Saro Wallace

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Surface Evidence for the History of Large Settlements in Central Crete

Part 1: Introduction – The Background of Research – Chronology

Introduction

The issues of how Archaic to Classical Cretan states formed, and why they took such an unusual form (numerous and densely-packed; conflict-ridden; conservative; oligarchically structured) remain greatly under-researched[1]. Text sources relating to the states' early development and structure are sparse. Only recently has interest grown in undertaking large-scale, modern, and systematic archaeological research on the large sites which formed the spine of Crete's settlement pattern, and the centres of state territories, by the seventh century BC[2]. Despite these advances, if we wish properly to understand the state development process in terms of its cultural and historical drivers and context (and to highlight and explore its sub-regional trajectories) we need to look at a much broader range of sites than the few so far targeted. This paper uses surface pottery collected by scholars from the British School at Athens in the 1930s–1960s at a number of large unexcavated settlements in central Crete, together with new observations made during more recent visits to these sites and to other contemporary sites in the island, to develop and enrich existing narratives of large polity emergence and expansion in the island during the Early Iron Age (EIA: c. 1200–700 BC) through Archaic (A: 700–480 BC)

This paper is dedicated to the memory of Professor Nicolas Coldstream, whose uniquely wide-ranging, systematic, and energetic research on Greek Iron Age pottery provides an essential grounding for this work. The way in which he continued his research until the very end of his life without any deterioration in its quality or ambition – making incisive new analyses of the data as well as publishing it in primary form – offers an outstanding model of scholarship for my own generation of scholars. I thank Sinclair Hood for permission to study the material collected by his field teams in the 1950s–60s, and the BSA for allowing me to use the Stratigraphical Museum facilities at Knossos to study this material (and that collected by John Pendlebury during the 1930s) in 2002–2003. The fieldwork was funded by a British Academy Small Research Grant, by a grant from the Mediterranean Archaeological Trust, and by a 2-year postdoctoral fellowship from the Leverhulme Trust. Documentation of the pottery was assisted by the INSTAP Study Team. I thank in particular Douglas Faulmann, who made and inked many drawings with his customary good humour. Kostas Paschalidis also undertook a great deal of inking work. Nicolas Coldstream gave permission for me to study the North Cemetery assemblage, and Hugh Sackett the Unexplored Mansion assemblage (both held in the Stratigraphical Museum) as bases for comparison with the material presented here. My opportunity to work for a season on the site, and with the pottery, at Thronos Kefala in 2002 proved extremely helpful, as did my participation in the Monastiraki Chalasmeno excavations in the year that Geometric deposits were discovered; I thank Anna Lucia D'Agata and Metaxia Tsipopoulou respectively for allowing me to take part. Among scholars particularly helpful in sharing their expertise on EIA – Archaic pottery were Leslie Day, Donald Haggis, Peggy Mook, and Krzysztof Nowicki. Emanuela Santaniello kindly showed me around her new excavations at Profitis Elias, Gortyn, and Lena Sjögren visited some of the sites here with me in 2002, resulting in many interesting discussions. Peter Callaghan kindly cast an eye over Classical and Hellenistic sherds from the collections I studied.

1 Erickson 2004; Lemos 2002, 1; Morris 1997, 100; Perlman 2000, Wallace in press a.

2 e. g. D'Agata 2002; Haggis et al. 2004; Haggis et al. 2007 a; Haggis et al. 2007 b; Whitley in prep.

periods. Though one would not normally expect surface assemblages to offer the best insight into ceramic development, Cretan settlement pottery of the Protogeometric (PG: c. 1000–800 BC) to Archaic periods has seen such limited study that a significantly improved understanding of fabrics, technology and shapes can be built up, and light thrown on chronology, by comparing surface material with the few excavated assemblages. Sub-regional distinctions in all these aspects, as well as broad interregional similarities, can be noted. They suggest that even while these large sites formed part of the same broad cultural and political network, the production of material culture in this period was adapted to fit local resources, construct group identities, and serve specific kinds of consumer demand. The brief macroscopic studies of fabrics undertaken here enhance and extend inferences drawn from stylistic and chronological analysis, and pave the way for more systematic, targeted fabric studies (including petrographic analysis) on both excavated and surface assemblages.

The paper aims to contextualise the data it presents with regard to regional models of settlement change, and their implications for social and political change, during this period. Central Cretan settlement is particularly under-researched for this period, yet developments in this large region must have had major implications for the history of the island as a whole: it contained the main concentration of prime arable, the best harbours and coastal access, and the core population mass. Continuity of use from the Late Bronze Age (LBA) right through the Early Iron Age at the former palatial sites of Knossos and Phaistos has long been known, and aspects of the EIA record at each site have been studied in some depth[3]. Many ancient literary and inscriptional sources relating to Cretan states make reference to, or originate in, the central region[4]. What we still lack is the structured investigation of developments in the wider central Cretan landscape of this period – of which Knossos and Phaistos are in many respects unrepresentative. Though a few other (more typical) large EIA – Classical sites in the region have been excavated as part of long-term projects started in the early twentieth century (Afrati Profitis Elias [Arkades]), Gortyn, Prinias), the results for the relevant periods are still only patchily published, derive from the use of basic, often outdated, excavation methods, and have not yet been fully analysed in a wide-ranging contextual perspective[5]. Nor has the central region yet been extensively surveyed. The Western Mesara and Lasithi surveys covered only small (though contrasting) parts of it[6]. A recent survey project covering the north-eastern part of the region (the Pediada Survey) has as yet produced no primary publication of data for the EIA – A period, while the ongoing Knossos survey covers mainly the area around the ancient town of Knossos itself[7]. At the five central Cretan EIA – Archaic/Classical sites presented here, surface pottery was gathered in the 1930s by John Pendlebury and assistants, and in the 1950s–1960s by Sinclair Hood and assistants. It is now stored in the Stratigraphical Museum, Knossos (fig. 1)[8]. The sites presented here were selected from a wider group of contemporary sites where collections were also made because their collected assemblages are large and diagnostic enough to be truly informative about settlement chronology. Observations on site topography, positioning, and the character and spread of sherds currently visible on the surface were made during new visits to the selected sites in 2002–2003, and are presented here. Each assemblage discussed represents only a small fraction of the material present on each site's surface, and more intensive surface research would in all cases greatly enhance the conclusions drawn. The scattered distri-

3 Coldstream 2000; Coldstream – Catling 1996; Coldstream – Hatzaki 2003; Cucuzza 1998; Rocchetti 1970; Rocchetti 1974; Rocchetti 1975.
4 Jeffrey – Morpurgo Davies 1970; Perlman 1993; Perlman 2000; Perlman 2002; Perlman 2004; Perlman 2005; Sjögren 2004; Willetts 1967; Willetts 1977.
5 Allegro 1991; Di Vita 1991; Johannowsky 2002; Levi 1929; Rizza – Scrinari 1968; Rizza 1983; Rizza 1991; Rizza 2000; Rizza 2006.
6 Watrous 1982; Watrous – Hadzi-Vallianou 2004.
7 Panayiotakis 2004; Whitelaw et al. 2008.
8 Hood 1965; Hood et al. 1964; Hood – Warren 1966; Pendlebury 1939.

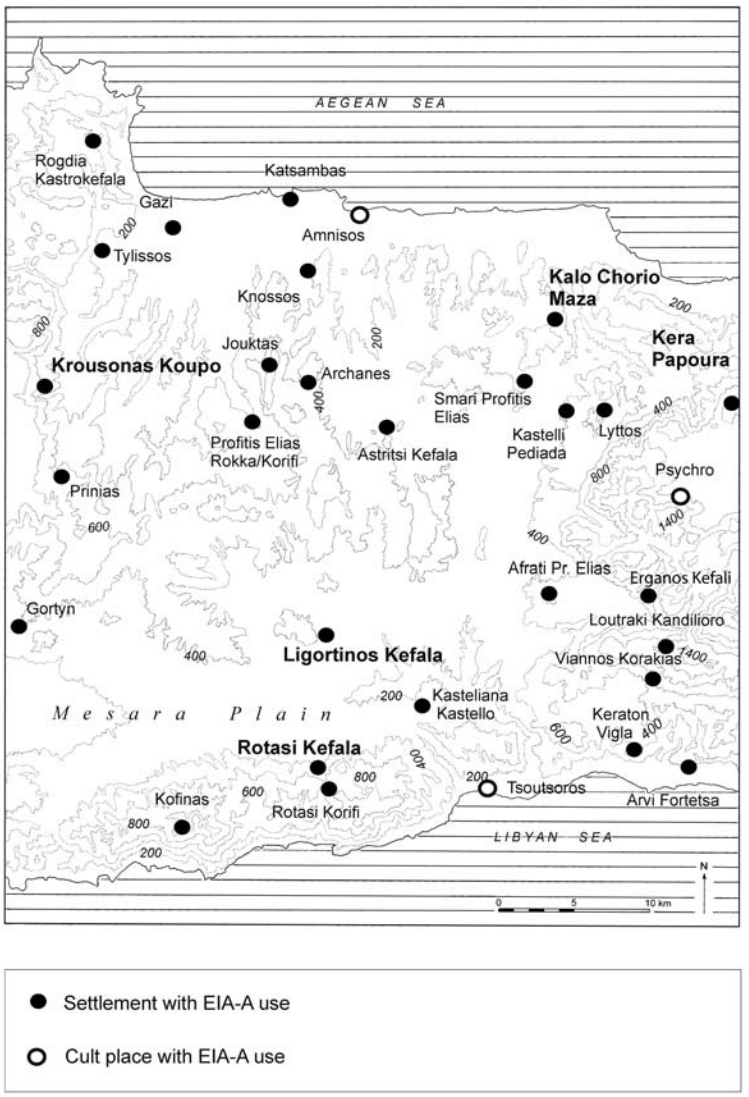


Fig. 1 Map of central Cretan region showing sites studied in the paper and other known Early Iron Age – Archaic sites (M. 1 : 500 000)

bution of the sites, as well as the quantity and quality of pottery collected from them, was important in their selection for study. Together they cover a very broad stretch of the central Cretan landscape, including some marginal areas – such as Lasithi – which are more usually studied as separate zones. Analysing the sites together as a group highlights common and distinguishing factors between them, in ways which aid our understanding of political and economic outlooks in this period. The broad geographical coverage also allows a better range of dating and fabric comparisons to be brought to bear on each small assemblage.

The scope of this paper does not allow characterisation or analysis of the whole process of state development in EIA – Archaic Crete. It does not, for example, examine many relevant aspects of the wider archaeological data, such as burial evidence, evidence for trade, data on subsistence economy, or even the whole range of settlement data for the island in the state emergence period. Nor does it address the important issues around the so-called Archaic gap at central Cretan sites – the former phenomenon is examined in a range of other recent literature, but still needs much more in-depth research[9]. Instead,

9 Erickson 2004; Haggis et al. 2004; Wallace in press a.

the main intention here is to demonstrate how this particular new body of evidence helps to develop and strengthen certain aspects of a emerging complex narrative of state formation and development in Crete. The paper particularly hopes to enhance and inform current fieldwork strategies – an important priority, since archaeological fieldwork is likely to be the main route to better understanding of the Cretan polis.

Background of Research on State Origins in First Millennium BC Crete

In the few cases where extensive excavation has taken place at the type of large settlement addressed here, the focus of study has often been the Late Geometric (LG: 750–700 BC)/Archaic to Classical/Hellenistic material (particularly architecture, sculpture, inscriptions, and fine pottery). Representing the later, better-preserved occupation phases on the sites, this material is often the most easily-recognised and dated[10]. The recent project at Azoria is exceptional in terms of its speed, detail and consistency of publication, including attention to EIA and earlier phases of occupation, though the problem of obscurement of earlier phases by the large volume of later remains applies here, too[11]. Work is also now underway at Prinias and Gortyn (following many years of excavation) on studying material from the earliest settlement phases in a systematic fashion[12]. Recent excavations at small settlements occupied *only* during the EIA (mostly its earlier part, 1200–1000 BC) provide some supporting context for these studies[13].

In cemetery investigations, the focus of study has been on EIA material, dating between the Late Minoan III C (LM III C: c. 1200–1000 BC) and Geometric (800–700 BC) periods. This is partly because some type of break occurs in the burial tradition from the Early Archaic period (EA: 700–600 BC) onwards, with many big cemeteries going out of use. Archaic burials are mostly known and studied as part of rescue projects or as chance finds[14]. The ceramics found in cemetery assemblages are, predictably, mostly fine wares. There thus remains a big gap in the scholarship with regard to the study of stratified ceramics from large settlements used in the period between c. 1000 and 480 BC (especially coarse wares, which comprise the vast bulk of all ceramic material in this period).

Two recent overviews of settlement in Crete between the EIA and Classical periods have taken the form of gazetteers, referring to surface as well as excavated material[15]. Interestingly, neither pays much attention to characterising settlement development through the period as a whole, or relating the latter to the state emergence process, although this is one of the stated themes of Sjögren's book. Nowicki's book, which presents much new primary data, has mostly focused on a move to settlements of defensible type occurring across Crete at around 1200 BC. The work discusses and illustrates only small amounts of PG – G material, though consistently recording its presence in surface assemblages. In contrast, Sjögren's study, entirely based on secondary data, isolates the Geometric and Archaic periods only for study. The latter approach seems to originate with reference to models of polis state emergence on the Greek mainland, making an *a priori* assumption that to examine the origins of Cretan poleis it is these periods alone which need to be considered[16]. This approach is problematic when it involves having to sideline or even ignore (as some of the gazetteer entries do) the clear presence of earlier EIA material on large sites used during the LG – A periods.

10 e.g. Cucuzza 1998; Rizza 1983; Rizza 1991; Rizza 2000; Rizza 2006; Rocchetti 2000; Rocchetti 2006; Santaniello in press; Tsipopoulou 2005.
11 Haggis et al. 2007b.
12 Johannowsky 2002; Perna in press; Santaniello in press.
13 Coulson 1997; Day et al. 2009; Mook – Coulson 1997; Mook in prep a; Mook in prep b; Tsipopoulou 2004a.
14 Sjögren 2004, 68–74.
15 Nowicki 2000; Sjögren 2004.
16 Sjögren 2004, 1–6.

The approaches outlined above, involving the selection of particular ›windows‹ of time in the state emergence process, and/or a focus on a narrow range of types of cultural evidence, leave major gaps in our understanding of the economic and political developments behind state emergence. Studying state emergence through reference to a longer overall time-frame, and to the cultural landscape as a whole, illuminates three distinct historical horizons.

Firstly, it is now widely recognised that the period around 1200 BC saw a major cultural transition in Crete, as Late Bronze Age (LBA) states collapsed and the vast majority of population relocated to new sites of a defended nature, dispersing permanently in the process. This is likely to have been a seminal period for the development of new community structures and networks[17]. In some parts of the island we can now map settlement developments at this period with considerable accuracy. However, the transition has been harder to document in much of the central region, where there are some important differences in the character of settlement. This paper stresses the importance to our understanding of the distribution, relationship and self-conception of early Cretan states of recognising that the foundation dates of almost *all* large LG – early Archaic settlements, including those of central Crete, lie in this crisis horizon. In doing so, it enhances the insight gained from excavations at large Archaic-Classical Cretan polities: the evidence of a twelfth-century origin for the Azoria settlement, for example, echoes results from excavations at sites like Thronos, Prinias and Gortyn[18]. The long-term perspective improves our understanding of how it came about that there were so many small and apparently very similar states in Classical Crete, and of how their identities as states were constructed and differentiated over time. Both these elements are vital to understanding the rise of long-lasting attritive conflicts between polis states, a characteristic feature of Crete by the Classical period.

Secondly, this kind of large-scale, long-term perspective is best-placed to clarify exactly when the emergence of new levels of social complexity, directly foreshadowing polis state formation, occurred in EIA – Archaic Crete. The paper's findings emphasise the need to revisit existing interpretative standpoints in this area, including the assumption that the distinctive horizon of state emergence in central Greece (c. 700 BC) should be matched in Crete by the first appearance, or sudden major expansion, of large settlements[19]. I have argued elsewhere for a much earlier departure point for complexity growth in Crete – from the tenth century onwards, in a process closely linked to a boom in trade with the east Mediterranean, and marked by a strong tendency to settlement nucleation within small regions[20]. The results of the present study strongly support the model of significant social, economic and political shifts in Crete from this period onwards, and help us move towards a better, more detailed picture of how and why they occurred.

Thirdly, parallels in developmental chronology between the sites studied here and their contemporaries elsewhere in the island allow us to better delineate a third major horizon of political change in Crete, falling in the early Archaic period, in which the newly consolidating and expanding poleis started to develop the cultural landscape in new ways. This has not been at all clearly identified or discussed in the scholarship to date, and requires much more research.

The basic presentation and interpretation of evidence on a site-by-site basis is undertaken in Part 2, below. In Part 3, I attempt to put this evidence in broader interpretative context, and thereby demonstrate the wider value of the study. In doing this I build directly on recent archaeological

17 e.g. Haggis 1993; Kanta 2001; Nowicki 2000; Wallace 2004.
18 D'Agata 2002; Haggis et al. 2007b; Perna in press; Rizza – Scrinari 1968.
19 Morris 1987, 156–171; Osborne 1996, 70–71; Sjögren 2004; Snodgrass 1971, 416–421; Snodgrass 1983.
20 Wallace 2004.

scholarship, including my own, to extend and develop existing ideas. Partly as a result of the uneven quality, balance and quantity of published archaeological data, existing discussions of state formation in EIA Crete often still draw heavily on ancient texts to support archaeologically rather weak or incomplete models. In Part 3, I use the archaeological evidence presented here to highlight some very wide discrepancies, yet also some underlying connections, between the picture of early Cretan state history often reconstructed from the textual accounts, and the archaeological picture at a broader, richer level. The aim here is neither to ›prove‹ or disprove the ancient textual accounts, but to look in a better-informed perspective at why the latter might have been constructed as they were, and to show how recognising their operation as elements of culture (rather than accepting them at face value as factual) assists our understanding of the island's history through this period. Part 3 finishes by looking briefly at how well the conclusions drawn from this study fit to, or could help adapt, more anthropologically-based state formation models of the kind in frequent use in archaeological interpretation in the last thirty years, but not yet applied in any detail to the Cretan EIA – Classical record.

EIA Pottery Chronology and the Dating of Surface Finds

To illustrate continuity of use of the presented sites, and draw reliable inter-site comparisons, I will refer throughout to chronologically diagnostic features in coarse and fine ceramics from excavated sites, with some additional reference to published survey assemblages. Though two of the sites studied here (Krousonas Koupo and Rotasi Kefala) were used well into the Classical period, there is no scope for coverage of the Classical material in detail within the present paper. Investigating the surface material of Classical date in more depth, and within a broad contextual perspective, at a number of different sites could produce many useful insights of the type I attempt to offer here for the EIA – Archaic periods.

Where a site's surface sequence is evidently continuous across the broad periods addressed by this paper, and fits a general pattern of site use across the island, I do not consider the apparent absence of any narrow or specialised style of fine pottery on the surface to indicate an actual gap in use. Some sub-designations within the existing Cretan EIA – Archaic pottery sequence are based on fine ware typologies from tombs. If they are accepted as representing generalised periods at all, the designations are usually taken to cover quite short spans. In fact, the terms »Subminoan« (SM: traditionally c. 1100–970 BC), »Protogeometric B« (PGB: traditionally the late ninth century), and »Orientalising« (O: traditionally the first half of the seventh century) may best describe regionally – or socially – circumscribed fine pottery styles[21].

To save space and avoid repetition, I preface the presentation and analysis of the material with an outline of the most common dating features for settlement pottery of this period. While not intended to be exhaustive, this provides all the main supporting arguments and references relied on for dating and fabric commentary within this paper. Because the exact terminology used to designate comparable material sometimes varies among the different published sources, traditional absolute dates (in terms of centuries and half-centuries) are used here wherever possible, though it should be noted that this whole span of Aegean pottery chronology is currently rather poorly supported by absolute dates arrived at using scientific methods.

21 Catling 1996; Coldstream – Catling 1996, 206–207. 715; Mook 2000; Mook 2004; Tsipopoulou 2005, 556; Whitley in press.

Coarse basins with pronounced carination below the flat rim and straight or slightly inward- or outward-slanting sides are common from mid-LM III C through early PG[22]. Later the profile becomes more flared, sometimes incorporating an overhanging and thickened rim, or one inset above a slight carination; fabrics are finer and harder; sometimes there are short horizontal handles level with the rim[23]. Narrow grooves appear around basin and bowl rims in late Archaic to Classical examples from Knossos and Azoria[24]. Some smaller thin-walled jars and basins in coarse fabrics, dating between latest PG and Archaic, have lightly-incised designs of wavy lines, foliate bands and zig-zags[25].

Cooking pots with plain, roughly-slashed or finger-impressed round-section legs, flat bases, high horizontal handles and short everted collars date to LM III C – SM[26]. Slashes on legs seem to become rarer in the PG period, and finger-impressions smaller and more regular[27]. PG – G tripod legs become rectangular or squarish in section, are of harder fabric, and have more regular incised/impressed decoration than their LM III C predecessors[28]. The ›cooking jug‹, with tall straight collar, oval-section handle at rim, and no legs is increasingly widely seen from PG through A[29]. Thin horizontal grooves on upper bodies and necks appear, and fabrics become thinner and finer[30].

For pithoi, the range of decoration seen at LM III C – PG Karfi indicates considerable diversity in form, even within the production of a single large site. There are hints that different regional traditions also existed. However, certain island-wide chronological developments are discernible from the few published stratigraphies. Broad hatching- and chevron-incised bands seem particularly common in LM III C – SM, though these continue at least into PG[31]. Rows of finger-impressions on raised bands, as seen at Chania Kastelli in LM III C, may be a phenomenon more characteristic of west Crete, though at least one parallel is seen at Karfi[32]. At Kavousi Kastro, incised running spirals appear on pithoi already in LM III C, and become increasingly popular in PG – G[33]. At first these designs most often seem to be handworked, but by LG – EA, small stamped circles and spirals become more common[34]. The latter are seen in west Crete at Thronos, where stamped circles appear in late levels. Narrow applied cordons with hatching also appear on hard-fired pithoid jars at Thronos in later PG through G levels, and at Kavousi Kastro

22 Day et al. 1986, 290; Hallager – Hallager 2000, pl. 49; Mook – Coulson 1997, 337–365; Sackett et al. 1965, fig. 11; Seiradaki 1960, figs. 5; 11 e–g; Tsipopoulou 2004 a, figs. 8. 10.

23 Coldstream 1960, fig. 14, 36. 115; Coldstream 1973, fig. 2, J26; Coldstream et al. 1999, fig. 1, 22 d. f have carination (dated EG, MG); 22 j and k are straight-sided with slightly overhanging rim (LG – O); see Coldstream – Catling 1996, fig. 100, 80.6 (LG – EA); fig. 98, 181; Haggis 2005, fig. 55, 71.1. 71.2; Mook 1993, fig. 60, P1.39; fig. 132, P3.126 (trays); Sackett et al. 1992, pls. 65, 26. 27; 57, GG9; 64, 34; Tsipopoulou 2004 b, fig. 8 (LG).

24 Coldstream 1960, fig. 14; Haggis 2005, 58 figs. 54, 70.1; 55, 71.5; Mook 1993, figs. 74, P1.123; 105, P2.146; 159, P7.56; Sackett et al. 1992, pls. 67, 11 (O); 74, H2:4; Shaw – Shaw 2000, pl. 4; 29, 650. 651. 656 (C–H).

25 Boardman 1960, fig. 5, 1.6 (PGB); Brock 1957, fig. 64, 137–139 pl. 43 e, 34; Coldstream 1960, pl. 37; Coldstream – Catling 1996, figs. 64, 137–139; 136, 58 (PGB – EG); Coldstream et al. 1999, fig. 1, 22 c; Sackett et al. 1992, pl. 70, 56. 57 (G).

26 Hallager – Hallager 2000, 45; Mook 1993, fig. 124, P3.59; Popham et al. 1965, fig. 17; Sackett et al. 1992, pl. 48, c13. d5; Seiradaki 1960, fig. 4; Tsipopoulou 2004 a, fig. 8, 7. 8.

27 Mook 1993, fig. 145, P3.218 (PG – O).

28 Coldstream – Catling 1996, fig. 60, 141; Hayden 2003, fig. 31, 126; Mook 1993, fig. 106, P2.149 (PG – O).

29 Coldstream – Catling 1996, fig. 102; Coldstream – Hatzaki 2003, fig. 5, B24; Hallager – Hallager 1997, pl. 45; Sackett et al. 1992, pls. 55, GD 32. GE 25; 51, GB 37; Shaw – Shaw 2000, pl. 4, 12.

30 Coldstream 1972, 86 fig. 9, G132; Coldstream 2000, fig. 1.23 b. d; Coldstream – Sackett 1978, 47. 56; Coldstream – Catling 1996, figs. 60. 62. 132; Coldstream – Hatzaki 2003, fig. 6, 32; Hallager – Hallager 1997, pl. 45; Mook 1993, fig. 94, P2.69A; Sackett et al. 1992, fig. 98, P 2.99. 2.100 pls. 47, 111. 112; 66, 24; 75, H3.

31 Mook 1993, figs. 79, P1.143; 143; 144, P3.214c. P3.214b; Sackett et al. 1992, pl. 61, 34. 35; Seiradaki 1960, pl. 12 a.

32 Hallager – Hallager 2000, pls. 80. 81.

33 Haggis 2005, 57. 169; Mook 1993, figs. 65, P1.73; 79, P1.141; 126, P3.70; 114, P2.206; spirals combined with angled lines also appear.

34 Coldstream 1960, fig. d; Mook 1993, fig. 99, P2.114; Sackett et al. 1992, pls. 66, 26; 67, 19. 21. 22; 229.

in PG – G deposits[35]. An important Geometric pithos type has shallow thin grooves incised directly on the body[36].

Twisted neck-handles from large semi-coarse amphorae, dated SM in some of the literature on Knossos ceramics, are present at a number of other central Cretan sites together with LM III C material, and probably start to appear in the letter part of the LM III C period[37]. Double handles on jars and amphorae date mostly from PG onward, though they are seen earlier[38]. From PG, amphora neck-handles are often painted with a cross or S[39]. In PG, too, concentric circle sets start to appear within the large empty zones between bands on amphora bodies[40]. Later PG – G amphorae and jars often have multiple narrow bands on the neck and body, and during the G period elaborate decorative patterns cover large zones of the body. Collar-like necks, often with banded decoration, on jars, jugs and kraters characterise the G – A period[41]. Amphora rims tend to become sharper, overhanging and bevel-edged between LPG and G[42].

In drinking/mixing vessels, the LM III C period is characterised by S-shaped profiles for deep bowls, skyphoi and kraters: these often have flat or low ring bases, banded body decoration, and single painted or reserved bands around the rim[43]. Some small carinated bowls of LM III C – PG also have an external band around the carination[44]. Higher feet, and monochrome dipped or painted bodies, mark out SM/PG skyphoi and kraters[45]. PG kraters are marked by a tendency of the body towards an inverted cone-shape rather than a bell-shape: they often have concentric circle sets painted in an open body zone below the rim. The latter is sometimes slightly inset above a slight carination or shoulder[46]. By LG – EA the high foot in skyphoi and cups becomes obsolete, and flat thin bases appear on vessels which are either monochrome or have elaborate panelled decoration above a monochrome or banded lower body[47]. The vessels tend to have long everted or straight rims and a pronounced globular belly, with horizontal handles. Through the seventh century the cup form becomes taller and the collar longer and straighter[48]. Imported cups and skyphoi from a variety of other Aegean regions are present in the island in considerable numbers by this date, each regional type having its own characteristic features. Krater body designs by LG – EA are very elaborate, and interiors often spatter-painted[49].

Chronological and Regional Patterns in EIA – Archaic Fabric Composition

The majority of surface pottery from this period in Crete is coarse, offering significant scope for provenance and technology studies using both macroscopic and petrographic techniques. Yet such studies, and the kinds of research agendas likely to drive them, are still in their infancy for the period discussed, partly because so much attention has hitherto been given to fine wares. The most detailed work on fabrics so far has been on material from intensive survey and excavation at the Kavousi site cluster in east Crete, and from survey in the Ayios Vasilios, Sfakia and Vrokastro regions: comparative petrographic work has recently taken place on excavated material from Knossos and Thronos Kefala, and is currently ongoing on the old excavated material from Karfi[50]. I will describe the fabrics in the present assemblages following the same methods adopted in these recent works, including the use of simple hardness scales and of informal colour descriptions alongside Munsell codes[51]. In all catalogues, sherds are listed in the same order as illustrated. The percentages of inclusions given are all approximate. Measurements in millime-

35 D'Agata pers. comm.; Mook 1993, fig. 143, P3.214a.
36 Brock 1957, pl. 68; Tsipopoulou 2004b, fig. 9; these are also seen at Thronos in the higher levels containing G pottery.
37 Boardman 1960, pl. 3, IV.1. VIII.2; Coldstream – Catling 1996, figs. 84; 100, 40.16. 98.11; Coldstream et al. 1999, pl. 1a; Seiradaki 1960, fig. 8.
38 Brock 1957, 147 pls. 16. 40. 60; Seiradaki 1960, pl. 9e.
39 Coldstream et al. 1999, pl. 1b; Hallager – Hallager 1997, pl. 119; Hayden 2003, 14. 70; Mook 1993, fig. 111, P2.181; Sackett et al. 1992, pl. 47.
40 Mook 1993, fig. 167, P8.55.
41 Coldstream 1960, fig. 6; Coldstream – Catling 1996, fig. 121, 129.5; Mook 1993, figs. 93, P2.65; 157, P7.35; Sackett et al. 1992, pl. 57, GF 8.
42 Hallager – Hallager 1997, pl. 114; Mook 1993, figs. 71, P1.110; 117, P2.225. P2.224; Shaw – Shaw 2000, pl. 4.3 no. 73. 74.
43 Borgna 1997; Borgna 2003; Coulson 1997; Hallager – Hallager 2000, pl. 34–36; Mook 1993, figs. 120, P3.17; 121, P3.20; Popham et al. 1965, fig. 8; Tsipopoulou 2004a, fig. 8.11.
44 Hallager – Hallager 2000, pl. 34–36; Seiradaki 1960, fig. 5.
45 Coldstream – Catling 1996, figs. 93, 60.32; 126, 35; Mook 2004, 164–170; Mook – Coulson 1997, 337–365; Sackett et al. 1992, pls. 60, 1; 61, 24; Seiradaki 1960, figs. 14. 17; Shaw – Shaw 2000, pl. 4.4 no. 117. 120. 128.
46 e. g. Coldstream et al. 1999, fig. 1.13.
47 Coldstream 1972, fig. 7, E1; Coldstream 2000, fig. 1, 18. 19; Mook 1993, fig. 66; Sackett et al. 1992, pls. 5, GC 7–9; 56, GE 12. 13; 58, GH 6; Tsipopoulou 2004b, fig. 6.
48 Coldstream 1960, fig 9; Coldstream – Catling 1996, figs. 98, 205; 63, 119; Hallager – Hallager 1997, pl. 106; Mook 1993, fig. 100, 217.
49 Sackett et al. 1992, pl. 64, 25. 31.
50 Boileau et al. in press; Mook 2005; Haggis – Mook 1993, Hayden 2005, 13; Moody et al. 2003; Whitley et al. 1999, 244–249.
51 Mook 2005, 168; Haggis – Mook 1993, 273; Moody et al. 2003, 47.

tres refer to the average diameter of inclusions. All inclusions are angular in form unless otherwise specified. Where inclusions can be generically identified at a macroscopic level, a suggested identification is supplied. Otherwise, particularly in the case of the frequently-encountered hard, mid- to dark-grey, slightly shiny angular inclusions, no attempt at identification is made. It is likely that in central Crete many of the fabrics containing these inclusions come from flysch deposits, which include basalt and chert elements (Nodarou in press). This is particularly likely for fabrics at Papoura and Maza, since flysch fabrics were in use at nearby Karfi and the clays seem likely to originate from the west Lasithi/Pediada region. A fabric hardness description follows the list of inclusions in each entry.

The studies cited above suggest that the ›ideal‹ or ›classic‹ fabric for EIA fine wares was buff in colour[52]. This is supported here. Yet the present study also shows significant differences in fine ware manufacturing practice between sites/regions within central Crete: some sites produced a high proportion of their fine ceramics in local red clays, with either a self-slip or (more commonly) a buff slip. In coarse wares, the overlapping use of what is basically a single local fabric (with minor adaptations) for a broad range of coarse vessel types, observed in previous studies, is reflected at many of the sites studied here. At Kavousi, phyllite, in combination with sparse white calcite, is a standard inclusion in the fabric commonly used for basins: a similar fabric was used for pithoi and large jugs[53]. Moody et al. describe one of their studied ›nut‹ fabrics from the Sfakia region as covering the same broad range of vessel types. However, the fact that a characteristic ›greasy blue phyllite ware‹, otherwise mainly used for cooking wares, was also used in making one *particular* type of pithos within the Sfakia region encourages us also to be alert for special manufacture patterns linked to particular exchange networks or vessel functions[54].

Cooking fabrics of this period often contain rather higher quantities of quartz than other coarse wares, thanks to quartz's ability to prevent vessel cracking at high temperatures. Yet the proportions of quartz used, and the frequency and type of other inclusions present, can vary hugely by region and site, as this study confirms. Haggis notes that most cooking pots (and some pithoi and jars) in the Kavousi region had a distinctive red to orange fabric – gritty and sandy, with a grey core – 10R 4/6 to 2.5YR 5/8–3/6 to 5YR 5/4[55]. Moody et al. describe a red »mixed metamorphic« fabric, 2.5YR 5/8–5YR 6/6, with frequent quartz and phyllite, as best characterising LBA – EIA cooking vessels in their study area[56]. The appearance of a new, harder fabric type accompanies changes in coarse shapes in the Kavousi region from PG onward. At sites covered by the present study, also, cooking vessels and pithoi dating between later PG – A have finer, better-fired fabrics than those of LM III C – PG.

Despite the helpful framework of reference provided by the above studies, the lack of existing baseline fabric studies for EIA central Crete makes it impossible to place the assemblages studied here in any proper regional perspective. Even at site level, the surface provenance of the material and the small sample sizes make meaningful studies of diachronic technological change, or the identification of regular associations between certain technologies and vessel types, difficult. My aim here, therefore, is simply to describe and analyse in basic terms the main fabric characteristics of each site, across both the coarse and fine ranges. This is a mere starting point in the identification of sub-regional distinctions and of diachronic changes in technology, vessel function, and consumption modes.

52 e.g. Haggis 2005, 131 gives Munsell 7.5YR 5/6; Moody et al. 2003, 52–53 give 10YR 7/4.
53 Mook 2005, 171–172.
54 Moody et al. 2003, 53.
55 Haggis 2005, 57.
56 Moody et al. 2003, 81.

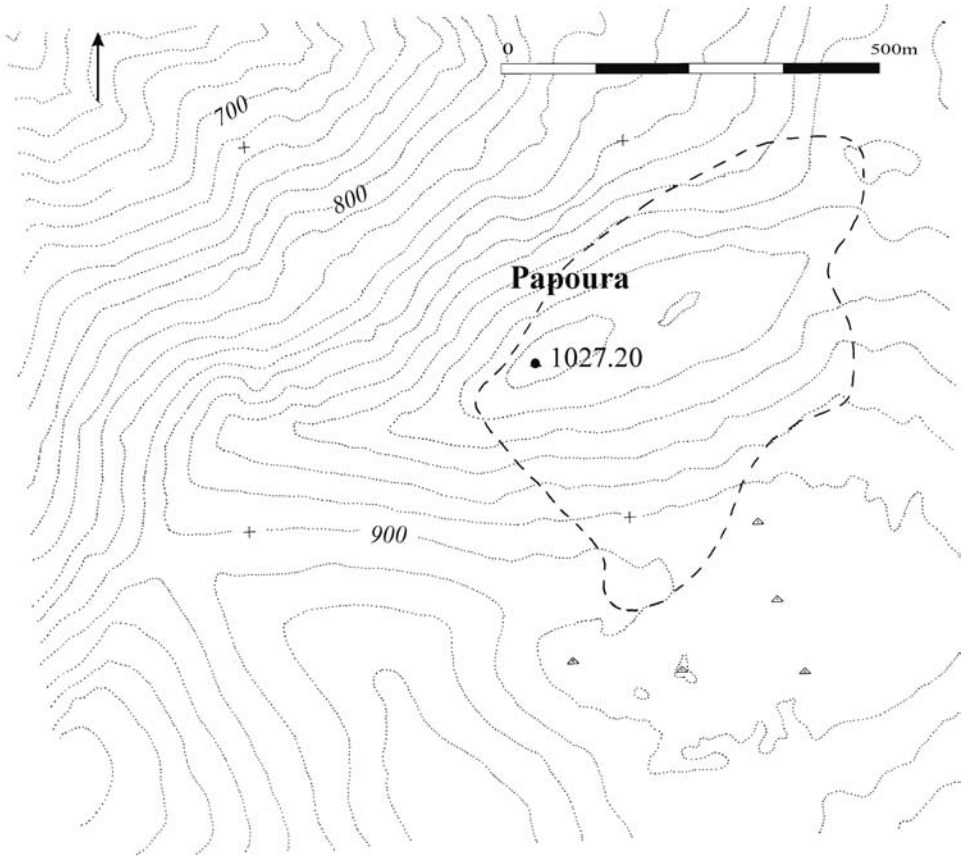


Fig. 2 Kera Papoura, Plan of sherd scatter limits (M. 1 : 100)

Part 2: The Sites and Material

Methods of Study and Presentation

Ancient remains at all the sites presented here have been briefly recorded by other scholars (with small-scale excavations in some cases) and are mentioned in a number of gazetteers. However, none have yet been investigated in detail, fully dated, or completely published[57]. In the text below, any significant earlier work at each site is cited, though not all ephemeral and early mentions (already fully cited in recent gazetteers) are included. On revisiting the sites in 2002–2003, the rough spread of sherds visible on the surface was noted with the aid of hand-held GPS and the 1 : 5 000 topographical maps of the Greek Army Mapping Service. For descriptive purposes, the sites were often divided into general zones – upper and lower slopes, and quadrants of the summit – to arrive at a better general picture of pottery spread and chronology. In some cases an indication of sherd provenance within the site came from labels stored with the original collections. Below, I individually introduce each site, then describe its topography and the character and spread of surface remains, before turning to discuss the chronology of each surface assemblage. The characteristics of fabrics from each assemblage as a whole are then discussed. Following this, a catalogue for each site gives more detailed fabric information for illustrated sherds only. No sample studied contained more than 150 diagnostic sherds.

57 Dimopoulou 1983; Dimopoulou 1985; Dimopoulou 1987; Hood et al. 1964, 84; Nowicki 2000, 185–186. 139. 175–177. 181–182; Pendlebury et al. 1933, 33. 85. 92; Platon 1947, 639; Sjögren 2004, 79–83. 118. 133–134. 155; Taramelli 1899, 322.

Fig. 3 Kera Papoura, remains of fortification wall, from east

Kera (Ayios Giorgios) Papoura

The Site

Lying at the edge of the central Cretan region, Papoura dominates the main valley route and pass into the fertile Lasithi plain from the coasts and valleys around Krasi and Malia to the north (fig. 1). The history of its EIA – Archaic cultural landscape is particularly well-documented, and this fact, together with the large volumes of surface material present on the site, provides fertile ground for comparative study. Papoura is best known as an Archaic site: its summit and parts of the immediate hinterland (including two small low-lying Archaic complexes nearby at Donadhes and Kolonna) were trial-excavated by John Pendlebury and his team[58]. Watrous' systematic survey of the Lasithi plain and foothills produced evidence for a number of other small individual (apparently residential) Archaic sites in the wider area of the site, while Nowicki's fieldwalking mapped a number of smaller EIA settlements in the valleys to the north[59]. Two circular tholos tombs of PG – G date were excavated on Papoura's north-east mid-slopes[60]. The summit was excavated over a small area as a still-unpublished rescue during the 1990s[61].

The surface pottery shows that Papoura's occupation started in the twelfth century BC, that the site had continuous use until at least early Archaic, and that it probably expanded over time – though as with all sites studied here, the original (LM III C) size is unknown. The total sherd scatter area can be estimated at 18.2 ha (fig. 2), though past cultivation and terracing (of the south slopes, in particular) must have redistributed some pottery over small distances. Large areas of bare rock with no sherds or building remains on the upper SE, NW and NE slopes are excluded from the estimate. Pottery covers the entire summit and stretches down the south slopes, which fall in a series of wide natural shelves/hollows, in quantities too large to represent eroded material. As the south slopes descend, they become overgrown with maquis/tree cover, producing a deep leaf litter which makes sherd visibility low: on the grazed summit and upper slopes, it is much higher. Traces of ancient buildings extend quite far down the south slopes, but on the north, surface material stops fairly abruptly at the edge of the summit, perhaps retained by the remains of a long wall following this side of the summit, but not traceable on the others (fig. 3). The wall's face is preserved at one point, and it seems to have had an original thickness of c. 0.8 m – not nearly as thick as known LM III C fortification walls at sites like Kritsa Kastello or Jouktas[62]. It may have been constructed as a perimeter, rather than a defensive, wall, for a settlement relying mainly on positioning and community size for its defence, or else have been rebuilt late in the site's history as a perimeter wall replacing an earlier fortification.

Papoura shares the strategic location of nearby Karfi (co-existing with it during LM III C – EPG) between the Lasithi plain and Ambelos valley. However, it lacks Karfi's 360-degree views and naturally defensible characteristics. These were sacrificed for a position much more accessible from the valley route and the surrounding arable land; Papoura actually straddles the pass into the Lasithi plain, giving the site's inhabitants more direct control over the pass, the valley bottom and the north-west part of the plain. By PG, Karfi had been abandoned, together with many similarly-positioned sites across the island: it seems likely that most of its inhabitants moved to Papoura. While Karfi, at 3ha, is one of the largest LM III C – EPG sites, Papoura was clearly much larger than this by early Archaic. It probably also nucleated other parts of the

58 Pendlebury 1937, 199; Pendlebury et al. 1936, 10; Pendlebury et al. 1938 b, 15. Some of the material was later published by Watrous 1980.
59 Nowicki 2000, 147–170; Watrous 1982, 20–22. 38–66.
60 Pendlebury 1937, 199; Watrous 1980, 273–275.
61 Blackman 2002, 135; Eliopoulos 1995, 754–755.
62 Nowicki 2000, 44–45. 123–125.

local regional population from PG onwards, in a pattern typical of the island in this period. Its use may have ended at an early stage within the Archaic period as very large expanding settlements at the east and west borders of the Lasithi range (Lato and Lyttos) emerged as the dominant regional polities. Though Watrous suggested a fifth-century abandonment, the surface assemblage shows a scarcity of pottery dating after the mid-seventh century. A number of small sites nearby (Kera Vigla, Kera Kastello, Krasi Kastello) did stay in use as outliers of Papoura from LM III C or PG through LG – EA, but were apparently all abandoned at around the same time.

The Pottery Sequence (figs. 4–6)

Coarse Wares

Tripod cooking pots with round-section legs decorated with thumb impressions or slashes date to the twelfth century BC (AYP 22, AYP 7, AYP 8, AYPS 9). The slashed type is most common in assemblages from the early part of LM III C. Horizontal handles (one having a finger impression at the junction with the body; AYP 1, AYPN 1) recall the round-bodied cooking pots of LM III C – PG date found at Karfi. Examples of similar cooking pots were found on Papoura's south slopes as well as the summit, suggesting that early occupation on the site covered a relatively substantial area. A possible example of the PG ›cooking jug‹ type, with vertical handle and collar, appears in AYPC 5.

In pithoi (most often manufactured in a red phyllite-rich fabric) we find the familiar chevron-incised band decoration of LM III C – PG (AYP 26). One probable LM III C sherd (AYP 10) has two narrow applied cordons with hatching on its upper part and a broad band with two rows of irregular small round impressions on its lower. In LM III C assemblages, the latter decoration is not nearly as common as the broad chevron band, and thus this piece could have a PG – G date, though parallels are seen at LM III C Karfi. A thick pithos rim (AYPS 2) could date anywhere in LM III C – PG. Applied pithos bands with incised running spirals, individual spirals, or concentric circle sets show the progression between PG and LG (AYP 12, AYP 27). At first these designs are most often hand-incised; by LG – EA, smaller stamped circles and spirals on bands become common. The stamped small circles with crosses on AYP 21 seem to date it LG – A.

AYP 18 and AYPNE 10 are typical of carinated basins in the red local fabric. Their fairly straight sides and the thick buff slip of AYP 18 are features widely found in LM III C – PG lekanes in east Crete. AYP 15, with curving inner sides, is almost certainly later, perhaps PG. AYP 19, with a rounded ledge rim, globular body, and pierced horizontal handle close to the rim, recalls a clay ›cauldron‹ from Knossos dated LPG – PGB, and trays with pierced reflex handles from Kavousi Kastro[63].

Fine Wares

Low ring bases are typical of LM III C deep bowls (e. g. AYPS 11). Examples of the higher SM to PG type of skyphos foot appear in AYPS 12 and AYP 3, and there are several deep bowl/skyphos bodies with horizontal handles, of LM III C – PG date (AYPS 14). One deep bowl with narrow internal painted band just below the rim must date in LM III C (AYPMS 6). A small krater with everted rim, external rim band and monochrome interior (AYPMS 11) also dates LM III C, while on a krater body fragment with handle (AYP 23) the interior and exterior monochrome paint suggest a PG date. Among frag-

63 Coldstream 1960, fig. 1.22 f; Mook 1993, figs. 60, P1.39; 132, P3.126.

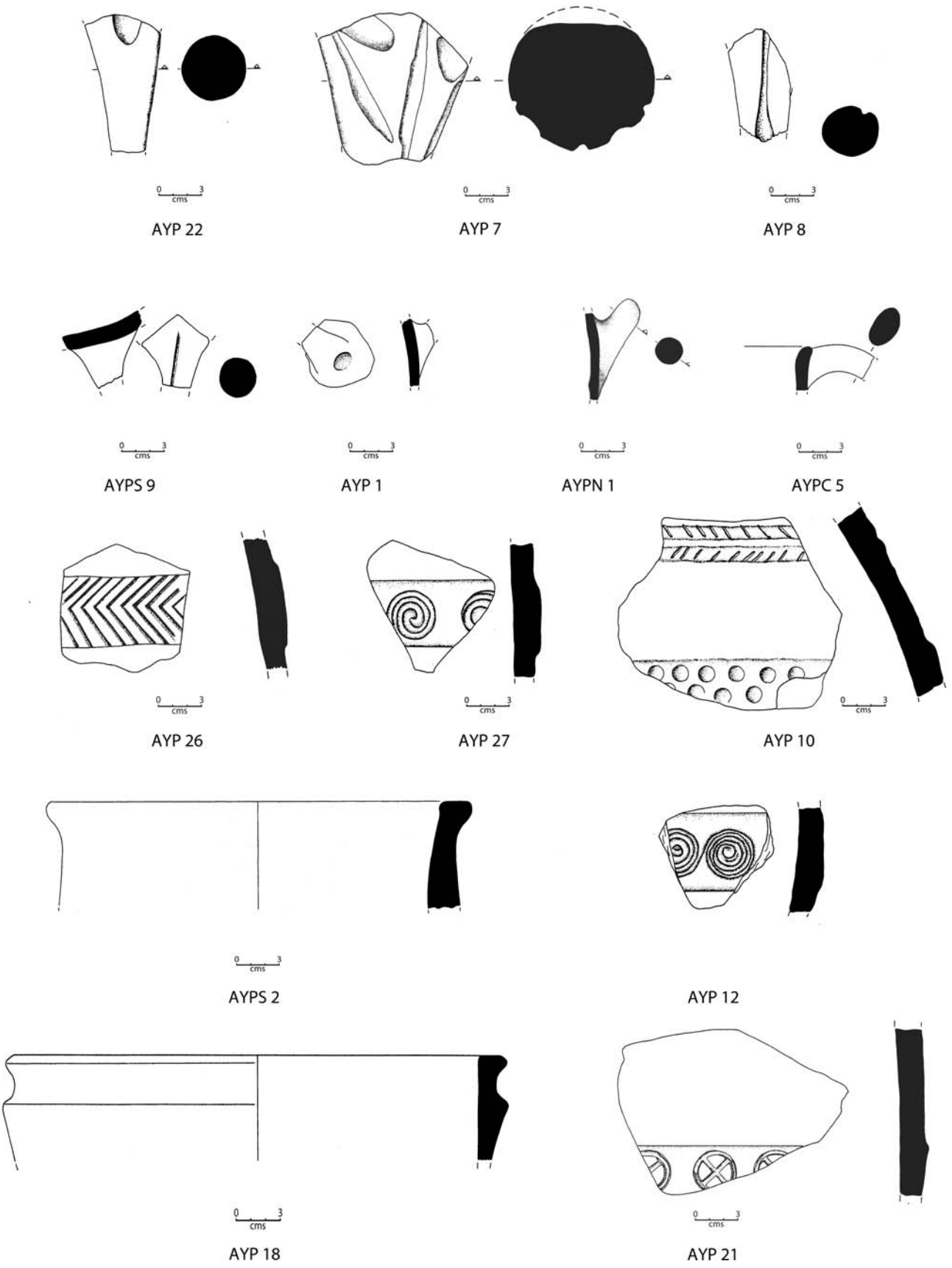


Fig. 4 Kera Papoura, Catalogued sherds

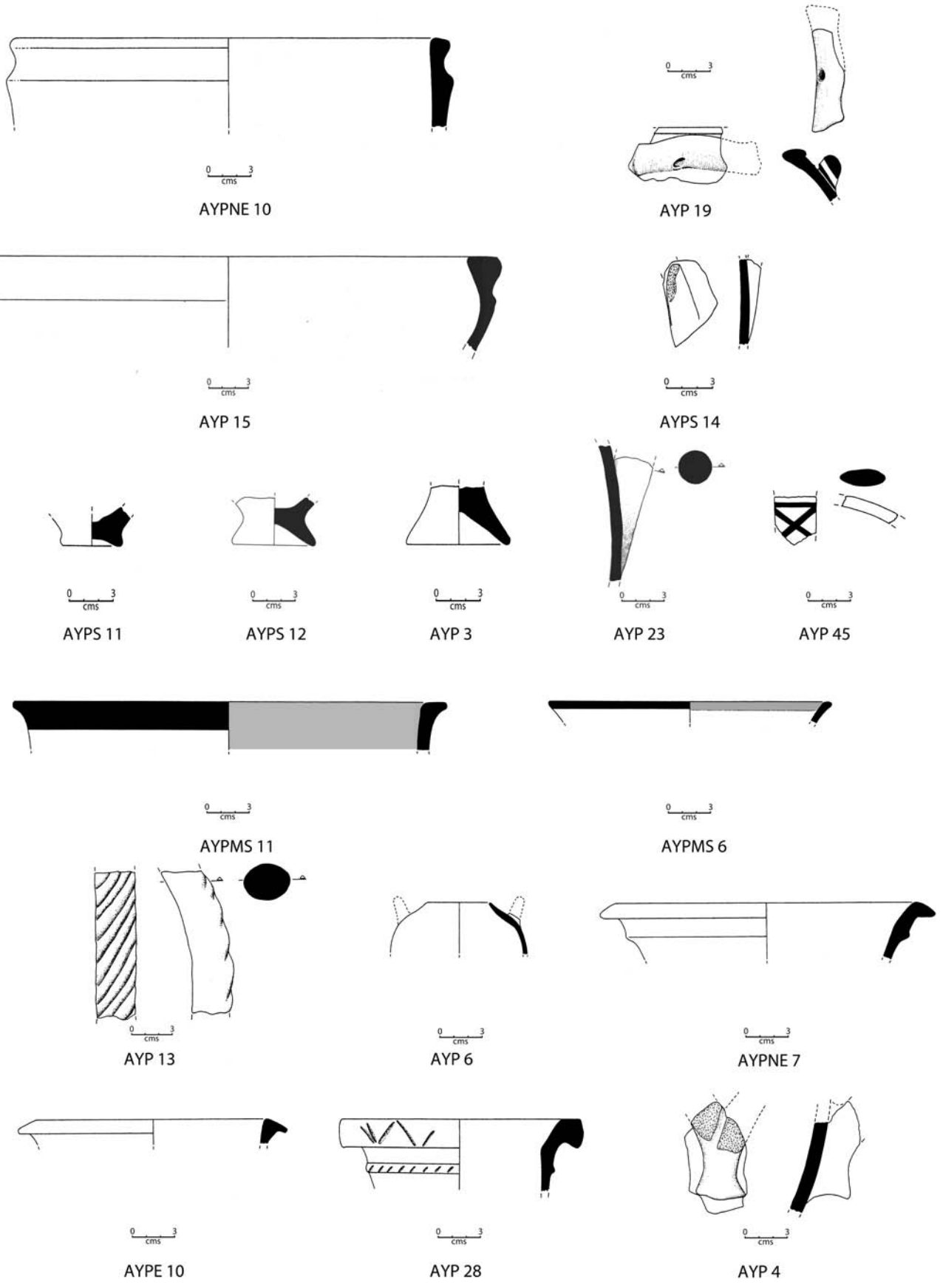


Fig. 5 Kera Papoura, Catalogued sherds

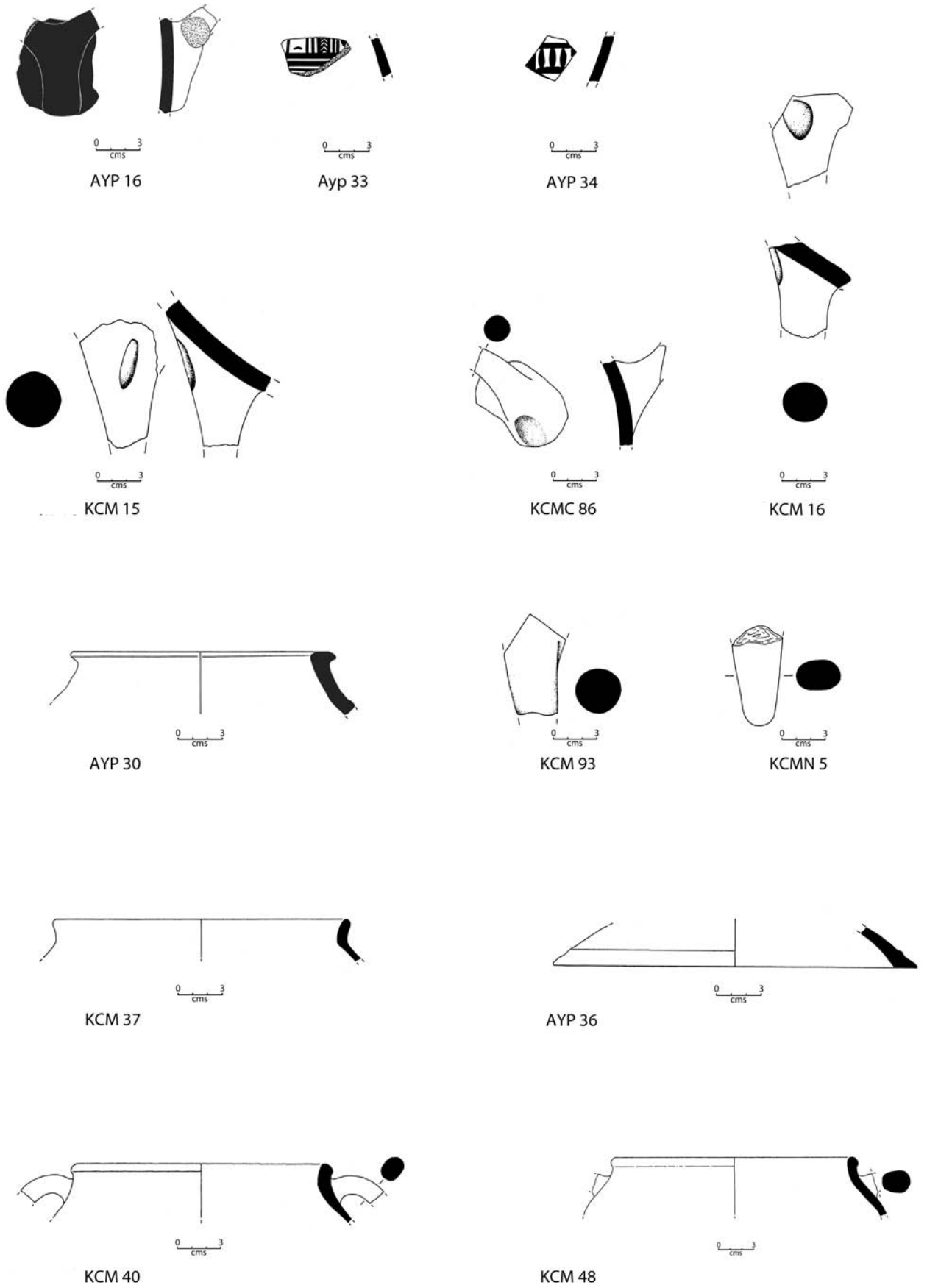


Fig. 6 Kera Papoura and Kalo Chorio Maza, Catalogued sherds

ments from closed vessels are a twisted handle from a neck-handled amphora of LM III C – SM date (AYP 13); a small pyxis is also clearly datable to LM III C – EPG (AYP 6). A vertical, oval-section handle from a neck-handled amphora or jug, with painted X (AYP 45) looks MPG or later[64]. By G, amphora rims often have a pronounced downturn or bevel (AYPNE 7, AYPE 10). The tall neck of a coarse amphora with folded incised rim and applied cordon, imperfectly fired (AYP 28) looks G – EA in date and seems very much a local design, without good parallels elsewhere. Double handles (AYP 4, AYP 16) are typical of large LPG – G jars (often used as ›burial pithoi‹) at Knossos[65]. A domed lid (AYP 36) probably comes from a small jar or pyxis of PG – G date and a short-necked round-bodied jar (AYP 30) with monochrome exterior paint looks PG[66].

Of two rare pieces with painted decoration, both in a buff fabric, a body sherd with repeating leaf pattern between horizontal bands suggests a PG – G lekythos (AYP 34)[67]. Another sherd has panelled decoration incorporating vertically stacked chevrons, and most probably comes from an MG – LG skyphos (AYP 33)[68]. Both have soft, powdery-surfaced fabrics.

Fabrics (fig. 7)

A distinctive red fabric with a consistent range of inclusion types dominates the Papoura coarse wares to a striking extent (appearing three times more frequently than the buff fabric in the studied assemblage). This suggests a mainly local production sphere for coarse wares, focused on the use of this clay[69]. Clay of a similar colour is used widely in cooking pots and pithoi at Karfi and the other smaller Early Iron Age sites in the region, suggesting a local provenance, and it seems there was no obvious break in tradition during PG as the regional settlement pattern changed. The unusually high incidence of on-body incisions, ribbing and grooving on coarse vessels (pithoi and amphorae) supports the picture of a generally very locally-based production tradition. Pithoi and smaller jars through all periods are linked by a high incidence of purple phyllite (15–40 % in pithoi). Phyllite is also found in almost all cooking ware sherds, a feature paralleled in the Karfi material. Inclusions of dark grey crystalline rock, in smaller amounts, link all the coarse ware fabrics, once again suggesting an integrated local production base. The presence of large chunks of white quartz is another linking factor between coarse fabrics: densities average 15–30 %. However, even given the limited assemblage studied it is possible to suggest that some distinct, if subtle, fabric choices were being made in the manufacture of particular vessels. The near absence of the large and unwieldy phyllite inclusions from the basin fabrics and some of the finer jar fabrics, and their particularly high frequency in pithoi of all periods, suggests some clay batches were separated out for the manufacture of specific vessel types. There are hints of slightly greater than average quartz concentrations (up to 40 %) being selected for cooking wares, with the quartz replacing the equivalent proportions of phyllite and hard grey crystalline rock. This is not surprising given quartz's special properties. In two of the sparsely-represented buff coarse fabrics, red sandstone appears in the kind of density in which phyllite usually appears in the more standard coarse fabrics. The combination of these features could suggest a non-local provenance.

In strong contrast to the coarse ware pattern, fine wares are very heavily dominated by a buff clay, to a much greater extent than at any other site studied here, suggesting that Papoura was more limited in its diversity of fine ware traditions and stimuli than some other central Cretan sites. If the

64 Coldstream – Catling 1996, pls. 47, D15; 114; 119.
65 Brock 1957, 147, pls. 16. 60. 40; Seiradaki 1960, pl. 9 e.
66 Coldstream – Catling 1996, fig. 68.
67 Coldstream – Catling 1996, 69. 97.
68 Coldstream 1972, fig. 7, E1; Coldstream 2000, fig. 1, 18. 19; Mook 1993, fig. 66; Sackett et al. 1992, pls. 5, GC 7–9; 56, GE 12. 13; 58, GH 6; Tsipopoulou 2004 b, fig. 6.
69 Seiradaki 1960, 1–2.

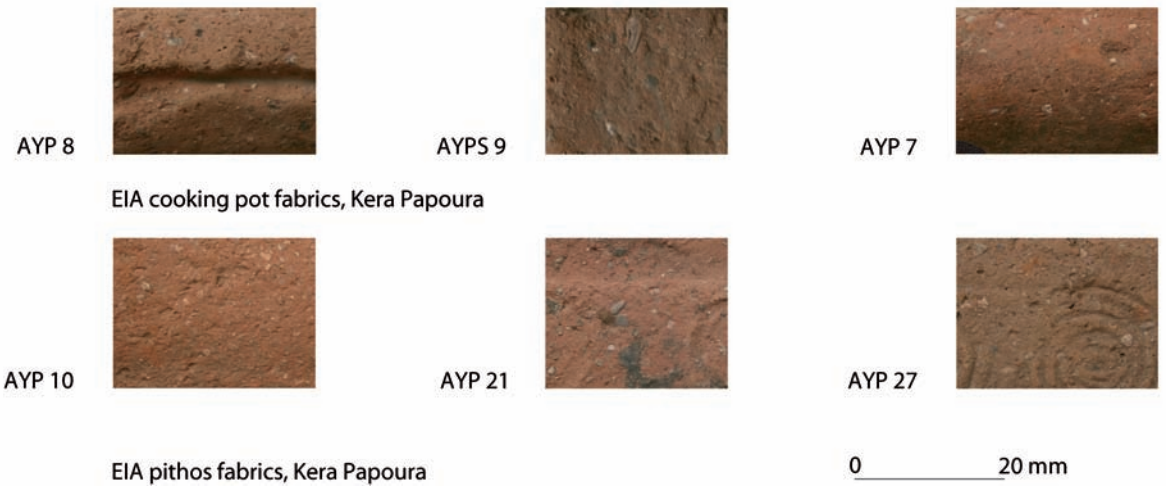


Fig. 7 Kera Papoura, EIA coarse fabrics. AYP 8, AYPS 10 (LM III C – PG cooking pots); AYP 10 (LM III C pithos); AYP 21, AYP (PG – G pithoi) (M. 1 : 1)

red clay dominant in the coarse wares is the local clay, it may be that the majority of the fine wares came to Papoura from another manufacturing region. The red fine wares which do appear have relatively high frequencies of dark grey crystalline rock inclusions compared to their buff counterparts. A buff slip is sometimes added to make them resemble the dominant fabric type. Though the buff wares may have been imported from further away in the central region, they seem unlikely to have come from a first-class manufacturing centre. The kind of very hard-fired buff-slipped fine ware with shiny, chip-resistant painted decoration popular in the Mesara or Knossos by PG – G (see below) is not seen at Papoura, and fine decorated pieces are generally rarer on the surface there than at the other large sites examined here.

Catalogue of Pottery, Kera Papoura

Provenance codes: AYP indicates pottery from unspecified area of site; AYPS from south slopes; AYPNE from north-east slopes; AYPE from east slopes and summit.

AYP 22 Tripod cooking pot. 38% inclusions (25% hard grey crystalline rock, up to 5 mm; 10% quartz, 1 mm; 3% mica, up to 2 mm); medium. Clay dark buff, 5YR 6/6. LM III C – SM.

AYP 7 Tripod cooking pot. 55% inclusions (20% hard grey crystalline rock, 3 mm; 15% quartz, up to 4 mm; 20% micaceous phyllite, 3 mm); soft. Clay mid yellowish buff, 7.5YR 5/6. LM III C.

AYP 8 Tripod cooking pot. 55% inclusions (15% hard grey crystalline rock, 3 mm; 20% quartz, up to 5 mm; 20% phyllite, up to 5 mm); soft. Clay mid yellowish red, 5YR 5/6, slip mid buff, 7.5YR 6/4. LM III C – SM.

AYPS 9 Tripod cooking pot. 51% inclusions (15% hard grey crystalline rock, 0.5–1 mm; 17% calcite or quartz, 1 mm; 19% reddish phyllite, 1.5–2 mm); medium-hard. Clay light tan, 5YR 6/4, with mid grey core, 5YR 4/1, at join to body; slip identical. LM III C.

AYP 1 Cooking pot. 41% inclusions (35% quartz, up to 3 mm; 5% phyllite, 1–2 mm; 1% mica, speck); hard. Clay mid greyish brown, 7.5YR 5/4. LM III C.

AYPN 1 Cooking pot. 53% inclusions (10% calcite, speck; 18% hard grey crystalline rock, speck; 25% phyllite, 2 mm); medium. Clay mid buff, 7.5YR 6/4. LM III C.

AYPC 5 Cooking pot. 48% inclusions (29% quartz, 1–2 mm; 19% red phyllite, 2–3 mm); hard. Clay light tan, 5YR 6/4; slip identical. PG.

AYP 26 Pithos. 45% inclusions (15% hard grey crystalline rock, 1–2 mm; 20% quartz, 2–3 mm; 10% phyllite, 2–4 mm); medium-soft. Clay mid yellowish red, 5YR 5/6, with 8 mm mid grey core, 5YR 4/1; slip identical. LM III C – PG.

AYP 10 Pithos. 65% inclusions (5% hard grey crystalline rock, up to 2 mm; 30% quartz, 3–5 mm; 20% phyllite, 3 mm); hard. Clay mid red, 2.5YR 5/8. LM III C – SM.

AYP 27 Pithos. 45% inclusions (15% hard grey crystalline rock, up to 2 mm; 15% quartz, 2 mm; 15% phyllite, up to 5 mm); medium-hard. Clay dark buff, 5YR 6/6; slip identical. PG – G.

AYPS 2 Pithos. 53.5% inclusions (14% hard grey crystalline rock, up to 0.5 mm; 28% quartz, 1–2.5 mm; 25% phyllite, 1–2 mm); hard. Clay mid yellowish red, 5YR 5/4; slip identical. PG – G?

AYP 12 Pithos. 35% inclusions (20% quartz, up to 4 mm; 15% phyllite, up to 5 mm); hard. Clay mid brownish red, 10YR 6/6. PG – G.

AYP 21 Pithos. 50% inclusions (5% hard grey crystalline rock, 1 mm; 15% quartz, up to 8 mm; 30% phyllite, up to 8 mm); medium-soft. Clay dark reddish buff, 5YR 6/8; slip identical. G – A.

AYP 18 Lekane. 38% inclusions (35% hard grey crystalline rock, 1–2 mm; 3% calcite, 3 mm); hard. Clay mid yellowish red, 5YR 4/6; slip dark buff, 5YR 6/6. LM III C – PG.

AYPNE 10 Lekane. 5% inclusions (5% calcite, up to 2 mm); hard. Clay mid buff, 7.5YR 6/6; slip identical. LG – EA.

AYP 15 Lekane. 45% inclusions (20% calcite, up to 5 mm; 25% hard grey crystalline rock, up to 5 mm); hard. Clay mid yellowish red, 5YR 5/6; slip identical. PG.

AYP 19 Round-bodied jar with pierced handle. 6% inclusions (6% hard grey crystalline rock, speck); hard. Clay dark buff, 5YR 6/6; slip mid yellowish buff, 10YR 7/6; paint mid yellowish red, 5YR 5/6. LG – EA.

AYPS 11 Deep bowl. 50% inclusions (30% quartz, up to 8 mm; 20% phyllite, up to 5 mm); hard. Clay light pinkish buff, 5YR 7/6; slip identical. LM III C – SM.

AYPS 12 Skyphos. 13% inclusions (2% calcite, up to 1 mm; 11% sandstone, up to 1 mm); hard. Clay mid yellowish buff, 7.5YR 7/6; slip identical. SM – PG.

AYP 3 Skyphos. 2% inclusions (2% calcite, up to 1 mm); soft/medium. Clay mid buff, 7.5YR 6/6. PG.

AYPS 14 Deep bowl/skyphos. 18.5% inclusions (1.5% calcite, less than 0.5 mm; 17% hard grey crystalline rock, up to 0.5 mm); hard. Clay light tan, 2.5YR 6/6; slip mid buff, 7.5YR 6/6. LM III C – PG.

AYPMS 6 Deep bowl. 17% inclusions (6% calcite, up to 0.5 mm; 11% sandstone, 1 mm); medium. Clay mid buff, 7.5YR 6/6; paint mid reddish brown, 2.5Y 3/0. LM III C – SM.

AYPMS 11 Krater. 13% inclusions (5% calcite, speck; 8% hard grey crystalline rock, speck); hard. Clay mid buff, 7.5YR 6/6; slip identical; paint mid reddish brown, 2.5Y 3/0. PG.

AYP 23 Krater. 27% inclusions (25% hard grey crystalline rock, 2–5 mm; 2% quartz, 1 mm); hard. Clay mid yellowish buff, 10YR 6/4; paint dark greyish brown, 10YR 3/1. PG.

AYP 13 Amphora with twisted handles. 55% inclusions (30% hard grey crystalline rock, up to 5 mm; 5% quartz, 3 mm; 20% sandstone, up to 7 mm); hard. Clay light yellowish buff, 10YR 7/4. LM III C – SM.

AYP 6 Pyxis. 20% inclusions (5% calcite, up to 1 mm; 5% hard grey crystalline rock, 3 mm; 10% quartz, 5 mm); hard. Clay dark buff, 5YR 6/6, paint mid yellowish red, 5YR 5/6. PG

AYP 45 Amphora. 0% inclusions; hard. Clay dark buff, 5YR 6/6; slip light yellowish buff, 10YR 7/4; paint mid grey, 10YR 4/1. MPG or later.

AYPNE 7 Amphora. 51% inclusions (51% phyllite, 2 mm); medium. Clay mid buff, 7.5YR 6/6, slip identical. G – A.

AYPE 10 Amphora. 15% inclusions (5% hard grey crystalline rock, 10% calcite); hard. Clay mid reddish brown, 2.5YR 5/6. G – A.

AYP 28 Coarse amphora. 46% inclusions (10% hard grey crystalline rock, up to 2 mm; 35% quartz, 3–4 mm; 1% mica, speck); hard. Clay mid red, 2.5YR 5/8, mottled with grey. G.

AYP 4 Double-handled jar/amphora. 15% inclusions (5% calcite, up to 1 mm; 10% hard grey crystalline rock, up to 1 mm); hard. Clay dark buff, 5YR 6/6; monochrome external paint, mid grey, 5YR 4/1. PG – G.

AYP 16 Double-handled jar/amphora.10% inclusions (10% hard grey crystalline rock, 1 mm); hard. Clay dark buff, 5YR 6/6; slip mid yellowish buff, 7.5YR 7/6. PG – G.

AYP 36 Lid. 38% inclusions (8% hard grey crystalline rock, 3 mm; 25% quartz, 2 mm; 5% mica, speck); hard. Clay dark red, 2.5YR 4/8; slip dark buff, 5YR 6/6, paint mid yellowish buff, 7.5YR 5/6. PG – G.

AYP 30 Jar. 2% inclusions (2% hard grey crystalline rock, 1 mm). Clay dark buff, 5YR 6/6; slip identical; paint light greyish brown, 5YR 4/2. PG.

AYP 33 Skyphos. 1% inclusions (1% calcite, less than 1 mm); medium. Clay mid reddish brown, 2.5YR 5/6; slip mid buff 7.5YR 6/6; paint mid brownish grey, 7.5YR 3/0. MG – LG.

AYP 34 Lekythos. 12% inclusions (5% calcite, 1 mm; 7% hard grey crystalline rock, 7mm); medium. Clay mid buff, 7.5YR 6/6, slip identical; paint greyish black, 7.5YR 3/2. PG – G.

Kalo Chorio Maza

The Site

Located north-east of Kalo Chorio village, Maza holds a strategic position within a low hilly zone overlooking the north coast (fig. 1). It lies about an hour's walk inland along a valley route linking the inland area around Kastelli, immediately west of the Lasithi mountain range, with the excellent natural harbour of Chersonisos on the north. Its wider western hinterland,

the Pediada plain, is one of the prime areas of cultivable land in Crete and saw dense prehistoric occupation[70]. Figurine fragments were retrieved from a small-scale excavation on the summit, leading to suggestions that the site was an MBA peak sanctuary[71]. It is not, however, the distinctive, dramatic kind of peak, visible from miles around, associated with several major peak sanctuaries in the island.

The EIA settlement at Maza appears to have been founded in the period of crisis and relocation around 1200 BC. Some of the founders may have been formerly resident at nearby Kastelli, where an important LBA settlement continued part of the way into LM III C[72]. The presence of early LM III C material at Maza may indicate an overlap period during which both sites were in use. Nearby is Smari Profitis Elias, a small settlement also founded around 1200 BC[73]. This continued, like Maza, into the G period, but without notable expansion; its markedly defensible rocky peak forms a landmark visible from many kilometres around. By contrast, Maza is not intrinsically defensible (nor was it ever apparently fortified) and spread over a much larger area. It is not, however, very large or long-lived by comparison with other large EIA sites of the same class, such as Rotasi Kefala or Krousonas Koupo, which both continued into Classical times. Maza went out of use within Early Archaic, even while large nearby sites with similar histories at Lyttos (Xidas) and Astritsi Kefala continued and expanded[74].

The size of the main sherd concentration (on the summit itself) is c. 10.3 ha, while the maximal sherd scatter, including areas of very low density (c. 1 sherd per 10 sq m) is 20.3 ha (fig. 8). There has been much disturbance on the summit in connection with agriculture in the recent historical period – clearly postdating Taramelli's visit in the 1890s, which recorded many ancient building remains[75]. Short-distance stone clearance from ancient structures has since occurred in order to construct field boundary walls on the summit and broad terraces, probably for grain, on the N slopes. Sherd density is sparse in the latter area, but the slope is gentle: we might expect at least a few houses under the recent terraces. Pottery is also scattered on the S slopes, particularly around a small rocky projection c. 20 m below the summit.

Rescue work and chance finds in the wider Pediada area have revealed a number of very small sites apparently founded in the Archaic period, to which Sjögren's recent study has been vital in drawing attention[76]. This phenomenon seems related to the continuation and expansion during this period of two major polities at Astritsi Kefala and Lyttos. Around Astritsi Kefala, small sites dating between the late seventh century and sixth centuries appear at Astraki, Houmeri, Kasanoi and Klisidi[77]. The area around Lyttos shows the same pattern. Sites at Kastelli, Sta Koutsounaria and Lakkoudia lie within the probable territory of this polity, which probably ran right up to the western Lasithi flanks by the Archaic period[78]. The smaller Maza polity and its territory, located between Astritsi Kefala and Lyttos, may well have been taken over by one of these two large sites early in the Archaic period. The relocation of its population around this time would help explain the lack of a clear spread of small Archaic satellite settlements in the close vicinity of the town. One small rural unit of Archaic date at nearby Koxari may have been directly attached to Maza during the last stage of its independent existence, helping it control its territory, or else have been established soon after its demise, perhaps to help mark a new border between the territories of Lyttos and Astritsi Kefala[79].

70 Panayiotakis 2004.
71 Platon 1951.
72 Rethimiotakis 1997.
73 Hatzi-Vallianou 2004.
74 Nowicki 2000, 177–179.
75 Taramelli 1899.
76 Sjögren 2004, 121–124.
77 Ioannidou 1978, 570; Lebessi 1971; Lebessi 1973; Lebessi 1976; Lebessi 1978; Pendlebury 1939, 314. 325. 342.
78 Alexiou 1974, 901; Marinatos 1933, 313; Pendlebury et al. 1933, 80; Rethimiotakis 1987, 532; Rethimiotakis 1988.
79 Platon – Davaras 1960.

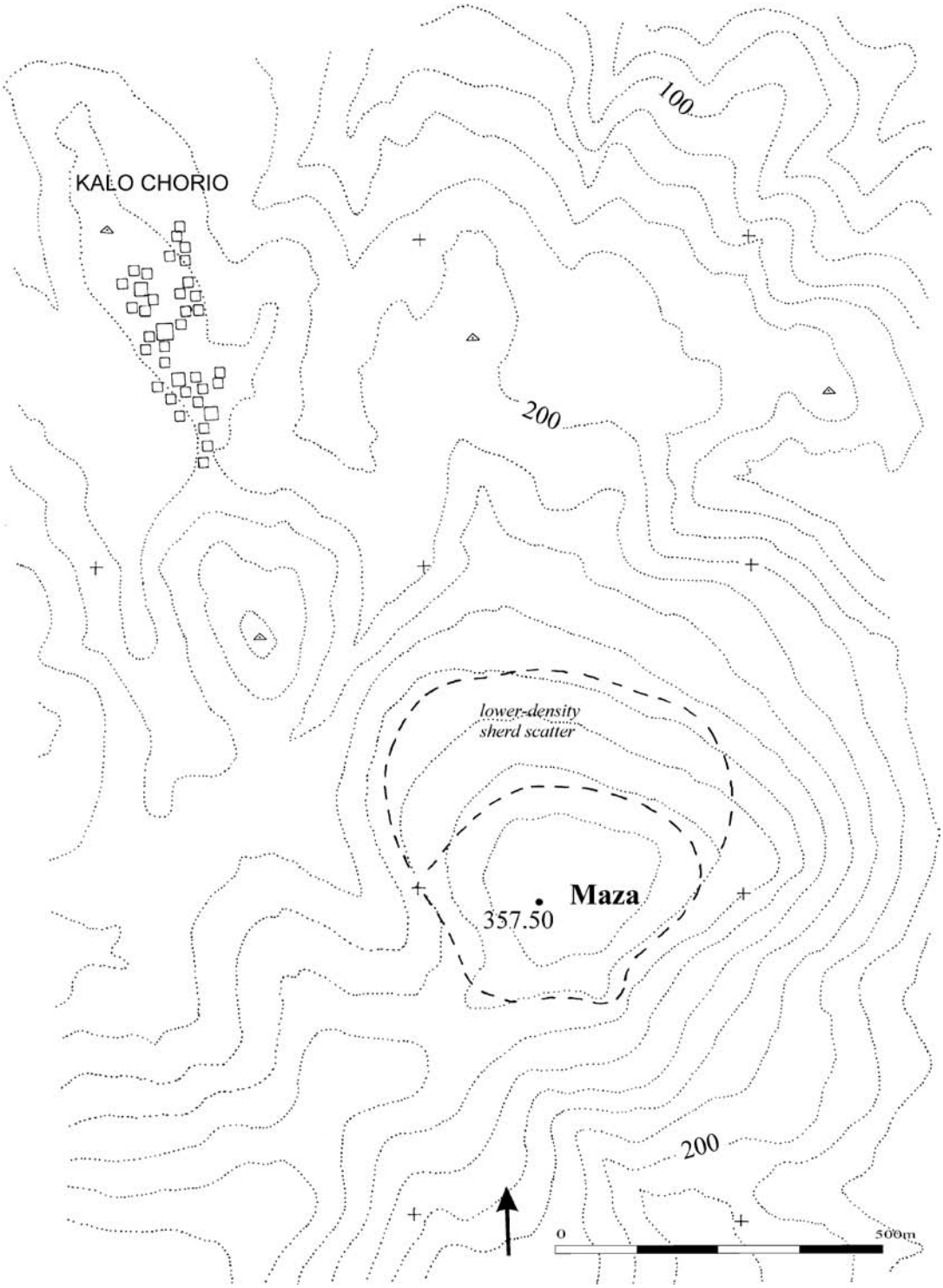


Fig. 8 Kalo Chorio Maza, Plan of sherd scatter limits (M. 1 : 100)

The Pottery Sequence (figs. 6. 9. 10)

Coarse Wares

A large number of round-section tripod cooking pot legs show that Maza's EIA pottery sequence starts in the LM III C period. Some plain examples (KCM 93, KCMN 5) suggest a transitional LM III B–C date; others have

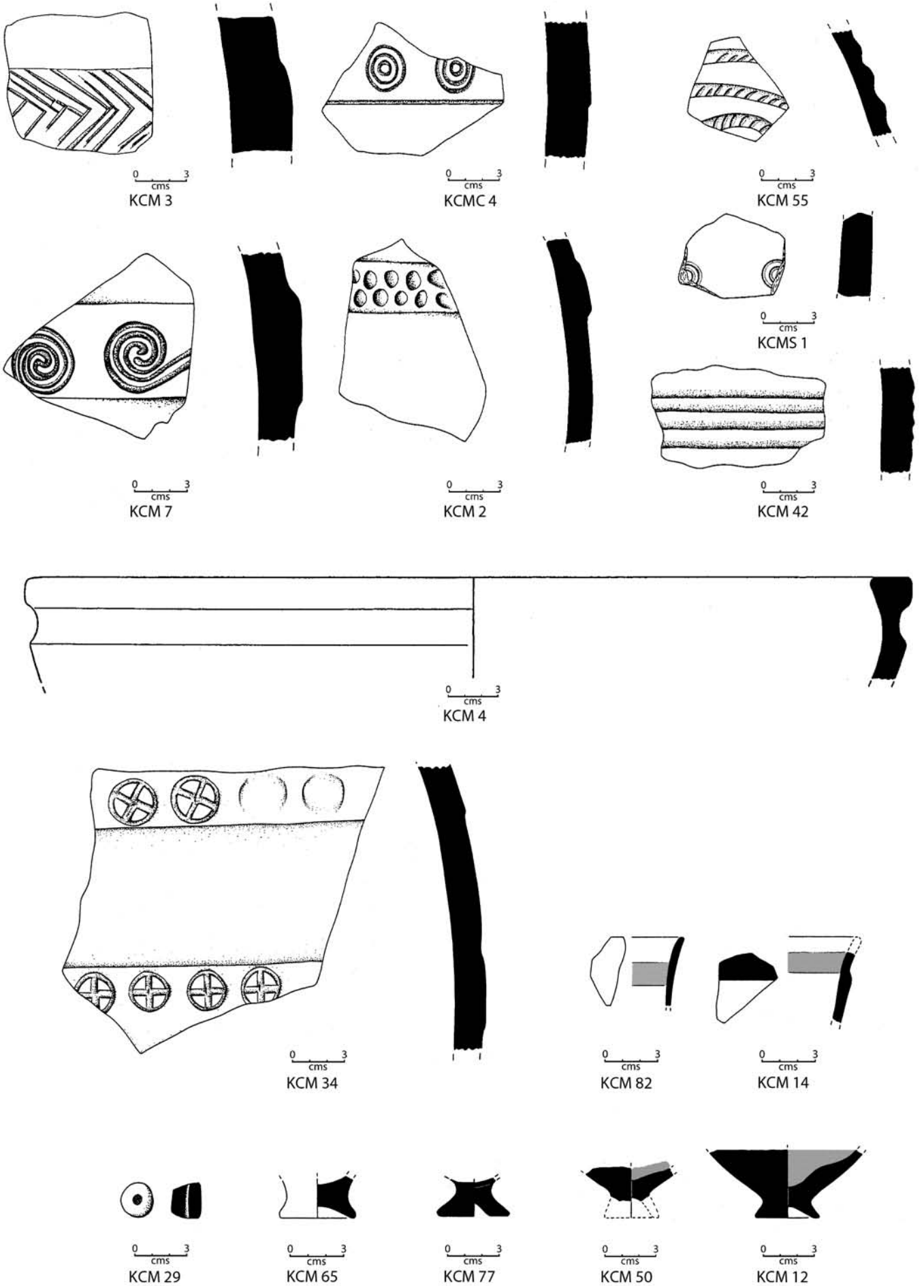


Fig. 9 Kalo Chorio Maza, Catalogued sherds

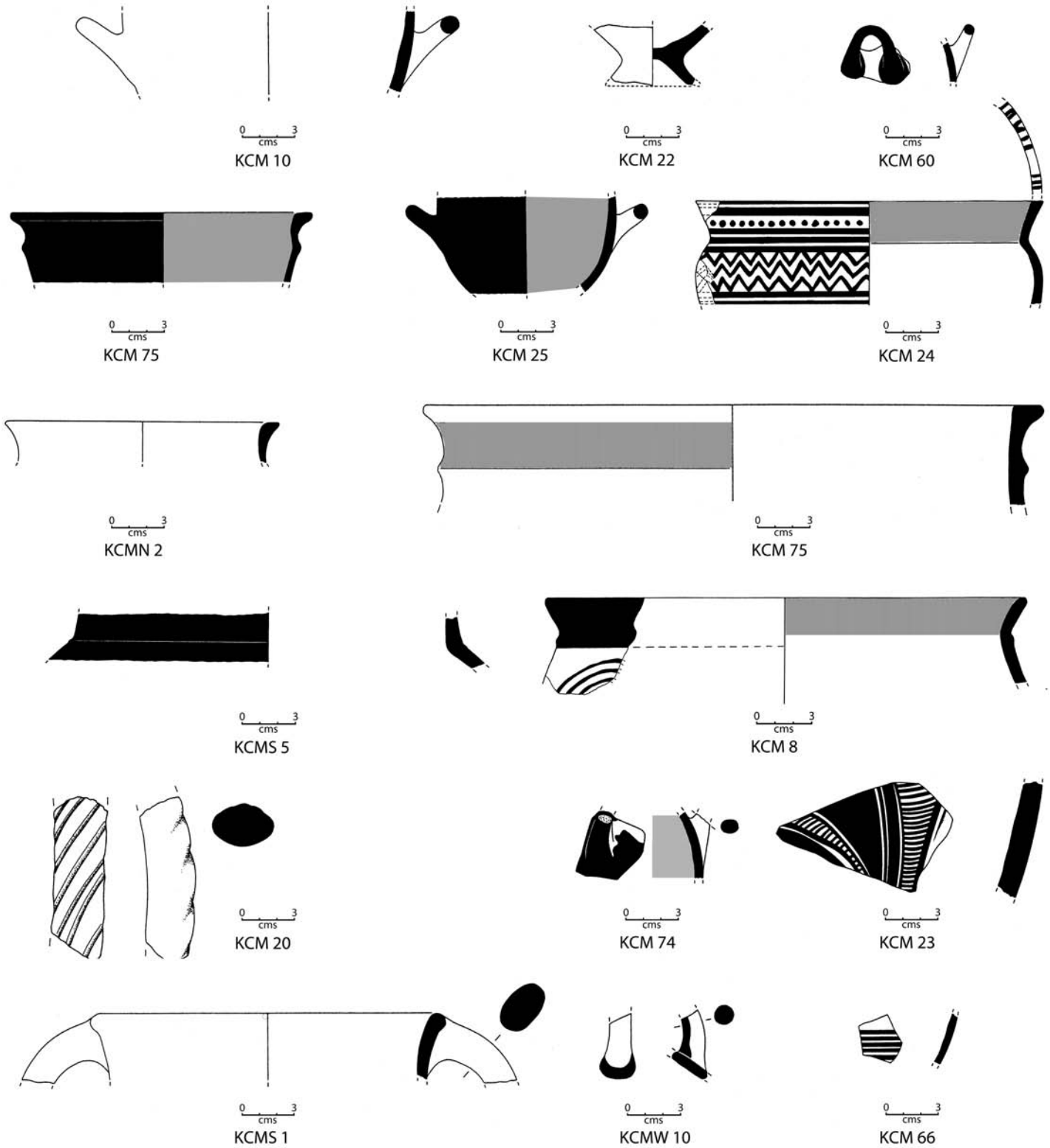


Fig. 10 Kalo Chorio Maza, Catalogued sherds

finger-impressions (KCM 15, KCM 16) or vertical grooves, placing them firmly within LM III C. There is a typical rim from an LM III C globular cooking pot (KCM 37) and a handle with finger impression of the same date (KCMC 86): the length of the rim and its hard fabric suggest a late date, tending towards PG. The straightish rim and horizontal handle of KCM 40 suggest a transitional date to PG, whereas KCM 48's vertical handle and bevelled rim could suggest a PG date.

LM III C pithoi have hatched and chevron-incised bands, and one example has two irregular rows of ovoid impressions (KCM 2, KCM 3, KCM 55). Incised concentric circle sets or spirals on raised bands suggest a PG – Geometric date (KCM 7, KCMC 4; the small size of the circle sets on KCMS 1 suggests a G – A date). Bands with rows of stamped circles containing an X appear on a large semicoarse jar probably dating in LG – EA (KCM 34) while narrow grooves on the body of another pithos date it to LG (KCM 42). Very coarse straight-sided basins with a carination below the rim suggest the LM III C – PG period (KCM 4).

Fine Wares

A straight kylix stem of late LM III B–C date appears in KCM 29. Some deep bowls of this date are characterized by a painted interior band below the rim (KCM 82; KCM 14, decorated in the same way, has a carination). A large skyphos in greenish-yellow clay, possibly an import from further west in the central Cretan area, appears in KCM 10. During the LM III C period flattish ring bases are common on cups and bowls (KCM 65). Feet become higher, more flaring and more conical between LM III C and PG, with monochrome paint inside and out (KCM 77, 12, 50). When high feet are unpainted, the dipped type of EPG skyphos is suggested (KCM 22); handles from these appear in KCM 60 and KCM 74, and KCMN 2 looks like a rim from one. KCM 25 is a good example of a more advanced PG skyphos – probably fully monochrome painted inside and out. A carinated version appears in KCM 73. An MG – LG skyphos with chevron decoration appears at KCM 24[80].

The straight-sided krater KCM 75, with a carination highlighted by a broad painted band, dates in LM III C – PG, and is paralleled at Karfi[81] while KCM 8, decorated with concentric circle sets and a broad rim band, is EPG. A krater/jar with straight collar, monochrome-painted, looks late PG – G (KCMS 5). A closed vessel, possibly a stirrup jar (KCM 23) with the elaborate ›close style‹ type of decoration, is paralleled at LM III C Karfi[82] and Palaikastro Kastri[83]. A twisted handle from a semi-coarse neck-handled amphora (KCM 20) dates late in LM III C, while finer neck-handled amphoras probably date within PG (KCMS 1, KCMW 10). Body sherds from PG – G amphoras appear in KCM 62 and KCM 66, the latter's thin walls and narrow banding suggesting a late date within this period. The beveled rim of the large amphora KCMW 11 suggests an LG – A date. A rim from a narrow-necked small amphora or lekythos, KCM 79, dates PG – LG[84]. Few sherds appear to date into the Archaic period.

Fabrics (fig. 11)

One feature distinguishing the Maza assemblage from those of Papoura and Karfi is the lower frequency and density of phyllite inclusions in the coarse wares at Maza (rarely above 20%). This makes it likely that despite the relative closeness of Maza and Papoura, each zone produced its own coarse wares. Another contrast is that instead of showing one dominant

80 Coldstream – Catling 1996, figs. 93, 13.5. 13.22. 13.28; 110, 98.
81 Seiradaki 1960, fig. 12.
82 Seiradaki 1960, fig. 13.
83 Popham et al. 1965, fig. 13.
84 Coldstream – Hatzaki 2003, fig. 6, C3; Shaw – Shaw 2000, pl. 4.7 no. 157.

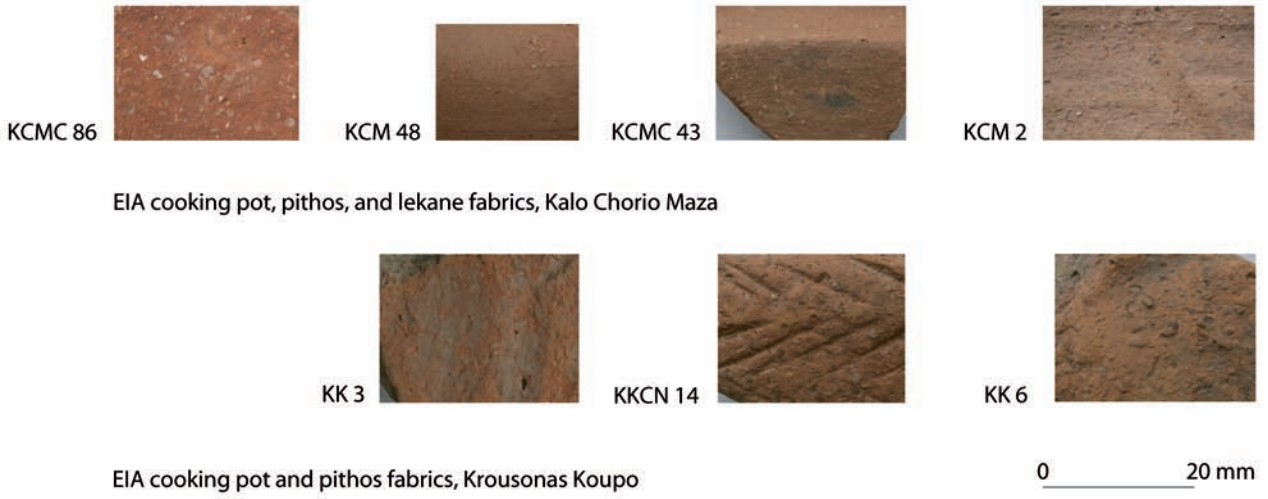


Fig. 11 Kalo Chorio Maza and Krousonas Koupo, EIA coarse fabrics. KCMC 86 (LM III C cooking pot); KCM 48 (PG – G cooking pot); KCM 43 (PG – G lekane); KCM 2 (LM III C – PG pithos); KK 3 (PG – G pithos); KKNC 14 (LM III C pithos); KK6 (LM III C – PG cooking pot) (M. 1 : 1)

local clay and production tradition, coarse wares at Maza show an almost exactly even balance of red and buff fabrics, suggesting that a range of clay sources and a number of traditions were in use in the site's everyday production.That the buff clay is well represented in both coarse and fine fabrics possibly suggests it was the main local/preferred clay for the site, though the red fabric is slightly more dominant in the coarse vessel group. The red fabric has certain technological features associated with it, though the sample is too small to draw any very meaningful conclusions. Compared to the buff fabrics, we see more sandstone in early red-ware pieces, more phyllite in late red-ware ones, and more quartz generally. Where phyllite appears, it has a dark grey colour, very different from the purple phyllite used in Lasithi. Neither the buff or the red clay is micaceous: where mica specks appear, these seem to derive from micaceous phyllite. The hard dark grey crystalline rock inclusions are very well represented in both fabrics, and grey and red sandstone are represented to a much greater degree here than in north Lasithi.

Though quartz is present in many coarse vessels, concentrations are, as usual, highest in cooking pots. Even in these vessels, however, the dark grey crystalline rock is particularly well represented, meaning the quartz content is often proportionately decreased. In general, quartz inclusions are very irregular in their density across the Maza pottery, ranging from 18% to 40%: densities seem more standard in earlier than later pieces. Even the early (LM III C – PG) Maza coarse wares are notable for their hard and compact texture. In general, the density of inclusions is much less that at north Lasithi sites, and most vessels are fired right through, again suggesting a local production tradition separate from that of the north Lasithi region. The fabrics of the thin-walled PG-G cooking pots, and of some of the lekanes, are particularly dense and hard.

The vast majority of fine fabrics here are buff in colour, often with a soft powdery surface like those from Papoura. In this light – in view of the regions' proximity, and the dominance of apparently local red clays in the coarse wares at Papoura – it is worth considering the possibility that the Pediada was the source area for some of the buff fine wares consumed in the north Lasithi mountains (see Nodarou in press). The fact that Maza fine wares do not incorporate a very diverse range of clays and finishes, as at Krousonas Koupo (below) suggests that a single, fairly unitary local tra-

dition supplied the site's fine pottery needs. Some large decorated vessels of early date have surprisingly coarse fabrics – the ›close-style‹ sherd KCM 23 has a notable percentage of the dark grey crystalline rock inclusions. This coarseness is not seen in the more complex, generally high-quality fine pottery traditions of Krousonas or Ligortinos, but is paralleled in some fineware pieces from Papoura.

Catalogue of Pottery, Kalo Chorio Maza
Provenance codes: KCM indicates unspecified part of summit; KCMW west slopes/summit; KCMS south slopes/summit, KCMN north slopes/summit; KCMCS central part of summit.

KCM 93 Tripod cooking pot. 22% inclusions (10% calcite, 2–3 mm; 12% hard grey crystalline rock, 3–4 mm); hard. Clay mid yellowish red, 5YR 5/6; slip identical. LM III C – PG.

KCMN 5 Tripod cooking pot. 25% inclusions (10% hard grey crystalline rock, 2–3 mm; 15% phyllite, 3 mm) hard. Clay mid yellowish red, 5YR 5/4; slip identical. LM III C.

KCM 15 Tripod cooking pot. 55% inclusions (40% quartz, 2–3 mm; 15% greyish phyllite, 3 mm); soft. Clay mid red 2.5YR 5/8, with 8 mm core of light greyish brown, 5YR 4/2; slip identical. LM III C – PG.

KCM 16 Tripod cooking pot. 40% inclusions (20% quartz, 2–3 mm; 10% phyllite, 4 mm; 5% hard grey crystalline rock, 2 mm); medium. Clay mid reddish brown 2.5YR 5/6. LM III C – PG.

KCM 37 Cooking pot. 25% inclusions (15% calcite, 1 mm; 10% hard grey crystalline rock, 2 mm); medium hard. Clay mid grey, 10YR 4/1; slip mid yellowish red, 5YR 5/6. LM III C – PG.

KCMC 86 Cooking pot. 45% inclusions (10% calcite, 0.5–1 mm; 18% quartz, 0.5–3 mm; 17% greyish phyllite, 2–5 mm), soft. Clay mid yellowish red, 5YR 5/6; slip identical. LM III C.

KCM 40 Cooking pot. 25% inclusions (5% calcite, speck; 10% quartz, 2 mm; 10% grey sandstone, 2 mm); medium. Clay mid grey, 5YR 4/1; slip mid buff, 2.5YR 5/4. LM III C – PG.

KCM 48 Cooking pot. 20% inclusions (10% calcite, 1 mm; 10% hard grey crystalline rock, 1 mm); hard. Clay dark red, 2.5YR 4/6; slip dark buff, 5YR 6/6. PG.

KCM 2 Pithos. 58% inclusions (15% calcite, 1–2 mm; 30% hard grey crystalline rock, 5–8 mm; 18% quartz, 4–5 mm); hard. Clay mid yellowish red, 5YR 5/4; slip mid yellowish red, 5YR 5/6. LM III C – SM.

KCM 3 Pithos. 63% inclusions (15% calcite, 1–2 mm; 30% hard grey crystalline rock, 3–8 mm; 18% quartz, 4–5 mm); hard. Clay mid yellowish red, 5YR 5/4; slip mid yellowish red 5YR 5/6. LM III C – PG.

KCM 55 Pithos. 20% inclusions (5% calcite, 1 mm; 15% grey sandstone, 3 mm); very hard. Clay mid reddish brown, 5YR 4/3; slip mid yellowish buff, 7.5YR 5/6. LM III B–C.

KCM 7 Pithos. 40% inclusions (35% hard grey crystalline rock, 3 mm; 5% quartz, 2–3 mm); hard. Clay mid buff 7.5YR 6/6; slip identical. LM III C – PG.

KCMC 4 Pithos. 37% inclusions (12% hard grey crystalline rock, 2–3 mm; 20% quartz, 4–5 mm; 5% red sandstone, 2–3 mm); Clay mid yellowish red, 5YR 5/6, slip identical. PG – G.

KCMS 1 Pithos. 45% inclusions (45% red sandstone, 3–4 mm); hard. Clay mid buff, 7.5YR 6/4; slip identical. PG – G.

KCM 34 Pithos. 45% inclusions (25% hard grey crystalline rock, 1–5 mm; 20% quartz, 3–5 mm); hard. Clay mid yellowish red, 5YR 5/6; slip mid yellowish buff, 10YR 7/6. G – EA.

KCM 42 Pithos. 45% inclusions (30% hard grey crystalline rock, 3–4 mm; 15% quartz, 5 mm); hard. Clay dark red, 2.5YR 5/6; slip dark buff, 5YR 6/6. LG.

KCM 4 Lekane. 30% inclusions (10% hard grey crystalline rock, 2 mm; 20% red sandstone, 3–4 mm); very hard. Clay mid yellowish red, 5YR 5/6; slip mid buff, 7.5YR 6/6. LM III C – PG.

KCM 29 Kylix stem. 0.5% inclusions (0.5% calcite, speck); soft. Clay light yellowish buff, 10YR 7/4; slip identical. LM III C.

KCM 82 Deep bowl. 1% inclusions (1% calcite, speck); soft. Clay light pinkish buff, 5YR 7/6; slip light yellowish buff, 10YR 7/4; paint dark greyish brown, 10YR 3/1. LM III C – SM.

KCM 14 Carinated deep bowl. 2% inclusions (2% calcite, speck); hard. Clay dark buff 5YR 6/6; slip mid buff, 7.5YR 6/6; paint dark brownish grey, 5YR 3/1. LM III C – SM.

KCM 10 Skyphos/small krater. 0% inclusions; soft. Clay light greenish buff, 2.5Y 7/4; slip identical. LM III C – PG.

KCM 65 Deep bowl/skyphos. 0% visible inclusions; hard. Clay dark buff, 5YR 6/6; slip light buff, 10YR 7/4. SM – PG.

KCM 77 Skyphos. 7% inclusions (2% calcite, speck; 5% hard grey crystalline rock, 0.5 mm); hard. Clay light tan, 5YR 6/4; paint dark greyish brown, 10YR 3/1. LPG.

KCM 12 Skyphos. 1% inclusions (1% calcite, speck); soft. Clay light yellowish buff 10YR 7/4; slip identical paint dark greyish brown, 10YR 3/1. LPG.

KCM 50 Skyphos. 1% inclusions (2% calcite, speck; 5% hard grey crystalline rock, 0.5 mm), hard. Clay dark buff, 5YR 6/6; slip mid yellowish buff, 7.5YR 7/6, paint dark greyish brown, 10 YR 3/1. PG.

KCM 22 Skyphos. 1% inclusions (1% hard grey crystalline rock, speck), medium. Clay light yellowish buff, 10YR 7/4; paint dark greyish brown, 10YR 3/1. EPG.

KCM 60 Skyphos. 0% inclusions; medium. Clay mid yellowish buff, 7.5YR 7/6; slip identical. EPG.

KCM 74 Skyphos. 1% inclusions (1% calcite, speck); hard. Clay light buff, 7.5YR 3/0; slip light tan, 5YR 6/4. EPG.

KCMN 2 Skyphos. 24% inclusions (14% calcite, 3 mm; 10% hard grey crystalline rock, 1–2 mm); hard. Clay mid yellowish red, 5YR 5/6; slip identical. LM III C.

KCM 25 Skyphos. 0% inclusions; hard. Clay dark buff, 10YR 6/4; slip mid yellowish buff, 10YR 7/6, paint dark greyish brown, 10YR 3/1. PG.

KCM 73 Carinated skyphos/small krater. 0% inclusions; hard. Clay dark buff, 10YR 6/4; slip identical; paint dark grey, 10YR 3/2. PG – G.

KCM 24 Skyphos. 1% inclusions (1% calcite, 1 mm); hard. Clay mid yellowish buff, 7.5YR 7/6; slip light yellowish buff, 10YR 7/4; paint mid grey, 10YR 4/1. E – MG.

KCM 75 Krater. 3% inclusions (3% calcite, 1 mm); hard. Clay mid yellowish red, 5YR 5/4; slip light creamy buff, 10YR 8/4; paint dark greyish brown, 10YR 3/1. LM III C – PG.

KCM 8 Krater. 0% inclusions; medium. Clay dark buff, 5YR 6/6; slip light yellowish buff, 7.5YR 7/6; paint mid grey, 7.5YR 4/0. EPG.

KCMS 5 Krater/jar. 10% inclusions (5% calcite, speck; 5% hard grey crystalline rock, 1 mm); hard. Clay mid buff, 7.5YR 6/6; slip identical. PG.

KCM 23 Closed vessel. 20% inclusions (10% calcite, 2–3 mm; 10% hard grey crystalline rock, rounded, 2–3 mm); medium. Clay mid buff, 7.5YR 6/6, slip light yellowish buff, 10YR 7/4, paint dark red, 2.5YR 4/6. LM III C – PG.

KCM 20 Amphora. 15% inclusions (15% hard grey crystalline rock, under 1 mm); hard. Clay mid reddish brown, 2.5YR 5/6; slip mid yellowish buff, 10YR 7/6, paint dark greyish brown, 10YR 3/1. SM – EPG.

KCM 1 Amphora. 35% inclusions (35% hard grey crystalline rock, 3–4 mm); very hard. Clay mid yellowish red, 5YR 5/6, slip identical. PG.

KCMW 10 Amphora. 0% inclusions; medium. Clay creamy buff, 7.5YR 7/4; slip identical, paint mid brownish grey, 7.5YR 4/0. PG.

KCM 62 Amphora. 1% inclusions (1% calcite, speck); medium. Clay mid yellowish buff 10YR 6/4, slip mid buff, 10YR 6/3, paint mid brownish grey, 10YR 4/1. G.

KCM 66 Amphora. 3% inclusions (3% hard grey crystalline rock, 1 mm); hard. Clay mid yellowish buff, 7.5YR 7/6, slip light tan 10YR 7/3. G.

KCMW 11 Amphora. 20% inclusions; hard (20% hard grey crystalline rock, 1 mm). Clay mid yellowish red, 5YR 5/6, slip identical. PG – G.

KCM 79 Juglet. 0.5% inclusions (0.5% calcite, 1 mm); hard. Clay dark buff, 5YR 6/6; slip light yellowish buff, 10YR 7/4, paint mid brownish grey, 7.5YR 4/0. G.

Krousonas Koupo

The Site

Koupo lies south of and above Krousonas in the Psiloritis foothills (fig. 1). Its strategic position offers views to the north and east over the fertile valleys of the area, which have traditionally supported a large village at Krousonas. Koupo's inhabitants had excellent access to low-lying arable land within about ten minutes' walk of the summit, down slopes which are only fairly steep – most sheer and rocky on the north side, but lacking dramatic cliffs anywhere. By the same token, the settlement had very limited intrinsic defensibility and could best have defended itself by force of numbers: no traces of any fortification have been found. Previous brief, small-scale excavations have indicated use of the site in LM III C and Archaic[85]. The study of surface material carried out here confirms continuous use of the site, and suggests its dia-

85 Dimopoulou 1983; Dimopoulou 1985; Dimopoulou 1987.

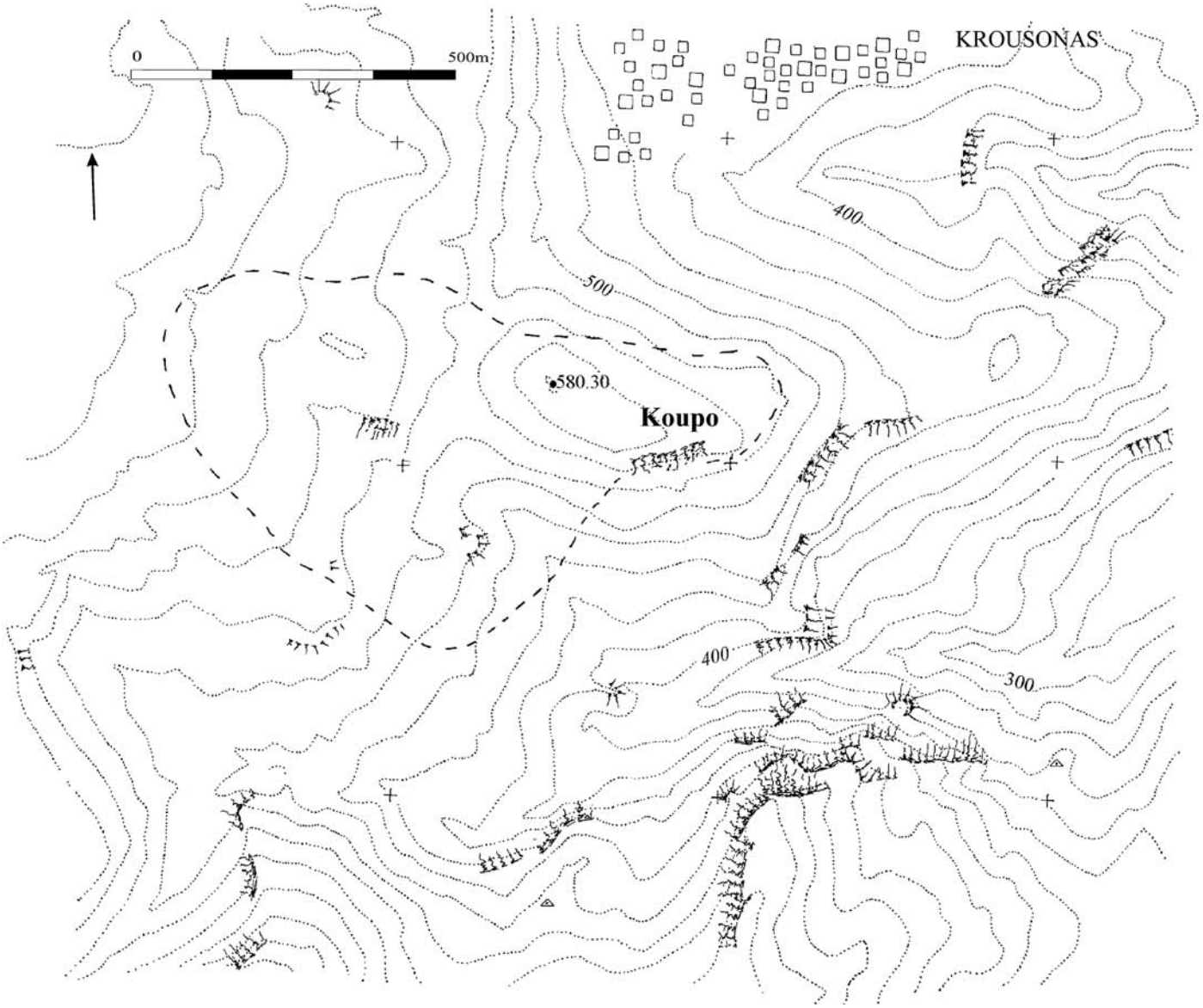


Fig. 12 Krousonas Koupo, Plan of sherd scatter limits (M. 1 : 100)

chronic expansion, all the way through the EIA – Archaic periods and into Classical-Hellenistic. The pottery has a sometimes patchy distribution, but indicates that Koupo was a very large site (c. 32.5 ha) by the end of its life (fig. 12). Stone clearance piles, which would suggest major disturbance of the ancient remains in the recent past, are absent on or around the summit, though the building of a chapel on the easternmost part of the summit has caused some disturbance.

As noted above, there are indications that a new spread of small farming and cult sites occurred into the hinterlands of large central Cretan polities by the Early Archaic period. A small PG – A site has been reported near to, but separate from, the main Krousonas summit[86]; and a PG – G site with suggested cult use was recorded at the neighbouring Volakas location[87]. A Classical site at Ayios Myronas, located west of the large polity at Profitis Elias Rokka/Korifi (which had a similar EIA – Classical history to Koupo) and east of Koupo, may have been a border-marking site founded in Archaic times

86 Dimopoulou – Rethimiotakis 1987, 530–531.
87 Sjögren 2004, 165.

as inter-state competition and conflict took off in the region. Alternatively, it could have been a small farming settlement attached to one of the polities, or have held both functions at once. No EIA history is known for it[88].

The Pottery Sequence (figs. 13–15)

Coarse Wares

Round-section legs from tripod cooking pots appear regularly at Koupo (KK 38, KK 39, KK 40, KK 76, KK 6, KK 46, KK 47). Many fragments appear plain (suggesting an LM III B/III B–C transition date). The finger impression at the junction of leg and body on KK 6 is a classic LM III C feature. A body sherd from a thin-walled cooking pot with narrow grooved decoration (KKNC 5) is of PG – G date.

There is a good datable range of pithoi, in which the chevron or hatched bands typical of LM III C – PG (KK 17, KKNC 1, KK 8, KK 35, KKNC 14) are replaced over time by stamped or incised circles on bands, sometimes combined with incised vertical or oblique hatching, in PG – G (KKNC 8, KKNC 3, KK 3). The incision of a chevron/diamond design directly onto the body of KKNC 2 suggests a G date. A short-necked coarse jar (KK 9) probably dates early in the EIA.

In basins, a flat-rimmed example (KK 30) probably dates in LPG – G; a more pronounced version of this shape, with horizontal handles and a sharp intake below the rim (KK 12) is probably of Geometric date. A semi-coarse basin with incised wavy line around its folded rim has good LPG – G parallels (KK 49)[89]. Another small basin with folded rim and handles near the rim appears in KK 22. Straight-sided flaring vessels of G – A date, with downturned and grooved rims, appear in KK 32 and KK 42[90].

Fine Wares

The fine ware hints at LM occupation at or around the Koupo site prior to its establishment as a major settlement in LM III C. A hollow foot from a ›champagne cup‹ and some bowls with very narrow external painted band above a low ring base (KKM 3) suggest a date within LM III B. LM III C skyphos sherds include three externally-banded ring bases and a rim with internal band, typical of early LM III C (KKM 4, KK 4, KKM 3A) as well as conical feet of PG type. A stage between LM III C and PG seems represented by KK 14. Two large painted krater feet date in late LM III C – PG, and have good parallels at Karfi (KK 41, 36[91]). A set of small concentric circles with scattered dot decoration around it on a flaring-walled open vessel, probably a krater, dates PG (KK 37), while a floral design within a concentric circle set on another possible krater suggests an EA date (KK 11).

In amphoras/jugs, a number of sherds from neck- and belly-handled amphoras date in LM III C – PG (KKNC 6, KKES 5[92]). A body design on a large amphora, of a quarter-chequered inner circle within an isolated concentric circle set (KKES 1) suggests an EPG – MPG date[93]. A small double jar handle suggests the PG – G period (KK 16); a short-necked jar with cross-striped flat rim, probably with external painted decoration, also looks PG (KK 25). Small, fine juglets, amphoras or jars with narrow painted bands on the body, probably of G date, appear in KK 20 and KKES 2.

Fabrics (fig. 11)

The coarse assemblage is heavily dominated by red fabrics, suggesting that these represent the local source. The sequence illustrates well the increas-

88 Mariani 1895, 228–231; Pendlebury et al. 1933, 91; Nowicki 2000, 181–182; Sjögren 2004, 117–118; Wallace 2002.

89 Boardman 1960, fig. 5, 1.6, dated PGB; Coldstream 1960, pl. 37; Coldstream – Catling 1996, figs. 64, 137–139; 136, 58 (dated PGB – EG); Coldstream et al. 1999, fig. 1.22 c; Sackett et al. 1992, pl. 70, 56. 57.

90 Coldstream 1960, fig. 14, 36. 115; Coldstream 1973, fig. 2, J 26; Coldstream et al. 1999, fig. 1.22 j. k; Coldstream – Catling 1996, figs. 100, 80.6 (LG – EA); 98, 181; Haggis 2005, fig. 55, 71.1. 71.2; Sackett et al. 1992, pls. 64, 34; 65, 26. 27; 57, GG 9; Tsipopoulou 2004 b, fig. 8.

91 Boardman 1960, pl. 31; Seiradaki 1960, figs. 16. 17.

92 Mook 1993, fig. 167, P 8.55.

93 Boardman 1960, pl. 34, I.9; Brock 1957, pls. 13, 154; 9, 161; 18.

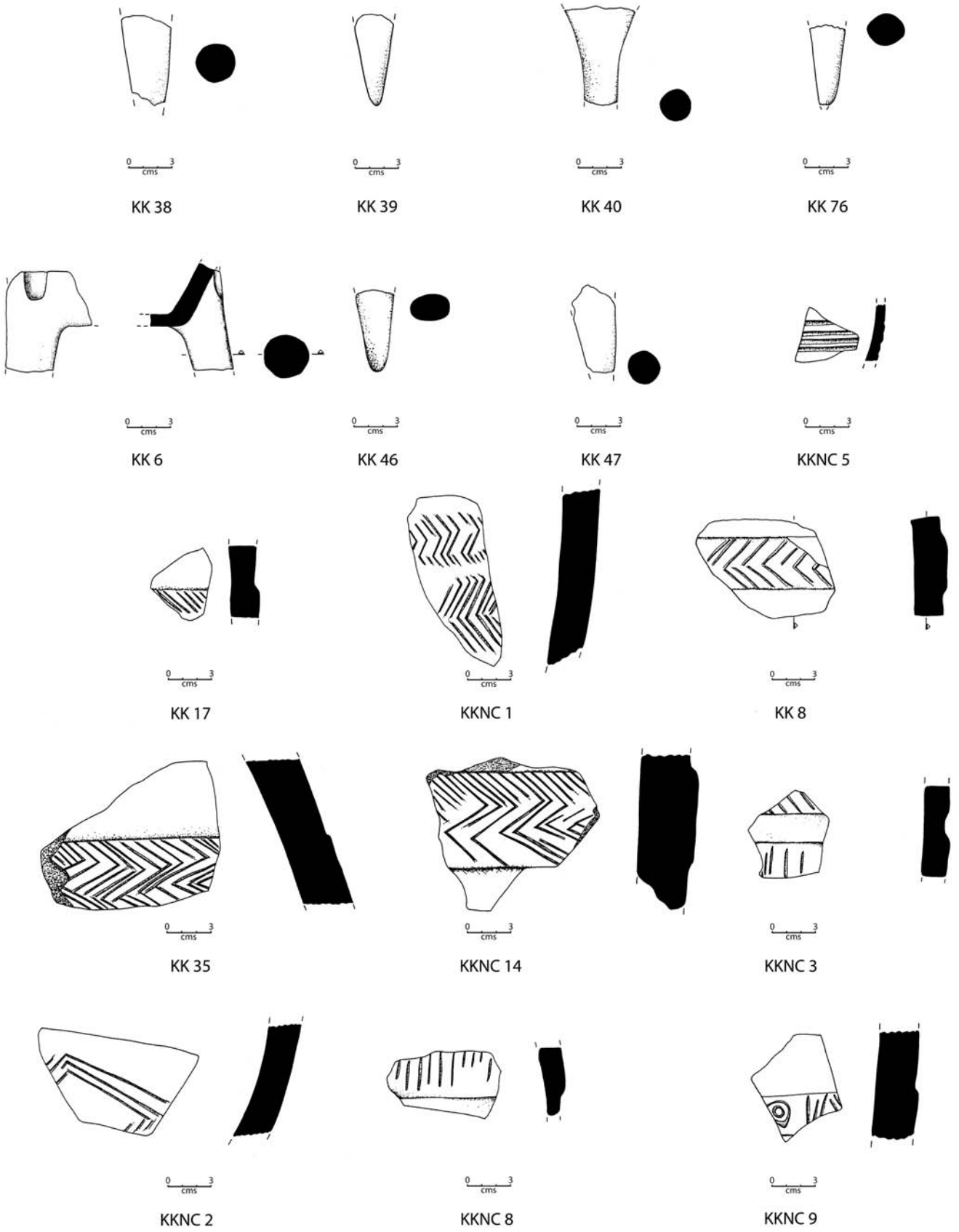
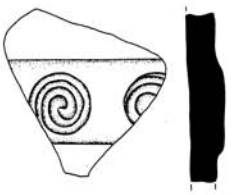


Fig. 13 Krousonas Koupo, Catalogued sherds



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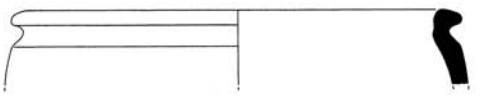

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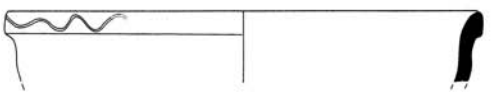

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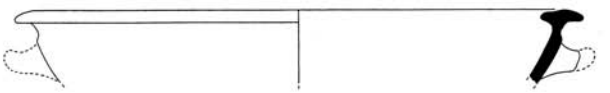

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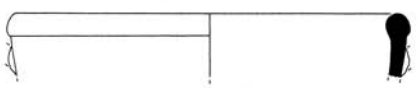

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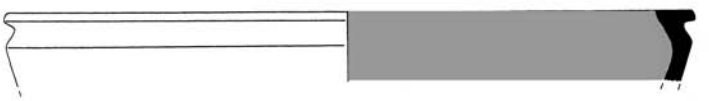
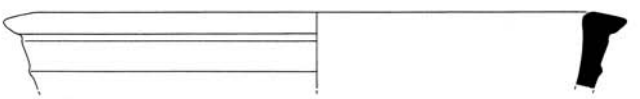


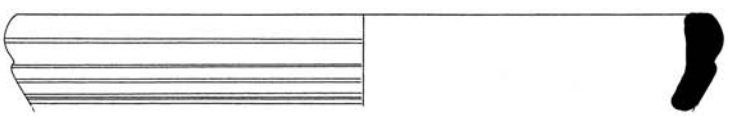
KK 30

KKM 4

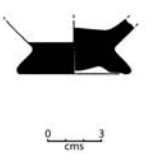


KK 32

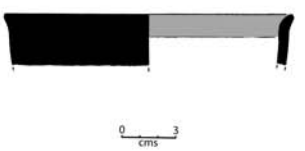
KKM 3



KK 42



KKM 4A



KKM 3A

Fig. 14 Krousonas Koupo, Catalogued sherds

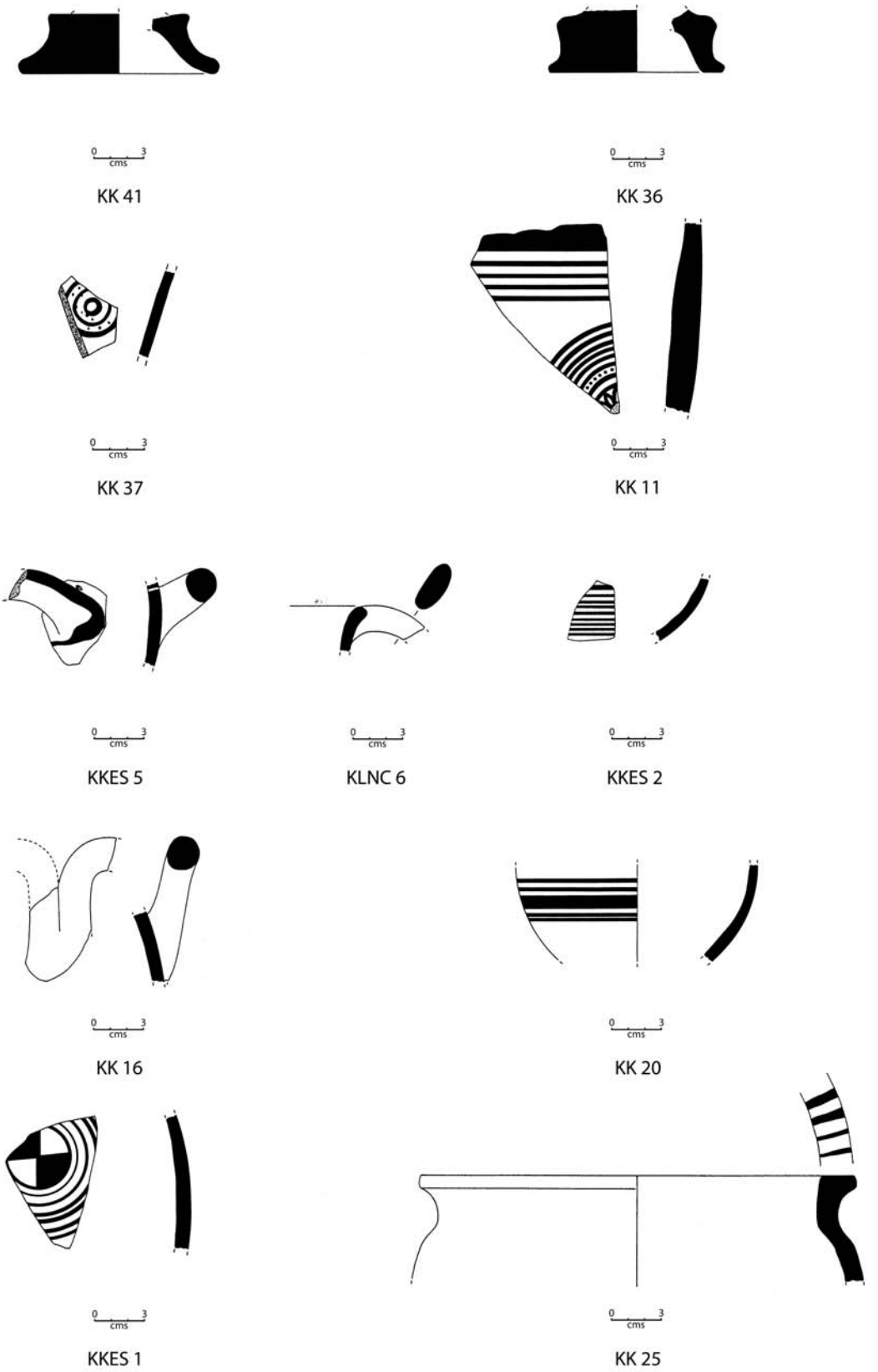


Fig. 15 Krousonas Koupo, Catalogued sherds

ing quality of coarse wares over time, with a decrease in total inclusions – though this appears less marked in pithoi than in other, smaller coarse vessels. Purple phyllite is common in pithoi (where it regularly approaches or exceeds 40%) but makes a much more restricted appearance in other coarse wares. Sustained choices were clearly being made about the recipes appropriate to this particular vessel type. Sandstones are almost absent, in a pattern differentiating this production tradition both from that of Maza and those of the Mesara sites discussed below. Quartz and dark grey hard crystalline rock are more regular inclusions – appearing in many coarse vessels in proportions of 10–20% and 20–30% respectively. Notably, quartz is not the dominant inclusion in cooking vessels here. As at Papoura and Maza, clays are usually non-micaceous, although there are a few examples of mica transfer from rock inclusions.

The Koupo fine wares are much less dominated by buff fabrics than those at Maza. The mid reddish-brown local fabric used for most of the coarse pottery is also well-represented in the fine assemblage alongside buff wares of good quality which potentially originate in a more distant clay source. If the red clay is, as it seems, locally-sourced, this pattern suggests that a more diverse and complex fine pottery industry and consumption sphere existed here than at either Maza or Papoura, involving a sophisticated, diverse local base of production as well as the regular use of imports from other regions or polities. Changes in fabric quality over time are well-illustrated in the fine ceramics – for example, the PG-G belly-handled amphoras and kraters are distinctly harder in fabric, and have much better-quality paint, than the LM IIIB/C deep bowls.

Catalogue of Pottery, Krousonas Koupo

Provenance codes: KK indicates unspecified part of summit; KKES east summit area near chapel; KKNC north central summit.

KK 38 Tripod cooking pot. 35% inclusions (15% quartz, 1 mm; 20% phyllite, 2–4 mm); hard. Clay mid reddish brown, 7.5YR 5/0; slip mid buff, 7.5YR 6/6. LM III C – SM.

KK 39 Tripod cooking pot. 10% inclusions (5% quartz, 5 mm; 5% phyllite, 2 mm); hard. Clay mid reddish brown, 10YR 5/1; slip mid yellowish red, 5YR 5/6. LM III C – PG.

KK 40 Tripod cooking pot. 25% inclusions (5% hard grey crystalline rock, 1 mm; 5% quartz, 1 mm; 15% phyllite, 1–4 mm); hard. Clay dark reddish brown, 7.5YR 5/0; slip mid yellowish red, 5YR 5/6. LM III C.

KK 76 Tripod cooking pot. 20% inclusions (10% quartz, 2 mm; 10% phyllite, 2–4 mm). Clay mid reddish brown, 2.5Y 3/0; slip identical. LM III C – PG.

KK 6 Tripod cooking pot. 15% inclusions (15% quartz, 1 mm); medium. Clay mid grey, 7.5YR 4/0; slip mid tan, 5YR 5/8. LM III C – PG.

KK 46 Tripod cooking pot. 37% inclusions (10% quartz, 0.5 mm; 25% phyllite, 2–3 mm; 2% mica, speck); hard. Clay mid yellowish red, 10YR 6/1; slip dark buff, 5YR 6/6. LM III C – PG.

KK 47 Tripod cooking pot. 45% inclusions (10% quartz, 0.5 mm; 35% phyllite, 2–3 mm); hard. Clay mid yellowish red, 10YR 6/1; slip dark buff 5YR 6/6. LM III C.

KKNC 5 Cooking pot. 15% inclusions (15% calcite, 0.5 mm); hard. Clay mid reddish brown, 2.5Y 3/0, slip identical. PG – G.

KK 17 Pithos. 55% inclusions (30% hard grey crystalline rock, 2–3 mm; 5% quartz, 1 mm; 20% phyllite, 2–5 mm) Clay dark buff, 5YR 6/6, slip identical. LM III C – PG.

KKNC 1 Pithos. 52% inclusions (17% hard grey crystalline rock, 1 mm; 35% phyllite, up to 6 mm); medium. Clay mid yellowish red, 5YR 4/6; slip dark buff, 5YR 6/6. LM III C – PG.

KK 8 Pithos. 33% inclusions (23% hard grey crystalline rock, 1–3 mm, 10% red sandstone, 2 mm); hard. Clay dark red, 2.5YR 4/6; slip mid yellowish buff, 10YR 6/6. LM III C – PG.

KK 35 Pithos. 65% inclusions (5% hard grey crystalline rock, 2 mm; 60% phyllite, 4–6 mm); hard. Clay mid reddish brown, 2.5YR 5/6, slip mid yellowish buff, 7.5YR 7/6. LM III C – PG.

KKNC 14 Pithos. 50% inclusions (20% hard grey crystalline rock, 3 mm; 30% phyllite, 4–5 mm); medium. Clay mid buff 7.5YR 6/6; slip identical. LM III C – PG.

KKNC8 Pithos. 50% inclusions (10% hard grey crystalline rock, 1 mm; 40% phyllite, 1–2 mm); hard. Clay mid reddish brown, 2.5Y 3/0; slip identical. LM III C – PG.

KKNC 9 Pithos. 80% inclusions (20% hard grey crystalline rock, 2–3 mm;10% quartz, 2 mm; 50% phyllite, 3 mm); hard. Clay mid yellowish buff, 10YR 6/6. G – EA.

KKNC 3 Pithos. 45% inclusions (15% calcite, 0.5 mm; 25% hard grey crystalline rock, 1 mm; 5% quartz, 0.5 mm). Clay mid yellowish red, 5YR 5/6; slip identical. LM III C – PG.

KK 3 Pithos. 55% inclusions (10% hard grey crystalline rock, 1–2 mm; 10% quartz, 3 mm; 35% red phyllite, 2–7 mm); hard. Clay mid greyish buff, 2.5Y 6/2; slip mid yellowish buff, 10YR 7/6. PG.

KKNC 2 Pithos. 30% inclusions (5% hard grey crystalline rock, 2–3 mm; 5% quartz, 4 mm; 20% phyllite, 4–5 mm); hard. Clay mid reddish brown, 5YR 5/6, slip identical. LM III C.

KK 9 Short-necked jar. 18% inclusions (3% calcite, 0.5 mm; 15% hard grey crystalline rock, 1 mm); hard. Clay dark red, 2.5YR 4/6; slip mid buff, 7.5YR 6/6. LM III C – PG.

KK 30 Lekane. 3% inclusions (3% calcite, speck); hard. Clay dark buff, 5YR 6/6; slip mid buff, 7.5YR 6/6; paint mid brownish grey, 7.5YR 4/0. LM III C – PG.

KK 12 Lekane. 2% inclusions (2% calcite, 2 mm); medium. Clay dark red, 2.5YR 4/6; slip mid buff, 7.5YR 6/6. PG – G.

KK 49 Basin. 6% inclusions (2% calcite, under 1 mm; 4% hard grey crystalline rock, 1 mm); medium. Clay mid buff, 7.5YR 6/6; slip identical. LG – A.

KK 22 Basin. 1% inclusions (1% calcite, speck). Clay creamy buff, 7.5YR 7/4; slip identical. G – A.

KK 32 Lekane. 18% inclusions (25% hard grey crystalline rock, 1 mm; 5% quartz, 5 mm; 10% red sandstone, 2–3 mm; 3% mica); hard. Clay light greyish buff, 10YR 6/2; slip mid buff, 7.5YR 6/6. G – A/C?.

KK 42 Lekane. 40% inclusions (20% hard grey crystalline rock, 0.5–2 mm; 5% quartz, 2 mm; 15% red sandstone, 2 mm); hard. Clay mid reddish brown, 2.5YR 5/6; slip identical. G – A.

KKM 3 Deep bowl. 1% inclusions (1% calcite, speck); hard. Clay dark buff 5YR 6/6; slip light buff, 7.5YR 8/4. LM III C.

KKM 4 Deep bowl. 1% inclusions (1% calcite, 1 mm); soft. Clay dark buff, 5YR 6/6; slip mid yellowish buff, 10YR 7/6. LM III C – SM.

KK 4 Deep bowl. 1% inclusions (1% calcite, speck); soft. Clay dark buff 5YR 6/6; slip mid yellowish buff, 10YR 7/6; paint dark greyish brown, 10YR 3/1. LM III C – SM.

KKM 3A Deep bowl. 2% inclusions (2% calcite, speck); hard. Clay mid buff, 7.5YR 6/6; slip mid yellowish buff, 10YR 7/6; paint mid brown, 2.5YR 4/2. LM III C.

KK 41 Krater. 3% inclusions (2% hard grey crystalline rock, 0.5 mm; 1% quartz, 1 mm); hard. Clay mid yellowish red 5YR 5/6; paint mid yellowish buff 10YR 7/6. LM III C – PG.

KK 36 Krater. 58% inclusions (15% hard grey crystalline rock, 1 mm; 3% quartz, 0.5 mm; 40% phyllite, 1–2 mm); hard. Clay mid yellowish red, 5YR 5/6; slip mid yellowish buff, 7.5YR 7/6, paint black, 7.5YR 2/0. LM III C – PG.

KK 37 Krater? 1% inclusions (1% calcite, speck); hard. Clay mid yellowish red, 5YR 5/4; slip mid yellowish buff, 10YR 7/6; paint dark brown, 5YR 3/2. PG.

KK 11 Krater? 20% inclusions (15% hard grey crystalline rock, 2–3 mm; 5% quartz, 2 mm); hard. Clay mid reddish brown, 2.5YR 4/4; slip dark buff, 10YR 6/4, paint dark greyish brown, 10YR 3/1. LG – EA.

KKNC 6 Amphora/jug. 7% inclusions (2% calcite, 0.1 mm; 5% hard grey crystalline rock, 3 mm); hard. Clay light buff, 10YR 7/4; slip identical. LM III C – PG.

KKES 5 Amphora. 0% inclusions; soft. Clay dark buff 5YR 6/6; slip mid buff 7.5YR 6/6. PG – G.

KKES 1 Amphora. 20% inclusions (10% calcite, 0.5–1 mm; 10% phyllite, 0.5 mm); hard. Clay dark buff, 5YR 6/6; slip light creamy buff, 10YR 8/4, paint dark reddish brown, 2.5YR 3/0. EPG – MPG.

KK 16 Double-handled jar/amphora. 50% inclusions (30% hard grey crystalline rock, 1 mm; 10% quartz, 1 mm; 10% sandstone, 2 mm); hard. Clay mid red, 2.5YR 5/6; slip mid yellowish buff, 7.5YR 7/6, paint light red, 2.5YR 6/6. MPG – LPG.

KK 25 Jar. 15% inclusions (15% calcite, 1 mm); medium. Clay light yellowish buff, 10YR 7/4; slip identical; paint dark greyish brown, 10YR 3/1. LM III C – PG.

KK 20 Juglet. 2% inclusions (2% calcite, speck); hard. Clay dark buff, 5YR 6/6; slip mid buff, 7.5YR 6/6; paint mid brownish grey, 7.5YR 4/0. G.

KKES 2 Juglet. 1% inclusions (1% calcite, speck); hard. Clay mid red, 10R 5/4; slip light tan, 10YR 7/3. LM III C – PG.

Rotasi Kefala

The Region and the Site

The excavated EIA – Archaic settlements of Gortyn and Prinias in south central Crete have strikingly similar topographic characteristics to the sites discussed above – locations on large flat-topped hills or ridges of locally strategic

(but not intrinsically defensible) character, and excellent access to high-quality arable land and communication routes[94]. Two unexcavated sites in the eastern Mesara region, at Rotasi Kefala and Ligortinos Kefala (fig. 1), share similar features: their histories, viewed in the context of those of the excavated sites, provide useful (and contrasting) reference points for general developments in south central Crete.

A small, highly defensible settlement, typical of the collapse response occurring c. 1200 BC in many parts of Crete, was founded in LM III C in the area of modern Rotasi, together with a much lower, more accessible, and larger settlement. Korifi is a rocky peak remote and inaccessible from the Mesara plain, commanding wide views in all directions[95]. Kefala is a large flat-topped hill immediately adjacent to the plain, with strategic views to the north: those to the south are blocked completely by the Asterousia foothills. Though Kefala's slopes are steep, rising abruptly from the surrounding plain, the site is not securely defensible, except by a very large population and/or a protective wall. No clear traces of such a wall have yet been found. As in the Karfi-Papoura case, the less extreme settlement choice seems to have paid off best in the long term. Korifi was abandoned before PG, while Kefala continued in use through the PG, G and Archaic periods and beyond into Classical and Hellenistic times. Several Geometric tombs have been excavated in its very close vicinity[96]. The Kefala site has been identified by a number of scholars with the Classical polis of Rhytion, and extensive scatters of Classical and Hellenistic pottery can be noted on the surface. In the small collection made by the Hood team there are a number of fourth- and third-century black-glazed sherds from drinking vessels, including a fragment from an Attic import[97]. The total sherd scatter (about 42.4 ha) covers the entire summit and extends down the slopes, especially to the north (under the modern village) and more sparsely to the south (fig. 16). The ground cover is currently excultivated grassland, not heavily grazed. The dense growth makes for limited sherd visibility on many parts of the summit. Recent chapel construction has covered surface material on the summit, and encroachment of the modern village on the lower N slopes makes it impossible to trace the original limits of the site in this direction.

The Pottery Sequence (figs. 17. 18)

Coarse Wares

Chevron-incised and hatched bands on pithoi/pithoid jars are typical of the LM III C – PG period (RK 3, RKES 4). A semi-coarse jar with two narrow foliate bands incised directly onto the body is paralleled at PGB – EA Knossos (RK 19)[98]. A double row of curved notches on one pithos base (RKES 7), and a heavy applied band of ribbed arches on another pithos indicate both vessels to be of Archaic date: the latter appears to date late in the period (RK 17). A sherd from near the rim of an EA coarse jar or basin (RKSE 1) has a row of small stamped circles below a line incised straight onto the body of the vessel: similar small stamped circles associated with two incised horizontal lines containing a hatched design are seen on RK 59, which has a probably similar date. The round-section legs of tripod cooking pots RK 13 and RK 36 are datable to LM III C – PG. In basins, a small LM III C – PG lekane or bowl with sharply carinated profile appears in RK 9. A flared basin with rounded rim (RKES 2) looks G – EA or later in date.

94 Allegro 1991; Rizza 2000.
95 Nowicki 2000, 191.
96 Galanaki 1993.
97 P. Callaghan pers. comm.
98 Coldstream – Catling 1996, figs. 64, 137–139; 136, 58; Coldstream et al. 1999, fig. 1.22 c; Sackett et al. 1992, pl. 70, 56. 57.

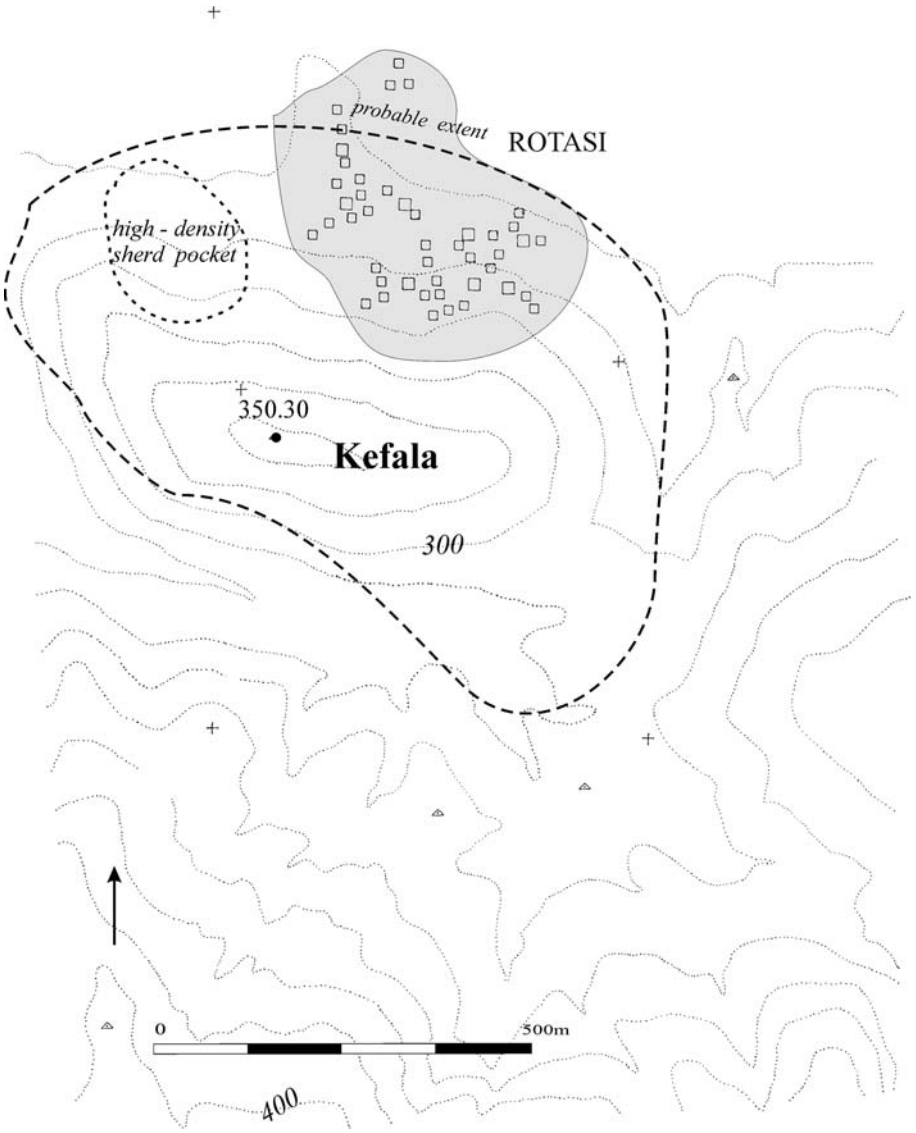


Fig. 16 Rotasi Kefala, Plan of sherd scatter limits (M. 1 : 100)

Fine Wares

LM III C – PG skyphos handles appear in RK 8 and RK 57. Various red-painted skyphos feet also look LM III C – PG. A rather thick-walled carinated open vessel (krater or basin) with a thick band of solid red paint above the carination looks LM III C – PG (RK 35). Small fragments of amphoras/jugs with banded decoration probably date between LM III C and PG (RK 11, RK 7, RK 2) and a thick-walled jar with small circle sets painted on the body looks LPG – G (RK 10). Decoration around the base of an amphora neck-handle (RKES 12) suggests a PG – G date; a narrow-necked amphora with thickened rim also belongs to this period (RKES 13). A vessel with painted hatching on the shoulder closely parallels a hydria from EPG Fortetsa (RK 5)[99].

Fabrics (fig. 19)

The very limited quantity of pottery able to be studied here means the observations below must be treated with special caution. As with the Krousonas fine wares, and those from Ligortinos Kefala (see below), the fine pottery

99 Brock 1957, pl. 18.

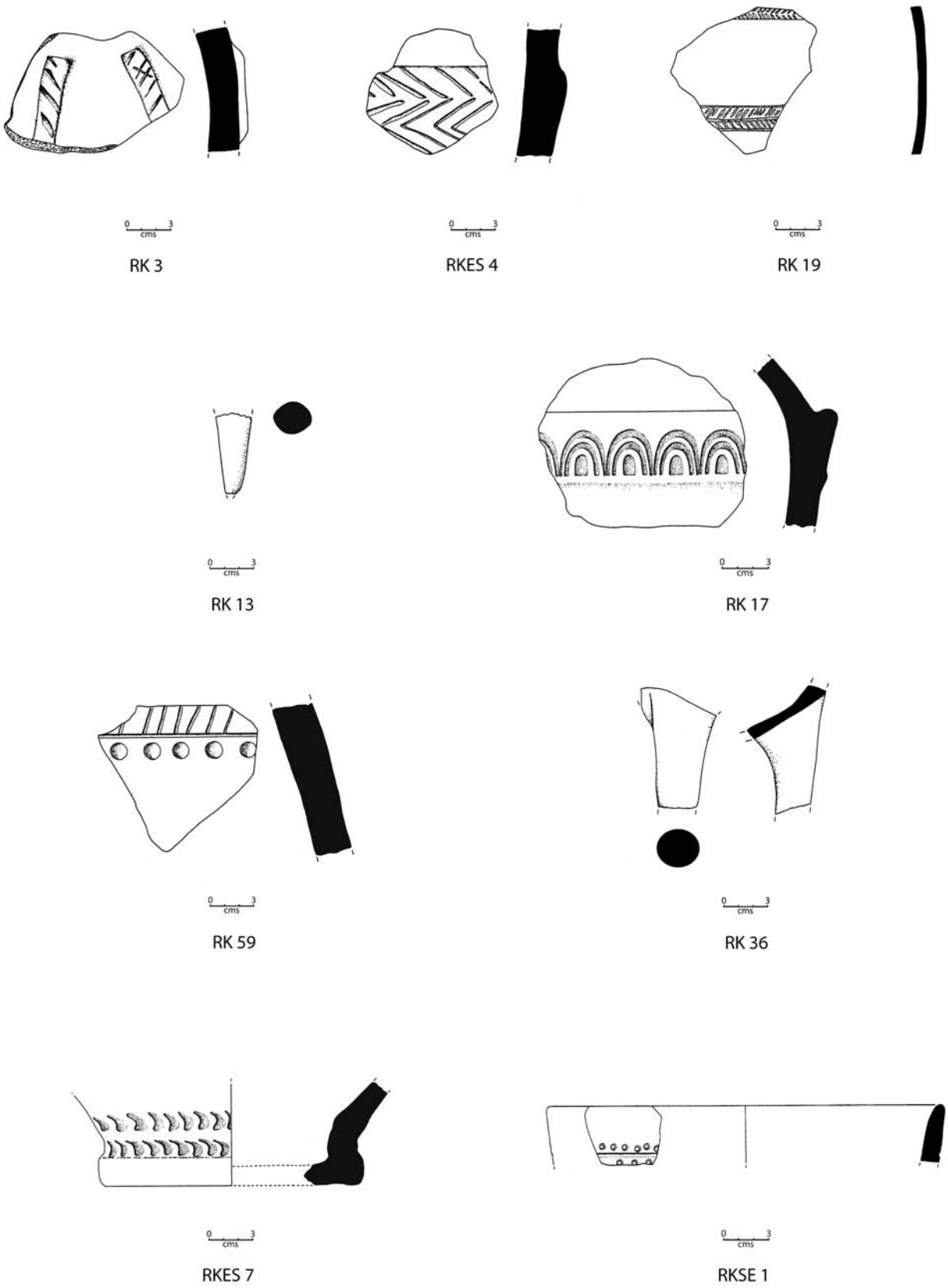


Fig. 17 Rotasi Kefala, Catalogued sherds

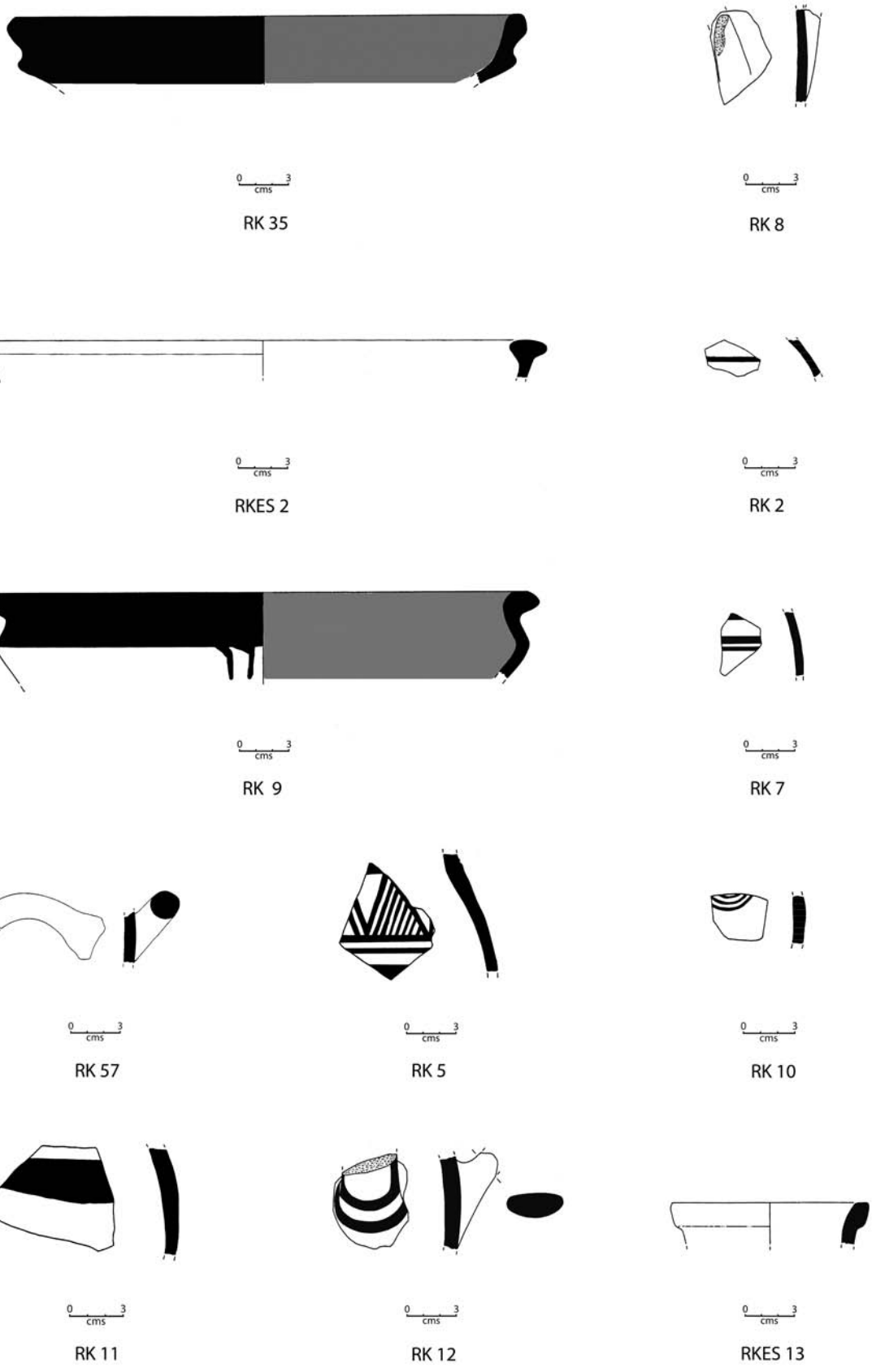


Fig. 18 Rotasi Kefala, Catalogued sherds

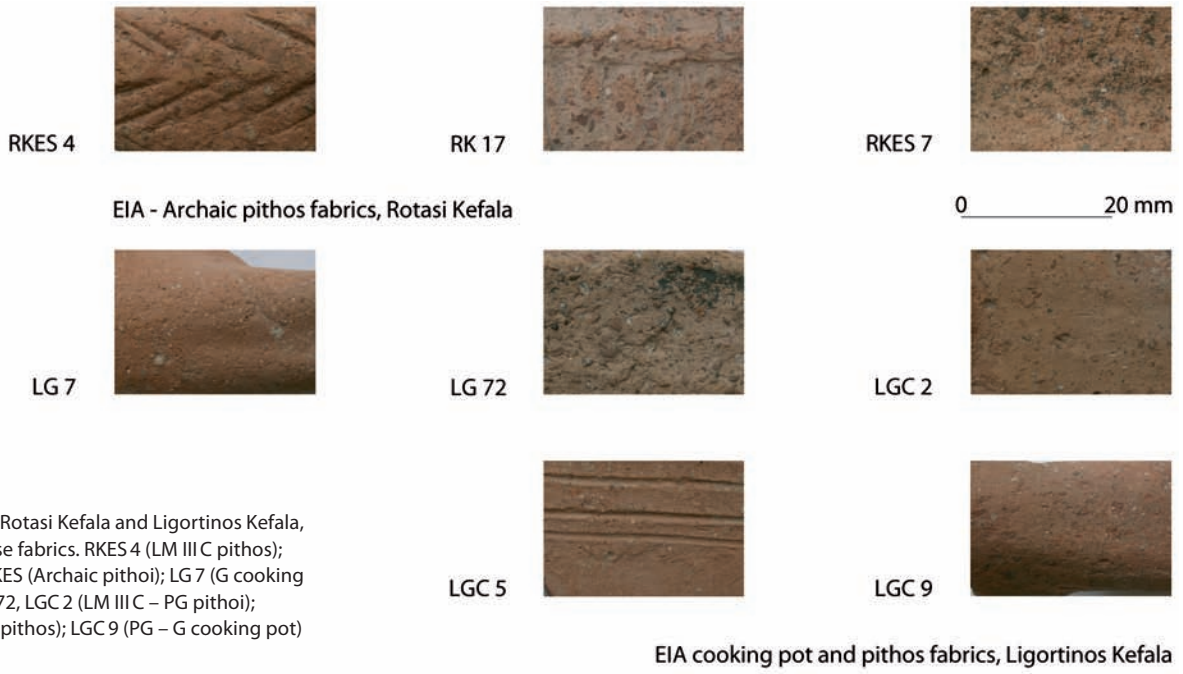


Fig. 19 Rotasi Kefala and Ligortinos Kefala, EIA coarse fabrics. RKES 4 (LM III C pithos); RK 17, RKES (Archaic pithoi); LG 7 (G cooking pot); LG 72, LGC 2 (LM III C – PG pithoi); LGC 5 (G pithos); LGC 9 (PG – G cooking pot) (M. 1 : 1)

from Kefala uses a good mixture of red and buff fabrics, suggesting that complex manufacturing traditions and exchange systems were in operation here. Buff fabrics outnumber the red ones rather more strongly in the coarse ware, suggesting that the main or most popular (local?) source was a buff clay, though there is a good mix of clays in this sector, too, in contrast to the other sites studied here. Sandstone is a fairly regular inclusion in the site's coarse ware (up to 30% red sandstone appears in an early EIA piece) as at nearby Ligortinos Kefala. Inclusions of hard, dark grey crystalline rock also appear regularly, at a relatively low 10–20%. Phyllite is almost entirely absent, and the latter is almost entirely absent as an inclusion here. The high quality of LM III C–EA fine pottery at Ligortinos Kefala is echoed at Rotasi, notwithstanding the much sparser collection here – the majority of fine pieces have a good quality buff slip and very few inclusions, even at an early date in the EIA. Where tiny inclusions do occur in the fine ware, they are of the hard dark grey rock (rather than the mixture of soft sandy rocks dominating the coarse pottery).

Catalogue of Pottery, Rotasi Kefala

Provenance codes: RK indicates unspecified area of summit; RKES east summit; RKSE south-east slopes.

RK 3 Pithos. 58% inclusions (17% hard grey crystalline rock, 2–3 mm; 20% red sandstone, 2–3 mm; 20% grey sandstone, 2–3 mm, 1% mica, speck). Clay light reddish brown, 2.5Y 5/2, slip mid buff, 7.5YR 6/6. LM III B–C.

RKES 4 Pithos. 53% inclusions (15% hard grey crystalline rock, 2–3 mm; 10% quartz, 2 mm; 28% red sandstone, 2–3 mm); hard. Clay mid red, 10R 5/4; slip identical. LM III C – PG.

RK 19 Pithos. 52% inclusions (20% hard grey crystalline rock, 2–3 mm; 18% quartz, 2–3 mm; 9% phyllite, 2–3 mm; 5% calcite, speck).

	Clay mid greyish buff, 2.5Y 6/2; slip light tan, 5YR 6/4. LG/EA.
RKES 7	Pithos. 60% inclusions (20% hard grey crystalline rock, 2 mm; 15% quartz, 2 mm; 5% red sandstone, 2 mm; 20% grey sandstone, 2 mm); hard. Clay mid red, 10R 5/4, slip mid buff, 7.5YR 6/6. EA.
RK 17	Pithos. 72% inclusions (6% calcite, 1 mm; 20% hard grey crystalline rock, 2–4 mm; 30% red sandstone, 1–6 mm; 17% phyllite, 2 mm). Clay dark buff, 5YR 6/6; slip identical. A.
RKSE 1	Jar/basin. 38% inclusions (30% red sandstone, 3–6 mm; 8% grey sandstone, 2–3 mm); hard. Clay dark buff, 5YR 6/6; slip mid buff, 7.5YR 6/4. A.
RK 59	Pithos. 30% inclusions (15% hard grey crystalline rock, 2 mm; 15% red sandstone, 2–3 mm); hard. Clay light tan, 5YR 6/4; slip identical. A.
RK 13	Tripod cooking pot. 40% inclusions (10% hard grey crystalline rock, 3 mm; 20% quartz, 3–4 mm; 10% grey sandstone, 3 mm); hard. Clay mid yellowish red, 5YR 5/6; slip reddish buff, 7.5YR 6/4. LM III C – PG.
RK 36	Tripod cooking pot. 45% inclusions (1% calcite, speck; 10% hard grey crystalline rock, 1–2 mm; 18% quartz, 1 mm); hard. Clay mid yellowish red, 5YR 5/6; slip identical. PG – G.
RK 9	Lekane. 12% inclusions (6% calcite, 1 mm; 6% hard grey crystalline rock, 1 mm); hard. Clay mid yellowish red, 5YR 6/4; slip identical; paint mid reddish brown, 2.5YR 5/6. LM III C – PG.
RKES 2	Basin. 25% inclusions (8% calcite, 2 mm; 17% grey sandstone, 2 mm); hard. Clay mid yellowish red, 2.5YR 5/6; slip dark brown, 5YR 6/3. PG – G.
RK 8	Skyphos. 10% inclusions (10% calcite, speck). Clay dark buff, 5YR 6/6, slip light buff, 7.5YR 8/4. LM III C – PG.
RK 57	Skyphos. 2% inclusions (2% calcite, speck); medium. Clay light buff, slip identical. PG – G.
RK 35	Lekane. 3% inclusions (3% hard limestone, 1 mm); medium. Clay light tan, 5YR 6/4, slip creamy buff, 7.5YR 7/4, paint mid reddish brown, 2.5YR 5/6. LM III C – PG.
RK 11	Amphora/jug. 30% inclusions (25% hard grey crystalline rock, 1 mm; 5% grey sandstone, 1 mm); Clay mid buff, 2.5YR 5/4; slip creamy buff, 7.5YR 7/4, paint mid grey, 10YR 4/1. PG.
RK 7	Amphora/jug. 4% inclusions (2% calcite, speck; 2% hard grey crystalline rock, 1 mm); hard. Clay light tan, 5YR 6/4, slip creamy buff, 7.5YR 8/4, paint mid red, 10R 4/4. PG – G.
RK 2	Amphora/jug. 55% inclusions; hard (10% hard grey crystalline rock, 2 mm; 20% grey sandstone, 2 mm; 15% red sandstone, 2 mm). Clay dark buff 5YR 6/6; slip very light creamy buff 10YR 8/3. EA.
RK 10	Amphora/jug. 5% inclusions (2% calcite, speck; 3% hard grey crystalline rock, speck); hard. Clay mid yellowish buff, 7.5YR 7/6, slip light tan, 10YR 7/3, paint mid grey, 10YR 4/1. PG – G.
RK 12	Amphora. 1% inclusions (1% calcite, speck); hard. Clay mid reddish brown, 2.5YR 5/6, slip light yellowish buff, 10YR 7/4, paint dark grey, 10YR 3/2. PG.

RKES 13 Amphora. 7% inclusions (7% calcite, speck); hard. Clay dark buff, 5YR 6/6, slip light yellowish buff, 10YR 7/4. LG – EA.

RK 5 Hydria? 11% inclusions (3% hard grey crystalline rock, speck; 8% grey sandstone 1 mm); hard. Clay mid yellowish red, 5YR 5/4, slip light tan, 10YR 7/3, paint mid reddish brown, 2.5Y 3/0. PG.

Ligortinos Kefala

The Site

This hilltop site lies near the village of Ligortinos, 7.5 km northeast of Rotasi across the Mesara plain and a network of shallow valleys (fig. 1). It commands excellent views south over the plain and the seaward approaches, and a limited distance into the rolling hills and valleys to the north and east. Like Rotasi Kefala, the site is easily accessible from its surrounding hinterland, with slopes of moderate gradient on all sides, and a saddle giving easy access from the west. This would have made it vulnerable at local level, unless defended by a large community. Occupation in the nearby area in the LM III A–B periods (c. 1450 BC) is suggested by the content of several excavated tombs in the vicinity[100]. The movement would parallel other movements of the same short-range type in central Crete at c. 1200 BC – for example, from the low-lying Vitsiles site to the summit of Rokka near the modern village of Profitis Elias, or from the LM III B site of Flega to the summit of Prinias Patela[101]. During or after the EA period, the Ligortinos Kefala population may well have relocated to Rotasi Kefala as part of a conquest/subjugation process, or have been mainly dispersed to surrounding small territorial units.

At 14.3 ha, the surface scatter area is not among the largest even for sites ending in the EA period, and is much smaller than those of Rotasi Kefala or Krousonas Koupo in their final occupation stages. Apart from any other factor, the much smaller size of the Kefala hilltop provided less room for secure expansion over time (fig. 20). The surface architectural remains have been much disturbed by the clearance of stones into huge heaps in the last 50–100 years, but pottery is still plentiful all over the summit, without extending far down the slopes in any direction. The site has recently been planted with young olives, and the turned-over soil promotes high sherd visibility over much of the central summit. The rest of the summit is excultivated grassland (not intensively grazed), which makes for only moderate sherd visibility.

A very striking feature at Kefala over the whole span of the site's occupation is the large concentration of fine, hard-fired painted pottery with buff slip. The Pendlebury and Hood collections are both dominated by this material, and so is the present-day surface assemblage. This rich fine ware range allows use of the site right into Early Archaic to be very precisely demonstrated. The site's location in one of the boom regions of the Cretan economy during the later EIA seems relevant here: Kefala may even have operated, with other large sites in the Mesara, as a specialised producer of fine ceramics for exchange beyond the region. It was interesting in this light to note at least two fragments of broken potter's wheels on the central summit in 2002. The quality of the assemblage at Kefala contrasts markedly with that at Papoura – a site abandoned at about the same time, but which has very little fine material; Kalo Chorio Maza, also

100 Evans 1928, 71–74; Taramelli 1899, 342–349.

101 Wallace 2002, 80–83; Rizza – Rizzo 1984, 238.

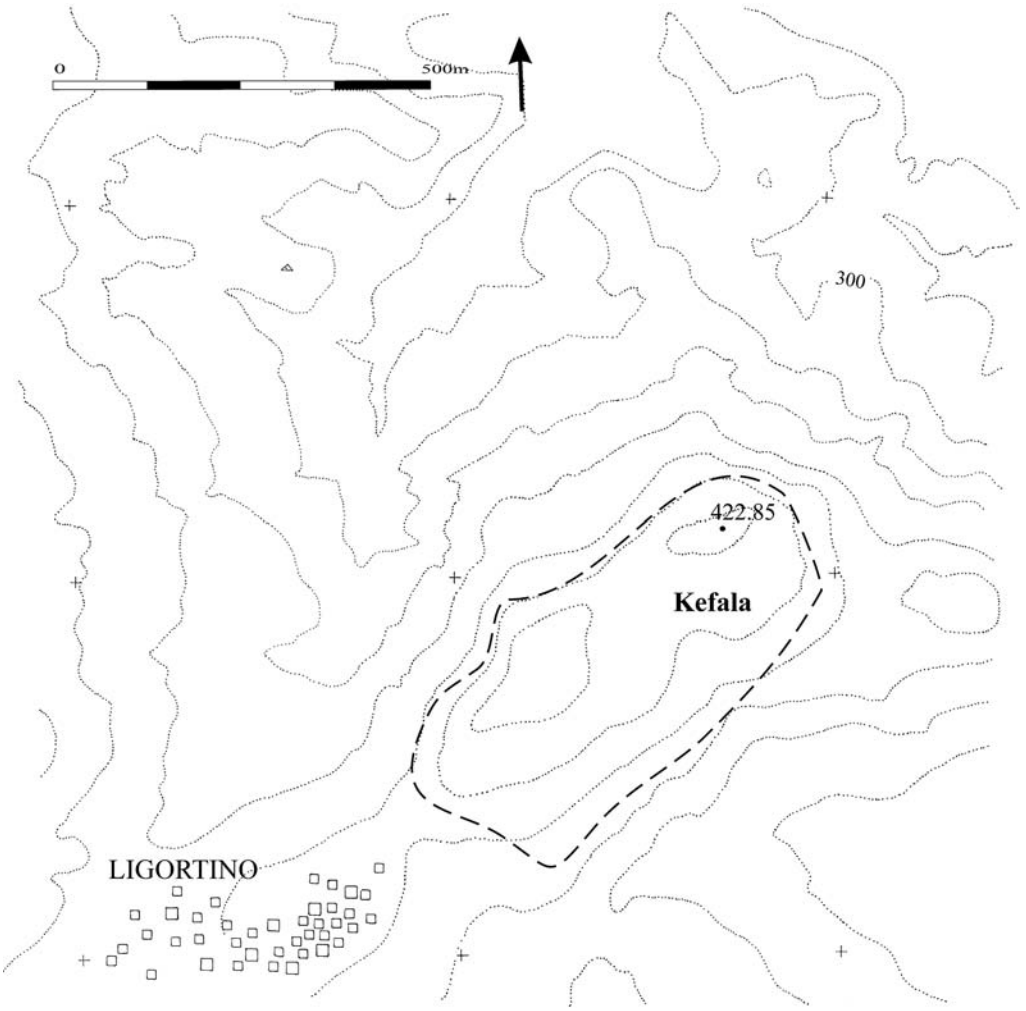


Fig. 20 Ligortinos Kefala, Plan of sherd scatter limits (M. 1 : 100)

abandoned in EA, has a much smaller proportion of fine ceramics than Kefala. At both sites, the fine wares are generally of much poorer quality than those found at Kefala.

The Pottery Sequence (figs. 21–23)

Coarse Wares

Pithoi with chevron-incised or hatched bands are typically LM III C (LGC 2, LG 72, LG 69, LG 8). Those with stamped and incised spirals and circles on bands most probably date PG – G (LG 201), while some LG examples have narrow grooves on the surface (LGC 5)[102]. A large hard-fired semi-coarse jar with a fine zig-zag design incised straight onto the body also looks of LG – A date (LGC 10). A thinner-walled small coarse jar or jug with fine incised decoration (LG 9) has parallels in the latest PG through EA periods[103]. Cooking pots have round-section legs with finger impressions in LM III C (LG 8, LG 107), giving way in PG – G to thinner-walled cooking jugs with narrow grooves on the body (LGC 9). Legs of the later EIA (PG – LG) notably have a more rectangular section and more careful, regular incisions or impressions (where present) as well as a particularly hard and dense fabric, with relatively few inclusions (LGC 3, LG 12)[104].

102 Brock 1957, pl. 68; Tsipopoulou 2004 b, fig. 9.
103 Coldstream – Catling 1996, figs. 64, 137–139; 136, 58; Coldstream et al. 1999, fig. 1.22 c; Sackett et al. 1992, pl. 70, 56. 57.
104 Coldstream – Catling 1996, fig. 60, 141; Hayden 2003, fig. 31, 126; Mook 1993, fig. 106, P2.149.

Fine Wares

A highly diagnostic early piece is the swollen, banded stem of a conical-bodied kylix of mid LM III C – SM type (LG 94)[105]. Flat or ring bases of advanced LM III C – EPG deep bowls with monochrome paint (LG 61) give way to higher skyphos feet in PG (LG 92); the rim of a PG bell-shaped monochrome skyphos appears in LG 29. The painted decoration on nearly all skyphoi, as on most other fine pottery pieces, is of extremely good quality, with a bright red colour in the early EIA phases and bichrome or a dense, glossy black on G – A cups and skyphoi. Geometric skyphoi of various types are identifiable by their flat horizontal handles and/or elaborate continuous designs covering large body areas (LG 78, LG 102). Very thin flat monochrome bases belong to Archaic bowls or cups: such high-quality pottery of this date is notably absent from Maza and Papoura, helping to explain the difficulty of recognizing much material of developed Archaic date on the surface of these sites (LG 32). In kraters, a typical PG bell-shaped example with broad painted band at the rim appears in LG 3. Jars or kraters with short, straight collars, having large areas of glossy black paint and/or narrow banded decoration, suggest the MG – LG periods (LG 13, LG 12, LGW 1A). A LG or early Archaic thick-walled krater, with a spatter-painted interior and elaborate floral decoration based on concentric circle sets, appears in LG 11).

Early amphorae tend to have the red paint seen on other LM III C – PG shapes, while harder, more glossy black and/or red paint characterizes the G pieces. Body sherds from amphorae, with isolated concentric circle sets on a light ground (LG 9A, LG 21, LG 17) clearly date PG, with the more complex decoration on LG 63 and LG 79 suggesting a G date. A neck-handle with round section and painted band twisting along its length comes from a PG amphora; an oval-section version with elongated cross looks G in date (LG 93, LG 33). The handle/body fragment LG 73 probably comes from a PG belly-handled amphora. The hatched motif below the monochrome neck on the amphora/jar LG 16 places it in the G period, while the well-defined folded rim of the juglet or small amphora LG 38 dates it G – A. A thick-walled jar/amphora with meander motif in black (LG 70) is clearly MG – LG[106]. Light-on-dark decoration of very small concentric circles or circle sets appears on latest LG – EA jars or amphoras (LGC 17, LG 41)[107]. A jar or amphora with guilloche decoration, and one with alternating circles of large and small size must date to early Archaic (LGC 1, LG 90)[108].

Fabrics (fig. 19)

The close parallels in coarse fabric composition between Ligortinos Kefala and Rotasi Kefala suggest that similar practices of resource use and manufacture operated within the broader region. Ligortino coarse ware, like that of Rotasi Kefala, shows a fairly even distribution of buff and red fabrics, suggesting a mixed base of production and/or some exchange transfer of even basic ceramic items. The latter might, indeed, be expected in a region with a relatively dense pattern of large settlements like the Mesara. Fine pottery production at Ligortino Kefala also had a diverse base, with roughly even proportions of red and buff fabrics in use. The fact that a light buff slip was universally applied to produce a standard appearance among the fine wares suggests that red clays may have represented the most local, or most preferred, clay source: otherwise it would presumably have been easier to make most of these wares in buff clay and self-slip them. The fine fabrics dating early

105 Seiradaki 1960, fig. 18; Tsipopoulou 2004a, fig. 8.13.
106 Sackett et al. 1992, pl. 53, GD1. GD2. GD6.
107 Coldstream – Catling 1996, figs. 9. 64. 73. 76. 96. 118. 131; Coldstream – Sackett 1978, 48; Mook 1993, fig. 101, P2.132; Sackett et al. 1992, pl. 66, 10. 11.
108 Brock 1957, fig. 11 ak. ab; Coldstream – Catling 1996, fig. 146, 94 pl. 132.

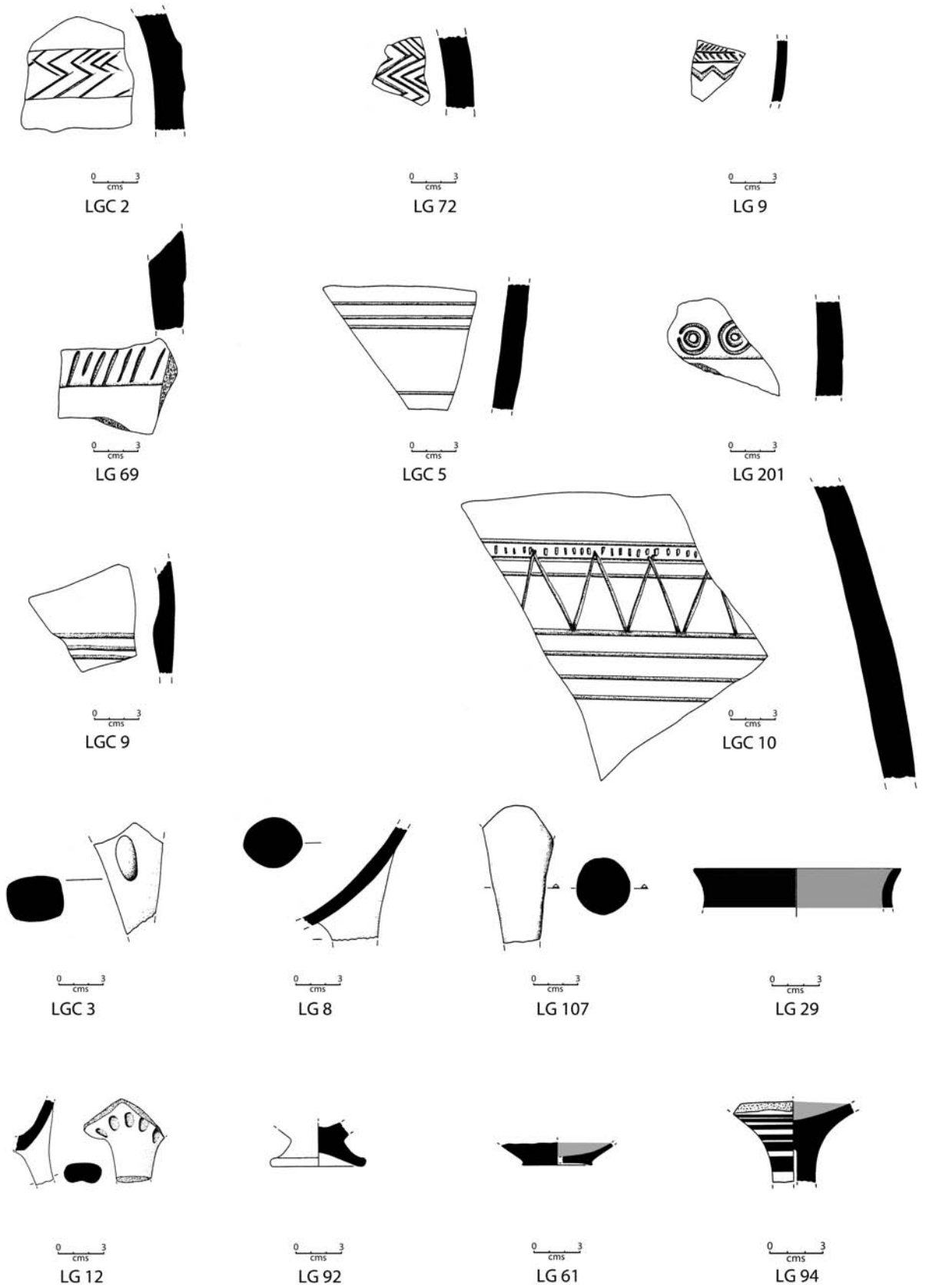


Fig. 21 Ligortinos Kefala, Catalogued sherds

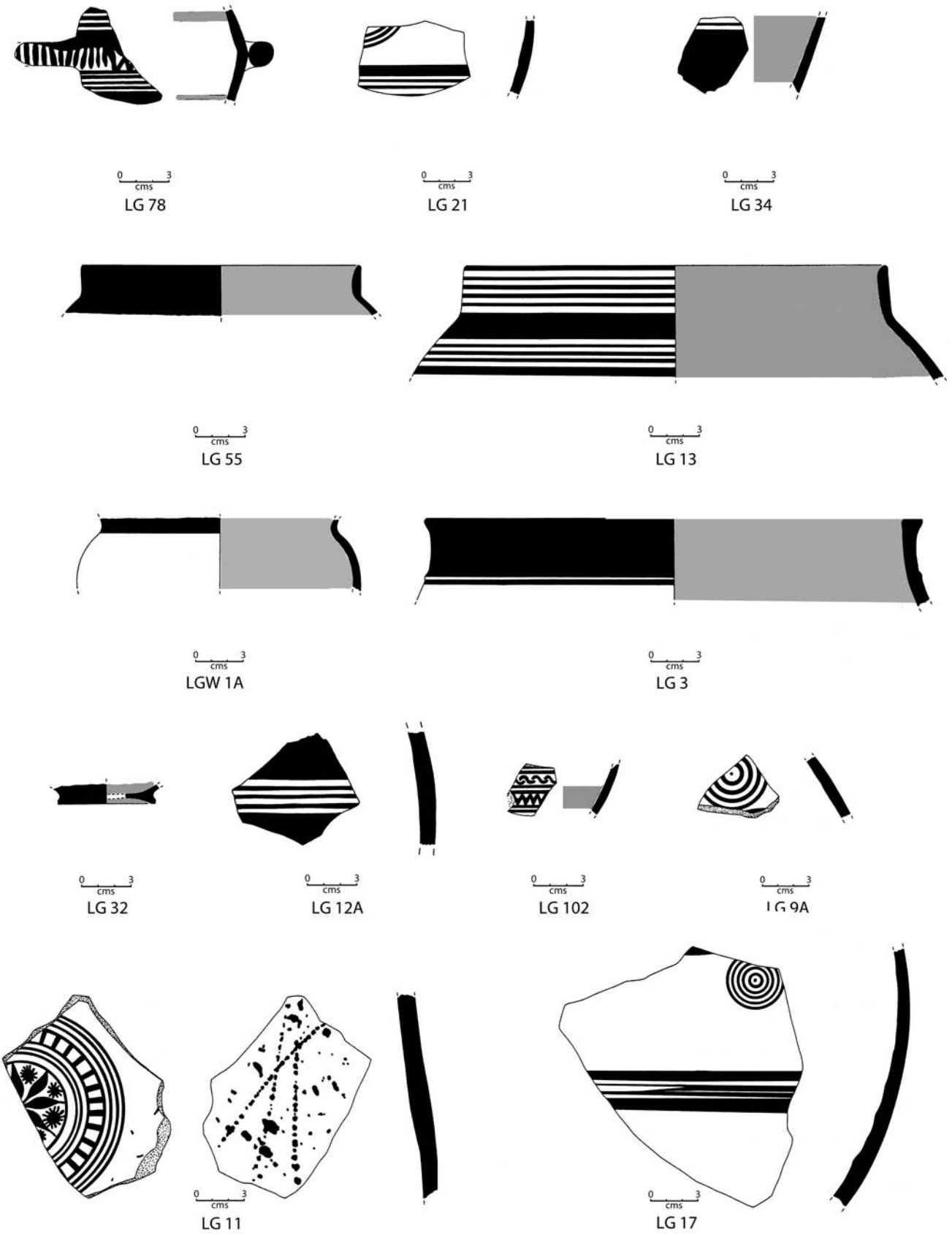


Fig. 22 Ligortinos Kefala, Catalogued sherds

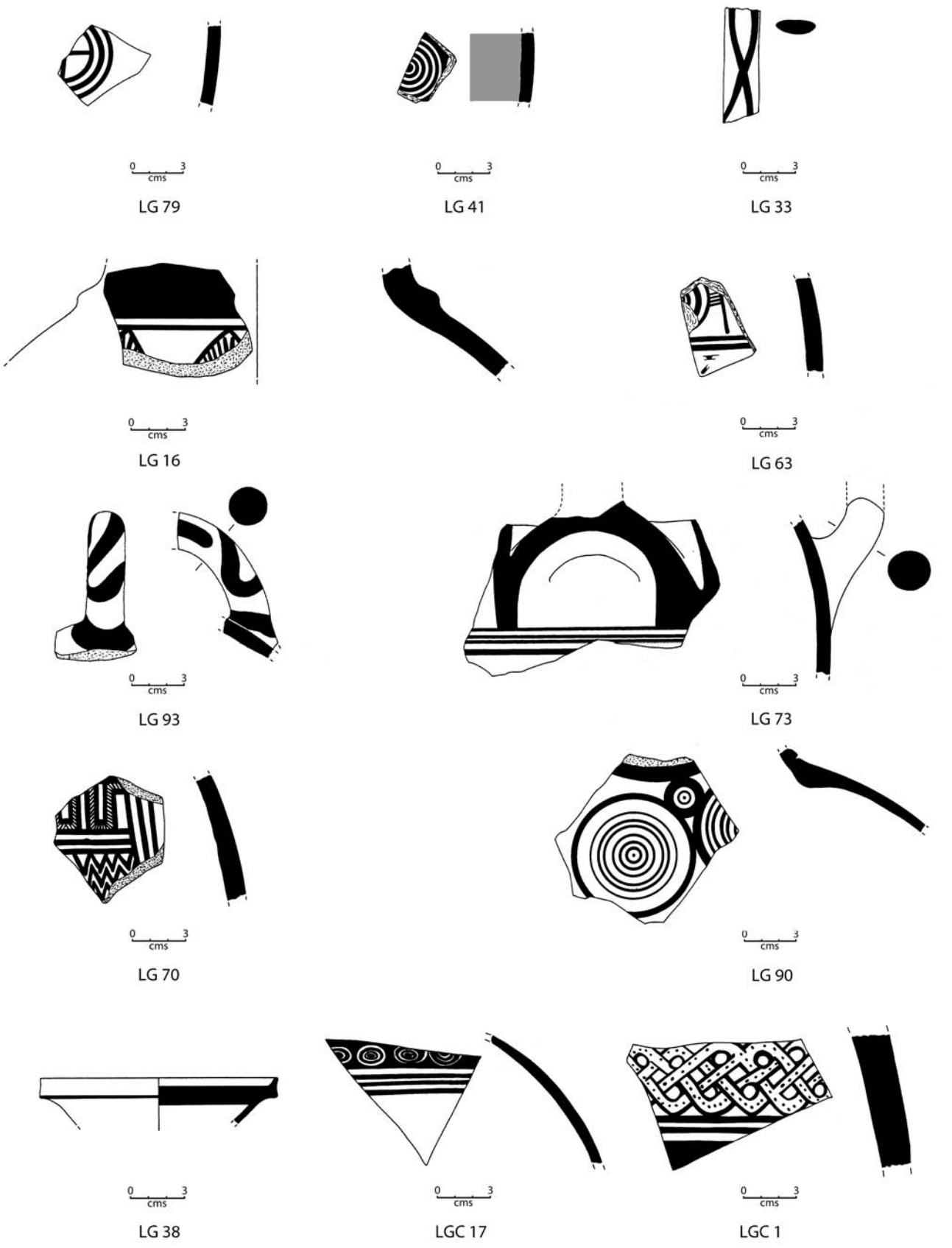


Fig. 23 Ligortinos Kefala, Catalogued sherds

in the sequence are of soft to medium hardness compared to the later material, but still of exceptional quality compared to those of Kera Papoura and Kalo Chorio Maza.

Unusually of the sites discussed here, Ligortinos Kefala is distinguished by a relatively high proportion of mica in its coarse wares (both red and buff), indicating use of a distinct, presumably local source for much of this pottery. The presence of a dark grey crystalline rock as the most common inclusion overall (average 20% density) in these wares suggests that the mica most often derived from this rock. Mica is less present in the fine clays – though both dark grey crystalline rock and greyish sandstone occur fairly frequently as small low-density inclusions in this group, particularly at the coarser end of the scale. Red sandstone is also a regular inclusion in coarse wares, often matching the dark grey rock at an average 20% density. It appears at up to 35% in early pieces, where the inclusions are often larger in size. Where it co-occurs with the dark grey rock as an inclusion, the sandstone is often slightly higher in density. Sandstone inclusions reach up to 25% in density, but appear much less frequently than either of the others.

As at Rotasi Kefala, phyllite is notable by its extreme rarity as an inclusion, even in the coarse wares. Quartz is irregularly used here, averaging 15–20% where it occurs in the coarse wares and pithoi. It is not concentrated in cooking vessels – in fact, it is found more in the other coarse wares than the cooking range, and the latter only contain up to 10%. This may partly relate to the fact that most of the cooking ware sample is late in date, with rather few (and small, 2–3 mm) inclusions overall. Even so, quartz inclusions are often less dense and less frequent than those of the hard grey crystalline rock in these wares.

Catalogue of Pottery, Ligortinos Kefala

Provenance codes: LG indicates unspecified part of summit; LGW west summit/slopes; LGC central summit.

LGC 2 Pithos. 45% inclusions (20% hard grey crystalline rock, 1–4 mm; 10% quartz, 2–3 mm; 15% red sandstone, 2–4 mm); medium. Clay mid red, 10R 5/4, slip light tan, 10YR 7/3. LM III C – PG.

LG 72 Pithos. 20% inclusions (15% hard grey crystalline rock, 2–4 mm; 5% red sandstone, 0.5 mm); medium. Clay light red, 2.5YR 4/0. LM III C – PG.

LG 69 Pithos. 35% inclusions (20% hard grey crystalline rock; 15% quartz, 2–3 mm); hard. Clay dark buff, 5YR 6/6; slip identical. LM III C – PG.

LG 201 Pithos. 37% inclusions (15% hard grey crystalline rock 1–2 mm; 2% quartz, 2 mm; 20% red sandstone 3–4 mm); medium. Clay mid yellowish red, 5YR 5/6, slip light tan, 5YR 6/4. LPG – G.

LGC 5 Pithos. 31% inclusions (15% hard grey crystalline rock, 2–3 mm; 15% grey sandstone, 2–3 mm; 1% mica); hard. Clay mid reddish brown, 2.5YR 5/6, slip light tan, 5YR 6/4. LG – EA.

LGC 10 Pithos. 23% inclusions (10% calcite, 1 mm; 5% red sandstone, 2–4 mm; 5% phyllite, 2–4 mm; 3% mica); hard. Clay dark buff 5YR 6/6; slip identical. G.

LG 9 Pithos. 5% inclusions (5% calcite, 0.5–1 mm); hard. Clay mid yellowish red, 5YR 5/6. LPG – EA.

LG 8 Cooking pot. 24% inclusions (18% calcite, speck; 6% hard grey crystalline rock, 1 mm); hard. Clay mid reddish brown, 2.5YR 5/6, slip identical. LM III C – PG.

LG 107 Tripod cooking pot. 30% inclusions (20% hard grey crystalline rock, 5 mm; 5% quartz, 2 mm; 5% phyllite, 1–2 mm); hard. Clay dark brown, 5YR 3/2, slip identical. LM III C – PG.

LGC 9 Cooking pot. 33% inclusions (8% calcite, speck; 15% hard grey crystalline rock, speck; 10% grey sandstone, 1 mm) hard. Clay light tan, 5YR 6/4. PG – G.

LGC 3 Tripod cooking pot. 22% inclusions (10% calcite, speck 1–3 mm; 12% hard grey crystalline rock, speck 1–3 mm); hard. Clay mid reddish brown, 2.5YR 5/6. SM – PG.

LG 12 Tripod cooking pot. 8% inclusions (8% calcite, 1 mm); very hard. Surface burnt in places. Clay light tan, 5YR 6/4, burnt places dark greyish brown, 5YR 8/1. MG – LG.

LG 94 Kylix. 1% inclusions (1% calcite, speck); medium-hard. Clay dark buff, 5YR 6/6; slip very light creamy buff, 10YR 8/3, paint dark greyish brown, 10YR 3/1, or dark red, 2.5YR 4/8. LM III C – SM.

LG 61 Deep bowl. 2% inclusions (2% calcite); hard. Clay light tan, 5YR 6/4; paint mid grey, 5YR 4/1. LM III C – SM.

LG 92 Skyphos. 2% inclusions (2% calcite, speck); medium. Clay mid buff, 2.5YR 5/4; slip creamy buff, 7.5YR 7/4. EPG – MPG.

LG 29 Skyphos. 1% inclusions (1% calcite, speck); soft. Clay creamy buff, 7.5YR 7/4; slip dark buff, 5YR 6/6; paint mid red, 2.5YR 5/8. LM III C – SM.

LG 78 Skyphos. 2% inclusions (2% calcite, speck); hard. Clay mid yellowish buff, 10YR 5/4; slip mid buff, 7.5YR 6/6; paint dark greyish brown, 5YR 3/1. LG.

LG 102 Skyphos. 2% inclusions (2% calcite, speck); medium. Clay light yellowish buff, 10YR 7/4; slip identical; paint dark greyish brown, 10YR 3/1. MG – LG.

LG 34 Krater? 2% inclusions (1% calcite, speck; 1% hard grey crystalline rock, speck); hard. Clay mid yellowish red, 5YR 5/6, slip creamy buff, 5YR 7/4; paint dark grey, 5YR 3/1, and mid red, 2.5YR 4/8. G.

LG 32 Cup/bowl. 1% inclusions (1% calcite, speck); hard. Clay mid buff, 7.5YR 6/6; paint dark greyish brown, 5YR 3/1. EA.

LG 3 Krater. 6% inclusions (5% calcite, 1 mm; 1% mudstone, 1 mm); hard. Clay light yellowish, buff 10YR 7/4; slip light buff, 2.5Y 7/4, paint dark greyish brown 5YR 3/1. EPG.

LG 55 Jar/krater. 5% inclusions (1% calcite, speck; 2% grey sandstone, 1 mm); hard. Clay dark buff, 5YR 6/6; paint mid grey, 5YR 5/1. G.

LG 13 Krater/jar. 1% inclusions (1% calcite, speck); hard. Clay mid buff, 7.5YR 6/4; slip identical; paint dark greyish brown, 5YR 3/1. LG – A.

LG 12A Amphora/jar. 5% inclusions (5% calcite, speck); medium-hard. Clay mid reddish brown, 2.5YR 5/6; slip light tan, 5YR 6/4; paint dark red, 2.5YR 4/8. MG – LG.

LGW 1A Krater/jar. 5% inclusions (5% calcite, speck). Clay mid red, 10R 5/4; slip light yellowish buff, 10YR 7/4; paint dark reddish brown, 2.5YR 3/0. G.

LG 11 Krater. 13% inclusions (8% hard grey crystalline rock, 1 mm; 5% quartz, 1 mm); hard. Clay mid brownish red, 5YR 6/4; slip light greyish buff, 10YR 7/2, paint dark brown, 5YR 3/2. EA.

LG 9A Amphora. 2% inclusions (2% calcite, speck); medium-hard. Clay mid buff, 7.5YR 6/4; slip light yellowish buff, 10YR 7/4; paint mid greyish brown, 10 YR 4/1. PG.

LG 21 Amphora. 8% inclusions (2% calcite, speck, 6% hard grey crystalline rock, 1 mm). Clay dark buff, 5YR 6/6; slip mid buff, 7.5YR 6/4, paint mid brownish grey, 7.5YR 4/0. PG – G.

LG 17 Amphora. 5% inclusions (5% calcite, speck); hard. Clay mid yellowish red, 5YR 5/6, with mid grey core, 10YR 4/1; slip mid buff, 7.5YR 6/6; paint dark brown, 7.5YR 3/2. EPG – MPG.

LG 63 Amphora. 10% inclusions (10% calcite, speck). Clay dark buff, 5YR 6/6; slip identical; paint mid yellowish red, 5YR 5/6. G.

LG 79 Amphora. 2% inclusions (2% calcite, speck). Clay dark buff, 5YR 6/6; slip mid buff, 7.5YR 6/6; paint mid brownish grey, 7.5YR 4/0. PG – G.

LG 93 Amphora. 1% inclusions (1% calcite, speck); medium. Clay mid red, 2.5YR 6/4; slip light buff, 7.5YR 7/3, paint dark greyish brown, 7.5YR 3/1. PG – G.

LG 33 Amphora. 2% inclusions (2% red sandstone, 1 mm; 1% mica, speck) hard. Clay light greyish brown, 5YR 4/2; slip light greyish buff, 10YR 6/2, paint dark greyish brown, 5YR 3/1. PG – G.

LG 73 Amphora/hydria. 51% inclusions (18% hard grey crystalline rock, 1–3 mm; 18% quartz, 1–4 mm; 15% red sandstone, 2–4 mm). Clay mid yellowish buff, 10YR 6/3; slip identical; paint dark greyish brown, 10YR 3/1. PG.

LG 16 Jar/hydria. 5% inclusions (1% calcite, speck; 3% hard grey crystalline rock, 1 mm; 1% red sandstone, speck). Clay mid yellowish red, 5YR 5/4; slip light tan, 10YR 7/3; paint mid grey, 10YR 4/1. G.

LG 38 Juglet/small amphora. 2% inclusions (2% calcite, speck); medium. Clay mid buff, 5YR 6/3; slip mid buff, 7.5YR 6/6; paint dark greyish brown, 5YR 3/1. G – A.

LG 70 Amphora. 3% inclusions (2% calcite, speck; 1% grey sandstone, 2–3 mm); hard. Clay mid buff, 5YR 5/3; slip mid yellowish buff, 10YR 6/3; paint dark greyish brown, 10YR 3/1. MG.

LGC 17 Jar/amphora. 1% inclusions (1% calcite, speck); hard. Clay light tan, 5YR 6/4; slip mid buff, 7.5YR 6/6, paint dark grey, 10YR 3/2, overpaint light grey to white, 10YR 8/1. EA.

LG 41 Krater. 8% inclusions (2% calcite, speck; 8% grey sandstone, 1–2 mm). Clay light tan, 5YR 6/4; paint 5YR 4/1; paint dark greyish brown, 10YR 3/1; overpaint mid grey, 5YR 4/1. LG – EA.

LGC 1 Jar/amphora. 5% inclusions (5% calcite, speck); hard. Clay light pinkish buff, 5YR 7/6; slip light buff, 10 YR 7/4; paint very dark brown, 2.5YR 3/1. EA.

LG 90 Jar/amphora. 5% inclusions (5% calcite, speck); hard. Clay mid buff, 7.5YR 5/2; slip light buff, 7.5YR 8/2; paint mid brown, 2.5YR 4/2. EA.

Part 3: Insight on Early Cretan States

General Trends and Drivers in EIA – Archaic Cretan Settlement: Inferences from the New Data when Examined in the Context of Earlier Research

The five settlements studied here are linked to a striking extent by their foundation dates and occupation spans, their rich agricultural hinterlands, their proximity to major access routes, and the protected, strategic viewpoints they offer over the surrounding landscape (though their topography is not of an extreme defensible character). Parallel features at many other large central Cretan sites suggest that strong shared patterns of preference in settlement location developed across this region during the EIA. But what was the broader context of these sites' foundation and development – how representative were they of the regional and island-wide settlement pattern as a whole at any point in their history; how did they interact with other types of contemporary settlement, and why did this particular type of site become home to the Cretan polis state? Below, I explore the ways in which patterns of settlement in central Crete match those elsewhere in the island, but also reflect specific local trends. Recognition of the degree of intra- and inter-regional complexity and diversity in EIA – Archaic Cretan settlement highlights the point that state development in the island was not a uniform, or entirely predictable, process. At the same time, shared features of outlook and circumstance combined to promote the emergence and development of the state in a distinctive, ›Cretan‹ form.

Patterns of Crisis Response, 1200 BC

This study highlights the effect of responses to the political crisis at c. 1200 BC on much longer-term social and cultural developments. The island-wide move to defensible sites at this time involved a number of often difficult compromises between the factors of security, preferred/supportable community size, provision for the physical expansion of settlements over time, and subsistence needs. Central Crete clearly saw the same kind of large-scale, deep-rooted and permanent change in settlement as the rest of the island at this time: that is, the vast majority of EIA – Archaic sites here, which formed the core of the settlement pattern right into Classical times, were founded in this period. Yet responses in this region seem rather more complex and diverse than in others, with extreme defence-focused relocation comprising only one of several adjustment strategies. We saw indications of this in the Papoura and Rotasi cases, where small- to medium-sized settlements at locations with extreme natural defensibility (Karfi, Korifi) were founded at the same time as (and not far from) much larger and longer-lived, but less defensible sites. Other aspects of response to crisis in central Crete seen in the data seem to link back closely to local LBA history. Settlement adaptations seem to have been particularly orientated towards retaining as many as possible of the established advantages of life in this hitherto very prosperous and powerful region. For example, in a pattern separate from the major horizon of settlement nucleation occurring across Crete from PG onwards, some abandonments of sites established c. 1200 BC occurred very early – well within LM III C. It appears that these represented only very short-term solutions to the crisis. The LM III C settlements at Kastrokefala, Jouktas and the Kofinas peak are all associated with (rare) massive fortification walls, making these sites look like high-investment, short-term refuges/vantage points established by, or for, the region's LBA elite[109]. The first two lie in very close proximity to the high-value farm-

109 Kanta 2003a; Kanta 2003b; Nowicki 2000, 188–190. 221; Platakis 1970; Vasilakis 2004, 100–102.

ing infrastructure and rich towns of LBA north central Crete, one of the areas most vulnerable to attack and disruption in this crisis period. Though Kofinas is more remote, and lacks such easy access to a prime agricultural hinterland, it visually commands the entire Mesara plain (another prime cultivation zone very vulnerable to attack) and much of Crete's south central coast. The fact that in two of these cases (Jouktas and Kofinas) the LM III C settlements overlie the remains of high-profile Middle to Late Bronze Age peak sanctuaries supports the idea of a very direct elite interest and involvement in their establishment. Though no longer in use as sanctuaries by the end of the LBA, their recent use and high profile in the landscape makes it unlikely that they were seen as virgin spaces free from any historical claims and ›up for grabs‹ from any quarter.

The LM III C occupation at Kastelli Pediada echoes this suggestion of hesitancy/compromise in central Cretan settlement relocation. It seems to represent an attempt to maintain an existing prosperous middle-sized site in use into the LM III C period with as few changes in lifestyle as possible for its inhabitants and a reliance on sheer population size for security[110]. Most inhabitants may eventually have relocated to Maza and Smari, but excavation finds indicate that Kastelli still housed some fairly high-status residents in the early LM III C period. The unexcavated site of Tachieri is located on a low marl hill north of Mires in the western Mesara and wich has LM III A/B material on the surface, is immediately adjacent to some of the best arable in the island[111]. It lacks any natural defensive characteristics or fortifications. Yet there is much LM III C pottery on the surface: again there seems to have been initial reluctance to invest decisively in a mass-scale, permanent move. By mid-LM III C, the site had gone out of use. There were various potential subsequent choices of residence for this population. Relocation as a body to a major new settlement of the large, long-lived type exemplified by the case studies above, such as nearby Gortyn, may have been one option. Another may have been dispersal to smaller-scale sites of a more extreme defensible type, such as Pobia Vigla in the same region[112]. In either case, a marked degree of further social upheaval and adjustment must have been involved, making the knitting of strong new social ties an extended, potentially difficult process. Similar decisions to stay put at c. 1200 BC (which were apparently more sustainable in the long term) seem to have applied at Tylissos and Archanes, where the stratigraphy suggests some small-scale occupation through LM III C – G[113]. All the above sites had been part of a very prosperous settlement network existing in north central Crete during the LBA. The political and economic restructuring involved in relocation at c. 1200 BC seems to have appeared to their residents as a process in which they had an especially great deal to lose.

A related phenomenon in central Crete is the occupation of two of the region's most important LBA settlements – Knossos and Phaistos – right through the collapse horizon into Archaic and Classical times[114]. The gateway function of these sites was apparently too valuable to sacrifice at the crisis period, while their size and prosperity may have made the inhabitants feel able to weather the storm. Though both settlements certainly contracted in size and complexity from this period, their status as well-known points on the interregional trade map (with historic concentrations of wealthy and powerful residents, who almost certainly tried to continue to use their resources, knowledge and influence to advantage) helped boost central Crete's prosperity from an early date in the EIA, as the Knossos North Cemetery and Kommos sanctuary bear witness. The histories of these

110 Rethimiotakis 1997.
111 Vasilakis 2004, 102.
112 Vasilakis 2004.
113 Hatzidakis 1921; Sakellerakis – Sakellarakis 1997, 463–466.
114 Borgna 2003; Coldstream 2000; Cucuzza 1998; Rocchetti 1970; Rocchetti 1974.

settlements contribute to the impression that central Crete's economic and political infrastructure was so highly invested-in and valuable that it was worth taking considerable risks (especially from the point of view of elite groups) to maintain a stake in it. Decisions to keep such sites in use may have depended heavily on the possibility of using fortified refuge sites like those discussed above on a temporary basis, or by some important groups: it seems likely that the functionality of the latter type of site was only able to be ensured by command of enough concentrated wealth/labour to build and guard fortifications. The decisions to stay at these sites were probably also partly dependent on collaborative agreements about security and territory with the many new large settlements being established in the region during the twelfth century, including the five studied here. As we have seen, these settlements now housed the majority of central Crete's population – including, surely, some former residents or subjects of these two former LBA centres. It is very difficult to judge the exact political standing of Knossos and Phaistos vis-à-vis the large new sites, especially as the latter developed and expanded from PG onwards. The two old centres clearly played an important role in the trade-based growth which fuelled and stimulated this expansion across the island, yet this growth could not have been sustained without the base of expanded agricultural production, specialised labour and consumer demand also developing in the large new settlements. By PG, it seems that the two old settlements operated in some sense as peers of the new sites. Ultimately, however, they were able to outlast a number of them: it appeared that not all the settlement foundations of 1200 BC were sustainable in the increasingly crowded and competitive political environment of Archaic Crete. The fact that both Knossos and Phaistos were members of the very small ›club‹ of early Cretan coining polities in the fifth century confirms they did more than hold their own: they reached an outstanding level of strength and power by Classical times, at least partly as a result of their long historical roots and rich resources. But the permanence of the power shift in the region from c. 1200 BC onwards is illustrated by the fact that the sites were never again able to achieve securely pre-eminent status: they now formed part of a set of competing equals, rather than supreme centres[115].

Changes from PG – Patterns of Emergent Complexity in Central Crete

More than 50 % of all known settlements established in LM III C went out of use from the EPG period. Few or no new sites of any substantial size seem to have been founded between this period and the early seventh century. Instead, population nucleated at a selection of existing sites. This pattern confirms how strongly decisions made at the collapse period drove developments during the polis emergence phase. The five case studies here indicate that central Crete was affected by the same set of new economic and political conditions favouring settlement nucleation and growth at similar sites across Crete from PG onward (including a decreased need for defence and a growth in the agricultural, commodity production and trade sectors)[116]. Yet there are signs that change happened in a different way in the central region, partly as a result of the response to crisis here at c. 1200 BC. The deliberate choice of very spacious hill summits for many settlements founded at this time, and the latter's relatively undefended nature (with large numbers of inhabitants probably forming their best guarantee of security) suggests that they housed large groups from the very start of their use. Indeed, we know relatively few examples from this region of small settlements established in

115 Coldstream – Huxley 1999; Erickson 2000, 142–146; Stefanakis 1999.

116 Wallace 2003; Wallace 2004.

LM III C and abandoned in the PG nucleation process. A striking feature of the Cretan PG nucleation movements is their occurrence within tightly bounded localities: local social and political links embodied in the LM III C landscape were clearly vital in structuring the shift[117]. Some nucleation did occur from PG onwards in central Crete, and very close spatial relationships between continuing and abandoned settlements are evident in two of the present case studies. In other regions, the very strong ancestry/identity-associative status of settlement units abandoned at this time is indicated by their subsequent symbolic re-use in a number of cases, presumably by residents of the nearest PG – A nucleation[118]. This phenomenon does appear in the central region – e. g. an Archaic open-air shrine at Vitsilovrysi, close to Karfi, was probably used by residents of Papoura – but the smaller number of abandoned settlements here meant there was less scope for it[119].

In east Crete, highly dissected topography promoted the use of scattered, limited arable pockets from a relatively large number of small defensive settlement locations in LM III C[120]. These communities, while well-defined as individual social units, may have taken a relatively long time to build the kind of complex political bonds required to support large, nucleated communities with sizeable territories: when these bonds emerged, however, they were likely to be strong and stable. The above hypothesis is supported by the relatively high number of small-to medium-sized settlements of defensible type persisting in east Crete right through the PG – early Archaic period. In central Crete, strong internal cohesion may have been particularly hard to develop in the predominantly large new settlements of the post-collapse period, and there were no networks of small sites providing a strong long-term basis for regional community bonds. As we have seen, some of the new settlements took a while to establish firmly. In terms of size and geographical spread, they rarely matched up neatly with individual LM III A–B settlements, and are thus likely to have incorporated a particularly broad and diverse social mix. Though kin links may have applied within parts of each large community, they probably did not encompass the whole settlement unit, as may have been the case in many of the smaller east Cretan sites[121]. More complex sets of political relations are thus likely to have existed within central Cretan communities from an early date. Additionally, because no horizon of major social restructuring and community self-definition occurred as part of a widespread PG nucleation movement, ongoing political volatility within large settlements and their territories may quickly have become an issue.

A significant degree of expansion at most major Cretan sites over the course of the LM III C – Archaic period is indicated by their maximal sherd scatter sizes. The maximum known size for settlements used in LM III C – PG only is about 3–4 ha, suggesting 1–2 000 inhabitants at most[122]. The final sizes of the central Cretan sites studied here range from 10.3 to 32.5 ha. Given the fact that central Crete lacks signs of widespread PG settlement nucleation, the picture of significant expansion occurring from this date is important, in suggesting that physical growth is likely to be connected not simply to rises in inhabitant numbers over time, but to changing forms of social and economic organisation associated with emergent complexity. The pattern is backed up by data from excavated sites. At Gortyn, the initial LM III C settlement area on the Acropolis continued in use until LG, but by the same period the settlement had also spread out over a much wider area, including the summit of Profitis Elias to the east, the Armi ridge, and probably part of the plain to the south[123]. At Prinias, the spread of occupa-

117 Wallace 2003.
118 Wallace 2003; Wallace in press a.
119 Pendlebury et al. 1938 a, 98–100.
120 Haggis 1993; Haggis 2005; Nowicki 1990; Watrous 2001.
121 Haggis 1993.
122 Haggis 1993, 158; Nowicki 1990, 177–178; Wallace 2002, 83–95.
123 Allegro 1991; Di Vita 1991; Johannowsky 2002, 108–116; Rizza – Scrinari 1968, 4–63.

tion over much of the top and slopes of the hill had occurred by the G – O period. In contrast, stratified LM III C – SM material is seen only in some places on the summit[124]. Intensive survey results in the wider island confirm the expansionary trend as a general phenomenon: c. 18 ha is estimated as the PG – EA size of Praisos: in contrast, LM III C – PG surface evidence is restricted in spread[125]. At Azoria, the final (fifth-century) size of the settlement from survey looked to be at least 15 ha: excavation has confirmed a much smaller spatial limit for LM III C – SM occupation, with the EIA occupation area in general estimated to cover 6 ha[126]. Assuming the same kind of architectural density as in excavated LM III C settlements (most likely too high for this period) even a relatively small site like Azoria could have housed up to 6000 people by the end of its life. The difference observed in the present study between the sizes of surface scatters for large sites abandoned in Archaic (which do not exceed about 20 ha) and those continuing into Classical (up to or exceeding 40 ha) suggests further expansion and replanning occurred throughout the Archaic – Classical period. New patterns of site abandonment in this period, as well as further changes in internal settlement organisation, must have contributed to growth. Both the final abandonment of a minority type of small continuing defended sites in LG – A, and the probable start of major inter-polity conflicts in Archaic, involving resettlement of conquered populations, would have brought more people into the expanding polities.

Room for expansion was clearly an important factor in selecting sites for continued use under the changing socioeconomic conditions of the PG – A period. It was not the only one, however. Communications, both in terms of access to nearby arable and at a wider cross-regional level, were equally if not more important. In the trade boom affecting the whole Aegean from the tenth century onwards, more resources were being invested in the movement of goods and people: control of movement around it, whether on land or sea, became essential to any successful community. While most LM III C settlements were sited for vantage *over* communication routes[127], settlements continuing and expanding from PG were all directly sited *on,* or easily accessible from, major routes. For example, Thronos Kefala lies on the major Amari transit route; Praisos dominates the most direct intercoastal route in the far east of Crete; Kato Chorio Profitis Elias is located at the mid-point of the Ierapetra isthmus. Just as with capacity for expansion, most existing sites in central Crete's rolling landscapes *already* met the requirement for improved communications. This fact is likely to have stimulated intense peer interaction and competition at an early date. Arkades/Afrati Profitis Elias stands at an important central Cretan crossroads. Papoura, Dreros, Lyttos, Kalo Chorio Maza, and Profitis Elias Rokka/Korifi share similar locations on valley routes[128]. Other sites – Gortyn, Prinias, Phaistos, Rotasi Kefala, Ligortino Kefala and Krousonas Koupo among them – overlook generally open landscapes through which traffic could move easily.

PG – EA Central Crete: Subsidiary Patterns of Settlement

I have mentioned above that as well as nucleation and expansion at large sites, the PG – A period also saw the continued use of occasional small defensible sites (usually forming distinctive landmarks in their surrounding regions) *without* significant expansion over time[129]. The pattern appears in the central region, as elsewhere – e. g. at Smari Profitis Elias, Kourtes Kefala, and Pobia Vigla[130], but is not very widespread. I have suggested above that the use of such sites reflects delay in the full integration of some well-defined

124 Rizza – Rizzo 1984, 143; Perna in press.
125 Whitley et al. 1999, 247.
126 Haggis 1993, 148–149; Haggis et al. 2004, 341.
127 Nowicki 1990.
128 Belgiorno 1994, 224; Hayden 1995, 93; Hayden 2005, 171–176; Kanta 1994; Lebessi 1969; Lebessi 1970; Levi 1929, 15–31; Nowicki 2000, 175–178; Wallace 2002, 80–83; Watrous 2001.
129 Wallace in press b.
130 Halbherr 1901; Hatzi-Vallianou 2004; Rocchetti 1989; Rocchetti 1990; Vasilakis 2004; Wallace 2003; Wallace in press b.

kin-groups and their associated small territories into the emerging large regional polities. Inhabitants may have traded on the sites' visually evocative associations with the crisis c. 1200 BC to maintain a quasi-independent status in the changing political environment. The phenomenon is particularly interesting in the central Cretan context because the few sites of this type contrast so markedly with the dominant type of settlement in the region (the very large, expanding and long-lived site acting as the foci of regional political power from at least PG onwards). The small sites could never have been bases of any significant power, being completely overwhelmed in numbers, frequency and size by the densely-packed and competitive big players. In this environment, the identity structures of the small units (potentially linked to concepts of local ancestry going back to the 1200 BC crisis horizon) and their associated territorial claims would need to be particularly strong to resist incorporation into large polities[131]. For these reasons, and because sites of this type stood out so dramatically in the gently rolling central Cretan landscape, earlier and stronger tensions might have arisen over them than was the case elsewhere. The lack of many abandoned small settlements of LM III C – PG date in the region able to act as symbolic links to their wider territories for emerging state polities surely heightened these tensions. The appropriation of the small Smari Profitis Elias site after its abandonment in LG/EA as a probable territorial shrine for the large territory of Lyttos may be one sign of their existence[132].

In central Crete, as elsewhere, two further changes appear in the settlement record of the early Archaic period, alongside the final abandonment of these few small, defensible long-lived sites. As shown in some of the case studies above, a new spread of small rural settlement occurred around large sites[133]. Across Crete, an interest also developed in recolonising the coasts by settling large groups at new port settlements (such as Istron, Itanos and Keratokampos). These usually seem to have been connected to a large inland settlement with EIA roots[134].

Cult Landscapes

As social systems and settlement maps changed through the course of the EIA, Crete's existing cultic landscape, which had incorporated reference to evocative natural features and the use of shared cult locations across large regions over many centuries, was also being reorientated. In central Crete, rapid restructuring of the LBA ports of Kommos and Amnisos as cult-only sites with a strong outward-looking focus occurred in LM III C – PG, alongside the continued and intensive use of long-established major open-air sanctuaries at the Psychro and Idaean Caves and Kato Simi[135]. Also seen in LM III C is the establishment of *new* shared extra-settlement cult places of the same type, though often at a smaller, local scale, such as the Tsoutsouros and Phaneromeni cave sanctuaries[136]. This combination of features points to a very active, conscious and structured manipulation of existing traditions/customs/beliefs tied to the landscape. Major political shifts were clearly involved in these changes, and this was particularly the case in central Crete, where several important sanctuaries were located. They had probably been under the control of large regional centres in the LBA, but these control networks are unlikely to have survived the collapse period, with its massive rebalancing of populations and territory[137]. Claims to control of the major ports must also have fallen away with their collapse and abandonment c. 1200 BC. The context of settlement change we have already examined in central Crete suggests the region's inhabitants would be especially highly-driven (and well-

131 Wallace in press b.
132 Hatzi-Vallianou 2000; Wallace 2003, 264.
133 Hayden 1995; Sjögren 2004, 40; Watrous – Hadzi-Vallianou 2004, 313–323.
134 Hayden 1995; Hood et al. 1964, 82; Nowicki 2000, 138–139; Sjögren 2004, 44–45.
135 Lebessi 1985; Prent 2005, 200–211; Schäfer – Alexiou 1992; Shaw – Shaw 2000; Watrous 1996, 52–55.
136 Rutkowski – Nowicki 1996, 34–36. 39–41; Kourou – Karetsou 1994.
137 Watrous 1996, 57–70. 98–100.

equipped) to accommodate valued elements of existing cult locations and forms within their changed lifeways[138].

Landscape as a Conditioning Factor in State Emergence and Development
We have seen that settlement adjustments made in central Crete c. 1200 BC were marked by their diversity, sophistication and ambition – delayed movement for large prosperous communities; continued residence *in situ* at a few former major sites for parts of their former population, backed up by use of elaborate refuges; relocation to large new settlement units, involving complex collaboration between existing communities; relocation to individual small defensible sites, involving the splintering of existing communities. This wide range of responses seems linked to the previous concentration of population, power and resources (including the rich, accessible natural landscape, as well as knowledge and accumulated moveable wealth) in the region. This favoured the flourishing after 1200 BC of relatively large and complex new communities with strong interests in retaining control of local assets. The ›sidestepping‹ responses to crisis developed by these groups had long-term impacts. The natural landscape also had long-term influence in another sense. A simple lack of defensible topography on which to establish new small sites c.1200 BC diminished the potential of this strategy, used to such effect elsewhere in Crete at the same period. The resultant longevity and large size of so many settlements provided special opportunities for rapid, unobstructed political and economic growth in the PG – A boom environment. The very marked rise in the volume of luxury imports from PG, and the early appearance of local skilled imitations of these at cemeteries and cult places across the region, suggest an extraordinarily pro-active adaptation to the new trade environment, reflected in developments like the Phoenicianising shrine at Kommos[139]. Yet successful settlements could not for long expand their subsistence hinterlands, build off-island trade/political links, or concentrate population from neighbours, without affecting peers of similar background, similar size and strength. The new cultural landscape, with so many large and long-lived settlements developing contemporaneously, without any major hiatus or readjustment, over about five hundred years, seems to have encouraged the early emergence of inter-polity conflict. A number of clearly sizeable, prosperous central Cretan sites (like Prinias, Maza and Ligortino) lasted only into early Archaic, presumably under pressure from powerful expanding neighbours. The lack of strong small-scale bonds between polity and territory, discussed above, meant that ownership of the landscape and its infrastructure are likely have been contested particularly intensely, and at especially high stakes, from an early date.

Existing Models of Cretan State Formation and Structure Reviewed in the Light of Settlement Data

Migrations and Ethnicity in Central Crete – Readings of the Ancient Text Sources
Text sources dating to the period of Cretan states' emergence and early development tend to refer to the central region more than any other part of the island, probably because it represented the most politically active, powerful and resource-rich area. Typically for the early Greek world, these references often focus on ethnic questions, using ethnicity to explain the island's history and its current political organisation. Below, I briefly consider a very few (commonly cited) aspects of these early accounts which touch central

138 Prent 2005, 126–154. 188–200.
139 Shaw – Shaw 2000, 14–21.

Crete, exploring how they might inform the archaeological narrative for the LM III C – Archaic periods I have outlined above, and *vice versa*.

Given that central Crete had been so heavily dominated by Knossian culture and administration in the LBA, and the evidence we have seen in the settlement data that LBA elites in central Crete were especially eager to preserve as many as of their assets and as much of their status as possible through the crisis c. 1200 BC, it is not surprising that the tradition of King Minos is reflected in many early textual accounts, and linked to central Crete in particular[140]. Indeed, it seems likely to have been consciously maintained and manipulated by central Cretan communities themselves, as they established their new status and relationships in the EIA-Archaic periods. Awareness of the settlement data brings new questions to the fore in regard to the historical self-conception of the Cretan poleis. Did the fact that Knossos remained in continuous use as a settlement encourage its inhabitants to claim to sole ownership of the tradition, or did the major readjustments at this site, and its new mode of existence – now one among a group of sizeable new peer settlements – encourage the tradition to become more generalised over the course of the EIA? I suggest the latter is most likely. The deliberate re-appropriation of important LBA sites like Amnisos and Kommos as apparently shared cult places/gateways from early in the EIA suggests that the value and application of ›Minoan‹ associations may have been expanded and flexible from soon after the crisis. The density of large polities in the island, and their likely mixed, volatile social composition, suggests that a considerable degree of fluidity must have been built into the assertion of polity identities from an early date. This would be further encouraged by the turbulent history of inter-site conflict in the region through the A – C periods. The ›Minoan‹ identity and tradition may have been useful as both a buffering and linking element in these respects.

Given the elements of literary nuancing and chronological cross-layering in the Homeric epics, we cannot rely on them for an accurate description of LG – EA Crete. They do, however, provide hints about how the Cretan polities were perceived in the wider Aegean world by the eighth century, and how older traditions about the island were reconciled with eight-century realities. The fact that apart from Kydonia, all Homer's references to *individual* Cretan polities relate to central Crete supports the archaeological indicators of the region's role as powerhouse and frontline in external affairs by the LG period. It seems meaningful that Homer twice represents Crete as characterised by its density of poleis: a »hundred« in Hom. Il. 2, 647 and »ninety« in Hom. Od. 19, 172–177. Both figures give the sense not only of a high number of essentially similar units crowded together, but of a shifting political reality, well supported by the hints at inter-polity competition and conflict we get from the G – A settlement record. When Homer mentions ethnic traditions in relation to Crete, they are attributed not predominantly to individual polities, but to broad regions[141]. The references to Dorians, Pelasgians and Achaeans link Crete (and probably the central region in particular) into a long-rooted and generic Aegean/Peloponnesian identity. Long-rooted economic and cultural connections had existed between Crete as a whole and the Peloponnese in the LBA, and clearly existed again from at least the G period[142]. However, the reference to a separate »Eteocretan« identity (if the term as used in Homer refers to east Crete, as later authors like Herodotus suggest) may indicate, as with the »Kydonian« identity for the west, that the non-central regions were seen as somewhat distinct, perhaps even less important, in the international arena, with the central zone forming the main focus of attention from, and bridge to, the Greek world.

140 e. g. Plat. leg. 1, 3, 682–683.
141 Hom. Od. 19, 172–177.
142 Vlasaki 2004.

A specific mention of central Crete in the *Odyssey* comes in the account of Menelaos landing in south central Crete. This echoes the colonial traditions becoming popular at this period, and again seems to link the central part of Crete with the Peloponnese[143]. However, the nature of the archaeological record, together with Homer's other uses of very generic ethnic attributions for the central region, suggest that established links with the Peloponnese in both the LBA and EIA, rather than any tradition of a major Peloponnesian influx to the EIA Mesara, are reflected here.

By the fifth century, political identities in Crete were being regularly manipulated and redefined during internecine conflicts and conquests, increasingly supported by alliances with external powers. In central Crete, with its especially high density of powerful sites possessing very similar backgrounds and close links, it seems likely that individual state identities would have been more easily stretched, disregarded or subsumed in the interests of large-scale power consolidation than was the case in many other Greek regions. The importance of external alliance (e. g. between several powerful central Cretan states and Sparta in a major fifth-century Cretan conflict), as well as Crete's long history of Peloponnesian connections, appear to lie behind the tendency in fourth-century and later texts to link the structure and origin of Cretan states to Sparta, and to characterise them as having a »Dorian« identity[144]. The high density of small states and the related fluidity in their identity structures may have contributed to the fact that this association was often applied not just to specific states holding alliances with Sparta, but to Cretan states generally – especially, it would seem, those in the crowded central part.

Recent Models of Social and Political Change in the EIA – Archaic Crete Reviewed

Faced with the lack of integrated archaeological syntheses for Crete during the EIA – Classical period, some scholars have tried to model social and cultural change at this time by focusing on selected aspects of the archaeological record, often attempting to match these up with readings of ancient texts. The fragility of some of these models seems worth highlighting in the light of the data presented here, because they all touch in some way on settlement pattern. I have tried to show above that Crete's rich settlement data resources, properly researched, can contribute significantly to our understanding of this subject. Like some of the ancient texts, these models often cite ethnic shifts as explanatory factors in settlement or other forms of cultural change. However, their tendency to direct equation of particular settlement forms with certain ethnic or social groups is badly undermined when we assess the data they rely on in a broader context. Increased movement and resettlement of people did characterise the whole Aegean during and after the collapse c. 1200 BC, particularly in connection with changes in the trade environment[145]. Central Crete, with its long history of intensive external contacts and concentration of exchange-related prosperity, must have been strongly affected by and involved in these connections, and have housed immigrants from other regions. Yet the elements of continuity, compromise and selective choice-making seen in settlement throughout this timespan provide little support for migration-based ethnic shifts as a transformative force.

One model suggests that large numbers of elite refugees from the Greek mainland arrived in Crete at the crisis period c. 1200 BC and settled there in fortified sites[146]. A similar idea, of a mainland elite arriving in Crete at some point *within* the EIA, also introducing new cultural elements and

143 Hom. Od. 3, 293–294; Perlman 2000, 68–69. 77.
144 Aristot. pol. 1271 b, 20–32; Ephorus cited in Strab. 10, 4, 17; Hdt. 1, 65; Plat. leg. 1, 3, 682–683.
145 Sherratt 1998.
146 Kanta 2001; Karageorghis 2001; Nowicki 2000, 42–44.

residing in separate communities, has sometimes been couched in terms of a »Dorian« aristocracy directing and controlling life in Crete to their own ends[147]. Another model argues that Cretan states, both as settlements and political structures, developed on essentially the same pattern and timescale as those of the mainland, via a pattern of major nucleation in the period LG (whether under migration-linked or other stimulus). Finally, in a rather different kind of approach (but with a similar interest in settlement and selectivity in the consideration of archaeological data to the others mentioned here) Whitley[148] has drawn on anthropological analogy to link settlement change to developing social structure in EIA Crete.

Use of an immigration model to explain changes in settlement and other cultural changes around 1200 BC appears unsatisfactory when we consider the very limited number, and specific characteristics, of fortified sites in Crete as a whole, and especially in central Crete. The broader settlement pattern (involving strategic relocation across the island, the use of large community size as the main defensive mode in central Crete, and natural defensibility, occasionally supplemented by fortification, elsewhere) makes the use of a small number of fortified settlements in this region, which might be expected to form the major entry point for incomers, unlikely to represent either a distinctively mainland-linked strategy, or mainlander immigration in any substantial numbers. Instead, the sites look like a specially high-investment form of local response to insecurity, predominantly serving the needs of small elite groups. Fortifications in Crete at this period do not in any way resemble the elaborate Cyclopean walls of the LH III A–B mainland (they usually simply close off the most vulnerable points of a hill summit). The settlement record, in highlighting the sheer scale and depth of social and economic disruption in the island, promotes a contextualised understanding of other cultural shifts which undermines oversimplified migration models. For example, the relatively high degree of stylistic homogeneity seen in fine LM III C ceramics (cited by Warren[149] in support of an immigration model) seems most likely to stem from the rapid cutting-off of innovatory stimulus via exports from major centres in the Peloponnese which occurred at the end of LH III B, and the related adoption of a somewhat static fine ware tradition (though one still influenced by external contacts) on the part of local producers. It is not enough on its own to convincingly argue for large-scale migration from the mainland at this time.

Turning to the ›Dorian‹ migration model, scholars espousing it differ widely on how to date the migration retrojected to explain a literal reading of the textual accounts discussed above. They often simply place it according to where they perceive a ›break‹ in any aspect of EIA – Archaic Crete material culture[150]. Without consideration of the full range of archaeological evidence, including settlement form and pattern, the identification of meaningful ›breaks‹ in this sense is often unconvincing. None of the three main horizons I have identified here on the basis of settlement data at a broad level (crisis and relocation 1200 BC, complexity growth and nucleation from the tenth century, state consolidation, expansion and conflict from c. 700 BC) seems likely to reflect an influx of this nature. All three are interlinked, are rooted in local understandings of and attachments to landscape, and occurred comprehensively at island level, while displaying significant regional variation. They all seem to reflect major shifts in economic and political priorities, rather than the actions of incomers, or simple local responses to their appearance. In a recent version of the ›Dorian‹ migration hypothesis, Watrous and Hadzi-Vallianou[151] do try to explain EIA settle-

147 Willetts 1955, 250–254; Willetts 1965, 16–36; Willetts 1977, 143–215.
148 Whitley 1991.
149 Warren 2005.
150 e.g. Prent 2005, 111. 123.
151 Watrous – Hadzi-Vallianou 2004, 310–315.

ment changes in the Mesara by positing the advent of new ethnic groups. They present the region's large nucleated settlements, expanding from PG onwards, as those of incoming ›Dorians‹ and the minority type of smaller, more extreme defensible site, going out of use by LG/EA, as representing an oppressed/marginalised Cretan population. The latter type of site, as we have seen, is represented across the island as a minority from until LG – EA, but is particularly poorly represented in the central region. The former type, on the other hand, represents the dominant settlement pattern across this region, as across the island from c. 1200 BC onward. We have seen this pattern to be deeply rooted in local knowledge, and complex choices, about landscape, collaborative defence, communication, and the value of historically-established infrastructure. It is therefore unconvincing to view it as a simple correlate of migrant units. Given what we now recognise about their uniformly early origins, it is also impossible to hypothesise that these large settlements represent incomer sites, and the second, minority type of site ›original‹ local communities, without arguing for a mass desertion of this rich region, which had housed Crete's main population in the LBA, and a simultaneous mass immigration into it, no later than c. 1200 BC. The parallel histories and abandonment dates of the second type of site would also remain to be addressed if this model were adopted: the assumption that they were ›local‹ groups does not explain these elements.

Next, we can consider the idea of a parallel state formation period, reflected in similar types and dates of settlement change, in Crete and the Greek mainland. Here, Aristotle's reference in *Politics* I to small settlements nucleating to form the ›polis‹ is often cited. In its context (a work of political theory) this account seems intended mostly as a model/justification for the operation of the state, rather than any kind of attempt at writing real history. Notwithstanding, it has been a focus of interest to scholars studying large central Cretan sites including Knossos and Gortyn, and has been linked to immigration hypotheses in explaining the origins and growth of such sites. There are obvious attractions in applying this model to the EIA settlement record, with its strongly visible element of nucleation from PG. Yet partly because the PG nucleation phenomenon has not yet been widely recognised or studied, attempts to apply Aristotle's model to Cretan settlement are usually based on a highly selective approach to the evidence and an unsupported assumption that the most relevant period of settlement change is the Late Geometric (i. e. the accepted horizon of polis emergence on the mainland). In the case of Knossos, Coldstream pointed out that a nucleation model does not entirely fit the history of the settlement, which functioned as a large and relatively complex unit throughout the EIA. He did suggest, however, that the scattered cemeteries around Knossos *could* represent scattered villages, nucleating around an existing settlement ›core‹ in LG/EO[152]. Yet the scattering of tomb clusters (and absence of settlement traces associated with them) around Knossos is replicated at other large settlements in PG – A central Crete, including Prinias, Phaistos, and Arkades. We have seen that stable and expanding town cores existed at the huge majority of Archaic and Classical central Cretan settlements from LM IIIC onwards, and that a nucleation/expansion phenomenon occurred first and mainly in PG, associated with a set of other developments related to emergent complexity. While a further shift in settlement and burial forms and locations by the LG/early Archaic period occurs at a number of sites, the origins of large complex polities in central Crete do not match up neatly with a date of c. 700 BC.

152 Coldstream 1991.

Gortyn has a history and character more similar to the other large sites in the region – apparently being founded in the relocation c. 1200 BC. Perlman has used Aristotle's model here to explain changes over time. Yet her model treats the site in isolation, drawing minimal comparisons with other similar cases in the region[153]. The present study has demonstrated a process of spread over time at many such sites. But since few have been systematically surveyed or excavated over large areas, traces of spread have sometimes been interpreted in terms of individual scattered units of Geometric – Archaic occupation. Perlman's impression of several entirely separate EIA settlements at Gortyn which »came together« to form the polis in LG is based on this assumption. It echoes Sjögren's approach[154], where different accidentally-recovered/preserved zones of habitation remains within the mostly unexcavated urban areas at Knossos, Lyttos, Praisos and others are all identified as individual EIA ›sites‹. As a result, Perlman reads the spread occupation at Gortyn onto the plain by Archaic as the foundation of a *brand-new* nucleated settlement drawing together the population of scattered ›Geometric villages‹ on the Ayios Ioannis and Armi ridges above. Seen in regional context, the remains at these locations are likely to represent a (loose) spread downward and outward from the Acropolis hill, settled in LM III C, rather than separate and new settlement foundations of the G period[155]. The belief that the ›villages‹ were founded as independent units also leads Perlman (drawing on text accounts including the Menelaos tradition in Homer, discussed above) to ascribe different ethnic affiliations to them, and to explain their eventual desertion as the result of an earthquake rather than a process of settlement expansion.

Finally, Whitley's attempt to map EIA social change in Crete through the settlement record argues for a dichotomy between long-lived stable settlements on one hand, and socially unstable, physically ›shifting‹ settlements ruled by ›big-men‹ on the other. Settlement form (very roughly defined) is here equated to social structure, with little further examination. Besides its essentially evolutionist perspective, one intrinsic problem of the model is that the anthropological case study cited in support of it is as far away from the circumstances of EIA Crete as one could imagine. It relates to shifting cultivators in the tropical rainforests of Burma, where the whole base of the subsistence regime is regular land exhaustion and necessary settlement relocation as a result. The model's lack of reference to the broader context of EIA settlement data adds significantly to these weaknesses. Regional and chronological variations are not considered in the simple dual categorisation of settlement types. Sites with so-called short-term use could include those abandoned within the 12th/early 11th centuries, in the PG nucleation, or in the LG/early Archaic shifts. Indeed, it is only by ignoring these distinctions and the reasons behind them that the characterisation of this group of sites as housing societies with mobile, permanently shifting leadership can be proposed at all. The idea of totally separate social systems existing at each of the two broad site ›types‹ is difficult to reconcile with the frequent proximity of, and close cultural links between, the two classes in many regions. A useful point highlighted, which is reinforced by the present work, is the strong general association between the largest, longest-lived type of EIA settlement and the emergent polis state. However, Whitley mainly characterises communities at these sites through the cemetery record, offering little insight into how settlement form reflected or created complexity growth. Knossos is the focus of much of the discussion – yet as this study has shown, its history is in fact unrepresentative of most large and long-lived sites in EIA Crete.

153 Perlman 1996, 238; Perlman 2000, 68–69. 77–78.
154 Sjögren 2004, 118–120. 128–134. 307.
155 Allegro 1991; Di Vita 1991; Santaniello in press; Santaniello pers. comm.

Early Cretan States and Standard State Formation Models

I have not tried here to define the precise moment at which the EIA Cretan polities turned into small states. It is clear that by the early Archaic period, most if not all major settlements in Crete had a level of regional importance and internal complexity at or near that usually indicated by the term *polis* in Archaic – Classical Greek texts[156]. By the seventh century, inscriptional evidence like the law fragment from the civic zone at Dreros[157] confirms that they did define themselves as *poleis,* with all the contemporary nuances of that term, and thus in some relation of equality to states elsewhere in the Greek world. Features of the type associated with early Greek states by early Archaic include a nucleated settlement pattern, with each single large polity controlling a sizeable territory and surrounded by initially relatively few, very small satellites; the existence of strong, consensualist-orientated governing institutions and laws, referred to in public inscriptions; the presence of a significant number of specialised public offices in the award of the state body; a developed trade economy, involving bulk as well as specialised trade; distinctive, coherent and formalised ethnic identities and traditions linked to each state community's internal integrity and its interactions, and the existence of planned and developed civic zones, including specialised public buildings, within each state settlement. The earlier history of settlement in the island, which kept many PG – A sites space-limited, suggests we cannot expect to find elaborate urban features like typical mainland-type agoras at medium-sized Cretan polities like Maza or Papoura, abandoned by Early Archaic. Agoras did, however, eventually develop at sites which continued longer and spread out more, like Gortyn and Lato[158].

This paper has hoped to demonstrate how far we can now move on from Willetts' highly schematic conclusions on Cretan state formation in the settlement dimension: »the more inaccessible refuge sites were eventually abandoned after about 800 BC. Others, more conveniently situated, were developed into city-states«[159]. While this encapsulation of the change process is not misleading, it now seems crude, failing to offer a meaningful chronology of change, an idea of the complex regional and sub-regional variations on the basic pattern described, a detailed analysis of the impetus and organisation behind settlement change, or an insight into the role of cultural drivers (including settlement change) in the process of state formation. Yet despite the fact that much more, and better, archaeological data has become available since this comment was published, it is clear that explanations have not always kept pace in terms of sophistication. Many more recent models are in fact less complete, less grounded, and more misleading than Willetts'. We have seen that explanations which are highly selective of the data and pay little attention to context, trying to cover large gaps in data awareness/understanding with highly selective use of archaeological evidence, reference to a mixed bag of ancient text references, or isolated anthropological cases, offer limited understanding of the origins of Cretan states, and provide poor foundations on which to develop new research questions and methodologies.

Can the more general use of anthropological analogy, within a richer and more balanced data context, offer greater insight? Many standard models of state formation relating to large territorial states are clearly inappropriate in this case, though some do seem partly relevant. Cultural diffusion had a role in the development of state culture across the Aegean by 700 BC[160] though the fact that the well-established and stable institutions likely to have existed in the large Cretan polities from PG period do not seem paralleled in central

156 Wallace 2004; Wallace in press a; Wallace in press b; Hansen 1997 a; Hansen 1997 b.
157 Meiggs – Lewis 1989, 2–3.
158 Ducrey – Picard 1970; Ducrey – Picard 1971; Ducrey – Picard 1972; Demargne 1903; Hadjimichali 1971; Perlman 2000, 61; Picard 1992; Watrous – Hadzi-Vallianou 2004, 314–315.
159 Willetts 1969, 87–88; see Boardman 1982, 774.
160 Morris 1987, 1; Raaflaub 1993, 74–75; Snodgrass 1986.

Greece at the same date shows the fallacy of assuming direct transfer of political structures in any direction. The nature of Cretan complexity emergence was specific to Cretan history and environment. Though the eastern-led trade boom clearly played a strong role in state emergence, secondary state formation models are inadequate on their own to explain it here: the developing Cretan states were clearly *not* merchant states orientated mainly towards the outside world in their economic relations, nor did they ever come to mirror in structure the Near Eastern societies with which they regularly interacted.

Economic and environmental factors were not consistently determinative of Cretan states' origin, location or developmental course, either. We have seen that the importance of these factors altered over time in relation to other imperatives, and were heavily mediated by sophisticated cultural adaptations of/to the natural environment which balanced defence, subsistence productivity, communication and symbolic concerns. The ›economic circumscription‹ model of state formation suggests states emerge when a limited agricultural territory reaching the point of maximal exploitation. There is unrelieved pressure to produce more surplus, and growing indebtedness on the part of some producers, who cannot splinter into self-sufficient groups because there is no more agricultural land. Enlargement of the resource base then takes place through spatial expansion, involving forceful subjugation of weaker, economically dependent communities to more powerful ones, and the rise of socioeconomic complexity in the newly expanded unit[161]. Use of the circumscription model in relation to subsistence resources seems generally inappropriate for PG – A Crete. Much less extensive territories were probably in use for agriculture than during the LBA, and the land which was in use (much of it previously treated as marginal) was probably being exploited much more intensively, thanks in part to the new patterns of settlement emerging from c. 1200 BC, which surely brought larger areas of rocky sloping land, previously treated as marginal, under cultivation. There is likely to have plenty of room for subsistence expansion and growth in the PG – A periods. Appropriation of economic territory through force by expanding groups did surely play a role in the emergence of early interpolity conflict from Archaic. But though such conflicts strengthened state-level identity structures, they do not seem to lie behind the *origins* of the state.

Models concerned with land-based expansion as core to state emergence often take little account of existing structures of attachment to land, or of agents' awareness of these[162]. Questions of community identity seem integral to understanding polis state emergence in Crete. PG settlement patterns suggest that nucleation at large sites, and the related emergence of larger and more formalised territories, depended on the existence of inclusive regional-scale identity structures closely attached to the landscape through a number of existing scattered sites, rather than on the sheer strength or size of a single emergent elite. When these structures were firm, a few strong clans could successfully mesh territories and power bases at a nucleated core, with the marginalisation of weaker groups at smaller settlements (whether the latter remained in use or not) being peacefully rationalised by invoking their ›membership‹ of a regional collectivity. We saw that the history of central Cretan settlement patterns meant rather few outlying settlements existed to provide strong points of identity attachment to the landscape for the developing nucleations. As a result, volatility probably developed at an early stage between a sizeable number of power-seeking groups within each large core settlement. This needed to be smoothly contained by complex new social institutions if the large units were to survive and prosper.

161 Carneiro 1970; Carneiro 1981; Earle 1997, 7–9; see Giddens 1984, 254–256 contra these models.
162 Carneiro 1970; Carneiro 1981; Earle 1997, 67–105.

Though the expansion of subsistence territories and rising agricultural production levels during PG – A are clearly indicated by settlement pattern, as well as other data, there is in fact no evidence for suddenly circumscribed or monopolised growth in any specific economic sector. An unusual freedom in economic aggrandisement at this period in Crete (already noted by Whitley)[163] encouraged by unrestricted social access to trade goods and a flexible agricultural environment, seems to have prevented early exclusive concentration of wealth in the hands of single individuals or clans, favouring instead the sustained existence of a number of influential groups at each major site. This pattern is reflected in PG – G funerary practices[164]. Athough economic growth in various dimensions clearly did push forward complexity, it was not the engine by which any single group came to prominence. A necessarily *negotiated* sharing of power between peer groups at clan level seems to have been central to building the state.

Lastly, we cannot say that conflict – whether in the form of reaction against aggressive incomers, or the forceful takeover of weaker by (existing) stronger groups within the island was the main creative factor in the movement towards larger and more complex community units. Though I have posited conflict with seaborne groups as a major factor in the crisis affecting Crete c. 1200 BC, and thus in cultural responses to that crisis, in central Crete, especially, there are (as yet)[165] few signs of the kinds of major inequalities between different communities likely to have kicked off conflict, takeover and related complexity growth. The strong local grounding of PG nucleation processes across the island also argues against a conflict-based or -driven mode of aggrandisement. If conflict had been a dominant factor, we would expect slower, less regular and more asynchronous growth at large sites, accompanied by irregular abandonments of smaller communities nearby, throughout the PG – EA period. From EA onwards, however, the rise of inter-polity conflict *is* likely to have helped consolidate state units and their territories.

Classic questions about the priority of events, processes and motivations in the rise of economic and political complexity clearly come into play here[166]. So far, it proves extremely difficult to separate, rank, or assign chronological priority to, different means and levels of power appropriation and institutionalisation. Did the concentration of powerful clans in large settlement units controlling expanded territories from PG promote the emergence of more formally-defined claims to land, and thereby push forward subsistence expansion and economic complexity? Or did the growing focus on control of larger land areas for subsistence production occur in order to support and balance increased prestige good production and consumption linked to the trade boom, and itself stimulate the move into nucleated units? On the other hand, how far did a changed economic base, promoting the production of large subsistence surpluses and supporting the growth of social inequality, increase the demand for and production of wealth goods, especially in central Crete? How important to all these developments was the diminishment of generalised security threat around the island's coasts by the tenth century, and how far did they, in turn, help to bring it about? How did these processes of determination differ between regions, if at all?

Though it always had strong similarities in culture and history with other Cretan regions, the island's central zone seems to have developed particularly rapidly and intensively as an environment for early state emergence, thanks to its access to diverse external contacts, exceptionally fertile and accessible landscape, and particular cultural history. For the same reasons, a high level of attrition quickly developed between the densely-packed and similar polities, pro-

163 Whitley 1991, 384.
164 Wallace in press a.
165 Excavation at Karfi by the author in 2008 showed that in at least two parts of the settlement occupation ended with the destruction of buildings by fire. This fact remains to be interpreted in context.
166 Gledhill – Rowlands 1982; Shanks – Tilley 1987, 58–59. 185; Trigger 1998, 179.

ducing frequent and rapid amalgamative shifts and alliances. This dynamic combination of factors resulted in a peculiar form of state and caused central Greek peers to perceive Crete as a whole (very often through the lens of the central zone) as a region of ›otherness‹ in terms of political structure[167]. Much work has recently gone into building generalised emergence models for small city-type states in the ancient world[168]. But the recognised ›otherness‹ of the Classical Cretan state, and its distinctive history as mapped here, highlight the fact that major variations exist even within this sub-sphere of state development. Understanding the origins of these differences must involve journeys into the particular and contingent. For this largely prehistoric period, balanced consideration of a rich, diverse and complex body of archaeological data, in a long-term and truly wide-ranging comparative perspective, is essential. A point emerging strongly from the present study is that the cultural landscape was a vital driving and conditioning force behind the emergence of state-level complexity – influencing outlooks, moulding identity constructs and links to territory, and promoting and bounding opportunities for growth. Physically and materially, the Classical Cretan poleis were the same settlements as those founded in the twelfth century crisis – survivors of a long process of selection, attritive competition and conflict. As conceptual and political entities, too, the Cretan poleis were formed by EIA – Archaic cultural developments. This recognition chimes well with recently developed understandings of the very strong and active role of culture, particularly material culture, in shaping social and political history[169] and with growing awareness of the importance of human agency and choice at local scale in shaping long-term developments through mediative realms of practice including community identity construction and material culture. In this case, the cultural landscape was such a mediating factor: shaped by humans through a deep awareness and understanding of their natural surroundings under conditions of large-scale political and social change, it shaped, in turn, their own interactions and development.

Conclusions – The Research Exercise in Broader Disciplinary Context

The study makes it clear that really high-quality, detailed information on polis development and its drivers in EIA – Archaic Crete will only be gained from excavating at a number of the typical large sites of this period over a significant area, using modern methods. Further intensive surveys are also needed to tell us about the stage at which the large sites became consolidated as the centres of political territories and could start to expand and exploit those territories in new ways, with implications for political relations at several different levels. Another highly useful, but more targeted, non-invasive research strategy would be the gridded collection of all surface pottery from several large sites of the large type discussed here, potentially allowing the mapping of growth over a site's lifespan[170]. In both cases, however, the opportunity to make direct comparisons between the histories of a *number* of large sites, and thus to build a broad, well-grounded picture of the process of state emergence and development, would be lacking. The system of limited state permissions for research fieldwork would scarcely allow the study of more than one or two large sites in this way by the same research team, and the territories of the sites are so large that two are unlikely ever to fall within the same intensive survey area (maximally limited by law).

As suggested earlier, further work could also be done on petrographic and macroscopic analysis of pottery fabrics from regional groupings of large and small, short- and long-term EIA – Archaic sites: the building of petro-

167 Perlman 2005.
168 Nichols – Charlton 1997; Morgan 2003; Morris 1997; Yoffee 1997.
169 Bourdieu 1977; Hunt 1989.
170 Moody et al. 1998.

graphic reference collections from a number of large sites would be a useful exercise. Limitations would be imposed on the value of this work by the lack of well-published stratified assemblages for comparison. However, certain productive directions are suggested by the present study. Existing scholarship suggests that a major disjuncture in manufacturing (with the break-up of large regional workshops) accompanied the other major political and cultural changes occurring at c. 1200 BC[171]. Yet strong *new* links in stylistic traditions across regions appearing at the same time suggest regular inter-site contacts and an acceptance of broad norms in pottery production and consumption, rather than any special emphasis on distinction through cultural innovation at sub-regional level. Fabric studies suggest that production itself, both in fine and coarse wares, stayed at a relatively local level through much of the EIA – A period: that is, the broad stylistic similarities do not accompany any kind of large-scale centralised production. In the PG – A period, as states emerged and contacts with the outside world broadened and intensified, we might expect that an increased emphasis would develop on making certain elements of production (vessel form and decoration) distinctive at polity level, and that some regional centralisation of production would occur. The relations of production and exchange between Kera Papoura and the sizeable group of smaller EIA sites now known through survey in its local region (and having various sizes and lifespans) would be a fruitful line of enquiry. Evidence for specialised production centres of any type is so far lacking in the LM III C site pattern, and investigation of how regional pottery production systems altered as the large regional polity at Papoura emerged from PG could throw considerable light on the shifting economic base and changing political relationships of the state emergence period. Understanding of the relationships *between* large polities through the PG – A period could be developed by studying ceramic production in the central/eastern Mesara. Given its striking concentration of high-quality fine wares, Ligortinos Kefala looks like an important, possibly specialised, producer of fine pottery in its region. Comparing the technology of fine wares here with those at other large sites (and possible production centres) nearby, such as Gortyn and Rotasi Kefala, would help test this hypothesis, and be instructive in explaining the process by which this site, despite its apparent prosperity and status, eventually went out of use (perhaps through conquest by one of the latter polities) in the Early Archaic period.

This paper has hoped to stimulate wider reflection on how successfully archaeologists are managing to connect local and regional studies (which produce small-scale narratives) to understandings of very long-term, global human behavioural trends. I have stressed the importance of getting real range into regional cultural studies and placing them in a meaningfully broad contextual perspective in order to understand social change. However, the paper also suggests that many previous attempts at generalisation are unsatisfactorily crude. Even when a complex range of data does exist for examination in a region it is often ignored or over-selected in analysis, especially when patchy and difficult to synthesise. The obstacles to further research on large sites in Crete, discussed above, remind us that we will *always* lack data consistent enough in quality and broad enough in coverage to allow fully secure generalisations of global reach. Yet we must continue to model at a general level to make our interpretations relevant. The solution seems to lie in working towards ever higher-resolution, more sensitive models of *meaningfully defined* regions – i. e. those distinct in terms of their historical development. Crete in the Iron Age to Classical period is clearly one of these, and its record, especially where developed through new fieldwork, will continue to reward approaches of this type.

171 Hallager – Hallager 2000, 171–172. 203–204.

Abstract

Saro Wallace, The Roots of the Cretan Polis. Surface Evidence for the History of Large Settlements in Central Crete

Classical Cretan states are known to have had an unusual and distinctive character, contrasting markedly with that of their central Greek peers. Yet the histories of the latter have tended to dominate our understanding of the polis form. The factors contributing to this difference, and to the whole process of state emergence in Early Iron Age – Archaic Crete, have not been much analysed, restricting our understanding of the origins of the earliest consensualist political structures. Some scholars have explained Cretan divergence in terms of a particularly strong ›continuity‹ in the island's social and cultural frameworks from the Bronze Age into the state formation period. Others have seen immigration into Crete during the latter period as a major constructive influence (frequently citing some aspects of Archaic-Classical texts in support of their arguments). The EIA – A archaeological record should be our main source of information in testing these models, but has been under-investigated in many respects, encouraging both an over-reliance on textual traditions, and generalisations based on too narrow a sample of sites and types of archaeological material. New excavation projects are starting to expand the frame of study. However, while many of the ancient text sources refer to central Crete, there remains a limited range of published archaeological data from this core development region against which to evaluate them. The paper uses surface ceramics from five large central Cretan settlements, collected by scholars from the British School at Athens in the 1930s–1960s, together with observations from more recent visits to the sites, to help develop a more archaeologically-informed narrative of large polity emergence and development in this region, and the island as a whole.

Keywords
early states • Crete • survey • pottery • polis landscape

Abbreviations

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Address
Dr. Saro Wallace
British School at Athens
Souedias 52
10676 Athens
GREECE
sarowallace@hotmail.com