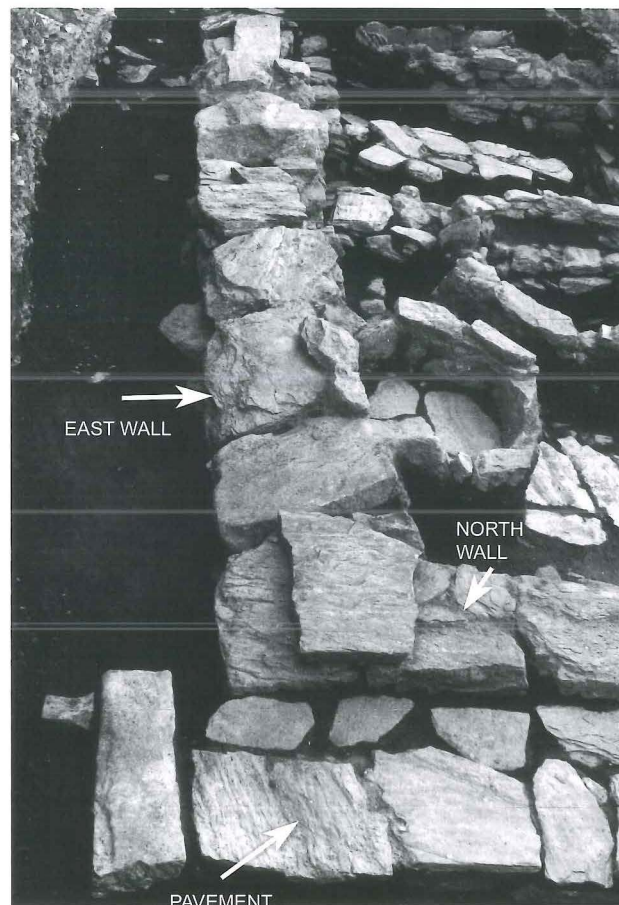


Fig. 6. Building F: north east corner, showing stretch of the east wall, and part of the north wall and north pavement; also visible are some of the later (Geometric?) circular funerary structures.

Iasos and 'The Minoans' in the neopalatial period

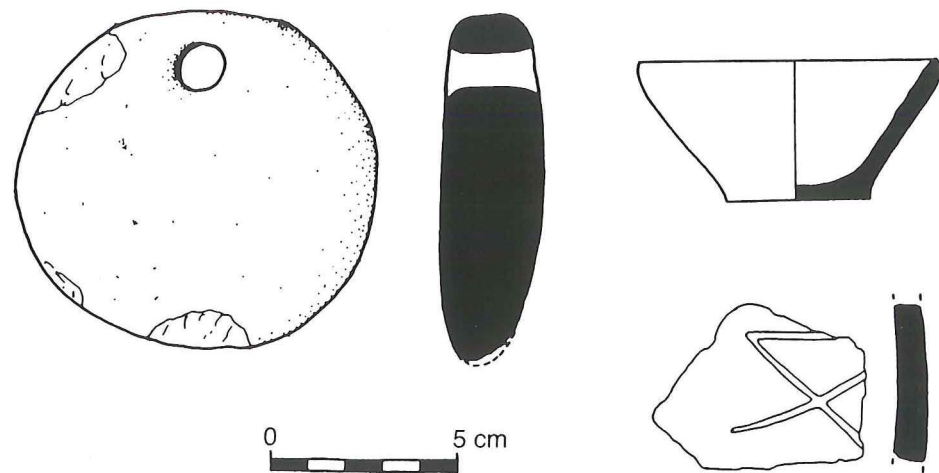
In the Neopalatial period the evidence for contacts between Iasos and Crete or, more generally, the 'Minoan' world is much more abundant, especially in the phases leading up to the LM IA Santorini eruption, and some of these data may be interpreted as indicating some kind of 'Minoan' presence at the site, as discussed below.

For the period corresponding roughly to MM IIIB-LM IA the evidence comes from: 1) architecture; 2) Minoan writing, *i.e.* potters' marks in Linear A; 3) possibly stone objects; and 4) pottery, which provides the most abundant (and better studied) data so far.

Starting from the architecture, one building of almost square shape, known as Building F, was constructed with many large roughly triangular or wedge-shaped stones, a technique which is quite at home in Minoan Crete (Figs. 4-6).¹⁹ This is a rather impressive, almost monumental structure, which has also produced a high concentration of Minoan imports and Minoanising finds. Assuming that Building F is an example of 'Minoan architecture', this could indicate the presence of 'Minoan' masons, possibly employed by a local 'Anatolian' elite emulating Minoan fashions or by a 'Cretan

¹⁹ Shaw 1971, 92; for specific Cretan parallels see Belli 1999, esp. 680-1 (note, however, that the phasing and dating of Building F reported in Belli's paper has now been largely revised).

Fig. 7. Loom weight, conical cup, and Linear A potter's mark.



Thalassocrat', depending on your own modern political and theoretical affiliations.²⁰ My assumption here is the following: anyone can 'consume' a 'foreign' product, *i.e.* anyone can live in a house built by a 'Minoan' mason or drink from a 'Minoan' cup imported from north central Crete, but the specific mental templates, manufacturing techniques, and even motor habits required to build a 'Minoan' house or to make a 'Minoan' pot in a certain way are much more difficult to acquire and therefore are more likely to reflect at least the cultural origins and affiliations of their makers, if not necessarily their ethnicity.²¹ In other words, assuming that the technique employed to erect Building F is exclusively typical of Bronze Age Crete or of other Minoanised areas, one might suggest that this could indicate the presence of 'Minoan' masons at Iasos. What I find more difficult to demonstrate is Laviosa's claim that buildings such as this illustrate a level of urbanisation at Iasos to be attributed to Minoan colonists.²² We know very little about the actual extent and organisation of the whole settlement, and about Anatolian architecture in this area in general, especially for the preceding Middle Bronze Age phases, and perhaps a bit more caution would not go amiss.

Concerning 'Minoan' writing, Iasos (unlike Miletus)²³ has not produced evidence of 'active' use of Linear A, but only a few potters' marks (3 or 4 in total). As one of my colleagues, Isabella Morabito, will publish them, here I illustrate only

one fragment (Fig. 7: bottom right) from a vessel that appears to be made in a local fabric and incised before firing with a Linear A sign (probably identifiable with 81'/81b),²⁴ closely comparable to contemporary finds from Ayia Irini on Keos.²⁵ The fragment illustrated here is too small to say much about the pot it came from, but at least one Iasian potter's mark appears on a vessel likely to belong to the local Anatolian tradition.²⁶ Thus, what do these potters' marks tell us about 'Minoans' at Iasos? The mere occurrence of Linear A writing, of course, does not necessarily imply the presence of a Cretan language at Iasos. Moreover, given our present lack of adequate knowledge of the languages of Bronze Age Crete and Bronze

²⁰ On the two basic models, colonialism (or 'thalassocracy') versus indigenous emulation, which have so far dominated the relevant literature see Broodbank 2004, 55-8, with further references. See also Knapp 1993.

²¹ The 'Minoan' masons may not share the same 'ethnic' identity as the Prehistoric Cretan population (which may have been 'multi-ethnic' anyhow). On the difficulties, in general, of detecting emigrants on the basis of purely archaeological data see, *e.g.*, Schofield 1983; Schofield 1996. On detecting possible 'Minoan' craftsmen see also, *e.g.* Broodbank 2004, 59-60; Davis & Gorogianni, 2008; Momigliano 2005.

²² *Cf.* note 3 above.

²³ See Niemeier, this volume, with further references.

²⁴ Brice 1961, Table 1; Raison & Pope 1994, 22-3.

²⁵ Bikaki 1984, 23 and *ff.* (V-2, V-3, V-4, VI-12, VII-5).

²⁶ Morabito 2006.

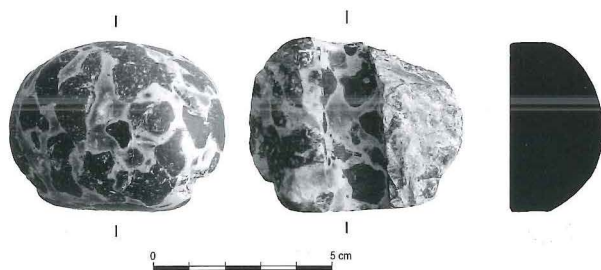


Fig. 8. Fragmentary mace head/hammer in breccia/conglomerate (Iasos inventory no. 2815).

Age Caria,²⁷ perhaps one should conclude that the Iasian potters' marks provide evidence for a Cretan (or even 'Minoan') presence that is fairly limited and ambiguous at best, and inconclusive at worst.

Concerning stone objects, I can only suggest some vague 'Minoan' connexions for the three examples illustrated in Figs. 8–10. Although it is difficult for an Aegean prehistorian not to associate stone objects and vases with Minoan Crete, I cannot offer very strong arguments for a specifically Minoan pedigree for all these objects, and I can only confess my ignorance about stone craftsmanship in Anatolia in general.

Of the three Iasian stone objects illustrated in this paper, Fig. 8 represents a fragmentary mace head or hammer in pudding stone (a kind of conglomerate), probably imported to Iasos, and comparable to finds from Crete, but also from elsewhere.²⁸ Figs. 9 and 10 illustrate stone vases made in the local red marble. Fig. 9 shows a small, simple, flat dish with raised rim, *i.e.* a saucer-like vessel, a shape of such simplicity that it would be rather difficult to argue for a specific Minoan derivation (and certainly I could not find a parallel in Peter Warren's *Minoan Stone Vases*, still our 'Bible' on this subject).²⁹ Fig. 10 illustrates a very fragmentary vase with a fairly rough surface (perhaps unfinished?), whose overall shape could be reminiscent of some Minoan low-pedestalled lamps.³⁰ Obviously the presence of a Minoan-type stone vessel, made in a Minoan technique, and in a local marble, could be further evidence of 'Minoans' at Iasos, but given the condition of this object I would not wish to push this identification very far. Nevertheless, this possibility, combined

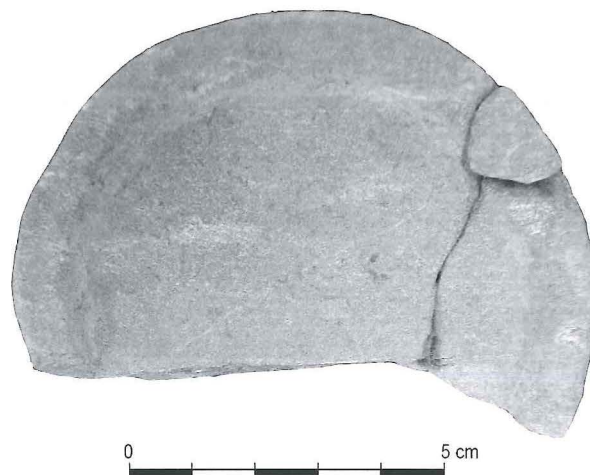


Fig. 9. Small flat dish in local red marble (Iasos inventory no. 3860).

with some comments made by Peter Warren and Lorenzo Lazzarini on rosso antico and on other red marbles, suggests a possible line of enquiry, with Minoan connexions.³¹ Lazzarini, in particular, has remarked on the difficulty of distinguishing macroscopically and chemically between *rosso antico* from Laconia (*marmor taenarium*) and some red Carian marbles (*marmor carium* or *iassense*), although petrographic examination may allow some differentiation. Thus, it is perhaps legitimate to ask whether some Minoan vases described in the past as being made of rosso antico or as being made

²⁷ No inscriptions have been found as yet which could shed some light on the Bronze Age Carian language(s). The 1st millennium BC inscriptions discovered so far illustrate an Indo-European Anatolian language of the western type, related to Luvian, Lycian, and Lydian, and, presumably, the descendent of a language spoken in the 2nd millennium: see Adiego Lajara 1993, esp. 285–91; Melchert 2004.

²⁸ Although I have not been able, so far, to find exact parallels, similar objects have come to light in Crete, but also Anatolia. For Crete see, *e.g.* Evans 1935, 356–7, fig. 299: mace head from 'mace bearer tomb' in breccia (cemetery of Isopata). See also Panagiotaki 1999, 122–4, fig. 29: 298 and pl. 21: b; Platonos-Manti 1983). For Anatolia see, *e.g.*, Kosay 1951, 165–8, pl. CLXXXII, 1 (from Tomb K, probably made of breccia).

²⁹ Warren 1969.

³⁰ *Cf.*, *e.g.*, Warren 1969, P295, P296, P299, and P300.

³¹ Warren 1969, 126; Lazzarini 1990.



Fig. 10. Fragmentary low pedestalled lamp (?) in local red marble (Iasos inventory no. 3416).

in a reddish-purple stone, may have been made from Iasian marble, and provide thus another link between SW Turkey and Minoan Crete or other Minoanised regions of the Aegean. Outcrops and quarries of red marble are found close to Iasos and also near Akbuk, on the road from Iasos to Teichiussa and Miletus. Thus, I cannot offer concrete proof that Minoan craftsmen made any of the three stone objects from Iasos illustrated here. Nor can I demonstrate that some Minoan vases found in Crete or in some other Minoanised sites such as Seraglio on Kos were made in this attractive Carian red marble, but this is a possibility, which perhaps could be explored in future investigations.

Last but not least, I shall discuss the evidence that may suggest the presence of 'Minoans' at Iasos provided by the ceramic finds. For the Neopalatial period we have many imports from Crete (and also from other islands and regions of the Aegean).³² In addition, we have local production and local imitations of Minoan-type pottery.

Starting with the Cretan imports, these amount to approximately 50 sherds of various sizes. Some fragments are from unknown contexts, some are from Geometric or later levels, and some were found in contexts datable to LM IA, *i.e.* in levels either directly sealed by or stratigraphically earlier than a thick layer of volcanic ash from the Bronze Age eruption of Thera.³³

That these are fragments with a likely Cretan

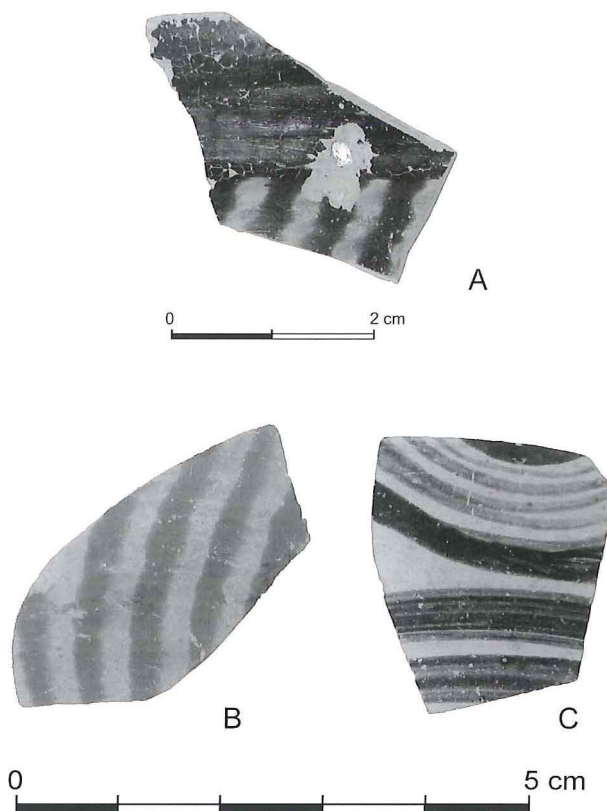


Fig. 11. Cretan imports: fine cups (A: Iasos inventory no. 4451a; B: Iasos inventory no. 4453b; C: Iasos inventory no. 4458).

provenance is indicated by macroscopic examination, often supported by petrographic analyses carried out by Carl Knappett. These Cretan imports may not be plentiful, but, interestingly, they cover a wide range of shapes, from small drinking cups decorated with ripples and spirals in a fine buff fabric typical of north-central Crete (Fig. 11), to middle sized jars or jugs (Figs. 12 and 13), to proper pithoi of various shapes and sizes (Figs. 14, 15, 16) and equally varied provenances within Crete. Some of these imports have already been published elsewhere,³⁴ but those in Figs. 13 and 16 are illustrated here for the first time. Fig. 13 shows the rim fragment from some kind amphora

³² Momigliano 2005, with further references.

³³ Benzi *et al.*, 2000; Momigliano *et al.* 2001; Huber *et al.* 2003, 83-105.

³⁴ See Momigliano 2005.

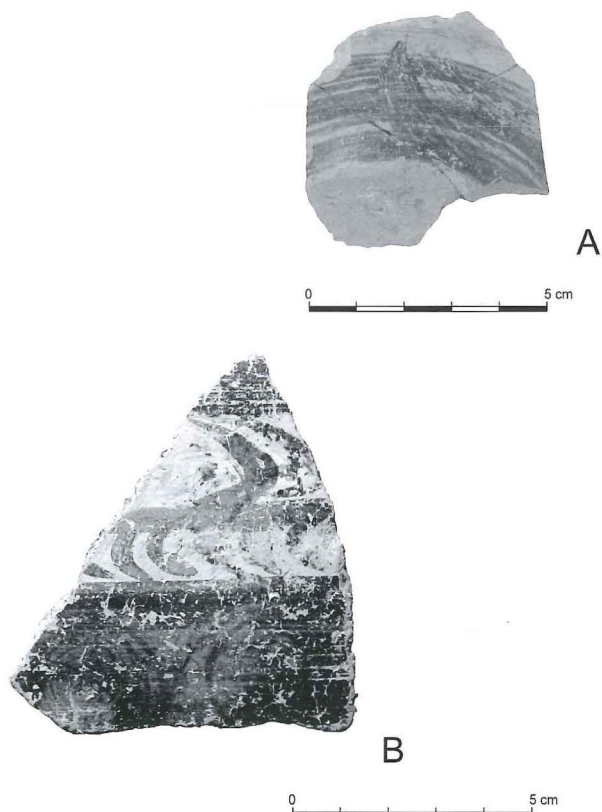


Fig. 12. Cretan imports: jugs and jars (A: Iasos AG/NM/291; B: Iasos AG/NM/144).

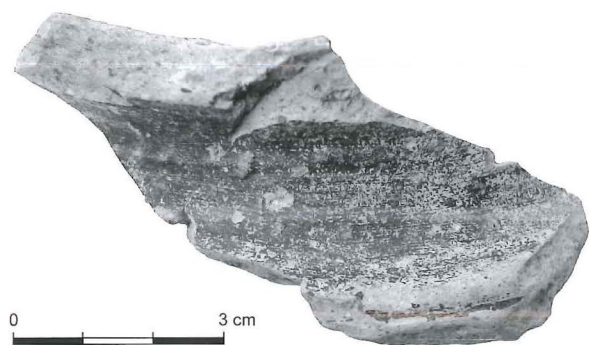


Fig. 13. Rim fragment of Cretan jar (Iasos AG/NM/269).

or jug: its petrographic analysis suggests a possible provenance from the Cretan SE coast. Fig. 16 illustrates fragments from a jar decorated with horizontal plastic ridges, and entirely covered with a red coat or slip, made in a rare phyllite fabric also found in some pots at Malia. A similar vessel, also identified as a Cretan import, has been found at Ayia Irini.³⁵

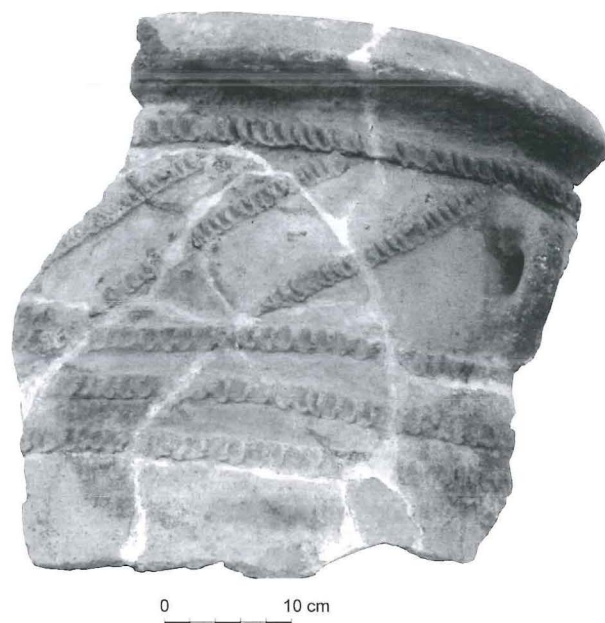


Fig. 14. Fragmentary pithos (Iasos inventory no. 3005 = Izmir Museum 973-5-96).



Fig. 15. Pithos fragment (Iasos AG/NM/ 293).

Whether these Cretan imports came to Iasos more or less directly or via other Minoanised centres such as Trianda, Seraglio, or Miletus, is difficult to tell, but the latter scenario seems more likely, assuming that cabotage would have been

³⁵ Davis 1986, 20: C-33.

Fig. 16. Pithos fragments (Iasos AG/NM/258).

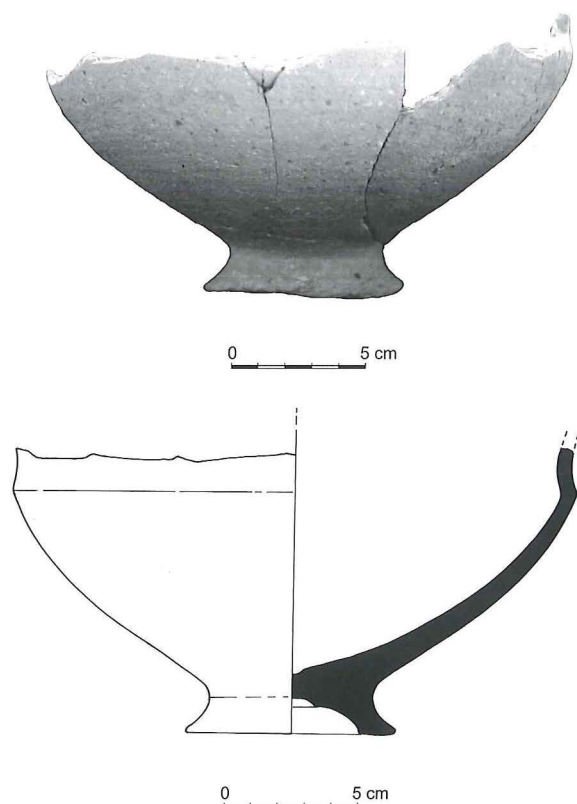
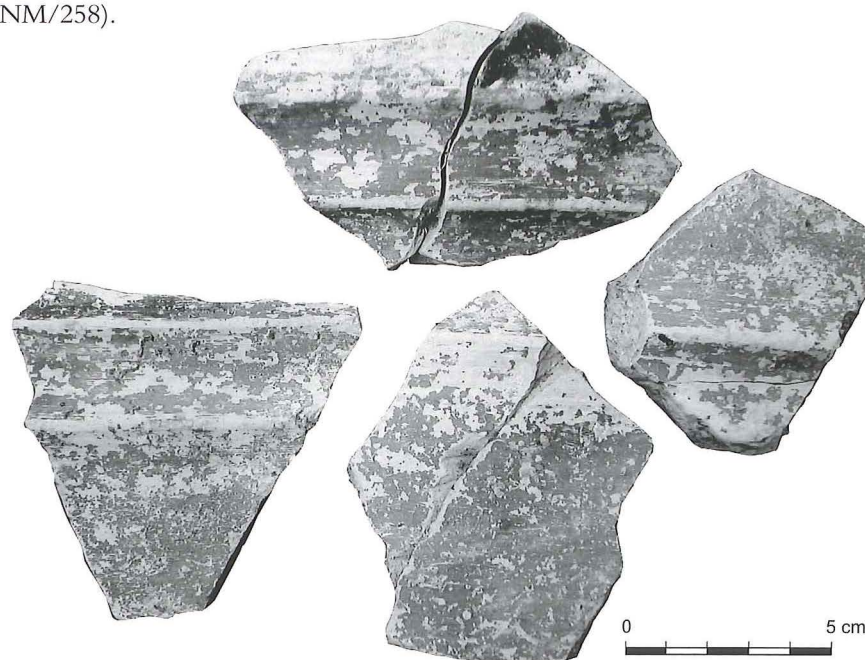


Fig. 17. Anatolian type vessel (carinated pedestalled bowl) imported from Miletus (Iasos inventory no. 4418).

the normal method of maritime transport, and also in view of the fact that we have several imports from these areas (especially from Kos).³⁶ In the case of imports from Miletus found at Iasos, interestingly, we have both Anatolian-type vessels (Fig. 17) and Minoan-type pottery, such as conical cups (Fig. 18).³⁷

Minoan imports, however, either from Crete or from sites where the substantial presence of 'Minoans' can hardly be contested, do not necessarily tell us very much about 'Minoans' in Iasos: they could simply attest to some kind of trade or exchange.

Similarly, the presence of a great deal of the SE Aegean Light-on-Dark and Dark-on-Light pottery, mostly made on Kos, which Levi and Laviosa called 'Kamares', tells us a great deal about emulation and trade networks, but not much about a 'Minoan' (let alone Cretan) presence in Iasos.³⁸

In order to find 'Minoans' at Iasos, it may be

³⁶ Momigliano 2005, 2007.

³⁷ Identified by Wolf and Barbara Niemeier during one of their visits to the Iasos storerooms.

³⁸ Momigliano 2007.



Fig. 18. Miscellaneous conical cups from Iasos, including Milesian imports.



Fig. 19. Cooking pot (Iasos inventory no. 3393 = Izmir Museum 973-5-106).

more fruitful to focus our attention on the local production of Minoan-type pottery, because, as I suggested earlier, the way in which a pot is made may be more indicative of a 'Minoan' presence at Iasos – for techniques and motor habits are among the most difficult things to acquire and change.

Local production of Minoan-type pottery (which is rather limited in quantity: see below) includes what is usually categorised as 'domestic and specialised pottery' and 'fine wares', but perhaps more important is the distinction between ceramic objects that are clearly poor imitations of Minoan proto-types (*i.e.* objects that try to imitate Minoan pottery but seem to indicate that the potter was trained in another manufacturing tradition) and those that indicate that the potter was working according to proper 'Minoan' templates.

Among 'domestic' and specialised vessels, Iasos has produced hundreds of conical cups of various types, a few dozen loom weights, several cooking pots (Fig. 19), a few fragmentary 'scuttles' (Fig.



Fig. 20. 'Scuttles' (A: after Laviosa 1973 pl. 46 a; B: Iasos, AG/NM/35).

20), and one 'spit-rest' (Fig. 21).³⁹ Sometimes these items are referred to as constituting the 'Minoan kitchen kit',⁴⁰ but perhaps they should not be lumped together, especially the 'spit-rests', which

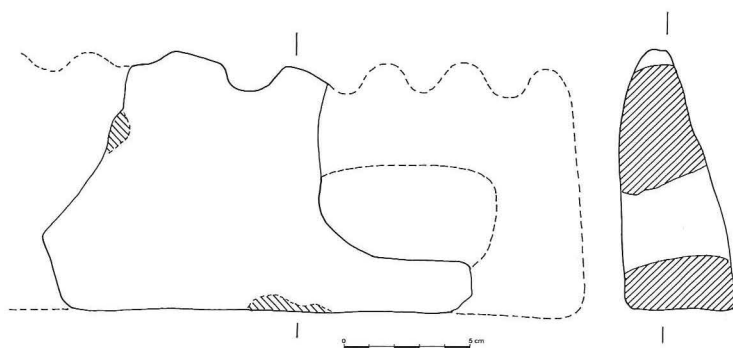


Fig. 21. 'Spit-rest' (Iasos AG/NM/58).

Fig. 22. 'Local' fine decorated 'Minoan' ware (Iasos BE/NM/98/2, from the area of the so-called Basilica by the East Gate).



may have nothing to do with cooking anyhow, and could even be, ultimately, of Anatolian origins.⁴¹ More interesting is the way in which some of these pots are made and, as I have already argued elsewhere,⁴² I think there is some evidence suggesting that most conical cups at Iasos are made following proper 'Minoan' templates, techniques, and motor habits.

While the conical cups run into the hundreds, the local production of fine decorated wares of Minoan type is much more limited. Fig. 22 illustrates one interesting sherd in a very micaceous and relatively fine fabric, which at a macroscopic level looks possibly 'local' or at least not out of place in

³⁹ Momigliano 2001 (conical cup and loom weight); Momigliano *et al.* 2001: fig. 3: c-e and fig. 4: b-c; Laviosa 1973, pl. 45: b (cooking pot), pl. 46 (scuttles), pl. 47 (conical cups); Momigliano 2002, 49-50 (spit-rest).

⁴⁰ See, *e.g.*, Niemeier & Niemeier 1999, 545.

⁴¹ Joukowsky 1986, 401-2 and figs. 341, 423. For Aegean 'spit-rests' see Georgiou 1986.

⁴² Momigliano 2005.



Fig. 23. Local imitation of LM I vessel (Iasos inventory 3084 = Izmir Museum 973-5-105).

western Anatolia (although more analytical work is needed). The fragment does look as if belonging to a pot, which could have been made by a 'Minoan' potter, on the basis of its relatively well-executed decoration. We can contrast this fragment with an interesting imitation of a LM IA vessel (Fig. 23)⁴³ made in local clay and very similar (in terms of fabric, slightly carinated bi-conical shape, and paint) to the 'red wash' and 'red-painted' wares in the 'Anatolian' tradition (*cf.* Figs. 24 and 25). This is either a vessel made by a local 'Anatolian' potter trying to imitate a Minoan prototype (which I think is the



Fig. 24. Jug in red wash ware (ag/nm/9; from 1982 Iasos excavations).

most likely explanation), or by a 'Minoan' potter trying to go native, perhaps a less likely alternative in this specific case, but a possibility that in our Creto- (or Mino-) centric view of the Aegean has rarely been considered explicitly (if even considered at all).⁴⁴

Minoan imports and locally produced pottery of Minoan-type probably amount to something in the region of 5% of the total ceramic assemblage at Iasos. Most pottery belongs to the local Anatolian tradition, such as the vessels illustrated in Figs. 24-26. The pot illustrated in Fig. 26 is a nice 'heirloom', *i.e.* a Middle Bronze Age vessel, which has been repaired and curated, until it was abandoned, together with another jug of Anatolian type and

⁴³ Already published in Levi 1970, fig. 33; Laviosa 1973, pl. 48; Momigliano 2001, fig. b; Momigliano *et al.* 2002, fig. 4: b.

⁴⁴ I am not aware of any studies that have addressed the issue of the assimilation of 'Minoan' (including specifically Cretan) emigrants in areas outside Crete. Schofield 1996, 44-6, however, has pointed out the general difficulties in detecting emigration archaeologically because of processes of assimilation. On Minoan emigrants in general see also Schofield 1983 and 1984.

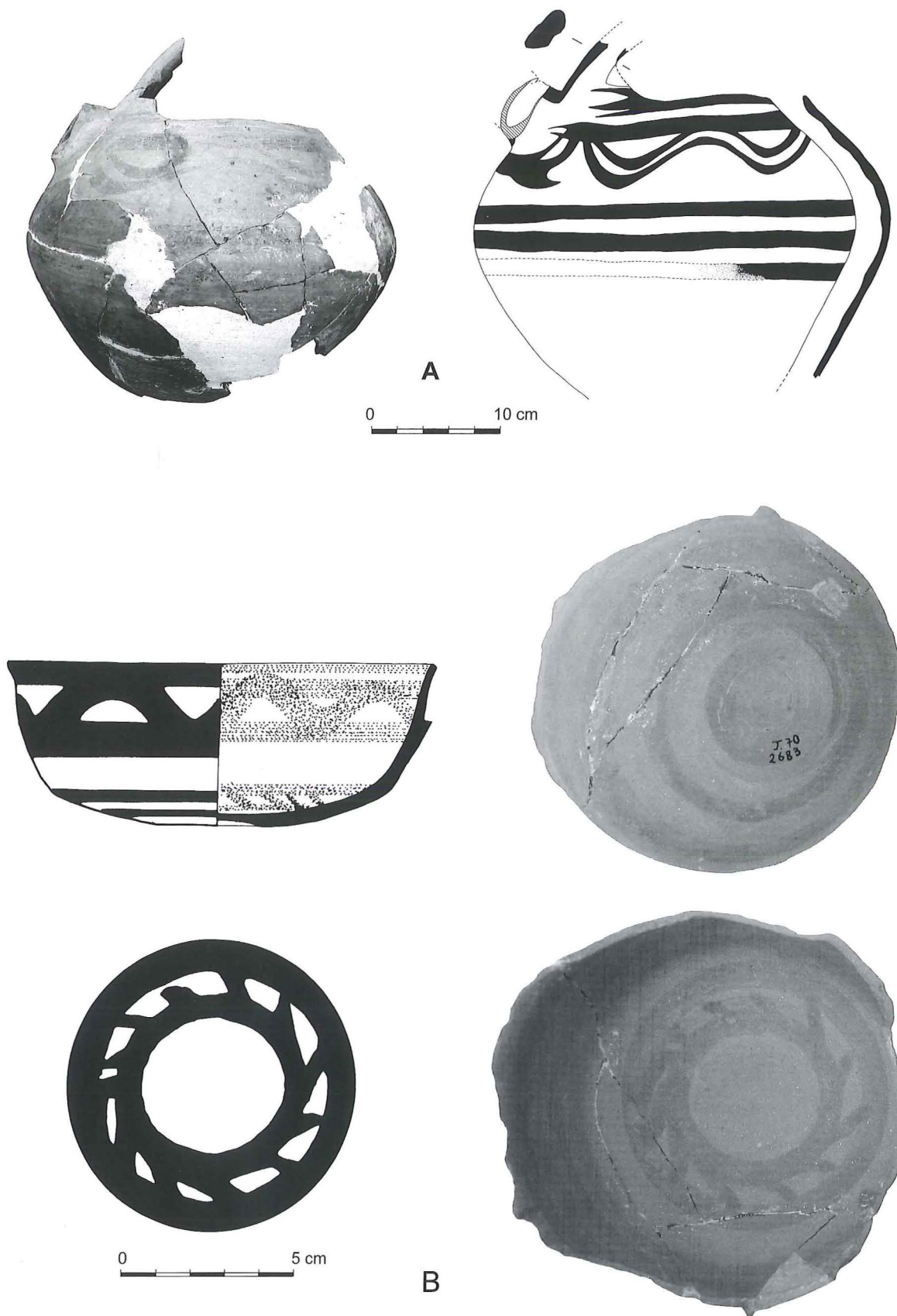


Fig. 25. Examples of Anatolian 'red painted ware' (A: Iasos inventory no. 3006; B: Iasos inventory no. 2683).



Fig. 26. Anatolian MBA jug (Iasos inventory no. 2041 = Milas Museum 638).

half a dozen Minoan conical cups, in the fire that destroyed Building B, a rather flimsy structure built directly upon a thick layer of Thera ash.⁴⁵

Not surprisingly perhaps, the evidence for contacts between Iasos and the Minoan world wanes in the aftermath of the Santorini eruption and, while the fire destruction of Building B is likely to date to LM IB in Minoan terms, no diagnostic pottery of this period has yet been identified at Iasos. The next well-datable pottery indicating renewed contacts with the Aegean can be assigned to LH IIIA:1.⁴⁶

To sum up and conclude, there is some evidence from Iasos that could indicate a 'Minoan' presence, *i.e.* the presence of 'Minoan' artisans (masons, potters). I deliberately use the term 'Minoan' (in its wider cultural, non-ethnic, meaning) instead of 'Cretan' because I cannot find any real evidence suggesting that the 'Minoans' of Iasos were 'Mi-

noan Cretans' rather than 'Minoans' from Miletus, Trianda, Seraglio or some other places. Although there are ceramic imports from various parts of Crete, it is likely that these arrived in Iasos via other centres such as those mentioned above, as suggested by the presence of many ceramic imports from these other areas.⁴⁷

Although the archaeological record of Iasos may indicate the presence of 'Minoans', I think it would be difficult, and rather limiting, to explain this only in terms of colonising processes. As shown by decades of research on the subject, and further underlined by the evidence presented at this Collo-

⁴⁵ For a summary of the stratigraphic sequence of this and other buildings and levels in Iasos see Momigliano 2007.

⁴⁶ See *e.g.* Benzi 1986, 31–2; Benzi 2005; Benzi & Momigliano 2000.

⁴⁷ For likely ceramic imports at Iasos from Seraglio (Kos), Trianda (Rhodes), and Miletus see Momigliano, 2005.

quium, the 'Minoanisation' of the Aegean is a very complex phenomenon, encompassing many different processes (acculturation, emulation, trade, etc.) acting at local, intra- and inter-regional levels: no totalising, single model can fully explain it (whether it is some variant of the 'Minoan Thalassocracy' colonialist model, the 'Versailles effect',⁴⁸ the 'centre/periphery' model of world-system theory,⁴⁹ or the 'new competitive environment' model recently suggested by Davis and Gorogianni).⁵⁰ Different models and different approaches, however, are crucial to shed some light upon different aspects of the Minoanisation of the Aegean: for example, directional trade/core-periphery models may help to explain why some sites, located at strategic places on certain sea-routes, are more 'Minoanised' than others, while the 'new competitive environment', with its focus on local processes of emulation and enculturation, is a step forward in trying to explain the huge variety of local responses to 'Minoanisation'.

In the context of local processes, a new interesting element is beginning to emerge: studies of ceramic imports from sites such as Iasos, Troy, and Çeşme suggest the hypothesis that a great deal of the Minoanisation in the northern and eastern Aegean may be largely (or at least partly) the result of relatively small networks of intra-regional trade and emulation processes. In other words, some of the Minoan/Minoanising traits visible at many sites could be the product of cultural interaction and exchange with close neighbours, rather than directly with Crete (and one useful aspect of this hypothesis is that it can partly be tested archaeologically by quantitative analyses of ceramics and other imports).⁵¹

It would be interesting to investigate further to what extent these smaller networks pre-dated and somehow helped the MM III-LM I Minoanisation of the Aegean, or to consider whether they were the outcome of stimuli coming from Crete. It is likely that, once again, different micro-regions and individual sites will provide varied answers to these questions.⁵²

This focus on small networks should not, of course, entirely replace other models or diminish the underlying importance of Crete, for we should not lose sight of the fact that the unifying element in the variety of the Minoanisation phenomenon is precisely this: what tends to be imported and imitated over a wide area is something that, stylistically, ultimately originated from that island, even if it was not always produced there, and even if the people who consumed Minoan and Minoanising products may have only been dimly aware of it.

In conclusion, in this paper I tried to look at 'Minoans at Iasos', *i.e.* at issues of human mobility in the eastern Aegean, through the study of production or manufacture traditions (technology/motor-habits), while other contributors to this volume have tackled this subject from other angles. Yet another fruitful approach, to finish where I started, could be a more detailed analysis and discussion of what we actually signify by 'Minoan', 'Minoans', and 'Minoanisation', for the meaning(s) we attribute to these terms can seriously affect the way in which we tackle a more fundamental and difficult question: why do we find 'Minoans in the central, northern, and eastern Aegean'?

⁴⁸ Wiener 1984.

⁴⁹ Champion 1989; Kardulias 1999.

⁵⁰ Davis & Gorogianni 2008.

⁵¹ Many imports, including much 'minoanising' material from these sites, appear to be products from close neighbours (Chios for Çeşme; Samothrace for Troy; Kos for Iasos): see contributions and discussion in this volume and also Momigliano, 2005. For a similar process of Minoanisation of Mainland Greece via Kythera see Broodbank 2004, 64–5.

⁵² For example, it is likely that, in the case of the Cyclades, Minoan trade and possible emigration latched on to well-established island networks (on these see Broodbank 2000, esp. 350–61), while, in the case of a settlement such as Teichiussa (Kömüradaşı) (Vöigtländer, this volume, with further bibliography), it may be that its brief 'floruit' and apparently sudden demise after the Santorini eruption were linked to a general intensification of interaction in the Aegean stimulated by the emergence of Cretan Neopalatial elites.

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Miletus introduction

Wolf-Dietrich Niemeier

Abstract

In the introduction the history of excavations and research at Bronze Age Miletus before the start of the new project in 1994, the different theories about the character of the relations between Minoan Crete and Miletus as well as the questions

which in 1994 were open in regard to this problem will be presented. The first two settlement phases, Miletus I (Late Chalcolithic) and Miletus II (Early Bronze Age) without signs of Minoan relations/presence will be presented briefly.

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‘Milet von den Anfängen menschlicher Besiedlung bis zur Ionischen Wanderung’, in *Frühes Ionien: eine Bestandsaufnahme*, J. Cobet, V. von Graeve, W.-D. Niemeier and K. Zimmermann (eds.), (Milesische Forschungen 5), Mainz, 4-8.



Fig. 1. Site plan of Miletus – all periods.

Miletus in the Middle Bronze Age: an overview of the characteristic features and ceramics

Amy E. Raymond

The Period III level at Miletus marks the earliest physical evidence of a Bronze Age occupation that had contact with Minoan Crete. First excavated in 1997 and later traced across the site in the 1998–2004 excavation seasons, this Period III level refers to the material culture of an indigenous Middle Bronze Age coastal island community.¹ Its architectural features and ceramic assemblage are typical of south-west Anatolian settlements of the early MBA period, and the majority of the imported goods were manufactured during Middle Minoan IB–IIB. The function of the settlement in this phase is unclear given the limited area of excavation and the extent of post-Bronze Age disturbance in the area. Among the best preserved Period III features were three hearths and a ceramic kiln.

The MBA pottery assemblage at Miletus can perhaps tell us most about the degree of Cretan influence on the local community, for recent analysis of this assemblage has identified a large group of locally made vases that has distinctive non-local traits. A “non-local trait” is defined as: 1) a characteristic of an object that is strikingly distinct if not unique within the known regional MBA archaeological assemblage even though the object itself displays evidence for local manufacture; and 2) where this characteristic has clear and contemporary parallels outside of western Anatolia, such as from the karum or the Protopalatial culture of Crete. At Miletus, there are several conspicuous vase shapes and one decorative ware from the Period III assemblage that are not widely documented in western Anatolia but are well known on Crete and, to a lesser extent, in the Dodecanese.

Although these traits and their interpretation within the Period III ceramic assemblage are mentioned here, this article serves more as an introduc-

tion to the MBA site at Miletus, its architectural features, pottery and imported goods. Other facets of the excavated material are discussed elsewhere.² This work, in conjunction with the work of Wolf-Dietrich Niemeier, Barbara Niemeier, Ivonne Kaiser and Carl Knappett, documents cultural interconnections in the Bronze Age that are commensurate with a site at the crossroads of the eastern Aegean littoral and the Maeander River Valley (Fig. 1).³

The extant Miletus III architectural features include: 1) the corner of a stone structure; 2) a ceramic storage area; 3) Hearth A, a sherd hearth; 4) Hearth B and Hearth C, parallel hearths; and 5) a ceramic kiln (see p. xx, Fig. 1)). The stone structure is surrounded by dump fills to its east, the ceramic storage area to its north, and Hearth A, at a slightly higher elevation, to its south.⁴ The kiln, segments of north-south walls and Hearths B and C are located in the western area of the current excavations, and another dump fill was excavated in the extreme western area of the site.⁵

¹ On the prehistoric islands of Miletus, see Brückner 2003, 121–44.

² Raymond 2001, 19–26; Raymond 2005a, 185–92; Raymond 2005b; Raymond 2006; Raymond in print.

³ As ever, the author is most grateful to W.-D. and B. Niemeier for their invitation to join the Miletus team and for their permission to work with this material.

⁴ The stone structure is located in Trench Q95.11; the eastern dump fills are in Q94.27, Q94.27R, Q94.27U, Q94.28, Q95.11R, Q95.12, Q95.12R, Q95.12U; the ceramic storage area is in Q94.26R and Q94.27; and Hearth A, the sherd hearth, is located in Q95.11U.

⁵ These features are located in Q95.14, Q94.25, Q94.30, Q99.50, Q99.51R, Q99.52 R, Q95.13, and Q94.29, and the westernmost dump fill is in Q95.13.

Fig. 1. Map of Miletus and other MBA sites in the eastern Aegean and south-west Anatolia.



The “stone structure” refers to the lowest course of a 4.0 m east-west wall and a 4.1 m north-south wall with a corner join. The walls are 0.6–0.7 m wide with large, almost slab-like, stones forming an inner and outer face, filled with small stone rubble. The preserved MBA layers from the interior of this structure are distinguished by thick patches of greenish-gray clay, and the scrappy assortment of MBA Anatolian pottery and imported MM IB – II ‘Kamare ware’ sherds from this space is in sharp contrast to the large intact vases found in the storage area to its north. From that roughly 1.5 m sq. wall-enclosed area came local MBA and imported MM vases including red painted jars, a small knobbed ware pithos (see below p. 149, Fig. 5), a MM IIB, semi-coarse, polychrome lentoid jug and a discoid clay loom weight of the Minoan standard type.⁶ From dump fills under the storage area and continuing to the northeast and east of the stone structure came rich finds of MBA Anatolian and Middle Minoan pottery, three more discoid clay loom weights, a triton shell, two Middle Minoan seals (a button seal with an agrimi and a half-cylinder of green serpentine with two circles) and a clay sealing of Minoan type.⁷

Hearth A is a sherd hearth that is located in the southern area of the stone structure and sits directly west of the end of a MBA wall with the centre point of the hearth directly opposite the “threshold” area (Fig. 2). The preserved portion of the hearth is a 1.26 x 1.08 m area of dark brown burned clay with a semi-circular western edge of reddish orange burned clay (Fig. 2 upper). The darkly shaded area in the figure is burned clay that contained many small stones and sherds of MBA Anatolian red slip vases and tan coarse fabric pottery, and the lightly shaded area is the preserved area of the hard and well burned clay. Beneath this clay layer lies a 1.03 x 1.05 m carefully prepared floor of coarse fabric pottery sherds (Fig. 2 lower). Interestingly, most of these sherds belong to a single large Protopalatial bowl from central Crete.⁸ Sherd hearths are well known in the EBA and MBA periods in western Anatolia, for instance at Limantepe on the central coast and at Troy in the

⁶ For the lentoid jug, see Raymond 2001, 20–2, figs. 2 and 4.

⁷ For the seals and sealing, see Niemeier 2004, 677–88.

⁸ Identified by A. van de Moortel.

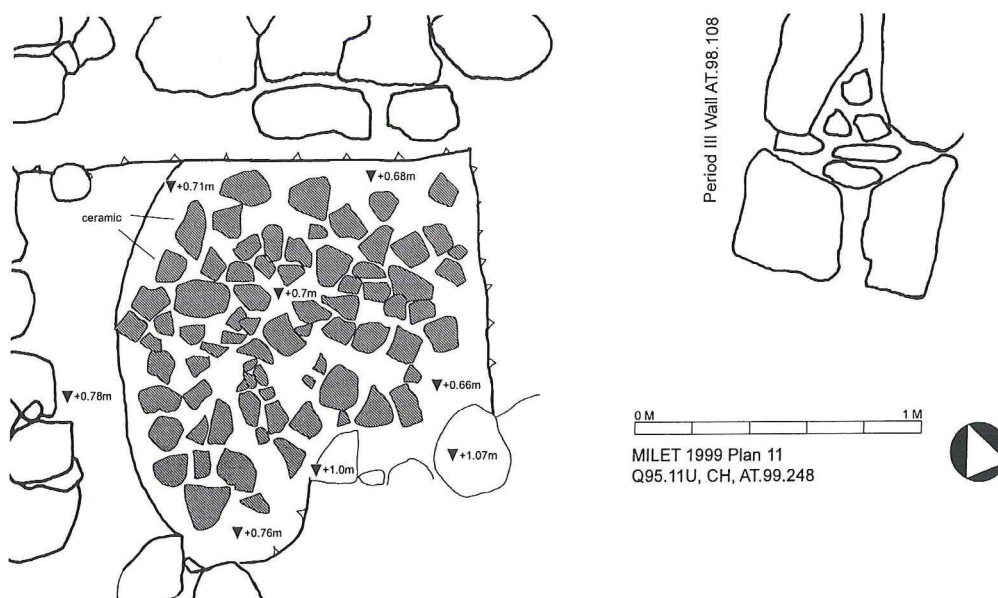
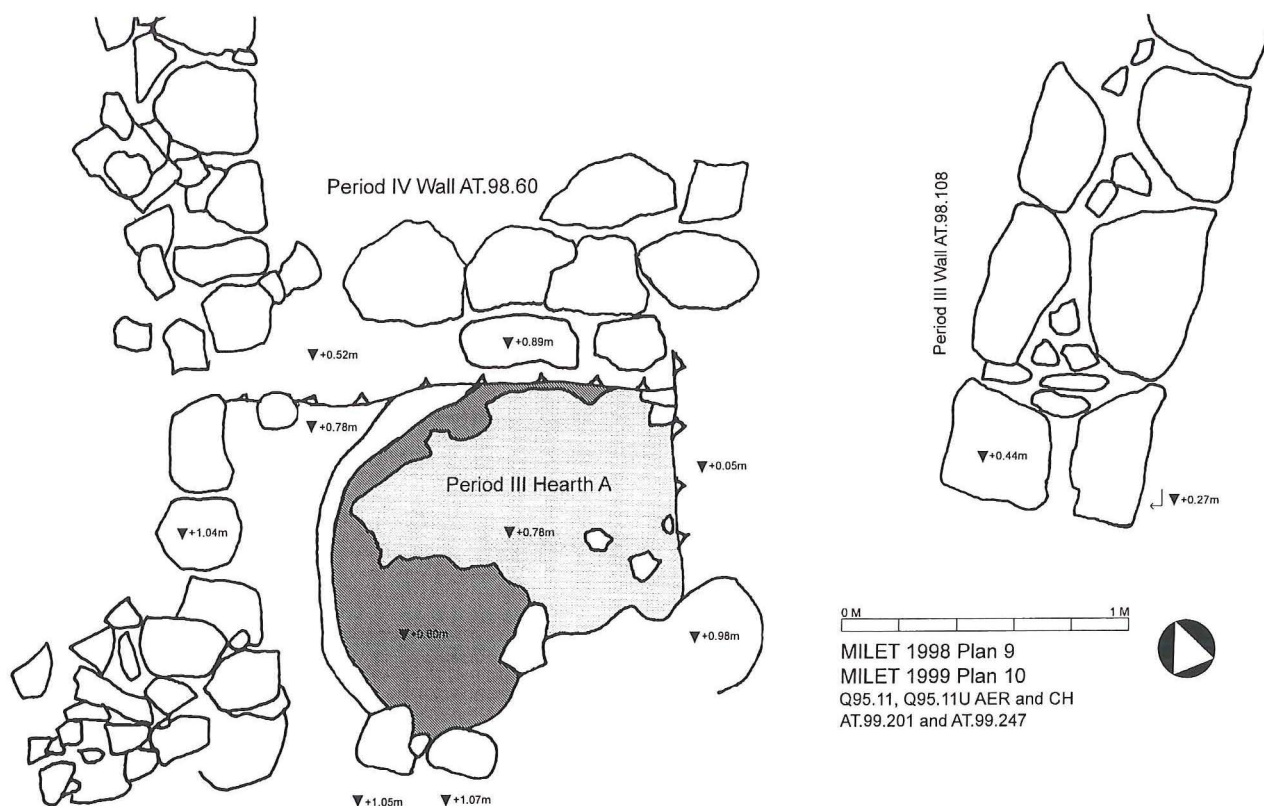
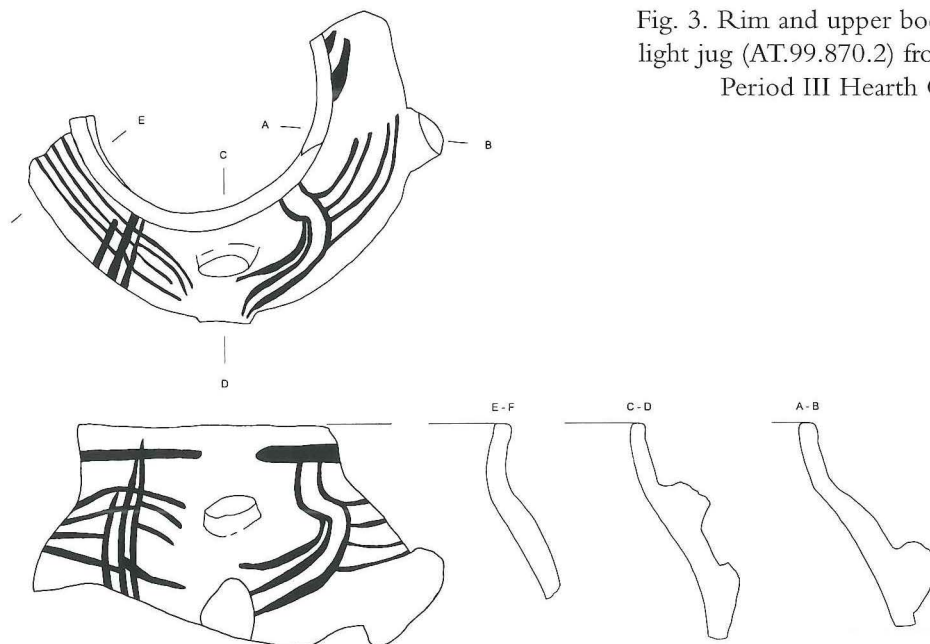


Fig. 2. Miletus Period III Hearth A, the MBA sherd hearth in Trench 95.11U. Upper figure shows baked clay surface of the hearth; the lower figure illustrates the sherd floor. Based on drawings by the author and C. Heitz, MILET 1999, Plans 10 and 11.



AT.99.870.2

Fig. 3. Rim and upper body of Middle Cycladic dark-on-light jug (AT.99.870.2) from the ash deposit upon Miletus Period III Hearth C. Scale 1:3 Drawing by author.

Troy IV and V settlements.⁹ This Milesian sherd hearth has nothing in common with Protopalatial and Neopalatial hearths excavated on Crete, and it seems incidental that its sherd floor is made of imported Middle Minoan sherds.¹⁰ Central Aegean sherd hearths are LM III in date on Crete, and sherd hearths are widespread in the LH III period on the Greek mainland.¹¹

Hearth B and Hearth C are rectangular areas of mudbrick that are of comparable orientation and size, with Hearth B measuring 1.25 x 0.98 m and Hearth C measuring 1.2 x 0.74 m. Both have rounded corners, raised edges, and Hearth C was covered with a 0.10 m thick ash layer. Other deposits adjacent to the hearths were blackened, and MBA Anatolian ceramics were found throughout the area including red slip rolled rim bowls, red slip carinated cups, red slip ledge rim bowls, bowls with flaring walls, and numerous blackened cooking pots. A large MBA Anatolian red slip rolled rim bowl was found south of Hearth B and a large MBA Anatolian dark slip handmade jar was one of two vases found in the 0.30 m area between the hearths. The ash layer above Hearth C also contained obsidian, a spindle whorl and a Middle Cycladic dark-on-light painted jug (Fig. 3).

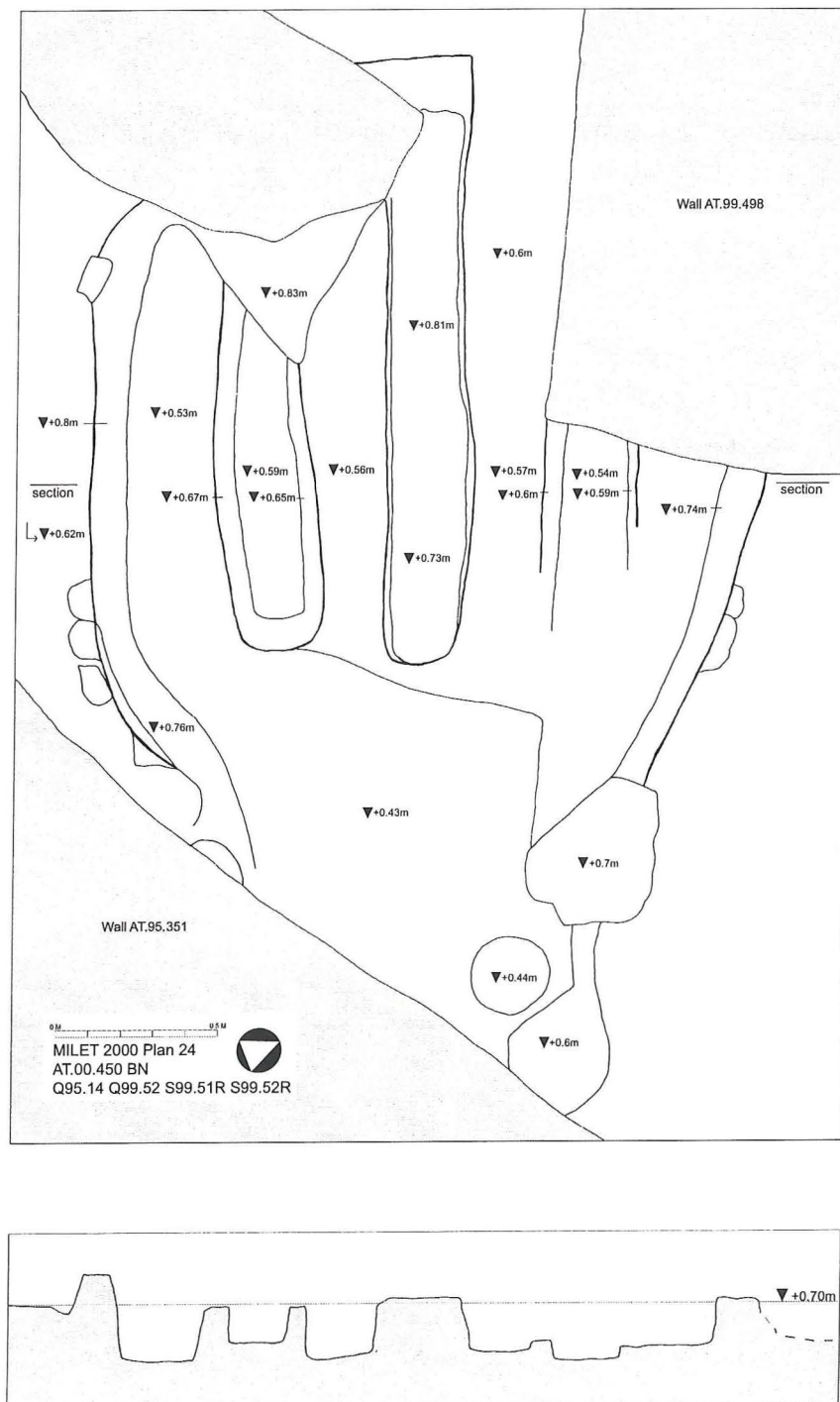
The ceramic kiln is an oval-shaped channel kiln with three interior “benches” and four channels (Fig. 4). Part of the firing pit to the east of the channels was uncovered, but the probable area of the kiln entrance is obscured by a later wall. The preserved length of the innermost bench and the area of the firing pit is 2.96 m, and the perpendicular measurement that reaches both exterior kiln walls is 1.86 m. The preserved height of the kiln benches and exterior walls is approximately 0.26 m, with the upper elevations of the kiln demolished by later building activity. The kiln is composed of burnt rectangular mudbricks (one example meas-

⁹ Erkanal & Günel, 1997, 247, fig. 12 and Blegen 1951, 151, 175, 201, 210, 253, 258, figs. 126, 129-30, 268, 272-4, 277-9.

¹⁰ For instance, it in no way resembles the Middle Minoan raised plaster or clay hearths with central cavities from Malia and Phaistos, nor the pi-shaped LM I stone hearths from Kommos, nor those from Galatas and Kastelli Pediada, Muhly 1984, 107-22; Shaw 1990, 231-54 and Rethemiotakis 1999, 726.

¹¹ Shaw 1990, 245, n. 29. Sherd hearths were excavated in Haus M and Megaron W at Tiryns, Gercke & Hiesel 1971, 1-19, pls. 15 and 20.2f. For other examples, see Tournavitou 1999, 838.

Fig. 4. Miletus Period III ceramic kiln in Trenches 95.14, 99.52, 99.51R and 99.52R. Plan and section based on drawings by B. Niemeier, MILET 2000 Plan 24/1 and 24/2.



uring 0.08 x 0.11 x 0.19 m) making the exterior walls 0.08 – 0.12 m and the interior benches 0.25 – 0.31 m in width. A few small stones were packed at the base of the walls on the exterior, and a brightly coloured clay coating survives on the three interior benches. The slope of the bedrock under the benches drops 0.13 m to the area of the firing pit,

perhaps creating a slightly recessed basin for the kiln fuel.

Diagnostic sherds from the kiln include: a MBA wheel-made red slip carinated cup rim, two MBA wheel-made red slip bowl rims which are badly burned, a waster of a bowl rim, a MBA red slip horizontal handle of a rolled rim bowl, and a MBA

matt-painted wall fragment that is not local. The waster, the rolled rim bowl handle and the matt-painted sherd were all found between the southern and the innermost bench of the kiln. All other pottery that was found just above the highest elevation of the benches down to the floor is consistent with Period III MBA material from the site, including sherds of red slip cups, red slip bowls and tan fabric jars from the various deposits.

Nearby features that may have been associated with pottery production include a deep basin, c. 1.1–1.5 m in diameter and 0.46 m deep, cut in the bedrock to the east of the kiln. The basin was cut with a slope of +0.11m, and it may have served as a small water reservoir. Two clay-lined pits were also cut into the bedrock to the north and south of the basin. These pits are similar in size, c. 0.25 m in diameter, and both may have supported a potter's wheel.

Other channel kilns have been excavated in western Anatolia, and one published example is the middle to late MBA ceramic kiln from Kocabaştepe, which is located south of İzmir between Baklatepe and Kolophon (Fig. 1).¹² This “horseshoe-shaped” kiln was excavated at the hilltop site among dense MBA remains, the pottery from which included examples of Gray Minyan ware and Troy VI vase shapes. The kiln was built of small stones with a mudbrick superstructure, and it has two interior benches that form a single rectangular and two semi-circular channels. It appears to be a more rudimentary form of channel kiln than the Milesian example given that the latter has a more elongated shape with four rectangular channels.

Channel kilns are well known on Crete, the earliest of which is the MM IIB ceramic kiln at Phaistos, located west of the West Court.¹³ Measuring 5.5 x 3.2 m with two free-standing benches and a “dromos-like” firing chamber, the Phaistian kiln is larger and appears more bulky in its stone and clay lining construction than the Milesian kiln.¹⁴ Indeed, the comparison between these kilns seems rather restricted to the fact that both are contemporary and of the oval-shaped channel type.

Other cross-draft channel kilns from Crete are Neopalatial in date: at Knossos, Vathypetro, Mochlos, Kato Zakros (MM IIIA?) and Hagia Triada,

as well as the recently published ‘LM IA’ channel kiln in the area of the south stoa at Kommos.¹⁵ The Kommian channel kiln is larger and more similar in plan to the Milesian, with three benches, four slender (0.25 m) channels, and a firing pit that is diminutive in comparison to the length of the channels. It was built with a +0.62 m upward slope to the east and the firing pit cut down an additional 0.4 m. The construction was of limestone blocks and clay mortar with an interior clay lining.¹⁶

These four kilns, two from Crete and two from western Anatolia, may be compared most easily with D. Evely's typology of Cretan ceramic kilns.¹⁷ Evely distinguishes between “Type 1” and “Type 2” kilns, where a Type 1 kiln is hemispherical or horseshoe-shaped with stoking tunnels and a “Type 2” kiln has an extended oval shape with longer, multiple flues. Evely classifies the MM II kiln from Phaistos as a Type 1 kiln,¹⁸ while the kiln from Kommos would be considered a Type 2. Correspondingly, the Kocabaştepe kiln might be described as a Type 1 horseshoe-shaped kiln with stoking tunnels, while the ceramic kiln from Miletus with its long, multiple flues is similar to other Type 2 Cretan kilns. To date, therefore, the “Type 2” shape of the Milesian kiln is unique among published kilns from western Anatolia.

The ceramic analysis of the Miletus Period III pot-

¹² Özkan & Erkanal 1999, 137–8, fig. 40 and Erkanal & Özkan 1998, 404–6, 419, pl. 2.

¹³ Tomasello 1996, 27–30, figs. 1–2; Levi 1976, 327–8, figs. 494, 510–11, who originally dated the ceramic kiln to the neopalatial period, Levi 1965–66, 351–2, fig. 43; and Evely 2000, 301, 309, for Type 1b, Kiln no. 4.

¹⁴ Levi 1976, 327, fig. 510.

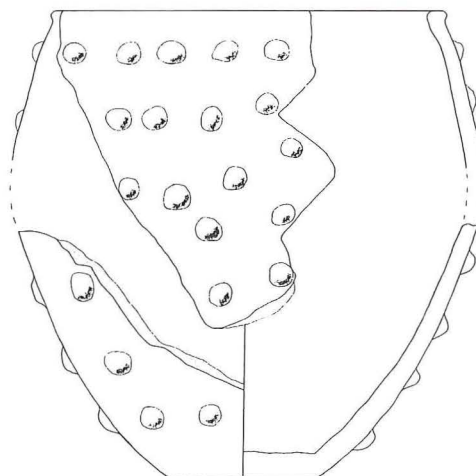
¹⁵ Evely 2000, 300–11; Soles 2003, 83–5 for Kiln A at Mochlos; Shaw, van de Moortel *et al.* 1997, 323–31; Shaw, van de Moortel *et al.* 2001. See Shaw *et al.* 2001, 2 and 107, for a comparative table of Cretan channel kilns with references.

¹⁶ Shaw 2001 *et al.*, 8, 12.

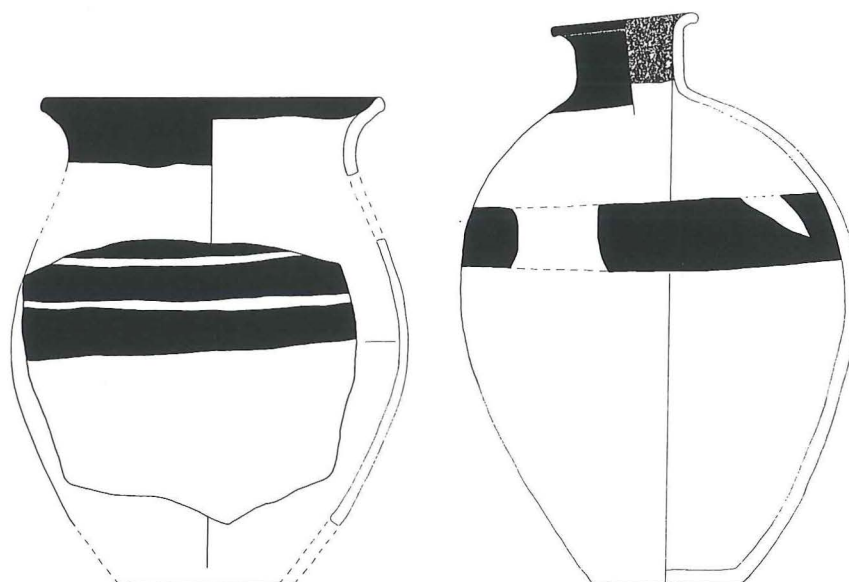
¹⁷ Evely 2000, 298–311.

¹⁸ Evely 2000, 301, though he did not publish the MM II date as established by Tomasello, Tomasello 1996, 27–30, figs. 1–2.

Fig. 5. Miletus Period III knobby ware small pithos (AT.98.234.2) and red painted jars with a wide neck (AT.98.234.4) and a collar neck (AT.98.234.3) Scale 1:6. Drawings by author.



AT.98.234.2



AT.98.234.4

AT.98.234.3

tery is based on post-firing fabric color (buff, orange, red and tan) and inclusion type and density (mica, sand and a yellowish white stone in medium fine to coarse textures). Most common is a medium fine buff fabric for small vases and a tan coarse fabric for the cooking pots. Four decorative surface treatments or wares have been identified: 1) red slip burnished ware, 2) buff slip ware, 3) red painted ware and 4) knobby ware. The well known grey fabric vases from MBA sites in the central and northwestern Anatolia are not typical at Miletus.¹⁹

Red slip burnished ware refers to a surface treat-

ment applied to cups, bowls, jugs and jars, the surface of which is coated in a thick red slip, that is rubbed or burnished to a smooth if not shiny surface with a tool, 2-5 mm wide. This ware is common throughout south-western Anatolia, for instance at Ayasuluk, Panaztepe, Aphrodisias and

¹⁹ Gray ware is common to the Izmir region and the Troad and occurs as far south as Ayasuluk *c.* Günel 1999, 38-9, 64-7, 70, 89, 116-20 and M. Büyükkolanç, personal communication.

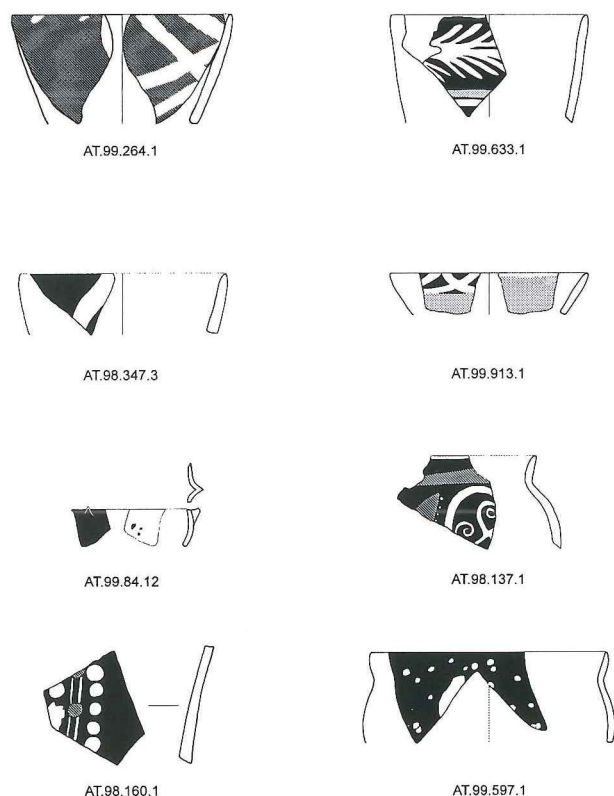


Fig. 6. Various Kamares ware cup sherds from Miletus Period III deposits (AT.99.264.1, AT.99.633.1, AT.98.347.3, AT.99.913.1, AT.99.84.12, AT.98.137.1, AT.98.160.1 and AT.99.597.1). Scale 1:3. Grey colour indicates red paint. Drawings by B. Niemeier and author.

Beycesultan.²⁰ Buff slip ware refers to a surface treatment found on small and medium sized vases. The cream and dark burnished wares that are so common in the Upper Maeander Valley are not found at Miletus. Red painted ware refers to a decorative treatment of jars, in which red stripes have been painted horizontally or diagonally across the body and the neck of the vase (Fig. 5 lower). And knobby ware refers to a distinctive plastic decoration found on tan coarse fabric vases at Miletus, where a series of knobs were smoothed onto the exterior of the vase (Fig. 5 upper). This type of decoration is a regional trait found on bowls, jugs and small pithoi from Samos, Limantepe, Aphrodisias and Beycesultan.²¹

The Miletus Period III ceramic vases principally consist of five shapes: cups, bowls, jugs, jars and

small pithoi – with a few unique shapes, such as the tray, the askos and the scuttle. On the whole, the data suggest that the potters had a propensity for bowls and cups, with the red slip burnished carinated cups being quite plentiful at the site, while rare in the region. Only the everted rim cooking pot is as common in the deposits as cups and bowls.

The majority of the non-local ceramics in the Miletus Period III assemblage are Middle Minoan vases, and these fall into two groups: 1) Kamares ware cups and bridge-spouted jars and 2) semi-coarse fabric jugs, amphorae and bowls.²² Most of the Kamares ware sherds are from wheelmade cups (with a few being handmade) including straight-sided cups, semi-globular cups and carinated cups. There are also examples of crinkly rims, grooved carinations and stamp impressions. The cups are decorated with foliate patterns, repeated circle bands, hanging semi-circles, j-spirals, quirks and parallel diagonal and vertical bands (Fig. 6). A preliminary report from Carl Knappett on petrographic analysis of the fabric sources suggests that most of these Kamares ware fabrics are from central Crete, if not from the region of Knossos. Some exceptions include a cup rim sherd with a “Vierpass” design, which is possibly from eastern Crete (Fig. 6, AT.98.137.1).²³ The semi-coarse fabric vase sherds are likewise of a central Cretan fabric, with a somewhat even mixture between north central and Mesara sources. A nearly complete lentoid jug and the upper body and neck fragment

²⁰ Günel 1999; Lloyd & Mellaart 1965; and Joukowsky 1986.

²¹ From Beycesultan, Lloyd & Mellaart 1965 91, P.9.4 and 7, 43, pl. XXXI.7, 117, P.22.10 and P.23.1, 121, P.24.29 and P.30.4; from Aphrodisias, Joukowsky 1986, 398–9, figs. 334.4 and 444.18, 569, no. 3, 408.3, 663–5, fig. 477.28; from Limantepe, Erkanal & Günel 1995, 270–1, 276, fig. 5 and 279, pl. 7; Erkanal & Günel 1996, 310, 320–1, pls. 10 and 11; from Samos, Milojevic 1961, 72, pl. 23, no. 11; and Isler 1973, 175 fig. On the jug from Samos, also see Niemeier 1984, 206, n. 26, and 215 for comment by J. Rutter; Foster 1982, 132; Papagiannopoulou 1991, 207, 306–7; and Walberg 1983, 144.

²² The author is most indebted to C. Knappett for his insight and his analysis of these Minoan imports to Miletus. Most recently, see Knappett & Nikolakopoulou 2005, 175–83.

²³ Raymond 2001, 23, fig. 3b.

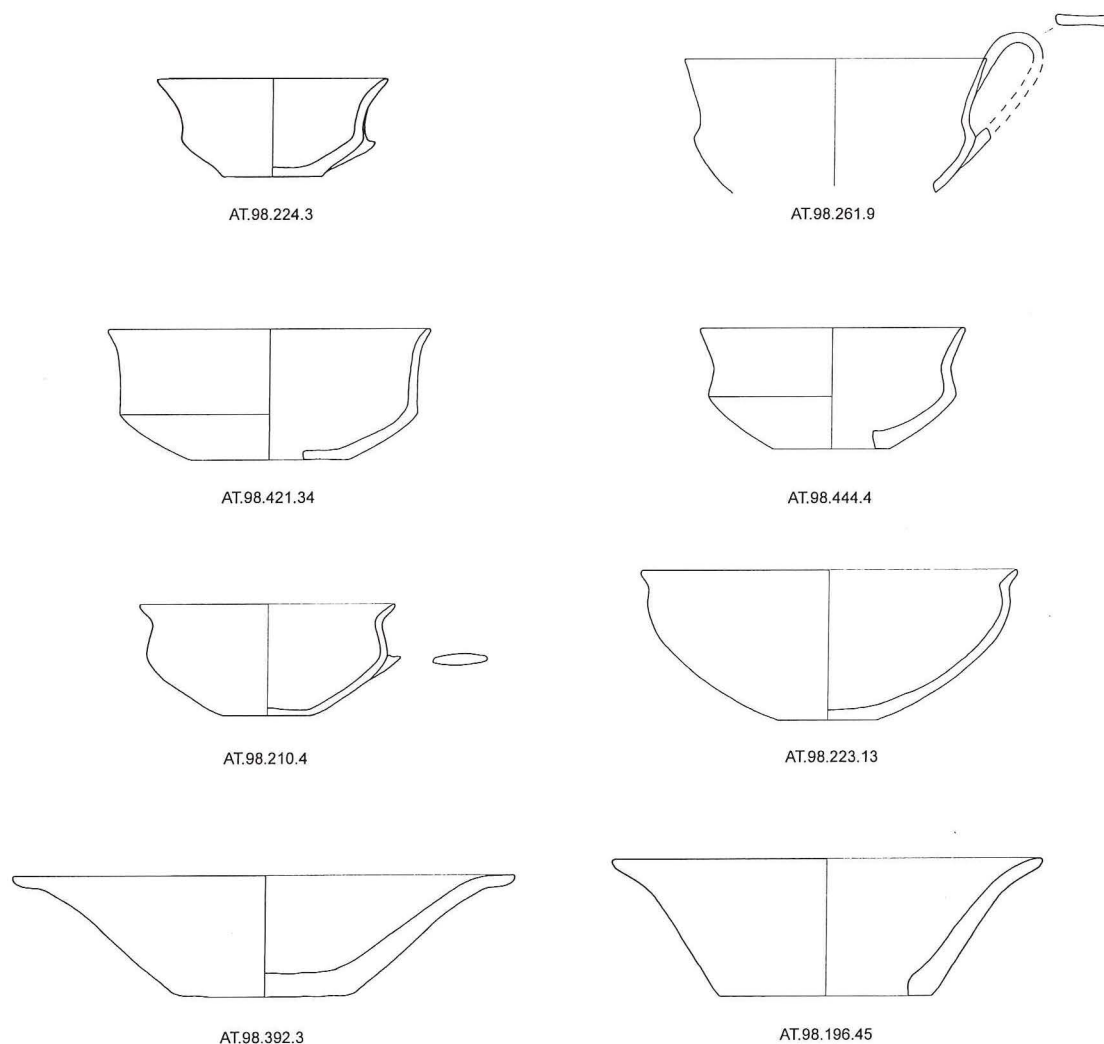


Fig. 7. Miletus Period III red slip carinated cups (AT.98.224.3, AT.98.261.9, AT.98.421.34 and AT.98.444.4), red slip semi-globular cups (AT.98.210.4 and AT.98.223.13) and bowls with flaring walls (AT.98.392.3 and AT.98.196.45). Scale 1:3. Drawings by author.

of an oval-mouth amphora are both of Mesara fabric.²⁴

All of the Protopalatial ceramic imports to Miletus were found in deposits with MBA south-west Anatolian pottery. There was not a cache of Minoan imports found isolated from the more typical deposits, nor was there an uneven distribution in the type of Cretan pottery by context. Instead, the imported Middle Minoan fine and semi-coarse pottery was fairly evenly spread throughout the excavated deposits with their accompanying local pottery. These Cretan imports comprise less than 2% of the Period III assemblage, although the

amount of imported Protopalatial Minoan pottery excavated at Miletus far exceeds the amount identified at any other site east or north-east of Crete.²⁵ While stylistically the Cretan ceramic imports of

²⁴ For the oval-mouth amphora, see Raymond 2005a, 186, pl. XLVc and, as mentioned above, for the lentoid jug, see Raymond 2001, 20-2, figs. 2 and 4. W.-D. Niemeier reports two more recent and interesting Middle Minoan finds from the site, a pyxis lid of the rather rare MM IA-B dark-faced incised ware and a dark-on-light decorated juglet of the same date.

²⁵ Raymond 2001.

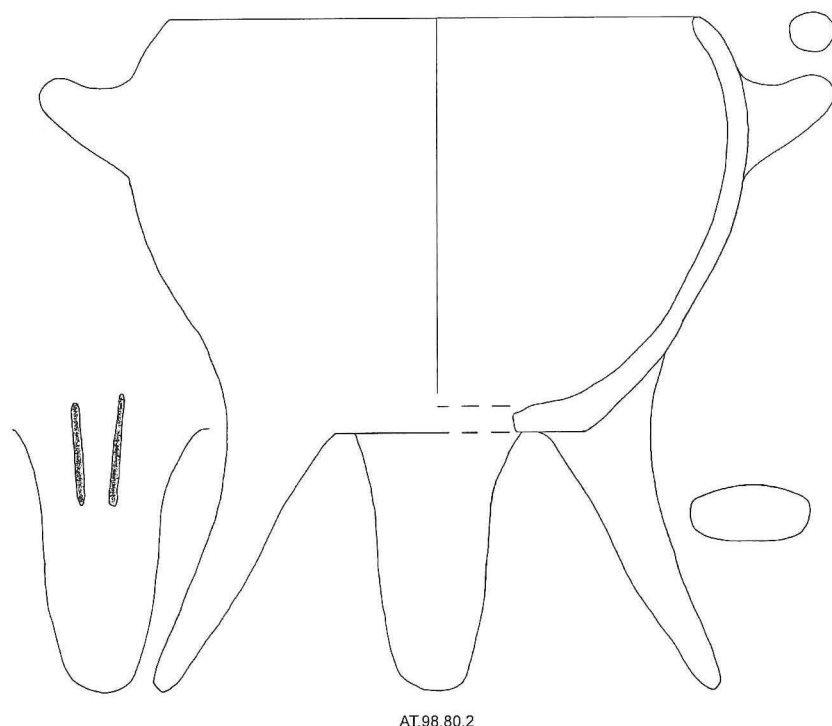


Fig. 8. Miletus Period III tripod cooking pot (AT.98.80.2).
Scale 1:3. Drawing author.

Period III cover the phases MM IB-IIB, these distinct periods on Crete are not reflected in the habitation sequence at Miletus, where all MBA deposits with imported material are homogeneous Period III deposits.

Unlike sites in the western Aegean, such as Lerna, Aegina and Keos, evidence of decorated “Minoanising” pottery at Miletus Period III is thus far inconclusive.²⁶ Only a few black slip cup fragments from Miletus are, on the one hand, distinct from the local red and buff slip cup sherds and, on the other hand, not quite as hard-fired or as thin-walled as most Kamares ware cup fragments. Additionally, there are no large Period III vase fragments with a black slip in local fabric. Thus, there is no evidence for the successful local imitation of the larger polychrome Cretan vases. Perhaps the Milesian red painted ware is related to the Cretan dark-on-light style, for this Milesian decorative ware has no regional comparanda and it is well removed in date and technique from the western Anatolian “red cross bowl” (Fig. 5 lower). It may be worth noting that the Milesian red painted ware and the Middle Minoan dark-on-light style are contemporary, adorn similar types of vases, use the local slip

as paint and have corresponding design schemes.²⁷

Aside from the decorated pottery, there is ample evidence of “non-local traits” in the vase shapes of the Miletus III assemblage, and many of these vase shapes are also common Protopalatial vase shapes. The carinated cups, the semi-globular cups, the inward sloping ledge rim bowls, the bowls with flaring walls, the trays and the domestic shapes (including the scuttle, the tripod cooking pots, the conical cups, and the discoid loom weights) make up a large part of the local pottery assemblage at Miletus while these shapes have little to no regional comparanda (Fig. 7 for various Milesian cups and bowls and Fig. 8 for a tripod cooking pot).²⁸ This is in direct contrast to the remainder of the Miletus Period III assemblage which includes shapes

²⁶ Knappett & Nikolakopoulou 2005, 179-81; Hiller 1993, 197-9; Davis 1986, 86-8; Davis 1980, 257-60; Niemeier 1986, 248; Overbeck 1989, 11-2 for a discussion of “Minoan wares”, as well as Papagiannopoulou 1991 for the islands.

²⁷ Raymond 2005b, 150-6.

²⁸ Raymond 2005a, pl. XLVI for carinated cups, semi-globular cups and inward sloping ledge rim bowls, pls. XLIV and XLV for the scuttle.

that are quite well known at other south-west Anatolian MBA sites (such as the rolled rim or bead rim bowls, the ledge rim bowls, the jugs and the everted rim jars). Only the carinated cups have significant parallels on Rhodes and Kos, and further excavation may allow more of these vase shapes to be identified as part of a Dodecanese MBA tradition.²⁹ In the meantime, though, the resemblance between the Milesian and the Cretan shapes is remarkable and certainly warrants consideration within the context of the “Minoanisation” of the MBA pottery practices at Miletus.

These, then, are the basic characteristics of the MBA level at Miletus where there is a strong indication that the MBA Milesians took part in the ceramic traditions of both south-west Anatolia and the Aegean. In terms of relative chronology, this assemblage most likely post-dates the EBA settlements at Beycesultan and Limantepe; it has parallels with early MBA Beycesultan Periods V – IVb and Aphrodisias BA4 – MB. While the types of wheel-made vases and the presence of rolled or bead rim bowls in this assemblage firmly place the Miletus Period III pottery in the MBA, some of its characteristics also have parallels in the late EBA period. If this assemblage must be aligned with the Trojan

chronology, it has references to the Troy IV and V late EBA and MBA “Anatolian Troy Culture” but none to the early Troy VI MBA and LBA culture.³⁰ Finally, the Cretan imports to this early MBA settlement are Protopalatial in date, with sherds and vases of the MMIB, MM IIA and MM IIB periods found throughout the Milesian Period III level.

²⁹ Benzi 1984, 93–105, Cat Nos. 7–10, figs. 4, 5, and 12; Marketou 1988, 27–8, fig. 2; Marketou 1990, 40–9; Marketou 1998, 42–5; and Papagiannopoulou 1991, 294. On other ties between southwestern Anatolia and the Dodecanese, see Knappett & Nikolakopoulou 2005, 180–1, for an imitation MM III ewer at Miletus in a fabric probably from Kos, and see Momigliano 2005, 217–26.

³⁰ M. Korfmann distinguishes between the Troy I – III “Maritime Troia-Kultur” (“Denizsel Troia Kültürü”) and the Troy IV – V “Anatolische Troia-Kultur” (“Anadolu Özellikli Troia Kültürü”), Korfmann 1997, 215. The postulated hiatus between Troy V and Troy VI appears to be no longer plausible, Korfmann & Kromer 1993, 168 and Korfmann 1993, 292, fig. 2. Now Troy V is often referred to as a MBA level and Troy VI as a MBA – LBA level, Korfmann 1997, 213–215 and Korfmann 1998, 427–9.

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Miletus IV: the settlement and Minoan sanctuary of the beginning of the Late Bronze Age

Wolf-Dietrich Niemeier

Abstract

In Miletus IV the picture changes completely: Almost all of the pottery (ca. 95%) is of Minoan character (the locally produced domestic pottery of Minoan character as well as the local red wash ware will be discussed by I. Kaiser). The fine and semi-coarse decorated pottery (MM III-LM IB/II) was imported from different areas of Crete, in smaller quantities also from the Greek mainland, the Cyc-

lades and Cyprus. Other evidence for close connections between Miletus IV and Minoan Crete in the New Palace period is provided by the existence of a sanctuary in which ritual items of Minoan type have been found, and by the finds of Minoan frescoes, Minoan seals as well as by the evidence for the use of the Minoan weight system and of the Linear A script.

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Miletus IV: the locally produced coarse wares*

Ivonne Kaiser

This paper deals with the locally produced coarse wares of Miletus IV,¹ the phase in the Milesian sequence defined by Cretan imports from MM III to LM IB/II. My definition for the term coarse ware² encompasses all ceramics that are not polished, but may have been smoothed, ceramics which are not painted, but may have been self-slipped or coated in a wash³ e.g. the so called red wash pottery; in Miletus III, this red coating is called slip because it seems to be thicker and is often burnished.⁴ Milesian coarse ware is easily recognizable. There are two pastes that are frequently used: a light coloured paste with lime inclusions that appear white to the eye, and a brown fabric with a dark grey core (nearly all of the red wash pottery uses the latter paste).

The assemblages of the Miletus IV local coarse wares contain shapes of Minoan type as well as some southeastern Aegean-koine shapes, more Anatolian derived types and some Milesian peculiarities. At the moment, only the Minoan type has clear borders whereas for the other types the borders are fluid and might change according to our knowledge.

Coarse ware evidence for Minoan⁵ presence

A clear sign for Minoan presence at the site was the abundance of conical cups. Even in the old excavations from the beginning of the 20th century, under the direction of Carl Weickert, huge amounts of conical cups must have been found so that he could state in the report given at the 6th international conference in Berlin in 1939: 'Nur trat eine sehr große Anzahl kleiner, unbemalter

Näpfchen auf dem untersuchten Geländestück in fast erdrückender Menge zutage'.⁶ Unfortunately most of them were thrown away together with other coarse wares.⁷ From the excavations directed by the Niemeiers, 530 complete conical cups have been uncovered so far. And, in addition, there were at least 20 times as many fragments of conical cups from an area of approximately 35 by 25 m, based only on the almost indestructible base sherds. This is the arithmetical equivalent of a little more than 12 conical cups per square metre; those parts of the area that were deeply disturbed by Roman building activities and previous archaeological trenches were not taken into account in these calculations.

Minoan shapes – household wares

The Milesian conical cups are quite standardized in terms of size, weight and quality of production.⁸ This is the main difference that separates them from

* My special thanks to W.-D. and B. Niemeier for allowing me to study this interesting material.

¹ The terms Miletus I to VI refer to building periods from the chalcolithic to Mycenaean times. Cf. Niemeier 1998–99, 87–94; this volume p. 142, Fig. 1.

² Other names for this kind of pottery are domestic or kitchen ware. But those terms, at least in my opinion, rule out the more industrial functions that some of the pieces have.

³ Schneider 1989, 13.

⁴ Raymond 2005, 69.

⁵ The better term may be 'Cretan'. Cf. Broodbank 2004, 51.

⁶ Weickert 1940, 328.

⁷ That they had the same range of shapes and wares show the plates in Weickert 1957, pls. 29–30; Schiering 1959/60, pl. 41.

⁸ Knappett 1999, 416.

their rare MM forerunners⁹ and their LH IIIA successors. Their average height lies between 3.5 and 4.2 cm., while the diameter of the always string-cut bases varies between 4 and 4.5 cm. More interesting than the size might be the question what function the conical cups uncovered at Miletus had; most of the unearthened examples reveal nothing as to their use. A few conical cups show traces of burning on the inside, indicating their use as lamps. An even smaller number had traces of pigment inside, one of these proving to be ochre. So they might have been used as vessels for crushing pigments which might also refer to a cult (altar), industrial (wall-painting)¹⁰ or personal (cosmetics) function.

Taller in height (5.5 – 6.5 cm) and with a wider diameter of the mouth (12.5 – 14 cm) is a shape that we call lipless bowl. The walls of the lipless bowls are thinner and more incurving than those of the conical cups. A second type of bowl has an everted rim.¹¹ Apart from the bowls, there are tumblers which have thicker bases than the bowls, a taller body than the conical cups, and a diagnostic horizontal everted rim.¹² Comparative material for these shapes comes from almost every site on Crete. Since the Milesian small, open shapes are all made from the light paste with lime inclusions, we can assume they were manufactured from the same clay mixes, which, in turn, may imply that they were primarily intended for the same uses, since their porosity is equal.

The two main types of tripod cooking pots show more diversity than the open shapes: Type I has an oval-shaped, elongated body, flat or rounded base and three small legs;¹³ these short legged pots vary in height between 24 and 33 cm. Type II has a more globular body and longer legs and only reaches a height of 16 cm.¹⁴ More box-shaped pots as known from Crete¹⁵ are not in use in Miletus. It can be noted as a Milesian feature that cooking pot legs are usually round in section.

Further details of the cooking pots are that they are always given two rounded horizontal handles and are provided with a small spout, grooves underneath the rim, and the imitation of a rivet opposite to the spout. The cooking pots and the tripod cooking trays are the only vessels that al-

ways show traces of fire. So it is more than plausible that those traces actually are related to their use. The cooking pots often show these marks of burning at the front under the spout as well as on the inside, whereas the cooking trays have such traces on the top and bottom. An explanation for the traces of fire on the front of the cooking vessels can be that they did not stand upright in the fire but were bent slightly forwards. Another culinary object is the cooking dish without legs. The flat ones without legs have an average diameter of 40 cm. They are supplied with a slightly incurving rim, rather thick walls and a base that becomes thinner towards the middle. A dish of this type comes from Kommos, with a diameter of 44 cm.¹⁶ Furthermore, there are several fragments of amphorae at Miletus which are closely comparable to Cretan types, e.g. from Mochlos or Palaikastro.¹⁷ On one of the amphora, there is a Linear A inscription incised before firing.¹⁸ In addition to these vessels, there are examples of bridge-spouted jars of Cretan type.¹⁹

Minoan shapes – industrial equipment

The so-called fireboxes are pieces of equipment that probably had an industrial purpose. Although their original function is not at first sight obvious, it seems very likely that they were used in the production process of aromatics as discussed by Georgiou.²⁰ Despite having unearthened several small

⁹ It seems to be a widespread phenomenon that conical cups make a broader appearance at the beginning of the LM I period. Cf. Gillis 1989, 99; Raymond 2005, 74.

¹⁰ Niemeier 1998–99, fig. 11 (mudbrick altar); Niemeier 1998, figs. 8–10 (fresco fragments).

¹¹ Niemeier & Niemeier 1997, fig. 67 (bowls on the left).

¹² Weickert 1957, pl. 30,1 (second from left).

¹³ Niemeier & Niemeier 1997, 235 fig. 68.

¹⁴ Niemeier & Niemeier 1997, 235 fig. 69.

¹⁵ Martlew 1986, 422 Type A II; Sackett & Popham 1970, fig. 17 NP 113.

¹⁶ Watrous 1992, 14 n. 251 fig. 16.

¹⁷ Barnard & Brogan 2003, 71 IB.380 fig. 31, pl. 18; Knappett & Cunningham 2003, 154 n. 297–9, figs. 35–37.

¹⁸ Niemeier & Zurbach forthcoming.

¹⁹ Betancourt 1990, 129 n. 890, pl. 52.

²⁰ Georgiou 1986, 8–11.



Fig. 1. Fire stand AT 96.229.10, photograph W.-D. Niemeier.

fragments of multiple pierced sherds with traces of fire on the interior, only one is without doubt a firebox²¹ belonging to Georgiou's category 222.

Whereas the fireboxes served in some production process, a question remains over the function for the so called fire-stands²³ (Fig. 1). Thus far, 20 individual fragments have been found at Miletus. All Milesian stands are pyramidal in section and 9 to 10 cm high, with bases about 4.5 cm thick, and their indented tops between 1 and 2 cm. They occur with horizontal or vertical handles.²⁴ Comparative material comes mostly from the so-called Minoanised islands of the Aegean, such as Keos,²⁵ rather than from Crete²⁶ itself. A fire-stand, albeit larger and more slender than the Milesian stands was found in the Early Bronze Age layers of Aphrodisias²⁷ about 80 km westwards from Miletus. From the Milesian Early or Middle Bronze Age levels, no such object is recorded so far. The purpose of these objects is more obscure than that of the fireboxes. A *communis opinio* is that they were spit rests. Georgiou has argued that it is difficult to imagine those stands as spit rests unless you have two identical ones.²⁸ In our opinion it is not necessary to have two identical ones because the material is very homogenous and it is possible for the spits to fit two different fire-stands. In the Milesian assemblage, no two are alike. The Milesian stands support Georgiou's idea that they were not used directly in the fire because they do not show traces of burning on the sides.²⁹ Indeed, traces of fire are only found on the cooking pots and cooking dishes.

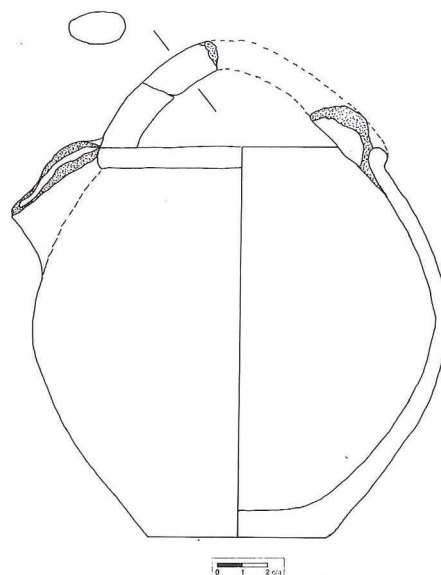


Fig. 2. Bridge-spouted jar A T95.352.1, drawing H. Muench.

Southeastern Aegean koine shapes

Shapes that might derive from Minoan sources, but that are somehow adapted to a southeastern Aegean taste, belong to what I call for the moment, southeastern Aegean koine types.

This group comprises shapes that are known not only at Miletus but also in the vicinity. One example is a bridge-spouted jar equipped with a basket handle (Fig. 2). Such shapes occur at the site of ancient Teichiussa³⁰ and as well as on the island of Samos.³¹ As a working hypothesis, we think that those shapes cover the same area as the east

²¹ Niemeier 2005, 6 fig. 14.

²² Georgiou 1986, 4.

²³ Niemeier & Niemeier 1997, 235 fig. 70.

²⁴ Out of the 20 pieces four are provided with horizontal and two are provided with vertical handles.

²⁵ Georgiou 1986, 23.

²⁶ Cf. Bosanquet & Dawkins 1923, 72 fig. 58a; Platon 1971, 215.

²⁷ Kadish 1969, pl. 27 fig. 32.

²⁸ Georgiou 1983, 78.

²⁹ Georgiou 1983, 79.

³⁰ Voigtländer 2004, pl. 65,4; fig. 148.

³¹ Heidenreich 1935/36, 167 fig. F 84.

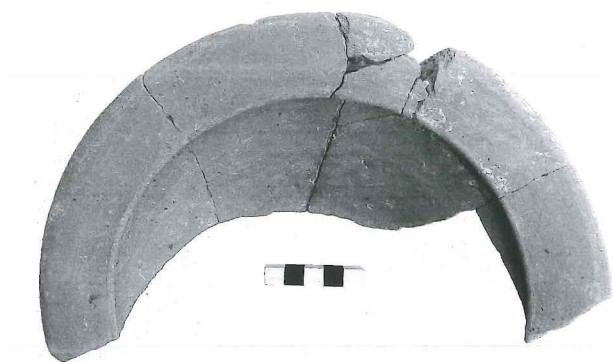


Fig. 3. Red wash bowl AT 96.143.11, photograph F. Galle.

Aegean Light-on-Dark ware, which means Kos and Rhodes, and from Iasos up to Miletus.³²

Anatolian shapes

This group is not only distinctive because of its shapes but also because the vessels have a red wash. This group comprises mostly open shapes such as cups and bowls. The red wash, which is applied to a brownish fabric with a dark grey core, makes it easy to recognize even as small sherds belonging to this Anatolian influenced group. The red coat is typical of the ceramic material from Beycesultan, a tell site which lies further inland (about 230 km) and has a ceramic sequence from the Chalcolithic period well into the Iron Age.³³ Though we can assume that the red wash originated on such Anatolian sites as Beycesultan, it can be observed that the Milesian red wash pottery does not always follow those Anatolian shapes. In addition, the locally manufactured, red wash ware of Miletus IV is sometimes rather dull when compared with the Anatolian red wash pottery.

In terms of typology, red wash pottery comprises globular, carinated and conical small bowls with a broad horizontal rim³⁴ (Fig. 3) as well as bowls with a carinated rim with an attachment to the rim (Fig. 4). Those bowls find their best parallels in the Beycesultan material.³⁵ Another very common type of bowl is the one with basket handles. Again, comparative material is found at Beycesultan.³⁶ The

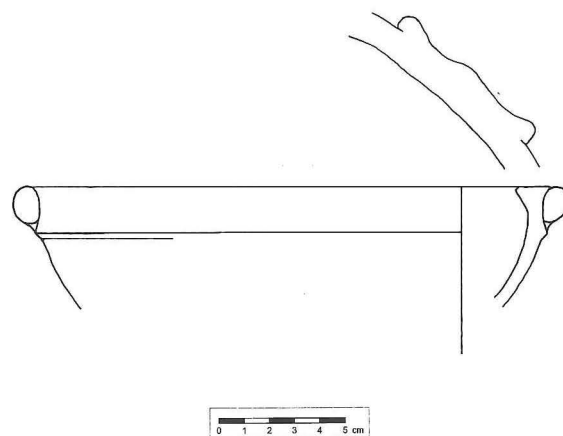


Fig. 4. Red wash bowl with rim attachment AT 95.179.4, drawing M. Wien.

reason why Beycesultan provides the most parallels for the shapes is due to the fact that material from sites closer to Miletus remains unpublished.

Further shapes that carry a red wash are a tall foot, perhaps belonging to a kind of fruit-stand or large bowl,³⁷ a jug with a narrow neck and the spout of a high-spouted jar.³⁸

One has to bear in mind that, at Miletus, closed shapes play a minor role in the red wash fabric. So it is surprising to find the flat base of a closed, red-wash vessel with a piercing made before firing, indicating that this vessel was used as a rhyton.³⁹

Milesian peculiarities

This group comprises shapes that are to our knowledge genuine Milesian. The first example is a hybrid cooking pot which combines the Minoan tripod shape, a flat base and the common Milesian grooves beneath the rim with an elongated spout and the Anatolian basket handles.⁴⁰

Another specifically Milesian feature is the stor-

³² Morricone 1972-73, 387.

³³ Mellaart & Murray 1995, preface.

³⁴ Niemeier & Niemeier 1997, 237 fig. 73 top left.

³⁵ Mellaart & Murray 1995, fig. P.16. P.17.

³⁶ Mellaart & Murray 1995, fig. P.15 no. 9. P.16 no. 12.

³⁷ Cf. Mellaart & Murray 1995, fig. P.14. P.15.

³⁸ Niemeier & Niemeier 1997, 237 fig. 73 bottom.

³⁹ Koehl 1981, 181 fig. 2 c-d.

⁴⁰ Kaiser 2005, pl. 47 b.

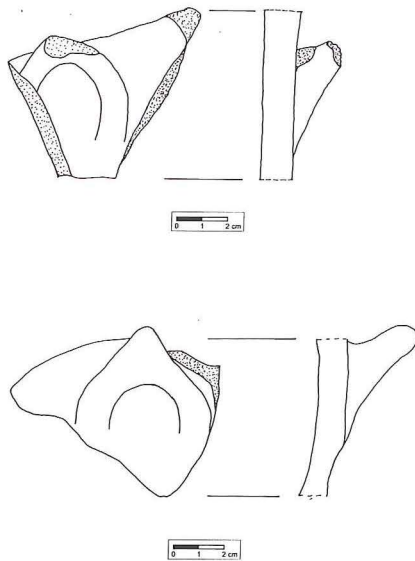


Fig. 5. Pointed attachments AT 95.59.1 and AT 95.60.2, drawings J. Zurbach.

age jars, which have an average height of 40 cm and usually possess a ring foot, a rounded everted rim and, in the upper third, either a rivet imitation or a ledge. The interesting phenomenon are the small pointed handles such vessels are equipped with (Fig. 5).

Furthermore there are the so-called horned stands. They are round in shape, hollow inside with two projecting horns⁴¹ (Fig. 6). The massive twisted horns are not upright but slightly bent with a vertical handle between them. While these may have functioned as potholders, the purpose of two tall vessels is completely unknown. They were found stacked one inside the other in a deposit that otherwise comprised only of household shapes. Both have flat bottoms and massive walls; the upper part of the larger vessel slopes outwards. A possible explanation could be that they were lamps.⁴²

Conclusions

By sorting the deposits we found out that the shapes belong mainly (90 %) to the Minoan and south-eastern-Aegean-koine group, the dividing line between which is not always clearly distinguishable. Roughly 5 % belong to the red-wash material and a percentage that can not be determined precisely,



Fig. 6. Horned stand AT 97.404.12, photograph W.-D. Niemeier.

is specifically Milesian in character. From this, it seems plausible that the whole of pottery production was in Minoan hands. The Minoan potters at work – a hypothesis supported by the Minoan type potter's wheel⁴³ uncovered in the excavation – were well aware of the local drinking habits, religious practices or simply local preferences, and therefore produced a certain amount of pottery with a red wash.

Since the ground plan of the remaining walls alone does not help us understand what this part of the Bronze Age settlement was used for,⁴⁴ we can only try to define it by its finds. A strong case was made for a sanctuary by the discovery of a clay altar.⁴⁵ Apart from the precious small finds and decorated pottery, the coarse ware strongly supports the idea of a Minoan Neopalatial sanctuary with its own pottery production and maybe the production of perfumes as suggested by the fire-boxes.⁴⁶

⁴¹ Kaiser 2005, pl. 47 d.

⁴² This comment I owe to Walter Voigtländer.

⁴³ Niemeier 2005, 6 fig. 15.

⁴⁴ See this volume p. 142, Fig. 1.

⁴⁵ Niemeier 2005, 7 fig. 16.

⁴⁶ See Kaiser 2005, 196 with pl. 47 a.

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Discussion after Saturday's sessions

Warren I have one comment to make at this stage, on Irene Nikolakopoulou's paper. With all the new discoveries outside Crete what we are looking at is different levels of complexity and different kinds of 'Minoan' influence or Minoanisation. We have to explore these different forms of complexity very thoroughly; they tell us not only about the different Aegean settlements of which we have been hearing, but also about Crete itself. One level, perhaps the most straightforward and at least in part aesthetic, is that of fine products exported from Crete and the reasons for this. More complex are matters like the transference of religion and religious forms, which did not previously (before MM I A in Cretan terms) exist in places like Philierimos, and the transfer of administration, which had major implications for local levels of activity and about which we shall hear more from Dimitris Matsas and others. We have also seen a little of such complexity with the weights which Anna Michailidou has worked on, the balance weights, and what this too implies for the transfer of certain levels of administration.

Macdonald I wanted to bring something up at this moment, because I suspect that it won't be appropriate at the end of the discussion tomorrow afternoon, and that is particularly for two speakers, Irene Nikolakopoulou and Toula Marketou, and their different sites. Firstly, for Toula Marketou: something that struck me about the pottery in this worrying, single MBA phase, was that the carinated cups you showed us from the Philierimos hill seem to me to be Minoan carinated cups of the normal MM IB and II types, whereas the MBA carinated cups we saw from the settlement appear to be a local development with the handle attached to the interior of the rim. Keeping in mind this matter of the single MBA phase and turning to Akrotiri, with phase C of Irene's paper we are faced with a bit of a problem concerning the end of the phase here and at Trianda on Rhodes. In the case of Akrotiri, the end is placed, in Minoan terms, in MM IIIA, at the end of MM IIIA; in the case of Ialysos, I'm not sure where the MBA ends since the bridge-spouted jars that you showed us are, in my opinion, impossible to date in Minoan terms. In each case, the Late Bronze Age town is then built on top of a destroyed settlement which had come to an end before the end of the Cretan Middle Bronze Age. We are left at this moment, I think, on Rhodes and on Thera with a grey area in the seventeenth century (MM IIIB), which we really don't know very much about although we thought we did until a few years ago.

Marketou I have shown some of the MM Ib/II Cretan imports from Mt Philierimos, as well as from the MBA settlement at Trianda in an attempt to suggest some synchronisms with Middle Minoan Crete. However, the percentages of MM imports on Rhodes are very small. The architectural remains of the Middle Bronze Age at Trianda cover a single period, without sub-phases, which seems to start around 1950/1900 BC,

after the final abandonment of Asomatos, while the succeeding phase, in terms of the architectural remains, belongs to the so-called transitional MM III-LM IA period. On the other hand, the fabric of the carinated cups from Phileremos seems local, while the majority of the red-slipped carinated cups from Phileremos have their handles attached to the interior of the rims, a characteristic which does not appear in the Minoan carinated cups.

Momigliano

I would like to thank Toula Marketou because she has solved the problem of where some of the pottery from Iasos came from! As to the question of the carinated cups, since I started working at Iasos and learned more about Anatolian pottery, I have become more and more sceptical about carinated cups being imitations of Minoan pottery. In my opinion, the evidence from Asomatos and Trianda shows very clearly that carinated cups in this part of the Aegean have much to do with Anatolia and very little with Minoan Crete, because they just go on from the Early Bronze Age down to the Middle Bronze Age; in addition, the technique of manufacture is different from Minoan Crete. The conical cup, however, is another matter.

Papazoglou

I would like to comment on the Middle Bronze Age at Trianda. Twenty years ago, when we excavated Middle Bronze Age strata in the Theochares plot, the pottery, now published in the *Deltion* (*ArchDelt.* 37 (1982), 139-190), included carinated cups and spouted cups and spouted vessels of typical Minoan type. At that time, I thought they were MM III, yet now that I see them, I think they are MM II. And so I can't understand very well why Toula said that Middle Bronze Age strata have not been excavated before at Trianda since it is clearly stated in my paper that there is a MM phase at Trianda. There is a misunderstanding here. Toula has stated, as I recall, that there is not MM material in previous excavation at Trianda. The truth is that Monaco's Trianda I is actually Furumark's Trianda I- LMIA but I have proposed in my paper the following, different, scheme: Trianda I- MMIII and Trianda II (sealed by tephra) LMIA. The new scheme is mentioned in RAP.

Nikolakopoulou

I want to return to Colin's question concerning strata belonging to the end of the Middle Bronze Age; we do not appear to have levels equivalent to MM IIIB stratified at Akrotiri.

Van de Moortel

Peter Warren has said that we should look into Minoanisation and the export of Minoan practices, like administration, religion, and so on, to the islands. Irene brought up another very important matter, namely the adoption of the potter's wheel in the islands. An interesting thing is that the wheel is used not for prestige pottery, but rather for simple pottery, ledge-rim bowls, straight-sided cups – Minoan shapes, but simple shapes. The wheel is not just a technological feature; it also has to do with the organization of production. Once you start using the wheel, you can produce large amounts of pottery. So we have to ask why somebody was producing on Thera large amounts of very simple cups. Was some kind of Minoan practice or habit exported at the same time as the wheel?

Momigliano

I wonder really how intensively Minoanised Çeşme is. Yes, you have imports of Minoan pottery, but do you have locally made Minoan pottery? Conical cups? You

do seem to have more evidence of contacts with the Minoan world than, say, Troy, but I think that even Iasos is not as Minoanised as Trianda, and Çeşme is even less so.

Erkanal/Keskin That is the case. Actually, Çeşme has more of an Anatolian character, and, compared to the sites of Miletus and Iasos, there is less original Minoan material.

Momigliano What is even more interesting is that you have Minoanising material from the Cyclades.

Marthari First I would like to congratulate you for such a clear excavation and presentation. It would be very helpful if we could have another look at the imports, which are very interesting indeed. You have some Cycladic material. I think that a panelled cup you showed, a bichrome one (Erkanal and Keskin this volume, fig.12), cannot be Theran, because, according to the evidence, the production of such kind of cups has stopped in Late Cycladic I/Late Minoan IA Akrotiri, so this could be Melian or from another Cycladic island. On the other hand the Cycladic White jug (Erkanal and Keskin this volume, fig.13), should be Theran, and probably an heirloom at this level from an early Middle Cycladic context. This jug finds a close parallel as far as the decoration is concerned in a vase from the Aghios Eleimon cemetery, Thera I referred to in my paper (Marthari this volume), although I haven't shown the specific vase; it has exactly the same pattern, chequers, a Theran pattern that starts in MC and continues into the Late Cycladic I period. Another variety of this pattern occurs on a Late Cycladic I jar from Akrotiri.

Niemeier What Momigliano says is of course important; that is why we are having this symposium – we want to see the different degrees of Minoanisation. Of course, it's different at Miletus, Iasos, and so on. About the so-called Cycladic imports, there are undoubtedly Cycladic imports, like this Middle Cycladic jug, the heirloom, and when I first saw the material two or three years ago I said it was Melian. It looks Melian. But then I read Sinclair Hood on Emporio, and he described this bichrome and also monochrome dark; he said, this looks local Melian. He also identified the same pottery on Samos, and I will try to study that from the old German excavation since it includes some pieces. And perhaps we have another local group, an east Aegean group of Minoanising pottery. It is possibly that the so-called Melian bichrome ware from Çeşme is not imported, but is local, like the similar pottery on Chios. This will have to be investigated.

Marthari I don't believe it.

Darque What is Minoan in your Building F (on Iasos)?

Momigliano The building technique and the finds.

Niemeier The architecture?

Momigliano The architecture: the use of these big wedge-shaped, triangular stones that others

have suggested look very similar to Cretan examples. I think other people have made parallels between these and Maison Z at Malia. We saw similar architecture at Trianda this morning. The other Bronze Age houses at Iasos are not built in this technique; they use much smaller stones.

Melas Building techniques, generally, wouldn't be a strong argument when you talk about introduction of culture and so of architectural influence.

Momigliano I have no problem with that. I can't say if we should accept this as a Minoan feature. As I said, I wish I knew more about local architecture especially in the earlier periods.

Caskey I simply wanted to point out that one of the valuable things in your paper is your dismissal of models. I personally think that we've been overwhelmed by models, and its high time we looked at the basic facts. And the other point I would like to make is surely the stone used for what you build is going to be the key influence on how you build it.

Momigliano Sure. But then why do we have buildings built in two different ways at the same site, using different stones? For me, if people are building in a particular way, they do it for a particular reason. Why is Building F different? Maybe because this is a more monumental structure, it's a more important building, or because this is a technique imported from some other area. I don't know. But I don't dismiss the models; all I am saying is that no single model can explain the variety of Minoanisation, because for me, for example, it is the directional trade model suggested by Jack Davis and by Colin Renfrew before him that helps to understand why Miletus is more Minoanised than Iasos, and why there are certain sites in the Aegean that are more 'international' than others. Other models – for example, models of human mobility on a much smaller scale, as suggested more recently by Horden and Purcell (*The Corrupting Sea*) for the whole of the Mediterranean, explain other situations. I don't have much time for the thalassocracy, *i.e.* for a grandiose colonizing movement out of Crete but I have a lot of time for human mobility being a characteristic of the Mediterranean, and not just in the Bronze Age, in all periods. Mobility is also one of the main ways with which people cope with food shortages. I think we have a lot of human mobility in the Aegean, but it may be on a smaller scale. When you look at the general picture it seems to me that, while Iasos shows very strong links with Rhodes and Kos, Çeşme, to the north, shows more links with the Cyclades and possibly Chios, which is just opposite. This phenomenon I can explain with smaller scale mobility. So, I wouldn't dismiss models: models are good to think with. But I don't want to accept a single all encompassing model to explain the diversity of Minoanisation; I don't think there is a single process that can explain all this.

Warren The local pottery (at Miletus) appears to be Anatolian, but the kiln for local production is entirely Minoan.

Niemeier Yes, indeed. So we have locally produced Minoan pottery. The pieces that I showed

you are of the highly characteristic local Milesian clay. But I agree with you, I was surprised when we found this kiln, indeed.

Macdonald A brief question about the tripod cooking pot, of which we have seen examples from other sites this morning. The rather globular shape seems entirely un-Minoan.

Niemeier I would agree with you on that. As I have said, we also have many imports from the Messara in the semi-coarse clay. With fine pottery, it is very difficult to distinguish between Knossos and the Messara. I don't know if I mentioned one very important object: a clay sealing, which, Erik I think will agree, is of Minoan type (**Hallager**, in the background: ... absolutely) and unknown in Asia Minor, is of local Milesian clay; so it was made in Miletus. It's not an import like the sealing from Thera that I showed this morning. And this perhaps says something about Minoan presence, of which I haven't said a word yet. We shall keep it for the tomorrow's discussion.

Unidentified Congratulations on the finds. If you have Anatolian material in the kiln what does it mean?

Niemeier Amy Raymond and I perhaps do not agree completely on this; Amy sees the possibility of some Minoan presence, but she also accepts that this could just represent trade connections. I am more positive of some Minoan presence because of the clay sealing; it is a typical Minoan sealing, not Anatolian, and it was produced at Miletus.

Momigliano Why does the kiln have to be Minoan? I'm asking out of sheer ignorance. I mean, how many Bronze Age Anatolian kilns do we know? And, second, the Kamares type pottery – which is neither Cretan nor made in Miletus – any idea where it could be from?

Niemeier No idea.

Erkanal I know of no Anatolian parallel for this type of kiln.

Niemeier What is interesting for the Aegean World is that we know this type only from Crete. And it is also very interesting that Ivonne Kaiser will show a kiln of this type from LM IA, but this type of kiln survives in Miletus V, the first Mycenaean settlement (Late Helladic IIIA:2) and up until now I only know of this type of kiln from Crete and from Miletus, but, as Erkanal said, we need to look for more evidence.

Melas I think that technology as an imported idea and borrowed process is more important than the specific find itself. There is no reason why the design of a kiln like that should not have travelled from Crete to Miletus as technology that must have served, within the receiving society, both functionally and ideologically.

Marketou A note concerning the Middle Bronze Age Kiln. The overfired carinated cup from Serayia on Kos, which I have shown in my presentation, was found fallen *in situ* in one of the channels of a MBA kiln. Kos provided good examples for the develop-

ment of three pottery kilns, the earliest dated to the EBA and the other to MBA and LBA respectively, while another kiln found at Trianda, is dated to late LH IIIA:2/beginning of LH IIIB:1. The presentation of all the above kilns, which will shed more light on pottery manufacture and technology in general, is in the process of publication in collaboration with the Demokritos laboratory.

- Niemeier** Between Miletus III and Miletus IV things change; that is very clear.
- Unidentified** Changes in the architecture could indicate that cult also changed. That would be very interesting.
- Tournavitou** I would like to ask about a single find from the altar area. You showed us a piece of rhyton with a plastic lion in flying gallop. That's definitely a rhyton, right?
- Niemeier** Yes. It has to be turned like this. I placed it in a way so that you could see the motif better. The lion is upright, galloping towards the rim.
- Tournavitou** I mention it because I have an almost identical piece from a plaque, like a dedicatory plaque, from the peak sanctuary on Kythera.
- Niemeier** If you see a section drawing you can see it is rounded and that it comes from a rhyton. Is yours flat? This one is certainly a rhyton and it's not flat.
- Tournavitou** And it's LM IA?
- Niemeier** It's earlier. It was found under the burnt chair, in the earlier phase, so it could be MM III, but we have no diagnostic pottery with it; it's in the level just under the last phase of Miletus IVa. So it's the level underneath, let's say, that of the Theran destruction. [Theran] ash was found together with the throne, but we won't discuss chronology.
- Nikolakopoulou** (to Kaiser): If I understand correctly, you are saying that 90% of your coarse ware is of Minoan type, 5% is Anatolian and 5% is something else?
- Kaiser** Yes. There are Milesian things that have no parallels. The percentage grows each year that we see the pottery. These are preliminary numbers.
- Nikolakopoulou** Do you have any idea of how these two traditions, two different ways of producing pottery, are consumed? Are there two parallel traditions? Are there, for example, drinking vessels in only Minoanising shapes and not the other? Are they producing all pottery types in both ways?
- Kaiser** The Anatolian shapes are mostly open shapes, for drinking, whereas the Minoan shapes are cooking pots, but we also have conical cups, cups and tumblers. I would say from my present knowledge that the more limited group is the Anatolian group.
- Nikolakopoulou** And you say that this is mostly for drinking and consuming food.

- Kaiser** That is how it appears right now.
- Michailidou** Do you have Anatolian material in the Minoan sanctuaries?
- Kaiser** Yes. With the tumblers we have a small amount of red-wash sherds, but they are too small for us to say if they belong to bowls, cups, or whatever. But every deposit has approximately five per cent of Anatolian red-wash material.
- Niemeier** This is important. There are no distinctive deposits. We have no Minoan house with Minoan domestic pottery and next to it an Anatolian house with Anatolian red-wash pottery; it's all mixed.
- Tournavitou** I wanted to ask you about the tripod cooking pots. First of all, do you have an approximate number of the vases represented, and, secondly, what percentage of these do you have that has traces of burning, of use?
- Kaiser** There are cooking pots and cooking trays.
- Tournavitou** Yes, excuse me; I wanted to ask about the trays, too. The number of tripod cooking pots and cooking trays, how many do you have approximately?
- Kaiser** This is a complicated question. For one big deposit that was excavated in 1994, there were the three cooking pots that I showed you, and then there must be at least eleven more, because we have thirty-four more legs. So from this one huge deposit we have almost fifteen pots.
- Tournavitou** And out of those, how many had burning?
- Kaiser** Almost every pot. Some legs may have traces of burning and the others not. So this is a phenomenon, because none of the other pots show traces of burning.
- Tournavitou** And the same applies for trays?
- Kaiser** Yes.
- Tournavitou** But you are not talking about huge number – not hundreds?
- Kaiser** No, no. Trays – we may have ten.
- Momigliano** I wanted to ask you about pitharia, pithoi.
- Kaiser** I left those out, because I have not studied them yet. So I really cannot comment. I simply do not know whether they are of Minoan type or not. But we do have several different shapes and types.
- Niemeier** I can comment on the pithoi, because I had a look at them. We have many Minoan pithoi with a rope pattern, like you have, and also imported ones. And then we have

an Anatolian or west Anatolian type with bands. You showed us one from Iasos and there is a parallel from Chios; what is it, a pithos?

Momigliano The one with painted decoration? It's from Rhodes and it's handmade.

Niemeier Ours, too, I think.

Momigliano Toula Marketou's too.

Rethemiotakis How do we understand the function for these bizarre vessel forms, the ones with the horns? Were they for domestic use or did they have a religious function?

Kaiser You cannot use it as a rhyton because the horns are solid and the inside is hollow.

Rethemiotakis I was thinking of the possibility of a resemblance between this and the way you hold masks. There is some similarity.

Kaiser Yes, but they were mostly found in areas used for industrial purposes or with typical household items.

Niemeier And we have some which don't stand up; they have a rounded base and so they have to be held up. And in one slide that both Kaiser and I showed, we have a group of three of these very close together, and, my colleague Reinhart Senff will confirm, we have similar in the Archaic period as pot-stands, and so we thought this is what they might be. But both of us would be very interested if you know parallels from elsewhere. I've heard a rumour that Toula Marketou has things like that from Rhodes; is that true?

Marketou No. We have them from Kos, but without the horns, and they continue into the historical period.

Van de Moortel About the function of these Anatolian cups and bowls that you have in the same assemblage; there are a lot of very simple, Minoan-type, conical cups and lipless bowls – masses of them – then far fewer of the high quality Anatolian ones. John Chadwick wrote an article (*Antiquity* 33.132 (1959) 269–278) where he discussed the cups referred to in tablet 31 from Hagia Triada, which lists masses of conical cups, then fewer but larger conical cups, and then even fewer high quality cups. He suggested that there might be, in this assemblage, a sort of social differentiation which would reflect the social differentiation of the participants in social events. It would be very interesting if your Anatolian cups and bowls play that role, because it seems to me that they are actually integrated into what appears to be a Minoan gathering or feast.

Koukonisi on Lemnos: reflections on the Minoan and Minoanising evidence[★]

Christos Boulotis

To Erik Hallager

I. 'Minoans overseas' is admittedly one of the most widely debated and intriguing issues in Greek pre-history. With the emergence of the Cretan palatial system, the dynamic Minoan influence in the Aegean, from MM II onwards and especially during LM I, left abundant, albeit unequally distributed, material evidence on the archaeological map. Such evidence has usually been considered as supportive of the 'Minoan Thalassocracy' factoid, as pictured predominantly in Thucydides' critical work (I. 3–8), as well as in various classical sources, according to which, Knossian king Minos, his brothers, sons and grandsons colonized various places in the Aegean.¹ However, between ancient literary tradition and archaeological reality serious questions of interpretation emerge concerning the nature and extent of the Minoan impact in several South Aegean islands, mainly in the Cyclades (most notably Akrotiri on Thera, Phylakopi on Melos, Ayia Irini on Keos), but also in Kythera (Kastri), and further in the so-called Eastern String, which includes the Dodecanese (Ialysos and Trianda on Rhodes, Seraglio on Kos, Kasos, Karpathos, Kalymnos and Nisyros), Samos, as well as Miletus, Iasos, Çeşme Bağlararası and other sites in the west coastal zone of Asia Minor. Most of these questions, which had already concerned Evans, were critically examined in 1950 by Furumark.² Theories on Minoan migrations and colonialism, with particular regard to Cyclades, were revisited by several scholars during the late 70s and early 80s³ and received a virtually holistic treatment at *The Minoan Thalassocracy: Myth and Reality* conference organised in 1982 by the Swedish Institute at Athens.⁴ In the following years numerous pertinent studies were published aug-

menting the already existing agenda and clarifying some critical points, especially under the 'pressure' of new archaeological evidence such as the 'peak sanctuary' site of Aghios Georgios Sto Vouno on Kythera,⁵ the Linear A tablets from Akrotiri,⁶ the Minoan sealed documents from Mikro Vouni on Samothrace⁷ or the impressive excavation results at Trianda on Rhodes (*inter alia* frescoes, bronze statuettes)⁸ and at Miletus.⁹

What clearly emerges from the synthesis of old

★ The preparation of this paper for publication could not have been possible without the outstanding patience of Professor E. Hallager. This paper is dedicated to him. I must also extend my warmest thanks to V. Petrakis for his input towards its completion. For discussion on specific matters of their expertise I am most grateful to A. Michailidou, M. Marthari, D. Matsas, O. Philaniotou, A. Devetzi, T. Boloti, J. Maran, A. MacGillivray, C. Macdonald, R. Barber, P. Pavúk and L. Girella. Drawings accompanying this paper are mainly the work of the Koukonisi draughtswoman for many years, R. Doksan, as well as L. Boloti and V. Petrakis. Last but not least, I feel deeply obligated to all members of the Koukonisi team, both past and present, too numerous to be accommodated in this short note.

¹ For an overview of ancient literary sources see Huxley 1968. On thalassocracy myths and Minoan colonisation see, for instance, also Platon 1984, 65; Wiener 1990, 152; Boulotis 2008b, 44–7; Niemeier this volume.

² Furumark 1950, 185–203 ("Minoan and Mycenaean expansion in the Aegean area c. 1550–1450"), 203–49, ("the Aegean and the Eastern Mediterranean c. 1550–1450").

³ Davis 1978; Davis 1979a; Branigan 1981; Barber 1981, esp. 1–6 (LC I settlements at Phylakopi, Ayia Irini and Akrotiri); Doumas 1982; Schofield 1983; Schofield 1984.

⁴ *Minoan Thalassocracy*.

⁵ Sakellarakis 1996.

⁶ Boulotis 1998; Boulotis 2008a.

⁷ Matsas 1991; Matsas 1995.

⁸ E.g. Marketou 1998; Marketou this volume.

⁹ Niemeier & Niemeier 1997; Niemeier 1999; Niemeier 2005.

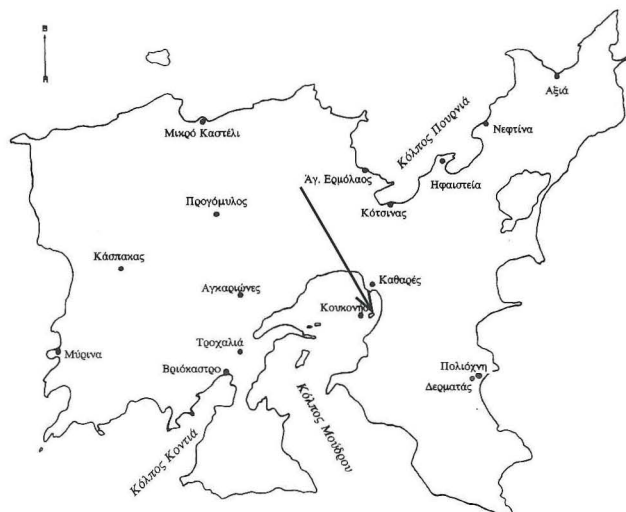


Fig. 1. Lemnos: the Bronze Age sites. Koukonisi is marked by an arrow.

and new data is a rather complex picture, according to which various settlements throughout the Aegean are not subject to a single explanatory model, since they reflect variability in terms of their character and play a different role within the sphere of 'Minoan Thalassocracy' corresponding to the degree of their 'Minoanisation'.¹⁰ Hence, if Kastri on Kythera is to be regarded as a 'Minoan' colony beyond reasonable doubt, at the other extreme of the range we would place sites, where Cretan influence upon material culture appears to have been only the result of occasional contact.

The present conference, organised by the Danish and the German Archaeological Institutes at Athens, is a further confirmation that the extra-Cretan occurrence of Minoan cultural features is still a set of open questions, demanding further investigation, especially in the light of new material evidence. It is from this perspective that this contribution focuses on Minoan influence in the northern and northeast Aegean *a propos* the rich evidence from the excavation project carried out under my direction at Koukonisi, a low islet in the Moudros bay, Lemnos (Fig. 1).

II. In contrast to the obvious 'Minoanisation' of the South Aegean, the northern Aegean region seemed, until recently, to have remained beyond

the prime interests of the 'Minoans'; almost six decades ago, only the richly furnished LH IIB (= LM II) 'grave of Staphylos' in Skopelos, northern Sporades, the northernmost limit of 'Minoan' presence, formed a striking exception, as Platon once thought.¹¹ The alleged *lacuna* was strengthened by the poor or doubtful Minoan elements in Troy (V and VI early) essentially restricted to a fragment of a hole-mouthed jar in Kamares style,¹² some handleless conical cups,¹³ a jug in a Creamy bordered style from the recent excavations,¹⁴ a few discoid loom weights of South Aegean type,¹⁵ two stone vessels (a blossom bowl and stone lamp) reasonably considered as MM III – LM I imported prestige items¹⁶ and a bronze figurine assumed to be from the Troad (currently in Berlin¹⁷); recent evaluations of the weak Minoan evidence in the Troad¹⁸ lead to the suggestion that some kind of rivalry between Trojan and Minoan interests in NE Aegean was one of the factors which prevented more close and systematic interconnections.

A rather different pattern of associations seems gradually to emerge from recent excavation in adjacent islands: Scanty ceramic finds (conical cups, bridge-spouted vases, painted sherds) from late Middle and early LBA Poliochni (Periods 'Bruno' late and 'Viola'), published by Bernabò Brea and

¹⁰ On alternative models of interpretation against the concept of a 'Minoan Thalassocracy' in its Thucydidean sense see Melas 1988; Melas 1991. For a recent overview of 'Minoanisation' as a cultural phenomenon and its mechanisms and quantitative assessment in the Protopalatial to the Neopalatial period, see Broodbank 2004.

¹¹ Grave goods included, among others, a variant of the type A long sword (bearing the most elaborate repoussé gold handle known to date), a double axe, seals and a bronze hydria of Minoan type. See Platon 1949; Platon 1974, 15; Platon 1984, 65.

¹² Blegen *et al.* 1953, 147, fig. 360:11.

¹³ Blegen *et al.* 1953, 50, 280, fig. 313 (37.957; 37. 1054. [shape A 76]).

¹⁴ Korfmann 1997, fig. 31.

¹⁵ Becks & Guzowska 2004; Guzowska & Becks 2005; Guzowska this volume.

¹⁶ Blegen *et al.* 1953, 230, nos. 38-116, pl. 298; Warren 1969, 52, 55 (group II A 4), 188.

¹⁷ Guzowska 2002, 590; *cf.* also a second Minoan figurine reportedly from the modern Izmir region.

¹⁸ See particularly Guzowska 2002; Guzowska this volume; Pavúk 2005, 270-2.

recently re-examined by Cultraro, indicated a South Aegean influence on Lemnos.¹⁹ However, the Minoan 'gap' in this region of the Aegean, was drastically modified on one hand by the research at Mikro Vouni on Samothrace, carried out by Matsas, and on the other at Koukonisi on Lemnos, close to Poliochni. During the 1983 and 1990/1 excavation campaigns at Mikro Vouni five sealed documents were found (two roundels, two noduli, one nodule),²⁰ in strata which also yielded a vertical handle of a semi-globular cup decorated in light-on-dark and two brown-slipped 'egg-shell' sherds of a MM II (late) – MM IIIA date,²¹ as well as a mud-brick fragment marked with an incised linear (A?) sign.²² This unexpected find demonstrated eloquently the commercial Minoan palatial interest in the North Aegean, with the acquisition of raw metals constituting, as we shall see below (section VIII), a plausible motive for such systematic long-distance activities. A base fragment of a serpentine bowl,²³ discoid terracotta loom weights, a disk-shaped balance lead weight (from a non-stratified context) with linear marks on both sides²⁴ and fragments of white plaster with red decoration²⁵ further emphasised the South Aegean connections of the settlement. In particular, the lead balance weight – typical of the South Aegean metrological system²⁶ – combined with the Minoan sealed documents, places Mikro Vouni within the formal commercial network of the period. Metallurgical activities at the site are attested so far by a schist mould of a razor's leaf shaped blade, as well as by crucibles from various MBA and LBA contexts.²⁷ To this significant corpus, impressive additions were made during the 1999 and 2003–2004 campaigns,²⁸ which drew an even more confident picture of Minoan influence and/ or presence at Mikro Vouni, with more documents demonstrating, in fact, Minoan administrative practices: a clay nodule inscribed in Linear A (?), a clay sealing, a MM II steatite seal and a clay seal with signs probably of Cretan Hieroglyphic. The further discovery of loom weights of South Aegean type (three of which bear incised linear marks), as well as more fragments of painted plaster, show that the influx of cultural elements from the South was not restricted to pottery and administration.

In the light of Mikro Vouni, a neglected, early

chance find from the neighbouring island of Tenedos gains much importance: a Protopalatial haematite seal with a herringbone motif, flanked heraldically by two pairs of quadrupeds. First mentioned by Cook in 1925,²⁹ it was purchased by him in 1901 in Athens, with Tenedos as its alleged provenance,³⁰ and has been used as an additional argument for Minoan presence on the island. Until then, the connection between Tenedos and Minoan Crete was solely based on the unwarranted projection of historical evidence concerning local cult emblems onto the Bronze Age: namely, the so-called double 'Tenedian axe' shown in local numismatic imagery. The appearance of this seal in the antiquities market in a period when Minoan evidence in the Northern Aegean was not attested by excavation data, allows us to consider its 'alleged' provenance as quite reliable; this is further exemplified by its chronological 'agreement' with the sealed documents and seals, also Protopalatial, from Samothrace. The Minoan network among the islands of this region seems to broaden even further, if the evidence from the site Pyrgos (Yuvali) in the south-western coast of Imbros³¹ is also taken into account. Future systematic research on Imbros, where an elaborate EBA nexus of c. 30 settlements has been detected³², apparently reflecting the advan-

¹⁹ Cultraro 2001; Cultraro this volume.

²⁰ CMS V, Suppl. IB (1993), 303–14, nos. 320–8; Matsas 1991, esp. 159, 164, 168–73, figs. 5, 8, 15–8; Matsas 1995, 235–42, pls. XXXIV, XXXVc, XXXVI, XXXVIIa–c.

²¹ Matsas 1995, 236, pl. XXXVa.

²² Matsas 1991, 164, fig. 9 (the sign was identified with AB 08 after Godart and Olivier's numbering).

²³ Matsas 1995, 242, pl. XXXVb.

²⁴ Matsas 1995, 242, pl. XXXVIIId–e.

²⁵ Matsas 1991, 164.

²⁶ Attention must be drawn to the numerous examples of discoid weights (also in stone) from Cretan sites, Akrotiri and Ayia Irini: Michailidou 1990; Petruso 1992, 3.

²⁷ Matsas 1995, 243, pl. XXXVIIIa–b.

²⁸ Matsas at this conference.

²⁹ Cook 1925, 662–3, fig. 602. Unfortunately this find, owned by Cook, has not been so far inspected. See also Cultraro this volume.

³⁰ Cook 1925, 663, n. 1.

³¹ Matsas at this conference; Andreou & Andreou 2002, fig. 1 (map of Imbros).

³² Andreou & Andreou 2001; Andreou & Andreou 2002.

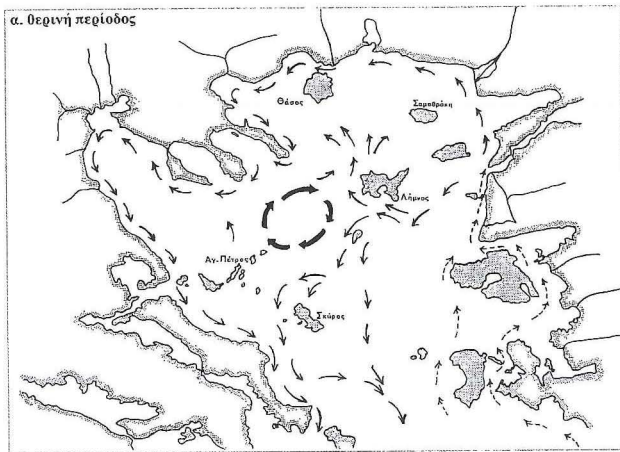


Fig. 2. Sea currents in the northern Aegean during summer time.

location of the island as a hub of commerce in the Dardanelles region, will display the Minoan and Minoanising component in the island, since at least some of these sites must have continued to flourish in the succeeding MBA and LBA.³³

III. The case of Samothrace formed a background to my belief, already formed in the very first excavation season on Koukonisi in 1992,³⁴ that, since Minoan interest had turned to the Northern Aegean, it could not have by-passed Lemnos. Pertinent evidence from Poliochni, restricted as it was, provided a firm foundation for such a hypothesis. A southern Aegean connection could be somewhat echoed in the literary *testimonia* concerning the legendary Lemnian royal line: Thoas, the first ruler of the island was a grandson of Minos, being a son of his daughter Ariadne by Dionysos.³⁵ The appearance of this very name in a Linear B tablet from Pylos (PY An 654.11) in the form *to-wa*,³⁶ or written *to-wa-no* on a Knossian tablet (KN Bk 806 *recto* .5)³⁷ offers us, if only from the perspective of onomastics, an idea of the depth in time (at least Mycenaean) in which this specific tradition could have been rooted. We are led in the same direction by the occurrence of the Mycenaean personal name *e-u-na-wo* *Εὐναῖος > Εὐναός/Εὐνήος/Εὐνεός, also attested in the Linear B tablets from Knossos, since it too has some onomastic Lemnian connections, being the name of another

Lemnian ruler, grandson of Thoas, son of Hypsipylē and Iason. According to Homer, Eunēos ruled the island at the time of the Trojan War and kept, as we shall review below (section IX), close commercial relations with the Achaean warriors at Troy.³⁸

A mere glance at the map of the northern Aegean (Fig. 2) clearly illustrates the key geopolitical position of Lemnos, opposite the entrance to the Dardanelles, nearly mid-way between Mt. Athōs and Troy. The island is literally a nodal point between the North-South and East-West maritime routes. Its deep-shored bays provided safe harbourage, while favourable sea currents (Fig. 2), as recent studies have revealed,³⁹ allowed long-distance navigation. The Argonaut and Trojan epic cycles sufficiently underscore the importance of Lemnos as an unavoidable maritime post (section VIII).⁴⁰ In this respect, the establishment of numerous settlements (*ca.* 20 have been identified) from the dawn of the EBA throughout the island (Fig. 1) is not unexpected; most were located in the coastal zones, *i.e.* convenient for the sea-trade networks of the time,

³³ See at least Mycenaean sherds from the settlement on the hill of Aghios Floros, where excavations are conducted by the University of Ankara (Andreou & Andreou 2001, 145–6, n. 29). Small cups and white slipped sherds reported by Andreou & Andreou 2002, 78, 82 (surface finds) might well belong to Minoanising and/or Cycladic wares.

³⁴ Boulotis 1994a; Boulotis 1994b; Boulotis 1997a.

³⁵ Boulotis 1997b; See also Platon, 1984, 65, n. 5.

³⁶ Ventris & Chadwick 1973, 191–2. PY An 654 is an *o-ka* tablet and it seems impressive that this Pylian *to-wa* is included in the same tablet as a certain *i-wa-so*, plausibly Iason, another name with Lemnian associations.

³⁷ Heubeck 1957, 31 (*to-wa-no* = *Thowanor* or *Thorwanor*). The Dative *to-wa-no-re* indicates a recipient of barley and olive-fruit on PY Fn 79.12

³⁸ Boulotis 1994a, 20, 24, 26; Boulotis 1994b, 20; Boulotis 1997a, 263. The author has also offered a lecture entitled ‘Homer and Lemnos: The Mycenaean Past’ (National Archaeological Museum, Athens, April 1999). For Lemnos and associated references in the epic, see Heurgon 1988.

³⁹ Papagheorgiou 1997, esp. 433–7, fig. 5–7. See also Boulotis 1997a, 258. More specifically on the geopolitical significance of Troy in connection with wind and sea currents and the harsh conditions met by Bronze Age vessels attempting to cross Dardanelles, see Carpenter 1948; Korfmann 1986; Neumann 1986; Neumann 1991.

⁴⁰ Boulotis 1994a, 20–1; Boulotis 1994b, 20; Boulotis 1997a, 264, 267.

Fig. 3. Koukonisi from the air.
The arrow indicates the main excavation area (Sector B) on the Koukonos plateau.



while also able to exploit from a fertile hinterland, which would ensure the necessary surplus to support commercial activities in full.

Poliochni, on the east coast of Lemnos, directly opposite Troy, and the recently investigated settlement at Myrina *Rēha Nera* on the western coast,⁴¹ are two extensive proto-urban centres of fundamental significance, with flourishing economies and long-distance commercial contacts. However, MBA and LBA evidence is until now almost absent in Myrina,⁴² while Poliochni seems to have had entered a period of decline after its EBA climax. On the contrary, Koukonisi, having followed closely the developments of Poliochni and Myrina in the EBA, continued to flourish in the MBA and early LBA as the most important settlement of the islan. enjoying a wide range of contacts across the Aegean. Koukonisi might have played a similar role in the advanced LBA, when a considerable Mycenaean presence is detected (section IX). During the 1st millennium BC habitation was apparently only sporadic.

The privileged geographical location of Koukonisi with regard to other Bronze Age settlements on Lemnos (Figs. 1–4) is surely one of the decisive reasons for its longevity as a major *emporium* for almost two millennia: (a) The settlement occupies what is today an elliptical (c. 500 m x 400

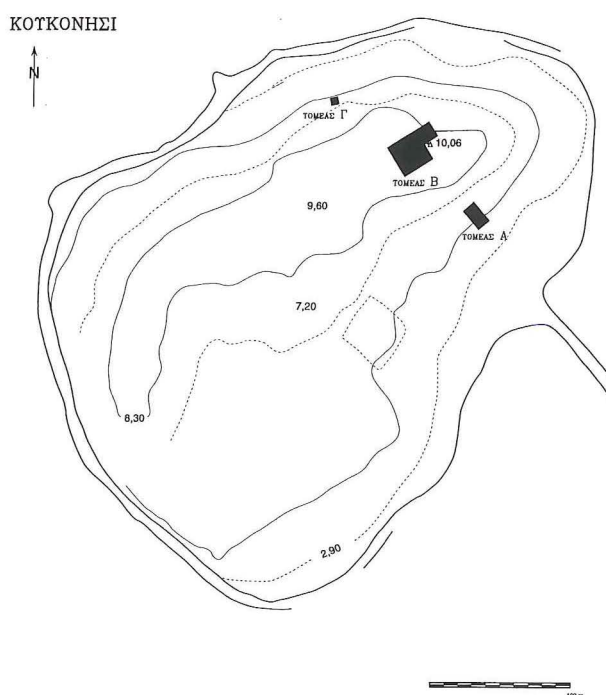


Fig. 4. Koukonisi with location of trenches (Sectors A, B and Γ).

⁴¹ In the excavations up to 1997, see Avgerinou 1997; Dova 1997; Acheilara 1997. The majority of the site was excavated by the 20th Ephorate of Prehistoric and Classical Antiquities after 2000 (see Archontidou-Argyri & Kokkinoforou 2004).

⁴² The only exception so far are certain Mycenaean sherds (currently in the Schachermeyer collection at Vienna), allegedly collected in the vicinity of Myrina (Cultraro 2005, 242–3).

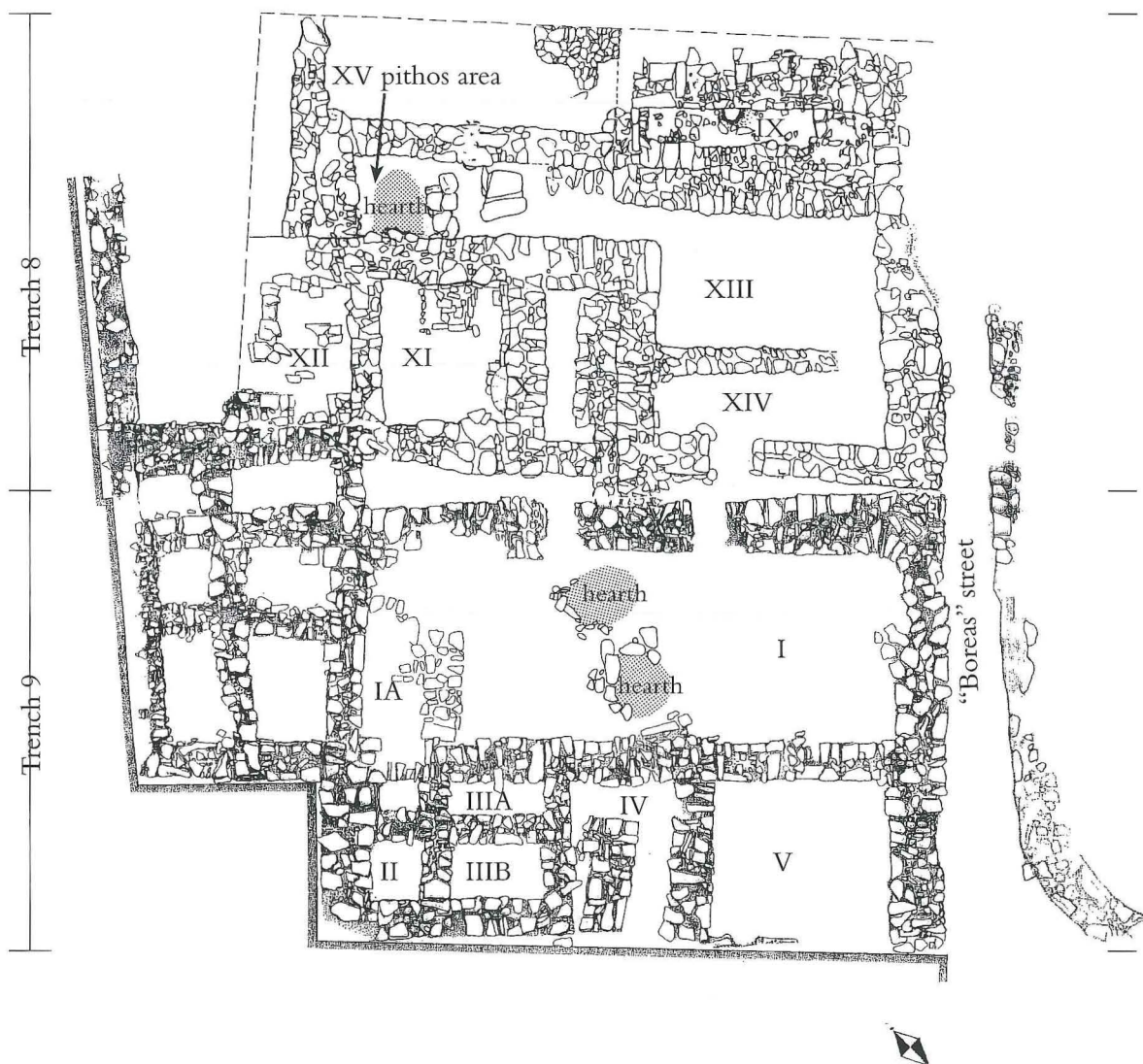


Fig. 5. Plan of the Minoanising sector of the settlement (Trenches 8 and 9).

m) low (max. ht. 10.6 m) islet, situated within the innermost part of Moudros bay, the largest bay in Lemnos and one of the largest harbours in the Aegean (7.12 nautical miles long), where strong sea currents meet, which are optimal for year-round navigation in all directions (Fig. 2).⁴³ The southward orientation of the bay would have ensured a safe anchorage for ships heading towards the northern Aegean, Macedonia, Thrace, Troy or the Dardanelles, providing, along with harbour facilities, replenishment of vitals and water supplies. (b) The islet, today approachable along an artificial road (c. 400m. long), was certainly united with the opposite shore⁴⁴ in the Bronze Age,

forming a kind of peninsula, which would have formed twin harbours, utilised according to the wind's direction. (c) Located at the 'heart' of Lemnos, in its narrowest area, where the opposing bays of Moudros in the South and Pournias in the North form a sort of isthmus, it constituted a crossroad of overland communications within the island. (d) Its large surface area, estimated to have

⁴³ Papageorgiou 1997, esp. 433-5, figs. 4-6.

⁴⁴ Water depth between Koukonisi and the opposite coast is quite small. In periods of drought a natural approach to the islet is formed (Boulotis 1994a, 22-3, figs. 3-4; Boulotis 1997a, 232, fig. 4a-b).



Fig. 6. Excavation photo showing the successive phases of the settlement from EBA to early LBA (Room IV, Trench 5 and Room V, Trench 7).

been even larger in the Bronze Age (sea level is generally accepted to have risen),⁴⁵ allowed the development of various industrial activities even beyond the borders of the settlement proper. (e) Inhabitants of Koukonisi were blessed with the most extensive plains of the whole of Lemnos – those in the Moudros district – while fishing in the safe waters of the bay would have covered a large part of their nutritional needs.

IV. Excavation conducted till 2005 has been mainly restricted to the north-eastern higher plateau of Koukonisi, the so-called Koukonos (Figs. 3, 4),⁴⁶ where successive levels of the EBA,⁴⁷ MBA (Koukonisi IV)⁴⁸ (Fig. 5–7) and early LBA (Koukonisi III) have been excavated. Our focus will be on the early LBA settlement, to which the

concentration of Minoan and Minoanising elements belongs (Figs. 5, 7). The advanced LBA (Koukonisi II) is widely characterised by typical Mycenaean pottery as well as by numerous terracotta figurines, either scattered throughout the islet or in apparent deposits, yet without clear architectural associations (Section IX).⁴⁹

The quality of the MBA (Koukonisi IV) architecture so far revealed indicates, along with small finds and pottery – particularly the large storage pithoi found *in situ*⁵⁰ – that this settlement must have been a thriving one. The change in the orientation of the buildings that succeeded those of the late EBA (*cf.* Poliochni ‘Giallo’ phase), appar-

⁴⁵ Psychoyos 1988, esp. 38–40, 161–3; Boulotis 1997a, 232.

⁴⁶ The main excavation area in Koukonos is defined as Sector B. The first, trial Trench 1 was opened E of this sector, in a lowland upon the axis of the approach to the islet (Sector A/'92) Boulotis 1994a, 28, n. 11; Boulotis 1997a, 234–6, fig. 4b. A third exploratory trench was opened to the W of the main excavation area, where Mycenaean figurines and pottery had been found on the surface (Sector I/'05).

⁴⁷ Trenches 2, 3, 5 and 7 have provided the most sound stratigraphical evidence. The earliest levels excavated so far correspond roughly to Poliochni ‘Verde’ phase. However, there are some hints at an even earlier settlement. A full reconstruction of the Koukonisi stratigraphy must follow an extensive study of pertinent ceramic finds, as well as the detection of the earliest habitation phase in more than one areas of the site.

⁴⁸ The MBA settlement has been revealed so far in Trenches 2, 3, 5 and 7 (Boulotis 1997a, 246–8, figs. 7, 8a, 9a, 10a–b, 11, 13a–b, 14a).

⁴⁹ There is growing evidence that the area of the settlement had shifted during the Mycenaean period (Koukonisi II), mainly towards the southern part of the islet, in a lower plateau, but also to the W of the excavation area, where a significant number of typical Phi and Psi type Mycenaean figurines were collected. However, a long wall, running from South–West to North–East, was revealed during the 2005 season, at the westernmost limits of Trenches 8 and 9 (here Fig. 5), whose foundations were laid slightly higher than the early LBA destruction level. It cannot be excluded that this was part of some Mycenaean construction, although hard evidence is so far lacking. The same might hold true for another curved wall built upon early LBA ruins (Trench 6A/'96) (Boulotis 1997a, 246, fig. 15). It is noteworthy that two Mycenaean deposits were retrieved recently, containing mostly LH IIIA:1–2 pottery (including the clay stopper of a stirrup jar): one immediately to the E of the aforementioned curved wall (Trench 6A/'05), the other above Room I (Trench 9/'05) in the LM I destruction horizon.

⁵⁰ See for instance, Boulotis 1997a, 238, 248, figs. 7, 11, 13b.



Fig. 7. Excavation photo view from west over the Minoanising sector (Trench 8). In the lower left part of the photograph is Room XV, "Pithoi area".

ently without a break, clearly marks the transition to the MBA. For Koukonisi, this is a period roughly contemporary with Poliochni 'Bruno',⁵¹ and Troy III late, IV and particularly V, but also (final horizon) partly with Troy VIa late. Close links of the Koukonisi well stratified MBA ceramic assemblages to those from Mikro Vouni, Troy and other Anatolian sites⁵² testify to a common cultural tradition, a continuation from the EBA, although certain local preferences in the pottery repertoire can be noted. In its southern Aegean associations, Koukonisi IV has many links to other MBA settlements, most notably Ayia Irini on Keos (Periods IV and V). Minor episodes of architectural modifications, as well as ceramic changes and developments together with imported decorated pottery,⁵³ allow us to distinguish sub-phases in this period of occupation. Its end, towards the close of the MBA and/or the transition to the LBA (early Shaft Grave Period horizon) is defined by a severe earthquake that must have affected the entire settlement,⁵⁴ as safely deduced from the character of the deposits within most buildings excavated. This is especially apparent in cases where large ceramic assemblages (local as well as imported, *e.g.* Grey Ware,

Mainland matt-painted, some South Aegean wares including probable Aeginetan pieces, which are highly significant for the reconstruction of more precise synchronisms in broader Aegean

⁵¹ A re-examination of the ceramic material from the early excavations at Poliochni in combination with additional MBA levels excavated since 1992 allowed a chronological division of the 'Bruno' settlement into a Phase 1 (=Troy III late-Troy IV), Phase 2 (=Troy V-VI early) and Phase 3 (=Troy VI early-middle). See Cultraro 2007, fig. 5 [suggested correspondence between the Poliochni 'Bruno' and the Troy stratigraphy]. However, the so-called 'Viola' phase belongs certainly to an advanced stage of LBA, probably in LH IIB-LH IIIA:1, corresponding to Troy VI f-g, (*cf.* also Cultraro 2001, Table 1 [suggested correspondence between Poliochni 'Bruno/Viola' and Troy VI]).

⁵² As far as the recent excavations are concerned, see esp. the possible correspondence with Liman Tepe IV and III (Günel 1999, 49-62) and Çeşme Bağlararası IIB (Şahoğlu 2007, 310-7).

⁵³ Boulotis forthcoming, esp. figs. 9, 10, 13.

⁵⁴ Such a destructive event must have had a serious impact on the neighbouring Poliochni as well, while it seems also associated with evidence for some seismic activity in the broader region, as indicated, for instance, by recent finds at Çeşme Bağlararası. At the latter site, the transition from the Phase IIB (=MM IIIA) to the Phase IIa (=MM IIIB) is marked by a widespread destruction (Şahoğlu 2007, 311, 317 and plan of stratigraphical succession in p. 310).

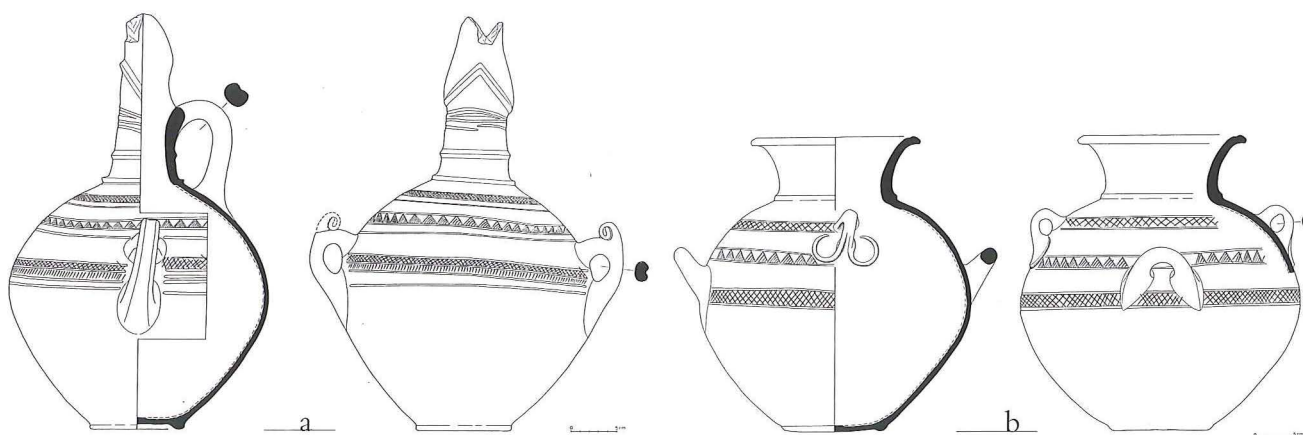


Fig. 8. Local MBA incised pottery (Room I, Trench 3/'95). Not to scale.

terms) were found smashed under fallen blocks or were included in the subsequent filling.⁵⁵

From the highly diverse local MBA pottery repertoire, the most striking case can be singled out, as it belongs to a diagnostic category: a Red Slipped ware, characterised by incised linear motifs in horizontal zones (mostly net patterns, striated triangles, 'herring-bone' motifs), the incisions filled with a white substance, and usually also with plastic decoration;⁵⁶ this ware, abundantly documented, has an extensive repertoire of shapes (e.g. jugs of various sizes, jars, hydrias, bowls, lekane, even pithoi) and forms the most luxurious local pottery class from Koukonisi IV (Figs. 8a-b), with significant survivals into the early LBA (Koukonisi III). Although this specific class, in its Lemnian 'incarnation', might have had Anatolian origins⁵⁷ alongside some earlier Aegean stimuli, it seems quite possible that it constituted a specifically Lemnian, if not Koukonisian, trait; the small quantities of sherds of this class from nearby Poliochni (then in its 'Bruno' Period),⁵⁸ Mikro Vouni on Samothrace,⁵⁹ Emporio on Chios⁶⁰ and Troy V late – VI early⁶¹ support such a hypothesis.⁶²

After the catastrophic earthquake, the Koukonisi inhabitants recovered immediately and resumed their previous lifestyle, with no sharp break in terms of material culture. The definition of the new period Koukonisi III is primarily stratigraphical/architectural, not ceramic. New buildings were superimposed directly upon the ruins of the previous phase, following the blocking of certain

⁵⁵ Such case is particularly strong in Room I (Trench 3/'95), Room IV (Trench 5/'99) and Room V (Trench 7/'01). For the results of the campaigns until 2005, with an emphasis on the imported Mainland and South Aegean pottery see Boulotis forthcoming. On a first presentation of the 'grey' ware(s) see Petrakis & Moutzoutidis forthcoming. Besides general Anatolian ceramic correspondences, particularly illuminating for the date of the seismic destruction of Koukonisi IV are some imported Aeginetan matt-painted (Room V, Trench 7/'01) and Mainland bichrome vases (Room 1V, Trench 5/'99), with close MM IIIB parallels, see, for instance Dietz 1991, no. 215, fig. 23; no. 191, fig. 22. Two sizeable plain piriform jars, with peculiar handles on the middle of the belly, found in the destruction level of Koukonisi IV (Room IV, Trench 7/'01) and (with incised X potter's mark on one of the handle-attachments) in the upper destruction horizon of Koukonisi III 'early' (Trench 3/'95: Boulotis forthcoming, fig. 12a) display similarities with Aeginetan examples, connected with the latest MH and the very early LH pottery (Wohlmayr 2007, 46, no. 1, fig. 3).

⁵⁶ Notable are the volute-shaped attachments on the handles, as well as plastic horizontal strips and other decorative motifs on the body and the tall necks of beaked jugs and hydrias: Boulotis 1997a, 244, 248, 19a-b.

⁵⁷ See some earlier examples of this decoration mode from Tarsus, although applied to a different shape repertoire Goldman 1956, 109, fig. 255.

⁵⁸ Bernabò Brea 1976, 324, 327, pl. CCLXXXe, g. (only two sherds have been reported). Cf. Cultraro 2007, 331, fig. 4b-c.

⁵⁹ D. Matsas pers. com.

⁶⁰ Hood 1982, 563, fig. 258l, pl. 102.

⁶¹ Schmidt 1902, 123, 162, nos. 2457-63, 3328-34. Blegen *et al.* 1951, 250, 287, 294, pls. 245:4, 6-9, 248:21, 249:4-8. Blegen *et al.* 1953, 77-8, pl. 361:5; cf. also "grey ware" with similar incised motifs, *ibid.* 137, 160, pl. 357:12, 364:33 – a variant represented also in Koukonisi by a few sherds.

⁶² A small jug from the remarkable Kolonna IX 'shaft grave' (advanced MH) seems to be a *painted* variant of this same class (Kilian-Dirlmeier 1997, 59, fig. 28:14, 61-2, fig. 30).

entrances (Fig. 6),⁶³ the deposition of fills for elevation, various modifications and a re-organisation of space with the construction of some new dividing walls. The façades were largely retained and the exterior walls were placed slightly higher; in certain cases, the door openings of the new phase were set at a higher level, yet in the same place as the earlier ones (Fig. 6).⁶⁴ Such building activity must have largely refreshed the settlement, although the broad outline of the previous phase was by and large retained. To the extent revealed by excavation, this outline was defined by two axial routes bearing the descriptive conventional names of 'Zephyros' Street and 'Boreas' Street (Fig. 5),⁶⁵ which were seemingly in use at least from early in the MBA.

As a rule, remains of the upper destruction levels of Koukonisi III were revealed immediately under the modern ploughing surface (usually *c.* 10–20 cm was removed). These are poorly preserved due to the extensive pillaging of an apparently significant amount of building material by locals, to be reused in constructions of a more recent past.⁶⁶

As certain architectural episodes of very local extent (evidence for minor destruction and repair) can be discerned, the Koukonisi III settlement is, in its North Aegean context, roughly contemporary with the end of Poliochni 'Bruno', Troy VIa late and also Troy VI b–c (in Blegen's definition). This horizon corresponds broadly to MM III–LM I in Cretan terms, to the Shaft Grave period in the Greek Mainland, to the Periods V (late) and VI of Ayia Irini, Phylakopi III, LC I Akrotiri, Miletus IV and to Phases 2a and especially 1 of Çeşme Bağlararası, the latter being, so far, the northernmost settlement on the western Asia Minor littoral with significant evidence for Minoan/South Aegean contact.⁶⁷

A first 'reading' of the data retrieved so far suggests that there were two main 'cultural horizons' within Koukonisi III, which seem to have distinct ceramic identities, although the point of transition is not stratigraphically clear: a) an 'early' horizon covers the transition to and the very first stages of the early LBA, when local production dominates, mostly of Koukonisi IV typological/ stylistic ancestry; b) a 'later' or 'advanced' horizon when

the local component, although still considerable, occurs alongside Minoan and Minoanising MM IIIB/ LM IA and mostly LM I pottery, contemporary with the appearance of other elements of clear South Aegean origin or inspiration.⁶⁸ These ceramic differences become all the more evident in certain closed assemblages of the upper destruction levels. Whereas the presence of some imported Mainland matt-painted and bichrome pottery is apparent in the upper destruction level of Room I in the Trench 3/'95, suggesting a dating somewhat earlier than the very close of the MBA,⁶⁹ other excavated areas (particularly those revealed in Trenches 8 and 9) (Figs. 5, 7) give us a different picture, featuring Minoan and Minoanising pottery of the MM IIIB–LM I range.⁷⁰ The possibility that certain matt-painted Helladic vessels, having survived the Koukonisi IV destruction, had

⁶³ Boulotis 1997a, figs. 11, 13b, 14a, 16a–b.

⁶⁴ See also Boulotis 1997a, figs. 14a, 16a–b.

⁶⁵ These are two narrow straight arteries extended in a rough East–West ('Zephyros' street) and North–South ('Boreas' street) direction. Especially on the 'Zephyros' street, see Boulotis 1997a, 252–3, fig. 6, 9a.

⁶⁶ A mere inspection of the masonry of the modern farmhouse roughly amidst the eastern half of the islet certifies that it must have been built with material robbed from the visible courses of buildings from the upper levels of the Bronze Age settlement (Boulotis 1994a, 23, fig. 6).

⁶⁷ Şahoğlu 2007, 310, 317.

⁶⁸ On the widely debated issue about the chronological distinction between MM III assemblages on Crete towards the end of the period and deposits from the beginning of LM IA (the so-called MM IIIB/LM IA transitional phase), see, for instance, Warren 1991 *a propos* a pottery deposit found in the Stratigraphical Museum Excavations; also P. Muhly 1992, 104–17; recently, Girella 2007 concluded "that MM IIIB in south-central Crete (variously labelled as MM IIIB/LM IA or early LM IA) corresponds in date and in ceramic composition to MM IIIB in northern as well as in eastern Crete [...] Thus we can find MM IIIB as a style in the LM IA period, and vessels stylistically datable to MM IIIB that possibly were produced in LM IA".

⁶⁹ See *e.g.* similarities with painted ceramic from Pevkakia and Lianokladhi (Boulotis 1997a, 264, fig. 26, n. 39), where references to Pevkakia 6 (Maran 1992, 25–6, 167–8, pl. 80; Maran 2007, 172, figs. 1, 3, 5) and Lianokladhi stratum III (Wace & Thompson 1912, 180–5, fig. 126a–b). See also Boulotis forthcoming, fig. 11.

⁷⁰ The case of the settlement of Ayia Irini, where the end of Period V is marked ceramically by the importation of LM IA pottery (Davis 1986, 1) might be comparable.

been valued as heirlooms and preserved into the new phase (Koukonisi III 'early') could give a plausible explanation to the problem, especially since such long use of 'exotic' ceramics is also attested at other sites, like at LC I Akrotiri (horizon of the final volcanic destruction).⁷¹ In addition, the ever-present possibility that certain pottery styles could have lasted longer than usually thought should also be taken into account.⁷² Synchronisms and/or overlaps among such differentiated assemblages is confirmed by some closer ceramic affinities, based on the abundant local ware (such as carinated bowls or the incised Red-Slipped category), as well as on more rare types at Koukonisi, such as a late local variant of the so-called Pteleon goblet⁷³ or the odd small jug with rounded bottom and a central small knob on its outside.⁷⁴ The occurrence of discoid loom weights in Room I of Trench 3/'95 as well as in areas with clear South Aegean affinities, such as Trenches 8 and 9 (Figs. 5, 7), seems to strengthen the association between the two assemblages. If such observations are reliable, it seems legitimate to ask whether the picture of a violent, probably also seismic, destruction attested in the upper levels of the excavated area could represent two distinct events (yet chronologically close) or one single event.

In any case, on the basis of the chronological implications of the imported Minoan and Minoanising pottery retrieved from Trenches 8 and 9, Koukonisi III seems to have been destroyed towards the close of the LM IA phase or probably somewhat later, more or less at the same time as neighbouring Poliochni,⁷⁵ Miletus⁷⁶ and also probably Çeşme Bağlararası I.⁷⁷ As far as the more dense concentration of Minoan and Minoanising elements in the upper destruction horizon (predominantly Trenches 8 and 9) of Koukonisi III is concerned, this might indicate, as will be further argued, not a different chronological phasing of these areas, but probably an uneven distribution of these 'new' cultural elements in the same horizon, plausibly indicating the physical presence of southern Aegeans in certain sectors of the settlement (section IX).

V. The South Aegean component in Koukonisi had started to become clear from the early excavation campaigns,⁷⁸ hinted at by the sporadic presence of handleless conical cups, as well as semi-globular and straight-sided cups with vertical handle, bridge-spouted vases and, notably, terracotta discoid loom weights. This evidence was considerably augmented by the finds of the 2001–2005 excavation seasons in Trenches 8 and 9 (Figs. 5, 7) and thus, along with other clues that are to be discussed below, created the impression for a

⁷¹ Marthari 1980, esp. 201–2; Marthari 1990, 64. On the other hand, the preservation – apparently as 'heirlooms' – of MC/LC I wares is indicated by the presence of two Theran nipped jugs as well as one Melian bird jug in the LM IB destruction levels at Myrtos Pyrgos (Schofield 1996, 47–8).

⁷² See for example the characteristic case of the LH I ceramic from Korakou, where some MH types occur both in MH and LH I layers, Davis 1979b, 253–9.

⁷³ Pteleon goblets of the late variant, *i.e.* with less prominent rim than the earlier MH examples, plain or with the typical for Koukonisi red paint (*e.g.* those discovered in the Room I, Trench 3/'95), have their close parallels in examples from the upper destruction level of Room VII, Trench 8/'02, while the foot of an earlier Grey Ware example (Koukonisi IV) is found in Room IV, Trench 5/'99, see Petrakis & Moutzouridis (forthcoming). For the identification of this specific shape with interconnections between the Trojan grey examples (typical for the first ceramic phase of Troy VIa) and Mainland attestations, see Pavúk 2002, 51; Pavúk 2007, 299–301, fig. 3 (esp. no. 1). One may plausibly conclude that Troy VIa covers the end of MH II, MH III and partly LH I, with its main part, after Pavúk, contemporary with MH III. Evidence that the late variant of Pteleon goblets from Troy VIa, Pevkakia 6 (with some survivals into phase 7) and also Macedonian examples seem to persist down to MM IIIB–LH I fits very well to the Koukonisi specimens: Pavúk 2007, 300; Maran 1992, 86; Horejs 2007, 192–3, fig. 20.

⁷⁴ See, for instance, an example from Room I (Trench 3/'95) and a fragmentary parallel from Room XVB, Trench 8/'05, with Minoan and Minoanising elements galore.

⁷⁵ See the burnt destruction level at the end of Poliochni 'Bruno' and the beginning of 'Viola', considered to be the result of an earthquake, Cultraro 2001, 230–1 (esp. Table 1); Cultraro 2005, 238.

⁷⁶ Niemeier & Niemeier 1997, 231–2.

⁷⁷ Şahoğlu 2007, 310, 318: The settlement, in any case, was abandoned after level I (= earlier part of LM IA), with the latest ceramic material, after a significant *lacuna*, corresponding to the LH IIIA:2–IIIB:1.

⁷⁸ For a first assessment of the evidence up to 1995, Boulotis 1997a, esp. 264.

true 'cultural innovation'⁷⁹ taking place at Koukonisi, as in other extra-Cretan settlements (e.g. Ayia Irini, Phylakopi, Akrotiri, Miletus), gradually from the advanced MBA (Koukonisi IV) and noticeably gathering momentum during the early LBA (Koukonisi III) period, the era of multifaceted 'Minoanisations' *par excellence*. A detailed discussion of specific contexts and finds lies beyond the scope of this paper; what is aimed at here is a rather general treatment with details supplied only selectively when necessary. What can be noted with certainty at the outset is that Minoan and Minoanising elements are identifiable in two basic domains of material culture: (1) household and industrial activities (domestic wares and utensils) and (2) prestige artefacts. It is imperative that one distinguishes between (a) actual imports and (b) local imitations, with apparent, yet occasional, stylistic hybridisations.

Within the context of household activities at Koukonisi III, a prominent South Aegean, and particularly Minoan, innovation is the wide use of discoid loom weights of various sizes,⁸⁰ with one (and rarely two) suspension holes and a peripheral groove on the top (Fig. 22). These artefacts, marking the introduction of the warp-weighted or vertical loom, probably also reflect increased specialization in the textile industry.⁸¹ This innovation in the weaving equipment⁸² becomes more striking when evidence from earlier habitation levels is considered: In these, although spindle-whorls are abundant, such loom weights are not attested until the advanced or the close of MBA (Koukonisi IV), where they occasionally begin to appear.⁸³ The large number of such weights from southern Aegean, with an impressive abundance at settlements such as Akrotiri, Ayia Irini and Kastri,⁸⁴ are considered, along with conical cups, as one of the hallmarks of Minoan influence throughout the Aegean at the time.⁸⁵

Furthermore, in the industrial domain, two technical applications of prominent South Aegean character deserve special mention: the clear use of the tubular drill, indirectly documented through the discovery of several small cylindrical marble bore cores (Figs. 21a-b) (section VII) and, on the other hand, the use of terracotta tuyères of the

straight cylindrical type (Fig. 23d) that facilitated air supply in metallurgical furnaces (section VIII),⁸⁶ the latter having striking parallels or variations in Ayia Irini V,⁸⁷ in the LM IB workshop installations at Poros near Herakleion⁸⁸ and at other Cretan sites such as Malia (Quartier Mu),⁸⁹ Knossos

⁷⁹ On the term 'cultural innovation' regarding the fusion of Minoan material elements outside Crete and its relevance to the 'Minoan Thalassocracy' debate, see Davis 1984. On the cultural innovation process and its links to the concept of acculturation see Melas 1991, esp. 175-83.

⁸⁰ The first three examples have been found in the upper destruction level (Room I, Trench 3/'95), together with pottery of the 'early' Koukonisi III Period, Boulotis 1997a, 260, 264. Numerous loom weights, however, appear in the Trench 7 and, particularly, in Trenches 8 and 9, where Minoan and Minoanising elements are more prominent. One of them features an impressed finger mark beneath the suspension hole, closely comparable with a specimen from Ayia Irini V, Davis 1986, 38(S-30), pl. 66 (taken erroneously for a second, incomplete hole). A stone loom weight (with incomplete suspension hole), similar in shape with the clay ones, was found 1996 in the ploughing surface. For stone parallels see Ayia Irini IV, Overbeck 1989, 142 (Group BL-7), pl. 71.

⁸¹ Davis 1984; Davis 1986, 106.

⁸² In Ayia Irini discoid loom weights are first well-attested during the advanced MBA (Period V) (Davis 1986, esp. 106, pls. 38e, 66(C-53, S-30). However, a few earlier examples in stone and clay (Ayia Irini Period IV = MM IIA) are reported from the site (Overbeck 1989, 69, 128, 142, pl. 23). Cf. finds from Mikro Vouni (Matsas at this conference) and Troy (Becks & Guzowska 2004; Guzowska & Becks 2005; Guzowska this volume).

⁸³ See two specimens from the deeper layers of the Room XI (Trench 8/'04).

⁸⁴ Carrington Smith 1975, esp. 276-86; Davis 1984, 161-3, fig. 2; Tzachili 1990; Tzachili 1997, 178-93, figs. 95-101.

⁸⁵ Recent finds of similar loom weights in significant numbers and in association with Minoan and Minoanising evidence come from Çeşme Bağlararası 1 (Şahoğlu, 2007, 318); however, two loom weights from this site have been found in EBA contexts (V. Şahoğlu 'Excavations at Çeşme-Bağlararası: New Perspectives on the Minoan Links of Western Anatolia', lecture given at the Athens Minoan Seminar, 11/06/2009). If this type of loom weight actually belongs to a local EBA tradition, such a fact would modify the significance of their occurrence and distribution.

⁸⁶ On a typology of tuyères see Tylecote 1981.

⁸⁷ Davis 1986, 52 (Y-11), 99, pl. 67.

⁸⁸ Dimopoulou 1997, 434-5, pl. CLXIXc.

⁸⁹ Poursat 1996, 117, pl. 35m.

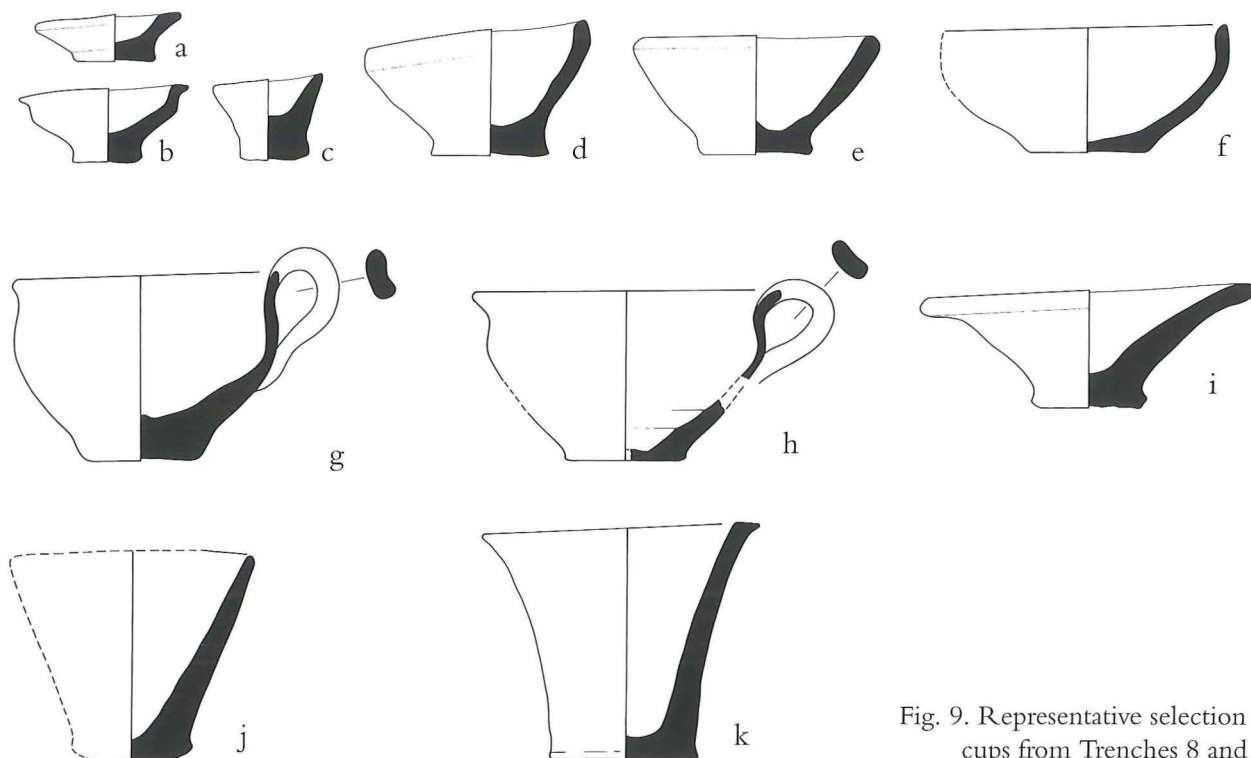


Fig. 9. Representative selection of cups from Trenches 8 and 9.

(Unexplored Mansion)⁹⁰ Mochlos,⁹¹ Kommos⁹² and Palaikastro.⁹³

Pottery wares, Minoan as well as 'Minoanising' (*i.e.* produced under Minoan influence at some external centres – mostly Cycladic – and/or locally imitated) embrace a wide variety of shapes and fabrics, both coarse and fine, plain or decorated, whose most dense concentration, as mentioned above, is observed in Trench 8/'03-'04 as well as in Trench 9/'05 (Figs. 5, 7). Handleless conical cups, as nearly all-purpose vessels (mostly for drinking and small food portions),⁹⁴ are by far the most frequent 'Minoan' shape⁹⁵ and are represented by several dozens belonging to various forms (even miniature) and fabrics (Figs. 9a-f), with characteristic string marks on the base. Occasionally, as in Crete, they might have been used for lighting purposes (lamps), as certain rims blackened by fire indicate.⁹⁶ Holes in the bottom of some examples, suggests (as in Crete, at Akrotiri and other South Aegean sites⁹⁷) a controlled pouring, *i.e.* a funnel function in storage and/or ceremonial contexts, while an example with remains of a red substance inside, might have been used as a kind of palette.⁹⁸ Other plain tableware appears at Koukonisi in various

types known from Cretan and South Aegean contexts, such as tumblers (one of these also with a

⁹⁰ H. and E. Catling in Popham 1984, 220, pls. 199i, 207:5.

⁹¹ Brogan 2008, 164, fig. 5.

⁹² Blitzer 1995, 508-9, pls. 8.80, 8.105.

⁹³ MacGillivray *et al.* 1992, 144-5, fig. 23.

⁹⁴ On the various uses of conical cups, esp. in rituals, starting from a foundation deposit in the palace of Zakros, see Boulotis 1982, 154-7, 159-60; Boulotis 1985, 252-3; Wiener 1984, 20; Wiener 1990, 137-9; Gillis 1990, esp. 110-1, 114; Berg 2004.

⁹⁵ Cf. examples from Poliochni, where they also represent the most distinctive 'Minoan' ceramic category of the 'Bruno' period (conical cups are reported only from levels of phase 2: Cultraro 2001, fig. 5:7-9, pl.1:3-11; Cultraro 2007, 328-9, fig. 3:7-9).

⁹⁶ On the function of conical cups as lamps see Gillis 1990, 110-1, with references to the percentage of the type at several Cretan assemblages. The assemblage of 33 conical cups from a rock-cut tomb at Poros near Herakleion, must have been used as lamps in burial contexts (P. Muhly 1992, 104).

⁹⁷ Gillis 1990, 114.

⁹⁸ A similar use of conical cups is attested at Akrotiri. Remains of a red substance have also been identified in the interior of a *Spondylus gaederopus* shell, found in a lower stratum (Koukonisi IV), under Room I (Trench 3/'95) (Boulotis 1997a, 260, fig. 13a).

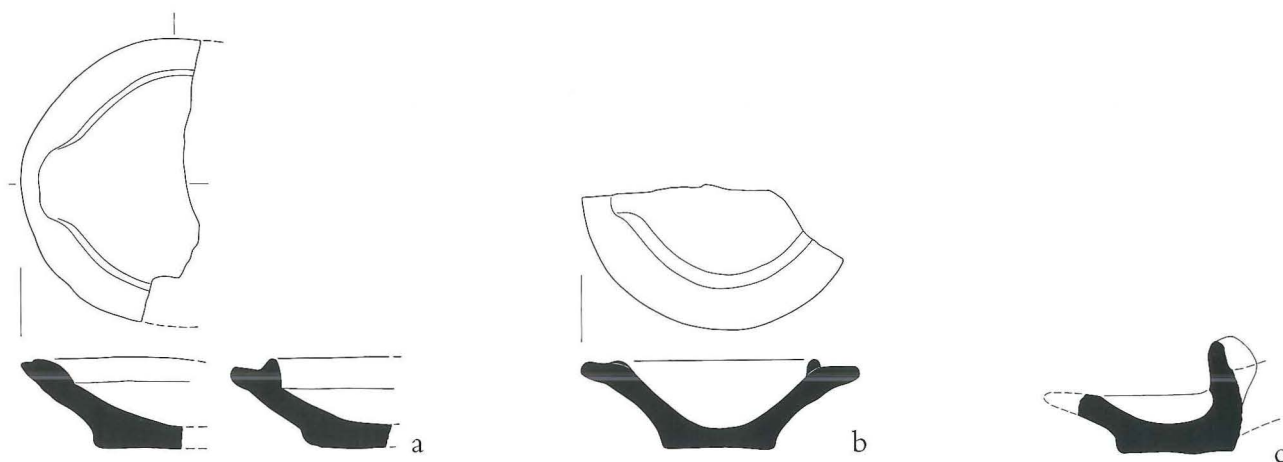


Fig. 10. Selection of lamps (a-b) and brazier (c) from Trench 9.

pierced base), semiglobular and straight-sided cups with a vertical handle, sizeable semiglobular handleless cups, as well as kalathoi and flaring bowls (Figs. 9g-k). Other South Aegean/Minoan shapes that occur more than sporadically are the several bridge-spouted vessels of varying size, both plain or decorated with linear motifs, bichrome (in red and black paint on a white ground, reminiscent of the Cycladic White class⁹⁹), as well as jugs (some with plastic rivet-heads at the upper handle attachment) (Figs. 11b, 17a, c), oval-mouthed amphorae and pithoid jars. The abundance of tripod cooking vessels, also in a great variety of types and uses,¹⁰⁰ while firmly rooted in a local tradition traced back to the EBA, reflects an almost seamless mingling of local and south-Aegean culinary practices. A double mouth of a coarse plain jug with plastic ring on the shoulder (Fig. 11b), found together with numerous conical cups,¹⁰¹ deserves special mention. It is in all probability a local imitation of a peculiar MM IIIB-LM I class (including both jugs and amphorae), known not only from Cretan sites, such as Palaikastro and Gournia, but also from Phylakopi, Ayia Irini and Naxos (area of Mikri Vigla),¹⁰² while it is also a common subject in the iconographic repertoire of the 'talismanic' seals of the era;¹⁰³ its execution, in stone, has produced luxurious items such as the veined marble amphora from the Zakros palace¹⁰⁴ and a 'Creto-Egyptian' three-handled amphora from Malia, composed of Egyptian alabaster and Cretan white limestone.¹⁰⁵

Besides strainers, flat cooking dishes,¹⁰⁶ probable cooking trays, clay tripod tables with raised rims (Fig. 11a)¹⁰⁷ and braziers (Fig. 10c), numerous lamps are also attested (Fig. 10a-b), varying in shape and size, with wavy nozzle and, in some cases, with a horizontal collared rim; the range of

⁹⁹ Barber 1978, 375-6 (Cycladic White; Black and Red Style), pl. 2.

¹⁰⁰ It is particularly interesting that tripod cooking vessels from Koukonisi, besides their main use for stewing meals, they functioned occasionally as portable hearths, as the burning traces on their interior indicate, as well as embedded hearths into floors. A characteristic example of the latter case has been found in Room IV, Trench 5/99 (Koukonisi IV).

¹⁰¹ Room III (Trench 9/05).

¹⁰² O. Philaniotou kindly brought the unpublished Naxian example to my attention.

¹⁰³ Onassoglou 1985, 12-22, esp. 18, 20, pls. I-X, with references to actual examples from Gournia, Palaikastro, Phylakopi and Ayia Irini. The frequent iconographic association of this vessel type with branches and 'horns of consecration' plausibly suggests that these could have been used in ritual action, probably libations. The relief scene on a stone triton from Malia (Baurain 1985, esp. 95, fig. 1) represents such a double-mouthed libation jug used by one of the two genii who pours its liquid content into the forepaws of the other.

¹⁰⁴ Platon 1974, 113-4, fig. 80.

¹⁰⁵ van Effenterre 1980, 474-6, fig. 632-3.

¹⁰⁶ Characteristic examples are found in Room I (Trench 3/95) (Koukonisi III 'early').

¹⁰⁷ Cf. similar tripod tables from Ayia Irini (House A) Cummer & Schofield 1984, pls. 55 (415), 66 (989), 69 (1055), 71 (1111).

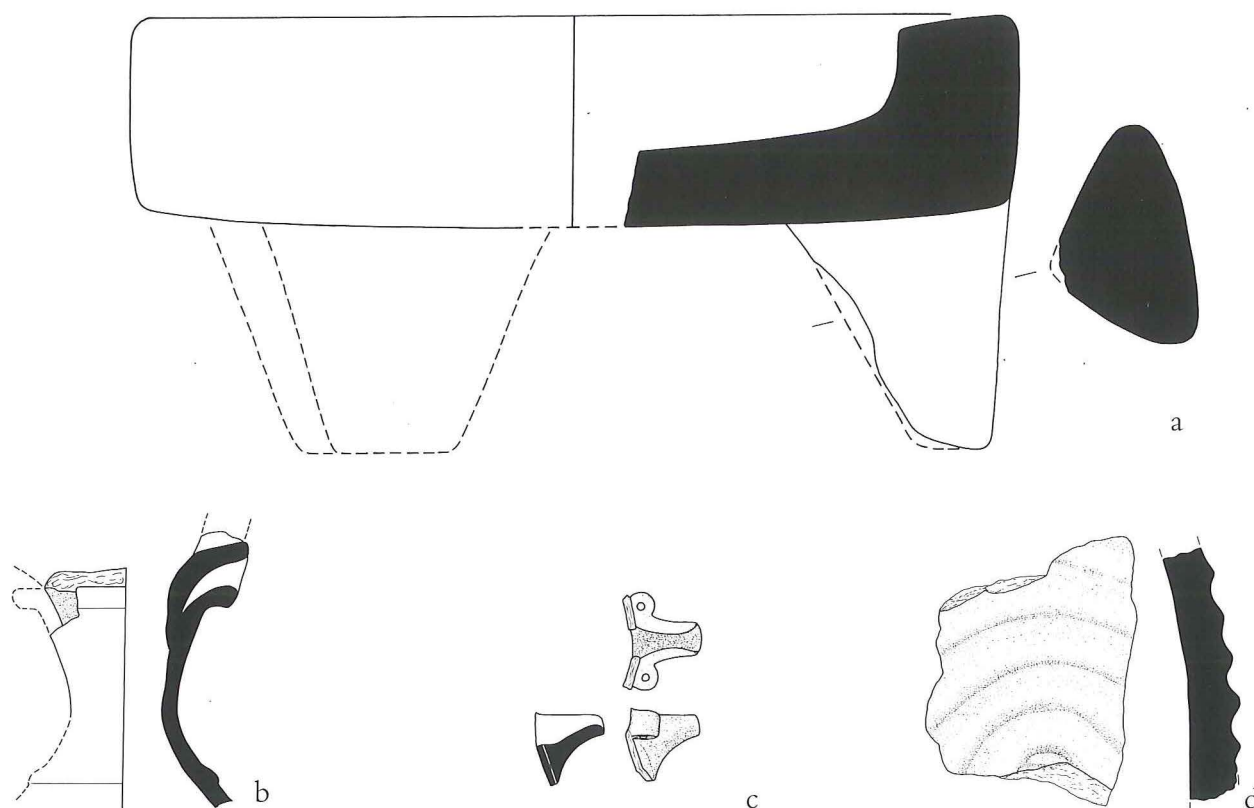


Fig. 11. Miscellaneous: a. Clay tripod table (Room IX, Trench 8), b. Fragment of a double-mouthed vase (Room III, Trench 9), c. Spout of a tiny cup in the form of schematic lily (Room I, Trench 9), d. fragment of a relief pithos (Room IV, Trench 9).

lamps includes even a sizeable pedestalled example.¹⁰⁸

Decorated pottery, in a variety of shapes (ranging from tiny cups to sizeable piriform jars (Figs. 12-15)) and styles (light-on-dark, dark-on-light, bichrome in red and black paint, polychrome with added white paint) echo, albeit on a restricted scale, the situation at LC I Akrotiri¹⁰⁹ and in Keos VI (House A).¹¹⁰ Most of the decoration is typical of MM III B-LM I (mainly LM IA): foliate band, ripple and stone conglomerate patterns and spirals of various types are the main motifs attested.¹¹¹ Apart from the obvious Cretan (even Knossian?) provenance of certain decorated examples (Figs. 12l, 13a), others have strong similarities with examples from the Cyclades (Ayia Irini, Akrotiri, Melos) or the Dodecanese/SE Aegean (Kos?) (Fig. 12g).¹¹² The matter of provenance is to be clarified through future study, as no clay analyses have yet been undertaken. However, certain sherds decorated with tiny floral motifs executed in dark-on-

light (grasses or 'fritillaries') (Fig. 12d-e),¹¹³ a variation of which in the form of stemmed buds in row appears on a sherd of the polychrome style (Fig. 14c), betray a specific Melian character. Some unusual forms and motifs also occur, such as two

¹⁰⁸ For the type *cf.* a characteristic example from Ayia Irini V, Davis 1986, 42 (U-44), pls. 27, 53.

¹⁰⁹ *E.g.* Marthari 1990.

¹¹⁰ Cummer & Schofield 1984, esp. 45-7.

¹¹¹ On the variety, character and chronology of LM IA ceramics see esp. the closed assemblage from the Gypsades Well Deposit (Evans 1928, 549-50, fig. 349; Popham 1967, 338-9), as well as the Unexplored Mansion (Popham 1984, 156-8). More general on the topic of MM IIIB/LM IA and LM IA pottery in Cretan contexts as well as in South Aegean, see recently Niemeier & Niemeier 1997, 232-8 with n. 322; Hatzaki 2005, 102-4; Hatzaki 2007 and *supra* n. 68.

¹¹² Momigliano & Knappett 2007, fig. 2E (from Iasos).

¹¹³ See for instance Atkinson *et al.* 1904, 126, pl. XXIII:4; Barber 2008, 135 (on chronology), 136, no. 623, fig. 37, *cf. ibid.* various types of stemmed buds: nos. 327, 335, figs. 18-9. Stemmed buds appear in row on some Melian panelled cups from Ayia Irini V (Davis 1986, I-2, M-1, pl. 24; AC-1, pl. 33).

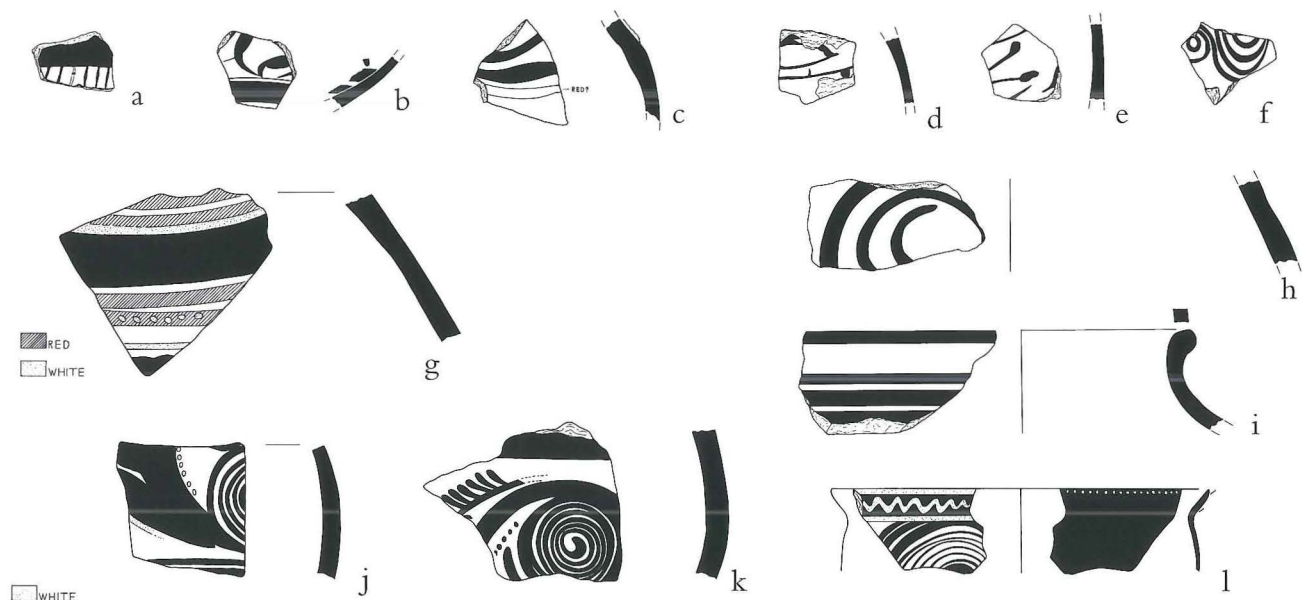


Fig. 12. A selection of painted pottery from Trench 9.



Fig. 13. A selection of painted pottery from Trench 8.

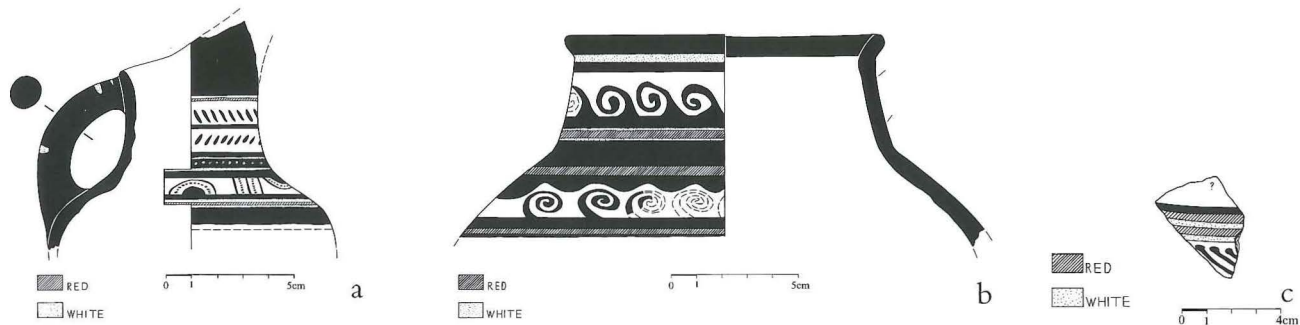


Fig. 14. Polychrome pottery from Trench 9.

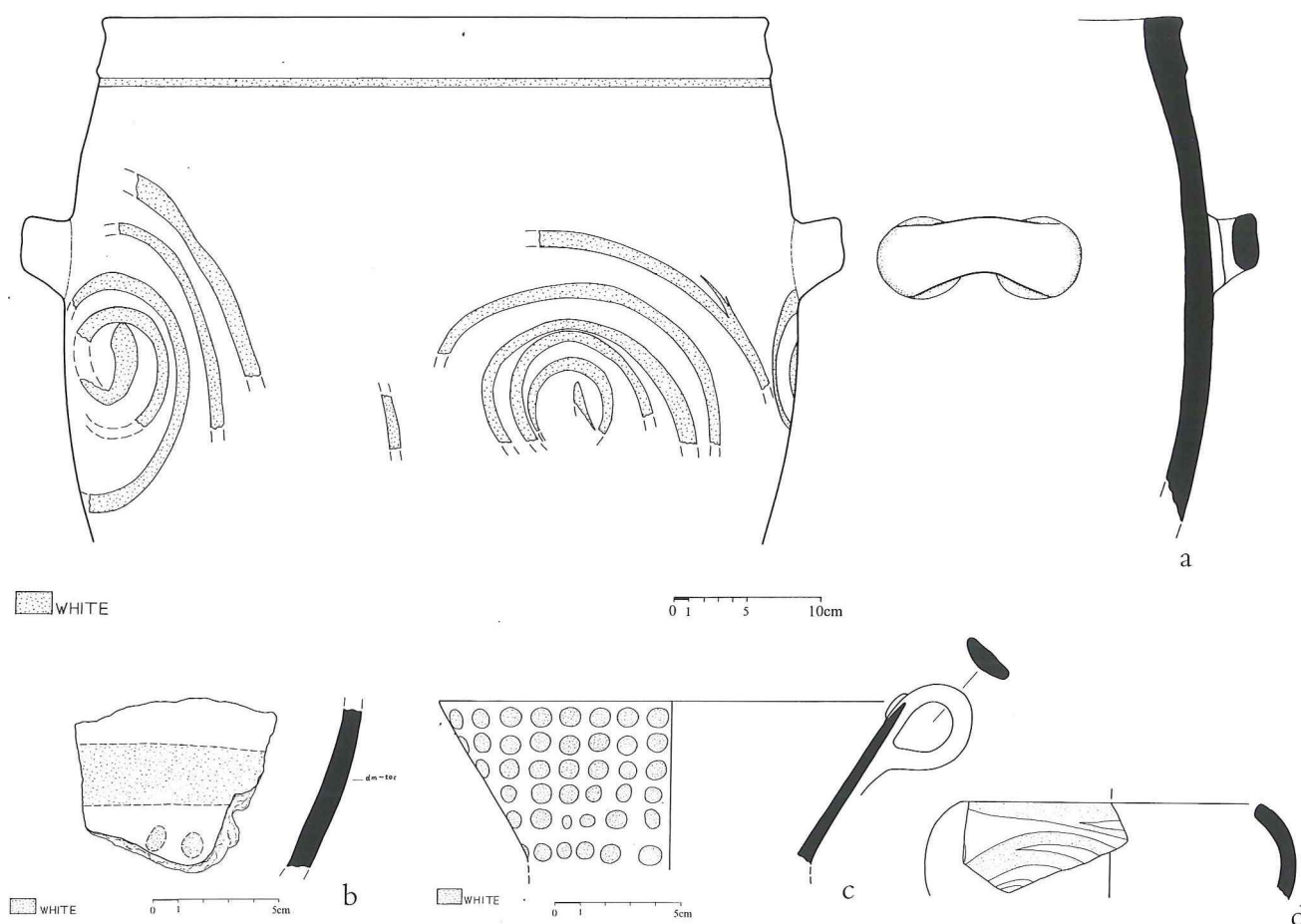


Fig. 15. A selection of white painted ware from Trench 9. **a.** is at a scale of 1:5.

small, polychrome vases of a probable Cycladic provenance, namely a beak-mouth jug (Fig. 14a) and a one-handled hole-mouthed vessel (Fig. 14b): the former is painted with a foliate band and a zone with semicircles and 'triglyphs',¹¹⁴ very close in style and fabric to the example shown in Fig. 14c, while the latter has two zones of antithetic running stemmed spirals.¹¹⁵ Furthermore, several examples of a clearly distinctive class characterised by paste-like white patterns (usually worn), painted either directly on a plain ground (Figs. 15a-b) or on a reddish slip (Figs. 15c-d) deserve special mention. Certain examples from this diverse group can be singled out: (a) a large Vapheio cup with a marked plastic horizontal rib, decorated with white dots on a reddish slip (Fig. 15c), thus following an aesthetic tradition of MM ancestry;¹¹⁶ (b) an inverted rim bowl with curvilinear decoration

¹¹⁴ In contrast to the frequency of foliate bands, the motif of semicircles combined with 'triglyphs' is practically unusual in this period.

¹¹⁵ On stemmed spirals attributed to the LM IA phase see the reportedly diagnostic Gypsadhes Well Deposit at Knossos (Evans 1928, fig. 349:1). Cf. also LC I examples from Akrotiri: Marthari 1980, pl.71 (one-handled cup); Marthari 1990, fig. 11 (bichrome eyed jug of probable Naxian or Kean origin). Cf. a zone with stemmed spirals on a fine kantharos from the Aphrodision of Argos, dated to the very end of the MH period (Philippa-Touchais 2007, 104, pl. 5).

¹¹⁶ Cf. e.g. a white-dotted MM IIA egg-shell cup from the palace of Knossos (Evans 1930, 362, fig. 240). For MM III/LM IA Cretan examples of white dots decoration on a dark ground, see also Popham 1984, pl.144:7; P. Muhly 1992, 107-8, nos. 35-37, fig.4, pl.8. For examples beyond Crete see, for instance, Knappett & Nikolakopoulou 2005, 177, pl. XLIIa (usually considered to belong in MM IIIa); Kilian-Dirlmeier 1997, 128, nos. 49-50, fig. 72, col. pl. 7 (fragment of a small jug and the rim sherd of a miniature bowl -with white dots on a red ground- from the earlier excavations at Kolonna).



Fig. 16. Fragments of a pithos *in situ* with relief decoration of running spirals and stripes (Room XV, “Pithoi area”, Trench 8).

(spirals?), again on a reddish slip (Fig. 15d); (c) a sizeable ovoid piriform jar with running spirals on a plain ground (strongly affected by fire) (Fig. 15a). The broad, yet uneven, diffusion of white-painted ware throughout the Aegean, especially in MM IIIB-LM I, and the seeming concurrence of several variants (perhaps hinting at regional production or imitation), prevents us from discerning a clear pattern in the distribution of this ceramic class. However, examples so far found at Koukonisi display an evident Minoanising character, while some of them resemble Cycladic white-on-red ware¹¹⁷ as well as demonstrating some similarities to a South-East Aegean class of light-on-dark ware, so far known from assemblages in the Dodecanese and the Carian-Ionian coast.¹¹⁸ In the northern Aegean, apart from Koukonisi III, similar decoration occurs at nearby Poliochni,¹¹⁹ Mikro Vouni¹²⁰ and Troy VI b-c,¹²¹ with the examples at the last two sites comprising an almost homogeneous group in terms of fabric and decoration,¹²² plausibly indicative of contact between Samothrace and the Troad. Some fragments of closed vessels with linear motifs and spirals, painted in red and black, belong to the bichrome Cycladic White class. A further pottery class, quite alien to the local tradition, but at home in the South, is comprised of certain large closed shapes from the fill of the final MBA destruction levels (Koukonisi IV), painted with red or brown large horizontal strips as well as spirals on a lightly polished surface.¹²³ The

earliest painted Minoan pottery at Koukonisi that might justifiably reflect imports consists of a few sherds of egg-shell cups (MM IIIB-III A?), which are mostly decorated with tiny bands of white and/or red on a blackish or dark brown ground, below the rim.¹²⁴ The relief running spirals combined with horizontal relief strips on the shoulder of certain red-coated storage pithoi (Figs. 11d, 16)¹²⁵ are probably Minoan-inspired; a similarly decorated pithos from a LM IA/ LC I horizon in Ayia Irini (Period VI), also red-coated,¹²⁶ further stresses the links between Koukonisi and the southern Aegean, while the spout of a tiny red-slipped cup, flanked by two volute-like motifs, shown from above, bears a resemblance to a schematic lily (Fig. 11c). A small, plain, four-handled pithoid jar from the ‘early’ Koukonisi III horizon,¹²⁷ is alien to the local

¹¹⁷ Cf. similar pottery from Aegina, locally produced and/or imported (Kilian-Dirlmeier 1997, 125-35, col. pls 6-11).

¹¹⁸ On the definition, character and the Aegean distribution of this class, only small quantities of which apparently reached sites outside the south-eastern production centres, see recently Momigliano 2005, particularly 221-2, pl. LVIIIb-c; Momigliano & Knappett 2007, esp. 259, 269-70, figs. 1B; 2D; 5B-C.

¹¹⁹ Cultraro 2001, 227, 230, fig. 6.4.

¹²⁰ Matsas at this conference.

¹²¹ Blegen *et al.* 1953, 203. See also a cup of white-on-red found in the Lower Town with diagnostic pottery of Troy VI early, Easton & Weninger 1993, 65, fig. 25; Pavúk 2005, 271-2, pl. LXVa.

¹²² Pavúk 2005, 272. Most recently, the detailed examination of the white-painted ware from Mikro Vouni (summer 2009) has further confirmed analogies with Troy (P. Pavúk, D. Matsas, pers.com.). Some white painted sherds have also been found at Thermi on Lesbos (Pavúk 2005, 272, n. 19) and Çeşme Bağlararası I (Şahoğlu 2007, 317-8, fig. 11).

¹²³ Rooms I (Trench 3/’95), IV (Trench 5/’99) and XIV-B (Trench 8/’04). For roughly contemporary extra-Cretan parallels see *e.g.* specimens from Ayia Irini V, Davis 1986, 44-5, nos. U-91-92, pl. 56.

¹²⁴ Some examples are uncovered in the upper destruction level (Koukonisi III), but mostly come from lower levels, as well as from the fill of the so-called ‘Boreas’ Street, under the level of its final use.

¹²⁵ The best-preserved example came into light in the upper destruction level of Room XV (‘Pithoi area’), Trench 8/’04 (Fig. 16). Some fragments were collected from excavated contexts (*e.g.* Room IV in Trench 9/’05, Fig. 11d) as well as at various areas of the ploughing surface.

¹²⁶ Cummer & Schofield 1984, 75, no. 519, pl. 57.

¹²⁷ Room I (Trench 3/’95).

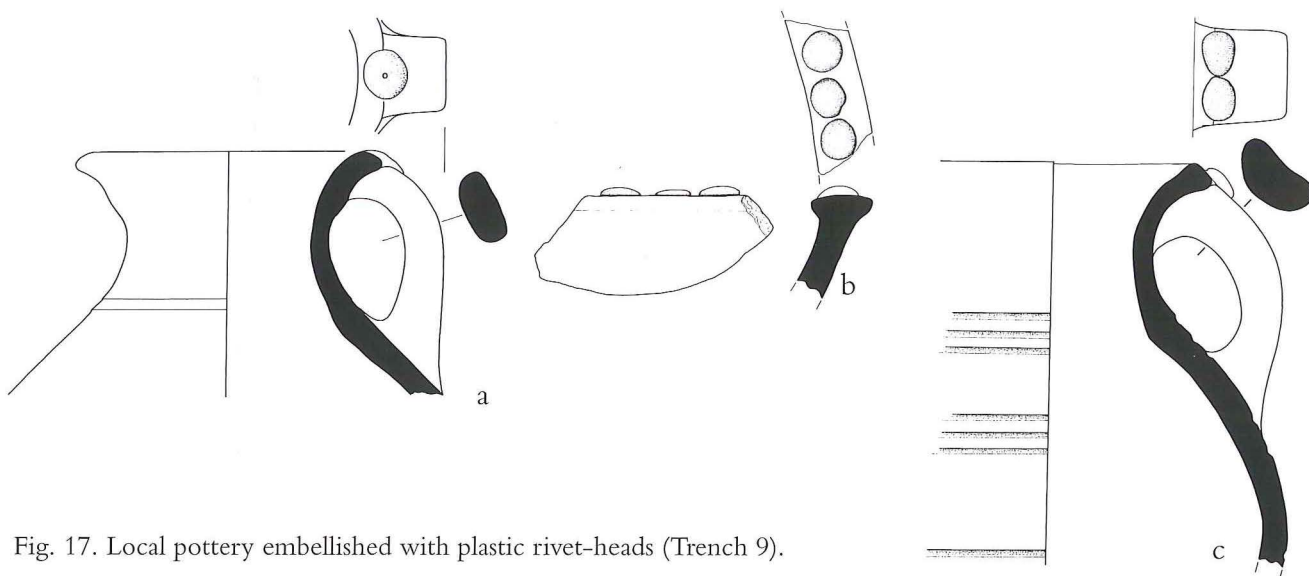


Fig. 17. Local pottery embellished with plastic rivet-heads (Trench 9).

ceramic tradition and might perhaps be better understood within the context of the southern Aegean affinities of the site. Finally, the application of plastic rivet-heads on plain or red-slipped vases of the upper destruction level (Koukonisi III 'advanced') is generally attested in association with South Aegean wares, may also point at Minoan influence.¹²⁸ These rivet-heads (usually single or in pairs), obviously imitating metal prototypes, appear, as mentioned above, at points of some functional significance (*e.g.* the attachment of the handle on the rim of jugs: Fig. 17a, c), or, more rarely, they embellish the everted rim of open shapes (Fig. 17b).¹²⁹ Similar decoration, also reported from Mikro Vouni and Troy VI early,¹³⁰ might enable the reconstruction of even more precise early LBA synchronisms with these sites, all the more since, as in Koukonisi III, these elements occur there along with white-on-red pottery.

Future petrographic inspection might provide us with more precise results as to the provenance of imported wares, contributing to the better understanding of the mechanism of eclectic affiliation ties within the trade network of the period, both in its regional context and in its long-distance extensions.¹³¹ However, one might suggest that, besides the probably imported Minoan/South Aegean pottery, including also some probable early Mycenaean (LH I) examples, it seems that local potters were involved in the production of imita-

tions, especially of plain table ware such as conical and one-handled cups or bridge-spouted vessels. Within this process, certain hybridizations seem to have occurred. Characteristic, in this respect, is a plain flask of squat lentoid shape, from the upper

¹²⁸ For rivet-heads on MM III- LM I pottery see Evans 1921, 142, fig. 183b; Evans 1928, 175, 508, fig. 311; Evans 1935, 277, 301, figs. 210a-b; E.N. Davis 1977, 104-5. *Cf.* imitations of metal rivet-heads from other heavily Minoanised Aegean sites, *e.g.* on each handle attachment of a basin from Ayia Irini V (Davis 1986, 58, AA-63, pls 33, 62) or on tripod cooking pots from Miletus, placed opposite the spout in the grooved zone (Kaiser 2005, 194, n. 15). Further examples are reported from Troy and Mikro Vouni (Matsas at this conference and Guzowska this volume).

¹²⁹ For the use of rivet-heads in Minoan and Mycenaean metal vases see mainly E. Davis 1977, 335, 339, 343-4. The Koukonisi plastic rivet-heads must be somewhat differently conceived from the purely decorative knobs ('Knopfverzierung') on handles and bodies of vases dated to the EBA/MBA transition onwards. *Cf.* for instance examples from Liman Tepe IV (Günel 1999, 50, cat. nos. 2, 6-7, figs. 10-1), which display close similarities with finds from Koukonisi IV.

¹³⁰ Blegen *et al.* 1953, 203. Matsas at this conference and Guzowska this volume.

¹³¹ With regard to the different degrees of 'Minoanisation' of extra-Cretan settlements and the phenomenon of eclectic affiliations the case of Liman Tepe may be a good example. This displays a somewhat different character from nearby Çeşme Bağlararası in terms of Minoan relations (Şahoğlu 2007, 319-20). On exchange and affiliations networks between Crete, Akrotiri and Miletus in MBA, see Knappett & Nikolakopoulou 2005.

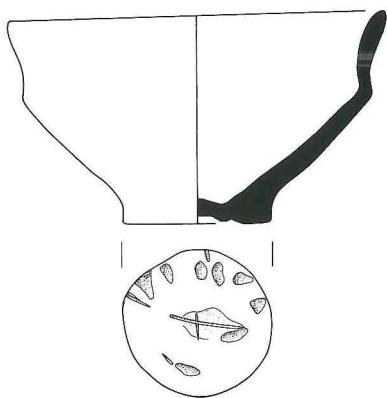


Fig. 18. An MBA carinated bowl with X-shaped potter's mark incised on the base (Room V, Trench 7).

destruction level of Room 1, Trench 3/'95 (Koukonisi III 'early'): while its overall shape, with a bifoil mouth and a low ring base, suggests Minoan-South Aegean prototypes,¹³² its yellowish burnished surface, as well as the placement of its two small cylindrical handles across the body and not on the narrow shoulders, set it apart from the 'standard' Minoan repertoire. A similar 'hybrid' suggests itself when plastic rivet heads of assumed Minoan inspiration are applied on jugs with horizontal grooves at the level of the shoulders, which is a widely attested decoration of local ancestry (Figs. 17a, c).

Along with Mainland and south-Aegean influences and imports, a practice associated with ceramic production was introduced and locally applied from MBA Koukonisi IV onwards, namely the use of potter's marks, either impressed or incised on various parts of vases (in particular on handles and bases).¹³³ By far the most common are impressed marks made by fingers or fingernails, which often, in their exaggerated application in rows, apart from their significance as 'markers',¹³⁴ might have also functioned as a kind of simple decorative pattern.¹³⁵ As in the South Aegean and Crete during MBA and early LBA,¹³⁶ the most common incised mark is the "X", attested, for instance, on the handle of an oval-mouthed amphora handle (of probable Aeginetan provenance)¹³⁷ or combined with cut or impressed 'dents', at the base of a carinated bowl (Fig. 18).¹³⁸

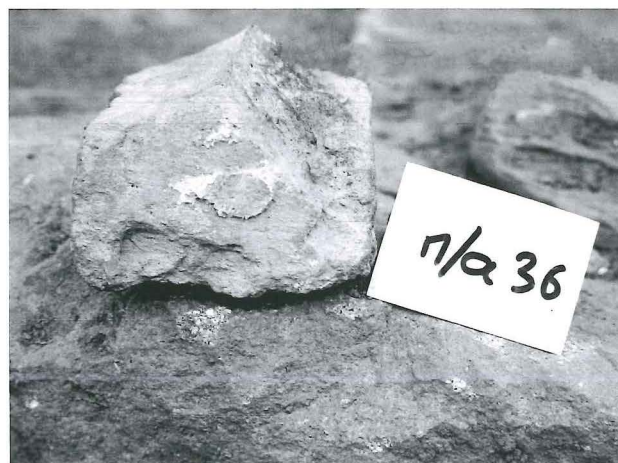


Fig. 19. Fragment of a clay table coated with red plaster (Room XV, "Pithoi area", Trench 8).

A more 'colourful' picture of the site's South Aegean connections was quite literally drawn by a small plaster fragment with a deep red and polished surface, found in 1999 associated with a large

¹³² Boulotis 1997a, 246–8, figs. 12a, 26, n.19 (with references to S Aegean parallels and deviations from Trojan flasks).

¹³³ E.g. Boulotis 1997a, fig. 25 (top).

¹³⁴ Cf. the practise of marking Aeginetan pottery with finger impressions (Lindblom 2001, mark types A3, F2, G3, fig. 21, pls. 3–5, 32–7). On the same practice in Ayia Irini see Halepa-Bikaki 1984, 2, 6, 8, 10–3, 26, 42 with Table (1.Categories of marks), pls. 2–3, 5–9, 11.

¹³⁵ E.g. the finger impression on the handles of a sizeable ovoid pithos from the upper destruction level of the Room I (Trench 5/'96) (Boulotis 1997a, 248, fig. 16a).

¹³⁶ For Protopalatial X-shaped marks, see the range of material from Malia (Quartier Mu) presented by Poursat 1996, 183–5, nos. 356, 357–62, pls. 71–2, 75. Among the Cycladic examples, characteristic are those from Ayia Irini (Keos), particularly Period VI, but also Periods V and VII as well (Halepa-Bikaki 1984, potter's marks V-11, VI-3, 4, 5, 6, VII-19, 26, 44). On Aeginetan examples dated to MH III – LH IIIA:1 see Lindblom 2001, 61–2, A49, A50. This type of mark is already attested in several EBA south Mainland sites such as Ayios Kosmas, Zygouries, Eutresis and Asine; in Lerna, in particular, it was nearly the exclusive potter's mark, in contrast to EBA Ayia Irini, where only one example was identified, Halepa-Bikaki 1984, 6.

¹³⁷ Boulotis forthcoming, fig. 12a. A similar amphora from Kolonna with incised potter's marks on the handles is dated to the MH/ LH transition (Wohlmayr 2007, 45–46, no. 1, fig. 3).

¹³⁸ An analogous combination of incised linear marks with cut or impressed ones is usual on Aeginetan pottery (Lindblom 2001, pls. 22–3, 37). Cf. also some examples from Ayia Irini, Halepa-Bikaki 1984, pls. 11 (VI-18), 13 (VII-33).

number of assorted sherds in an extensive refuse deposit, created during the early LBA (probably a minor demolition or repair episode).¹³⁹ Quite a few, very small plaster fragments, painted white or red, were subsequently uncovered in the wider area in later seasons.¹⁴⁰ Precisely due to the lack at that time of *certain* evidence for plastering from the buildings of Koukonisi,¹⁴¹ I had suggested that the most plausible explanation for such a find was that it originally covered a portable item, such as a tripod table, whose presence is, as mentioned above, attested in the settlement (Fig. 11a). The hard proof was provided in 2004: A fragment of a terracotta table preserved parts of its red-painted plaster coating (Fig. 19),¹⁴² although of an inferior quality. Tripod tables coated with coloured plaster, especially those bearing figurative themes, must have been a commodity of 'prestige' value.¹⁴³ Some of them could have reached Koukonisi through commercial routes and most of the painted plaster fragments so far found might have originally covered the flat upper surface of a tripod table.¹⁴⁴

VI. As mentioned above, the impact of the South Aegean at Koukonisi is also reflected in the taste of the 'local elite'. Evidence, although restricted, is a distant echo of what Wiener termed the 'Versailles effect',¹⁴⁵ a mechanism for the emulation of the Cretan high aesthetic standards, inscribed in the wider context of 'cultural innovation'.

Among all artefacts considered to be imported Minoan prestige items, the most impressive is a fragment of a Neopalatial dark grey obsidian vase, with elaborate decoration of dense fluting on its exterior (Fig. 20b), which was a surface find in the excavation area.¹⁴⁶ It seems to have had the form of a *Dolium* shell like the famous obsidian one from Hagia Triada, which shows a similar fluted rendition of the shell's appearance.¹⁴⁷ The working time involved and the degree of difficulty in processing the obsidian, especially if the complex structure of a 'shell vase' is taken into account, indicate, as Warren notes, "the astonishing technical skill of the Minoan lapidaries".¹⁴⁸ The relatively small number of obsidian vases from palatial Crete itself¹⁴⁹ emphatically underscores the significance

of this North Aegean find as an additional indicator of the flourishing community at Koukonisi in

¹³⁹ The deposit laid directly above the east wall remains of Room V (Trench 7/'99) that had fallen out of use and had become an open space (see here Fig. 6).

¹⁴⁰ See for example some fragments from the fill of the so-called 'Boreas' Street (2005 season).

¹⁴¹ A restricted, at least, use of plastering, in buildings of the Minoanising phase of the settlement would not surprise us, cf. for instance wall plastering executed apparently under Minoan-South Aegean influence in settlements such as Mikro Vouni (Matsas 1991, 164 and at this conference) and, in western Asia Minor, besides Miletus, in Çeşme-Bağlararası (Şahoğlu 2007, 319).

¹⁴² Room XV or 'Pithoi Area' (Trench 8/'04). The fragment of the table implies a somewhat rectangular form; cf. a recent terracotta example with white-on-red painted decoration from the LC I site of Raos on Thera (M. Marthari pers.com.).

¹⁴³ The numerous clay tripod tables with painted plaster found stored in the Neopalatial villa at Nirou Chani, (Xanthoudides 1922, 15-6, fig. 12) might be considered as destined for export. An idiosyncratic tripod table from the Upper Citadel at Tiryns, painted with flying birds over a rocky landscape (Boulotis 1992, 85, pl. 37a; Boulotis 2000, 853), stands out among the earliest examples of this category that could have been transported as 'prestige items' from Crete or the Cyclades to the Greek Mainland; however a local fabrication by an itinerant South Aegean painter is not to be excluded.

¹⁴⁴ Red is indeed the most usual colour attested upon the circular upper surface of tripod tables, see e.g. the examples from Akrotiri and also the 'imported' in Tiryns painted example (*supra* n.143).

¹⁴⁵ Wiener 1984, 17, 25.

¹⁴⁶ It was uncovered immediately to the E of Room IV (Trench 5/'99).

¹⁴⁷ Warren 1969, 91 [Type 35: Shell vases,] no. P 497; cf. a fragmentary triton vase from Palaikastro also made of obsidian (Warren 1969, no. P 500) with widely spaced arranged fluting. Both the Hagia Triada *Dolium*-shaped vase and the Palaikastro triton are made of dark grey translucent obsidian with white spots, a material probably imported from Giali near Nisyros in the Dodecanese. The grey/black variety, on the contrary, being rarely used for vases, may, as suggested, come to Crete not from Melos, but from a south Anatolian source (Renfrew *et al.* 1965, 240; Renfrew 1966, 39, 66, Warren 1969, 135-6). For the decoration of fine Minoan stone vases with densely arranged flutings cf. also a triton of Egyptian alabaster from Kalyvia in Mesara (Warren 1969, 91, no. P 498), as well as the marble chalice from Kato Zakros (Platon 1974, 126, fig. 82). Similar horizontal flutings also appear on a chalice of veined limestone from Ayia Irini (Cummer & Schofield 1984, pl. 42 [no.1499])

¹⁴⁸ Warren 1969, 91, 142, 161-2.

¹⁴⁹ Warren 1969, 135-6, 143-4, where only three vases of black obsidian and nine of the black white-spotted variation are registered.

the early LBA. A green serpentine circular lid with a boss-shaped handle (Fig. 20a)¹⁵⁰ – similarly a surface find – might also be of Cretan manufacture: it belongs to the small group of stone lids, under 8 cm in diameter, usually associated with shapes such as the Bird's Nest Bowl, with close parallels, for example, from Quartier Mu at Malia,¹⁵¹ and outside Crete from House A of Ayia Irini (Keos)¹⁵² and from Ialysos (Rhodes).¹⁵³ Two further small luxurious items from the early LBA levels also shift our focus southwards: A cornelian translucent bead of slightly biconical shape, perforated lengthwise (Fig. 20g)¹⁵⁴ and a minuscule, almost trapezoidal, ivory (or bone) plaque, with an undulating upper surface (Fig. 20f),¹⁵⁵ which, along with other similar pieces, would have probably formed the inlaid-decoration of some piece of furniture of perishable material.¹⁵⁶ The range of prestige goods is increased with one more surface find in the excavation area:¹⁵⁷ a fragmentary globular mace-head of blackish polished stone with small white flecks and decorated with relief ovals and incised linear motifs (Fig. 20h); it could have been imported from Crete as an elaborate version of Neopalatial 'ceremonial maces', or, alternatively, from some other area¹⁵⁸ to be used, apparently, as a status symbol, probably like those known from Minoan imagery or even the real thing.¹⁵⁹ Among all Minoan parallels, the closest to the Koukonisi example is the spherical mace-head from the 'Mace-bearer's tomb' at Isopata, made of siliceous breccia and with vertical edges on its surface, which was considered 'the official badge of some functionary'.¹⁶⁰ Within a similar symbolic frame one may gain a better understanding of the fragmentary single axe of deep green *Lapis Lacedaemonius* (or Spartan basalt) with light green feldspar phenocrysts,¹⁶¹ which was found associated with abundant Minoan and Minoanising ware in the early LBA destruction layer (Fig. 20j).¹⁶² Its extremely well-polished surface, the high value of the aesthetically attractive stone and the high quality of execution, single this artefact out from plain utensils, at least in its primary use.¹⁶³ The exclusive provenance of this fine stone from the southern Peloponnese (near ancient Krokeai in Laconia), the large store of blocks of

this material in the so-called 'Lapidary's Workshop' at Knossos, as well as several pieces of processing

¹⁵⁰ It was found SE of the current trenches. Boulotis 1997a, 264. On typology, Warren 1969, 68–71 [Type 27: Lids].

¹⁵¹ Poursat 1996, pl. 24g (three examples from the seal workshop).

¹⁵² Cummer & Schofield 1984, pl. 42 [nos 143, 476, 1461].

¹⁵³ Benzi 1984, 98–9, figs. 13–4.

¹⁵⁴ Room VII (Trench 7/'99, upper destruction layer). For similar LM IA cornelian beads from Crete, see for instance the finds from Pyrgos (Evans 1928, 75, fig. 34k–m). Cornelian beads of this shape have also been found in Ayia Irini IV (Overbeck 1989, 193, nos. 10–8, pl. 96g). The concrete shape, in slight variations, mostly of cornelian, is also attested in early Mycenaean elite funerary contexts (the examples from Grave Ksi at Circle B at Mycenae are typical: Mylonas 1972–3, 184–5, pl. 160a), as well as in imagery (Boulotis 1999, 31, 78, figs. 5 and 14).

¹⁵⁵ Room XI (Trench 8/'04). Cf. for instance the precious small finds of Minoan or Minoanising character from Çeşme Bağlararası I (=LM IA), among which figure an ivory inlay, a gold wire, a faience bead and a glass bead (Şahoğlu 2007, 318).

¹⁵⁶ On similar Minoan inlays, usual under 5 cm long see Evelyn 1993, 202–3.

¹⁵⁷ Boulotis 1997a, 264 (Room I, Trench 3/'95).

¹⁵⁸ See typological and decorative similarities of the Koukonisi example with maces from the EBA III and MBA Balkans and central Europe, Häusler 1982, 102, fig. 1.

¹⁵⁹ On Minoan stone 'ceremonial' mace heads and hammers *in corpore* as well in seal iconography, see Platonos-Manti 1981. See also a list of real mace heads in Shaw 1973, Appendix F.1. Two moderate stone examples have further been uncovered in the Unexplored Mansion at Knossos, used perhaps in metalworking (Evelyn in Popham 1984, 237–8, pls. 228:6, 10, 230:17–8). To the well-known corpus of representations a sealing from Hagia Triada with a long robed 'priestly' figure holding a spherical mace on his shoulder (CMS II.6, no. 12) should be added. On the symbolic use of 'weapons' and 'tools' as *insignia dignitatis* see P. Muhly 1992, 134–40, 189–90. Especially on the so-called Syrian axe as *insigne dignitatis* in LM IB Crete and in LH IIA Lakonia (tholos tomb at Vapheio) see recently Boulotis 2008b, 47–9, figs. 3, 4, 6.

¹⁶⁰ Evans 1914, 17–8; Evans 1935, 340–54, fig. 299.

¹⁶¹ On the Bronze Age use of *Lapis Lacedaemonius* see Waterhouse & Hope Simpson 1960, 105–7; Warren, 1969, 132–3; Warren 1992.

¹⁶² Room III (Trench 9/'05).

¹⁶³ Its more quotidian use, industrial (in metalworking?), might have been secondary. See the analogous case of a broken hammer of fine green grained limestone with darker veins from the Unexplored Mansion at Knossos, considered to have primarily fulfilled some symbolic role as a 'ritual hammer' (Evelyn in Popham 1984, 237–8 (no H 229), pl. 218:4, cf. also 237 (no Misc. 22), pl. 218: 9).

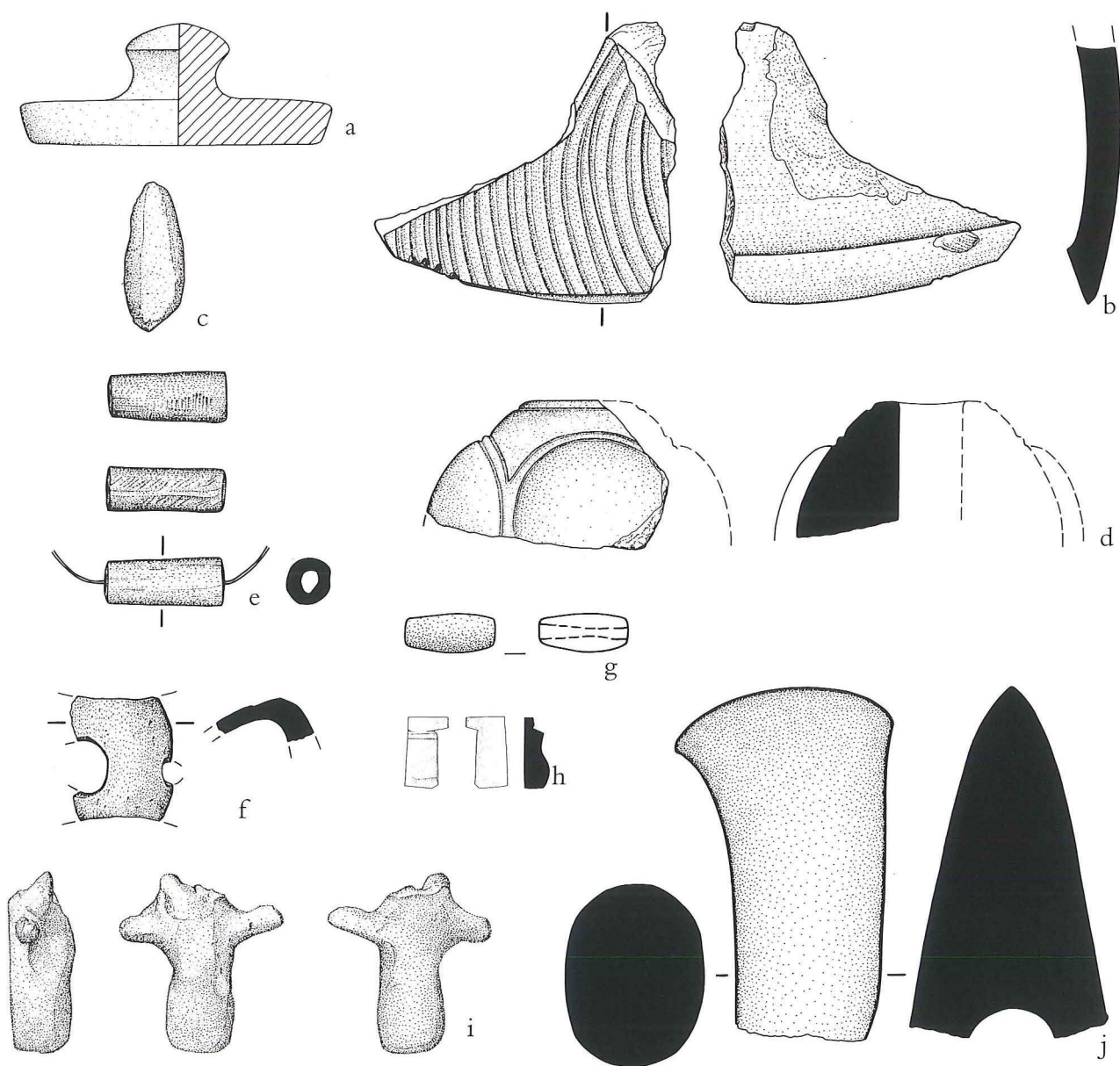


Fig. 20. Stone vases and small finds (Scale 2:3). a. Circular lid of serpentine (Surface find). b. Fragment of an obsidian fluted vase (Surface in Sector B). c. Unfinished bead of rock crystal (Room XIV-B, Trench 8). d. Fragment of a stone mace-head (Room I, Trench 3). e-f. Bone ornaments (from the fill in the "Boreas street", Trench 9). g. Carnelian bead (Room VI, Trench 7). h. Ivory (or bone) plaque for inlay-decoration (Room XI, Trench 8). i. Coarse clay figurine (Room III, Trench 9). j. Fragmentary single-edged axe of *Lapis Lazuli* (Room 3, Trench 9/05).

waste from other Knossian¹⁶⁴ and Theran contexts,¹⁶⁵ if combined with the fact that the use of *Lapis Lazuli* as a material for prestige artefacts such as stone vases reached a peak in MM III-LM I,¹⁶⁶ suggest strongly the Cretan connections of the Koukonisi axe. There is evidence in LM I Crete for the use of single axes as personal

¹⁶⁴ Warren 1969, 133.

¹⁶⁵ In the case of Akrotiri, deep green *Lapis Lazuli* with light green feldspar phenocrysts, identical to the Koukonisi axe, was imported to the settlement for the local production of stone vases, as bore cores from the pre-seismic horizon clearly attest (A. Devetzi pers.com.).

¹⁶⁶ Warren 1969, 133.

symbols, besides the exquisite MM 'Leopard axe' from the palace at Malia: the hammer-axe from a tomb at Poros (near Herakleion), made of veined limestone,¹⁶⁷ may be characteristic in this respect, while a contemporary sealing from Kato Zakros shows a processional figure holding a similar, single axe on her shoulder.¹⁶⁸

Exotic objects like the Koukonisi axe, the Minoan stone vase from Mikro Vouni and the two examples from Troy (section II) could have ended up in the North Aegean via sea trade routes, according to the 'prestige chain model' defined by Renfrew,¹⁶⁹ which had operated in the area as early as the EBA, as Minoan and Cycladic stone vases imported to Lemnos indicate.¹⁷⁰ As far as Minoan contacts are concerned, it is worth mentioning that a chlorite miniature vase, found in Poliochni 'Giallo' and considered as Cycladic by Bernabò Brea,¹⁷¹ is most probably of Cretan origin.¹⁷² The same could be true for another miniature vase in the Myrina Museum, of unknown provenance, which has many EM III–MM I parallels.¹⁷³ In fact, stone vases began to play a considerable role in the first significant expansion of Minoan trade from EM III–MM I/II onwards, whereas in the MM III–LM I period, precious items of this category, exported in larger numbers than ever before, comprised a substantial part of the artefactual evidence for the 'Minoan Thalassocracy'.¹⁷⁴

VII. However, the inhabitants of Koukonisi did not remain passive receivers of imported prestige items. In the cultural environment of the transition from the MBA to the LBA, probably under the influence of South Aegean elite behaviour, specialised craftsmen became involved in the production of some luxury items, although, *mutatis mutandis*, on a much smaller scale.

So far, the evidence for *in situ* fine craftsmanship comprises an unfinished drop-shaped bead of rock crystal (Fig. 20c),¹⁷⁵ some shell (*Pinna nobilis* L.) ornaments in varying stages of processing and, probably, six cylindrical bore cores of fine white marble,¹⁷⁶ apparently of Cycladic provenance (Figs. 21a, b). The bead, whose suspension hole had not yet been cut, nor had its edges been

finally smoothed, was found along with three extremely thin leaf-shaped pendants of *Pinna nobilis* shell. It would have been worn in a necklace of types known from Neopalatial Crete and Early Mycenaean burials, as well as from, more or less, contemporary imagery.¹⁷⁷ As parts of a similar necklace, one could consider the three shell-pen-

¹⁶⁷ P. Muhly 1992, 96, 134–40, 189–90 (no 284), fig. 26, pl. 31.

¹⁶⁸ CMS II, 7, no. 17.

¹⁶⁹ Renfrew 1972, 467–8.

¹⁷⁰ The earliest evidence for an imported valuable item at Koukonisi (from a deep layer of the 'Zephyros' street, Trench 2/'94) is a fragmentary conical marble vessel, obviously of Cycladic provenance, which, however, seems to be the Aegean version of a Near Eastern type. It was found in a disturbed layer of the advanced EBA, but its parallels indicate a date in the Final Neolithic or Chalcolithic (Boulotis 1997a, 263–4, n. 32, fig. 23). On the frequency of Early Cycladic and Minoan stone vases in the North Aegean as indicator of commercial interconnections, with references to examples from the surrounding areas, especially the imported examples found in Poliochni and the nearby hill of Dermatas, see Devetzi 1997, 561–3 figs. 3–4; on the Koukonisi marble vessel, see also Devetzi 1997, 559–61, fig. 1.

¹⁷¹ Bernabò Brea 1976, 178, 202, 303 (no. 6066), pls. CCXIIa, CCLIIIb; Boulotis 1997a, 265; Devetzi 1997, 561–3, fig. 4.

¹⁷² Boulotis 1997a, 265; also Devetzi, 1997, 563, fig. 4, where the case is argued in more detail.

¹⁷³ Bernabò Brea 1976, 304, fig. 175. The fact that this vase belongs to the Pantelidhēs Collection (Myrina Museum Inv. No. 2087) should make its provenance from Myrina all the more possible (Boulotis 1997a, 265). For Minoan parallels see Warren 1969, 72–4 [Type 29: Miniature Goblets].

¹⁷⁴ Warren 1967; Warren 1969, 182–90.

¹⁷⁵ It was found in Room XIV (Trench 8/'04), in the fill beneath the latest upper floor of the area. Scattered pieces of some crystalline material (possibly quartz) were also retrieved from the neighbouring Room XV or 'Pithoi Area' (Trench 8/'04). Cf. pieces of rock crystal for the fabrication of various ornaments (especially beads and pendants) in the workshop areas identified at Malia, Quartier Mu (Poursat 1996, 104, 109, pl. 47b–d), the palace of Zakros (Platon 1974, 202, figs. 115, 121), the Unexplored Mansion at Knossos (Evely in Popham 1984, 239–40, pl. 219:17) and Poros *Katsambas* near Herakleion (Dimopoulou 1997, 436, pl. CLXXII).

¹⁷⁶ Four of them were found in Rooms I and III (Trench 9/'05), characterised by a rich Minoan and Minoanising evidence. A further example came in the adjacent Room XI (Trench 8/'03). Both areas have yielded significant South Aegean evidence. A sixth piece was uncovered in Sector Γ/'05.

¹⁷⁷ E.g. Boulotis 1999, 31, 78, figs. 5 and 14.

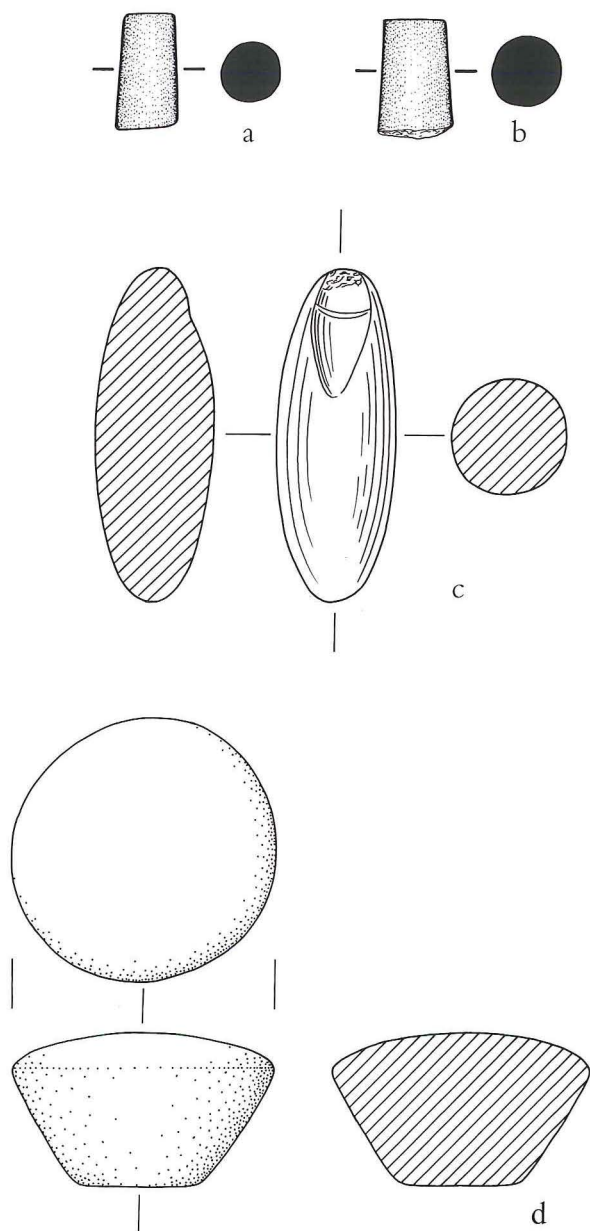


Fig. 21. Weights (Scale 2:3): a-b. Selection of marble bore cores from Trench 9, probably used as balance weights, c. Hematite sphendonid weight from a final MBA context (Room I, Trench 3), d. Marble domed weight (Surface find).

dants, one of which had not been fully perforated,¹⁷⁸ in addition, bone ornaments, such as a cylindrical bead and an unidentified type also appear to be local products (Fig. 20e-f).¹⁷⁹

The cylindrical marble bore cores (Fig. 21a-b) bear all those features, which, according to Warren,¹⁸⁰ ensure their identification as drilled-out cores produced during stone vase-making: they are slightly conical in shape, with fine horizontal traces and, in some cases, with a curved underside produced by the tubular drill. Therefore, it seems not unreasonable to suggest a local, even if occasional, activity of some stone-vase makers, albeit on a significantly lower scale than those that could have practised their craft at Akrotiri or Ayia Irini; this interpretation is strengthened by the surface find of a piece of unworked white Cycladic marble. However, one should keep in mind that objects of this kind could have been intentionally *modified* into small-scale standards used for weighing small quantities,¹⁸¹ the weight of most examples, ranging from 8 to 9.2g,¹⁸² corresponds more or less to small fractions of Evans's definition of the 'Minoan' unit (*ca.* 65g),¹⁸³ while it fits equally well into the East Mediterranean metrological system, corresponding roughly to the Egyptian *qedet* (9.2g) and *shekel* (9.3g) units, as well as the Mesopotamian *shekel* (8.6g).¹⁸⁴ It seems that a unit approximating 9.4g had been commonly used in the Eastern Mediterranean as well as in the Aegean during the LBA. Weights of cylindrical shape, although morphologically 'abnormal' in their Aegean context,

¹⁷⁸ Another small ornament made of *Pinna nobilis* shell, rectangular in shape and of fine craftsmanship, seemingly also unfinished, was found in the neighbouring Room XI (Trench 8/'04).

¹⁷⁹ Both uncovered in the fill of the so-called 'Boreas' Street (2005 season).

¹⁸⁰ Warren 1969, 159–60 (bore cores), fig. 6.

¹⁸¹ For the occasional use of bore cores as balance weights, evidence from Quartier Mu at Malia might be significant, since two such cores had received a secondary treatment to even their rough surface (Poursat 1996, 120, pl. 57a). For Thera evidence see Michailidou 1990, 413, fig. 18. The Koukonisi examples could not have been used as game tokens, since their edges are usually uneven, not allowing them to stand upright.

¹⁸² The smallest of them weighs only 4.9 gr, but it is probably accidentally broken.

¹⁸³ Evans 1906. See also Michailidou 2004; 2006, 235 with further references.

¹⁸⁴ Cf. the Egyptian *qedet* (9.2 gr), *shekel* (9.3 gr.), and the 'Mesopotamian' *shekel* (8.6 gr) See Michailidou 2006, 244.

might have had an EBA ancestry, if considered as a simpler variant of the spool-shaped weights, some of which also turn up in MBA/ LBA funerary contexts.¹⁸⁵ This last hypothesis is supported by two EBA examples from Tiryns and Poliochni, each weighing 9.1g,¹⁸⁶ which seem morphologically to bridge the spool-shaped weights and the cylindrical ones from Koukonisi. It is in the South Aegean, however, that the Koukonisi examples find their closest parallels, namely in a small cylindrical stone weight (9.7g) from Quartier Mu at Malia, bearing additionally an incised arrowhead-shaped sign,¹⁸⁷ as well as among the LC I Akrotiri material.¹⁸⁸ Two further small artefacts (both surface finds) from Koukonisi, also made of fine-grained Cycladic marble, can very plausibly be interpreted as balance weights: one is spherical,¹⁸⁹ while the other is in the shape of a truncated, slightly domed cone (Fig. 21d),¹⁹⁰ which also have Thera parallels.¹⁹¹ The domed weight in particular is very close to two Akrotiri specimens, convincingly interpreted as balance weights, weighing 167.8g and 168.3g respectively, a mass equivalent to one third of a 'Mesopotamian' *mina*.¹⁹² In fact, the close formal correspondence of these Koukonisi marble artefacts with the Thera ones might potentially illuminate the hardly explored issue of the relation between the weight systems of the Northern and Southern Aegean.¹⁹³ A lead truncated cone weight from Ayia Irini VI,¹⁹⁴ a variant of the above marble, domed specimens, further strengthens the interpretation proposed above, while acting as a 'link' between those and the lead discoid weights, the 'Minoan' type *par excellence*, such as the one from Mikro Vouni on Samothrace. The absence at Koukonisi thus far of the typically South Aegean lead discoid weights can be attributed to the chance of discovery, if one considers the multifaceted evidence for 'Minoanisation' from the early LBA settlement. The physical advantages of the site's location at a very significant hub of commerce between Anatolia and the rest of the Aegean permit the daring assumption that different weight systems could have been in simultaneous use, a situation paralleled in other major emporia of the era. The local range of possible or certain weights, consisting tools for tallying, indus-

try-managing and trading¹⁹⁵ – as necessary as writing and other marking systems¹⁹⁶ – is further broadened by a haematite sphendonoid (91.6g.) of excellent manufacture (Fig. 21c), found in the final MBA destruction level of Koukonisi IV (Room I, Trench 3/'95);¹⁹⁷ this weight, belonging to the most recognizable shape of both Aegean and Near Eastern balance weights¹⁹⁸, is attested in various LBA Aegean sites,¹⁹⁹ occasionally in association

¹⁸⁵ On the function of Aegean EBA spool-shaped objects as balance weights, see recently Rahmstorf 2006, 24–8, fig. 4 (a typical 'set' of such weights from EBA II Tiryns).

¹⁸⁶ Rahmstorf 2006, fig. 1:1–2, 4.

¹⁸⁷ Poursat 1996, 123, pl. 57g. For the incised sign – a usual practice for balance weights – cf. the arrow-head sign on a lead discoid weight from Ayia Irini VI, Petruso 1992, 23 (no. 8), pls. 4, 10.

¹⁸⁸ The Thera example, illustrated in Michailidou 2006, 261, fig. 28 right, is a very small, cylindrical object made of gypsum and weighing 3.3 gr. Being found inside a basket, associated with a discoid lead weight (*ibid.*, fig. 27) and a small disc of gypsum (*ibid.* fig. 28 left) makes its interpretation as a balance weight all the more plausible.

¹⁸⁹ This example was found at Koukonos before the excavations proper had started (Boulotis 1994a, fig. 13 bottom right).

¹⁹⁰ Boulotis 1997a, 266, fig. 24; this artefact was collected c. 50 m to the NE of the excavation area.

¹⁹¹ For a preliminary treatment of the significant number of spherical stone artefacts (of varying size) found in Akrotiri see Michailidou 2006, 252, fig. 16.

¹⁹² Michailidou 2006, 246, figs. 9a–b. Comparison between the Thera examples and the artefact from Koukonisi demonstrates the morphological identity, which may well reflect a functional one.

¹⁹³ Both domed and spherical weights are represented in the wide-ranging metrological system of Troy as well as sporadically in other Aegean sites (Bobokhyan 2006, 84–6, fig. 3, with further references). On the origin of the dome-topped weights from Predynastic Egypt and their popularity at least until the 12th Dynasty (broadly contemporary with the Aegean MBA) see Petruso 1992, 3.

¹⁹⁴ Petruso 1992, 26, no. 53, pl. 13.

¹⁹⁵ Petruso 1992, 65.

¹⁹⁶ Palaima 1982; Boulotis 2008a, esp. 71–2, 89.

¹⁹⁷ Boulotis 1997a, 265, fig. 22. A Lemnian 'tradition' of sphendonoid weights going back to the EBA is well represented by the seven examples from Poliochni 'Giallo' (Bernabò Brea 1976, 304–5, pl. CCLVII:1–7).

¹⁹⁸ Petruso 1992, 3.

¹⁹⁹ The case of Katsambas Tomb H (LM IIIA), where all five balance weights were of the sphendonoid type (Petruso 1992, 52–4, nos. 183–187) might be typical of a dominance of this type in the later LBA.

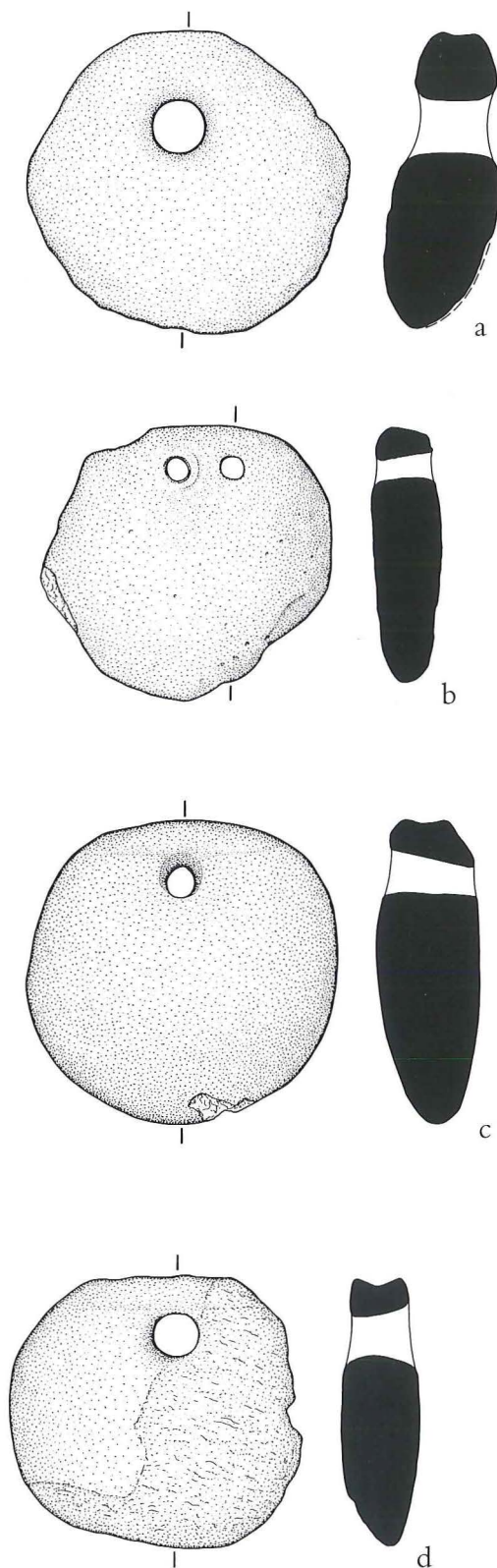


Fig. 22. Selection of loom weights. Scale 1:2. a-b. (Room XIV, Trench 8), c-d. (Room III-A, Trench 9).

with discoid ones, as at Akrotiri, Knossos and particularly Boeotian Thebes.²⁰⁰

VIII. Evidence so far draws a vivid picture of household and industrial activities that show signs of external influence, especially towards the close of the MBA (Koukonisi IV late) and during the early LBA (Koukonisi III). The production of some luxury items, as we have seen, was one such activity. Traditional weaving must have been significant, as the growing number of loom weights (Fig. 22) and spindle whorls shows; the final textile products would surely represent a considerable trading commodity, especially if systematic rearing of ovicaprids, indicated by the large quantities of bone material recovered from the site, is taken into account. Processing of the locally abundant flint, an old traditional craft, was performed in a special workshop (Room 1, Trench 3/'95), violently destroyed by earthquake (Koukonisi III 'early'), that yielded a large assemblage of material at various stages of processing as well as the appropriate 'toolkit'.²⁰¹ It should be underscored that in the same workshop, among the great amount of local ceramics, three discoid loom weights of South Aegean type were found,²⁰² alongside the Minoanising flask, cooking dishes, a small four-handled pithoid jar, imported matt-painted vases and the late variant of the Pteleon goblet mentioned above (sections IV, V).

In an island such as Lemnos, where, according to Homer, the divine smith Hephaistos chose to establish his own workshop (*Od.* 8.266-358),²⁰³ and with a significant local metallurgical tradition going back to the dawn of the EBA, as the evi-

²⁰⁰ Boulotis 1997a, 266, nn. 52-3. On the Theban balance weights discovered in association with administrative and productive activities in the heart of the palace area and/or its annexes, see recently Aravantinos & Alberti 2006.

²⁰¹ Boulotis 1997a, 248, 262.

²⁰² Boulotis 1997a, 260, 264.

²⁰³ Boulotis 1994a, 20-1. On the significance of Lemnos as a vivid metallurgical centre, according to the Athenian historical *testimonia*, see Giuffrida 1999.

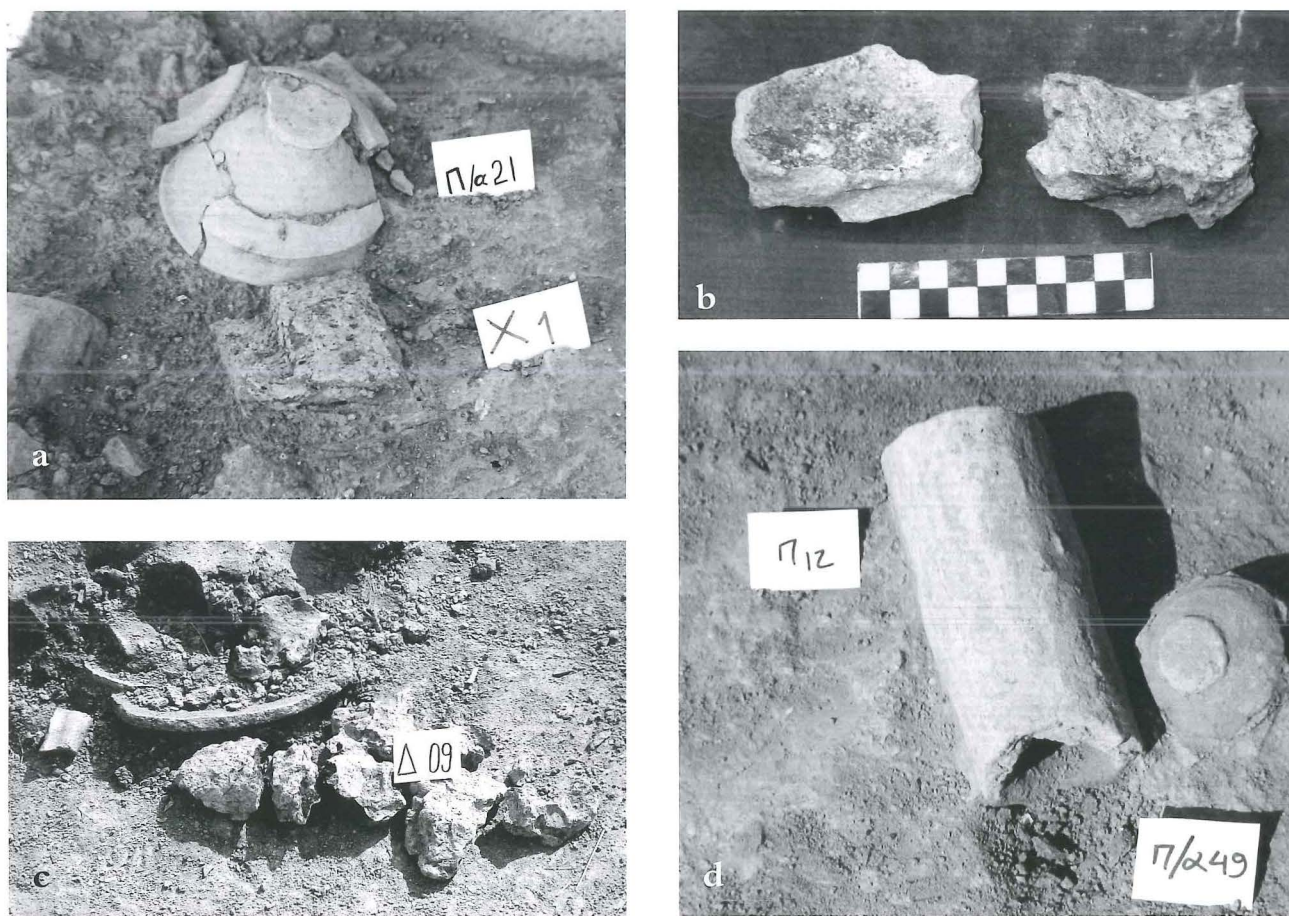


Fig. 23. Metal workshop in Room XV “Pithoi area”, Trench 8. a. Folded bronze plate and carinated bowl found *in situ* next to the hearth. b. Fragments of crucibles. c. Slags, d. cylindrical clay tuyère and semiglobular cup.

dence from Poliochni and Myrina clearly attests,²⁰⁴ metallurgy and metalworking must have been an intensive industry for the Koukonisi economy. Numerous bronze pins, a chisel, a small knife and other finds indicate bronze-working during the EBA²⁰⁵. Within the boundaries of the settlement, in the upper occupation levels (Koukonisi III), evidence for metallurgical activities (*e.g.* slags, crucible fragments) has been occasionally found, alongside the hitherto scanty bronze artefacts such as a fragmentary chisel,²⁰⁶ twisted wire,²⁰⁷ a pin²⁰⁸ and a small fish-hook.²⁰⁹ In October 2004, however, came proof for intensive metalworking practices within an area with remarkable Minoan and Minoanising finds: In the SW corner of the so-called Pithoi Area (Room XV, Trench 8/'04), probably an open or semi-open space and named after the five pithoi found *in situ* (Figs. 5, 7), an extended elliptical *loculus* was revealed, with suc-

cessive thick ash layers, charcoal and slags, clearly indicating a metallurgical hearth or furnace. Next to this fiery installation, was a typical, local carinated bowl together with a long trapezoidal bronze plate folded in two (Fig. 23a).²¹⁰ Scattered in the same area, two cylindrical terracotta tuyères were also uncovered (Fig. 23d), and the funnel-like end (or nozzle) of a third with traces of burning traces, two fragments of crucibles of irregular, elliptical shape, with a layer of slag with stains of copper

²⁰⁴ On the Poliochni metallurgy see Bernabò Brea 1964, 591–6, 658–66; Bernabò Brea 1976, 222–8; Pernicka *et al.* 1990; Doulas 1994a; 1994b; Nakou 1997; Cultraro forthcoming.

²⁰⁵ Boulotis 1997a, 262–3, fig. 18.

²⁰⁶ Room I (Trench 3/'95).

²⁰⁷ Room IV (Trench 5/'99).

²⁰⁸ Room XIII (Trench 8/'04).

²⁰⁹ Room I (Trench 9/'05).

²¹⁰ Total length 18 cm; max. width 12 cm; thickness *c.* 1 cm.

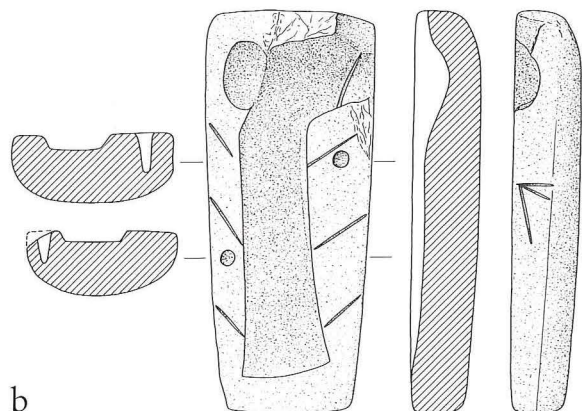


Fig. 24. a. The stone mould for casting of single sleeve-shaft axes at excavation (Room III-A, Trench 9). b. Drawing of the axe with incised mark in the form of an arrow (Scale 1:3).

prills on the interior (Fig. 23b) and several pieces of crucible slags,²¹¹ to which further examples were added in 2005 (Fig. 23c).²¹² As an illustration of how the Koukonisi tuyères strengthened the fire via bellows and were used in a horizontal or oblique position at ground level, the reconstruction drawings proposed by Tylecote for Cypriot parallels (from Enkomi, Kition, Ambelikou or Apliki)²¹³ are quite illuminating. As far as the bronze plate, folded on purpose, is concerned, its shape, different from the popular oxhide ingot types, could indicate the intended re-use of a bronze sheet in a shape approaching the form of the less frequent category of so-called slab-ingots;²¹⁴ according to its context, the plate might have been meant for melting in the neighbouring hearth. It is worth mentioning, in this regard, that a small

bronze bar, rectangular in section (obviously produced in mould), was found on the surface of the excavated area, somewhat recalling specimens of the bar-ingot category.²¹⁵

Another contemporary metal workshop functioned in an elongated neighbouring area (Room I, Trench 9/'05) (Fig. 5) and yielded, as already mentioned, the greatest concentration of Minoan and Minoanising elements, especially imported painted ceramics (Figs. 12, 14-15). On two successive floors (A and B), two hearths or furnaces were revealed, the lower parts of which were stone-built and roughly circular, along with typical equipment and by-products of metallurgical activity closely comparable to that from the former workshop (tuyères, crucibles, slags). Stone implements for crushing found in the area were apparently used in metal processing. The picture of metallurgical activities was further enriched by a finely made double mould of grey chlorite schist (?)²¹⁶ for casting of single sleeve-shaft axes ('Schaftlochäxte'), only partly preserved²¹⁷ (Fig. 24a-b); this significant find was uncovered in an adjacent small space (Room IIIA, Trench 9/'05), together with numerous conical cups (Fig. 24a).²¹⁸ What makes this mould all the more interesting in its Aegean con-

²¹¹ Further pieces of slags were uncovered in the same area during the 2005 excavation.

²¹² On utilitarian metals, foundry practices and tool equipment in Minoan Crete see Evelyn 2000, 323-97.

²¹³ Tylecote 1982, esp. 92-3, figs. 4-8.

²¹⁴ On this type of ingots, see for instance the 19 pieces found in the Cape Gelidonya shipwreck, Bass 1967, 81-2, figs. 96-97; cf. also a rectangular unworked casting (a sheet), *ibid.* 113, B 222, figs. 126-7.

²¹⁵ Cf. Bass 1967, 111 (B 210), figs. 122-3. On the variety of this type see now Bobokhyan 2006, 87-90 (V. Bar-Ingots).

²¹⁶ The accuracy in the cutting of the axe initially gave the impression that the material was steatite.

²¹⁷ The majority of these one-blade axes are made by casting in a double mould, Nakou 1997, 638, n. 20. The Koukonisi mould preserves clearly the sockets for the adjustment of its lost half.

²¹⁸ The fact that the mould was found in the uppermost levels of the area, associated with dispersed building material from the neighbouring 'metal workshop' raises the possibility that it could have originally belonged there and was only displaced during the severe earthquake and/ or the subsequent clearing of the area.

text, is, on the one hand, its early LBA date, and on the other, its seemingly hybrid nature, combining 'local' and 'southern Aegean' elements: the axe itself, of Branigan's type III²¹⁹ has a long tradition in south-east Europe, including the northern Aegean, the Troad and Macedonia; characteristically, the type is present in the 'Petalona Hoard' as well as in Boeotian Thebes,²²⁰ but it was never common in Crete.²²¹ Its occurrence at Koukonisi is particularly noteworthy, since it is the sole well-stratified occurrence of a LBA continuation of a local Lemnian tradition of EBA ancestry, as evidenced by a single sleeve-shaft axe from 'Vano 829' of Poliochni 'Rosso'²²² and a terracotta one-piece mould for similar implements, produced by lost-wax casting from Megaron 605.²²³ The 'southern' connection of the mould is strengthened by an arrow-shaped incised linear sign in one of its narrow long sides (Fig. 24b), plausibly an owners' mark or, alternatively, a guide for the attachment of the two parts of the mould.²²⁴ Popular as pot-mark in the southern Aegean,²²⁵ this sign had different uses in different contexts, as is apparent with the small cylindrical stone 'weight' from Quartier Mu at Malia and a discoid lead-weight from Ayia Irini (already mentioned in section VII); however, it raises questions as to the identity of the smith who used it: Was he a craftsman from the South, now a permanent resident at Koukonisi, or was he an itinerant artisan,²²⁶ who could draw on local preferences? Given the intense metalworking activity at the site, it is legitimate to ask whether the mould itself was produced *in situ*, even if the raw material had to be fetched from abroad. Single axes of this or related types, although originally tools with wide applications²²⁷ might also function, in their more elaborate versions, as *insignia dignitatis* (of a metal-exploiting elite?²²⁸) as was the case with the 'ceremonial' stone hammers and maces (section VI).

In any case, the Koukonisi III metal workshops, dated to a broad MM IIIB-LM I horizon, along with the clear Minoan and Minoanising evidence of the same period, shed new light on the interests of certain 'Minoans'/South Aegean Islanders in the North Aegean. As Stos-Gale and Gale have noted, "there was little inducement for Minoans to leave

their prosperous island except in one respect: the maintenance of their civilisation needed some natural resources not available on Crete itself. Among these the most important was metal",²²⁹ a largely accepted assumption which essentially recognizes that the question of Minoan metal sources is, by and large, closely related to the problem of Minoan foreign relations. However, opinions vary concerning the degree of palatial involvement in trade from the Protopalatial period onwards, as well as the parallel activity of independent traders (and craftsmen) in the search for metals and exercising control over access to copper, tin or arsenic, as well as gold. Metal artefacts formed the markers of prestige consumption *par excellence*. That the bulk of long-distance trade in metals and luxuries must have been carried out by the palaces, at least during their

²¹⁹ Branigan 1974, 23.

²²⁰ For a detailed discussion of the Thebes example, dated to EH II-III on typological criteria, see Maran 1989. For a thorough examination of bronze axes of this type from Macedonia as well as of related matrices, *a propos* the publication of the 'Petalona Hoard' (Chalkidikē), see Grammenos & Tzachili 1994, esp. 82-3, 89-91, 98-9, 100-1, 103 (nos. 19-21, 23, 43-6, 48), fig. 56, 11-3. See also Nakou 1997, 637-638, fig. 3 (a distribution map of single sleeve-shaft axes in North Aegean and in the 'Metallurgical Province of the Pontic littoral', after Chernykh).

²²¹ Shaw 1973, 47, n. 5.

²²² Bernabò Brea 1964, 661-2, pl. CLXXIII; Nakou 1997, 637-8, fig. 2 left; Doumas 1994a, figs. 2-3.

²²³ Bernabò Brea 1964, 591, pl. LXXXV; Nakou 1997, 638, n. 22 where a probable revision of the dating of the mould to the 'Verde' phase; Doumas 1994a, fig. 4.

²²⁴ Cf. especially a Minoan mould from Malia (van Effenterre 1980, figs. 641, 643), with incised "dessin-repère pour l'ajustage" and a Mycenaean one in the Boston Museum, the latter bearing two probable signs of Linear B (Vermeule 1966, 145). More generally on the function of incised marks on moulds see Michailidou & Tzachili 1986, 371-3; Boulotis 2005, 91.

²²⁵ See e.g. Aeginetan pottery, Lindblom 2001, 60-1 (type A 46), pl. 15 (nos. 297-305) [LH I-IIIa], 88 (type 128), pl. 54 (nos. 1076-9) [MH I-II].

²²⁶ On itinerant craftsmen and artisans in the LBA Aegean, comparable to the Homeric δημιουργοί or handicraftsmen, see Boulotis 2000, esp. 845-6 with further bibliography; Boulotis 2005, 91.

²²⁷ Grammenos & Tzachili 1994, 103.

²²⁸ Cf. Doumas 1994b, 13.

²²⁹ Stos-Gale and Gale 1984, 59. See also, Wiener 1984, 145-50 (the role of trade and the search for bronze).

period of efflorescence, seems to be a most plausible point of view.²³⁰ It is within such a framework that the significance of sealed Cretan documents of palatial character and other Minoan evidence from Mikro Vouni on Samothrace should be best understood,²³¹ a view supported by the fact that Central and Eastern Macedonia, as well as the island of Thasos, are among the most important metalliferous areas in the Aegean.²³² The Pangaion Mountain district, in particular, was famous in antiquity for its rich gold mines,²³³ while Thasos was also renowned for its sources of many metals including copper, lead, silver and gold.²³⁴ If we see Samothrace as almost literally a stepping stone between the Aegean and the eastern part of the Balkan Peninsula and Lemnos as incorporated into the network of acquisition and trading of metals moving from the North, Northwest and East, their role as intermediary posts must have been substantial. This is all the more applicable to Koukonisi, as its crucial location on regional sea routes indicates (section III). As far as the provenance of copper and tin from which the known bronze artefacts from Poliochni, Myrina and Koukonisi were made, the question still remains either open or relatively unclear: the artefacts of the two latter sites have not yet been analysed using the lead isotope method, whereas, the analysis of EBA metal objects from Poliochni added to the view that during the 'Giallo' period (contemporary with the later part of Troy II), a major technical development takes place in the Aegean; tin-bronze becomes the dominant alloy in use.²³⁵ It has been proposed that tin-bronzes from Poliochni were been imported and that, although the origin of the tin employed is still unknown, the metal sources used were several.²³⁶ However, the detection of provenance, in both ingot form and as finished products, is further blurred by the fact that metals must have been the object of multiple transactions within a highly complex and broad network of mobility. Anatolia and the Black Sea region must have comprised, in any case, a considerable source of provenance.²³⁷ The lack of identified significant metalliferous zones on Lemnos would have prompted its inhabitants, whether indigenous or migrant agents, to acquire raw metals from abroad, with the agricultural surplus and, very probably, textile products

used for exchange. Imported copper and tin would be locally processed. Future chemical analyses of various bronze artefacts from Koukonisi, including the 'slab ingot' (Fig. 23a), is expected to provide illuminating evidence for two different chronological periods, namely the EBA and early LBA.

With regard to Asia Minor, in particular, as a traditional metal source for the Lemnians, a passage from the *Iliad* (7.467–475) might be revealing: During the Trojan War, Eunēos, son of the Lemnian princess Hypsipylē by Iasōn and ruler of the island, maintained close contacts with the Achaean besiegers, who were trading copper (and iron), slaves, oxen and animal skins, in exchange for Lemnian wine,²³⁸ the most renowned product of the island in antiquity. Although probably reflecting a much later situation, the Homeric passage might successfully illustrate the spirit in which exchange trade operated in the region during the Bronze Age as well. The 'metallurgical' links of Lemnos with Asia Minor are further emphasised by another ancient tradition, according to which, the Sinties, the earliest indigenous inhabitants of Lemnos, were famous metalworkers, reportedly the first producers of bronze weaponry with metals imported from the opposite coast.²³⁹ Given Anatolia's importance as a

²³⁰ Wiener 1987, esp. 262–5 with further references, where Branigan's views about independent merchantmen are questioned; Wiener 1990, 145–50.

²³¹ Matsas 1991, 174; Matsas 1995, 243–6.

²³² Matsas 1995, 244–5.

²³³ Photos *et al.* 1989.

²³⁴ Pernicka & Wagner 1988.

²³⁵ Pernicka *et al.* 1990, 290.

²³⁶ Pernicka *et al.* 1990, esp. 278–84. J. D. Muhly (1985; 1992) continues to be sceptical concerning the existence of exploitable tin sources in Anatolia during any phase of the Bronze Age, preferring the Afghanistan and NW Europe as the most possible sources.

²³⁷ Pernicka *et al.* 1990 282–4; Nakou 1997; Cultraro 2005, 244–5; Cultraro forthcoming.

²³⁸ Heurgon 1988, esp. 24–5; lecture by the author at the National Museum (*supra* n.38).

²³⁹ Boulotis 1994a, 20–1. According to one tradition, also reflected in festivities honouring the Kabeiroi, Sinties were also credited with the invention of fire, an attribution which could also reflect their metallurgical associations in Greek legend. In such a context the Homeric designation of Lemnos as ἀμυχθαλόεσσα, that is 'smoke-shrouded' (*Il.* 24.753), could be related to metallurgical activities.

metalliferous region, the Minoan presence on coastal sites and offshore islands along the so-called Eastern String has been likewise interpreted as indicating one of the main routes along which metals reached Crete.²⁴⁰ In this respect, of great interest are the results of the isotopic analyses of MM II artefacts from Quartier Mu at Malia which showed that their 42% copper component is compatible with an Anatolian provenance,²⁴¹ while the bulk of LM I oxhide ingots from Hagia Triada and one from Kato Zakros have similar lead isotope compositions with objects from the Troad.²⁴²

In the light of these data and taking into account the increasing demand for metals especially during the Neopalatial era, Minoan and Minoanising evidence from Koukonisi, Mikro Vouni and the adjacent islands could, *mutatis mutandis*, be regarded as evidence for the dynamic of a 'Northern Crescent'²⁴³ including a series of emporia, accessible via two principal maritime routes: Predominantly from the East, as the northernmost tip of the 'Eastern String', but also from the West, sailing from Crete to the west Cyclades and subsequently northwards alongside the Mainland coastline and offshore islands – a kind of 'Western String', in analogy to the Eastern one. Favourable sea currents prevalent in the northern Aegean during most of the year, with Lemnos holding a key-position (as noted in section III), would have effectively facilitated navigation, especially from and towards the Dardanelles. The role of Lemnos, in particular, as a crucial station for penetration to the Black Sea and the broader Pontic littoral region in search of metals, exemplified in the mythical metaphor of the golden fleece, is well illustrated in the legend of the Argonauts,²⁴⁴ who, having sailed from Iōlkos on their way to their ultimate goal, Colchis, stationed themselves on the island for a considerable time. Such links between Lemnos and coastal Thessaly, in particular, are further echoed in the mythical intermarriages between the royal houses in at least two generations (Myrina-Thoas, Hypsipylē-Iason), while some matt-painted vessels imported to Koukonisi probably from Pevkakia, near Volos (section IV), could comprise, as we have seen, an archaeological hint for a significant trade route from Central Greece to North-East Aegean.²⁴⁵ In any case, the very rare occurrence of

Minoan pottery at Pevkakia²⁴⁶ may hint at the involvement of coastal Thessaly in the trade circuit between the Southern and Northern Aegean, via the 'Western String' line.

IX. To sum up, Minoan and Minoanising evidence so far found at Koukonisi (especially the Period III settlement) can be articulated into a solid body of evidence for the movement of people, artefacts, ideas and technologies, which, seen in their broader historical context, comprise aspects of a 'cultural innovation', expressed in terms of a multi-faceted 'Minoanisation'. However, since migration studies cover a wide spectrum and may produce a variety of models which seem to have been complementary more often than contradictory, an agenda emerges concerning the intensity of the 'Minoanisation' of Koukonisi and the precise mechanisms through which it was achieved in this remote northern Aegean settlement. A first question cannot really be answered except through more excavation, the collection and further study of more evidence and their quantitative evaluation within the local cultural tradition. However, a preliminary judgment, according to the 'sample' avail-

²⁴⁰ Wiener 1987, esp. 261; Wiener 1990, esp. 146–7; Niemeier & Niemeier 1997, 243–4; Niemeier 1999, 69; Niemeier 2005, 201.

²⁴¹ Poursat & Loubet 2005, esp. 120, n. 19. On the issue of various raw metal sources that supplied the Minoan bronze industry, varying according to each period, see Stos-Gale 1993; 2001.

²⁴² Stos-Gale 1988, 275; Wiener 1990, 147–8.

²⁴³ The term 'Northern Crescent' is here coined as useful demarcation of the separate geographic entity, to which belong the islands of this region, namely, Lemnos, Samothrace, Imbros and Tenedhos. A route linking these four islands gives the impression of a crescent.

²⁴⁴ Doumas 1991; Doumas 1992; Hiller 1991, where the arguable case is made that 'Mycenaeans' had penetrated into the Black Sea region and that the Argonaut cycle was rooted at least in the LBA. What is demonstrated is that names associated with various segments of the Argonauts' legend are attested in Linear B tablets from Knossos and Pylos.

²⁴⁵ Boulotis 1997a, 264; Privitera 2005, 234.

²⁴⁶ Two sherds with lustrous light-on-dark motifs, resembling Kamares ware, were found associated with phase 6 Middle and 7 (close of MBA and 'Shaft Grave period' respectively) (Maran 1992, 178–9, pls. 88.5–6, XXVI.8–9).

able, seems to show that the character and degree of 'Minoanisation' in Koukonisi III was indeed affected by the considerable distance from Crete and the major flourishing insular centres of the South Aegean.²⁴⁷ Compared with sites, such as Akrotiri, Phylakopi, Ayia Irini, Trianda, or Miletus, 'Minoanising' evidence at Koukonisi seems meagre. A second question is closely attached to the tantalising subjectivity of our interpretational schemes, as well as our fragmentary composing of what is an admittedly complex image, whose historical dimension we attempt to appreciate through its material reflections. In any case, considering that the main motives for overseas mobility on any significant scale must have been largely economic/commercial and given the priority of the need for metal acquisition, we could view Koukonisi as a major intermediary emporium, where 'Minoans'/South Aegean Islanders would have been playing diverse roles ranging from fully dependent 'palatial' agents ('directional trade') to independent merchantmen and/or craftsmen ('freelance trade'). The multiplicity of the evidence discussed has shown that the contacts involved could not have been merely occasional, resulting in some superficial acculturation on the part of the native population; on the contrary, we are justified to speak of trading groups, settled and incorporated within the local society, in a scheme comparable, *mutatis mutandis*, to the Assyrian trading communities (*karums*) in early MBA Anatolia.²⁴⁸ As frequently happens with such 'transplants' of foreign groups into a local population, immigrants could have been spatially clustered in certain quarters (enclaves) within the long-established settlement,²⁴⁹ aiming at group-consistency, security and maintaining identity. This is perhaps what is suggested by the comparatively larger density of Minoan and Minoanising material from Trenches 8 and 9, the area where the metalworking activities also took place (Figs. 5, 7). Crucial questions, such as the proportion of the population that the settlers formed, the role they played in their new surroundings, their relationship to the native population and the socioeconomic re-arrangement still await an answer that is more than pure speculation.

As a general observation, Minoan culture

abroad usually underwent a more or less significant change in adapting to its new environment, a perhaps inevitable mingling caused by the contact with local traits which often resulted in assimilations and hybrid cultural expressions, as has been noted in certain Cycladic settlements,²⁵⁰ as well as at Miletus.²⁵¹ Influence on the local architecture, the introduction of Linear A, fresco-painting, religious expression and everyday practices are justly considered as decisive criteria by which it is possible to identify a non-Cretan settlement²⁵² as one of the three main 'colony' types defined by Branigan: a. *Governed colony*, b. *Settlement colony* and c. *Community colony*.²⁵³ However, neither is the co-existence of all these categories a prerequisite for such an evaluation, nor have these elements been identified to the degree of intensity that can be seen at certainly 'Minoanised' settlements.²⁵⁴ In the segment of Koukonisi III excavated so far, which is but a fraction of the esti-

²⁴⁷ Differences in the distribution of Minoan traits in other Aegean islands can often, yet vaguely, be related to the distance of these sites from the Cretan centres. See, for instance, the three zones of the Minoan expansion abroad proposed by Melas 1988, 50 [map]; 1991, esp. 170-4.

²⁴⁸ Branigan 1984, 49, 50-1.

²⁴⁹ See the 'Colonial enclave' as defined by Renfrew 1975, 12-3; The term 'enclave' is properly used when a distinctive grouping of immigrants is also reflected in the spatial arrangement within a settlement-site. "Such 'enclaves', however, are not always formed; the immigrant group may form a 'community' in a social, economic and cultural sense rather than a spatial one. For this reason, the term community colony is preferred to enclave colony", Branigan 1981, 26 (*cf.* Davis 1978, 259). On the tendency of foreigners to cluster together and on the issue of identifying probable Cretan 'quarters' within Cycladic settlements, see Schofield 1983, 298; Schofield 1996, 48 with further references.

²⁵⁰ Schofield 1983, 296-7.

²⁵¹ On some pottery hybrid shapes, see for instance Kaiser 2005, 194-5.

²⁵² Warren 1975, 101; Schofield 1983, 294; Schofield 1984, 47. For a detailed discussion of criteria defining the relationship of South Aegean island settlements (mainly Akrotiri, Phylakopi, Ayia Irini, Kastri, Trianda) or Miletus with Minoan Crete, see esp. Branigan 1981, 27-33; Branigan 1984, 51-2; Wiener 1990; Niemeier & Niemeier 1997, 193-4, 232-44; Niemeier 1999, 68-9; Niemeier 2005, 201-2.

²⁵³ Branigan 1981; 1984.

²⁵⁴ For a summary presentation and evaluation of the evidence from major Cycladic islands see esp. Wiener 1990.

mated extent of the site, no certain Minoan architectural influence has been noted and no indications of literacy have been recovered, although it is likely that such evidence, if found, would be in the form of sealings for documents, such as those from Mikro Vouni; in addition, the sporadic small fragments of plaster seem, as we noted, to originate from painted plaster tripod tables (Fig. 19). As far as religious expression is concerned, besides the double-mouthed vase (Fig. 11b), the tripod tables (if their cult use is accepted) (Figs. 11a, 19), certain conical cups (especially those with perforated base) (Fig. 9) and the obsidian triton shell rhyton (Fig. 20b), which allude to Minoan cultic beliefs and practices, mentioned should be made of a small coarse human clay figurine (Fig. 20i), also found in a Minoanising context²⁵⁵ and with some interesting Cretan parallels.²⁵⁶ Finally, the two assumed *insignia dignitatis*, the elaborate stone mace-head (Fig. 20d) and the axe of *Lapis Lacedaemonius* (Fig. 20j), would be interpreted as ceremonial *paraphernalia*, displaying a special symbolic significance, analogous perhaps to their Minoan parallels.

In a more telling way than prestige items, whether imported or locally produced, hints at the physical presence of 'Minoans' and other South Aegean Islanders at Koukonisi are provided by domestic coarse wares and, more specifically, by the domestic 'kitchen kit', which comprises one of the main criteria for the identification of immigrants, justifiably regarded as diagnostic by Schofield and other scholars.²⁵⁷ Minoan and Minoanising ceramic material from Koukonisi (including cooking wares), although considerable, seems integrated within the local tradition. The continuity of traditional material expressions alongside 'imported' ones, as well as the identification of certain hybridisations, at least as far as the ceramic picture is concerned, might suggest a peaceful co-existence of two different 'identities'.²⁵⁸

Commercial sea routes established in the northern Aegean by Mainlanders and 'Minoans'/South Aegean Islanders during the MBA and early LBA would have been subsequently taken up by 'Mycenaeans', as seems to be the case in the rest of the Aegean. In contrast to the scarce evidence from

Hēphaestia, Poliochni, Myrina and Mikro Kastelli,²⁵⁹ Koukonisi appears as the one Lemnian site with the most pronounced and enduring Mycenaean connections. With regard to the mechanisms and events that permitted 'Mycenaeans' to establish a closer connection with Koukonisi, marking decisively the end of whatever has been termed as the 'Minoan Thalassocracy', these might have been similar to the development of sites that followed a somewhat analogous historical trajectory. The relatively high percentage of Mycenaean pottery (imported and/or locally imitated), at least from LH IIIA:1 onwards,²⁶⁰ if seen alongside the numerous Mycenaean figurines (anthropomorphic, zoomorphic) as unmistakable bearers of religious ideology,²⁶¹ present a picture that cannot have simply resulted from processes of acculturation of the native population, according to the model proposed by Mountjoy for the East Aegean-West Anatolian 'Interface' (an intermediate cultural

²⁵⁵ Room III (Trench 9/'05).

²⁵⁶ Cf. the coarse clay figurines from the Unexplored Mansion at Knossos (R. A. Higgins in Popham 1984, 197-9, pl. 193:5-7), numerous specimens from peak sanctuaries (e.g. from Petsophas, Rutkowski 1991, pl. XLII, 5-7) and of Post-Palatial plastic (Rethemiotakis 2001, figs. 45-6).

²⁵⁷ Schofield 1983, 298-9; Branigan 1984, 52; Wiener 1990, 134-40, esp. 135; Kaiser 2005.

²⁵⁸ The cases of Miletus and Iasos can be very illuminating, since Minoan and, subsequently, Mycenaean 'settlers' would have had to live alongside native Anatolians (Niemeier 2005, esp. 199, 203). On the successive presence of Minoans and Mycenaeans in the west coastal zone of Asia Minor and their relations to Anatolian populations, see Mee 1978.

²⁵⁹ Messineo 1997; Messineo *et al.* 2001, 112-5; Privitera 2005; Cultraro 2005. Scattered Mycenaean sherds have also been collected near the modern village of Kornos, NE of Myrina.

²⁶⁰ Excavated levels probably or certainly dated *after* the beginnings of the LBA have been found to be severely disturbed. Therefore, the transition from the period contemporary with LM I/LH I-IIA to one corresponding to LM II/LH IIB is not yet clear. We cannot postulate any hiatus in this period, comparable, e.g. with the one observed at Çeşme Bağlararası (Şahoğlu 2007, 310, 318).

²⁶¹ It is certainly remarkable that fragments of more than ten Mycenaean figurines have so far been collected on the surface of the Koukonisi islet, whereas systematic excavations at Troy or Liman Tepe have yielded only one example in each site. The diffusion of Mycenaean figurines in the periphery of the Mycenaean world and their significance as an index for Mycenaeanisation have been summarily treated by Pilali-Papasteriou 1998.

entity between 'Mycenaeans' and Anatolians ranging from the Troad to the Dodecanese).²⁶² Off-shore islands of the northern half of this area (the 'Upper Interface'), such as Chios, Psara, Lesbos and Lemnos must have experienced a somewhat different 'Mycenaeans' from some of the littoral settlements, such as Troy. Their insular autonomy, combined with their strategic geopolitical position, must have contributed to their emergence as intermediary emporia along the commercial routes that linked the Greek Mainland to the Western Anatolian coast, the Propontis region and Thrace. The Mycenaean cemetery at Archontiki on Psara particularly suggests a prosperous Mycenaean settlement, founded perhaps by traders or adventurers in LH IIB-III A:1.²⁶³ while the extended settlement Kourtir on Lesbos (in the gulf of Kallonē)²⁶⁴ could have been a 'gateway community' controlling the flow of local goods and connecting its own hinterland with foreign traders.²⁶⁵ The permanent installation of 'Mycenaeans' on Lemnos and, in particular, at Koukonisi, would have been of major importance, especially if one accepts even a smouldering competition with Troy for control over the Dardanelles straits, if we follow the plausible hypothesis that control over metals, as in earlier phases, must have constituted a main motive for initiating trade networks in the region. The Argonaut cycle, alongside some archaeological evidence, seems to suggest a Mycenaean penetration into the Black Sea region,²⁶⁶ while the passage from the *Iliad*, book 7 (mentioned in section VIII) eloquently illustrates the metal exchange between Lemnos and the Achaean besiegers at Troy. Alongside other tradable 'commodities' mentioned in this Homeric passage, captives are also reported; this is hardly an unusual theme in the world of the epics, reflecting what had been a widespread ancient practice, also traceable in the Linear B evidence.²⁶⁷ From the archives of Pylos, in particular, we have an invaluable, even if indirect, testimony to Mycenaean interests in distant Lemnos; namely, in the lists of dependent personnel, who receive rations from the palace, among women groups described with 'ethnic' designations (such as *ki-ni-di-ja* /Knidhiai/ 'women from Knidhos', *mi-ra-ti-ja* /Milātiai/ 'women from Miletus', *ki-si-wi-ja* /*Khsiwiiai/ > /Khiai/ 'women from Chios'), the

ra-mi-ni-ja /Lāmniai/ 'Lēmnian women' (PY Ab 186.B)²⁶⁸ are also recorded. If these women are indeed, as has been argued, 'captives'²⁶⁹ obtained from the regions mentioned in order to satisfy the increased labour demands of the palatial industries (particularly textile production), then an even more eloquent cross-reference between the epic and the tablets can be gained. The fact that a variant form of the Lemnian ruler's name Eunēos, with its maritime connotations ('he who owns well-built ships'), is attested among the Greek names in the Knossos tablets in the form *e-u-na-wo* (KN As(2) 1520.9; Bk 799 verso .2; Dv 1206.B; Np(2) 5725),²⁷⁰ may lend the passage mentioned from Homer's *Iliad* a hue of historicity. The mythical figure of Eunēos, the ruler of the island at the time of the Trojan events, as well as a close commercial partner of the Achaeans in the same context, can be vaguely, yet plausibly, associated with the outstanding Mycenaean evidence from Koukonisi II; more impressively, Eunēos is himself the offspring of Cretan as well as Thessalian royal blood. Would it not be too far-fetched to conceive the Koukonisi settlement of the later LBA not as an occasional trading post, but as, to use Branigan's terminology, a *governed colony*, a settlement where a largely indigenous population had been politically controlled by some foreign elite?²⁷¹

²⁶² Mountjoy 1998, esp. 33, 38. For a critique of the acculturation model *a propos* Mycenaean finds at Miletus see Niemeier 2005, 199–200.

²⁶³ Papadimitriou 2001, 143–6; Privitera 2005, 232–4.

²⁶⁴ Spencer 1995, 20.

²⁶⁵ Privitera 2005, 231–2, 234.

²⁶⁶ Boulotis (lecture at the National Museum, Athens, *supra* n. 38); Camassa 1999.

²⁶⁷ Michailidou & Voutsas 2005; Doğan & Michailidou, 2008, esp. 36, 38, 44.

²⁶⁸ On *ra-mi-ni-ja* women, see Hiller 1975; Boulotis 1994a, 26; Boulotis 1994b, 25–6; Boulotis (lecture at the National Museum, Athens, *supra* n. 38). In the Pylos tablets, besides *ra-mi-ni-ja*, a masculine *ra-mi-ni-jo* (literarily 'the Lemnian') is also attested as the personal name of a shepherd (PY An 209.2; Cn 328.4; Cn 719.6). A similar use of an 'ethnikon' in onomastics is attested in the personal name *mi-ra-ti-jo* (literarily 'the Milesian') belonging to a recipient of barley in some of the new Thebes tablets.

²⁶⁹ Chadwick 1976, 80–1; Hiller 1975.

²⁷⁰ See also Palaima 1991, 284.

²⁷¹ Branigan 1981, 25–6.

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Crete and the islands of north Aegean before the palaces: reconsidering the evidence of Poliochni, Lemnos*

Massimo Cultraro

Introduction

For years, scholars from different fields have discussed the long-range interaction system between the north Aegean and Crete during the 3rd millennium BC.¹ It has often been claimed that there is a close relationship between Early Minoan I-II pottery and the EBA north Aegean ware.² It might rather be suggested that, during the EBA II, with an “International Spirit” in evidence in much of the Aegean, similarities in shapes and decoration might suggest general interconnections between different areas of the Aegean.³ However, these correlations are difficult to define and, in many cases, have been explained in terms of direct or indirect contacts.

Despite the increase in the data, there has been no new reconsideration of the models used to examine the processes at work or to interpret emerging patterns. Therefore, it is useful to review what research of the last decades has revealed at an empirical level about the dynamics of interaction of the south Aegean and north-west Anatolia. This topic is not clearly defined as seems and it needs some explanations of the main issues. One of the major problems in this regard is the debate of patterns, time and features of these long-range interactions. According to the so called “Law of Monotonic Decrement” postulated from C. Renfrew, the links become progressively more questionable with distance, geographic and cultural.⁴ In the case of Crete and north Aegean, a synthesis of Aegean-Anatolian interaction must largely overlook these problems of the large distances between key sites, and the cultural and geographic heterogeneity of Anatolia. For instance, some scholars use the term Anatolia as a generic label, not taking geographical definition and cultural context into account. In

fact, there is accordingly greater subjective interpretation, not to mention some contradictions, in any accounts. What does mean Anatolia for scholars interested in problems of EBA Aegean? Is it a matter of terminology or rather of defining cultural context?

As D. H. French has recently pointed out, ‘western Anatolia is largely an archaeological term which does not suit the great diversity of natural factors in Anatolia as a whole’.⁵ Modern scholars, and not only Turkish, who are interested in the prehistoric cultures of Anatolia, are aware to distinguish the northern coastal zone, which corresponds to the large area to north of Maeander river and also including the major Aegean islands, and south-western coastline area, situated between the Acipayam plain (in Denizli) and Korkouteli plains (in Antalya).⁶ This distinction is important in terms

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¹ E.g. Broodbank 2000, 283–305; Cadogan 1983, 507–18; Manning 1995, 74–81; Renfrew 1972, 202–11; Warren 1973 and 1984.

² Betancourt 1985, 28 and 38–9; Deshayes 1962, especially 548–50; Warren 1973, 41–2.

³ Renfrew 1972. For an effective analysis of the ‘International Spirit’ in the Aegean EBA II societies: Broodbank 2000, 279–83.

⁴ Renfrew 1977, 71–90.

⁵ French 1997, 569.

⁶ E.g. a similar problematic question concerns the definition of the Marmara region, northwestern Turkey, that represents a good example of intensive survey projects aimed at reconstructing cultural developments in later prehistory: Özdoğan 2003, 105–20.

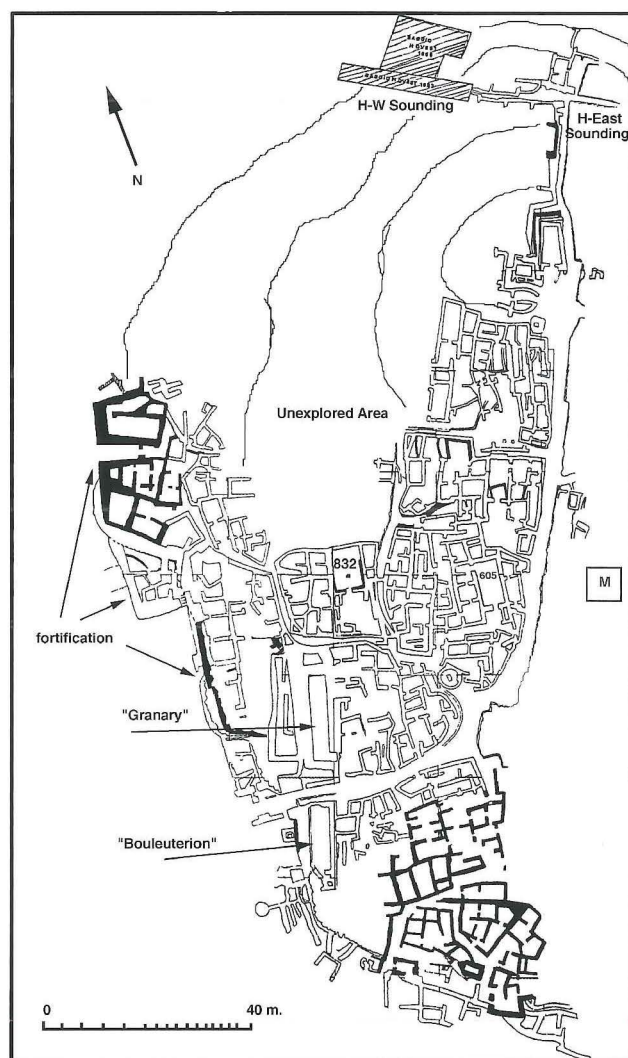


Fig. 1. Poliochni, general plan of the EBA settlement (redrawing after Cultraro 1997).

of defining cultural dynamics, because it implies a different perception of the long-range contacts between Anatolia and the southern Aegean. For a better knowledge of the EBA western Anatolia cultures, this distinction must not be forgotten.

Secondly, a similar consideration of strengths and weak points in the chronology is necessary and also revealing. In the case of north Aegean, there is a problem of definition of cultures or cultural groups and the system in use for the chronology.⁷ An example is enough to explain the terms of question: the definition of the transitional stage from Late Neolithic to EB I involves early Troy I, Polioch-

ni Black Period and Kum Tepe IB.⁸ Despite this terminological controversy, a more constructive approach is to investigate these ceramic groups as contextualised problems. Recently, increased refinements in radiometric methods and the reassessment of the main pottery groups from key sites, such as Troy and Poliochni, led to a better understanding of the long-range interactions between north-western Anatolia and southern Aegean.⁹

The third point arises the decisive importance of the role played from Cyclades in the dynamics of interactions between north Aegean/western Anatolia and southern Aegean. The credit for first recognising the evidence for these long-range dynamics between both districts in the EB II Aegean must be awarded C. Renfrew.¹⁰ His characterisation of this phenomenon shows two important good issues. The first is to document the importance of maritime interconnections, which Renfrew has associated with a technological innovation in the form of longboats.¹¹ The second is to emphasise the crucial role of the metals as fluid, desirable medium and a means of acquiring social status and fighting power. If these points are taken into account, it is often possible to reconfigure the debate of the inter-regional linkage between the north-east Aegean islands and Crete in a manner conducive to its resolution.

The aim of my paper is to propose some approaches for reconstructing towards a much more light picture of the long-range connections between north Aegean and Crete during the EB I-II. The issue is to demonstrate that both areas were well placed into a wider network of external contacts since the Final Neolithic. If the general

⁷ Manning 1995, 74–84. For the EBA Anatolia chronological system see: Mellink 1992, 207–20, and vol II, 171–84.

⁸ For defining the early EBA culture on Lemnos: Cultraro 2004, 19–34.

⁹ For the broad chronology of the third millennium BC in north Aegean see: Korfmann & Kromer 1993, 135–71. For the comparison between the chronology of Troy and other important site of north Aegean see: Manning 1997, 498–520.

¹⁰ Renfrew 1972, 451–5.

¹¹ For the social dynamics of longboat activity in the EBA Cyclades: Broodbank 2000, 256–8.

Fig. 2. Poliochni and the synchronisms with the EBA western Anatolia (after Efe-İlslı 1997).

		TROY - POLIOCHNI	ESKİŞEHİR - KUMTEPE	AFYON PLAIN	BEYCESULTAN	KARATAŞ-SEMAYÜK
2000 BC		IV	BANÇENİBAR KÖLLÜOBA		VII-VI	
					VIII	
		III			IX	
					X	
EB 3	Yellow	h	KÖLLÜOBA AE 10 (PIT)	KAKLIK MEVKİİ GRAVES 24, 26	XII-XI	
		g				VI
		e-f				
		d				
		II	EARLY ANARKÖY			V:3
		c	YAZILIKAYA CEMETERY	KAKLIK MEVKİİ GRAVES 18, 21-23	XIII a	
	Red	b				V:2
		a	SEYİTÖMER (BURNT LEVEL)		XIII b-c	
EB 2		j				V:1
		h-i		KARAOĞLAN MEVKİİ AND KAKLIK MEVKİİ GRAVES 1-8	XIV	
	Green	g			XV	
		f			XVI	IV
		e				
	Blue	d				I-III
		c			XVII	
EB 1B		b			XVIII	
		a			XIX	
3000 BC					hiatus?	hiatus
EB 1A	Black	KUMTEPE IB	KUMTEPE YUKARI SÖÜTÖNÜ II KIRCA TASLIK KÖLLÜOBA	KAKLIK MEVKİİ	XX	

questions are addressed to explore this articulated picture through the archaeological investigation of the main potential contexts with stratigraphical sequence, it may help to understand the time and the ways of the interest by Minoans in north Aegean since the Protopalatial Period.

Lemnos and its major sites with stratigraphic sequence

Throughout the Aegean, the transition from Late Neolithic to the Bronze Age is enveloped in obscurity and diversity. The limited extent of excavation, the lack of a key stratigraphy and the fact that

a substantial part of the Late Neolithic appears to be missing, all make great caution necessary when trying to reconstruct cultural processes at the end of the 4th millennium BC in this area.

In the north Aegean, few sites have a continuous stratigraphic record the Final Neolithic into the EBA. For instance, in the case of the island of Lemnos, recent fieldwork has since clarified the definition of the earliest phases of the EBA. In terms of research and publication, Poliochni is presently unique in providing a key, long-term stratigraphic sequence; it is one of the best sites for reconstructing the cultural dynamics of north Aegean and its external contacts.

The prehistoric settlement at Poliochni is situ-

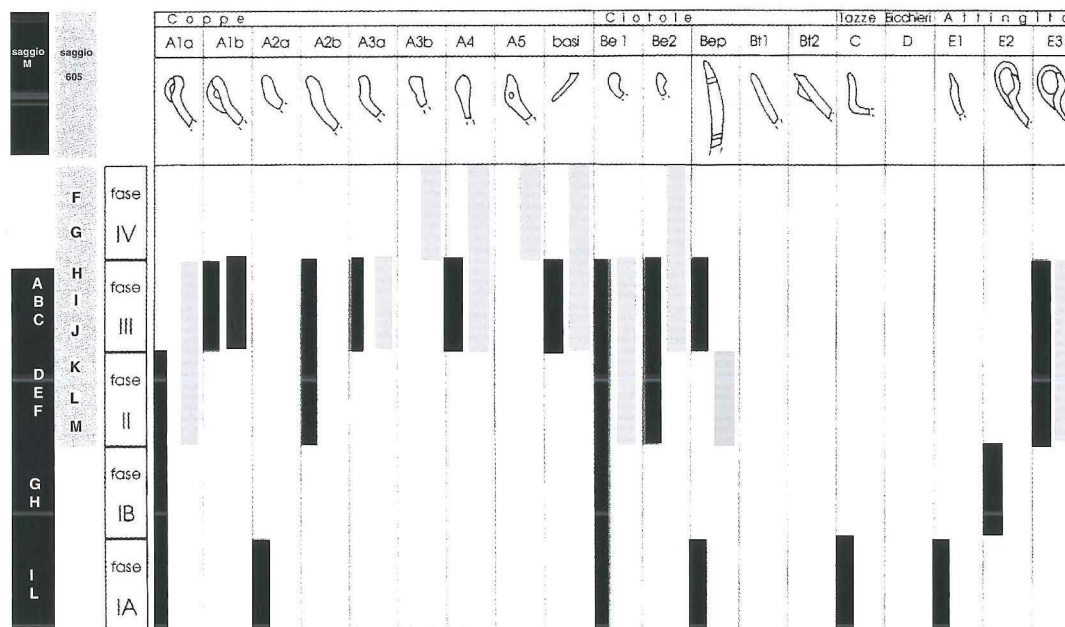


Fig. 3. Poliochni: the development of the main pottery types from the Black Period levels (after Tiné 1997).

ated on a hill close to the eastern coast of the island of Lemnos (Fig. 1). Excavations carried out by the Italian Archaeological School in 1930–36 and a second campaign directed by Luigi Bernabò Brea in 1952–56 allowed a detailed chronological classification of the different architectural levels and established the basic stratigraphical sequence for the EBA of the northern Aegean.¹² The Italian Archaeological School at Athens carried out another campaign of exploration from 1989 to 1998, and the recent results consolidate the general picture of the cultural sequences and the pottery assemblages identified by the first Italian archaeologists.¹³ The superb state of preservation and the large size of the site make Poliochni one of the best examples of village-level communities; it may have owed its existence to the specific combination of social and topographical circumstances.

L. Bernabò Brea, by excavating stratigraphically, distinguished the major architectural phases with different colours and divided them into seven periods, from Black for the first phase of occupation to Violet for the last settlement¹⁴ (Fig. 2). It is worth noting that this unusual system, quite different from the sequences elaborated for Troy and for Thermi, is typical for the Italian tradition in the field of the prehistoric studies.¹⁵

The second important site of the region is Koukonissi, which occupies a low hill set in the innermost part of Moudros Gulf. The site is currently under excavation, and therefore only preliminary information is available. However, there is little information on the early phase of occupation, and the archaeological record belongs predominantly to the late EB and MB periods.¹⁶

The third notable prehistoric site is the settlement recently explored at Myrina by the 20th Ephoreia of Prehistoric and Classical Antiquities.¹⁷ The village occupies a small rocky coastal hill corresponding to the modern Meteorological

¹² Bernabò Brea 1964; 1976.

¹³ For a synthesis of the recent excavations see: Tiné 1997, 13–22.

¹⁴ Bernabò Brea 1964, 29–31.

¹⁵ For an overview of field research and the theoretical approaches to the study of the prehistory of the north Aegean area see: Cultraro 2005a, 279–90.

¹⁶ Boulotis 1997, 230–69. For the recent excavations see the contribution of Ch. Boulotis in this volume.

¹⁷ For the recent explorations carried out over the last ten years on the promontory see: Dova 1997, 2003. For the settlement at the eastern slope of the Meteorological Observatory Hill see: Augherinou 1997, 273–81; Acheillara 1997, 298–309.

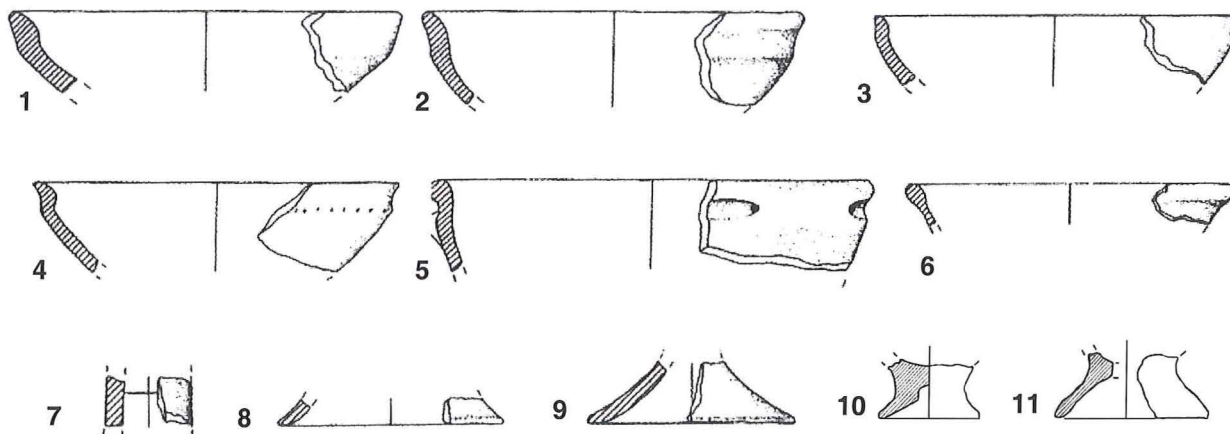


Fig. 4. Poliochni: Selected pottery from the Black Period levels explored in the Sounding M (redrawing after Tiné 1997).

Observatory, between the bays of Richa Nera and Romeikos Gialos. A recent exploration of the plain by the eastern slopes of the hill suggests that the settlement was larger than previously thought, perhaps more than one hectare, with large, rectangular houses. The investigation of the stratified EBA deposits on the promontory gives us a good opportunity to fill out the picture and to compare the stratigraphy of Poliochni with other contexts.

On-going excavations on Lemnos are certain to amplify the picture, but even with the information currently available, there are grounds for arguing that this island may hold the key for the investigation of the emergence of large communities in the EB north Aegean.

The Black Period at Poliochni: recent advances

The Black Period corresponds to the earliest organized occupation on the hill. Recent investigations have confirmed that in this phase the settlement occupied the middle section of the rocky plateau.¹⁸ Building remains of this period belong to large huts of elliptical or apsidal plan, with dry-stone foundations and mud-brick superstructures.¹⁹ In some cases, seven different architectural levels have been identified, clearly indicating a long duration for the Black Period.²⁰

Test excavation "M", carried out in 1992-93 in

the eastern part of the settlement (Fig. 1), yielded extensive and clear stratification for the Black Period, covering four sub-phases of pottery development, based mainly on the evolution of the shallow cup²¹ (Fig. 3). The pottery assemblage is very homogeneous: dark burnished ware, and some products decorated with painted white lines are frequently attested.²² Of the shapes, the high-footed bowl or fruit-stand, known in the Italian terminology as "fruttiere", is the most characteristic shape that makes its first appearance in this period²³ (Fig. 4:7-9). Another important diagnostic shape is the bowl with rolled rim and horizontal tubular handle set below the rim²⁴ (Fig. 4:5); this type is attested in the latest phases of the Black Period and its presence is particularly important for chronological correlations with other sites of north Aegean.

The pottery assemblage of the Black Period provides some links with the other ceramic traditions

¹⁸ Tiné 1997, 51-3.

¹⁹ Bernabò Brea 1964, 54-7, 86-95, 537-8.

²⁰ Bernabò Brea 1964, 95-6, fig. 48.

²¹ Tiné 1997, 36-8, pl. I.

²² Tiné 1997, 36-46, pls. II-VII.

²³ Tiné 1997, 37, pls. I-II. For examples from the oldest excavations: Bernabò Brea 1964, 540-3, pls. I.a-c; IV.a-b, i, k, q; V.a.

²⁴ Examples in Tiné 1997, 38-9, pls. I-II; Bernabò Brea 1964, 541, pls. IV.c, l; V. b-e, i-l.

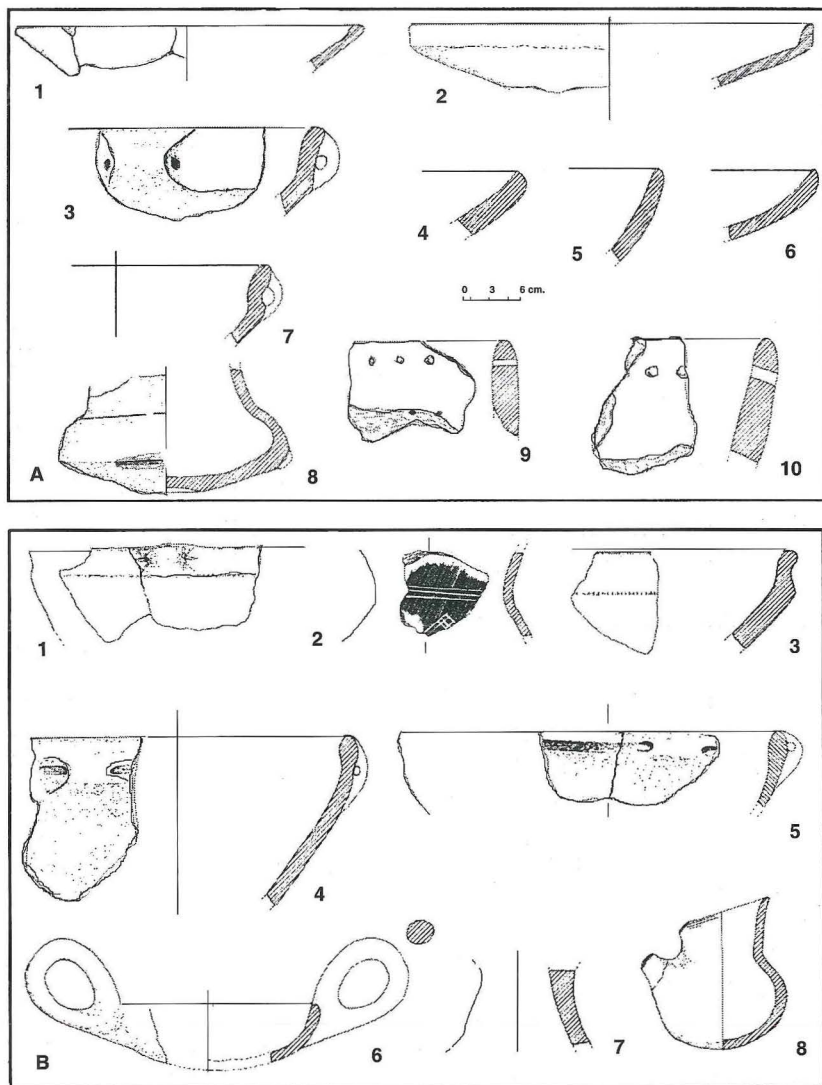


Fig. 5. Myrina, Meteorological Observatory Hill: selected pottery from Phase 1 (A) and Phase 2 (B) (redrawing after Dova 2003).

attested in western Anatolia and in other parts of southern Aegean; in particular some typological and decorative elements of the Black Period pottery (*e.g.* the white-on-dark decoration) can be identified in the pottery assemblage of the Late Chalcolithic IV of central Anatolia.²⁵ The rolled-rim bowl with horizontal tubular handle best demonstrates the long-range connections between north-east Aegean islands and southern Aegean. This type is virtually confined to the Black Period where it was the commonest type of the bowl, but similar bowls were still well represented in the next Blue Archaic Period.²⁶ Bowls of this kind are typical of Period VII at Emporio, on Chios, where it disappears in Period VI.²⁷

The conventional correlations for the Black Pe-

riod at Poliochni and the Final Neolithic or Late Chalcolithic in north Aegean is provided by the evidence of Kumtepe IB in the Troad (Fig. 2).²⁸ According to J.W. Sperling, the stratigraphical se-

²⁵ The typological features of the pottery assemblage from Poliochni's Black Period show close parallels with the sequences identified at Arapkahve, Torbali (western Anatolia), where it is possible to distinguish a transitional horizon from Late Chalcolithic to EBA: French 1997, 580, fig. 6. In general, for the synchronisms between the Late Chalcolithic 4 and the Black Period see: Felsch 1988, 121.

²⁶ Bernabò Brea 1964, 553-6, pl. IX-X. For new data on the Blue Period: Traverso 1997, 63-6, pls. 4-5.

²⁷ Hood 1981, 17, shape 11, fig. 98.318; 179-81.

²⁸ Sperling 1976. For the new excavations by the German Mission see: Gabriel 2001, 343-5.

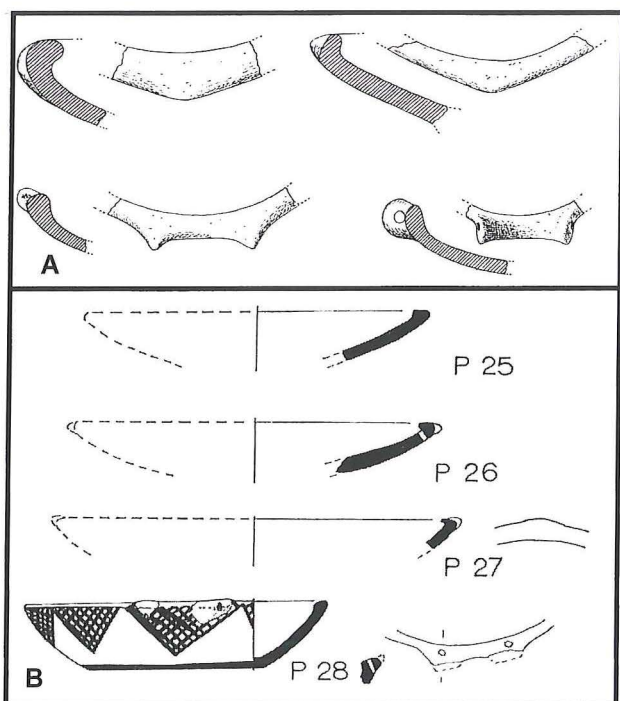


Fig. 6. A: rolled-rim bowls from Poliochni, Green Period levels; B: rolled-rim bowls from Myrtos, Crete, Period 1 (A after Bernabò Brea 1964; B, after Warren 1972).

er Aegean region. But the presence of this ceramic category at Lemnos in a specific cultural horizon allows the secure correlation of the Black Period at Poliochni, Phase 2-3 at Myrina and Kumtepe IB with early Troy I.³²

EB I in the north Aegean and the Cyclades

The evidence for the diffusion of the rolled-rim bowl in north-western Anatolia and the north Aegean can be supplemented by information available from some key sites in Cyclades.

The stratigraphy of the Zas Cave on Naxos is important for dating the introduction of the rolled-rim bowl to the south Aegean.³³ The lowest level (Zas I) contains pottery of the Saliagos cultural assemblage, while the next stratum (Zas II) includes two sub-different phases: the earlier (Zas IIa) has pattern-burnished pottery, and the later (Zas IIb) includes rolled-rim bowls and other material contemporary with the early Grotta-Pelos culture.³⁴ Overlying this latter level is an EB stratum (Zas III) with later Grotta-Pelos material.

quence suggests that the bowl with rolled-rim and horizontal tubular handle was very popular in the north Aegean Islands and in the Trojan region of north-west Anatolia in the period before Troy I; indeed, they fell out of fashion before the beginning of Troy I.²⁹

On Lemnos, rolled-rim bowls are well-documented in the deepest levels (Phase 1-2) of the stratigraphical sequence at the Meteorological Observatory Hill, Myrina, mentioned above (Fig. 5: A-B); the association of this kind of bowl with pottery belonging to Blue Period 1 confirms how widespread this shape was at a transitional stage from Late Neolithic to the early EB.³⁰ In support of this, Poliochni Blue Period 1 does have examples of rolled-rim bowls which can be compared with a similar shape still present in early and late Troy I.³¹

The continuity of the rolled-rim bowl is of interest, suggesting that there was in fact a considerable geographic and cultural variation within the great-

²⁹ Sperling 1976, 327, fig. 12.303 (phase IB 1); 330, fig. 13:401, 408 (IB 2); 332, fig. 14: 501-6 (IB 3); 333, fig. 15: 535-45 (IB 3); 338, fig. 19, pl. 75: 601-6, 607-8 (IB 4); 355-7. This sequence is confirmed by the new explorations at Kum Tepe: Korfmann, Girgin, Morcol & Kilic 1995, 252-3, figs. 29.2, 30.4, 31.6, 32.1, 33.5, 34.4-5. For other examples from north-western Anatolia: French 1961, 102, figs. 2, 5, nn. 9-49, 58-62.

³⁰ Dova 1997, 103, fig. 3.1.

³¹ For Poliochni: Bernabò Brea 1964, pl. XIV.b,d. Examples from Troy I: Blegen *et al.* 1950, figs. 254.I.a-e, and 255.I.f-g. For a general discussion on the rolled-rim bowls in north Aegean: Renfrew 1972, 161-3, fig. 10.1; Manning 1995, 43-5, 73-6. This reconstruction is supported by the evidence of some sites in the region of Alasehir, central-western Anatolia, where rolled-rim bowls are attested in levels of the EBA 1: French 1997, 581, fig. 7.

³² On the relative position of Kumtepe versus Trojan sequence see: Sperling 1976, 355-7; Podzuweit 1979b, esp. 133-6.

³³ For the archaeological reports: Zakos 1994; 99-113; Zakos 1996, 88-9. An overview of the stratigraphy is in Broodbank 2000, 122-3.

³⁴ For the rolled-rim bowls: Zakos 1987, 696, figs. 10-11.

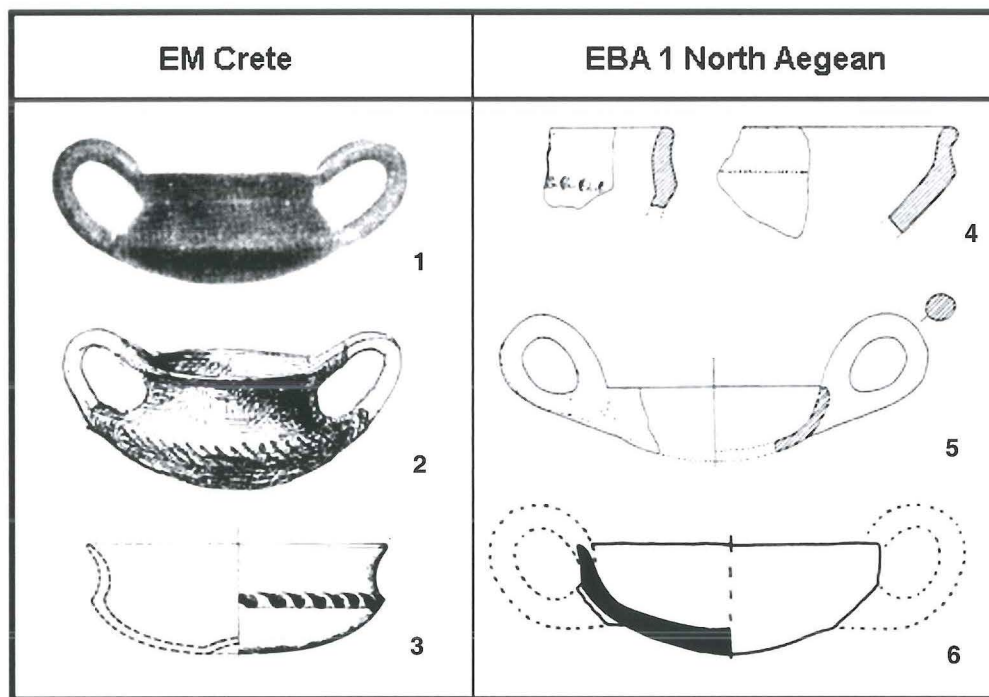


Fig. 7. A comparison between double-handled bowls from EM I-II Crete and EBA I north Aegean: 1. from Kanli Castelli Cave; 2. from Miamou Cave; 3. from Phaistos; 4.-5. from Myrina (Lemnos); 6. from Poliochni.

In the light of this, the mere presence of a “rolled-rim” is not an adequate criterion for an early date: rolled-rim bowls begin to appear at a transitional stage between Late Neolithic to EB I in many regions of the Aegean, and this type continues to be very common into the late EB I.³⁵ The evidence of the north-east islands and of the Trojan area also confirms the early introduction of this shape to the region and probably its diffusion from there to other parts of the Aegean³⁶ (Figs. 4-5). If there is no evidence of rolled-rim bowls in northern Aegean after the horizon corresponding to the Poliochni Blue Period and early Troy I, in the case of the southern Aegean, the shape continued into the late EB I. The stratigraphical sequences at Phylakopi and Akrotiri indicate that rolled-rim bowls continued into the late EB I, notably during the later Grotta Pelos culture and the Kampos group.³⁷

In addition, this form also occurs in an EM II context on Crete: some examples reported from Myrtos, in levels of Pyrgos I or EM IIA, have strong parallels with shallow bowls found in Poliochni Green levels³⁸ (Fig. 6). The shallow bowls with triangular lugs on the rim in particular are without parallel in Early Minoan Crete, perhaps suggesting the introduction of such a type from the

western coastal area of Anatolia or from the north Aegean. Moreover, the absence of parallels among the pottery assemblages of the Cyclades leads to the conclusion that such a shape was introduced to Crete probably without an island intermediary. This comparison is of crucial importance for relative chronology since it appears to provide a close correlation between the EM IIA and the Green Period at Poliochni.

Long-distance dialogues: north Aegean and Crete

The proposal of a comparison between the shallow bowls with triangular lugs of the Green Period

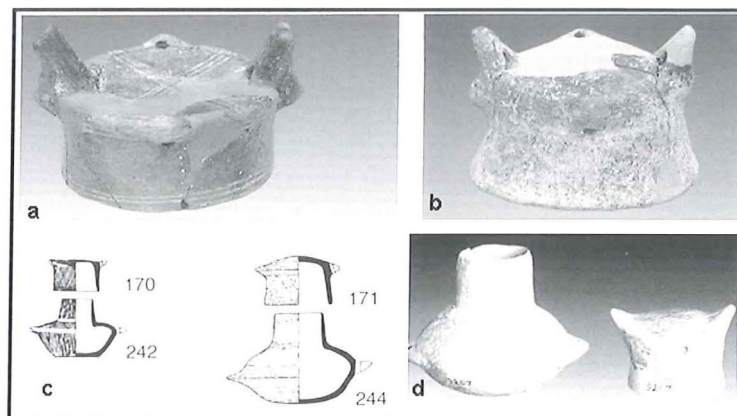
³⁵ Manning 1995, 42-4, 74. For west Anatolia see above footnote no. 28.

³⁶ Maran, 1998, 137, n. 1588.

³⁷ For the evidence of Akrotiri: Sotirakopoulou 1986, 300-3. Rolled-rim bowls are attested at Kato Akrotiri on Amorgos: Rambach 2000, pl. 71. Same evidence is also reported from Markiani Amorgou on the island of Amorgos: Davis 1992, 753.

³⁸ Crete: Warren 1972, 100, 155, fig. 39. P24-28. For the parallels from the Green Period at Poliochni: Bernabò Brea 1964, 614-6, pls. CIX.b-c and CX.d.

Fig. 8. Bell-shaped lids with triangular lugs a-b from Myrina; c. from Tholos Tomb II at Lebena (Crete), d. from Partira Cave (Crete) (a-b, c from Neolithic Culture in Greece, Athens 1996; d from Alexiou & Warren 2004).



at Poliochni and EM I pottery introduces another issue of interest: the system of chronological relationships and of stylistic interaction between Crete and the north Aegean during the early EBA Period.

The appearance of the dark burnished two-handled bowl in EM I Crete may allow a correlation with this Green Period. This form, that in Crete appears in the Kanli Kastelli Cave, Heraklion³⁹ (Fig. 7:1), may be broadly compared with those from Poliochni's Period Black and the Meteorological Observatory at Myrina (Phase 2)⁴⁰ (Fig. 7:4-5). There is no doubt that the origin of the shape lies in the north Aegean, where two-handled bowls are characteristic of the Chalcolithic Period.⁴¹ The Kanli Kastelli bowl may cause some problems in terms of external interrelations, because it was compared with EB II kantharoi.⁴² However, the Kanli Kastelli Cave deposit can be dated to early EM I, therefore allowing a comparison with the early EB I in the northern Aegean. A good example for the two-handled bowl could be a similar shape found at the Miamou Cave, in the southern Asterousia mountain range, where the context can be dated to the Final Neolithic⁴³ (Fig. 7:2). In addition, other good parallels are with a fragmentary bowl from Final Neolithic Phaistos, that should be restored as a two-handled cup, like other Minoan examples mentioned above⁴⁴ (Fig. 7:3).

It is important to point out that two-handled bowls of this kind occur only in the north Aegean and Crete, with no evidence for their existence in Early Cycladic or Early Helladic I. It is reasonable

to conclude that the shape was introduced into Crete during the Final Neolithic, probably from western Anatolia, and that it continued into the next period, namely Early Minoan I.

A second close link with the northern Aegean cultures is suggested by the appearance of a specific shape of lid in Crete. The bell-shaped lid, with two perforated, low triangular lugs, represents one of the best known examples in EM I funerary assemblages *i.e.* Lebena Tholos Tomb II, Partira and the Eileithyia Cave, near Amnisos, north-central Crete⁴⁵ (Fig. 8). As for chronological labels, P. Warren, in his report on the pottery from Lebena Tomb II, has argued that the deposits at Partira

³⁹ Alexiou 1951, 278, pl. ID. no. 1.6.

⁴⁰ Poliochni: Bernabò Brea 1964, 543, pls. IIIa, VIIf and r. Myrina: Dova 2003, 108, fig. 4.7.

⁴¹ It is difficult to propose a derivation of the Cretan types from the two-handled cup attested in the Middle Neolithic of south Peloponnese, where this shape is scarcely known (examples in Papathanasopoulos 1996, 218, fig. no. 20, from Alepotrypa Cave, Driros). The main morphological differences mostly concern the biconical body and the handles. Therefore, the two-handled cups from LN/EM I in Crete probably originated from the Late Chalcolithic Anatolian kantharos. For the diffusion of this shape in western Anatolia see, with references: Seeher 1987, 165-70.

⁴² Renfrew 1964, 124; Manning 1995, 75.

⁴³ Taramelli 1897, fig. 13. For dating the Miamou Cave to the Final Neolithic see: Alexiou & Warren 2004, 193.

⁴⁴ Vagnetti 1972-73, fig. 65.9.

⁴⁵ For Partira and Eileithyia Cave: Mortzos 1972, 418 and pl. 36, no. 9440; pls. 37-8, 3328 and 3329; 408 and pls 1-2, no. 9207. Lebena Tholos Tomb II: Alexiou & Warren 2004, 77-78, fig. 22.159, pl. 53b left.

and Amnisos could be classified as early EM I or, more probably, a transitional stage from FN, or Sub-Neolithic, to early EM I.⁴⁶ If we change the perspective in terms of north Aegean chronology, this kind of cylindrical lid with pierced triangular lugs appears in an early stage of the Poliochni Blue Period⁴⁷ (Fig. 8). It is also attested at Troy I⁴⁸ and the comparison with the Cretan examples provides clear contextual evidence to support the synchronism between the north Aegean EB I and the EM I periods. Further confirmation of this synchronism is provided by the evidence recently found at Myrina, in the settlement at Richa Nera: a lid of this type is associated with pottery coming from levels of Phases 1-2, correlating with the Poliochni Black Period.⁴⁹

Another potentially important correlation is offered by the baking pans or “cheese pots”. A group of coarse, large dishes with row of holes below the rim belong to this category. The distribution of baking pans in the northern Aegean is of interest in chronological terms. At Poliochni, fragments of baking pans are still common in levels of Black Period (Sounding ‘M’, stratum 10), but the type disappears in the next Blue Period.⁵⁰ This evidence is confirmed by the stratigraphical sequence at the Meteorological Observatory Hill at Myrina mentioned above (Fig. 5A: 9-10); there, the baking pans do not occur after local Phase 1 of the Black Period at Poliochni.⁵¹ The same evidence is reported from Chios, where fragments of baking pans were well documented at Haghios Galas and Emporio (X-VI Period).⁵²

The type is attested in Cyclades (Grotta on Naxos, Phylakopi on Melos, Ayia Irini on Keos, Salia-gos)⁵³ and in the Dodecanese (Aspipetra Cave on Kos and the Vathy Cave on Kalymnos).⁵⁴ In the case of Crete, there is evidence of baking pans at Prinias, in the Idaean mountain range, where the type is associated with pottery classified as Final Neolithic or transitional to EM I.⁵⁵ Recent discoveries of “cheese pots” at other sites in central Crete confirm that this type of vessel is much more common in the island was hitherto claimed.⁵⁶

There is no doubt that the type is Anatolian in origin. The problem, however, is to define more clearly from which area of Anatolia. There is evi-

dence of two large regional clusters: the first area is south-west Anatolia, where baking pans are reported from the Elmalı region (Karatas, Karaburun, Bozdag, Boztepe, Beycesultan) and south Anatolia in the context of Middle and Late Chalcolithic, corresponding to the Late Neolithic in south Aegean.⁵⁷

The second geographic area includes north-west Anatolia and the neighbouring islands (Lesbos, Chios and Samos), where the type occurs later than in the southern Anatolia.⁵⁸ According to this evidence, it is likely that the type was firstly introduced to southern Anatolia, probably from north Syria, and then to north Anatolia, where it is not attested before the beginning of the Late Chalcolithic or Late Neolithic, in terms of the Aegean sequence.

From this it can be concluded that there were some links between the ceramic traditions of the northern Aegean islands and those of the south

⁴⁶ Alexiou & Warren 2004, 194-5. For dating Partira ware to Final Neolithic: Betancourt 1985, 10-1.

⁴⁷ Bernabò Brea 1964, 575-6, pl. LXVII.g.

⁴⁸ Podzuweit 1979, 218-9, Type C1b and pl. 22.

⁴⁹ Example from Myrina published in the catalogue of exhibition, Papathanasopoulos 1996, 281, figs. 157-8.

⁵⁰ Tiné 1997, 43, pl. VI, c-d, f.

⁵¹ Dova 2003, 103, fig. 3.11-2.

⁵² Hood 1981, 37, 74, 80, fig. 19 nn. 91-3, Shape 3 (Haghios Galas); 247, fig. 119, n. 17-88, 22, 309, fig. 141, nn. 431-435.

⁵³ Renfrew 1972, 155, fig. 10.2, 5, 11.

⁵⁴ Sampson 1987, 30-1, 81, 89-90.

⁵⁵ Unpublished material stored at Prinias. I thank prof. G. Rizza for assigning the study and publication of this pottery group to me. The present study is supported by INSTAP (Research Projects 2005-8).

⁵⁶ Nowicki 2002, 54-9, figs. 32, 28:13, 26:17, 31.11 and 33:2, 4. Examples from Nerokorou: Vagnetti 1996, 32, fig. 2.4.

⁵⁷ Examples from south Anatolia: see Voigtländer 1982, figs. 1-2. Examples from the Elmalı region: Eslick 1992, 72, pl. 73.26. For other examples from Bozdag, near Ancient Myndos see: Paton & Myres 1896, 204, 264.

⁵⁸ Furness 1956, pls. XVIII:2 and XXII:15; Samos (Tigani Phases III-IV): Felsch 1988, 58, 66, pl. 31 no. 280 and pl. 70 nos. 421, 424, 425; Chios (Emporio Period V-IV): Hood 1981, 37, fig. 20, nos. 91-3. For western Anatolia see: Secher 1985, 180, fig. 18 n. LL83.46/9 (with references).

Aegean during the transition from Late Neolithic to EM I or EC I.

The examples reported from Poliochni and Myrina during the Black Period seem to confirm these parallels. In this respect, it is useful to point out that Samos provides a similar correlation for the FN red-crusted ware attested in Thessaly and in the island of Crete, at Phaistos.⁵⁹ Indeed, a couple of jars with red-crusted decoration of FN type are attested at Kanaki, on Naxos in a context that can be dated to the Kephala culture; indeed, red-crusted occurs more frequently than white decoration at that site.⁶⁰ Similar material decorated with red-crust is known in central Anatolia (Alaca Hüyük and Yazirköy) in Late Chalcolithic, chronologically equivalent to Late Neolithic in the Aegean world.⁶¹

In other cases, specific affinities of particular shapes can only with difficulty be explained just as general cultural resemblances. For instance, the wide diffusion of baking-pans suggests the circulation of a specialised clay vase for specific purposes, *i.e.* the manipulation and consumption of milk derived products. In this case the circulation of specific pottery classes seems to have cultural implications both for chronology and the practice of food preparation and consumption.

An outline of EBA patterns of long-range interaction

These patterns of long-range dynamics across the south and north Aegean axis are illustrated by the increasing evidence of maritime interaction, indicating that such a system began as early as the EB I/II transitional stage, slightly earlier than Renfrew imagined. Within a wider Aegean framework, while the overwhelmingly maritime nature of connections has been reinforced by recent work, it is becoming obvious that this inter-regional linkage involves movements of population and the circulation of ideas and technologies. It is now widely acknowledged that the later Neolithic saw an increase in the amount of maritime activity in the Aegean, but what has not been investigated is the way in which the Cyclades contributed to the generation of such maritime networks.⁶²

Three important elements can be usefully proposed for reconstructing this long-range interaction. The first point is the Melian obsidian that is reported from Lemnos and other islands of north Aegean during the Black Period.⁶³ It is worth noting that there is no evidence of any other kind of obsidian coming to Lemnos from other Aegean sources, such as Yali in the Dodecanese or from other sources in central Anatolia.

The second important aspect is metal and its circulation. Whereas obsidian has been convincingly shown to have been of relatively low value in the early Aegean, metals, on the other hand, can be demonstrated to have entered the system of the broad Anatolian-Aegean-Balkan region much higher up the scale.⁶⁴ An early exploitation of Cycladic metal sources is accordingly of particular interest in the present context.⁶⁵ Despite the fact that the exploitation of silver becomes remarkable in the Cycladic burial record of the EB I-II Kampos Group, the existence of FN Aegean silver jewellery in the Zas Cave on Naxos does suggest the use of at least one Aegean silver source by this time.⁶⁶ In this respect, it is important to mention two metal artefacts found at Zas Cave, a copper flat axe and a gold strip, which can be interpreted as north Aegean imports.⁶⁷

⁵⁹ Samos: Heindenreich 1935-36, 310. Examples of Red-Crusted ware from Festòs see: Vagnetti 1972-73, 80-2, figs. 74, 116-8 and pls. II-III (Class C).

⁶⁰ Kanaki: Broodbank 2000, 154. For the examples from Kephala on Keos see: Coleman 1977, 11.

⁶¹ Examples in Mellaart 1966, 118-9.

⁶² For this problem see: Broodbank 2000, 277ff.

⁶³ For the lithic industries of Poliochni and references with the circulation of Melian obsidian in north Aegean: Moundrea-Agrafioti 1997, 168-91.

⁶⁴ Nakou 1997, 637-8, fig. 3.

⁶⁵ Broodbank 2000, 292-3. In the case of Lemnos, Lead isotope analysis of a large quantity of metal objects found at Poliochni shows a strong association with the signatures of the Siphnian and Kythnian sources: Cultraro 2008.

⁶⁶ Broodbank 2000, 159.

⁶⁷ Broodbank 2000, 160, fig. 45. For similar bronze flat axes from Poliochni: Bernabò Brea 1964, 663, pl. CLXXIIc (Red Period). The strip of hammered gold sheet found at Zas Cave, Naxos, is published in the catalogue of exhibition, Papathanasopoulos 1996, 340, fig. 304.

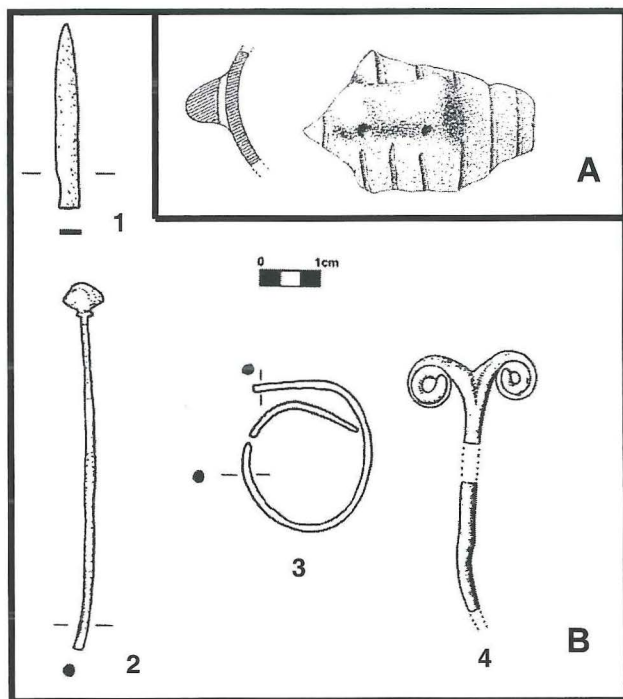


Fig. 9. a. Cycladic imported sea-urchin aryballos from Poliochni; b. Selected silver objects from the Blue and Green Period levels at Poliochni (A after Bernabò Brea 1964; B after Cultraro 2000).

Evidence of Cycladic silver circulation in the north Aegean comes from Poliochni, where some silver objects were found in contexts of the late Blue Period. One of the most remarkable items is a double-spirals pin found in the fill of the Boulouterion and attributed to the Blue Period⁶⁸ (Fig. 9B:4). The pin is stylistically comparable with jewellery from central Anatolia and Levant, but the lead isotope analysis confirms the use of silver coming from Siphnos.⁶⁹ The same conclusions follow from the examination of other silver objects found in levels of Blue Period (Fig. 9B:3): the lead isotope analysis suggests the possible provenance of the silver from Siphnos or other western Cyclades sources.⁷⁰ In terms of production and long-range communication, it does mean that at Poliochni, Cycladic silver was worked locally and the main source for the Lemnian metal-workers were the metalliferous islands of the western Cyclades.

Despite some criticisms of the application of lead isotope analysis on Aegean metals,⁷¹ the convergence of such different aspects of data leads to conclude that the Cyclades were supplying a range

of metals, mainly gold, silver and copper, to the south and north Aegean during the EBA.

The third point concerns the circulation of prestige/ritual objects between north and south Aegean. Together with the gold strip from Zas Cave mentioned above, one also could include the FN marble pointed-based beakers found at Koukonisi on Lemnos, at the Heraion on Samos and Kum Tepe and Besik Tepe on the western coastline of Anatolia.⁷² It's worth noting that a marble pointed-base beaker of Cycladic origin was found at Varna (Bulgaria), on the Black Sea, and among the funerary furnishings of the same cemetery it is also possible to identify close parallels for the gold strip from Zas Cave mentioned above.⁷³

Marble objects are hardly common in the EBA north Aegean. Among the marble vessels, a fragmentary shallow cup was found in a burial located in the Dermatas Hill, to the south of Poliochni.⁷⁴ The burial can be attributed to a Black or Blue Archaic Period. There is no chemical analysis on the provenance of the bowl, but the material seems to come from Cyclades and the best parallels are with the Grotta-Pelos group stone assemblage.⁷⁵

In summary, between the periods of the Saliagos and Grotta-Pelos cultures, Cycladic communities appear to have created large interaction zones between Crete and north Aegean, and also participated in exchange networks that brought them distant objects at a much earlier date.

⁶⁸ Bernabò Brea 1964, 591-2, fig. 320, pl. LXXXVI.

⁶⁹ Cultraro 2000, 107, fig. 3d.

⁷⁰ See Cultraro 2000, 107-9, fig. 3.a-c.

⁷¹ E.g. Pernicka 1995, 59-64. Contra: Stos-Gale 1998, 717-35.

⁷² For the catalogue of finds see: Broodbank 2000, 161, fig. 46. See also: Debetsi 1997, 566-70, fig. 1.

⁷³ For the marble pointed-base beaker from Varna: Ivanov 1978, 58, fig. 41. For the gold strip from Zas see references in footnote 67. About the possible parallels of some objects from Varna with Aegean material: Makkay 1993, 821-3.

⁷⁴ Unpublished material stored in the Archaeological Museum at Myrina, Lemnos. For the burials at Dermatas Hill see: Bernabò Brea 1964, 18.

⁷⁵ Renfrew 1972, 163, fig. 10.4 nos. 1-2.



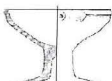


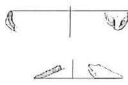


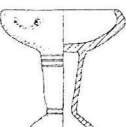
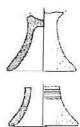
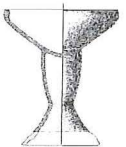
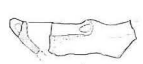


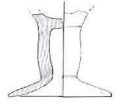
Poliochni's Periods	Sounding M	Megaron 832	Megaron 605	Myrina Meteo. Hill	Myrina Richa Nera
Black P. 1	Level I-II no evidence				
Black P. 2	Level III-IV few a pieces				
Early Blue					
Late blue					
Transitional					
Green 1					
Green 2					
Red					

Fig. 10. Diachronic development of the stemmed-cup type in the EBA north Aegean.

The stemmed cup shape: an exercise in chronological synchronisms

This revised image of the wider system of inter-relation between north and south Aegean since the Late Neolithic can be verified in the analysis of one of the most popular and intriguing pottery shapes known in the north-west Anatolia, the stemmed cup or 'fruit-stand' (Fig. 10).

Many years ago Peter Warren has suggested a possible connection between the chalices from Cycladic Kampos Group, the fruit-stands of EM I Crete and similar shapes from Poliochni.⁷⁶ The proposed correlation is correct and an association seems plausible, but it needs some clarification. The real problem is the definition of close parallels for the Cycladic and EM examples within the Poliochni sequence. In fact, Warren drew parallels with the early Period Blue, while other scholars have proposed comparison with different periods

in the Poliochni sequence. A few examples help to illustrate this confusing and uneven picture: for instance, C. Podzuweit classified the EM I examples with the Poliochni Green and Red Periods, while Ph. Zapheirou and P. Sotirakopoulou proposed a Red Period correlation.⁷⁷ At the same time J.E. Coleman made a comparison with the fruit-stands from Poliochni Black Period, and S. Manning suggested close parallels with the Blue Period pottery assemblage.⁷⁸ As this picture shows, the comparisons proposed encompass the whole stratigraphy of Poliochni; it is very difficult to identify parallels securely so that they are of some chronological help.

Which solution can we propose, and how can we explain these potential affinities in terms of pat-

⁷⁶ Warren 1984.

⁷⁷ Podzuweit 1979, 135-7; Zapheirou 1984, 39; Sotirakopoulou 1997, 523, fig. 2.3.

⁷⁸ Coleman 1974, 342-3; Manning 1995, 77-9.

terns of stylistic interaction? And finally, what are the chronological implications of making comparisons in this way?

The key to proposing a solid chronological grid turns out to be a systematic analysis of the archaeological evidence found at Poliochni and at other sites on Lemnos. New data derived from the reassessment of the Poliochni stratigraphical sequence contribute substantially in reconstructing the formal, chronological development of these stemmed cups in western Anatolia and the north Aegean.

Stemmed cups begin during the late stage of the Black Period⁷⁹ (Fig. 10). The late introduction of the shape is fixed within the stratigraphic sequence: stemmed cups occur in levels III-IV of Sounding M, and also in levels 24-27 beneath the foundation of Megaron 832 dated to the Archaic Blue Period⁸⁰ (Fig. 1). In addition, this sequence is supported by the evidence of the Meteorological Station Hill at Myrina mentioned above, where stemmed cups appear to belong to the phase 2, corresponding to the late Black Period⁸¹ of Poliochni (Fig. 5b).

In the next Archaic Blue Period, the stem of the chalice expands gradually until it is virtually straight; the cup consists of an open bowl with a single horizontal, tubular lug just below the rim.⁸² In the late Blue Period, chalices consist of globular bowl with a perforated lug, that can be horizontally tubular or vertically elongated like an elephant's head, a feature that it is at home in the Late Neolithic culture of Kephala in south Aegean.⁸³

In the transitional Blue/Green Period, a new shape of fruit-stand becomes most common in the domestic pottery set: the bowl appears to be deeper than the earlier examples, and with an angular profile; the stem is tall with a slight swelling with defined conical foot; a small perforated lug is set below the rim, and, in some cases, the stem is decorated by pairs of incised lines.⁸⁴ The attribution of this shape to the transitional stage Blue/Green Period is confirmed by the evidence of Myrina, where stemmed cups of this kind occurs in the settlement of Richa Nera, explored to the east of the Meteorological Station Hill.⁸⁵ In this case, the context is certain because the pottery assemblage is associated with architectural remains. It is worth noting that some chalices are decorated with

incised lines on the stem forming a herring-bone arrangement; this last is an important and diagnostic feature for attributing this variant of the chalice into a transitional period from the Blue to the Green Period.⁸⁶

The recent reassessment of the Green Period suggests that two different architectural phases can be distinguished: in the first stage (or Green Period 1), the stemmed cup consists of an open shallow bowl with triangular vertical lugs set below the rim; the stem is thick and swelling in profile and is set on a large conical foot;⁸⁷ in the next stage, (or Green Period 2) the shape is quite different: the bowl is more shallow and angular in profile, whilst the stem is more swollen than before; it is also decorated with incised lines at the bottom and top. Similar typological features are reported from Richa Nera at Myrina mentioned above.⁸⁸

The last stage of the typological development of the fruit-stands is found on the stemmed cups of the Red Period at Poliochni.⁸⁹ The main feature is the clear reduction in size: the cup is very small with large, triangular, tongue-shaped lugs on the rim; the stem is swollen and set on a conical foot. This is the last phase of production of stemmed cups at Poliochni, since, in the next, Yellow Period, there is no evidence for this shape.

⁷⁹ Tiné 1997, 38, pl. II: g-i.

⁸⁰ Bernabò Brea 1964, 113.

⁸¹ Dova 2003, 108, fig. 4.5

⁸² Bernabò Brea 1964, 553-6, pls. IX and X.

⁸³ Bernabò Brea 1964, 553-6, pls. XI-XX. For the Kephala examples see Coleman 1977, 16, pl. 80.B.

⁸⁴ Bernabò Brea 1964, 557, pl. XXI

⁸⁵ Dova 2003, 113, fig. 7.3.

⁸⁶ Decorated examples from the oldest excavations at Poliochni: Bernabò Brea 1964, 556-7 and pl. XXI.

⁸⁷ Cultraro 1997, 103-8, figs 4.2 (Period 1) and 5.4-7 (Period 2).

⁸⁸ Unpublished material found in the Kazoli Property. I would like to thank L. Acheillara for showing me the material and for useful comments. For the preliminary reports see Acheillara 1997.

⁸⁹ Bernabò Brea 1964, 631, pls CXXXV-CXXXVI.

The wider context of the stemmed cups: parallels and models of change

Turning back to the initial question, the main problem now is to propose correct parallels for the Cycladic and EM stemmed cups. It is necessary to draw attention to the problematic data from Cyclades. The cemetery at Agrilia in the Epano Kouphonissi, in the Erimonisia, can be dated to the Kampos Group, or the transitional stage between EC I (Pelos-Lakkoudhes of Doumas classification, or Grotta-Pelos Culture according to Renfrew) and the EC II Keros-Syros material.⁹⁰ The large fruit-stands from Epano Kouphonissi show diagnostic features, such as the swollen stem and the horizontal lug below the rim⁹¹ (Fig. 10).

In terms of relative chronology, it is of relevance to point out that these features appear in the pottery assemblage of Poliochni Green Period 1. This correlation may be confirmed by the stratigraphy beneath the floor of Megaron 605: from levels 8-9, that I can now date to the Green Period 1, is reported a fragment of sea-urchin shaped aryballos with incised decoration that is a characteristic product of the Kampos Group⁹² (Fig. 11). That the first stage of the Green Period can be correlated with the Cycladic Kampos Group is also confirmed by the evidence of the next, Green Period 2, where imports of Keros-Syros painted ware are reported.⁹³

In the light of these typological parallels, it may be concluded that the first stage of the Green Period is contemporary with the transitional period ECI/II in Cyclades and corresponds to the Kampos Group, while the next, Green Period 2 provides significant parallels with the Keros-Syros material. This proposal of comparison of course has consequences for the chronological correlation between Crete, Cyclades and north Aegean. The chalices found in the Pyrgos Cave, on Crete, show features that are diagnostic of the stemmed cups of the Green and Red Periods⁹⁴ (Fig. 10). The high conical foot and the swollen stem have good parallels on the chalices of the Red Period. Many affinities of form and profile do exist, yet

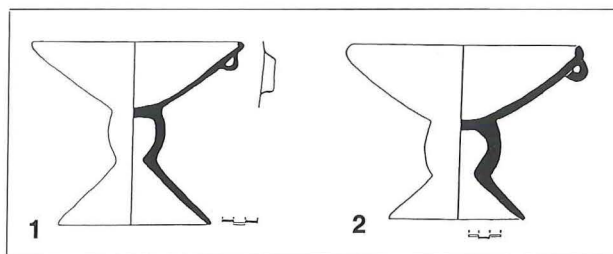


Fig. 11. EBA Stemmed-cups from Pyrgos Cave, Crete (1) and from Epano Kouphonissi (2) (redrawing from Karantzali 1996).

there is no close similarity. How can this paradox be explained?

If we compare the EM I stemmed cups with examples from Poliochni, there is little room for doubt that the closest parallels are with the fruit-stands of the Green or Red Period, and that there are no links with similar cups found in the earlier Blue or Black Periods. In other words, it means that the EM stemmed cups from the Pyrgos Cave cannot be earlier than late EB I or transitional to EB II, in the chronological sequence of north Aegean.

The further nexus between the Cyclades and Crete is the cemetery at Ayia Photia, in the far north-east of the island.⁹⁵ This large cemetery is a remarkable testimony to elaborate cultural interaction between the Cyclades and the local communities of Early Minoan Crete. The majority of the pottery resembles the Kampos group shapes, and has parallels in the fabric traditions of the Cyclades.⁹⁶ The stemmed cups from Ayia Photia are very similar to the examples from the cemetery of Epano Kouphonissi, while the fruit-stands from the Pyrgos Cave seem to be local imitations, rather removed from the prototype.

⁹⁰ Zapheirou 1984; Broodbank 2000, 209.

⁹¹ Zapheirou 1984, 37, fig. 3c; Warren 1984, fig. 3a.

⁹² Bernabò Brea 1964, 61, 650, pl. CXXX:b; Cultraro 1997, 114.

⁹³ E.g. a fragmentary 'sauceboat' painted Dark-on-Light and some Beak-Spouted Jugs of Cycladic origin: Cultraro 1997, 112-5 (with references).

⁹⁴ Xanthoudides 1918, fig. 5 n. 3; fig. 10 nn. 74, 78.

⁹⁵ Davaras & Betancourt 2004.

⁹⁶ Betancourt 2003, 3-12.

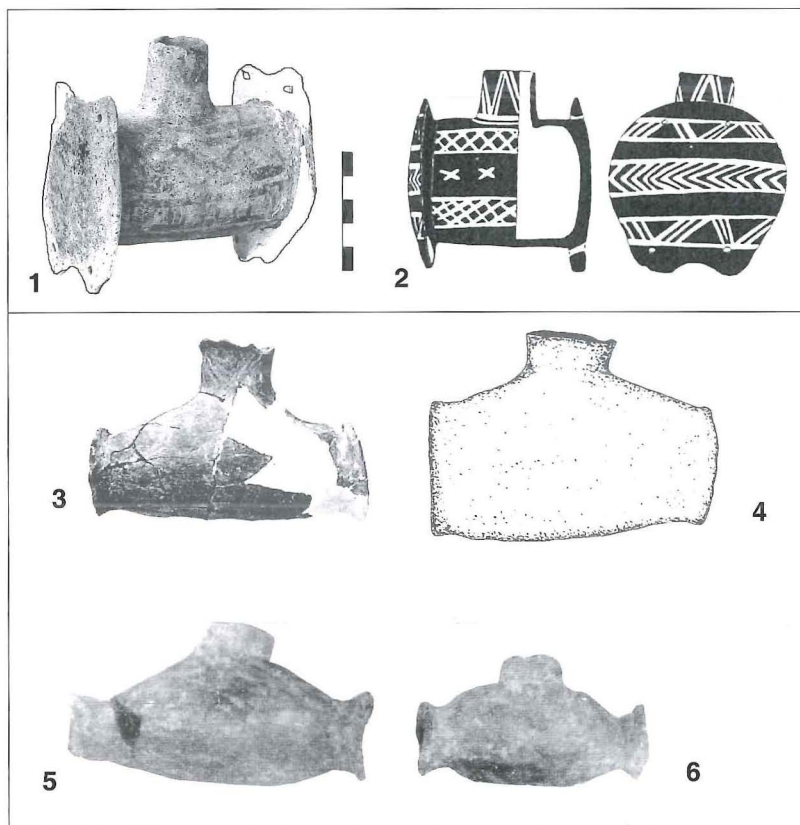


Fig. 12. Barrel vases from Crete and north Aegean: 1-2. from Lebena, Tholos Tomb II; 3-4 from Thermi, Lesbos; 5-6 from Poliochni (Red Period levels). (1-2 after Alexiou & Warren 2004; 3-4 from Lamb 1936; 5-6 from Bernabò Brea 1964).

Before summarising what we can say about Cycladic long-range interaction, it is necessary to stress another aspect that has been overlooked in the discussion of the Cycladic interconnections: the cemeteries at Agrilia, Epano Kouphonissi and at Ayia Photia include the same type of funerary architecture, the small rock-cut tomb with antechamber, that is not part of the Early Minoan cultural heritage. This funerary type is well documented in the north Aegean, on Chios and Lemnos; its origin is uncertain, but the distribution map indicates that the rock-cut tombs belong to Cycladic funerary architecture.⁹⁷ This is another instance of a remarkable element in favour of the long-distance interaction between the islands of north Aegean and the Cyclades during transitional EC I/II.

If this link can be substantiated, it implies that stemmed cups came to Crete via the Cyclades, although one cannot exclude other elements being directly transmitted from the north Aegean to Crete. Despite the presence of stemmed conical

cups since the Final Neolithic,⁹⁸ the oldest Cretan examples can not be interpreted as the ancestor of the fruit-stand so well-known in late EM I; its origin lies outside Crete.

The correlation between EM I late or EM IIA and the Red Period at Poliochni is also supported by the evidence recently published from the Prepalatial cemetery at Lebena, on the south coast of Crete. To explore potential synchronisms, it is instructive to analyse two important and diagnostic pottery shapes found in this funerary complex. The first category includes two examples of barrel vases,

⁹⁷ For a general re-assessment of the origin, chronology and diffusion of the rock-cut tomb type in the EBA Aegean see: Cultraro 2000b, 473-99. I would like to thank INSTAP for funding the new development of this research. It is now possible to include in my catalogue the cemetery of rock-cut tombs at Ayios Ioannis Eleemon, on Thera, dated EC III or early MBA, see the contribution by M. Marthari in this volume.

⁹⁸ Betancourt 1985, 15, fig. 11.D.

one of them with elaborated painted decoration, and found in Tholos Tomb II and dated to EM II⁹⁹ (Fig. 12:1-2). The examples from Lebena are locally made, but the origin of the shape is undoubtedly in the north Aegean. This form appears to be related to a north-west Anatolian shape beginning in late Troy I or II early; it is also found at other sites of north Aegean, such as Thermi on Lesbos and Poliochni (Fig 12:3-6).¹⁰⁰ The evidence from Poliochni is of particular interest with regard to the date of the introduction and diffusion of barrel vases in the north Aegean. All the examples from Poliochni were found in levels assigned to the Red Period; this evidence confirms the proposed synchronism between EM IIB Crete and late EB II in the north Aegean/north-west Anatolia.¹⁰¹

The second shape is the one-handed mug or tankard, with large neck and biconical body¹⁰² (Fig. 13). This was a shape that was very popular in western Anatolia, especially in the Troad, whence it spread to Mainland Greece and the Cyclades during late EB II.¹⁰³ The examples from Lebena (Fig. 13:3-4) have close parallels in the one-handed tankards attested in the Red Period at Poliochni;¹⁰⁴ these typological parallels further support the synchronism between EM IIB and late EB II in the north Aegean. Similar one-handed cups are known in the Kastri group pottery assemblage in the Cyclades, where it is thought to be a shape derived from western Anatolia.¹⁰⁵ This evidence aligns the Kastri group phase with a period roughly contemporary with the Red Period at Poliochni and EM IIB on Crete.

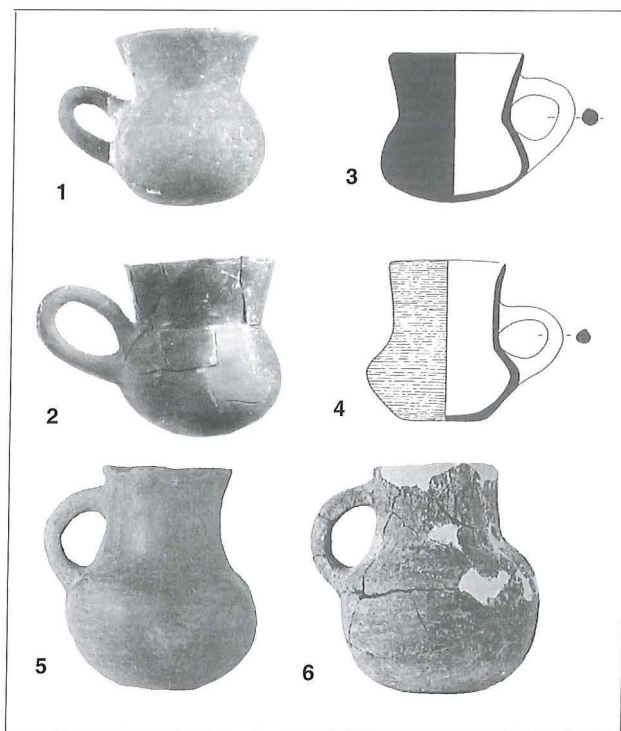


Fig. 13. Selected one-handed cup type from Crete and north Aegean: 1-2 from Poliochni (Red Period levels); 3-4 from Lebena, Tholos Tombs; 5-6 from Troy I late-II early (1-2 after Bernabò Brea 1964; 3-4 from Alexiou & Warren 2004; 5-6 from Blegen, Caskey & Rawson 1951).

known each other and formed trading partnerships. If the link can be sustained, it implies that long-range travels, and the forging of links with

Some concluding remarks

Island-based networks and long-distance trading systems represent crucial EBA Aegean maritime interactions. If an order of magnitude in evaluating these long-range contacts is correct, several interesting elements follow: First, the Cyclades played a significant role in the interaction trading activity between Crete and north Aegean in the late EB I or EB II. The number of people engaged in this trading system must always have been limited, and among this restricted group, many must have

⁹⁹ Alexiou & Warren 2004, 62-3, fig. 18, pl. 31B right.

¹⁰⁰ Thermi: Lamb 1936, fig. 37, n. 367. Examples from Troy: Podzuweit 1979, 231-2.

¹⁰¹ Bernabò Brea 1964, 506 and 642, pl. CXLVIIIa-b

¹⁰² Alexiou & Warren 2004, 84-5, fig. 24, pl. 58 (nn. 217-8).

¹⁰³ Examples from the north-western Anatolia: Podzuweit 1979, 158-62, type H I-II, pl. 7.1 and pl. 27.2. For the Cyclades: MacGillivray 1980, 19-20, fig. 5, nos. 14-6, 58-63, 119, 299-302, 434 (Group B). For the diffusion in the central area of Mainland Greece: Hanschmann & Milojevic 1976, 87, pl. 64, B:4.

¹⁰⁴ Bernabò Brea 1964, 639, pl. CXLIIIa-c.

¹⁰⁵ For the cultural and chronological definition of the Kastri group phase in the Cyclades see: Broodbank 2000, 305-18.

distant communities, played a part in the strategies of the emerging centres and provided an ideal medium for gathering fragments of exotic ideas and integrating them with local ideology in the home community.

The second point is the nature of this trading system. Metals and metallurgy are a key factor in explaining the different degree of long-range interactions between the north and south Aegean during the EBA. The north-east Aegean alone, with its metal-rich sites at Troy, Poliochni, Thermi on Lesbos, and the connections to non-Aegean metal-liferous zones in central Anatolia and possibly the Balkans, provides a complex picture throughout the EBA.¹⁰⁶ It is certain that some of its metals may also have derived from the Cyclades, as we have seen in the case of the silver objects from the Poliochni Blue Period¹⁰⁷ (Fig. 9). The late EB II evidence for increasing circulation of tin and the use of copper from non-Aegean sources suggests that the islands of the north Aegean played a central role in metal exploitation and consumption.¹⁰⁸

Thermi and the Poliochni Green Period provide evidence for the early production of tin-bronze.¹⁰⁹ The origin of the tin remains undetermined, although sources located in central Anatolia or the Balkans may plausibly have been exploited. In any case, the crucial point is that all the viable metal sources necessitated an extension of acquisition networks and a competitive edge for places that could control the entry points into Aegean.¹¹⁰ In this instance, we suggest that tin was chiefly introduced in its pre-alloyed tin-bronze state; metallurgical analysis suggests that knowledge of its properties must have been very restricted.

Another element of contact between north Aegean and Crete is the metal jewellery.¹¹¹ If the well-known treasures found at Poliochni and at Troy were part of the overall *Metallschock* seen in the EB II Aegean, these passive 'hoards' constitute a reliable indication of the inventive participation of the communities of north Aegean in gold prospection, production and exchange from north to south.¹¹² It is probable that gold sources were located in the Pangaion Mountain range, in Macedonia, and also in the island of Thasos.¹¹³ Gold jewellery is one of the most remarkable results of

the "International Spirit" that characterises EB II, and the EM II jewellery found in the Mesara tholos tombs and in the cemeteries of eastern Crete provides a good example of this wider interconnection.¹¹⁴

Investigations of the patterns of metal exploitation and consumption further our understanding of dynamics between the Cyclades and the north Aegean and prepare the way for an exploration of the north Aegean by the first Minoan traders during the Palatial Period. Poliochni has not yet yielded Minoan evidence, but this could be acci-

¹⁰⁶ For a general picture see: Pernicka, Eibner, Öztunali, & Wagner 2003, 143-72. The hypothesis that islanders of north Aegean exploited metal ores of the central Anatolia seems to find a close support from the evidence recently known in the Afyon region: the pottery from Kalik Mevkii and from Seyitömer Hüyük, dated to EBII, demonstrate strong similarities with the pottery assemblage of the Yellow Period at Poliochni: Efe & Ilasli 1997, 596-608.

¹⁰⁷ See above footnote 65.

¹⁰⁸ Pernicka, Eibner, Öztunali, & Wagner 2003 espec. 170-2.

¹⁰⁹ Lemnos: Pernicka, Begemann, Schmitt-Strecker & Grimanis 1990, 263-97. Thermi: Begemann, Schmitt-Strecker & Pernicka 1992, 219-39. See also Cultraro 2008, 455-6.

¹¹⁰ With the maritime dynamics of long-range voyaging now delineated, the next question is to define the patterns of metal exploitation and consumption. There is no evidence that insular communities controlled access to the mines of the Cyclades nor that any large settlements, as Phylakopi or Ayia Irini, profited either as passive or active centres in exploiting and trading metals. Evidence is provided by the metallurgical installation identified at Skouries on Kythnos which could have at least been partly built by non-local people. If this picture is correct, the miners could be specialised metalworkers coming from other areas, whether from islands of the Cyclades or from the north Aegean, who procured metals in an already smelted or semi-smelted state. For Skouries at Kythnos: Hadjianastasiou & MacGillivray 1988, 31-4.

¹¹¹ For the EM jewellery and its connection with the Troad: Vasilakis 1996, 227-33.

¹¹² For a reassessment of the hoard from Poliochni see: Cultraro 1999, 41-52. For the Trojan Treasures: Antonova, Tolstikov & Treister 1996.

¹¹³ For the Pangaion District see: Photos, Koukouli-Chrysanthaki, Tylecote & Gialoglou 1989, 179-90. About the exploitation of the Thasian mines, see: Pernicka & Wagner 1988, 224-31.

¹¹⁴ Davaras 1975, 101-14.

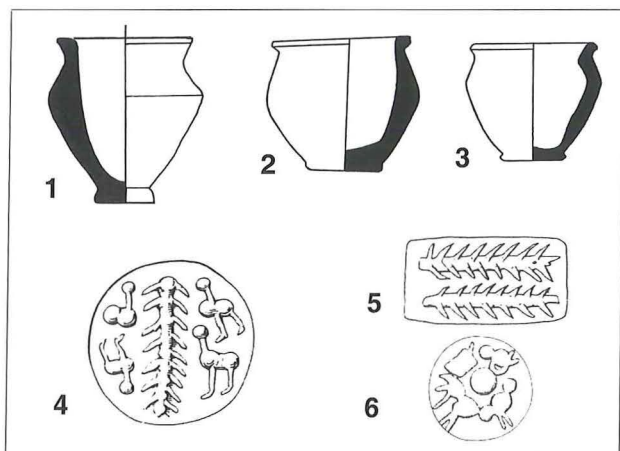


Fig. 14. Minoan and Minoanising objects from north Aegean: 1. serpentine carinated vase from Myrina; 2-3 stone vases from MM Crete; 4. haematite button-shape seal from Tenedos; 5-6 seals of the MM IB-II Malia Workshop from Crete (1. after Cultraro 2005b); 2-3 after Warren 1969; 4. from Cook 1925; 5-6 from Yule 1980).

dental.¹¹⁵ Conversely, the site at Koukonissi, thanks to the large amount of Aegean imported pottery, gives us some hope of finding Minoan imports at Poliochni in future explorations.¹¹⁶

Among the BA sites recorded on Lemnos, Myrina seems to be an important settlement with a lengthy, stratified occupation. A stone vase of Minoan type found in the last century and now housed in the Archaeological Museum, provides a good example of the long-range interaction between the north Aegean and Crete in a period certainly before the MM III-LM IA¹¹⁷ (Fig. 14:1). The suggestion that Minoan people travelled through the islands of the north Aegean can be supported by a stone seal found on Tenedos in the last century but now lost¹¹⁸ (Fig. 14:4). The haematite seal, of plano-convex button shape, was decorated with schematic quadrupeds and a central branch, motifs that commonly occur on seals of the MM II Malia Workshop (Fig. 14:5-6).¹¹⁹

The haematite seal from Tenedos and the stone vase from Myrina are remarkable pieces of evidence for the long-range interaction system in-

volving Crete and the north Aegean during the crucial phase that immediately precedes the floruit of Minoan maritime activity in this region. However, the origin of this large and complex trading system must be found in a 'long-range' practice in the EBA Aegean and the particular and intricate nature of Minoan presence, as the administrative documents found on Samothrace suggest,¹²⁰ needs to be understood in the light of the movement of people and ideas from the Final Neolithic onwards. However, although the picture of Cretan dominance in the north Aegean in the later MBA should be better defined, the *disiecta membra* of Minoan presence in the major islands (Samothrace, Lemnos, Tenedos) delineate a fundamentally altered world, where the new regime of interaction implies now more articulated social dynamics, different patterns of cultural exchanges and human mobility.

¹¹⁵ The re-assessment of the MBA material from Poliochni, belonging to the Brown and Violet Period, is ongoing by the author of this paper. As a preliminary remark, I would like to mention that in the notebook by Corrado Ricci, who explored the strata of the Brown Period in 1930-32, some fragments of fine pottery with "Minoan decorative patterns" are recorded. It is also of particular interest that a sherd of a large jar bore a specific potter's mark, a double-axe, that can be compared with similar Linear signs of Minoan and Minoanising pottery found in south-west Anatolia (Iasos, Miletus), the Cyclades (Aya Irini) and Crete. For the example from Poliochni: Bernabò Brea 1976, 280 and pl. CCXXId. For the parallels from Iasos and Miletus see respectively the papers by N. Momigliano and by W.-D. Niemeier in this volume.

¹¹⁶ For the Minoan and Minoanising pottery found at Koukonisi see the contribution by Ch. Boulotis in this volume.

¹¹⁷ Cultraro 2005b, 243, pl. LXIIIB. For the archaeological exploration of the prehistoric site at Myrina see above footnote 17.

¹¹⁸ The seal was bought from A.B. Cook who stored in a private collection in England. The provenance from Tenedos is certain. Cook 1925, vol. II, 663, fig. 602.

¹¹⁹ Yule 1980, 143 motive 22, pl. 15.1-2 ("Branches"), 131, pl. 8. 23 (Malia Workshop Subgroup).

¹²⁰ Matsas 1991, 159-79.

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En vogue Minoenne ... On the social use of Minoan and Minoanising objects in Troia¹

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There was no discussion or even mention of possible Minoan influence on Troia during the seminal colloquium on Minoan Thalassocracy held at the Swedish Institute at Athens in 1982.² This is not surprising. In Carl Blegen's four-volume monograph which was, at the time, the only available modern publication of Troian material, the subject of Troian relations with the Minoan world was hardly discussed. Scanty evidence consisting of some four oatmeal fabric stirrup jars,³ a small sherd from a hole-mouth jar,⁴ a blossom bowl of steatite,⁵ and a Minoan lamp⁶ found built into the Roman wall suggested that the relations between Crete and Troia were at best sporadic and insignificant.

Over 65 years after WW II had interrupted Blegen's research at Troia and over 50 years after the monograph volumes had appeared, the renewed excavations at Troia brought to light a variety of evidence which may shed new light on the relations between Troia and Minoan Crete. The aim of this paper is, after briefly reviewing the evidence, to attempt an interpretation of a certain aspect of these relations.

For simplicity's sake, the Minoan or Minoanising objects at Troia have been organized here into functional groups representing various spheres of domestic and public activities.

The domestic sphere is only scantily influenced at Troia by Minoan and Minoanising artifacts; in fact, it may be disputable if it is represented at all in the contacts between the two areas. Two types of a cup classified by Blegen as shapes no. A74 and A76⁷ may be local versions of a conical cup. However, at Troia "conical cups" do not appear in the large quantities they do in the Minoan world, where their superabundance (reflecting standardized pro-

duction and widespread use)⁸ "was essential to the well-being of any Minoan society of this period"⁹ and was also an important indicator of Minoan influence outside Crete.¹⁰

Loom weights of clearly Minoan type – round-flat or oval-flat with a hole close to the edge and a distinctive groove along the upper edge – rep-

¹ The papers presents preliminary results of a study which has started 2 years ago as a project of identification of imported wares at Troia, financed by the Troia Project and, in the years 2003 and 2004, also supported financially by the INSTAP. Naturally, the interpretations and even some data presented above may alter in the future. I have been very grateful for the support of the late Prof. Manfred Korfmann, the Director of the Troia project. My Colleagues and friends at Troia must be thanked for their help and very constructive discussions; special thanks go to Diane Thumm, Ralf Becks, Gebhard Bieg and Pavol Hnila. I would also like to thank Peter Pavuk for his valuable remarks concerning the chronology of Troia; he has also identified many foreign ceramics at Troia mentioned in the text.

² Hägg and Marinatos 1984.

³ Blegen shape D41; Blegen *et al.* 1953, no. 35.1065, figs. 330, 408.4; no. 37.1064, fig. 330; no. 36.1067, figs. 330, 408.7, 10; no. 36.1063, figs. 330, 408.8, 11; no. 34.719, fig. 330; fig. 411.2-4; Mountjoy 1997, 283-5, fig. 6; Mountjoy 1999, 271, fig. 7 no. 27.

⁴ G 105; Blegen *et al.* 1953, 147, fig. 360 no. 11.

⁵ Götze in Dörpfeld 1902, 391, fig. 373; Schmidt 1902, no. 7905; Blegen *et al.* 1953, 17, 230, no. 38-116, fig. 298 a-c.

⁶ Blegen *et al.* 1953, 230 no. 38-116, fig. 298.

⁷ Blegen *et al.* 1953, fig. 313: 37.1054, 37.957; described by Mountjoy as lipless bowl FS 204: Mountjoy 1997, 290, no. 32, fig. 10.32; cf. also Blegen *et al.* 1953, 426, no. 21 (Early Troia VI).

⁸ Gillis 1990a, esp. 127-37; Warren 1993, 219-20; Knappett 1999.

⁹ Coldstream & Huxley 1972, 285.

¹⁰ Wiener 1984, 20-5; Gillis 1990b; Niemeier & Niemeier 1999, pl. CXVIII d; Schofield 1999.

resent Minoan influence at Troia in the sphere of craft.¹¹ Presently 16 flat, ovoid, grooved loom weights of Minoan type, but made of local clay, have been identified at Troia from the excavations of Blegen and Korfmann.¹² Some similar specimens were unearthed earlier by Schliemann¹³ and Dörpfeld.¹⁴

The small number of grooved loom weights of Minoan type at Troia,¹⁵ the fact that none of them were found in sets suggesting actual use of the Minoan loom, and the peculiarities of some of the objects, (*i.e.* carefully burnished surface)¹⁶ may suggest that the grooved loom weights were probably not connected with the introduction of Minoan weaving technology at Troia, at least not in the early stage of their appearance.¹⁷ It is suggested below that the objects may have been more than purely functional at Troia.

The area of Troia has revealed two objects which relate to the sphere of cult. A bronze statuette of a dancing female, presently in the collection of the Berlin Altes Museum, is a chance find lacking a context ("area of Troas") and probably found in the 19th century.¹⁸ The object is most likely of genuine Cretan workmanship, dating from MM III – LM I, executed in the "flamboyant" style apparently characteristic of only to two workshops in Crete – Tylissos and Hagia Triada.¹⁹ Most of the recorded examples in the Aegean have been found in sanctuaries as votive offerings.²⁰

The context of a Minoan jug,²¹ excavated in a simple grave dating to the Troia V phase and accompanied by a simple bowl of a local manufacture²² adds nothing to information concerning the possibility of Minoan cult practices at Troia. In the Aegean, however, this type of vase is closely related to cult.²³ Although the two objects may hint at a powerful ideological Minoan influence in the NW Asia Minor, no information about their actual use at Troia can be provided.

Transport and trade with Minoan products are visible at Troia through the presence of at least four Minoan transport stirrup jars of coarse, oatmeal fabric, already published by Blegen.²⁴ The vases may have served to transport unidentified Minoan agricultural products²⁵ to Troia. The fact

¹¹ Becks & Guzowska 2004; Guzowska & Becks 2005.

¹² Becks & Guzowska 2004, catalogue nos. 1–16, with references to the Blegen publication.

¹³ Schmidt 1902, nos. 8132–8134, 8144–8153, 8157–8159, 8160, 8161, 8162, 8163.

¹⁴ Dörpfeld 1902, 399, fig. 391.

¹⁵ This fact may also be related to the relatively large degree of destruction and disturbance of the Troia VI layers, only small percent of which has been excavated; *cf.* Becks & Guzowska 2004.

¹⁶ Becks & Guzowska 2004, cat. nos. 2 and 16.

¹⁷ In the 13th century, when the derivative, trapezoidal grooved loom weights appear at Troia, it is likely that Aegean weaving technology was already employed at the site and Troia may have been an important weaving center; *cf.* Guzowska & Becks 2005.

¹⁸ Verlinden 1984: 190, no. 33, pl. 16; Sapouna-Sakellarakis 1995: 89 no. 153, pl. 13. In a discussion following the presentation of my paper Prof. Yannis Sakellarakis has suggested that the figurine "travelled" from Crete or the Cyclades to the Troad in modern times, as a result of looting. This hypothesis cannot be challenged since the figurine has no context.

¹⁹ Sapouna-Sakellarakis 1995, 125–8; other examples of the style were catalogued under the numbers 27, 40, 46, 100, 101, 109, 122, 123, 124, 133, 147, and 152.

²⁰ Verlinden 1984, 51–5.

²¹ I am very grateful to Prof. Yannis Sakellarakis for directing my attention to the possible religious significance of this object at Troia.

²² Korfmann 1997: 33, esp. n. 11–13, no. A7.1025.1, figs. 31, 32.

²³ Similar jugs are presented before the goddess sitting on the Tiryns ring. MacGillivray at Knossos quotes parallel jugs from among the re-deposited material from destroyed structures near Kouloures (MacGillivray 1998, group E, 33–4, pl. 90–91, nos. 542–5). A faience version of the shape, also with a spiral decoration on the main body, was found by Evans in the Temple Repositories at Knossos (Panagiotaki 1999, 91, no. 194, fig. 22, pl. 15a). The shape is also later repeated in metal at the Shaft Graves at Mycenae (Karo 1930–33, fig. 40).

²⁴ *Cf. supra* n. 2.

²⁵ More fragments of Minoan transport stirrup jars were identified during the last few years in the course of the project aiming at identifying pottery imports at MBA and LBA Troia, partly financed by INSTAP. Other imported pottery fragments identified as coming from the Minoan Crete or the islands under Minoan influence may possibly be related to different spheres of activities discussed in the text: they may belong to the household, make physical evidence of trading contacts, relate to some elements of Minoan cult practices or reflect a complex network of social status symbols. The conclusions about their function are only preliminary and need to be treated with caution. The project continues and the preliminary results will shortly be published in a series of articles in *Studia Troica*. I am very grateful to the late Prof. Korfmann for allowing me to mention the unpublished material here.

that the shape was imitated in local fabrics²⁶ may imply that the understanding and role of the Minoan containers at Troia went beyond their mere contents.

Several imported and imitated, Minoan and Minoanising artefacts in Troia may be associated with life and symbolism of local elites. The above mentioned stone lamp²⁷ and a fragment of a blossom bowl of steatite date most probably to LM I.²⁸ Other objects: a plaque of ivory with the characteristic Minoan tricurved arch motif²⁹ along with fragments of alabaster discs and vessels³⁰ as well as marble pommels³¹ may be generally related to elite iconographies in the Aegean, although it is impossible to state if the impulse came directly from Crete.

The brief review presented above reveals that small quantities of the objects at Troia were imported from the Minoan world or imitated Minoan characteristics. This small number contrasts with the surprisingly wide variety of activity spheres to which they might be related. How can this apparent paradox be explained?

It is possible that Minoan imports and imitations in Troia did not actually function in the various spheres of activities with which they would normally be connected. Firstly, they all have qualities which do not match the characteristics of comparable objects in the Minoan world: "conical cups" are scanty, the surface of grooved loom weights is carefully burnished, cult objects are not found in religious contexts. Secondly, the adoption of Cretan cultural traits at Troia is not, in the initial stage of their appearance during Early and Middle phases of Troia VI, accompanied by visible processes of technological or cultural change. The Minoan imports are probably accepted for their affinity to existing cultural practices and not as novelties which could change social actions.³²

It has been noted many times in previous studies on the objects out of their primary context that artefacts often acquire new roles and meaning when they move beyond the boundaries of the society of the producer and primary consumer, and are integrated within the material culture of other society.³³ The social identities and values of the ob-

jects are arbitrarily ascribed by the user and are re-defined in new social conditions.

It will be argued that at Troia, at the beginning of the Sixth Settlement,³⁴ a new social situation created a plausible climate for adopting and re-defining certain cultural traits borrowed from the Minoan environment. The transition between the settlement phases V and VI at Troia is marked by rapid social changes due to the formation of a new elite. The economic and social background which may have initiated these processes is beyond the scope of the present study, but we can trace their consequences in striking changes in Troian material culture in this period. Although the central part of the citadel, where the ruler's dwelling was most probably situated, had been erased in later

²⁶ Blegen *et al.* 1953, 74, no. 35-473, fig. 331, *cf.* also nos. 34-320, 35-473, fig. 331, fragments no. 3 and 4 on fig. 388 (in Grey Minyan) and 38-1237, fig. 331 (in Tan Ware).

²⁷ *Cf. supra* no. 5; Warren registers 6 lamps of this type from Crete and 3 outside Crete dating only generally to the New Palace Period: Warren 1969, 54-5.

²⁸ *Cf. supra* n. 4; Warren 1969, 14-7 type dating from MM III-LM I.

²⁹ Fragment of a box, h. 0.042, w. 0.042, th. 0.003: Blegen *et al.* 1953, 263, fig. 304, no. 35-508.

³⁰ Blegen *et al.* 1953, 123, no. 37-644 fig. 298 a disc dating to Troia VI Early; another example of a complete alabaster disc from a context dating to Troia VI Early of Middle: Blegen *et al.* 1953, 151, no. 33-74, fig. 298. Schmidt records 63 pierced stone discs but provides no illustration: Schmidt 1902, nos. 9282-9324; for the alabaster vessels *cf.* Blegen *et al.* 1953, 208, figs. 296, 298, no. 37-791, dating to Troia VI Middle. Schliemann's collection contained a few fragments of alabaster vessels (*e.g.* Schmidt 1902, no. 7910) and Götze reports that similar pieces were found in deposits of Troia VI (Götze in Dörpfeld 1902, 402). Minoan origin of the alabaster objects at Troia is not certain.

³¹ Blegen *et al.* 1953: 7, 25, fig. 298.

³² This phenomenon in relation to the grooved loom weights has been discussed in Guzowska and Becks 2005.

³³ Appadurai 1986; Kopytoff 1986.

³⁴ Blegen has dated the beginning of Troia VI to around 1800 and equalled it with the beginning of the Middle Helladic period in the Mainland (Blegen *et al.* 1953: 18). Rutter has argued that the Sixth settlement at Troia must have begun already after the start of the MH. The detailed chronology of the beginning of Troia VI is being presently studied by Peter Pavuk, whose analysis will undoubtedly produce significant results.

Greek times,³⁵ other elements of Troian architecture at this time, like the massive and continuously re-modelled citadel walls³⁶ and large, mansion-style houses in the citadel,³⁷ may hint at a development of a new social stratification allowing mass-labour to be organized and employed. The appearance of marble pommels³⁸ suggests the use of ceremonial and decorative weapons which could have served as power emblems. The sudden and notable increase in the proportions of horse and fallow deer bones among the animal remains at Troia VI³⁹ indicates that horse riding and hunting became elitist pastimes with newly ascribed social meaning.⁴⁰ Moreover, ninety per cent of the pottery shapes at the beginning of the Sixth settlement are new and are mainly connected with drinking and serving, perhaps suggesting that ritualized feasting was brought into play as an important status indicator.⁴¹

It is thus likely that all Minoan and Minoanising traits in Troia had only one addressee and consumer: the local elites. Minoan cultural traits could play a role in a package of “power insignia” by which the new Troian elites reinforced their status as a group. The imports were incorporated in the already existing system of elite consumption and served additionally to give international status to the elite. The adoption of Cretan status symbols may have reinforced the ties of the Troian elites to other elites in the Minoanising world, thus contributing to the maintenance of the regional power structure.⁴²

It may be useful here to use two definitions coined by Susan Sherratt for the cultural context of the imported, added-value products (which is the case for most, if not all, Minoan imports at Troia): ‘sub-elite’ and ‘substitute-elite’. Sherratt defined ‘sub-elite’ as a provision of “acceptable, exotic, yet non-convertible ‘placebos’ for social groups whose means or status exclude them from participation in high level exchanges or otherwise limit their access to the kind of genuinely elite material and goods”. ‘Substitute-elite’ “substitutes for elite goods in what may otherwise be more or less elite context”.⁴³ As Sherratt has also pointed out, the elites in local, regional, and interregional contexts are not equal⁴⁴ and the adoption of foreign products

and their imitation in ‘sub-elite’ and ‘substitute-elite’ contexts may serve a complex process of negotiating interregional status.

Similar strategies of adoption of cultural innovations in a society whose structure was re-defined through a series of economic and social changes, has been discussed by Jack Davis in the already mentioned volume “Minoan Thalassocracy”, using the example of Minoan cultural traits in the Cyclades.⁴⁵ Increased investments in ideology by the newly formed elites was tightly related to the growing economic and social complexity of the islands, reflected in increased social stratification, specialization in craft production, and accelerated competition in the marketplaces. The examples of elites reinforcing their newly gained social status with imports and imitations from another cultural sphere can be multiplied. The phenomenon of the Shaft Graves can serve as an illustration of similar practices, only slightly preceding the development of the Troia VI elites.⁴⁶ The study of Mycenaean pottery imports in Cyprus in the 14th and 13th centuries has concluded that “the dinner services and pictorial style were appropriated by the élite as

³⁵ Blegen *et al.* 1953, 6.

³⁶ Blegen *et al.* 1953, 5–6; 81–113.

³⁷ Blegen *et al.* 1953, 6; *passim*.

³⁸ *Cf. supra* n. 29.

³⁹ Uerpmann 2003: 256, fig. 1.

⁴⁰ Uerpmann notes that, although environmental changes may be partially responsible for the increase of amounts of fallow deer bones, hunting was certainly an activity of social importance at Troia, this being suggested by large proportions of wild species among sanctuary offerings, as well as presence in Troia of the species absent in the immediate vicinity of the town, probably hunted during organized, long distant hunting expeditions, which could not have subsistence value, because the nutritional values spent during the expedition overcame the gain (Uerpmann 2003, 256).

⁴¹ *Cf.* Dietler 1990; also Tsipopoulou & Rupp 1999. The possibility of introducing ritualized drinking as an important social action at Troia at the beginning of the Sixth settlement is a preliminary idea which needs further extensive studies.

⁴² *Cf.* Sherratt 1999, esp. 174–94 for a thorough discussion of these processes.

⁴³ Sherratt 1999, 184.

⁴⁴ Sherratt 1999, 184.

⁴⁵ Davis 1984.

⁴⁶ *Cf.* Dickinson 1984; Graziadio 1991; Voutsaki 1999.

status symbols to define their own exclusivity".⁴⁷ In a later period, when after *c.* 500 BC a steady increase in the Etruscan population was accompanied by the development of increasingly complex social structures, society adopted certain elements of Greek material culture.⁴⁸ In all these cases the assimilation of readily available patterns saved the local elites from slowly developing indigenous status symbols and, at the same time, symbolically related their power to the systems probably widely acknowledged in the eastern and central Mediterranean. It is worth mentioning that not all adopted cultural patterns relate to products with a convertible value, like raw metals, but rather concern entirely value-added commodities, whose value was as objects of social re-negotiation.

Even modern times can produce countless analogies to these phenomena. A walk in the streets of Moscow where, at a distance of some 3000 km from the centre of fashion, Paris, more Chanel boutiques can be seen than in nearer Berlin, shows that the search for symbols of social status among newly born elites can stretch over great geographical distances.

The question remains why, of all choices, it was Minoan symbolism, design and ideology that supported the newly formed Troian elites. In fact the Troians probably had rather limited options to hand. Minoan presence at Mikro Vouni at Samothrace⁴⁹ and probably also on Lemnos,⁵⁰ which coincided with the development of the new elites at Troia, was probably a source for ready-made social patterns available literarily at the gates of Troia. Or maybe the Minoans were just en vogue.

⁴⁷ Steel 1998, 296; *cf.* also Keswani 1989.

⁴⁸ Arafat & Morgan 1994.

⁴⁹ Matsas this volume; *cf.* also Matsas 1991; 1995.

⁵⁰ Boulotis, this volume, *cf.* also *BCH* 120.3, 1996, Chron. 1285, fig. 241; La Rosa & Cultraro 1997, 152-3; Bernabó Brea 1976, 335-9.

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The Minoans in Samothrace

Dimitri Matsas

Abstract

Earlier and more recent evidence from the excavation at Mikró Vouní has confirmed that Middle Bronze Age Samothrace formed an interface between the north-eastern Aegean region and Minoan Crete. While the earlier data (stone vase fragments, administrative documents, balance weights, sealings with hieroglyphic seals, Linear A) have suggested a remote Minoan trading post on the island connected with a Cretan palace's activity,

recent excavation and a closer examination of the material confirmed that this interaction had a more profound impact on the islanders' life. However, the limited excavated area doesn't permit definite answers to our questions concerning the character of the Minoan presence in Samothrace, but what we do get at the moment are some glimpses of a more extensive, probably a more intensive too, phenomenon.

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Discussion after Sunday's sessions

- Tsipopoulou** (to Boulotis): First, regarding metallurgy: it seems you interpreted evidence for metallurgy that you have found in that room as evidence for metallurgy taking place there or that the various objects connected with metallurgy were stored there. Of course, we know that one cannot practice metallurgy in a closed area and within a settlement because there are these poisonous gases.
- Boulotis** It certainly was an open area, like a court. For me it would be strange to find a metallurgical installation inside a settlement. But we do have evidence from Mesopotamia that metallurgy could be practiced inside a settlement. The area and its contents are quite new discoveries (October 2004), so we still have to study it more carefully.
- Tsipopoulou** Secondly, you seem to see a pattern since you connected it with Samothrace; yet, if I understood correctly, what Dimitris Matsas found there was Protopalatial (MM II) in Minoan terms. But your material is Neopalatial, although not of the last phase of the Cretan Neopalatial, LM IB; rather a sort of transitional MM IIIB–LM IA.
- Boulotis** Yes, we have some sherds that appear to belong to MM IIIB, while other sherds, some of them imported, are probably LM IA. There is no LM IB.
- Tsipopoulou** You have LM IB pottery, Marine Style etc., from other areas, but this seems somehow different. This is not after the LM IA destruction. Your evidence of influence of the Minoan palaces does not extend beyond the LM IA phase. A third point I would like to raise is the presence of many loom weights all over the site. Do you think the weaving was practiced by local women, using their local method, and that at some moment they suddenly changed to the Minoan method with Minoan type of loom weights?
- Doumas** This is a subject that can be discussed in the General Discussion this afternoon.
- Marthari** Are the strange flask/amphora and the conical cups of local production?
- Boulotis** The conical cups must be locally produced. The flask is really enigmatic, combining the flask shape with the oval mouth. I think the fabric is local, slightly polished. It fits into the category of local production.
- Marthari** I could make a suggestion about it. I have noticed that it is characteristic of the pottery workshops outside Crete that produced 'Minoanising' pottery to create new combinations of Minoan types in ways never attempted in Crete where they knew the rules. Locally, they are not aware of rules, so they create new shapes. The flask

shape, which we also have at Akrotiri, is here combined with an oval-mouthed amphora shape.

Boulotis I did not have time to find good parallels, but in the context of our excavation it is a unique piece. To me the most important point about the vase is the red lustrous surface with incisions filled with white material, typical of the Koukonisi luxury wares. The quantity of this material is impressive, with its very baroque shapes. Blegen mentioned a sherd of this in Troy VI early. In Poliochni, there is just one sherd. But it seems that for several centuries in the Middle Bronze Age – it does not cover a complete phase – Koukonisi produced this type of ware, at least for the north Aegean. I am looking for Anatolian parallels.

Niemeier Massimo Cultraro brought us back to the Early Bronze Age. This afternoon we have to discuss the problem of changing trade patterns. You demonstrated convincingly that we have a very different trade pattern in the Early Bronze Age from that of the beginning of the Late Bronze Age. You showed us that the Cyclades are a mediator between the north and the south, and that tin-bronze metallurgy comes from the north-east, as J. Muhly has argued in a recent paper. This brings us also to the question of who imports the tin which probably comes from Central Asia. In the north-east we have not only Troy, the maritime Trojan culture, but we must also think of important players on the islands. And remember, we have the Mari texts and there we learn – either at the end of the Old Palace period or just at the beginning of the New Palace period – that we have the Cretan agent sitting in Ugarit acquiring tin from the agents of the palace of Mari. So here Crete appears to be an importer of tin into the Aegean. This is a major difference between the Early Bronze Age and the beginning of the Late Bronze Age. The influence of the northern Aegean on Crete seems to me, at least from what you have shown, to be somewhat superficial: we have no 'Poliokhnization' or 'Trojanization' of Crete. The contact is probably indirect, via the Cyclades.

Michailidou You spoke about this north-south axis: did the technology of alloying tin travel down this axis, or just the tin itself?

Cultraro In my opinion, I think that technology of alloying tin and tin travelled together along this north-south axis.

Michailidou Copper ores, of course, can be found in many places. We conclude that tin was brought from this area since real bronzes (that is, tin-copper alloys) were produced at an early stage. As far as I know, we have not identified any actual sources of tin. We know tin, probably coming from Afghanistan, was imported through Ashur to Asia Minor, to the Old Assyrian emporia like the one at Kültepe. And we know of tin sources in the Taurus mountain region, but we can only identify active sources in this area in the Early Bronze Age. In the Aegean, we see the technology but we know nothing of the source of the tin unless they were co-operating with the Old Assyrian traders or others coming from the eastern Aegean coasts.

Cultraro New data come from Caucasus. Some of the tin-bronze artefacts from Mound III,

Catacomb Tomb n. 11 at Velikent in Daghestan (Maikop Phase I – Middle of Third Millennium BC), fall on the same cluster as the early tin-bronzes from Troy II and Poliochni in particular (L. Weeks pers. comm.).

Papagianopoulou I would like to ask Boulotis for some information concerning the introduction of the potter's wheel at Koukonisi. And why do you suggest that the potter's mark is an indication of southern influence?

Boulotis In Keos we have two or three abnormal potter's marks as early as the Early Bronze Age. We appear to have great stimulus from Crete in Keos V and VI. At Koukonisi, all the potter's marks come from the end of the Middle Bronze Age and the beginning of Late Bronze Age I, the equivalent of MM IIIB and LM IA.

Papagianopoulou In Thera, where we are studying the potter's marks, there seems to be a great drop in potter's marks after the Middle Bronze Age. It would be interesting to ascertain whether this is part of the same phenomenon, because you say that at Koukonisi they do go on into the Late Bronze Age.

Boulotis At Koukonisi we have evidence, as early as the start of the Middle Bronze Age, for the use of the potter's wheel for small open shapes. Closed forms remain hand-made until the end of the Middle Bronze Age.

Papagianopoulou Regarding Thera, Marthari placed the introduction of the wheel in later Middle Cycladic, but we have discovered that the bridge-spouted jar from Agios Ioannis Eleimon, which is wheel-made, belongs to an even earlier phase. One thing that you could look into is whether the introduction of the wheel is connected with the introduction of Minoan shapes.

Boulotis No, the earliest use of the wheel is definitely earlier than the importation of Minoan pottery.

Doumas We must not forget that the potter's wheel was introduced to Troy long before this. Do not expect ex Creta lux for everything!

B. Hallager (to Cultraro): I was wondering about the interesting murex shell theory. I heard that David Reese is studying a lot of murex shells from a site in SE Crete. So my question is: did they not have enough murex themselves?

Cultraro First of all, as an archaeological problem, we are able to date exactly the first appearance of murex shell in the northern Aegean. According to recent evidence from Poliochni, the exploitation of murex starts in the island in the later Early Bronze Age or early MB I (Poliochni Yellow Period). This evidence is comparable with that is documentable in the same period at Lesbos. I don't know the relative quantity of murex found in the northern Aegean versus the SE of Crete, but we probably have two specific clusters, one in the southern Aegean, with Crete, and a second area including the islands of north Aegean. It is worth noting that in Hittite texts, there is a clear mention of purple dying in the islands of the Ahhiyawa kingdom. This

could be one of the reasons for the interest shown in the northern Aegean by the Hittites and the Mycenaeans – and by the Minoans before them.

Boulotis (to Guzowska): In Koukonisi MM IIIB–LM I, there were fragments of a large vase with plastic bands around the waist and plastic rivets. This is very similar to your example and constitutes a very important link between this category of ceramics and the other which includes the bridge-spouted jar with exactly the same brownish-yellow polish. I have to underline that the enigmatic flask from Koukonisi, with its combination of motives from the south Aegean, *e.g.* Crete, and Anatolia, is slipped with exactly the same colour. In this phase, together with other Minoan elements, notably the ceramics, we have a great amount of pottery with these plastic rivets, not only at ‘functional’ points, imitating metal vases, but as exaggerative, decorative motives *i.e.* large plastic rivets. I think that this category of ceramics, the bridge-spouted jar with exactly the same burnished surface, and the other with the wavy bands, really have very good parallels in our MM IIIB–LM IA level.

Guzowska I am glad to hear this because we should expect to have the imports from Poliochni and Lemnos. I haven’t mentioned this, but I also have some small sherds that in terms of the fabric are quite similar to material that Bernabò Brea published from Poliochni, but as you know the publication is old and in black and white and it is very hard to say exactly, so this still has to be checked.

Cultraro I hope that you could extend your project towards the islands of the northern Aegean, because we have discussed for a long time the possibility of transmission of technology and pottery from western Anatolia to the islands or in the other direction. About a specific shape, the bridge-spouted jar that you mention is locally produced: this interpretation is confirmed by the evidence of Emporio on Chios, where Hood suggested that this shape was produced in Emporio I. I have reassessed the archaeological context where the jar was found and I attributed the level to the Violet Period (Late Bronze Age I-II), where some TE I-II Aegean-Mycenaean pottery was found (M. Cultraro, *Indizi della sopravvivenza di Poliochni (Lemnos) nella media e tarda età del Bronzo*, in *Studi di Preistoria e Protostoria in onore di L. Bernabò Brea* (Quaderni del Museo Archeologico Eoliano di Lipari, Suppl. 1), Messina 2001, 213–40).

Sakellarakis I want to say a few words about the figurine. Today, not one Aegean archaeologist would think that the figurine came from Troy. Efi Sakellarakis in her book, *Die bronzenen Menschenfiguren auf Kreta und in der Ägäis* (1995), has proved that it did not. It was probably acquired in Smyrna. I know a good deal about the smuggling trade, not only of today, but even of the 19th century, and of forgeries; we know that Smyrna was a centre, even for the islanders, and that is the way it came to Berlin. Evans acquired Minoan objects from Smyrna. The ‘Volantrock’ is a common theme and it occurs on Theran wall-paintings; it is a Cretan-Mycenaean feature, so I don’t see any reason to use that to suggest cult activity at Troy. But on the other hand, I have been struck by the ewer, which is a libation jug. Every scholar of Minoan religion would recognize it immediately; Martin Nilsson showed us that it is a typical vase used for libation. That seems noteworthy. Why was it found in Troy?

- Guzowska** I repeat that there is a problem with the figurine. We just don't know where it comes from and we will never know. I know the ewer is clearly a libation vase. The question is why it was found in such a poor grave. The grave has just this ewer, and a very small bowl.
- Sakellarakis** If the bronze figurine comes from Anatolia, certainly it comes from Milet, Miletus, Miletos – that is the point.
- Niemeier** I take it with pleasure. I am also sceptical that this is a fake because we find those statuettes in real Minoan contexts, or in contexts that are very close: Keos shows much more Minoan influence than you can show at Troy. The libation jug is an important point. If I remember correctly it was a child's grave. I would also want to comment on pillar cults: I agree with everything you showed, except seeing Minoan influence in pillar cults. We don't know what a 'Minoan pillar cult' really is, nor do we know if a 'Minoan pillar cult' ever existed. We have rooms with pillars that are probably cult rooms. But there is no indication that the pillar was the focus of the cult. I think it was Spyridon Marinatos who argued that these may be architecturalized caves with stalagmites. At Troy, the pillars are by the gate – this has no parallel in the Aegean. I think it was Manfred Korfmann who has argued from Hittite literary sources that this is an Anatolian phenomenon – and you saw it in the reconstruction, where there are these faces on top of the pillars. We have baetyls all around the Mediterranean, from Byblos, from the Levant. So I would see these pillars in front of the tower gate more as an Anatolian phenomenon, than Minoan or Aegean.
- Guzowska** I am not exactly sure about this, but this is the only indication we have of cult at Troy in this period.
- Momigliano** I would like to make a point that follows on what Prof. Sakellarakis has said. This is a libation jug, but it is found in a child's grave. You have Minoan objects, Minoanising objects, but do you really have Minoan behavior? No. The context can tell you about the behaviour. Also, you're mostly talking about the elite. I would like you to talk a little bit more about the 'Lumpenproletariat' of Troy ...
- Guzowska** Loom weights are very good evidence for this. They do not make sense. At least we did not find a sense. There are just a few of them, and as you have seen, a couple of them are so well finished, so well burnished, which is something you don't do with loom weights. I don't really believe that this groove is important technologically, as Jill Carrington-Smith has argued. I don't think this is the reason. I don't think they were using them at all.
- Momigliano** Would you go so far as saying that although these are Minoan-type loom weights, they are not necessarily used as such?
- Guzowska** No, but whatever you say, please don't forget the plan of Troy I showed you. We are missing large parts of the citadel. I wouldn't say they weaved in the Minoan way. They are simply Minoan-type loom weights.

- Tournavitou** I would like to make a very short comment on the possible Kytheran origin of some pithos sherds you showed us. I would not put my life on the line for any kind of sherd, but the clay that you showed us here is not of the consistency of 99% of material made of the miraculous clay from Kythera. 98-99% of the sherds have much redder clay with more micaceous inclusions.
- Guzowska** That was just the photograph. If you picked up the sherd you would see it sparkling with mica and the clay is reddish.
- Tournavitou** Of the pithos sherds that we have at the peak sanctuary, only 1% or so are made out of red micaceous clay. The rest is plain coarse clay. So it is a very small percentage confined to this ware. And I just wondered why that would be transported abroad. This kind of clay is used mostly for cooking ware, tripod cooking pots and the like, but still only a very small percentage of the total. So to find in Troy a pithos made out of red micaceous clay from Kythera just strike me as a little surprising.
- Guzowska** There isn't just one pithos. There are actually several sherds from different locations and they represent about ten pithoi.
- Tournavitou** Even worse!
- Guzowska** The point is that from this grave we only have coarse-ware sherds. We tried to compare the petrography: macroscopically, it looks very much like Kytheran. But I am not a petrographer, so for more information you will have to talk to my colleague. This particular pithos has some inclusions that have not yet appeared on Kythera.
- Tournavitou** Not present in the existing pottery collection?
- Guzowska** Quite. But I have to admit that I do not understand the implications of this. The fact that an inclusion is present in this sherd, and not in the others, I do not know how far that affects the issue. It is about 95% similar to Kytheran clays; 5% seems different.
- Touchais** Concerning the presence of the Minoan jug in the grave, we have this same phenomenon in Grave Circles A and B at Mycenae; thus the same model of an elite group trying to stress their own power with reference to Cretan civilization. It is not just a fashion, but in a broader sense, it is a religious practice but not in a religious context. It is exactly the same in Mycenae.
- Boulotis** I am not certain that this kind of jug is only for religious rituals. It is very simplistic to interpret this kind of precious jug exclusively within a religious/cult framework. I should also refer to the conical rhyta which are not only for cult practices; they are also used as funnels in everyday life and can be beautifully decorated.
- Doumas** But this could be considered luxury item. It is not an object of mass production. In this respect, I would like to make a point on the social hierarchy that you mentioned. I don't think it is a new phenomenon. It goes back to the Palaeolithic when

every group had a leader and the means of expression change. We find material evidence of this hierarchical distinction in the form of luxury commodities, behavioural patterns (which we do not know), in different things. So one has to be very cautious as to how the material evidence is interpreted.

Guzowska The way I see it, at the very end of Troy V and the beginning of Troy VI, there is a rugged social change, the character of which we still do not completely understand. Luckily, at the same time, the Minoans are very active in the general area – we see their activities at Koukonisi, on Samothrace, and at Troy. Unlike what many, including Manfred Korfmann, have said, Troy does not really have as strong a connection to the Hittite world, which could be another powerful source of ideological symbolism, as to the Aegean world.

Doumas We have Minoan objects found here and there. We do not know whether they were brought by Minoans, or by other islanders, or were brought directly or indirectly through in many different stages. This is the archaeological evidence and we are trying to find out what it means. We don't know whether the ewer was brought for its own sake as a luxury item, or because it contained something important.

Guzowska This particular shape is not very practical for transportation.

Doumas But with a luxury content?

Guzowska Unfortunately it cannot be analyzed because the vase is in the Canakale museum and is not accessible for analysis.

Doumas There are many possibilities concerning how it reached the grave.

Bouzek Many years ago there was a similar discussion about the Cypriote Base-ring juglets, containing something used during ritual, some substance, perhaps an opiate. Perhaps the contents of this vase were indeed important.

Chrysoulaki I would like to stress the question about an object used in the ritual and then transformed for domestic use. I don't think it is so. For the rhyton, we can refer to the R.B. Koehl's book *Aegean Bronze Age Rhyta* (Philadelphia 2006): we cannot characterize every object with two holes as a rhyton. There are various strict conditions that have to be fulfilled for a vessel to be interpreted as a rhyton. Vessels that have an entrance for the liquid and a way to take it out can be domestic, everyday vases – but these are not rhyta. As far as transport is concerned, this kind of vase (the Troy ewer) containing something, perhaps a very good wine, is not a good shape for long distance voyages. That's why you have shapes specially designed for transport over long distance. Thirdly, I don't think that if we have a ritual vase transported from one place to another where they may not have known exactly how it should be used, we can say a great deal, particularly when there is just one vase.

Guzowska I disagree with this point, although it is not exactly related to this paper. We have historical examples of sacred objects being looted and used elsewhere for secular

purposes – the looting of Constantinople is a good example, or cases from the Holy Land. The question is that we don't know exactly how this vessel was used. It could be taken as evidence for Minoan cult practices at Troy. But it may also have been used in a purely secular way. We know only where it was deposited at the end. I would not exclude, for theoretical purposes, that it could have been used in a secular context, and that it is just a vase that comes from Crete, a very beautiful object, something that decorates the table or the house of the owner.

Doumas Many years ago I went to Japan and brought back a tea ceremony set. Does this mean that the Athenians or the Greeks were there, or that the Japanese were active in the Aegean, or that I introduced the tea ceremony in my home?

E. Hallager With regard to the seal impressions from Samothrace, you certainly have got evidence for Minoan administration. I think it is a very convincing case. I was not aware of the direct sealing you showed from the northern sector. The old ones you say are of local clay.

Matsas This direct sealing is not local.

E. Hallager That is what I wanted to ask you. It looked to be foreign although it is a very well-known type.

Matsas This one has a completely different appearance from the other sealings. The clay has a reddish colour. It is certainly imported.

E. Hallager It is difficult to judge from photographs but it looks like one of those that have been enclosed around something. Are there string impressions on the inside?

Matsas Unfortunately we have not been able to take a cast because the object is very fragile. It is very small, about 2 cm in length.

E. Hallager As you know, we have many examples of this kind from Crete. And we also have the comparanda from Keos. One brief question: your loom weights – also very interesting with the incisions – are they of local clay as we have seen elsewhere?

Matsas They are local. They are another example of the Minoanisation of the site.

Niemeier I just wanted to comment on one seal you showed with the concentric circles. I have seen a very similar one from Miletus. This is a rectangle, while ours is a half-cylinder, but the motif is exactly the same. You showed a comparison from Ayia Irini, which comes from the Malia Workshop. So your piece probably comes from Malia. This is very typical for Malia, the material and the motif.

Matsas Ingo Pini certainly believes it is from Crete. Its date is MM II.

Niemeier Yes, that is the date of the Malia Workshop. It is very exciting that your roundels are of local clay. This means that people had the seals on Samothrace and were sealing with

Cretan seals. This is not just a token that has travelled somehow, but Minoan administrators were sitting on Samothrace and sealed these roundels. This is a very important point: a certain indication for Minoan presence or at least agents of the Minoan presence.

Doumas This is evidence for the importation of a system.

Niemeier This is such a typical Minoan phenomenon.

Matsas I think we have to make a distinction between Samothracian and Cretan seal owners. The Samothracian seal owners in the last phase of the settlement own only clay seals. These imitate, probably not very successfully, hieroglyphic seals.

Niemeier That is an important point.

Boulotis I just want to underline that this is a very interesting phenomenon. Two settlements so close to one another, Koukonisi and Mikrovouni, have very striking similarities in the ceramics especially at the end of Troy V and in the early Troy VI, but the differences are also of interest: very local wares and styles. For example, I saw many sherds (from Mikrovouni) that are absent from Koukonisi, and this is a very good example of how to define local ceramic workshops and examine the trade routes and so on. On another matter, I am really impressed by the presence of mini-documents, noduli, nodules, sealings, seals, and I think Dimitris Matsas has excavated only a small area, perhaps two per cent, and I think we have to expect really very impressive results in this respect.

Doumas We may find them at Koukonisi, too.

Macdonald What was the context of ΣK 512, the bridge-spouted jar?

Matsas The context of the bridge-spouted jar was the same as that of the serpentine seal with the tubular drill ornament – on the same floor – it is late Troy V.

Niemeier And the seal is MM II.

Matsas Yes, but this means nothing.

Unidentified Did you find any evidence of metallurgical debris, such as copper alloys?

Matsas Yes, there is evidence for (the processing of) copper from the last occupation phase, corresponding to Late Minoan IA, the phase also of the documents.

Unidentified Did you find a Minoan-type cooking pots, tripod vessels?

Matsas There are tripod cooking pots, but not of the Minoan type, at least among what we have found so far.

Boulotis It is the case both at Koukonisi and Poliochni that tripod vessels have a long tradition in the north Aegean; they do not need to import the Minoan type.

Final summing up

Peter M. Warren

It is a great pleasure to begin by reaffirming our warmest thanks and congratulations to the organizers of the Colloquium, Erik Hallager, Wolf-Dietrich Niemeier, Colin Macdonald and their excellent team. Given how much it has already achieved it is worth reminding ourselves that the Minoan Seminar began only one year ago – its birth was at a dinner party given by Colin in his beautiful home here in Athens. We wish it continued success and progress, something we can be fully confident about since we are in the hands of dedicated Minoans, ancient and modern.

Much new and highly interesting material has been presented. So what are we to make of it? In the presentations we have been offered strikingly different interpretative models and approaches. With Wolf Niemeier we have (as too, we certainly would have had from Malcolm Wiener) a picture of the high civilization of palatial Crete exercising a powerful presence in the Aegean, albeit in varying forms. Others are less sure of the strength of this Minoan vision, less entranced by the *ekstatiko orama* (to quote another scholar). They look hard at each situation and find a local picture, each with more or less Minoan influence. They find almost infinite variety in a kaleidoscope of networks. So how do we progress or produce a new synthesis (which in any case tomorrow's new finds will change)?

First, with Nicoletta Momigliano, we need to ask just what we mean by "the Minoans". Of itself the term does not convey very much beyond its use for the inhabitants of Crete in the 3rd and 2nd millennia BC. What then of 'Minoans' outside Crete? One might suggest a definition along these lines: a distinctive (Minoan) way of behaving expressed in distinctive material culture terms, for example the total package we see when we look at, say, Zakros or Miletus Period IV, or at, say Juktas or Aghios Georghios Sto Vouno. At these, and of course many other sites, there is a highly distinctive and recognizable way of doing things, composed of all the brilliant elements we know and love, and so need not repeat. Gerald Cadogan once remarked that no two Minoan villas and their contents are the same, but you always know a Minoan villa when you see one.

It follows that we can discuss the Minoans or Minoan influence outside the Megalonesos, saying if appropriate whether we mean Knossians or Phaistians or east Cretans or west Cretans, on many different levels in the transfer of relationships. There is, for example, a simple demographic possibility. Crete, in relation to the technology available for exploiting the environment, was quite 'full' in Late Minoan I, as site distribution in lowland zones has shown. Was this an encouragement for groups to move outside the island?

Next, an off-island dimension more obviously inviting discussion is commerce, exports in order to achieve imports. What did the high civilization of Crete need in order to maintain and develop itself? The basic answer seems easy: metals (as Malcolm Wiener and others have often argued). We note the informative slide shown by Professor Hayat Erkanal, documenting many metalliferous deposits in the

Izmir region, a matter of obvious relevance to Miletus. Beyond metals the Neopalatial inhabitants of Crete desired and sought out many other raw materials, a remarkable range of hard and attractive semi-precious and other fine stones, ivory, fine woods such as cedar of Lebanon, ostrich eggs, murex shells for purple dye (though these were also available in abundance in Cretan waters) and surely a range of now invisible goods (such as the contents of the Melian amphorae in the Temple Repositories) and living creatures. For proof of these desires we see recently the workshop contents of Herakleion Poros or the raw material imports at Mochlos or Zakros. When we say Minoan Crete needed or desired raw materials we of course need to consider, though not at this off-island Colloquium, the internal political and social structures prosecuting the needs and desires.

Next, what were the mechanisms for achieving these objectives? Settlements of Cretans abroad? It has seemed to me, as the Colloquium has developed, that a strong case can be made for directional differentiation. Based on excavation the strongest cases for external settlement seem to lie north-west of Crete, on Kythera, and north-east, at Trianda, Miletus (if Miletus in its Period IV is not a community of people from Minoan Crete it is very hard to know what else could be, in material terms) and, most remarkable of all, given its location, Samothrace. The site of Mikro Vouni introduces a new mechanism for Minoan objectives, the actual emplacement of Minoan administration with stamping, sealing, possibly use of Linear A (well documented at other sites) and weighing systems, on which latter Anna Michailidou, building on Karl Petruso's work, has recently thrown so much light. The exciting finds shown by Christos Boulotis from Lemnos Koukonisi will also certainly promote further evaluation. Another mechanism is the transfer of Minoan ideology and belief; this is clearly expressed in the peak sanctuaries of Kythera and, I would think, Keos Troullos and, after hearing Toulia Marketou building on the proposals of Mario Benzi and Yannis Sakellarakis, Ialysos Philerimos. Meanwhile in the central Aegean directly north of Crete, by contrast, it is hard to see any exclusive Minoan presence. The presence of some Cretans at Akrotiri and Keos, just possibly Melos too, does however seem more likely than a "Versailles Effect" at these places.

If the main object of Cretan off-island interests was the acquisition of raw materials and emplacements abroad were a major mechanism for achieving this should we not see these emplacements as way-stations en route to source areas, especially of metals? Surely no Minoan settled at Mikro Vouni for its own sake, since Samothrace in itself had little or nothing to offer, nor indeed, land requirements apart, did Kythera (unless its deposits of murex shells were of crucial importance) or even Trianda. But all make sense, as too Miletus, as geographically critical points en route to Peloponnesian, western, north Aegean and Anatolian sources of raw materials. That such sites were deliberately selected also seems to be the case from a negative argument, namely the very much slighter evidence for Minoan contact at adjacent sites, such as, for the north-east Aegean, Troy and Poliochni, as the papers of Marta Guzowska and Massimo Cultraro have shown; Ios Skarkos, Iasos, Çeşme and Teichiousa we have seen did have clear Minoan elements, but the extent of any Minoan presence remains a tantalizingly open question. Exploitation of their local resources, such as the famous red marble of Iasos, is a clear possibility. Nor should we forget the evidence of sites and islands referred to by Wolf Niemeier in his introductory paper but not presented as such at the Colloquium, the significance of

which Minoan-Aegean relationships is clear: Chios, Samos, Knidos, Kos, Telos and Kalymnos (Vathy Cave). One thinks immediately of a further example: Aigina.

Commerce of course involves reciprocity, unless Cretan communities or their elites were simply acquiring raw materials without 'payment', which raises questions of the use of power in one or more forms. Crete exported pottery and other fine finished goods in metal, stone, ivory and ostrich egg; it, probably Knossos specifically, also exported its own raw material, gypsum and probably building timber to Thera (Akrotiri). But it is not at all easy to see such finished goods and materials as have survived as an equivalence for the known range of raw materials acquired.

Next, what were the consequences arising from these Minoan interests, apart from commerce? Here we enter on the concept of 'isings', Minoanising in this case, a situation many would think as if not more interesting than the economics of import/export trade. We must surely discuss the reception, adaptation and modification of Cretan forms and the use of the consequent new forms of material objects. Two contrasting examples are (1) the white-on-dark-on buff ceramics in the south-east Aegean, forms far removed from their Minoan originals, and (2) the many new combinations of Minoan and Cycladic decorative styles at Akrotiri and Phylakope. In social terms does not the selective acquisition of goods from outside a community and the use of those goods to create new local forms create status and power differentials among local recipients? Good examples would be the, surely valuable, bronze adorant statuettes, Minoan-type ladles and other stone vases offered at peak sanctuaries, most obviously at Aghios Georgios Sto Vouno on Kythera.

Lying between the export of finished products from Crete and the 'Minoanisings' just referred to is the highly visible transfer of technology, as Manolis Melas reminded us. Many speakers have displayed as significant evidence Minoan types of discoid loom weights (which are standard in Crete from at least as early as Early Minoan II), ubiquitous conical cups, everted rim bowls, fireboxes, lamps and braziers, tripod cooking pots and other artefacts of Minoan form, all in local clays. The social significance of these technological packages (intermarriage?) merits questions.

Crete was the main driver and motivator in all this. It is striking that while the island sought and acquired many foreign raw materials there appears to have been very little transfer of aesthetics or beliefs or styles or technologies or ways of behaving from Aegean to Cretan communities. Economic and social relationships were unequal or asymmetrical, Crete being dominant in the Neopalatial period. Something approaching a reversal of this position is discernible in the relationship of Crete to Egypt, from where both beliefs and goods were received, adapted and modified; but that is outside the bounds of our present discussion.

Finally there is the diachronic factor. An obvious area for discussion is the fact that economic, social and probably political relationships changed. For example, as we have seen, Miletus was wholly Minoan in its Period IV, less so in the preceding Period III; Trianda had clear Late Minoan I B elements but, as shown by Toulia Marketou, was a much more cosmopolitan community than its much more strongly Minoan form in Late Minoan I A.

Let us therefore move to discussion of these themes, economic, social, demographic, political, aesthetic, technological, ideological and the fundamental matter of the mechanisms of operation of the relationships and their diachronicity, as well as other themes I will certainly have omitted.

General discussion

- Melas** The transfer of technology is a very significant matter indeed.
- Warren** Technology is important. I talked to you about the transfer of relationships, and in that indeed I include the transfer of technology, I should have said so – the transfer of technological relationships and what that might mean, whether it might mean anything or whether it might mean a great deal, what is behind it? But thank you indeed for mentioning it.
- Melas** In order to understand social structures, within Minoanising populations, it is necessary to include technology in one's account. Apparently, technology was not borrowed just for its functional merits, but certainly also as an ideology and social strategy relating to to the legitimation of hierarchy and status.
- Warren** It is perfectly correct that behind all of this there is our subtext: what were the social correlates of all of these social forms of behaviour and these different receptions of material things in all those different places? What were the social correlates? This is fundamentally important since we need to recognize that it is people, not objects or material goods, that we are actually trying to understand.
- Melas** A good example for the relationship between borrowed technology and local social evolution was just mentioned by Marta Guzowska. She refers to the transition from Troy V to VI, focusing on a rearrangement of the social structure just at the time when the Minoan products, including Minoan loom weights, enter Troy.
- Warren** Well this is right, and this is exactly what I was just saying near the end of my introduction, that when you receive foreign goods this itself comes to create status differentials and power differentials in the receiving community, because not everybody is receiving it. This was a very fruitful point in our discussions about Aegina that those who have these beautiful things – the same would be true of Cretan objects – are in some kind of a special position. It's not the same for everybody since not everybody is receiving these things; everybody might have loom weights, but not everybody had a beautiful stone vessel or something like that.
- Niemeier** And even people. There is also the political dimension, of course, which is very difficult to analyse from archaeological finds, but I think we all agree that Crete at that time, at least at the beginning of the Neopalatial period was the great power in the Aegean like America is today in the western world. Of course we must also take this into consideration since it goes together with economic power – the flag and trade always go together.
- Tsipopoulou** From our perspective, the Cretan, Minoan perspective, we try to understand the

function of palaces and what they really were. I think we all agree that all this expansion, no matter which aspect we choose to examine, whether cultural or political, is due to the presence of a central authority or authorities. And I would like to ask if we can discern any difference between the Protopalatial and the Neopalatial periods? You spoke about diachronic... but there must be some difference, because there were also changes in Crete.

Warren Many people will speak of this diachronic factor but before doing so maybe we should just remind ourselves that we're discussing the Aegean here, the central and northern Aegean and so on, but if you want them to say where is the best manifestation of Protopalatial MM II material, then the answer is certainly the Levant and Egypt. This is where these beautiful cups and bridge-spouted jars, which are classically Minoan, they are not –ising, they're not imitations or anything, they're straightforward exports, and so there was a very considerable activity in the Protopalatial period; but not in the Neopalatial period as the number of exports to these regions in the LM I is very small. So maybe there was a change in that sense, a change of emphasis perhaps between the Protopalatial and the Neopalatial period.

Guzowska I would like to say that while we are talking about all these factors that you mentioned, we should always remember that they depend not only on the impact of what was coming out of Crete, which I agree was the driving force, but also on the state of the social development of the society impacted by the Cretan elements. Because when we talk about Troy, the impact is on a highly developed, stratified society with a long history; so these people will never get really very Minoanised. By contrast, when the impact is on Kythera, a more or less empty island, you can be what you want; you can be Minoan there, not just Minoanised.

Warren That may be a reason of course why the Minoan impact on Troy was so small, a flourishing culture...

Guzowska Yes, I believe it was limited only to certain spheres.

Melas I would like to congratulate Professor Warren for his perfect introduction and I would also like to stress another couple of points, which are essential for an up to date study of Minoan civilization. Instead of more facts, simplistic culture historical approaches and "scientific" methodologies, what we really need most today, one hundred years after Arthur Evans and twenty-three years after the Thalassocracy conference, are more insights taken from various intellectual fields, like philosophy, including phenomenology and realism, material culture studies, structuralism, and also ideas relating to sociology, Marxist philosophy, sociology and political economy, modern social thinkers like Foucault and Bourdieu, and above all interpretive hypotheses deriving from anthropology, especially borrowing examples and analogues and from ethnography, ethnohistory and ethnoarchaeology, and so on.

Warren Thank you for mentioning these broader perspectives, which are very relevant to what we should be thinking.

Van de Moortel I would like to add to what Marta Guzowska was saying: we should look at societies that came into contact with the Minoans, but also which elements in society, which social classes actually had that contact, and also what impact Minoan influence had on society? Do we see an increase in social and political complexity, which is what often happens when a society of a high order of complexity comes into contact with a society of a lower order of complexity. I thought that the discussion about the libation jug in the Trojan grave was very symptomatic. It is such an isolated find; we really don't know the social class of the child that was buried there; it could be, as Christos Doumas said, just the child of a sailor who happened to pick up the jug.

Guzowska Not necessarily, excuse me, the child was buried inside the citadel. That already shows something.

Van de Moortel Ok, but in your case we need to have a good idea of the society that is receiving...

Warren This is exactly what I meant by this question of the receiving community; it helps to create status and power differentials.

Niemeier I would like to disagree a little bit with you (Warren) when you talk about the problem of the economic expansion of Crete. In the Old Palace period we have to look only to the Levant. In this conference we are presented with an expansion within the Aegean. We have two seals and one sealing at Miletus; more impressive, of course, is what Dimitris Matsas found in Samothrace, and his seals and sealings especially he gave a date MM IIB-MM III, the border between the Old and New Palace periods. We know about the problem of dating seals from their context because they can survive a long time. However, what he has shown, all the impressions on the roundels, is that all these seals are pure Old Palace period seals, particularly the Hieroglyphic seals. So I see that what Dimitris has shown us of Minoan administration in Samothrace appears to me to be an Old Palace period phenomenon. We, therefore, have two sites in the Aegean, where we have strong indications – stronger at Samothrace than at Miletus – that there was at least an economic expansion in the Aegean as early as the Old Palace period.

Momigliano I apologize, but I would like to bring us back to the very beginning. You gave us a definition of the Minoans, which is very much what I said in my paper, a way of behaving, a way of doing things, and I assume – correct me if I'm wrong – by doing this you remove any kind of ethnic connotations; and perhaps we can start talking more about cultural affiliations, especially in terms of material culture, but also symbolic affiliations. And I would like to know how many people agree with these ideas?

Warren Well, the question of ethnicities is, as we all appreciate, a very difficult one. I'm trying not to get too deep into the question of ethnicity, but I do mean this was something that originated from Crete and came from Crete. After all we have the discoid loom weights in EM IIA and onwards, probably in EM I, and you find that this particular way of doing things is already there, so if you want to call it ethnicity in

the sense that it originated in Crete, that is fine. It is at least a cultural phenomenon, but I think it is also more than that. This particular way of behaving, that manifests itself at Miletus, began in Crete, not Rhodes, nor the Argolid nor Aegina.

Momigliano Yes, but then you assume that Crete is a homogenous ethnic unit.

All Not necessarily...

Momigliano Actually I prefer this definition precisely because it got us away from the problems of ethnicity.

Warren I don't necessarily assume homogeneity, I did actually say that we can try and discern whether it's the Knossians who are doing it, or the Phaistians or east Cretans; perhaps not the west Cretans. But on the other hand, a powerful argument for the cultural homogeneity, and homogeneity in belief in Crete, at least in LM I is a very strong argument.

Nikolakopoulou I would like to take this a little bit further and discuss physical presence and what it means – the actual presence of whatever these people are and how we are to perceive this. For example, even if we find the evidence for the physical presence of so-called Minoans somewhere else, what do these people consider themselves to be over there, in Miletus? It's a matter of identity. These people then die, and what do the next generations consider themselves to be? I think this is an incorrect approach; it is about identity. At Akrotiri, you cannot discern a group of Minoans using specific assemblages which clearly contrast with assemblages used by other people living there. So even if these people came from Crete, they are no longer Minoan on this level. They acquired the identity of Therans.

Warren You are very right to raise the question of identity; maybe we should not say ethnicity, but identity.

Momigliano That is the point I was making!

Warren So then we have to ask: how can we test for the continuum of identity? The answer might be if you find, over a period of time, that the same way of doing things is continuing, from period to period, to me that suggests that there is an identity, which is developing of course in relation to the new location of these people. Of course they did not shut themselves off from the Anatolians or whoever, but if you find that the assemblage is being modified, as with the southeast Aegean ware, then something else is going on. That is a new kind of identity, insofar that we can connect identity and material culture. It is quite difficult to determine an identity otherwise, without written texts. But in cases like Miletus, where Period IV has more than one phase, for example, there is a certain passage of time, one hundred, one hundred and fifty years maybe. Kythera, Kastri, had several phases; it wasn't just one period. But the identity, in terms of material culture, appears to stay strong in relation to the original identity. I'm just looking for ways of testing whether we can speak about identity or not.

Sakellarakis Thank you or your fine introduction, Peter, made in your perfect and perfectly understandable English. I think that the discussion has been somewhat sidetracked by details. I hear discussion of nationality or identity, and I am very much afraid that no-one here in this auditorium, not even the two young ladies, can tell us how we can tell identity, how we can demonstrate identity or nationality. (Just one moment, Mrs Tsipopoulou, as I shall talk for some time.) It is very difficult to well nigh impossible. I would be very happy if someone in this hall could tell me if I am Greek, and how Greek, or how English you are. These matters are very difficult to demonstrate for the second millennium BC. Certainly I try to and it behoves us to ask these questions; it is our job as researchers. But researchers depend on 'evidence', that great word, 'evidence'. What is our 'evidence'. The two per cent excavated by Dr. Matsas? In other words, nothing. We all know very well how museums are full of unpublished material and what a small proportion has actually been excavated, even if well excavated. Consequently, the evidence that we do have is of very poor quality in terms of being able to answer these questions. In my opinion, you Peter, Christos and I are very lucky to have lived in two golden ages. When we began, we began in an organized manner – you worked on Minoan stone vases, still today a key study; Efi Sakelleraki worked on dress, I on religion, Cameron on wall-paintings – all still basic works – and Branigan. So, in this way, progress was made in the Minoan archaeology that we are now discussing and concerning which we have learnt so much. I am afraid that now the body of evidence continues to grow every day, as you rightly said, so that we change our minds daily because of this or that new piece of evidence, so much so that we cannot assimilate it all. The only great work that has come out of Minoan archaeology is the CMS, so that we now all know our seals. It is our duty, as the seniors in Minoan archaeology, to steer the younger generation in that direction so that we do not let them ask theoretical questions that cannot yet be answered, since our actual knowledge is really very small, of course not in the Socratic manner of knowing very few things.

Doumas Please, we have to bear in mind that only when we talk about Crete are we entitled to use this distinction: Prepalatial, Palatial and Postpalatial. It's tragic. You see a map of the Aegean where it says 'Prepalatial sites' for the north, in Thrace! The second point is that according to what you said, there are many different categories of evidence relating to our subject: perhaps imports, maybe indirect influences, maybe technology, and the indirect evidence from Classical sources. There I think we have to be very sceptical, too, because we don't know why this information was put into the Classical sources; sometimes it is mentioned once, for example by Herodotus, and then copied by everybody, thus producing a false accumulation of 'evidence', which is not evidence at all. And in this respect, although Folegandros is mentioned in sources, we have nothing Minoan so far from that island, whereas Thera is completely out of the Classical sources. And if these sources had any value, I think that Thera would be the first to be mentioned.

Warren Perhaps it disappeared with the eruption.

Doumas There's also Melos. Is Melos mentioned in the sources as a Minoan colony? In terms of the needs of Cretans, you mentioned metals, and I would add services. The

Cretans have a surplus from their land and they need commodities from the outside, but they needed services to do this. I never believed that Crete had a fleet; they did not need a fleet, and were safe and flourishing on the resources of their land. On the contrary, the wealth and affluence of the islands is nothing but services; it results from services, and therefore I think that one of the needs of Crete was this. And then talking about colonies, we must also find out what was the function of these colonies? We can say 'this is a colony', but why was it needed? Crete was not a poor island that needed to expand, so I do not agree with Warren that it was for reasons of overpopulation. And finally, Crete might be a passive force in the sense that it was for others to who imported ideas or commodities from Crete, taking what they required and then adopting or adapting according to their needs. The force is from outside the island, and it extracts what it needs from the passive source, namely Crete.

Warren The question of services I think is a very interesting one, and certainly deserves attention. I think that you are perfectly correct to say we should ask, if a place is a colony, why it is there; and, I think it was Christos Doumas who had a very good phrase when speaking about Lemnos, calling it an *anagkastikos stathmos* or "station of necessity" *i.e.* these were stations, very critical points for economic purposes to gain access to routes for the command of stone or metal or other natural resources and this very well explains the position of Kastri and indeed of Trianda and of Miletus. Samothrace I'm sure was again an *anagkastikos stathmos* because they were seeking metals from further north.

Niemeier There were many interesting issues I would like to comment on. Of course, I can't resist responding to Christos Doumas's: 'Crete had no fleet'! This I don't believe at all, because it is so passive. I can't imagine that the Cretans were waiting and saying "Somebody will send us metals, let's wait to see if they arrive"! From the beginning of the Middle Bronze Age, just before the first palaces were founded in Crete, we have a large corpus of depictions of ships on Minoan seals; this started in MM I, and I showed some later ones. There are also the talismanic seals. So we have a lot of ship representations, and even if it is a great island, they also needed their ships. And if you want to get raw materials you have to be proactive; you can't wait. And this is the same in Mesopotamia, the so-called Ur expansion is connected with a search for raw materials, to import them; so you can't wait for someone to bring the metals, you have to be proactive. This doesn't mean that the inhabitants of the Aegean islands – and I agree completely with you here – did not play a role in this as Herodotus (I.171) tells us that the islanders had manned the ships of King Minos if he needed. Of course this was a collaboration but I think you can't really argue that Crete didn't have a fleet. You have so many representations of ships. The only almost complete corpus of Aegean antiquities is that of Minoan and Mycenaean seals, as Yannis Sakellarakis mentioned; and if you look through it, you see how many ship representations we have in Crete. Both Thucydides and Herodotus say that Minos was the first to own a fleet or to have constructed a fleet.

Now, ethnicity. This is of course a big problem, because, I agree with Nicoletta and Irene that the term 'Minoans' is very problematic. It was coined by Sir Arthur Evans at a time in modern history when the nation states were formed, which have

brought many troubles to the world, unfortunately twice in Germany. But before, we did not have a nation state; Italy only became a nation state in the nineteenth century. Therefore it is problematic to say the “Minoans”, as if there was a Federal Republic of Minoan Crete, or something. I would prefer to use Peter’s term of identity. There is a book by John Myers, entitled “Who were the Greeks?”, where he uses a good phrase: “The Greeks were always in the way of becoming”. What is Greek identity in Antiquity? Or Phoenician? They never called themselves Phoenicians, but rather said “I’m from Sidon, I’m from Tyre”. The Minoans probably never said “I’m a Minoan”. And the process of becoming Minoan, or creating a consistent identity for the whole island, can be seen in the development of Crete. If you look in the Prepalatial period, you have many different local pottery wares and no unified material culture; this slowly changes in the course of time, and, I think, by the Neopalatial period, although we still have local differences, we do find some unified material culture, in architecture – lustral basins, pillar halls, the Minoan megaron –, in pottery and fresco painting. Then there is some kind of Minoan identity. I think if John Myers said that “the Greeks were always in the way of becoming”, even we could become a Minoan, so that living in Miletus as a local Carian you can adopt this material culture and live together with people coming from Crete or other centres. And what ethnicity means is a problem. I am German, I have French and Polish ancestors; so what is German, what is British? I think ethnicity today doesn’t mean a great deal.

Voigtländer I want to provoke a little bit. If you want to identify Minoans, you have to do it only on architecture. Everything else can be imported. But if you find architecture, like on Lemnos, you need the idea to come from somewhere to there, and that means that people are coming and are building this architecture. Then we can identify people who are living in that place.

Michailidou I quite agree that if you have architecture this is a strong argument for identifying culture and people, but I would like to provoke the other way. I was very astonished when I studied Kültepe, where the merchant enclave of Assyrians is being excavated for many years. The scholars who deal with this material have noticed that the architecture and all the equipment used in the city and at the palace on the cliff are local in style, and that had no archives been found, we would never have understood that the Assyrians were there. Taking this example from the old Assyrian colony, we have to decide how we will be sure of the presence of the bearers of the culture and what that means.

Warren The other half of Malcom Wiener’s distinction was the ‘Versailles effect’, which is a culture taking on the forms of another culture that is not in any way subservient to that culture; that was the Prussian court taking on the trappings of Versailles civilization. With Kültepe, it was the exact opposite (‘Karum Kanesh contact’) since we would never have known that there was this Assyrian contact at all from the material culture only; it is merely due to the texts that said so.

Hallager I agree with Voigtländer that architecture is very important when you want to identify people, but I disagree that it should be the only criterion. We were discussing

this in coffee breaks as you know, and to take an example from what we have been discussing in the colloquium here I believe firmly that the evidence that Dimitri Matsas has excavated in Samothrace does prove the presence, at some point, of Minoan administrators. To me there can be no doubt about that. I mean if the two roundels and the two noduli were found in the temple repositories at Knossos nobody would have doubted that they belonged there. There is a very firm system. So I see Minoans, in certain periods, working in Samothrace; and I agree with Peter Warren and Dimitri Matsas, that it has something to do with the acquisition of raw materials from further north. Lastly, I would ask Christos Doumas, would the Minoans do that without having transportation of their own?

Doumas May I answer? How many countries need oil today and how many countries own tankers to transport it?

Hallager Denmark has.

Doumas Not every country has, and Greece has a lot more transport than she needs. I meant services. If somebody needs services, they order them from those who provide them.

Boulotis Please do remember the evidence from Crete itself, Kommos especially, where there are fine harbour installations – Kommos, Amnisos and Poros.

Marketou I would like to add some of my thoughts concerning matters of “ethnicity” and the long debate about “Minoan colonies”. We have again heard in this symposium that Kythera, Trianda, and Miletus have been Minoan colonies. During the LM IB phase at Trianda – let me call it LB (Late Bronze) IB,–, we do have some Minoan together with Mycenaean imports, as well as Cypriot imports, some of them existing there since LB IA. In the meanwhile, large amounts of Cypriot imitations, in both closed and open shapes were produced locally. However, although these local products are similar to Cypriote WS I milk-bowls, as well as Base ring I and Red Lustrous Wheelmade pottery, we could never think of the existence of a Cypriote colony on Rhodes.

This is just an example to understand that what I meant by participating in the Aegean network of exchange, which is a very complex mechanism, I meant that Trianda and other ‘Minoanising’ sites imitate locally several Cretan shapes and decorative motifs. This means that they were making ‘fakes’ for trading purposes across the Aegean and Asia Minor. The presence of Minoan, Cypriot and Egyptian bears the meaning of ethnicity; for me, ethnicity is just the town that produced these products and not the surroundings. For example, in the Dodecanese, Koans were very different from the Milesians although they had similar cultural traits; but the Koans exported large amounts of Light-on-Dark pottery – it is not ‘southeast Aegean’, but pottery made at Serayia on Kos – and Trianda imported this pottery from Kos, and sometimes they also imitated this Coan pottery, perhaps ultimately inspired by Cretan MM pottery. So this is a very complex situation and mechanism which was developed in a process to produce and sell things to other areas. That’s why they imitated Cypriot pottery, just as they imitated Minoan pottery in LM IA.

I have also noticed that most of the imports found at Trianda, on Samothrace and at Miletus are not from Knossos, but rather from the Messara; why did they import from the Mesara when Knossos was the palace of Minos? Perhaps we have to transfer the focus from Knossos to the Mesara and Phaistos.

Boulotis By Minoan thalassocracy we don't only mean Knossos, as in Minos, but the palatial centres or other sites in Crete, not necessarily just Knossos.

Chrysoulaki I would like to get back to Metaxia Tsipopoulou's thoughts about differentiation in chronology, which now is very important; we need to understand that during the EM period, before the emergence of the state, the character of the different sites in the Aegean with Minoan presence is very different than in the period when the states had emerged. I would like to explain that in terms of ideology. I agree with Metaxia Tsipopoulou about it being important to differentiate between the Early and Late Palace periods, between the period when we have fledgling states in Crete and late, when Knossos may have had a more dominant role and a different kind of presence in the Mediterranean in economic and political terms. Secondly, I would like to stress what Peter Warren said in his introduction. It is very important to differentiate between production, what objects and materials arrived in different parts of the Mediterranean, and ideology, which is in that period, religion. So goods could be Cretan, but the religion, which is the expression of the ideology of the state, is a very different thing requiring a different kind of analysis. So I think we can talk of the power of Minoan, state ideology, which is why Cycladic did not have the same effect on Crete, because the Cyclades did not have a form of state system.

Warren Thank you for that. I recall that a very nice conjunction of religion together with the goods and raw materials is found at Hagios Giorgos sto Vouno, where raw material is offered in a Minoan peak sanctuary.

Tsipopoulou If you will allow me a few words about identities. First of all identities existed in the past as they do exist today. However, it is only during a crisis that people feel the need to express identity. And I believe that these people from Crete, if they emigrated to Miletus, or Kythera, or other places where their presence seems certain, were not under the control of a far away central authority or state – and Miletus is far away from Crete. I think, however, they maintained their own identity, whatever you want to call that identity, Minoan let's say. At Miletus they live in a Minoan way, so they had an identity. Identities existed, and, if you will allow me, it is not a matter of blood by any means. You and I may be of the same blood, but you're British and I'm Greek.

Marthari Concerning the pottery from Late Cycladic I Akrotiri, *i.e.* the Volcanic Destruction Level pottery, I would like to say that there is Minoan influence in all three levels: a) shapes, including the ritual ones, b) decoration, and c) pottery technology. However, we have to consider the quantities and the percentages of both the minoanising vessels and those of the Cycladic tradition and make comparisons to understand better what happened there; it is not as if one piece can speak the truth

to us. Furthermore, what I've noticed at Akrotiri is that even in this late period, the Late Cycladic I, new Cycladic types are being produced. The potters are creative from this point of view. For instance, they create new forms of Cycladic jugs. On the other hand, they adopt, at the same time, several shapes of jugs from Crete, because the latter suit them or are technologically better than the local ones; or perhaps, because they are embedded in the Minoan way of life and they are attracted from it.

Concerning clay ritual vessels from Late Cycladic I Akrotiri most of them, and there are large numbers, are of the specifically Thera forms, namely nipples ewers (nipples ewers are very different on Keos, Melos, Thera, and Ios, Marthari this volume, figs 32-33), cylindrical rhyta and ribbed vessels. However, characteristic Minoanising forms, such as chalices, triton-shell vases, rhyta in the shape of animals or animal heads etc also occur in small numbers. Both local and Minoanising ritual vessels are found side by side in the same deposits. Such kind of material culture indicates that the same thing may happen regarding the content of the religion itself? Some Minoan rites and probably beliefs have been adopted by and/or adapted to the Thera religion. On the other hand, Peter Warren has said that Crete was the driver during this period; it was. However, since all rules have their exceptions, I draw your attention to some Cycladic nipples ewers imported to Pyrgos, Kommos and other sites in Crete, including the exclusively Thera libation form with the horn protuberances. In addition, two ewers which look to be of the LM I A style in form and decoration, yet they bring nipples, have been recovered at Akrotiri. So it is possible that Minoans were impressed in a way by this type of Cycladic libation jug and involved it, even very rarely, in their own rites. I remind that Nikolaos Platon once remarked that Thera played a role in the religion of the Minoan world in many different ways, because of the volcano.

Macdonald This is not a matter of definition or character. I wanted to raise the question of why there was interest in certain places that were discussed during the conference and to get on with the matter of raw material and in particular metals. I just had a thought speaking diachronically briefly whether in the Old Palace period some of the interest may be specifically targeted interest, whereas in the New Palace period there may be partly, what Peter Warren was talking about, expansion, whatever precisely that means. I don't mean that population was overflowing at the edges of Crete, but something connected with expansion of population in Crete and expansion of interests abroad, partly in the New Palace period plugging into ever increasingly active networks of maritime activity, which would have involved of course the ferrying of raw materials with or without a Minoan fleet.

A Minoan fleet doesn't have to be an organized form of fleet, a Knossian fleet or something like that, but I do believe that there were many Minoan boats. Just before I come to the origins of the raw materials themselves it is of interest that just as in the ninth century BC with the foundation of the Greek colony at Pithekoussai on Ischia, not in metal-rich Etruria, but opposite Etruria, so Kythera is not on top of any raw material whatsoever, nor is Rhodes, and nor is Miletus. Perhaps all are spring boards or gateways to areas where raw materials could be accessed.

With regard to metal sources, quite rightly the geographic location of Samothrace has been noted as being close to the Mt. Pangeion region; Samothrace is again off

shore and not on the mainland itself. There are the other regions that have been mentioned, there are the Taurus mountains, but also I was interested in what Professor Erkanal and Dr Keskin were saying about copper, silver and lead resources immediately inland from Çeşme. I was wondering if there is any lead isotope data on the metal ores from this area.

Erkanal A tin mine has been found at Uludağ, not far from Bursa. This is new. But in the region of Bakla Tepe south of Izmir, we have gold, silver, tin and copper.

Warren Is there any evidence that these sources were exploited in antiquity?

Erkanal I don't know. We have some samples from our excavation, which were sent for analysis in Oxford; we await the results.

Warren This would be extremely important because these sources are even nearer than the Tarsus and north Aegean sources.

Niemeier I just wanted to respond briefly to Marisa Marthari and Toula Marketou. Marisa, why shouldn't the Minoans import or adopt Cycladic shapes that please them, because this is not a one-way relationship? Of course there is input, and in the earlier days, the input from the Cyclades is much greater, as Christos Doumas has shown. But here it's the other way around with some input from the Cyclades, which you can see in pottery, but the influence on material culture is undoubtedly much stronger in the other direction.

And Toula: We believe that the Cretans who went to Miletus didn't do any ethnic cleansing in that area, or in Rhodes – this is a horrible invention of the twentieth century – but rather were interacting with the local people; they married women there – this we know from later Cretan colonization – for they had no women when they arrived. We also know this from Plutarch, and it may be one reason why the local material culture is mostly taken care of by women. Ivonne Kaiser showed examples of hybrid shapes from Miletus, the Minoan cooking pot with the Anatolian basket handles. Of course there is interaction. And if you have Cypriot pottery on Rhodes, Toula, and you have local imitations of Cypriot pottery, why not? The Late Bronze Age was a cosmopolitan world, and we can see that in the Ulu Burun shipwreck. I think that this was not very different at the beginning, if we speak in Cretan terms, so I don't say that Neopalatial means the whole period, but if you use Cretan terms, the New Palatial period of LB I was not very different. There was a long discussion over the nationality of this Ulu Burun ship – is it Mycenaean, Levantine, Cypriot? All this discussion was nonsense because it was a cosmopolitan world and ships were coming from the Levant and Minoan ships went there. And Rhodes, of course, is the first island you reach when coming from Cyprus, and why shouldn't Cypriot merchants have lived on Rhodes? They brought their pottery, and the pot broke, and they said: "my wife's fine milk bowl broke, could we make another one that looks similar?"

Melas As we all know there are different levels of acculturation, and they can be traced in material culture. Some societies, however, resist change and acculturation, and the more private and secluded the sphere of life, the more it is likely to preserve local cultural traditions and ethnicities. An example of processes of Minoan acculturation

is offered by Miletus, although here material culture appears to remain mostly local. Minoan influences, however, bring about gradual changes in various fields, including technology and household material culture, and create new cultural and social identities. This applies to such activities as the way they cook, the way they weave, wine consumption and the use of conical cups. Import or imitation of exotic items belong to another scale of acculturation pertaining to systems of prestige objects associated, as social rather than ethnic markers, with local power strategies. Most of the material culture in Miletus, however, continues to be local. This is especially true of architecture, a fact that is observed elsewhere in the Aegean, including Karpathos. As to why this phenomenon may occur, a later example offered by Kültepe – Karum Kanesh, may be instructive. We are informed from the archives of this important commercial center that foreign merchants married local women, and therefore the entire household material culture is local; the houses are also local because the merchants wanted to incorporate themselves into local society.

Momigliano I think it was Marisa Marthari who said that the driving force of this Minoanisation was Crete, and I think we more or less all agree on that. And this is also shown by the immense variety of evidence from completely different sites, which have this in common: they all try to imitate Minoan pottery. Although I do not want to diminish the role of Crete, I would like to think about emulation. I think there are processes of emulation going on, but are the people from Teichoussa and Iasos imitating the Cretans or are they imitating their neighbours, Miletus or Trianda? And how much of the Minoan material at Troy actually comes from Samothrace or closer neighbours? We shouldn't forget the driving force, but there are also smaller networks at work, which spread Minoanisation.

Warren The thing to ask is "is there some way of investigating that very point", and I think that it can be done by looking at an assemblage and seeing what could only have come say from Kouphonisi to Samothrace or Çeşme or wherever you like, and look at it in that way. It is open to investigation.

Doumas What I would like to emphasize is that we are talking about evidence, which has a very strong physical appearance. But there were other things, which were traded and of which we have no trace. We would reach the wrong conclusions if we did not bear in mind that we have so little. I will give an example from our recent work at Akrotiri. Our palaeo-entomologist has identified insects that do not belong to the Aegean fauna, but come from the Levant. The botanist has discovered charcoal of Lebanese cedar, of pomegranate, of oak, which does not belong to the Aegean.

Rethemiotakis For all of us who work in Crete and are accustomed to the term, "Minoan", the word tell us nothing about ethnicity, identity, etc, outside of Crete. We must be a little more specific about identifying fabrics and provenance. For example the material presented by Irene Nikolakopoulou from Santorini is Knossian, not Minoan. Minoan, in this context, means nothing. The same applies to the material from Miletus. So everybody here has to be a little more specific about fabrics, about provenance, and not just use the term Minoan, because it is misleading.

- Papazoglou** I would like to point out that when we speak of the Minoanising process in the Aegean we speak of MM II-III, which is the age of the great expansion of the Minoans, until LM IA. That's what I have understood from the two days of discussion here. And in this discussion, LM IB should be excluded because it is not simply the equivalent of LH IIB, but also LH IIA; it sees the rise of the Mycenaeans, not the expansion of the Minoans who are already counting their last days. They received a blow from Santorini, and within fifty years the Mycenaeans were at Knossos. LM IB is truly cosmopolitan as Toula Marketou has said for Trianda. Of course, there are Mycenaeans, there are Minoans, and there are Cypriots. We know it even from the chamber tombs at Ialysos that there are two or three Cypriot graves with only Cypriot goods inside. I think that what we see as Minoanisation in the Aegean is in the MM II-III and LM IA. It's the first time we see cosmopolitanism. Before that, in the Early Bronze Age, there are distinct cultures, north Aegean culture, Early Helladic, Early Minoan, Early Cycladic – worlds apart, despite some interaction. The Minoans, or Cretans, began this process because they were the stronger and more affluent. After LM IA, the Mycenaeans take their place as witnessed in many places, including Trianda.
- Warren** Certainly in LH IIA, Mycenaean culture is indeed on the rise, but I do not accept that LM IB – and I know Colin and I have disagreed about this matter – was in any way a period of decline in the island of Crete; it was a very great and flourishing period. I believe this is also manifest in Miletus. I am not saying that for this reason Trianda is not cosmopolitan in the LM IB phase and Lena Papazoglou knows this far better than I do.
- Papazoglou** In the Middle East there are more MM imports than LM IA; that must mean something. The beginning of the imperialism is Middle Minoan.
- Warren** Crete itself has a whole series of LM IB destructions, which are full of foreign imported material. At Mochlos there is an Egyptian bronze sistrum in an LM IB destruction level, for example, but there are lots and lots of others. So the picture at that time in Crete is a very rich moment.
- Papazoglou** I'm not saying they are declining; of course they retain all their wealth, but the power no longer stretches across the entire Aegean; it starts to decline.
- Niemeier** Reference has been made to the article by Penelope Mountjoy and her selective clay analysis of the so-called Marine Style pottery, which indicates that this selection is imported from the mainland. But when you see them, you believe they are Cretan; they are like the Lacoste shirts you now buy in Turkey. Imported pottery does not mean political domination. An imitation was possibly cheaper to get from the mainland than from the Knossian master potter. So the appearance of this pottery, as Peter Warren argued at the Knossos conference (2000), is a purely Minoan phenomenon. If you look at a Marine Style sherd, you associate it with 'Minoan'. So this is not proof for Mycenaean domination at that time. I agree with you that the dynamic process of Minoanisation occurred in the MM III-LM IA period. In LM IB, we have more of a state of affairs, combined with the beginning of Mycenaean expan-

sion in the Aegean. As I told you, in the LM IB, in Miletus IVB, we do have more mainland imports than in Miletus IVA (~LM IA). But we must not always see a Minoan-Mycenaean antagonism; they did communicate with each other. In the Shaft Grave period, the Mycenaeans imported luxury items from Crete; I remind you of Peter Warren's article of more than thirty years ago about the Minoan stone vases on the mainland.

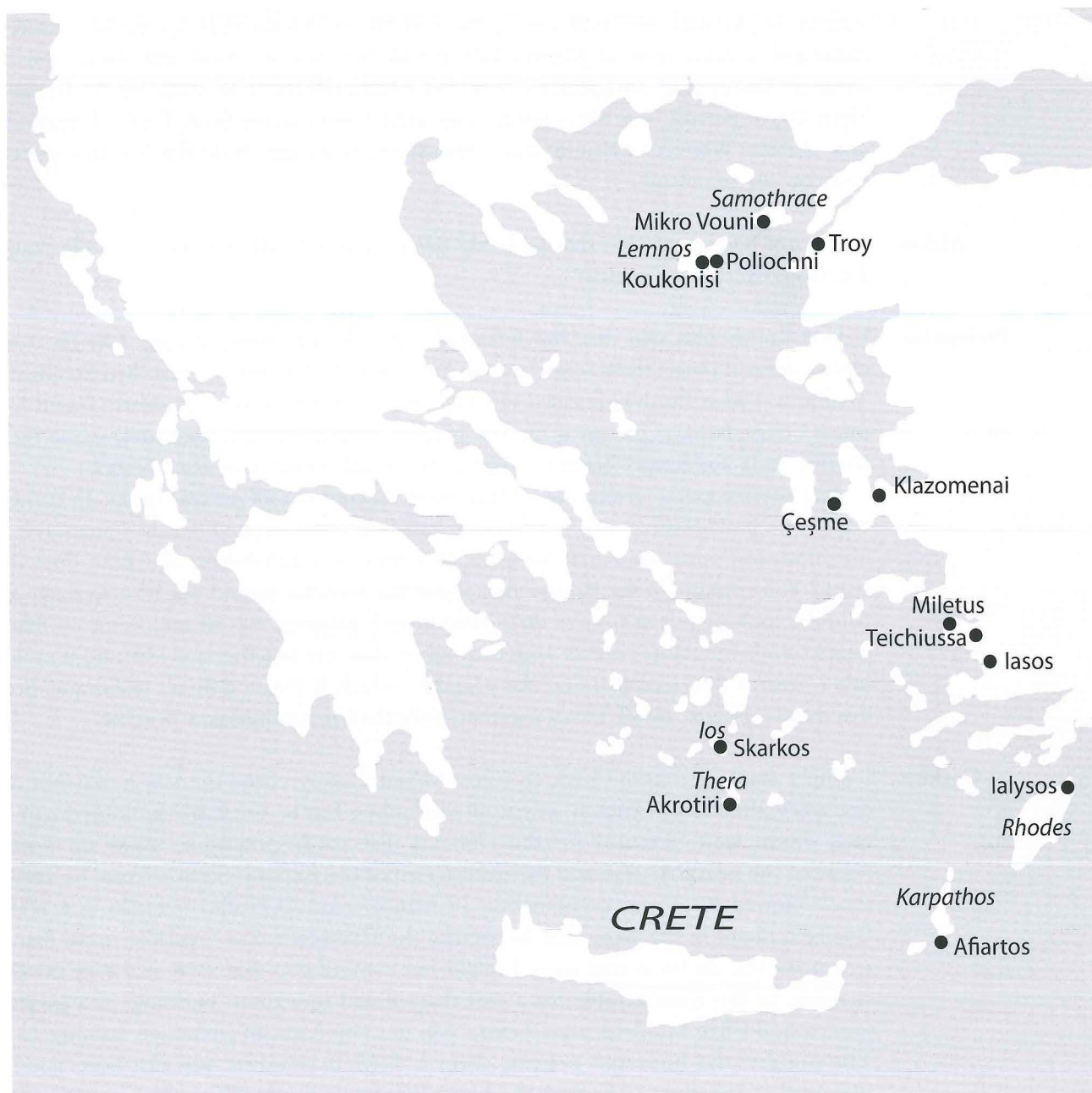
Melas Has it not been suggested that probably this period, LM IB, is more of a style than a period, except at Knossos?

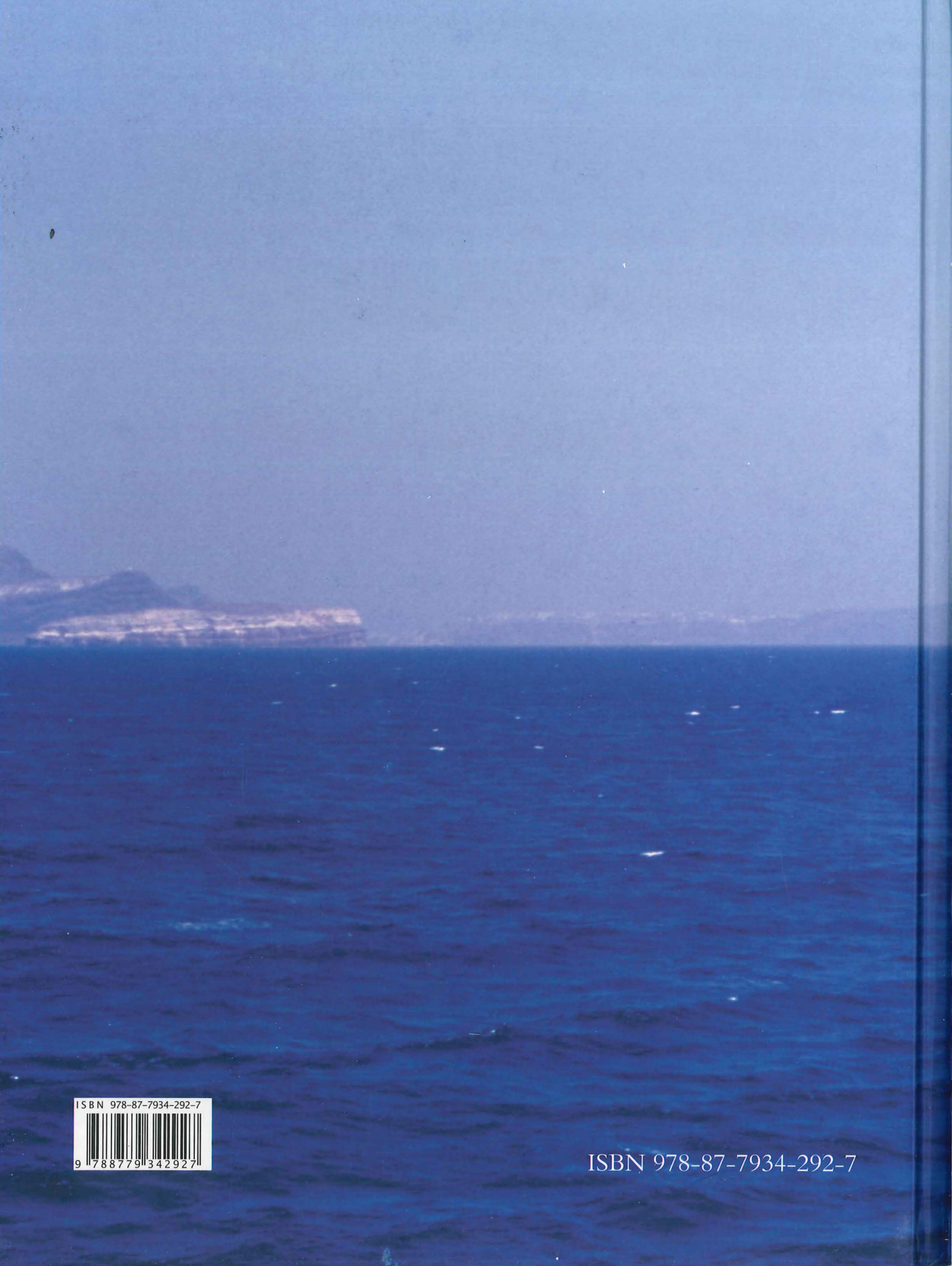
Neimeier I don't know who said this, but whoever said it is completely wrong. LM IB is a clearly defined phase; there is not just the Marine Style, but also the so-called Standard Tradition – what Furumark called sub-LM IA. I find Betancourt's Standard Tradition much better, because the great mass of pottery follows standard traditions, while the Marine Style and luxury ceramics form only a small minority of assemblages.

And my last point: I have heard this word "acculturation" several times. In some ways, it's a problematic term. A colleague, not here today, argued that this phenomenon does not mean an actual presence. But what is acculturation and how does it work? You couldn't in the Bronze Age search the Internet to find out how to make a Minoan cooking pot or how to do a Minoan wall-painting. Acculturation means that people come into close contact with each other; they live together and learn from each other how to do fresco painting, for example, which is a very difficult technique. So this means contact, travel, living together; only then is acculturation possible.

Caskey I simply wanted to come back to Keos. When Caskey chose the site it was not a discovery; the site was known, as you all remember. But he was really looking north-east, south, west, and east for the contexts that are beginning to show up now between the north Aegean and the eastern part of the Aegean. So in a sense, he very much viewed Keos as a combination of Minoan and Cycladic, but also as a real Cycladic island in the sense that he viewed the Cycladic sea as Cycladic more than a Minoan sea. As far as cult goes, I might just remind you that there is a very good example in the Keos' temple for a cult that existed in a given building, at a given spot, a good five hundred years before you get any Minoan influence coming in. The pottery, the imported pottery, there is MM II onwards; we also have good mainland connections right from the beginning when this building was constructed.

Warren It is time for me to draw things together. I'm very tempted to spend thirty seconds on my intellectual hero, Fernand Braudel, to say how well his three level model would suit the kind of situation we are describing, because do we not have a whole series of immediate events, *histoire événementielle*, that we can see, like the eruption of Thera, the destruction of Miletus, and many other events? But at the same time, these events were bringing to an end a *moyenne durée* of cultures which had been going for some few hundreds years in networks of economic cycles and trade. And behind all that, we have the *longue durée* of the geological and geomorphological formation of all these backgrounds with all their differential effects on natural resources; this is very much a matter of the *longue durée*.





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