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Aspects of mobility between Crete and the Southeast Aegean in the Middle Bronze Age: the new evidence from the Heraion of Samos

ABSTRACT

The Aegean area has represented since at least the Upper Palaeolithic the most vital theatre of mobility in the Eastern Mediterranean. The motivation, the direction and the scale of mobility has led scholarship to define limited or more extensive land or sea trade networks and changing spheres of interaction in the Aegean in particular from the late 5th through the 2nd mill. BC. Contacts between Crete and the East Aegean / Western Anatolia cannot so far be traced before the Early Minoan II (EM), as finds from Liman Tepe V and Miletus II indicate. Increased interaction is registered at the end of the Middle Bronze Age (MB) with the erection of the New Palaces in Minoan Crete.

Recent excavations at the Heraion of Samos have revealed for the first time a flourishing, strongly fortified MB settlement with evolved political, economic and social structures, which interacted with Mainland Greece, the Cyclades and the Old Palaces of Crete. In this paper, Minoan imported pottery and small finds as well as pottery of Minoan inspiration will be discussed within their Samian context in order to clarify the scale and the value of interaction between Crete and the Southeast Aegean during the Old Palace period.

KEYWORDS: East Aegean, Western Anatolia, Samos, Heraion, Crete, Minoan, Prehistoric, Bronze Age, Protopalatial, Old Palace Period, Thalassocracy

INTRODUCTION

The Aegean area with its extensive coastal and insular landscapes has represented since the Upper Palaeolithic the most vital theatre of mobility in the Eastern Mediterranean. The motivation, direction and scale of mobility has led scholarship to define limited or more extensive land or sea trade networks and changing spheres of interaction in the Aegean in particular from the late 5th through the 2nd mill. BC (Broodbank 2013, fig. 3.3, 4.1, 5.2, 7.1, 7.50, 8.1).

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Despite the well-documented involvement of the insular East Aegean, Western Anatolia littoral and Crete in trade networks, particularly with the Cyclades for the acquisition of obsidian and metals and exchange of further cultural elements (technology, prestige objects, everyday and burial practices, symbolism) in the 4th though the late 3rd mill. BC (Kouka 2008; 2015; 2016), contacts between Crete and the East Aegean/Western Anatolia cannot so far be traced before the EM IIB, as finds from Liman Tepe V (Kouka 2013, 572, tab. 1; Day et al. 2009, 342) and Miletus II indicate (Kouka 2013, 575; Kouka forthcoming) (Fig. 6). On the contrary, an intensive and multidimensional interaction can be registered in the mature MB and the Late Bronze Age (LB) as part of the large-scale 'Minoan Thalassocracy' of the New Palaces of Crete (Macdonald – Hallager – Niemeier 2009; Gorogianni – Pavúk – Girella 2016 with older bibliography) (Fig. 6).

But what about contacts between the MB East Aegean islands and the Western Anatolian littoral on the one hand and Protopalatial Crete on the other? Evidence from Mikro Vouni on Samothrace, Poliochni Bruno and Koukonisi IV (end) on Lemnos, Çeşme-Bağlararası 2b, Miletus IIIa, Tavşan Adası 3 and Ialysos on Rhodes (Girella-Pavúk 2016, 18-19 with relevant bibliography; Şahoğlu 2007; Raymond *et al.* 2015) implies contact between the Old Palaces of Crete and the East Aegean/Western Anatolia, forming a cultural bridge between the Aegean and Central Anatolia. Witnesses to this interaction are Protopalatial cups, Kamares ware bowls and spouted vessels, and discoidal loom-weights at the above-mentioned sites, a MM II seal and sealings at Mikro Vouni (Matsas 2009; Girella – Pavúk 2016, 18-19), and architectural features (plastered floors, walls and an offering table) at Ialysos (Marketou 2009, 78-80, fig. 7-8). These finds have recently been classified into a Pre-contact (MM IB) and a Contact stage (MM II) of Minoanization in the East Aegean, followed by a stage of Hybridisation in MM III-LM I (Girella – Pavúk 2016, 18-23).

Based on recent excavations at the Heraion of Samos which have revealed for the first time a flourishing MB settlement with evolved political, economic and social structures that interacted with Mainland Greece, the Cyclades and the Old Palaces of Crete (Kouka 2013, 575-576; Kouka 2015, 228-230, figs. 2, 4-5, 8), this brief paper aims: 1) to outline the cultural dynamism of the East Aegean/Western Anatolia in the Early Bronze Age (EB), 2) to present the MB evidence at the Heraion and Minoan imported pottery as well as pottery of Minoan inspiration within their Samian context, and 3) to elucidate the scale and value of interaction between Crete and the Southeast Aegean during the MB.

THE EB IN THE EAST AEGEAN/WESTERN ANATOLIA

The evaluation of archaeological evidence from the sites shown in Fig. 1 has led to the recognition of a cultural uniformity in political and economic structures and social dynamics in the insular East Aegean and Western Anatolian littoral since the EB I (3200/3100-2700 BC) (Kouka 2002, 299-300, Tab. 1, Karte 1). In the EB (2700-2200 BC), these dynamics only allowed specific sites to develop into local centres of their micro-regions (Kouka 2002, 299-301; 2013, 577; 2016, 210-211), due to their location and notable participation in land and sea trade networks (*Anatolian Trade Network, Great Caravan Route*) (Şahoğlu 2005; Efe 2007) related to bronze technology and the exchange of metals, prestige goods, new ceramic technologies, symbolism



Fig. 1. Aegean and Anatolian sites mentioned in the text. In yellow/red are marked sites showing interaction with Middle Minoan Crete.

and ideas. Settlements like Troy IIa-g, Liman Tepe V, Bakla Tepe-EBII-III/early (all three located in metalliferous regions), Poliochni Green-Yellow, Myrina, Thermi IV-V, Heraion II-V and Palamari II-III also expanded due to population increase following a new architectural plan, and were reinforced with monumental fortifications. They further comprised communal buildings of an economic or political character and metallurgical workshops, social stratification, and personal and communal symbolism. The cultural interaction and competition among the stronger island settlements of the East Aegean and those of coastal Western Anatolia led to the abandonment of some of them circa 2500 BC, e.g. Thermi and Emporio (Kouka 2002, 301; Kouka 2013, 577; 2016, 212). Moreover, dry climatic conditions in the Eastern Mediterranean circa 2200 BC (4.2 ka BP climatic effect) (Massa – Şahoğlu 2015) led other sites in the EB III (2200-2000 BC) to a more or less serious decline (Kouka 2013, 577-578; Wiener 2013, 582-588). However, some of the aforementioned sites, due to their location on crucial sea trade routes and also through their more or less active participation in the Minoan sea trade network, prospered even more in the MB through the LB I: Troy V-VIa-c, Mikro Vouni VII-IV/III-I, Koukonisi IV-III, Palamari IV, Liman Tepe III.4 and III.3-1, Çeşme-Bağlararası 2b-a-1, Miletus III-IVa, and Heraion VI-VII) (Kouka 2015, 230 with relevant references).

THE HERAION IN THE MIDDLE BRONZE AGE

Archaeological research at the Heraion since the 1910s has revealed stray finds and stratified architecture, attesting to the settlement of this area before the institution of cult. However,

4 ΠΕΠΡΑΓΜΕΝΑ ΙΒ΄ ΔΙΕΘΝΟΥΣ ΚΡΗΤΟΛΟΓΙΚΟΥ ΣΥΝΕΔΡΙΟΥ

HERISON - ARCHITECTURAL PHASES			CULTURAL	CRETE	ABSOLUTE	MILETUS	IASOS	DODECA	LIMAN TEPE	CESME-	BEYCE	TRIOY	SAMO
HERA TEMPLE Milajčić 1961 Homes/ Fastiliation		SACRED ROAD 1981, 2009-2013 Houses Fortification		CYCLADES MAINLAND GREECE	CHRONOLOGY		TAVŞAN ADASI	NESE		Bağlararanı	SULTAN		THRACE Miles Vouni
				LMIB/LH IIA	1625-1420BC	IVb		1818		ÇBO	IVa	VId	
HERAION VII ALTAR-LATIA	187	187	LB	MM HIB/MH III	1700-1625 BC	Wa	TA4	LB I late LB I carly	III 1-2 III 3	ÇB1	IVb IV/c	VIb/c Via	1 11
HERAION VI (stray finds)	MB1	Haraion VI.1 HS 23-22 Haraion VI.2		MM IIIA/MC/	. 2000-1700 BC	IIIb	TA3	MBA/ MM III Trianda I		C82a C82b	We V	Vistart	III
	MB 2			(1700-1675) MM II/MH II-III (1850-1700) MM IB (1900-1850) MC I/MH I									
	MB 2												
	MB3		мв										
	100.0	H511147											
	M8.4	HS 12:27											
											VI		
	MBS	Heraion VI.3 HS 13:61		MM IA									
				(2100-1900)									
													IV V
									III 4				v
	M8.6												VII
HERAION V	HERAION V	HS 13:30	EB III lete	EM III					IV 1		VII-VIII		
HETAION IV	HERAJON IV	HS 13:30	EB III early	EC III/EH III	2200-2000BC	IId			IV2	VZ XI-X IV	IV.	VIII	
HERAION III	HERAION III	H513:30	EB II late	EC II fate/		Rc	TA2		Via		XII	III (EB II/III)	
HERAKON II	HERAIONII	HS 13:30	EB II late	EH II late Lefkandi-Kastri/ EM IIB	2550-2200BC				V2b-2-1b		histus?	IIa-h	IX
	HERMANN II		EBITIALE						A 50-5-T0		Alla		
HERAIONI	HERAION I/	H5 13:30	late EB II early		2650-25508C	IIb (Histus at Achena Temple)				CB3	XIIIc-b	Jk.	
	encommunity.	(East							V3b-e	100			- 10
	HERAION I		late EB II early	ECII early/ Distanty			TA2				XIV	lg-h	
		V.150771140040			2750-2650BC								
1	HERAION 2	HS 1981	EB II early								XV	le .	
17	HERAION 3	HS 1981	EB II early								XVI	ld	
3	HERAION 4	H5 1981	EBI	EHIB	3100-27508C				W16-a VI1c-		XVII	le	

Fig. 2. Heraion internal and comparative chronology with the Aegean and Anatolia.

it is only with the excavations of Milojčić (1953, 1955) (Milojčić 1961), Walter (1958-1960) (Walter 1963), Isler (1966) (Isler 1973) and Kyrieleis (1981) (Kyrieleis et al. 1985), and especially those of the University of Cyprus north of the Sacred Road (2009-2013) as part of a joint project with the German Archaeological Institute, that the prehistoric past of the Heraion has been illuminated (Niemeier – Kouka 2010, 113, fig. 16; Niemeier – Kouka 2011, fig. 17-18; Niemeier – Kouka 2012, fig. 21; Kouka 2013, 575-576; 2014, 49-52; 2015, 226-228, fig. 1-3, 7) (Fig. 3). Based on the evidence available up to the 1950s, Milojčić defined the chronological sequence of the Heraion by dating the architectural phases Heraion I-V in the EB II-III, some MB stray finds in Heraion VI, and LH I material from Bothroi excavated at Kastro-Tigani in Heraion VII. Finally, he assigned LH IIIA-B material from a chamber tomb at Heraion to Heraion VIII (Milojčić 1961, 58, 66, Abb. 3). The LB phases Heraion VII-VIII have been enriched by the excavations of W.-D. Niemeier in the area of the Altar of Hera (Niemeier – Kouka 2010, 113, fig. 16) (Fig. 2).

The recent excavations north of the Sacred Road of the Heraion point to the foundation of the earliest settlement core during the Chalcolithic (Ch; 4500-3100 BC) (Kouka 2014, 49-50; 2015, 226, fig. 2, 6). This was expanded and fortified in the EB I-EB II early (3100-2650 BC), including long rectangular houses and the *Communal Storage Building I* (Fig. 3, 4). In the final EB II early-EB III (Heraion I-V) (2650-2000 BC) a radical re-organization predicted an extension of the settlement

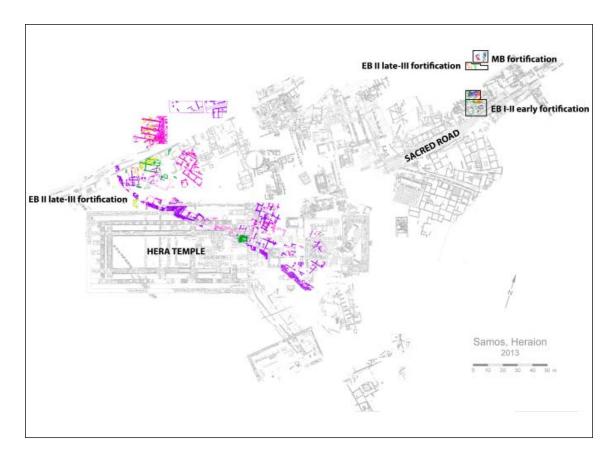


Fig. 3. Heraion (1953-2013). General Plan with the Prehistoric settlement (Plan by H. Birk, O. Kouka, A. Clemente, K. Ragkou, N. Hellner, A. Tanner, M. Jaumann).

from the E up to the W branch of the Imbrassos and the erection of a new fortification to protect a settlement of 3.5 ha with Communal Storage Building II, a possible administrative building (Cyclopean Building), and freestanding or grouped rectangular and trapezoidal houses in a radiating pattern (Kouka 2013; 2015) (Fig. 3). In the second half of the 3rd mill. BC the Heraion became the most extensive EB site on an East Aegean island and an urban center in south Samos.

The EB local centre of the Heraion, due to its crucial location opposite the Maeander Delta and on the natural sea route linking SW with NW Anatolia, was not abandoned at the end of the EB III, as recent discoveries north of the Sacred Road have demonstrated (Fig. 3-4). Architecture dated in the MB uncovered beneath thick sandy layers of flooding of the River Imbrassos comprises three massive stone enclosure-fortification walls (Heraion VI.3-1) (2-3 m wide, preserved height ca. 1 m, investigated length 8 m) for protection from flooding, on the same site and with the same orientation as the earlier EB II-III fortification (Fig. 5). One- or two-roomed rectangular, freestanding houses (ca. 7 m long, 3 m wide) with similar orientation have been assigned to six successive architectural phases (MB 1-6), and testify to a long-lived settlement used in the MB (Fig. 4). Calibrated radiocarbon dating of carbonized wood and bones by Yiannis Maniatis (Laboratory of Archaeometry, NCSR Demokritos) date the MB Heraion between 1942-1775 BC (Fig. 2).

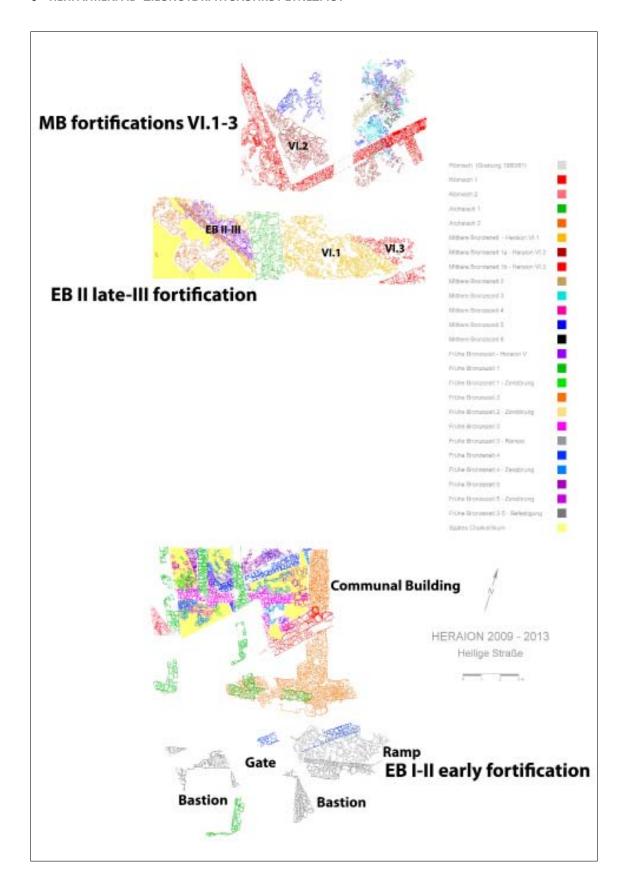


Fig. 4. Heraion, Sacred Road (2009-2013). Ch, EB I-III and MB settlement phases (Plan by H. Birk, O. Kouka, K. Ragkou, N. Hellner, A. Tanner, M. Jaumann).

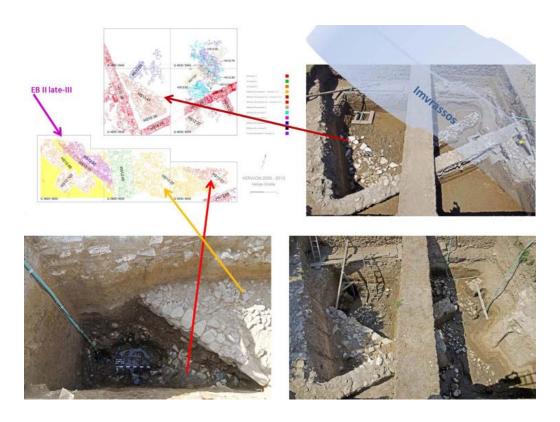


Fig. 5. Heraion VI. Middle Bronze Age fortification and house walls.

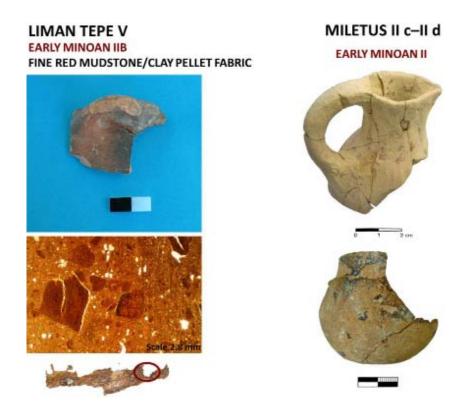


Fig. 6. Early Minoan II imports to Liman Tepe V and Miletus II (Photos: Chr. Papanikolopoulos).

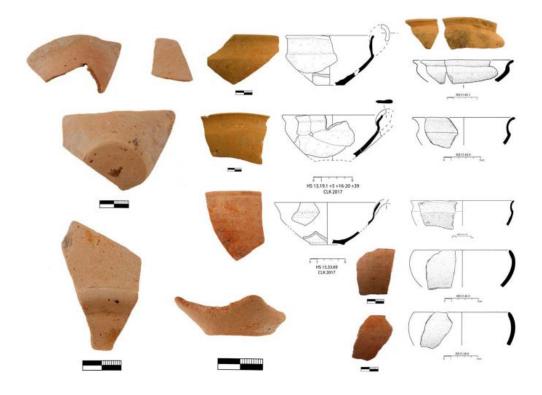


Fig. 7. Heraion VI. MB Fine wares (Drawings: A. Kontonis, Chr. Kolb; Photos: Chr. Papanikolopoulos).

The preliminary macroscopic study of ceramics from house phases MB 6-MB 1 and from the fortifications Heraion VI.3, VI.2 and VI.1 shows a standardization in shapes and fabrics. This should not be surprising, as the MB Heraion was an insular settlement inhabited for only 300 years, facts that speak against any rapid evolution in pottery technology and morphology (cf. MB Gray Minyan pottery).

The vast majority of the pottery belongs to locally produced handmade or wheelmade beige, orange and red wares. *Fine wares* include beige or light orange with red/reddish brown washed/light polished or painted one-handled cups with carinated or semiglobular body, strap handles, and flat or ring bases (Aykurt 2010; Kaiser – Raymond 2015, fig. 5). These drinking cups are numerous in almost all contexts and were made of fine micaceous clay with limestone inclusions (Fig. 7). Carinated cups have a long tradition at the Heraion (IV-V), Miletus II, Tavşan Adası 2, and Beycesultan XII-XI, as indicated by the EB III hybrid depas cups (Milojčić 1961, Taf. 41.9-10, 13-15; Raymond 2007, fig. 26.1, 26.2; Kouka 2013, fig. 4; Bertemes 2013, Abb. 12.1; Lloyd – Mellaart 1962, fig. P47.61). In the MB carinated cups from the Heraion, Miletus IIIa (Raymond 2001, tab. XLVI, AT 98.223.13) and Tavşan Adası 3 (Bertemes 2013, Abb. 10) the carination is on the lower part of the body, contrary to Cretan examples (Phaistos: Raymond 2007, fig. 26.3; Knossos-MM IIA: MacGillivray 2007, fig. 4.16), that show a higher carination (Raymond 2010,

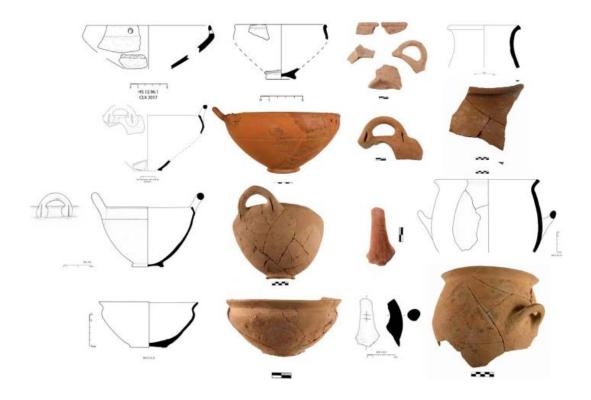


Fig. 8. Heraion VI. MB Medium Coarse wares (Drawings: A. Kontonis, Chr. Kolb; Photos: Chr. Papanikolopoulos).

fig. 7). However, the semiglobular cups imitated Minoan Kamares ware originals that would have reached all the aforementioned settlements (Raymond et al. 2015, 66, tab. 4.6, fig. 4.3).

Medium coarse wares comprise fine reddish orange deep bead rim bowls with flat, ring or stemmed base, and vertical handles on the rims with incisions on their attached part to the rim (Fig. 8). These deep bowls are the most popular shape for multiple uses not just in this ware, but in the entire ceramic production at the MB Heraion, Western Anatolia and the East Aegean islands, as examples from Miletus IIIa, Troy V-VI (early), Liman Tepe III.4-3 (Aykurt 2010, tab. 3), Beycesultan V-IVc (Lloyd - Mellaart 1965, fig. P31, 10-11) and MB lalysos (Marketou 2010, 779) confirm. The clays used were calcareous and micaceous, light orange, red or purple with voids and dark brown clay pellets. Pouring and storage vessels of this ware include red-reddish brown washed/slightly polished or red-painted globular jugs, trefoil amphorae, and wide-mouthed pithoi/jars with two horizontal handles in the middle of the globular body (Aykurt 2010, Tab. 3).

Coarse wares include cooking pots, jars, and pithoi in particular of dark red to red clay (Fig. 9). Cooking pots were made of dark reddish brown or orange, local alluvial metamorphic clay with a lot of mica schist and quarzites. Jars were made with the same recipes but are darker red in colour. The surface treatment included smoothing or washing of the thick slip. Thecoarse wares also included the hard-baked, dark reddish brown bowls with inward sloping

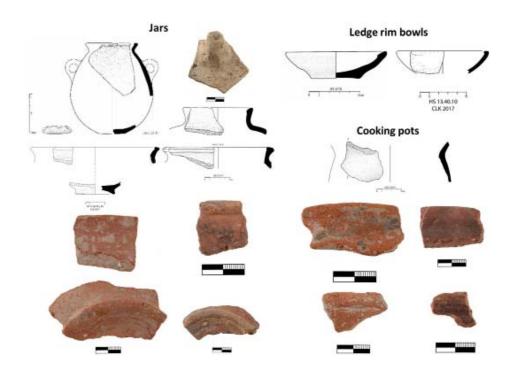


Fig. 9. Heraion VI. MB Coarse Wares (Drawings: A. Kontonis, Chr. Kolb; Photos: Chr. Papanikolopoulos).

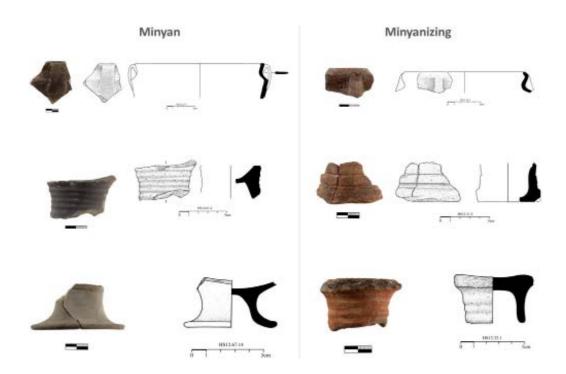


Fig. 10. Heraion VI. Minyan and Minyanizing pottery (Drawings: A. Kontonis; Photos: Chr. Papanikolopoulos).



Fig. 11. Heraion VI. Middle Cycladic imports (Drawings: A. Kontonis; Photos: Chr. Papanikolopoulos).

ledge rim that occur particularly in the later stage of the MB (Raymond 2005, pl. XLVI AT98.179.9, AT98.188.1) (Fig. 9).

Imports occur in all houses without exceeding 2% of the unearthed pottery, and comprise pithoi, jars/jugs of purple lime-spalled Miletus ware, and Middle Helladic Minyan (and/or Anatolian Gray) and Minyanizing goblets (Overbeck 1989, pl. 37 Group B.10, pl. 48. 47b. 51 (Ayia Irini IV) (Fig. 10).

The Middle Cycladic imports include a buff deep bowl, brown-pinkish and white slipped beak-spouted jugs (nippled ewers) (Doumas 1983, fig. 141; Nikolakopoulou et al. 2008, 317, fig. 32.3 (d-f), 32.6 (e)), short-necked jugs (Nikolakopoulou et al. 2008, fig. 32.3 (b)), bowls with light orange clay and well burnished yellowish surface, and big, white-slipped pithoi (Fig. 11).

Cretan imports include MM IB-IIA black-painted, flat-based, straight-sided cups, MM IB-IIB bridge-spouted angular skyphoi (cf. MacGillivray 2007, 138, fig. 4.25; Davis 1986, pl. 57. U-100, Ayia Irini V) and jars of Kamares ware, as well as the upper part of an ovoid mouthed amphora imitating metal prototypes from MM IIB Crete (sand tempered with quartz and schist) (Betancourt 1985, pl. 12.B-C; Davis 1986, pl. 68.62, Ayia Irini V; for shape and plastic rib at the base of handles cf. Overberbeck 1989, pl. 62.9-10, Ayia Irini IV) (Fig. 12). There are also fine semiglobular cups, conical cups (MM IB-IIB; metamorphic fabric with quartz and clay pellets) (Betancourt 1985, 92, fig, 65; MacGillivray 2007, 131, fig. 4.20.1 second and third on the right; Momigliano



Fig. 12. Heraion VI. Minoan imports (Drawings: A. Kontonis; Photos: Chr. Papanikolopoulos).

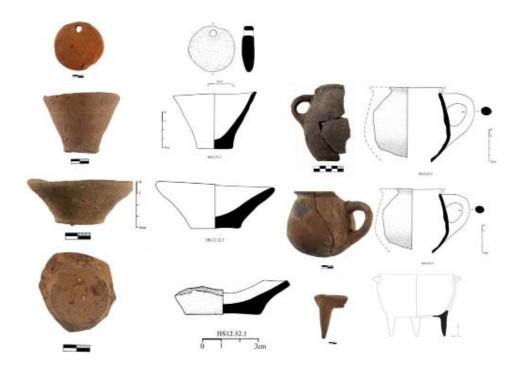


Fig. 13. Heraion VI. Minoanizing pottery and loom-weight (Drawings: A. Kontonis; Photos: Chr. Papanikolopoulos).

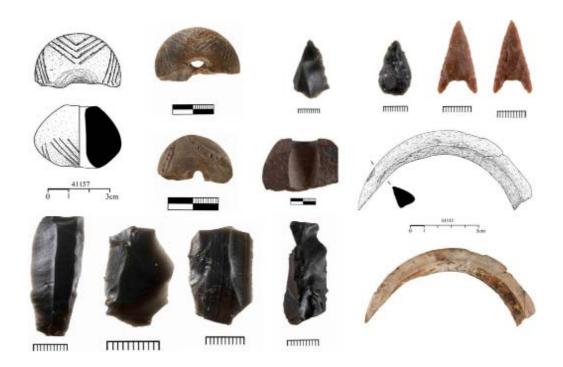


Fig. 14. Heraion VI. MB small finds (Drawings: A. Kontonis; Photos: Chr. Papanikolopoulos).

2012, 119, fig. 77.a), tripod cooking pots (MM IIB; metamorphic fabric with quartz; sandy with transparent glassy rock fragments), and loom-weights of Minoan inspiration (Fig. 13).

The small finds included spindle-whorls with incised decoration, pierced sherds used as loomweights, discoid loomweights of Minoan/South Aegean type, numerous cores and blades of flintstone and Melian obsidian, pieces of rock crystal and part of a shaft-hole axe (Fig. 14). The finds are indicative of storage and food preparation, as well as industrial activities such as flake-tool industry and textile production. Furthermore, the obviously worked wild boar tusk is an indicator of hunting in the forests of Samos - a sling stone and flint and obsidian arrowheads have been found in the MB levels - and possibly of its further use for personal ornamentation or as a prestige object of the local community of the Heraion, as was also the case in the late MB levels at Jalysos (Marketou 2010, 777-779).

DISCUSSION AND CONCLUSIONS

The brief presentation of domestic and public architecture and the associated finds demonstrates the existence at the Heraion of a flourishing MB urban center that succeeded its EB predecessor. This became obvious with the erection in the MB, on the same site and with the same orientation, of three fortification walls marking the limit of the settlement to the E. Taking into account the monumental fortifications that were obviously constructed by a large number of inhabitants under the coordination of a local authority, and considering Walter's

unpublished MB finds in the Temple area, close to the W branch of the Imbrassos, we can argue for an extension of the MB settlement over an area of 3.5 ha as was the case in the EB (Fig. 3). Such an extensive harbour settlement, in such an important location opposite the Maeander Delta, and on the natural sea route linking the SW to the NW Anatolian coast, would be, like Miletus, Tavşan Adası, Iasos and Ialysos, an attractive trading post for the emerging Thalassocracy of the Old Palaces of Crete (Fig. 1). The erection, at the end of the MB (Heraion VI.1), of a third, even stronger fortification may not exclude a short habitation of the site through the beginning of the LB. To this phase dates the cult place for fertility, testified by Niemeier beneath the Heraion Altar (Niemeier – Kouka 2010, 114, fig. 17). LM IA conical cups and lamps found on a stone-paved area indicate fertility rituals at the later Altar of Hera following the Minoan typicon, as a result of intensive contacts between the MB Heraion and Protopalatial Crete.

Stratigraphical observations and the ongoing evaluation of the study of all pottery groups allow house phases MB 6 and 5 to be associated with the earliest fortification wall MB VI.3. House phases MB 4 and MB 3 apparently co-existed with the second fortification wall MB VI.2. Finally, house phases MB 2 and MB 1 should be synchronous with the latest fortification wall MB VI.1. House MB 1 is the only house located inside the fortifications of the MB settlement to date (Fig. 2).

The Minoan and Minoanizing pottery found in all houses of this quite limited excavated area dominates among the imports and elucidates on the one hand the enrichment of the local life style with new cooking, eating and drinking sets. On the other hand, it points to the significance of the MB Heraion as an important trading post in the SE Aegean in the Old Palace period. It is worth mentioning that contacts between Crete and the East Aegean/Western Anatolia have so far been traced before EM II only at Liman Tepe V and Miletus II. On the contrary, an intensive and multidimensional interaction can be registered in the MB, as part of the emerging 'Minoan Thalassocracy'.

As Broodbank notes: 'The emergence of palatial Crete reconfigured the Aegean islands and much of the coasts into a lively periphery, with each area interacting with Crete in its own way. Behind this lay acquisition of metals, in which Crete was deficient and which encouraged its entry into Mediterranean trade networks ...', notably involving distant metals obtained via intermediaries mainly in the east Aegean. '... In the Cyclades, the east Aegean's islands and peninsulas and on Kythera, ... nodes of maritime trade flourished at key points. In the Neopalatial period their relationship with Crete deepened into ties of cultural affiliation. Several kinds of activities could lie behind this "minoanisation", from emulation/imitation by socially aspiring/ambitious locals, to influxes/arrivals of Cretans, to political control from one or more Cretan palaces, notably Knossos. A few island centers grew as large as Cretan towns, like lalysos on Rhodes and Akrotiri' (Broodbank 2013, 370-371). The new evidence from the Heraion shows that this site had the potential to grow into such a town in the LB – this requires further excavations – a town that could connect, together with Miletus, through land and sea trade networks the Aegean with the Anatolian hinterland.

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