

An update on the chronological value of Minoica in the Levant and Cyprus*

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Introduction

In recent years, the interconnections between the areas in the eastern Mediterranean have been dealt with on numerous occasions and approached from a variety of angles.¹

Since the *Radiocarbon Revolution*² in archaeology and the application of this technique to the Minoan eruption of Santorini by, among others, Betancourt & Weinstein in 1976,³ the absolute dating of the early part of the Late Bronze Age has played a vital part in the scholarly debate and has so far resulted in publications such *Thera and the Aegean World III.3*, and *A Test of Time*, as well as playing a role in other volumes relating to the chronology of the Eastern Mediterranean, such as *Timelines* and *SCIEM I-III*.⁴ Resting upon the branch of an olive tree from the unapproachable caldera rim of *Kalliste*, Thera, the present publication joins this debate.

The basis of the traditional absolute chronology in the Bronze Age eastern Mediterranean are the historical Egyptian king lists. The Levant, Cyprus and the Aegean can only add to this chronology relatively through their cultural linkages and facts about single points in time such as the Minoan eruption of Santorini. The natural sciences offer new opportunities to build up the absolute chronology of the Aegean Bronze Age and subsequently also interrelated chronologies around this specific point in time.

This chapter provides a concise overview of the Minoan objects of chronological value to the Santorini eruption that have been found in the Levant and Cyprus; it does not consider Near Eastern or Cypriot finds in Crete, which are naturally also a vital part of the chronological picture.

The Levant

A limited number of definite Minoan objects from closed stratigraphic contexts of the MM-LM I period have been found in the Levant, and around half of the Minoan (MM-LM I) pottery pieces uncovered in the Levant are Kamares ware of the Cretan Old Palace Period, which was excellently discussed by Merrillees in 2003.⁵ Two of the largest and most important Levantine emporia, Ugarit and Byblos, are almost unusable in connection with the absolute chronology surrounding the Santorini eruption and the cultural linkages throughout this period.

Claude Schaeffer initiated the still ongoing excavation of Ras Shamra/Ugarit in 1929. The Kingdom of Ugarit was situated on the coastline of Northern Syria and was engaged in trade with Cyprus, the Aegean, the Syrian hinterland, Egypt and Anatolia.

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¹ E.g. Cline 1994; Lambrou-Phillipsson 1990; Wijngaarden 2003; Kemp & Merrillees 1980; Merrillees 2003; Phillips 1991; Raymond 2005; Bietak – SCIEM 2000 program; Manning 1999; 2007, among others; Warren 2006 among others; AEGAEUM 18, 25, 26; Stampolidis & Karageorghis 2003; Warren & Hankey 1989; Crowley 1989.

² Renfrew 1973.

³ For more references, see Kuniholm 1990, 14.

⁴ Hardy & Renfrew 1990; Manning 1999; Czerny *et al.* 2006; Bietak 2000a; 2003a; 2007.

⁵ The total amount of published Minoica will be catalogued and discussed in Sørensen *forth.*



Fig. 1. Silver “teapot” from Byblos, Tomb I. (After Montet 1929, Pl. CXI, 746).

Schaeffer’s publications from Ugarit offer fragmentary evidence and it may thus be concluded, as has already been done by Merrillees,⁶ that the Middle Minoan Kamares ware pottery found in Ugarit cannot be used to settle firm chronological linkages. From early on, the explorations at Ugarit have focused on the LB strata, and the soundings from 2002 in *Palais Nord* are the most recent to uncover strata from the MB period.⁷ The publication of the finds from these soundings is underway.⁸

Starting perhaps from the middle of the 3rd millennium, Byblos (modern Jbeil, north of Beirut) was in close contact with Egypt, when Byblos became the favourite port of call for this nation in need of cedar.⁹ Byblos presents problems in the excavated stratigraphy. This important port town was explored by Ernest Renan in the early 1860s and excavated by Pierre Montet and later Maurice Dunand in the early 20th century. Dunand excavated the site using an artificial stratigraphy, cutting the tell into 20 cm layers right across the site, regardless of the cultural stratigraphy and without registering the exact position of many finds,¹⁰ which leaves us with the royal Tombs I and II for chronological studies concerning Minoan synchronisms from this very significant metropolis. Moreover, the rich collection of silver and bronze items from Tombs I & II, excavated by Montet and identified as Aegean or Minoan by Virolleaud, Schaeffer, MacGillivray and Cadogan,¹¹ may be interpreted in another fashion.¹²



Fig. 2. Silver bowl, from Byblos, Tomb I. (After Montet 1929, Pl. CXI, 748).

The possible Minoan objects consist of one silver “teapot” (Fig. 1), one silver bowl (Fig. 2), one bronze jug, two bronze cups from the sarcophagus of Tomb I, and one silver “teapot” and silver bowl from Tomb II.¹³ An obsidian vase set in gold with the name of the Egyptian king Amenemhat

⁶ Merrillees 2003, 127–31.

⁷ Mallet 2002, 527–50.

⁸ Joël Mallet is in charge of these; cf. Al-Maqdissi 2008 for more information on the excavated MB contexts at Ugarit.

⁹ Ben-Tor 1982, 11–2; Akkermans & Schwartz 2003, 240; Redford 1992, 37–43.

¹⁰ *Fouilles de Byblos VI* by the late J. Lauffray, scheduled for 2008, aims, according to Frost 2004, 319, to clear some of the problems concerning the excavation of the site. By the deadline of the present publication *Fouilles de Byblos VI* had not yet appeared.

¹¹ See references note 13.

¹² Anatolian: Davis 1977, 79–83.; Mycenaean: Pottier 1922, 298–300. The term “Mycenaean” only applies to the LH periods. The term was, however, occasionally used during the early 20th century as a designation for Bronze Age Aegean or even Minoan material; Local: Montet 1928, 191.

¹³ Tomb I: Silver “teapot”: Virolleaud 1922, 282 figs. 4–5 no.10 & pl. LXIV; Schaeffer 1948, 65 fig.63; Montet 1929, pl. CXI, 746; Davis 1977, 79–83, fig. 60; Pottier 1922, 300f.; Kantor 1947, 20; Montet 1928, 189–90 no. 746; MacGillivray 1998, 105–6; Silver bowl with spirals: Virolleaud 1922, 284 figs. 4–5 no.11 & pl. LXIV; Cadogan 1983, 514; Schaeffer 1948, fig. 63 M; Montet 1928, 191–2 no. 748; 1929, pl. CXI, 748; Davis 1977, 83–5. fig. 64; Pottier 1922, 298ff.; Kantor 1947, 20; Buchholz 1999, fig. 101a; MacGillivray 1998, 105–106; Bronze jug: Virolleaud 1922, 288 pl.LXVI 1.12 fig. 4.12; Kantor 1947, 20; Evans 1928, PM II,2, 655; 2 Bronze cups: Cadogan 1983, 514; Virolleaud 1922, 279 figs 2+2bis (Only one of these and the next no. are depicted – it is uncertain which one); Tomb II: Silver ‘teapot’: Schaeffer 1948, fig.63; Montet 1928, 190–1 no. 747; 1929, pl. CXII 747; Davis 1977, 79–83. figs. 59 & 61; Kantor 1947, 20; Silver bowl with spirals: Cadogan 1983, 514; Davis 1977, 79 & 83–85.; Montet 1928, 192 no. 749; 1929, pl. CXIII, 749.

III of Dyn. XII was also found in Tomb I.¹⁴ Tomb II held a small obsidian chest also set in gold with the name of Amenemhat IV, of the same dynasty.¹⁵ The possible Minoica from Tomb I were all found inside the sarcophagus along with the obsidian vase, whereas no sarcophagus was found in Tomb II. The two possible Minoica and the obsidian chest were, among other artefacts, found in the tomb chamber. The naming of Egyptian kings dates the tombs rather precisely, but not many stylistic dates have been given for the possible Minoan material. The only objects for which a published stylistic Minoan date have been found are a fragmented silver bowl from Tomb I dated by MacGillivray to the MM IIB¹⁶ and two bronze cups from the same tomb dated by Cadogan to the MM IB or MM II period.¹⁷

The controversy between the historical and scientific chronologies is not conspicuous in the early part of the Old Palace Period and Dyn. XII; in fact, the discrepancy mainly lies in the length of the MM II period – whether it stretched into the 17th century.¹⁸ In all three cases, Amenemhat III's reign falls during the MM II period. Should the cups be MM IB, this would merely indicate their circulation for a longer period of time than the remaining objects.

Very few Minoan objects in the Levant have firm dates due to either the excavation or publication methods or to the find contexts; for instance, they may be stray finds, stem from disturbed contexts or even, like the looted objects, lack provenance. From well-stratified deposits in the Levant, however, stem the frescoes from Alalakh VII and Tel Kabri. These were dated by the first excavators of Kabri, Niemeier and Kempinski, to the second half of the 17th century (*i.e.* the late MB IIB).¹⁹ However, recently, Bietak has challenged this point, partly based on the presence of Bichrome Wheel-made Ware and Chocolate-on-White Ware on the floor of the frescoed Hall 611,²⁰ arguing that the frescoes date from the first half (Alalakh)²¹ and the second half (Kabri) of the 16th century, respectively – *i.e.*, Kabri might be as late as the initial stage of LB I.²² The 2008 campaign at Kabri revealed more mural fragments but also a possible MM III polychrome ware sherd in a locus related to the restorations of the MB II floor 703.²³ Moreover the phasing of

the frescoes published by Kempinski & Niemeier has been reviewed by the present excavators Yasur-Landau and Cline. New evidence seems to point to the fact that the palace had a very long lifespan of up to 250 years and was renovated at some point before its destruction when the miniature frescoes were dismantled and used as fill in the renovation layer. This new evidence points to a MB II date in the 17th century long before the Tell el-Dab'a frescoes and the final MB II destruction of the Kabri palace.²⁴

The Kabri (and perhaps Alalakh) frescoes are thus the closest we get to firm Minoan LM IA imports in the Levant. Furthermore the frescoes of Kabri bear close resemblances to the Ship fresco from Thera.²⁵

The only well-stratified and well-dated Minoan

¹⁴ Montet 1928, 155 no. 610; 1929, pls. LXXXVIII, LXXX-IX; Amenemhat III: 1818–1773 BC according to Hornung *et al.* 2006, 492.

¹⁵ Montet 1928, 157 no. 611; 1929, pl. LXXXVIII, XC; Amenemhat IV: 1772–1764 BC according to Hornung *et al.* 2006, 492.

¹⁶ MacGillivray 1998, 105–6.

¹⁷ Cadogan 1983, 514.

¹⁸ Warren & Hankey 1989, 169: MMII: 19th cent – 1700/1650 BC; MacGillivray 1998, 109: MMII: 1908–1760 BC; Manning 1995: 1900/1875–1750/1720 BC.

¹⁹ Discussion on the frescoes of Alalakh: Niemeier 1991, 192–4; 1998, 69–71+83–85; 2000, 772 + 780–9; 2002, 275–85; Tel Kabri: Niemeier 1990a, 123–4; 1990b, xvi–xxi; 1991, 196–9; 1993, 332–3; 1995a, 1–10; 1995b, 675–8; 1998, 71–8+85–9; 2000, 767–9+776–80; 2002, 254–75, 279–85; Kempinski & Niemeier 1991, 188, 192; Kempinski 1993, 72; 1997, 329; The late MB IIB date of the Kabri palace destruction was reached using ¹⁴C dates in combination with the introduction of Bichrome pottery in Palestine and its correlation with the Egyptian chronology (Niemeier & Niemeier 2000, 769); Pottery from the palace and tomb 902 along with two Egyptian scarabs from Tomb 902 bearing the king name Yakebamw of SIP date in the destruction to the late MB IIB, end 17th century BC (Kempinski *et al.* 2002, 120; Mizrachy 2002, 330–3).

²⁰ Bietak 2007, 272.

²¹ Using the Low or Ultra-low Babylonian chronology, 271. Niemeier & Niemeier 2000, 767 apply the “Middle” or “Low” Babylonian chronology.

²² Bietak 2007, 269–72. fig. 2.

²³ Yasur-Landau & Cline 2008, 6, fig. 10a.

²⁴ Yasur-Landau & Cline 2007, 159–160; Yasur-Landau & Cline 2008, 8.

²⁵ Niemeier 2000, 767–780.



Fig. 3. Jar fragments from Tell Ta'annek (Courtesy of Dr. Hamed Salem, Birzeit University).

find in the Levant post-dating the Minoan eruption of Santorini is a LM IB palace style bridge-spouted jar found in the destruction layer at Tell Ta'annek in Israel (Fig. 3).²⁶ This piece has been thoroughly illustrated by Warren & Hankey²⁷ but, as was also noted by Warren & Hankey in 1989, the deposit has not been exhaustively published. This remains the case. The debris in which the fragments were found were said to stem from the destruction layer of Thutmose III's 23rd regnal year.²⁸ The preliminary report only gives a brief record of the remaining pottery from the debris. The so-called Tannish Wares were found in the same debris, which according to the excavator were found in Megiddo IX, the destruction layer of Thutmose III.²⁹ Two Cypriot sherds allegedly from the same period as the LM IB piece were also found in the debris,³⁰ and according to Hankey, these pieces were White Slip II and Base Ring I Wares,³¹ but they have not been published and thus cannot be assessed here. It cannot be excluded that the Minoan piece was an heirloom. Apart from this, a fragmented bridge-spouted jar from Kāmid el-Lōz³² and a faience vase neck from the Ishtar temple as far away as Assur³³ are dated to the LM IB.

The bridge-spouted jar from Kāmid el-Lōz (Fig. 4) was found in the rich tomb of stratum P4d-c dated to 1480-1340 BC.³⁴ The jar was pieced together from fragments scattered in two rooms of the tomb and fragments bought on the art market.³⁵ Furthermore, according to the excavator, it seems the



Fig. 4. Kāmid el-Lōz: Jar reconstructed from excavated and probably looted fragments (After Lilyquist 1994, pl. 16).

tomb was in use for some time, since more joining pot sherds were dispersed in different rooms of the tomb.³⁶ The Cypriot White Slip II and Base Ring

²⁶ Warren & Hankey 1989, 116 & 142 fig. 6&7; Hankey 1993, 106 no. 39; Strøm 1982, 370; Buchholz 1974, 416; Betancourt & Weinstein 1976, 338; Leonard 1994, 195 LM#12, no. 208; Hankey & Leonard 1998, 32.

²⁷ Warren & Hankey 1989, 116 & 142 fig. 6 & 7.

²⁸ Hornung *et al.* 2006, 492, Thutmose III, 1479-1425 BC; Krauss & Warburton this volume, Thutmose III, 1468-1415 BC.

²⁹ Lapp 1967, 33-34.

³⁰ Lapp 1967, 33.

³¹ Hankey 1981, 108.

³² Miron 1990, 144 no. 670, figs 82-3; Lilyquist 1994, 107-8, fig. 33, 34, pl. 16.

³³ Hall 1928a, 64-74, fig. 5; Pendlebury 1939, 225; Andrae's notes on Ashur excavations; Bär (pers.comm. Feb. 2008); Koehl 2006, no. 218.

³⁴ The beginning of this period lies at the end of the scientifically settled period of LM IB (Manning *et al.* 2006: c. 1620/1600-1450 BC) and at the beginning of the archaeologically settled chronology (Warren & Hankey 1989, 169: 1480 ± - 1425 BC).

³⁵ Miron 1990; Lilyquist 1994.

³⁶ Hachmann in Miron 1990, 39-40.

I-II Wares³⁷ were found in the same rooms as the LM IB sherds. These facts complicate or even preclude the use of the jar as a firm chronological link.

The alleged Minoan vase neck from Assur (Fig. 5) is said to derive from the Ishtar Temple built by Tukulti Ninurta I.³⁸ In both the High and Low Chronology this date is much later than the LM IB and the piece must thus be regarded as an heirloom. Lastly it should also be noted that stone objects dated to the LM I period were found in a LB II temple at Amman.³⁹ The temple itself is firmly dated but the objects within the temple were dated in periods ranging from the predynastic period in Egypt to the final years of the temple.⁴⁰ The mixed character of the context points to the Minoica as heirlooms.

The remaining objects with firm dates antedate the eruption and are to be placed in the Old Palace Period (Hazor,⁴¹ Sidon,⁴² Ashkelon,⁴³ and the aforementioned Byblite Royal Tombs I & II⁴⁴).

As has been shown above, much seems to depend on the palace frescoes from Kabri and possibly Alalakh in terms of cultural synchronisms in connection with the eruption date.

Cyprus

From what has been demonstrated above through the Levantine material, Cyprus must move to centre stage in the search for usable contexts and Minoica. Naturally, Egypt holds the leading role due to its historical sources, but much argumentation put forward on chronological linkages in the past relates to Cyprus and its pottery, primarily the White Slip ware. Let us therefore turn to Cyprus to look at the Minoan finds from there. The Minoica (MM-LM I) from Cyprus have recently been described and catalogued.⁴⁵ It has been demonstrated that very few Minoan objects have been found in Cyprus from the period in question, most of them found in tombs in the earliest phase from northern Cyprus and later on also on the southern coast of the island. Furthermore, most objects were of New Palace Period origin.⁴⁶

Toumba tou Skourou Tomb I has a prominent role in the assemblage of Minoica in Cyprus because of the number of artefacts found there. The



Fig. 5. Faience piece from Assur. (After Hall 1928a, fig. 5).

tomb was, however, in use for a longer period, MB III-LC IB, and the grave goods were thus disturbed by the continuous use and the ground water.⁴⁷ This makes the tomb unsuitable for chronological issues. In Cyprus we find 12⁴⁸ closely datable objects from secure contexts. Six of these antedate the Minoan

³⁷ Miron 1990, no. 658, published as Base Ring (BS) II Ware. According to Paul Åström (pers. comm. June 2008) BSI and was produced from LC IB-LC IIA; No. 664, BS II; No. 773, published as "milk-bowl". According to Paul Åström (pers. comm. June 2008) White Slip II ware which can be dated to the LC IIB.

³⁸ 1244/3-1208/7 BC.

³⁹ Hankey 1974, 175-6; 1973, 104, 109; Koehl 2006 no. 218 & 219; Cf. Sparks 2007, 11-2 for alternative interpretations of these objects.

⁴⁰ Hankey 1974, 168.

⁴¹ Dothan *et al.* 2000, 1-15. fig. 1; Åström 1961-62, 146; Hankey 1993, 106 no.33; Ward 1971, 78; Yadin *et al.* 1960, 91 pl. CXV, 13; Cadogan 1983, 14; Walberg 1987a: 70; Merrillees 2003, 135-6; MacGillivray 1998, 105.

⁴² Doumet-Serhal 2003, 12-3; Doumet-Serhal 2008, 21, figs 29, 32-3; MacGillivray 2003, 20-4; MacGillivray 2008, 45; Merrillees 2003, 135.

⁴³ Stager 2002, 357, fig. 19; Merrillees 2003, 136; Stager *et al.* 2008, 231, fig. 14.25; Bietak 2009 *et al.* 2009, fig. 1.14.

⁴⁴ Cf. n. 13.

⁴⁵ Sørensen, 2008.

⁴⁶ Sørensen, 2008.

⁴⁷ Vermeule & Wolsky 1990, 161.

⁴⁸ Sørensen 2008, catalogue nos. 1-2,19,20-1,24-6,44-7.

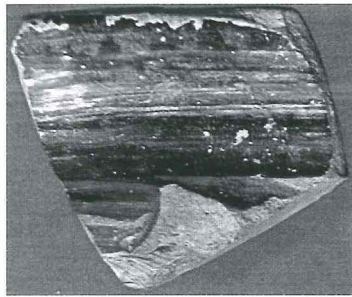


Fig. 6. Cup sherd from Enkomi. (After Dikaios 1969, frontispiece, 1793/2).

eruption of Santorini by centuries and are thus less relevant to the eruption date. Of LM IA objects usable in this connection are two cup fragments from Enkomi,⁴⁹ a shoulder fragment from Toumba tou Skourou⁵⁰ and one from Maroni-*Vournes*.⁵¹ All of these items are small pottery sherds; nevertheless an examination of their context might prove useful.

The sherd from Maroni-*Vournes* was found in a closed LC IA (*Vournes* IA) context⁵² along with Proto White Slip ware and several other wares from the early LC I period.⁵³ Radiocarbon dating was applied to samples from *Vournes* but unfortunately the results were too broad to give a precise date.⁵⁴

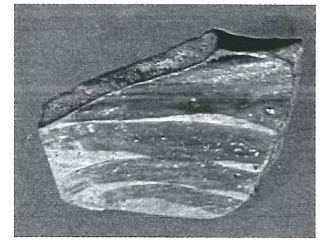
The LM IA sherd from Toumba tou Skourou was found in the niche of the undisturbed Tomb III along with a “Syrian”/Proto Base Ring jug, White Polished and Plain White Wheel-made Ware.⁵⁵ In the tomb chamber Proto White Slip pottery and other ware types were found.⁵⁶ The tomb was dated to the early part of LC IA,⁵⁷ a period roughly contemporary with the LM IA.⁵⁸

Two sherds of LM IA date, alternatively LH I, from Enkomi will also be considered here.

A cup sherd⁵⁹ (Fig. 6) was found in room 115 of the fortress between floors VI and V, along with a sherd of the Painted Wheel-made Ware.⁶⁰ The stratum derived from Dikaios’s early Level I B, which was synonymous with LC IB. A sherd from another cup⁶¹ (Fig. 7) was found in floor X of fortress room 118, likewise from early Level I B. This floor also included Middle Cypriote and LC wares.⁶² Since the two possible LM IA pieces from Enkomi are sherds and were found in and between floors with mixed MC and LC I material, they can only present a *post quem* date for the floors and early Level I B. Neither piece is therefore conclusive for the absolute chronology.

Lastly, two pieces of pottery from well-dated

Fig. 7. Cup sherd from Enkomi. (After Dikaios 1969, frontispiece, 1805/1).



contexts at Enkomi postdate the eruption. They have been stylistically dated to the LM IB/LH IA period. The first piece is a fragment from either a LM IB or a LH IA alabastron.⁶³ It was found in Area III, Room 114, floor VII, which dates to the advanced Level IB phase, corresponding to the later LC IB.⁶⁴ A Syro-Palestinian amphora and a plain ware bowl⁶⁵ were found in the same stratum, but they were not in the excavation catalogue and thus cannot be further described here. The second ceramic LM IB fragment is a rim, possibly from a cup. It was uncovered in Quartier 4E in an LC IB context.⁶⁶ Along with this sherd, Cypriote Red-on-Black and Bichrome Ware was found.⁶⁷ Red-

⁴⁹ Sørensen 2008, catalogue nos. 19–20.

⁵⁰ Sørensen 2008, catalogue no. 25.

⁵¹ Sørensen 2008, catalogue no. 26.

⁵² M 11 12 8814, Cadogan *et al.* 2001, 77.

⁵³ Cadogan *et al.* 2001, 77, White Painted V-VI, Composite, Black Slip II-III, Red-on-Black, Red-on-Red, Bichrome Wheel-made and Proto Base-Ring Ware, all from the early LC I period.

⁵⁴ Cadogan *et al.* 2001, 85–8.

⁵⁵ Vermeule & Wolsky 1990, 267, P642, P840, P 641.

⁵⁶ Vermeule & Wolsky 1990, 267–70 Black Slipped, White Painted, Red Polished Ware, a knife and pins.

⁵⁷ Vermeule & Wolsky 1990, 266.

⁵⁸ According to Eriksson 2001a, 52 more precisely contemporary with LC IA:2.

⁵⁹ Sørensen 2008 no. 19; Dikaios 1793/2.

⁶⁰ Dikaios 1793/1, pl. 57/8.

⁶¹ Sørensen 2008, no. 20; Dikaios 1805/1.

⁶² Dikaios 1969-71, IIIa: 230: The LC pottery being Monochrome, Cypriot Wheel-made and plain wares.

⁶³ Sørensen 2008, no. 21 (with further literature); Dikaios 4102/1.

⁶⁴ Dikaios 1969-71, IIIa: 438.

⁶⁵ Dikaios 1969-71, IIIa: 28, pl. 6.1.

⁶⁶ Sørensen 2008 no. 24 (with further literature).

⁶⁷ Courtois 1979, 163; LCIB dates according to Merrillees 1992, 51, Table 2 to 1550–1450 BC.

on-Black Ware was, however, in use already from the Middle Cypriot period.⁶⁸ Bichrome Ware began being produced in the final years of MC⁶⁹ or from the LC I.⁷⁰ Again, these LM IB/LH IA sherds are only fragments and do not represent conclusive data to chronological issues.

Conclusion

Only very few items in the chronological puzzle of the eastern Mediterranean have been considered here: the Minoica from the Levant and Cyprus firmly dated by both stratigraphy and style. It has been demonstrated that the Minoica published from the Levant up until now have played a marginal role in determining the absolute dates of the LM IA period and the Minoan eruption of Santorini. The best candidate seems to be the Kabri (and perhaps Alalakh) frescoes with their close Theran affinities. However, since their high date, before 1600 BC,⁷¹ has recently been challenged by Bietak,⁷² but re-established, on a new basis, by the renewed excavations which suggest that they be assigned to the 17th century BC⁷³ we have not yet established consensus on the absolute chronology of Cretan finds in the Levant.

Until now, Cyprus seems to have produced two LM IA/LH I sherds applicable to the debate, the Toumba tou Skourou Tomb III and Maroni-Vournes sherd and two LM IB/LH IA fragments from Enkomi. However, since these are sherds their chronological value must be seen as limited.

The Proto White Slip and White Slip ware present two vital clues for piecing together the absolute chronology by means of archaeology, since they were found throughout the eastern Mediterranean.⁷⁴ As an example, the famous, now lost, White Slip I bowl from Thera⁷⁵ has been put for-

ward many times in the chronological debate.⁷⁶ Proto White Slip ware was found in both contexts with the LM IA sherds from *Vournes* and *Toumba tou Skourou*. Åström deduced from his study that Proto White Slip was produced during LC IA:1-LC IA:2 and that this period began around 1600/1575 BC and ended 1525/1500 BC.⁷⁷ According to Merrillees, the LC IA dated slightly earlier, to 1650-1550 BC.⁷⁸ Absolute chronology based on archaeology is thus still debated, as is the Egyptian chronology amongst Egyptologists.

The discussions about the historical and archaeological data show that the scientific radiocarbon dates⁷⁹ are compatible within the range of the present archaeological data. We still need more refined data like the Kabri finds and the Theran olive branches to more firmly link the entire chronological sequences of the Levant, Cyprus and Crete both archaeologically and scientifically.

⁶⁸ Åström 1972.

⁶⁹ SCIAM2000 Bichrome Ware Project, <http://www.oeaw.ac.at/sciam2000/Pr12main.html>, accessed 16/12/08.

⁷⁰ Paul Åström pers. comm. June 2008.

⁷¹ See above n. 20.

⁷² See above n. 21.

⁷³ See above n. 25.

⁷⁴ Karageorghis 2001; Manning 1999, 170-87.

⁷⁵ Fouque 1879 (1998), Pl. XLII.6.

⁷⁶ E.g. Bietak 2007 among others, Manning 2007 among others, Merrillees 2001 and Niemeier 1980.

⁷⁷ Åström 2001, 50.

⁷⁸ Merrillees 1992, 51.

⁷⁹ Radiocarbon dates from Tell el-Dab'a, Egypt, also point at the late 17th century BC eruption date (Walter Kutchera – paper given at the Danish Institute at Athens 01/12/08, Danish Institute at Athens Newsletter, December 2008 <http://www.diathens.com/NEWSLETTER%20DECEMBER%202008.pdf>, accessed 15/12/08; Athens News Agency, <http://www.hri.org/news/greek/ana/last/08-12-03.ana.html>, accessed 15/12/08).

