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Traversing Space:

Landscape and Identity in Bronze Age Cyprus

by

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DECLARATION OF OWN WORK

Title: Traversing Space: Landscape and Identity in Bronze Age Cyprus

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I declare that this thesis has been composed by and reflects the work of the student signing below. This work has not been submitted for any other degree or professional qualification and no parts of the thesis have been published.

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ABSTRACT

The Cypriot Bronze Age (c.2300-1075 BCE) is a widely researched chronological period. However, with long-term material elaboration receiving most attention, detailed studies have revealed a remarkable, yet insufficiently integrated amount of data. Based on these, and since the 1960's, researchers proposed settlement pattern models to describe increasingly complex politico-economic mechanisms. Despite continuous excavations and detailed material studies, these models have only been slightly modified over the past 50 years. This raises questions on how integrative and representative currently employed settlement pattern models are, and if new approaches may support different relationships.

This study is a spatial attempt to answer these questions via a comparative research of diachronic local/regional trajectories in three valleys from the south central coast of Cyprus: the Kouris, the Vasilikos and the Maroni. It examines the association between the valleys' surveyed and excavated data with current large-scale interpretations, focusing on human-landscape relations in open (landscape), constructed (architecture) and concealed (burials) spaces. Underscoring a pattern between natural and cognitive landscape with materially expressed identities, this study offers a novel conceptualisation of multiple scales of relations throughout the Bronze Age. Consequently, it underpins the significance of a deep understanding of local histories, prior to the formation and/or use of any generalised settlement pattern models to describe any chronological period. Finally, it supports integrative methodologies for material evidence associated with groups of people that are hardly visible in large-scale reconstructions of politico-economic relations.

AUTHOR'S NOTE

This volume contains 8 chapters (One-Eight), two appendices (I-II), a bibliography list and 17 tables numbered according to the relevant chapters (tbl.). The readers will find attached a DVD, which contains 17 Microsoft Excel spreadsheets (S.). No part of this research has been published before the submission of it as a PhD thesis. Selected parts of Chapters One-Seven and Appendix I have been presented in archaeological conferences between 2010 and 2014, some of which are in the process of publication. The Department of Antiquities permitted visit, study and photography of artefact collections and archaeological sites. The developed geo-databases were kindly provided, and their use authorised by the Department of Geology, Ministry of Agriculture, Natural Resources and Environment and the Department of Lands and Surveys, Ministry of Interior of the Republic of Cyprus.

The present study is the result of a 4 year research reviewed by anonymous reviewers. Potential language and expression mistakes are entirely the responsibility of the author.

Georgia-Marina Andreou

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Access to archaeological and geological survey material and unpublished databases was facilitated through the kind permission of G. Cadogan and S. Manning (Maroni valley), L. Bombardieri, S. Swiny and G. Walberg (Kouris valley) and Z. Zomeni (geology). Zomeni's enthusiastic help during a Saturday morning saved me many months of work. I am particularly grateful for the invaluable help of D. Sewell, who, through his cooperation provided me the chance to investigate the landscape of Tochni-*Lakkia*. Finally, throughout my studies I was privileged to communicate with inspirational academics through attending classes (M. Iacovou, O. Kouka, R. Leighton, U. Schoop), participating in excavations (S. Manning) and meetings (B. Knapp), who introduced me to different ways of thinking and contributed immensely to the formation of a multifaceted theoretical and methodological track.

The University of Edinburgh provided an excellent environment for interacting with colleagues of varying research perspectives, willing to learn about Bronze Age Cyprus, and who have helped improve the final form of this study. I would like to thank the Department of Antiquities of Cyprus for their support throughout the last four years both for my PhD and the investigation of Tochni-*Lakkia*.

Finally, this study would not have been possible without the love and support of my husband and family, to whom my work is always dedicated.

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LIST OF ABBREVIATIONS

Bibliographic

AAAG: *Annals of the Association of American Geographers*

ABSA: *The Annual of the British School at Athens*

ADAJ: *Annual of the Department of Antiquities of Jordan*

AJA: *American Journal of Archaeology*

AmerAnt: *American Antiquity*

AntJ*: The Antiquaries Journal. The Journal of the Society of Antiquaries of London.*

AR*: Archaeological Reports*

BAR: *British Archaeological Reports*

BASOR*: Bulletin of the American Schools of Oriental Research*

BCH*: Bulletin de Correspondance Hellénique*

BiblArch*: Biblical Archaeologist*

BSA*: Annual of the British Schools in Athens*

CAARI*: Cyprus American Archaeological Research Institute*

CAJ*: Cambridge Archaeological Journal*

Catena*: CATENA. An Interdisciplinary Journal of Soil Science - Hydrology - Geomorphology focusing on Geo-ecology and Landscape Evolution.*

CCEC*: Cahier du Centre d'Études Chypriotes*

CurrAnthr: *Current Anthropology*

EJA*: European Journal of Archaeology*

FAO*: Food and Agriculture Organisation of the United Nations.*

Geoarchaeology*: Geoarchaeology: An International Journal.*

***Hesperia**: Hesperia. The Journal of the American School of Classical Studies at Athens.*

***IEJ:** Israel Exploration Journal*

***IJNA**: International Journal of Nautical Archaeology and Underwater Investigation*

***IntArch:** Internet Archaeology*

***JAnthrArch**: Journal of Anthropological Archaeology*

***IJNA**: The International Journal of Nautical Archaeology*

***JARCE**: Journal of the American Research Center in Egypt*

***JAS**: Journal of Archaeological Science*

***JCoastConserv**: Journal of Coastal Conservation*

***JFA:** Journal of Field Archaeology*

***JGR**: Journal of Geophysical Research*

***JHS**: Journal of Hellenic Studies*

***JMA**: Journal of Mediterranean Archaeology*

***JMC**: Journal of Material Culture*

***JPR**: Journal of Prehistoric Religion*

***JRAI**: Journal of the Royal Archaeological Institute*

***Kadmos**: Kadmos. Zeitschrift für vor- und frühgriechische Epigraphik.*

***Levant**: Levant. Journal of the British School of Archaeology in Jerusalem and the British Institute at Amman for Archaeology and History.*

IntArch: Internet Archaeology

***Minerva**: Minerva. The International Review of Ancient Art and Archaeology.*

***NatGeoRes**: National Geographic Research and Exploration*

***NEA**: Near Eastern Archaeology (Formerly **BiblArch**, Biblical Archaeology)*

***OJA**: Oxford Journal of Archaeology*

***OpAth**: Opuscula Atheniensia*

***OWAN**: Old World Archaeology Newsletter*

***Paléorient**: Paléorient. Revue Internationale et Pluridisciplinaire.*

***PPS**: Proceedings of the Prehistoric Society*

***RDAC**: Report of the Department of Antiquities of Cyprus*

***SCE**: The Swedish Cyprus Expedition*

***SIMA**: Studies in Mediterranean Archaeology*

***SMEA**: Studi Micenei ed Egeo-Anatolici*

***KTU**: Dietrich et al. 1995*

***WorldArch**: World Archaeology*

Chronological

BA: Bronze Age

BCE: Before Common Era

Byz: Byzantine

EAN: Early Aceramic Neolithic

EBA: Early Bronze Age

EC: Early Cypriot

Cal: Calibrated 14C

CA: Cypro-Archaic

CC: Cypro-Classical

CE: Common Era

CG: Cypro-Geometric

CL: Chalcolithic

LAN: Late Aceramic Neolithic

LBA: Late Bronze Age

LC: Late Cypriot

LR: Late Roman

Hel: Hellenistic

Med: Medieval

MBA: Middle Bronze Age

MC: Middle Cypriot

Neo: Neolithic

PPN: Pre-Pottery Neolithic

PreBA: Prehistoric Bronze Age

ProBA: Protohistoric Bronze Age

R: Roman

Ceramological

BI: Bichrome

BiW: Bichrome Wheel Made

BL: Black Lustrous and/or

BLW: Black Lustrous Wheel Made (*cf*. Karageorghis and Violaris 2012)

BS: Black Slip

BSW: Black Slip Wheel Made (*cf*. Karageorghis and Violaris 2012)

BP: Black Polished

BR: Base Ring

BrP: Brown Polished

BUC: Bucchero

CL: Chalcolithic

DPBC: Drub Polished Blue Core

LH: Late Helladic

Mono: Monochrome

Myc: Mycenaean

Neo: Neolithic

PI: Pithos

PW: Plain Ware

PWW: Plain Ware Wheel made

RL: Red Lustrous and/or
RLW: Red Lustrous Wheel made

RoB: Red-on-Black

RP: Red Polished

RPM: Red Polished Mottled

RPP: Red Polished Punctured

RPSC: Red Polished South Coast

RS: Red Slip

WL: While Lustrous (*cf.* Benson 1972) and/or

WLW: White Lustrous Wheel Made

WP: White Painted

WPW: White Painted Wheel made

WS: White Slip

WSh: White Shaved

(Ceramological abbreviations are commonly followed by more specific classification employing Latin numbers e.g. WP I, WP II, WP III, WP IV etc.)

Other

BM: British Museum

CM: Cypro-Minoan (script)

CPSP: Canadian Palaepaphos Survey Project

CYSurvey: Cyprus Survey

DA: Department of Antiquities, Republic of Cyprus

DGRC: Department of Geology, Republic of Cyprus

EA: El-Amarna letters

Episkopi: Kent State University Survey Project at Episkopi

F: Female Skeleton

GIS: Geographic Information Systems

KAMBE: Kalavasos and Maroni Built Environment Project

Kg: kilogram

KVP: Kouris Valley Project

LAP: Lemba Archaeological Project, Western Cyprus Survey

M: Male Skeleton

Misc: Miscellanea

MVASP: Maroni Valley Archaeological Survey Project

RS: Ras Shamra excavation number

SCSP: Sydney Cyprus Survey Project

SKS: Sotira-Kaminoudhia Survey

SSP: Sotira Survey Project (Land Behind Kourion)

TÆSP: Troodos Archaeological and Environmental Survey Project

TL: Tochni-*Lakkia* (Seabed) Project

UTM: Universal Transverse Mercator

Note

- Cypriot site names include village and locality name in a two word combination e.g. Maroni-*Vournes*.
- The transliteration of site names from Greek to Latin characters is not consistent in publications, the official cadastral and topographic maps. The present study follows the cadastral maps' spelling, with the exception of Τόχνη-*Λακκιά* that is used interchangeably as Tochni-*Lakkia* and Tokhni-*Lakkia*, depending on the source of information
- Information on vegetation types, provided by the Department of Geology of the Republic of Cyprus and used in map production does not always follow the widely employed spelling: e.g. maquis vs. maquies.

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CHAPTER 1

INTRODUCTION

The Bronze Age (2300-1075 BCE) is a widely researched chronological period in Cypriot archaeology and provides opportunities for highly detailed artefact studies. As a common practice, researchers rely on one another's material examination, methods and interpretation to enhance their argumentation and expand current knowledge on a particular topic. Beyond reasons of mutual support within the archaeological community, this reliance is also a practical one, involving the mitigation of time and resource restrictions (Drennan and Peterson 2012: 67). Nevertheless, researchers (e.g. Iacovou 2007) have also discussed the perils of the uncritical use of research, especially in comparative studies that aim to analyse site relations and eventually discuss larger scale socio-economic complexity. Problems surrounding combinations of small and highly limited material samples inevitably raise questions on the usefulness and validity of reproducing patterned information in a wide aspect of geographical and chronological spectra. The research proposal presented in this chapter stems from such questions, particularly regarding material investigation methodologies, and aims to examine the impact of large-scale interpretative models in the study of Bronze Age Cyprus (pp.34-35, tbls.1A-B). This examination is based on three case studies: the Kouris, Vasilikos and Maroni valleys of the south central coast of the island - a choice I explain in the following sections.

Following researchers, who consider archaeological survey the most appropriate means for monitoring archaeological evidence with minimal intervention to modern development (Di Giacomo *et al.* 2011: 2051; Lasaponara and Masini 2011: 2000; Patino and Duque 2012: 2; Cobb *et al.* 2012: 3), this study also examines surveys' contribution to large-scale archaeological interpretation. Namely, it investigates the degree to which survey material in Cyprus is conducive to representing the complexity attested in the material culture, particularly regarding the reciprocal relation between communities and landscape.

Deconstructing the Large Scale

Archaeological survey data serves as the framework supporting the large-scale picture of chronological periods - as classified by archaeologists. However, to reveal the background, upon which archaeologists place material classification and correlations to discuss complex human relations, it is useful to carefully deconstruct the large picture and re-investigate its components at different scales. Such a detailed approach can incorporate information of various forms, and actively appreciate limitations depending on pre-existing and concurrent trends in archaeological research. These can influence, *inter alia*, survey collection methodology and subsequent interpretation; topics often inexplicitly considered in large-scale interpretations.

The Cypriot material is in its own way biased, and has diachronically affected the implementation of settlement pattern models, which researchers employed to construct the larger picture of chronological periods. Similar to a traditionally strong focus on site recording (see also Corvisier 2008: 31-32), Cypriot archaeology demonstrates unparalleled interest in the spatial distribution of copper; a dominant resource of the Cypriot landscape and a central theme in large-scale archaeological interpretations. Coastal proximity is another popular landscape aspect, analysed to a great extent in association with copper export. These two topics are paramount in the island's Bronze Age archaeology, to the degree that one can argue that with few exceptions, such as the Sydney Cyprus Survey Project (SCSP) (Given and Knapp 2003) and the Troodos Archaeological and Environmental Survey Project (TÆSP) (Given *et al*. 2013), current research is perhaps minimising equally important datasets - despite tremendous advances in material culture studies. This is particularly evident in discussions contrasting the 'typical' EBA rural villages with the copper-oriented, 'international' economy of the LBA cities, which generally frames the description of this chronological period. When this deep interest in copper and coasts forms the basis of comparative studies of regional socio-economic relations and organisation, suggestions that Maroni, for example, is an

area “where stone is missing” (Hadjisavvas 2009: 128), association of non-coastal sites with copper (Portugali and Knapp 1985: 50-61; Keswani 1993: 78; Knapp 2008: 136) and discussions of the “secondary” or “support” role of non-coastal sites (Keswani 1993: 79; Knapp 2008: 138-140; Papanikolaou 2012: 311, 314) likely require additional more substantive archaeological and geographical evidence to demonstrate the sites’ characteristics in association with the surrounding landscape.

This study proposes a new approach on the topic of settlement patterns by incorporating multiple investigative scales with which to frame the material derived from archaeological surveys and perhaps more inclusively expand the wider Bronze Age picture. Namely, it combines surveyed and excavated information within inter-regional comparative research to attempt a more holistic representation of settlement relations; one that remains contextualised within current theoretical approaches, and may provide a more detailed understanding of the factors contributing to the dynamic chronological period of the 2nd millennium BCE. Before introducing the material under investigation in the following chapter, it is necessary to appraise the history of relevant research and demonstrate the problems and limitations surrounding the aforementioned proposal.

Archaeological Survey: Setting the Background (tbl.1C)

Archaeological survey, settlement pattern models and interpretative traditions are central to this study. It is useful then to provide a relevant, diachronic methodological framework upon which to reflect (pp.36-39, tbl.1C). To begin, prior to WWII archaeology was closely associated with art history, which largely relied on architectural remains and the classical tradition, and favoured texts over material culture. Association with philology and topographical tradition guided fieldwork, which concentrated on large-scale excavations at visible religious and urban sites. However, the post-WWII economic environment necessitated a lower-cost approach to humanistic studies, which subsequently led to the rise in relatively expeditious and financially sustainable investigation avenues. It is in this era that

archaeological survey emerged, and while was initially met with scepticism, it gradually developed into an established discipline in its own right (Ruppè 1966: 313; Haggett *et al.* 1977: 541-542; Schiffer *et al.* 1978: 1; Hogg 1980: 5; Ammerman 1981: 63; Dyson 1982: 89; Bettess 1984: 1; Banning 2002: 11).

Archaeological survey in the Mediterranean initially followed a topographic tradition stemming from the late 18th-early 19th centuries that greatly influenced methodology in this part of the world, which was different than, for example, contemporaneous trends in Mesopotamia (e.g. Adams 1965) and the New World (e.g. Willey 1953). Surveys developed earlier in the areas outside of the Mediterranean and were based on different traditions and conceptual bases (Van Leusen 2002: 4-5; Kouchoukos and Wilkinson 2007: 2). Archaeological survey began to be systematised by the mid-20th century with the first systematic regional survey undertaken in the 1930s at the Amuq plain in the northern Levant (Braidwood 1937), followed by South Etruria in the 1950s and 1960s (Ward-Perkins 1962), and the Minnesota Messenia expedition in Greece (McDonald and Rapp 1972), which produced diachronic data and useful paradigms for the Aegean. These include intersection of environmental and cultural information, assessment of their economic potential, a diachronic perspective and incorporation of ethnographic studies. Gradually the intensity of surveys increased and a great number of sites were placed on maps, drastically populating terrae incognitae, and setting the stage for more refined methodologies.

In the 1980s the resolution, rather than extent, of survey was intensified with field walking focusing on all traces of human activity irrespective of chronological period (Bintliff et al. 1999: 139). Extensive, site-oriented and targeted survey was followed by a 'new wave' of archaeological surveys. These included clearly demarcated territories, sophisticated sampling designs and a more standardised collection and recording methodology. This maturation incorporated notions such as 'non-site' and 'off-site', integrated natural post-depositional processes such as erosion, soil formation, coastal change, alluviation, colluviation and archaeobotany, and

increasing use of relational databases and sophisticated relational means of data presentation (Alcock and Cherry 2004b: 3).

By 1990 many areas of the Mediterranean involved a rich diachronic record of human activities spanning environments. Simultaneously, the development of spatial databases and their incorporation in GIS software provided interactive maps that could more intuitively and effectively display spatial and material associations. Finally, by mid-2000 and after the completion of a series of survey projects throughout the world, great concern developed around the productive use of the vast survey data through holistic approaches and comparative studies. Some of the early attempts include Alcock's (1993) study in Greece, followed by *Side-by-Side Survey*, which casted its focus on the Mediterranean (Alcock and Cherry 2004a).

Despite the rapid development trajectory in consolidation and improvement of collection, recording and presentation methodologies, Given (2013: 3) recently argued that data interpretation has followed a more conservative path, which he relates to a low degree of confidence directly linked to the sporadic nature of survey data. Regardless, new site recovery and their situation within diachronically intensively used landscapes have facilitated their incorporation into new interpretative frameworks; frameworks that appraise the role of sites as economic and socio-political entities influenced by and interacting with their surrounding environment, coping with population stresses and managing human relations.

Similar to methodological trends, archaeological survey has followed concurrent theoretical trends, such as the New World Archaeology's processual questions and the post-processual focus on conceptual aspects of human-landscape relations. Influenced by the scientific positivism of processual archaeology, survey research design, analytical models and eventually interpretation favoured the employment of quantitative analysis and modelling (e.g. Clarke 1977; Hodder and Orton 1976), which although not widely accepted (Flannery 1976), and heavily criticised (Tilley 1994), have productively scrutinised methodological strategies, particularly sampling. In an attempt to discuss the spatial dimensions of archaeological material,

archaeologists introduced settlement patterns, which focused on relations between observed site spatial allocations, the surrounding environment and its resources available technology. Although such eco-environmental approaches and settlement-pattern orientation have received negative criticism (Trigger 2007: 444-478), researchers have also noted that one cannot overlook that the employment of general models is a first step toward more detailed understanding of the past (Given and Knapp 2003: 8).

Archaeologists have actively involved spatial models in interpretation with the aim to reconstruct past landscapes and economic interaction within investigated environments of interest (Hodges 1987: 118). However, model-oriented approaches often influenced a wide array of interpretations, later criticised as inflexible and dehumanising. Issues that raised skepticism are, for instance, the often uncritical association of settlement with social hierarchy (Wilkinson 2003: 211; Renfrew and Bahn 2006: 183), and the central place theory (Hodges 1987: 119-120; Renfrew and Bahn 2006: 182-183), Thiessen Polygons (Renfrew and Bahn 2006: 183) and XTENT Modelling (Renfrew and Bahn 2006: 183-184, 186) presumption of the existence of a political and economic control centre generated by equifinal processes (Stark and Garraty 2010: 41). Researchers also questioned some theoretical approaches that prioritised the economic relationship of settlements (Smith 1976: 314) while downplaying or ignoring socio-political relations, despite the proposed models' nomenclature intimating the existence of a speculative 'centre' (Sherratt 2004: 81 on the misuse of evolutionary metaphors). Examples include the unbounded network system and the bounded hierarchical network (Hodges 1987: 123, 125), the solar central place system (Gamble 2001: 145; Grant *et al.* 2005: 211), the dendritic central-place system (Smith 1976: 301-302), the interlocking central-place system (Hodges 1987: 123, 125), and other models emphasising the identification of regional economic patterns.[1]

[1] Some of these are the Region Macro-Region Model, the Braudelian "Annaliste" Structural History Model, the Historical Accident, "Events" Model, the Core-Periphery, World Systems Theory, the Neo-Malthusian, Eco-demographic Model, the Combination Trajectory Model, the Socio-Cultural,

Nevertheless, archaeologists gradually introduced more nuanced interpretations with deeper consideration for socio-political dimensions. New topics of interest include resources control, social stratification, the emergence of 'elite' groups and centres (e.g. Gamble 1982; Renfrew and Wagstaff 1982) and the development of social 'complexity'; a controversial term - often criticised for its strong neo-evolutionary connotations (Yoffee 2005: 91; Chapman 2007: 14; Verhoeven 2010: 11-12; Peregrine 2012: 183).

New Archaeology's challenge as an environmentally deterministic and universalistic approach led to the exploration of new interpretative avenues, which may be referred to as 'landscape studies' rather than 'settlement pattern studies' (Athanassopoulos and Wandsnider 2004: 8); a term that reflects their non-site-specific approach. According to Knapp (1996a: 54, 57) the shift from 'settlement archaeology' (Trigger 1967, 1968; Chang 1968) to 'landscape approach' (Shanks and Tilley 1987: 79-117; Hodder 1991: 6-10; Rossignol 1992: 4-5) took place with little attention to the two terms' considerable divergence. For that reason, this study associates 'settlement archaeology' with excavated data, whereas 'landscape archaeology' is understood as merging the material culture and its natural surroundings to reconstruct socio-economic patterns.

Post-processual approaches, influenced by the incorporation of social theory in archaeology (e.g. Hodder 1982; Renfrew 1984; Shanks and Tilley 1987) have also received negative criticism for being disinterested or devaluing the environment and economic parameters that affect human decisions, and potentially replacing ecological with cultural determinism (Bintliff 2000: 21). In a search for the lived experiences of landscape, Heidegger's (1962) phenomenology infiltrated archaeology (Ingold 1993, 2000; Gosden 1994; Tilley 2004), with notions such as embodiment, practice and materiality (Bender et al. 2007; Tilley 2008; Thomas 2012). Despite the importance of such approaches for a holistic understanding of the landscape, one cannot overlook that cultural processes, which do shape the physical world and

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Punctuated-Equilibrium Model and the "Boom Bust" Cyclical Evolution-Devolution Model analysed in Bintliff 1997: 17-33; Attema *et al.* 2010: 26-29.

contribute to the creation and transformation of spaces, leave ambiguous material traces that survey data cannot highlight. For that reason researchers (e.g. Bintliff 2013) have actively criticised phenomenology in landscape archaeology.

Finally, in more recent years researchers have discussed, in a more measured way, the benefits of a holistic approach to understanding the relationship between human society and its natural environment through a more tightly integrated set of questions (Kouchoukos and Wilkinson 2007: 13; Bintliff 2013: 47). This approach is aligned with the goals of landscape archaeology, which considers spatial relationships of artefacts and aims to shed light on the mutual interrelationship of natural and cultural processes to reconstruct a more dynamic history of ancient societies in their respective environments (Knapp and Ashmore 1999; Wilkinson 2004). Given (2013: 15) describes recent theoretically engaged survey projects as 'second wave', with the defining characteristic as the integration of surface data with landscape theory. One such survey is the TÆSP in Cyprus (Given et al. 2013), which covers an area outside of the scope of this study.

To conclude, available theory and methodology allows the multi-scalar investigation of landscape with wide interpretative possibilities (Kouchoukos and Wilkinson 2007: 10). Yet, while one can now spatially identify a site and perhaps introduce it in a large-scale interpretation, the challenge remains to flesh out notions concerning issues of contact, production vs. consumption, trade and the interrelated diachronic history of occupation in different regions. This is something that survey data cannot produce unambiguously and often requires additional contextualised material from excavations. The combination of survey and excavation data may help better contextualise and to a degree overcome evidence biased from different directions. It is through this combination that the present study is attempting a more nuanced diachronic settlement pattern proposal; one that can embrace the plurality of behaviour attested from small-scale excavated materials to large-scale settlement and regional interaction.

The Cypriot Bronze Age Background

When viewing examples of other survey projects in the Mediterranean (e.g. Attema *et al.* 2010: 12-16), one may argue that settlement pattern studies in Bronze Age Cypriot archaeology followed a relatively conservative path; a path this study relates principally to the nature of archaeological activities on the island from the onset of their practice. Prior to the 1950s archaeologists sought to construct the foundations of and structure a terra incognita and thus focused primarily on data collection and classification. The earliest attempt to understand the spatial association of archaeological sites in Cyprus occurred in Myres and Ohnefalsch-Richter's (1899) division of the island into 8 zones. Stanley Price (1979a: 56, figs. 12, 21) later decreased that number to 6, following the concurrent administrative division of the island. Given the limited material evidence, he aimed to spatially classify and reference, rather than interpret location trends or preferences and inter-community relations. Similarly, Gjerstad (1926: 17) proposed an artificial geographical division of the island in order to facilitate separate investigation of areas, which would support a subsequently deeper understanding of human interaction. These areas formed part of the distinguished work of the Swedish Cyprus Expedition, which recorded a considerable number of sites from the 'Stone Age' to the Roman period and analysed pottery and other artefacts. As the expedition focused on setting the material foundation of Cypriot archaeology, its work did not incorporate extensive geographic information. Landscape characteristics of sites or regions were at this time limited to brief introductory chapters, which incorporated general observations on proximity to water and mineral resources (e.g. Gjerstad *et al.* 1934-1937; Westolm 1936; Sjöqvist 1940a, 1940b; Gjerstad 1948; Vessberg and Westhom 1956; Dikaios and Stewart 1962; Åström 1957, 1972a, 1972b).

Christodoulou's land use assessment

In the following decades Christodoulou (1959) produced the first attempt at synthesising settlement location using a socio-economic framework with a geographical study of traditional settlement patterns; a combination still broadly used in the study of past societies (e.g. Georgiou 2006). Christodoulou examined traditional economy from the perspective of the land use of Cyprus between the late 19th and early 20th centuries to discuss the variety of relationships developed amongst villages and wider regions of the island (fig. 1.1), and provided an unprecedented ethnographic study of the Cypriot rural economy. His work is particularly influential and along with Catling's (1962) publication of the results of the archaeological survey of Cyprus has set the basis of settlement pattern investigation for the island's Bronze Age.

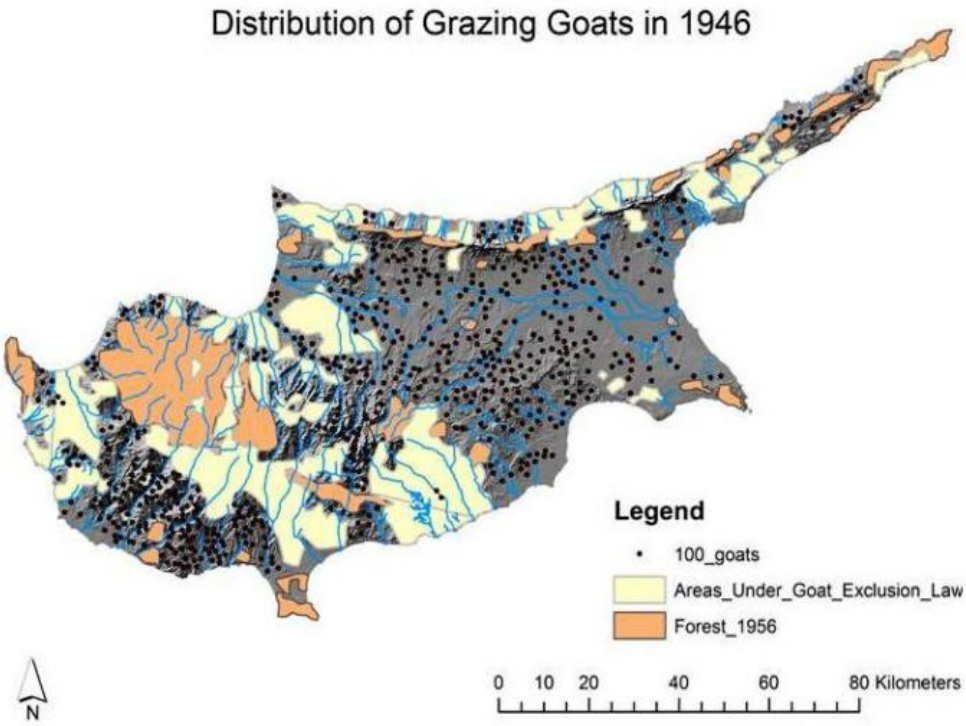


Figure 1.1. Christodoulou's map of grazing goats' distribution and how this affected local administration (adapted from Christodoulou 1959: 190-191, figs. 104-105).

Catling's Tripartite Model

Even though the aforementioned survey aimed to represent monuments from the prehistoric to the medieval period (Hadjisavvas 2004: 37), Catling discussed in unparalleled detail the Bronze Age results, particularly those of the LBA. His publication marks the earliest attempt at systematically investigating the spatial association of Bronze Age Cypriot archaeological settlements, and follows concurrent disciplinary trends– the traditional ecological approach, which emphasised on the causal relation between settlement pattern, environment and technology (Trigger 2007: 247-249). Catling implemented a tripartite settlement and economic system that encompassed rich coastal trading centres, inland rural settlements and inland production sites located primarily around the Troodos foothills and mainly associated with copper mining (fig.1.2) (Catling 1962: 144).

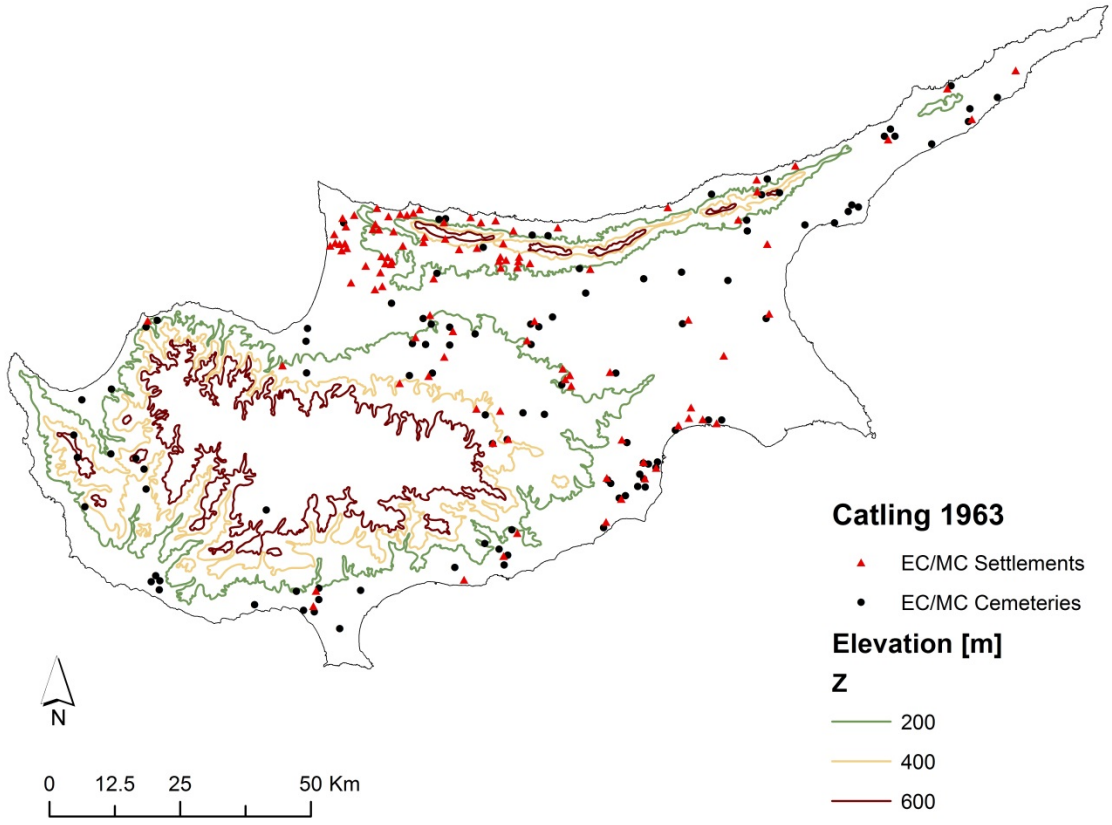


Figure 1.2 EC/MC site distribution based on Catling's survey (adapted from Catling 1962).

Following widely accepted interpretations of the copper economy of the island, Catling introduced elements of central place theory with the inclusion of coastal settlements as trading centres controlling the rural hinterland, a concept adopted by subsequent studies (Stanley Price 1979a: 81). Catling's pioneering work, while largely descriptive, implicitly presents a unidirectional relation between rural villages and urban centres,[2] an element also retained in later researchers. Namely, he tends to stress the supportive role of rural hinterland and the decision-making authority of urban centres characterised by complex economic and socio-political relationships. As Schwartz and Falconer (1994:2) discussed, this is a typical representation of urban-rural relations in early complex societies, especially within the period in which Catling's survey took place. It is important, however, to note that Catling's article predates a number of aforementioned ground-breaking publications on archaeological survey, from the 1970s onwards; approaches, which inspired, to a degree, the work of archaeologists undertaking surveys after 1974 in southern Cyprus (Adovasio *et al.* 1975; Peltenburg 1979; Rupp 1981; Baird 1984-1985, 1987), including those areas considered in the present study. For instance, the aforementioned shift of interest from settlement to landscape archaeology, especially with the introduction of 'off-site archaeology' (Foley 1981a, 1981b), has initially had little to no direct impact on the methodology of the earliest surveys in Cyprus. Survey projects on the one hand broadened their data sources by introducing ethnographic studies on land-use patterns and/or by employing geologists and geographers to describe the associated landscape (Gomez 1982, 1987; Gomez *et al.* 2004: 6; Held 1988). On the other hand, they were never clearly emancipated from Catling's settlement pattern or Christodoulou's land-use assessment.

Catling's publication is exceptionally influential if not dominant in systematic and intuitive surveys and interpretations of material associations (e.g. Swiny 2004: 58;

[2] Introduced by Childe 1942, 1950, concisely presented in Whittaker 2005 and widely challenged by Falconer 1994: 122; Hayden 1994: 201; Schwartz and Falconer 1994: 1; Smith 1994: 144; Chevitarese 2005: 297-298; Trigger 2007: 324-325; Attema *et al.* 2010: 8-10; Veikou 2010: 171-172; Yoffee 2011: 308.

Negbi 2005: 5-6, Antoniadou 2007: 487-488; Steel 2010: 107-108). As a result settlement pattern discussions focus almost exclusively on the LBA and have been frequently criticised for largely ignoring the EBA and the early stages of the MBA (Georgiou 2006: 20; Crewe 2007a: 9) - the incipient stages of the LBA urban phenomenon. This problem is exacerbated by the lack of sufficient examples of archaeological sites from earlier chronological periods and the problematic chronology linked to ceramic typology, discussed in Chapter Two (pp.60-63).

While a widespread reliance on Catling's model points to a generally useful consensus among the interpretations of Bronze Age Cyprus, the persistent adoption without significant critical revisit of a model proposed in the 1960s demonstrates what Jones and Richardson (2012) termed "archaeological comfortability". Namely, in the conservative case of Bronze Age Cyprus, despite excavation of non-conforming sites to Catling's model, subsequent research has reconfigured the 1960s model to accommodate new discoveries, rather than approaching such 'anomalies' as separate case studies, required to appraise and interpret the island's overall diversity.

Keswani's models of local exchange

As discussed, a wide range of concepts are influencing archaeological interpretation and researchers often proceed to support evermore specific theoretical approaches. Although this practice facilitates a clearer representation and communication of complex material evidence, some researchers criticised the selective application of theoretical models on dissimilar regions and chronological periods as promoting an inequity of utility (Crewe 2007a: 11; Carballo and Pluckhahn 2007: 621), based on the observation that models often embraced spatio-temporal case-specific particularities. Despite the perils of introducing context-derived models to explain multifarious archaeological data, tested theoretical models from New World Archaeology came to increasingly frame case studies across the globe, including Bronze Age Cyprus.

Keswani adjusted Catling's model to incorporate newly excavated non-coastal settlements (figs.1.3-1.4) in a theoretically innovative contribution, which appraises intra-island variations in the developmental trajectory of LC urban politico-economic organisation. She used the term "secondary coastal centres" to characterise for instance Alassa-*Paleotaverna*, and distinguish them from "primary centres", such as Enkomi and Kalavasos (Keswani 1993: 79). Based on the available evidence, Keswani associated secondary centres with ceremonial or religious activities (Keswani 1993: 80); an association that based on more recent archaeological discoveries appears to lack a clear or patterned relation with product collection and redistribution.

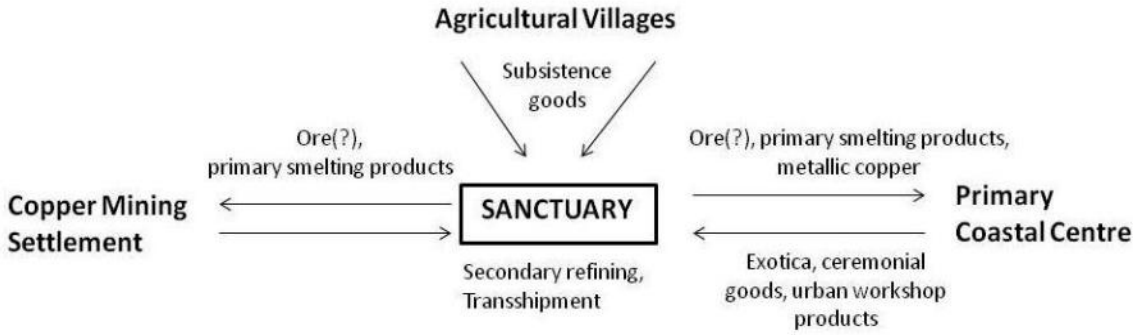


Figure 1.2 Keswani's settlement pattern model (adapted from Keswani 1993: 72, fig.2).

Despite problems stemming from material limitations and a conservative lean toward Catling's model, Keswani's innovative contribution to the market models, which were frequently employed in Cypriot archaeology (Merrillees 1974; Muhly 1982; Stech 1982; Knapp 1986a; Muhly *et al.* 1988), is distinguished by the introduction of theoretical frameworks borrowed from Mesoamerican Archaeology. Keswani, employed the example of staple and wealth finance inspired by D'Altroy and Earle (1985). This is a two-tier model frequently employed in archaeological studies (e.g. Wilkinson *et al.* 2007: 53), which involves two types of economic interaction. Keswani regarded this model apposite for the LC economic organisation and subsequently other researchers incorporated her proposal into material studies (e.g. Webb 2002: 128-135).

The staple finance model involves the collection and redistribution of subsistence supplies as tribute, while the wealth finance model is characterised by remuneration of prestigious wealth objects to administrative personnel. Keswani proposed that staple finance was the predominant system at sites with evidence for large-scale storage of agricultural products, such as Kalavasos-*Ayios Dhimitrios*, Maroni-*Vournes* and Alassa-*Paleotaverna*, and that wealth finance was characteristic of primary settlements, which contained large amounts of prestige artefacts, but lacked the aforementioned facilities.

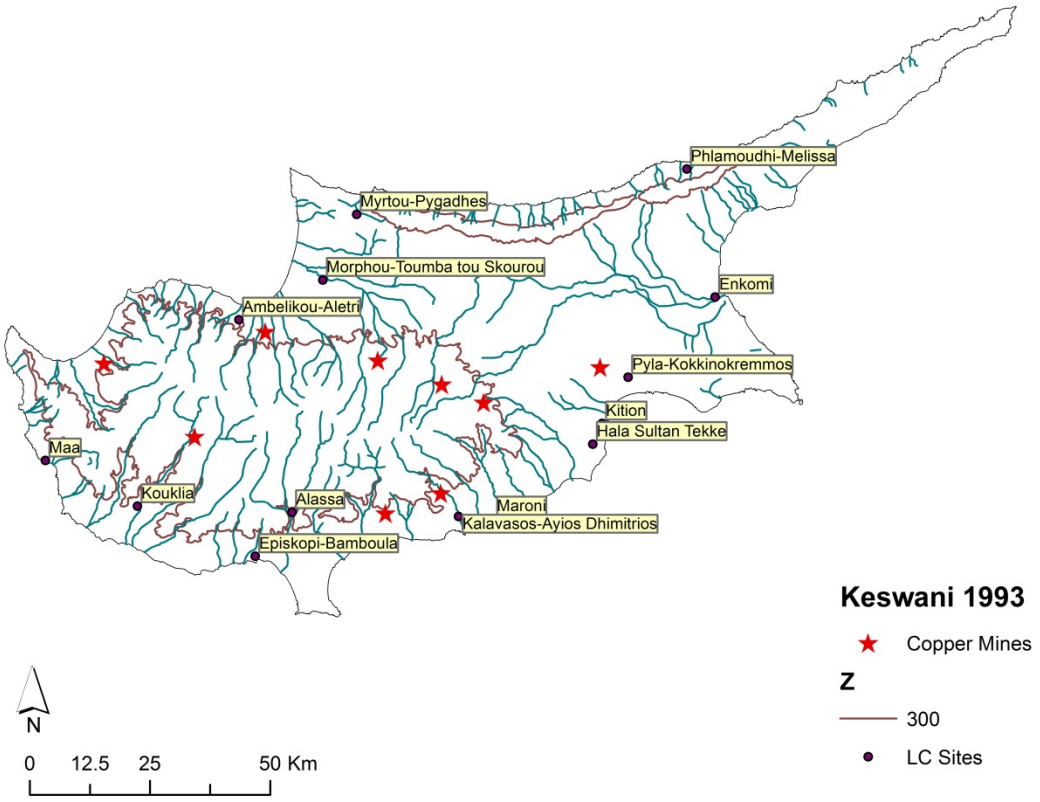


Figure 1.3 Keswani's map of LC sites and copper (adapted from Keswani 1993: 74, fig. 1).

Keswani's focus on theoretically explaining the LBA material evidence did not sufficiently highlight other important aspects of the Cypriot landscape, such as agricultural productivity. For example, in a discussion surrounding lack of large storage facilities from Enkomi, Kition and Hala Sultan Tekke, in comparison to *Ayios*

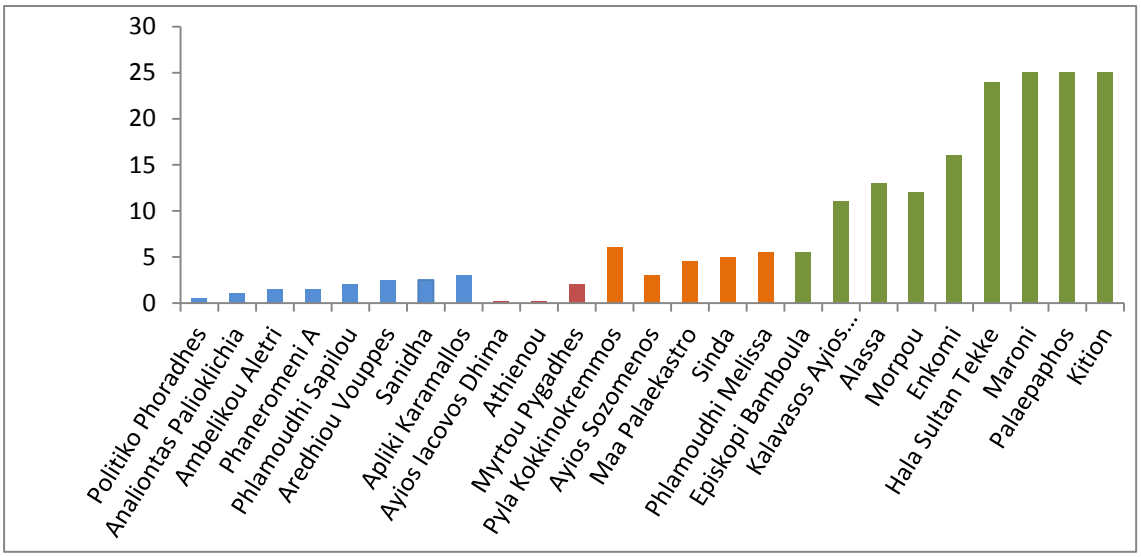
Dhimitrios, Apliki-*Karamallos* (Du Plat Taylor 1952: 133-143) and Athienou (Dothan and Ben-Tor 1983: 14-20), she explained this distinction as a product of inadequate archaeological evidence or lack of staple finance requirements. In addition, despite Keswani's theoretically pioneering interpretation of the Cypriot LBA, in following years Earle, one of the model's chief proponents, admitted the model's heuristic character and proposed that the economic base of complex societies usually involves a mixture of staple and wealth finance (Earle 2002: 193 ; Earle and Smith 2012 : 241). In fact, he argued that economic stability is greater if flexibility exists between the two types of finance (Earle 2002: 194).

Keswani's theoretical contribution is further attested in her seminal 1996 article, in which she discusses a widely supported regional character of the LC polities (Peltenburg 1996; Webb 2007: 270-271). Deeply influenced by the Peer Polity Interaction model (Renfrew and Cherry 1986), she deduced a series of 'heterarchical polities', inspired by Crumley (1979). She interpreted the variability observed in different LC urban elements as the result of independent locally based developments, contrary to externally imposed patterns and, based on burial evidence, categorised LBA settlements into two groups. The first held Alassa, Maroni and Kalavasos as created by older populations residing in the relevant valleys that maintained a hierarchical socio-political organisation. In the second, *Toumba tou Skourou*, Enkomi and Hala Sultan Tekke derived from a heterogeneous population that were initially characterised by heterarchical socio-political organisation and aiming to accomplish specific economic goals (Keswani 1996: 236-237). Keswani's interpretation for the emergence of autonomous polities presents chronological and material coherence and importantly emphasises the regional aspects of the LBA phenomenon. However, she often relies on demographic estimations (Keswani 1996: 77-79) to support politico-economic relations; which is an acknowledged tenuous relationship in archaeological interpretation (Reynolds 2011: 343).

Knapp's social model of Protohistoric Bronze Age Cyprus

Regionalism is not a universally accepted socio-political interpretation for the LBA Cyprus. Knapp (1997: 53-61; 1999: 232; 2013b: 354-355, 437-438), who adjusted Catling's and elaborated Keswani's model, while founded on the same parameters, supports an island wide socio-political configuration (fig.1.5-1.6). His argument is chiefly based on LBA written sources referring to the kingdom and international economic activities of *Alashiya*, which is commonly identified with Cyprus, and is discussed in the following section (Knapp 1986a, 1986b, 1996a).

Knapp was the first to incorporate a discussion relating site topography with agricultural, metallurgical and social processes of what he classified as ProBA Cyprus (tbls.1A-B) (Knapp 2008: 138-139). In addition, Knapp's settlement pattern model is so far the most analytical approach in the relation of different levels of settlement hierarchy (Knapp 2008: 139, fig.23; 2013b: 354, fig.94). However, a significant part of his argumentation relies on site size estimations, which are widely discussed as problematic in relation to assessment of the spatial extent, functions or the relative socio-political importance of sites (Drennan and Peterson 2004: 543-545; Iacovou



2007: 1-2).

Figure 1.5 Knapp's ProBA site size (hectares) approximations (adapted from Knapp 2013b: 355, fig.95).

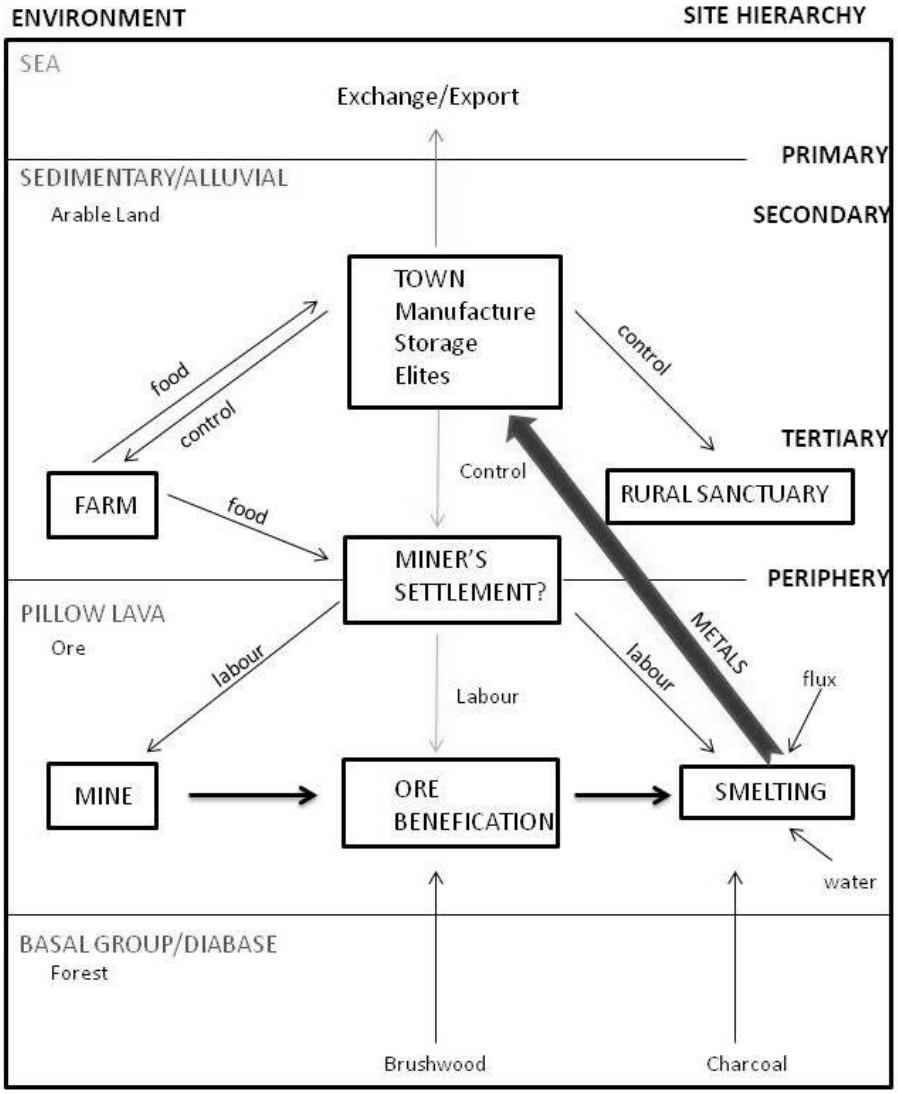


Figure 1.6 Knapp's social model of ProBA Cyprus (adapted from Knapp 2013b: 354, fig.94).

Notwithstanding the interpretational diversity of the proposed models, there is general consensus that copper acted as the driving force towards a more complex economic and socio-political structure and settlement system (Muhly 1985: 123; Knapp 1993a: 89, 91, 94-96; 1994: 291; 2013a; Manning 1993: 44, 46-47), while external trade and increased prosperity was of equal importance at least from the MCIII. Enkomi, the most extensively excavated and widely researched LBA site in Cyprus, is at the heart of this relationship. Additionally, Enkomi was the focus of the 'archaic state' model, according to which one site, through gaining control over copper resources and trade, came to control the island's Bronze Age international relations. Elaborating on the regional infrastructure of this 'archaic state', Peltenburg proposed a settlement organisation

scheme, involving a series of fortification structures dispersed between the east coast and the copper resources at Troodos. Those fortifications were suggestive of redistributive centres (Peltenburg 1996: 35), based on the evidence of trade at Enkomi and textual information from Mari and Babylon concerning Alashiyan copper.

Alashiya, its textual profile, location, character and influence is one of the most debated topics in Cypriot archaeology. The present study with its local and regional focus attempts to reveal some of the less formalised contributing elements of what potentially consists of "Alashiya". In preparation for this, however, it is necessary to assess the available information.

Alashiya: Textual and Material Profile

The identification of Cyprus with *Alashiya* originates from discussions surrounding the Amarna letters, although *Alashiya* and its copper sources appear as early as the 18th-17th centuries BCE in references from Mari, Babylon and Alalakh (Knapp 1996c: 17-20, 30). These sources mention *Alashiya* as a geographic entity, providing no detail on its location, or politico-economic structure. Between the 15th and 12th centuries BCE, Egyptian and Hittite sources placed *Alashiya* within their politico-economic spheres, yet omitted detailed geopolitical information, beyond a general consensus that this place is located in or near the sea (de Martino 2008; EA 33, 34, 37, 38). Among these texts, however, it is possible to infer political figures, including for example, a 'chief' of *Alashiya*, who paid tribute to Tuthmosis III, or references that *Alashiya* was a vassal state paying tribute to the Hittite ruler (de Martino 2008: 255). These relations, especially the Hittite link, are not materially substantiated, with the exception of a few Hittite artefacts found in Cyprus (Åström 1989: 16; Karageorghis 1982: 68; South 1997: 163; 2000: 355; Todd 2001: 205), and the widely attested RL pottery in Boğazköy-Hattusa (Eriksson 1993: 129-134).

The most detailed and controversial information regarding *Alashiya* comes from the 14th century BCE onwards in the Amarna letters, through a series of exchanges

between Egypt and *Alashiya* (Malbran-Labat 1999). Complex politico-economic relations are apparent in key words, such as the Alashiyan representative addressing the king of Egypt as "brother", intimating a sense of equality (Knapp 2008: 326). In general, *Alashiya* is mentioned as an important diplomatic power, participating actively in 'elite' gift exchange (Peltenburg 2012: 11; Peltenburg and Iacovou 2012: 350), which involved copper on a large scale. *Alashiya* was also mentioned as sacked by the "sea peoples" during the 8th year of Rameses III (1189 BCE) (Kitchen 1983: 39-40; Sandars 1985: 119; Muhly 1984: 38-39; Knapp 1996c: 48), while in later Egyptian sources, as surviving the 12th century turmoil (Åström 1989: 202-203; Steel 2004a: 185). Like preceding sources, these textual accounts seem at odds with the material evidence, which is hardly surprising, considering the uncertainties and controversy surrounding the textual representation of "Sea Peoples" (Sherratt 1998: 294; Oren 2000).

These discrepancies become more perplexing when scholars attempt to reconcile references to an eponymous king of *Alashiya*, "Kushmeshusa" with a clear lack of archaeological evidence supporting island-wide economic and socio-political integration, networking or form of organisation (RS 94.2177 and 2491, RS 94.2475; Malbran-Labat 1995: 105; 1999; Pickles and Peltenburg 1998: 86-91; Yon 2003: 47-48; Singer 2006: 255). Given the plurality of what such organisation may entail and represent, some of which are discussed by Peltenburg (2012), it is likely that there exist noticeable semantic and diachronic differences between the intra-island and extra-island status of people directly participating in the diplomatic and economic framework of the Near East. That is, although the traditional Mesopotamian state is not to be anticipated in the LC, a complex form of formalised or institutionalised politico-economic relations still needs to be theoretically framed and diachronically investigated (Knapp 2013b: 440-441).

The material diversity of the island between the 18th and 11th centuries suggests the character and degree of Alashiya politico-economic was probably not static and in fact likely subjected to drastic changes. Changes may have involved reconfiguration in the production scale of various products, locally distinct pace in settlement pattern shift

throughout the island, continuous network renegotiation and fluctuating scales of direct or indirect participation in international trade. From the material perspective, close to the time that *Alashiya*n economic activities are mentioned in the written records, the earliest Near Eastern imports appeared in Cypriot contexts (Steel 2004a: 185). However the practicalities, processes and local and/or island-wide organisation of exporting Alashiyan copper to the Near East are materially and epigraphically unclear.

This is exacerbated by a lack of consensus on the actual politico-economic nature and influence of *Alashiya*. As mentioned in the previous sections, some researchers support that Enkomi emerged as a single 'archaic state' during the 16th century (Muhly 1989; Knapp 1988b, 1993a: 99; 1994: 424-428; 1997a: 65-66; Knapp and Cherry 1994: 37-38; Peltenburg 1996; Webb 1999: 205), which may correspond to the administrative centre of *Alashiya* (Dussaud 1952; Merrillees 1969, 1987; Muhly 1989: 229; Knapp 1996c). *Alashiya* as first mentioned in the Near Eastern texts and if Cypriot probably corresponds to a part of the island possessing the required complexity and infrastructure for participation in international trade, through large-scale exportation of copper. It is not surprising then that Enkomi is a popular candidate (fig.1.7). Problems, however, emerge with the petrographic identification of the 14th-13th century alashiyan Amarna letters with the geological profile of the area south of Troodos, that is, in the general vicinity of Alassa and Kalavasos (Goren *et al.* 2003, 2004). Despite the proximity of these areas to known copper mines, their spatial analysis (Chapters Three and Five) suggests a rural lifestyle, while the excavated material from tombs, intimates a lack of formalised or intensive extra-island communications prior to the 16th century BCE (Chapter Sever, pp.308-323). This may suggest that Alassa and Kalavasos had not developed such wide-reaching economic networks as early as the 18th century BCE appearance of *Alashiya* in the written records. Moreover, based on the methodological limitations of petrographic analysis, not all researchers (Merrillees 2011) are convinced of the validity of the above results. One cannot but wait for the implementation of additional sourcing techniques.

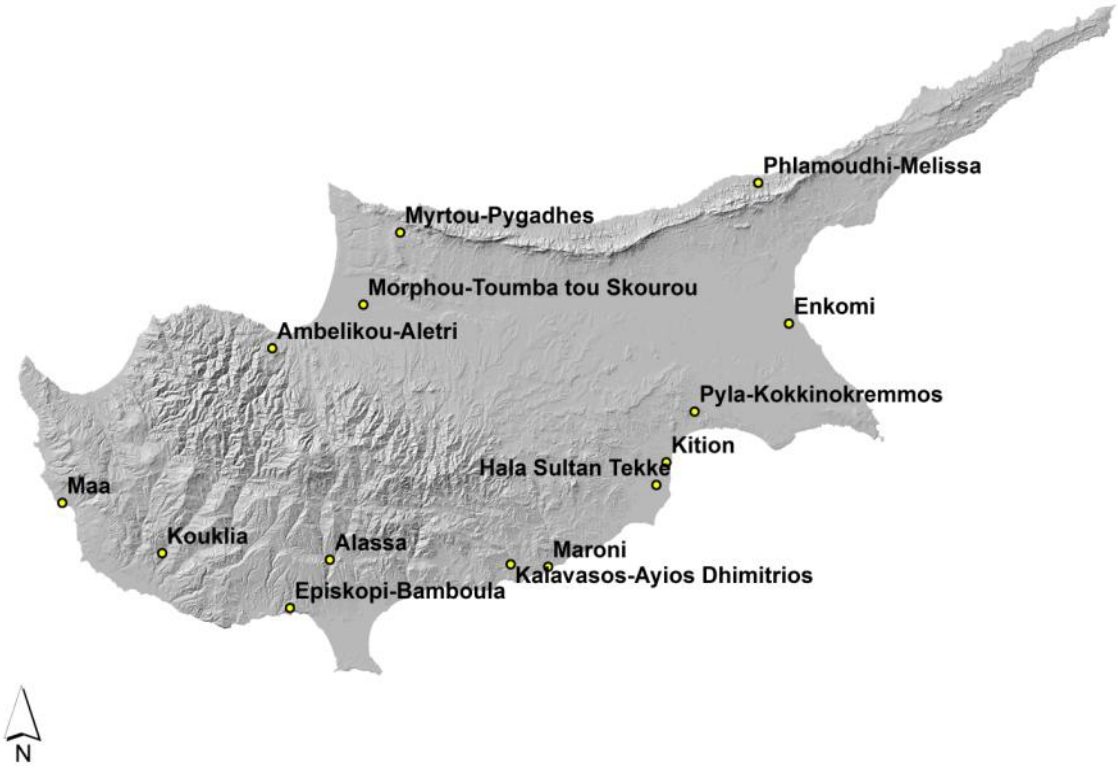


Figure 1.7 Map with mentioned LC sites (produced by the author on ArcGIS).

Knapp, while considering the dynamic nature of economic networks and socio-economic relations, demonstrates a strong interest in locating a unified politico-economic entity; a focus, which may be obscuring local and regional networks participating and potentially supporting the more materially and textually visible network - *Alashiya*. For instance, he considers that mining and transportation of impressive amounts of copper attested in the sources and found in the Uluburun shipwreck (Pulak 2000: 141-143) was possible only through a form of centralised organisation. That is, despite acknowledging that the material record does not support the existence of a king in the Near Eastern sense and that texts present only selected aspects of the nature of international trade in the Eastern Mediterranean (Knapp 1993b: 332; Knapp and Cherry 2004: 128), he supports the existence of an island-wide authority; one, which was at least controlling copper production and trade, but also maintaining subsistence and support of the required work force through well-organised redistributive systems.

Knapp is the most ardent supporter and extensive researcher of an Alashiyan 'king' at least from the mid-14th into the late 13th c. BCE (2013b: 438). Interestingly, in his recent book devoted to the archaeology of Cyprus from the earliest Prehistory to the end of the Bronze Age he follows a more nuanced approach to the material and textual discrepancy of Alashiya. He specifically compares his interpretation regarding a centralised hierarchical authority on the island, and Peltenburg's recent (2012) proposal on a household organisation on a more heterarchical basis. He concludes suggesting that the "real dilemma" is in fact the ambiguity of the material record and particularly the different ways archaeologists perceive aspects of materiality (Knapp 2013b: 445). He finally ascribes the difference between his and Peltenburg's interpretation to differing perspectives, characterises Peltenburg's view as "minimalist" and his as "maximalist" (2013b:446), and permits an interpretation that lies somewhere along the spectrum between these two views.

One such interpretation is Manning and De Mita's (1997) argument regarding the difficulties surrounding a centralised authority interpretation for the LC; an argument that, according to Knapp (2013b: 439), attracted little attention. Manning and De Mita contrasted the required amount of effort and powerful ideology for controlling the widespread Cypriot resources with the lack of material evidence for such characteristics, to argue for independent elite groups located in different parts of the island (1997: 108). They additionally discussed that a 'king' would at best have "nominal control" over them, and in fact the complex LC administrative structure was formed by " a highly intertwined web of political and kin alliances" (1997: 113).

The above argument, in association with the lack of clear material evidence for a centralised authority may advocate that a fuller understanding of *Alashiya'*s character requires a closer examination of those underlying regional relations. Particularly intriguing would be a regional reconstruction of the participation in Eastern Mediterranean international trade and its subsequent juxtaposition with contemporary textual evidence. This is one of the topics of this study, which aims to contribute to a resolution through a multi-scalar investigation of regional interaction patterns.

Alashiya: From Local to Global

As mentioned, the earliest textual evidence of Alashiya's international reach dates to the 18th century. Would that suggest that the power of a single mediator stirred, motivated and achieved the introduction of the island to international trade? Was this initiative taken by extra-island elements? Or conversely, did local interest groups initiative contact? Were the local communities actively or passively engaging in long distance trade networks? Was this an elite motivated interaction undertaken to build status and promote legitimisation of a new order (Webb 2005: 180)? Or was this documented event one successful attempt amongst myriad efforts?

The material evidence of the island, especially in the 18th century BCE does not yet support a singular leading political figure, but does suggest external contact (Crewe 2013: 47). Therefore, in order to understand processes of globalisation, it may be useful to investigate correlates of formal and informal participation in international trade, how they developed (parallel, intertwined), whether extra-island contexts were punctuated or steadily increasing and how articulations differed throughout the island. As the distinction of formal from informal, and the private from public spheres in the LC is argued to be difficult (Peltenburg 2012: 8), a multi-scalar study focusing on local and regional spheres of interaction can be useful in revealing the inter-scalar means by which these spheres interacted. This is not a novel approach in the archaeology of the Eastern Mediterranean. Beaujard (2011: 17) has already argued that the role of private traders of the 2nd millennium has been greatly underestimated, while Monroe (2009) investigated multiple facets of LBA networks to demonstrate their simplification in textual representation. This seems to suggest the possibility that the incipience of such networks was non-linear and rather more organic. To test this possibility, it is worth examining if larger more visible networks developed out of pre-existing smaller-scale networks to accomplish more specific purposes. Therefore, a diachronic investigation encompassing the 2nd millennium is useful to shed light on the materially and textually more pronounced LBA.

In addition, understanding the role of the attested leading political figures in trade could benefit from an assessment of their relation with the active participants in exchange networks, namely traders and merchants; an approach used in research from Assyria (Glassner 2002: 148) and Ugarit (e.g. Schloen 2001; McGeough 2007; Monroe 2009; Routledge and McGeough 2009). Regarding LBA Cyprus, Brown (2013: 11) argued that the division between the state (formal) and private (informal) sphere was less defined. This argument is based on the generally mercantile character of the Alashiyan correspondence, and on textual information of Alashiyan individuals and families residing in Ugarit, involved primarily in mercantile activities (ship ownership and trade) that bestowed significant economic resources and status (KTU 4.352; Virolleaud 1965: 117-118; Steel 2013: 30). Can this line of investigation argue that LBA informal interactions developed from less formal, antecedent and locally distinct economic networks?

The processes of globalisation are far from clear, as they involve multiple scales, the configurations of which, as Knappett (2011: 9) discussed, change as power shifts. This raises challenges when trying to provide a nuanced understanding to mechanisms developing and reconfiguring over centuries. Additional challenges emerge from limited material evidence, which is un-representative or misrepresenting elements of large-scale integration. Thus, it is unclear if and how communities or regions integrated to form an island-wide economic network and how, or if, this can be assessed as beneficial.

In a similar vein, Hodos (2010a: 98; 2010b: 25) has suggested that global cultures (encompassing shared material culture and symbolism) may enable and encourage local integration and incorporation, without an inherent element of control and dependence. The challenge and interest lies, as Knappett (2011: 35-36) discussed, in understanding how these different scales articulate and/or co-construct each other. In fact, attempts at exploring such heterarhical socio-economic collaboration, particularly through the abilities of individuals to operate across different scales from local to global has been termed ‘glocalization’ (Swyngedouw 2004; Knappett 2011:

10). The latter supports that investigating local settlement patterns is fundamental in assessing spatial (physical) and social networking (Knappett 2011: 10) - and for that reason comparing the three valleys' settlement patterns and associated material culture can prove useful in fleshing out such notions.

Studying regions in the Cypriot Bronze Age

In addition to Keswani's aforementioned publications (1993, 1996), one of the first attempts to appraise the regional dynamics underlying the impressive developments of the LBA is Georgiou's study on patterns of human settlement. In his 2006 PhD thesis, Georgiou analyses patterns from the Chalcolithic to the LCIA with a useful incorporation of topographical characteristics. Georgiou divided Cyprus into 12 geographically distinct regions, the "περιφέρειες" (peripheries), which he studied in association with landscape characteristics, such as elevation, proximity to natural and mineral resources and proximity to the sea, in order to establish probable intra-island networks of communication and trade. In addition he discussed issues of population distribution and fluctuation (Georgiou 2006: 12), which many studies, including the present, consider tenuous bases for discussions of social complexity (Fletcher 1981: 97; Ewens 2004: 37-38; Trigger 2007: 130; Corvisier 2008: 32-37), particularly when information concerning population structure is inaccessible (Hawks 2008: 18-19), and issues of mortality, fertility and age composition are not re-constructible (Giddens 2001: 604; Goodale *et al.* 2008: 179; Jackes and Meiklejohn 2008: 210-211; Meindl *et al.* 2008: 259-260).

Beyond Georgiou's individual attempt, interdisciplinary survey projects, including among others the Maroni Valley Archaeological Survey Project (MVASP) (Manning and Conwell 1992), the Canadian Palaepaphos Survey Project (CPSP) (Rupp 1983), SCSP (Given *et al*. 1999; Given and Knapp 2003), the TÆSP (Given *et al*. 2013), the Palaepaphos Landscape Project (Iacovou 2008b) and the Kouris Valley Project (KVP) (Jasink *et al.* 2008) employed multiple methodologies following developments in survey that place landscape in a more prominent position (fig.1.8). Nevertheless, only the most

recent SCSP and the TÆSP progressed to an in-depth, landscape-oriented interpretation of the location of sites, by focusing on their functional character and defining recurrent spatial patterns in relation to industrial landscape and a copper-oriented economy. In these interpretations one can observe the influence of the settlement pattern models discussed previously, despite the interpretative potential provided by the conspicuously rural valleys they investigated.

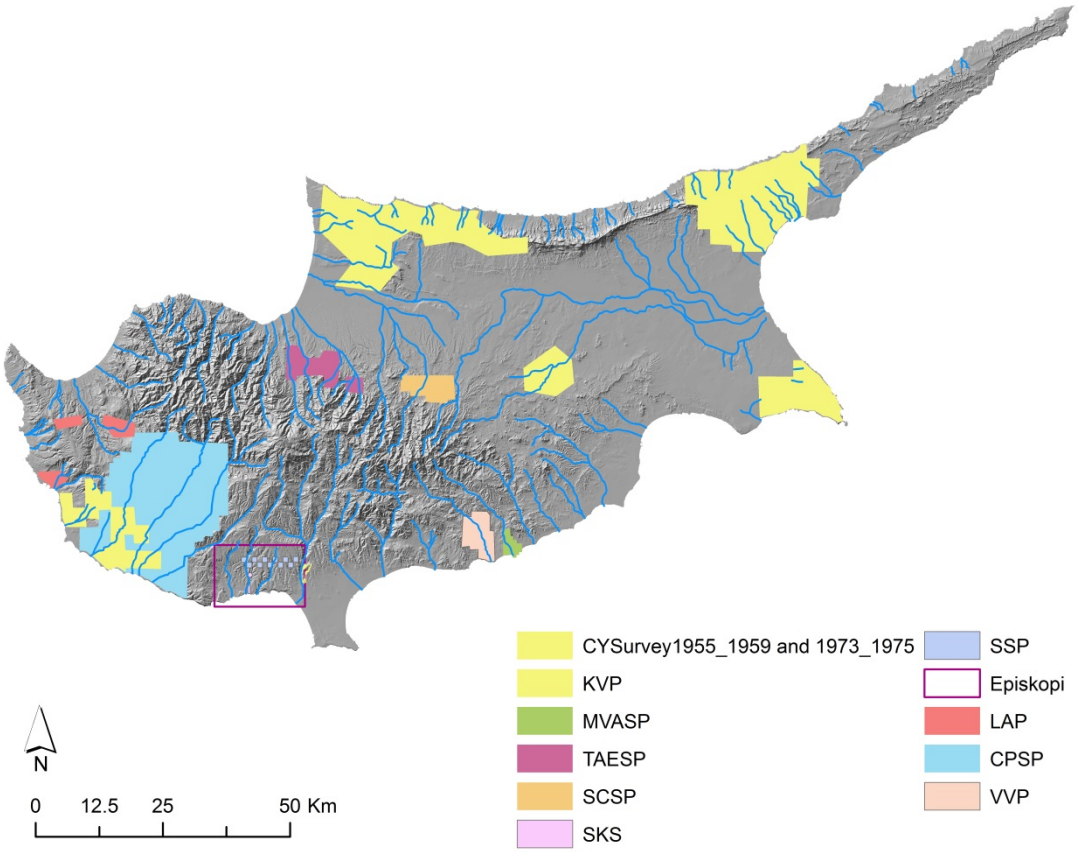


Figure 1.8 Map of regional archaeological surveys in Cyprus (produced by the author on ArcGIS).

Despite the theoretical elaboration and methodological rigour of the aforementioned surveys, the direct environmental surroundings of sites seem to be marginalised by the predominance of the undeniably important copper resources. Thus, the socio-political implications of human-landscape relationships remain

peripheral considerations. Additionally, the above examples indicate that the problem of discerning appropriate settlement patterns and human-landscape relations in Bronze Age Cyprus, similar to other geographic areas (see Wilkinson 2003: 5; Lönn 2012), is in part related to a rather rigid understanding of the surrounding landscape and the under-theorised nature of many, usually short-term, regional archaeological surveys. This is further attested by the problematic applicability of Keswani's and Knapp's models, which South (2002: 62-67) demonstrated by situating the multifunctional Kalavasos-*Ayios Dhimitrios*, the most important LBA site of the Vasilikos valley, comfortably within all levels of classification. The models' inflexibility is also observable in the problematic incorporation of atypical sites, such as Pyla-*Kokkinokremmos* and Maa-*Palaekastro* (Keswani 1996: 234; 2004: 155).

Based on the aforementioned theoretical limitations, settlement pattern examination or reconstruction would benefit from the expansion of its interpretive spectrum and the inclusion of additional sources of information. This study aims to demonstrate that landscape, earlier occupation histories (Pauketat and Alt 2003:157; Feinman 2012: 26-27), localised geographic and socio-political factors (Manning 2001: 80; Webb and Frankel 2013: 59), and the nature of local and regional interaction networks critically influence the sites' characteristics, despite their size and primary function. In order to support this argument with specific examples, this research introduces case studies of archaeological survey methodology, as applied in the **Kouris**, **Vasilikos** and **Maroni** valleys from the south central coast of Cyprus, through a series of research questions (fig.1.9).

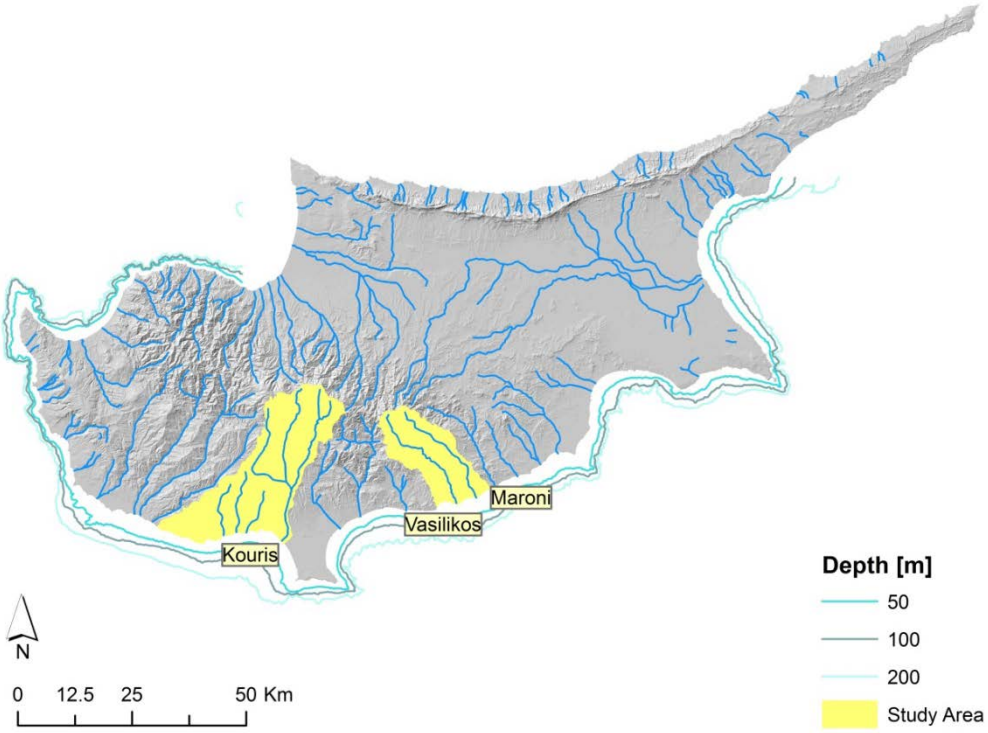


Figure 1.9 Map showing study area (produced by the author on ArcGIS).

Unresolved Questions

As demonstrated, despite intensive research and the large material dataset concerning the Cypriot Bronze Age, the limited spatial consideration of such material and the use of elaborate interpretative models cannot sufficiently support a holistic understanding of human-space relations. There still exist unresolved questions, which often affect the conduct of flexible interpretations and the future development of existing data. Excavation and especially survey data are often considered to be or have been exhausted of their interpretative value and are subsequently stored un-contextualised, with scant meta-data and in poorly accessible locations. As a result, researchers must often rely solely on out-dated publications, producing second-generation analysis that is received with mistrust and comparative analyses of regional data are frequently considered as an insurmountable problem (Driessen 2001: 51-53; Smith 2012: 322 with references).

Unresolved questions introduced and re-approached through the aims of this study are classified from general to more specific:

General

1. Why are the currently employed settlement pattern models for Bronze Age Cyprus often ineffectual and broadly inapplicable?
2. What information can form the basis for more inclusive comparative studies and more effective spatial analyses?
3. Why is a multi-scalar approach indispensable for the appraisal of economic and socio-political relations of Bronze Age Cyprus and other chronological periods and geographic areas?
4. In what ways can a separate yet combinatorial study of the relation between local, regional and possibly island-wide politico-economic interaction networks contribute to understanding patterns of globalisation, and reconstruction of the character of *Alashiya* of the Near Eastern texts?

Specific

5. What information can one obtain through the EC/MC place establishment, maintenance and abandonment in the landscape of the Kouris, Vasilikos and Maroni river valleys with regards to different scales of economic networking?
6. What is the association of LC settlement pattern shift, place-making and abandonment practices with the landscape of the aforementioned valleys?
7. What is the relation between landscape and formalisation of politico-economic authority in the three case studies?
8. What are the politico-economic connotations of the material and particularly architectural similarities observed in the three valleys?
9. What is the politico-economic status and inter-regional association of the sites (particularly the LBA sites) of the aforementioned case studies?

Aims and theoretical avenues

This study emphasises diachronic local and regional interaction networks and aims to incorporate both the natural and where possible the cognitive or social landscape. Following Casey's anthropological approach (1996, 2008), landscape as space and contextualised place is a promising avenue for answering the above questions, because it provides *both* the natural and cognitive backdrop of communities beyond their constructed space, which traditionally attracts archaeological attention. What is more, it is widely considered to offer the economic infrastructure for communities, contain information concerning environmental change, within which communities interacted, and can shed light on long-term changes in settlement patterns and their active association with decision-making (Wilkinson 2003: 4).

Following this, the central aim in this study is to communicate a rigorous understanding of the complications surrounding the implementation of a successful comparative archaeological interpretation, by following a path, which involves in-depth investigation of landscape productivity and alteration patterns. This goal also follows the view that a comprehensive understanding of the above characteristics is useful for the creation of standardised terminology, which is generally considered central to large-scale comparative regional studies (Fentress 2000: 50; Peterson and Drennan 2012: 88-90, 128; Smith and Peregrine 2012: 10, fig.2.1). Akin aims are:

1. Evaluating and understanding the role of landscape in the display of materially attested identities, and the ways these facilitate interaction.
2. Pursuing of a pattern that links the properties and diachronic use of landscape palimpsest with the formation and re-configuration of economic and socio-political aspects of human interaction (see also Van der Leeuw and Redman 2002: 599; Fisher 2009: 82-84; Feinman 2012: 26).

Answering the Questions – Resolving the Problems

The Kouris, Vasilikos and Maroni valleys have a long history of archaeological survey investigation and provide excellent examples for comparison of their landscape and Bronze Age material culture. While the landscape of the three valleys demonstrates common characteristics such as the river's natural heterogeneity and their vital role as sources of food, water and energy (Bayley 1995: 154; Johnson *et al.* 1995: 134-135; Gregory *et al.* 1991: 540), it appears that there have not been adequate comparative attempts to spatially frame the relevant archaeological information, beyond chronologically specific material comparisons (e.g. Russell 1989; Keswani 1989b, 2009; Cadogan 1996: 17; Manning 1998: 42; Iacovou 2008a: 626-627; Hadjisavvas 2009). The available comparative studies tend to focus on LBA architecture and favour description over interpretation (Hadjisavvas 2009: 131), or discuss only briefly the meaning, importance and meta-narratives of identified material similarities and/or differences (Fisher 2007, 2009a, 2009b), and in a way that does not often incorporate the relation of human communities with their surrounding landscape (Sterry 2008). Comparative discussions regarding landscape traditionally rely on proximity to the coast and copper resources (Courtois 1986; Hadjisavvas 1992a), and often refrain from addressing other characteristics such as geology, geomorphology and soil productivity.

Following the above observations, this study proposes an investigation of the valleys' common characteristics through a comparative analysis, which will incorporate the available material studies in a detailed landscape examination. An inclusive multi-scalar landscape approach may help overcome problems surrounding strict focus on certain resources or particular groups of distinct socio-economic and political influence. It further facilitates the incorporation of coexisting agents or groups of agents, who displayed variable identities through settlement patterning, and established and institutionalised their differences in a given space over time (Bradley 2000: 85; Feinman 2000: 155; Fisher and Feinman 2005: 64; González-Ruibal 2008: 257; Ames 2010: 16; Drennan *et al.* 2010: 71). Therefore, contrary to traditional approaches, this proposal is not restricted to the establishment of socio-

political relationships through the manipulation of landscape, an oft discussed topic concerning politically complex societies (Smith 2003: 272; Falconer and Redman 2009: 5). It rather follows more recent research emphasising landscape's incorporation of active agents, a wide variety of land related activities (see also Halstead 2000: 123; Barker 2005: 66; Conneller 2010: 188), and a series of concepts, such as knowledge, cognition and memory that contextualise landscape in human experience (Cosgrove 1984; 2006: 51; Lefebvre 1991; Bender 1993; Tilley 1994; Thomas 1993a, 1993b; Schama 1995; Hitchcock and Bartram 1998: 31, 34, 37; Barnes and Sheppard 2000:5; Hendon 2000: 44; Moore 2005: 1; Herrera 2007: 179; González-Ruibal 2008: 256-257; Van Dyke 2008: 277-278).

Due to the nature of the available material this study cannot extensively employ all the above notions, and will thus focus on the identification of attachment to landscape with materially supported observations. Specifically, it will test the applicability of more recent research on place-making practices (Bradley 2000: 106; Soja 2000: 24; Harmanşah 2011b: 644), which supports that they may provide invaluable insight into human relations, as they involve the establishment of foci of collective identities. As repeatedly discussed such an attempt requires the implementation of multiple scales of analysis, used to establish a thorough understanding of landscape's economic potential and its diachronic association with living communities.

Table 1A: Up to date relative and absolute chronology from Early Prehistory to the end of the Cypriot Bronze Age

Archaeological Periods (Knapp 2013: 27, tbl.2 *cf*. Knapp 1994: fig.9.2)	**Traditional Chronological Scheme (e.g. Steel 2004a: 13, tbl.1.1 Smith 2008: 13; Webb and Frankel 2013: 60, tbl.1)**	**Absolute Dates Cal BCE (Manning 2013)**
Late Epipalaeolithic	Akrotiri phase	11000-9000
Initial Aceramic Neolithic	Cypro-PPNA	9000-8500/8400
Early Aceramic Neolithic (EAN)		8500/8400-6800
EAN 1	Early Cypro-PPNB	8500/8400-7900
EAN 2	Middle Cypro-PPNB	7900-7600
EAN 3	Late Cypro-PPNB	7600-7000/6800
Late Aceramic Neolithic (LAN)	Khirokitia (Choirokoitia) Culture	7000/6800-5200
Ceramic Neolithic	Sotira Culture	5200/5000-4500/4000
Chalcolithic	Erimi Culture	4000/3900-2500/2400
	Early Chalcolithic	3900-3600/3400
	Middle Chalcolithic	3600/3400-2700
	Late Chalcolithic	2700-2500/2400
Prehistoric Bronze Age (PreBA)	**Philia-Early/Middle Cypriot**	**2400-1700**
PreBA1	**Philia 'Phase'**	**2400/2350-2250**
PreBA2	**Early Cypriot I-II**	**2250-2000**
PreBA3	**Early Cypriot III- Middle Cypriot I-II**	**2000-1750/1700**
Protohistoric Bronze Age (ProBA)	**Middle Cypriot III-Late Cypriot III**	**1750/1700-1050**
ProBA1	**Middle Cypriot III-Late Cypriot I**	**1700-≈1450 (no 14C)**
ProBA2	**Late Cypriot IIA-Late Cypriot IIC early**	**≈1450-1300**
ProBA3	**Late Cypriot IIC late- Late Cypriot IIIA**	**1300-1125/1100**
Early Iron Age	Late Cypriot IIIB	1125/1100-1050 BCE
Early Iron Age	Cypro-Geometric I	1050-1000 BCE

Table 1B: Traditional Chronological Schemes for Cypriot Archaeology

Traditional Chronological Period	*Absolute Chronology (Smith 2008: 13; Webb and Frankel 2013: 60, tbl.1)*
Akrotiri Phase	c. /10000-9500 BCE
Aceramic Neolithic	c. /9500-5800/5500 BCE
Ceramic Neolithic	c. 4900/4500-3900/3700 BCE
Chalcolithic	c. 3900/3700-2500/2300 BCE
Early Bronze Age (I-III) • Philia EC • ECI-II • ECIII	c. 2500/2300-1950 BCE c. 2450/2400-2300/2250 BCE c. 2300/2250-2150/2100 BCE c. 2150/2100-2000/1950 BCE
Middle Bronze Age I	c.1950-1850 BCE
Middle Bronze Age II	c. 1850-1750 BCE
Middle Bronze Age III	c. 1750-1650 BCE
Late Bronze Age IA	c. 1650-1550 BCE
Late Bronze Age IB	c. 1550-1450 BCE
Late Bronze Age IIA	c. 1450-1375 BCE
Late Bronze Age IIB	c. 1375-1300 BCE
Late Bronze Age IIC	c. 1300-1200 BCE
Late Bronze Age IIIA	c. 1200-1125 BCE
Late Bronze Age IIIB	c. 1125-1050 BCE
Cypro-Geometric	c. 1050-750 BCE
Cypro-Archaic I	c. 750-600 BCE
Cypro-Archaic II	c. 600-475 BCE
Cypro-Classical I	c. 475-400 BCE
Cypro-Classical II	c. 400-310 BCE
Hellenistic	310-100 BCE
Early Roman	100 BCE-300 CE
Late Roman	300-750 CE
Byzantine	750-1191 CE
Medieval	1191-1571 CE

Conventional Scheme (Steel 2004: 13, tbl.1.1)	*Revised Scheme (Knapp 1994, fig.9.2)*
Philia/EC-MC	*Prehistoric Bronze Age*
Philia	PreBA I
EC I-III	PreBA II
MC I-III	
MC-LC	*Protohistoric Bronze Age*
MCIII-LCI	ProBA I
LIIA-C	ProBA II
LCIIIA-B	ProBA III

Table 1C: Archaeological Traditions and Landscape Approaches

Tradition	**Concepts**	**Information and References**
Environmental Approach	Landscape = Environment	Characteristic approach of the early stages of archaeological exploration, repeatedly occurring from publications of early travellers to concurrent survey and excavation projects.
Topographical Approach	Landscape = Topography	Characteristic approach of short reconnaissance surveys undertaken prior to excavations. Their goal was to reconstruct landscape based on ancient writers (e., antiquarians' and travellers' notes.
Culture-History	Landscape= Part of a Culture	Characteristic of the early stages of archaeological discipline and influenced by geographical studies. This is evident in systematic use of geographic descriptions, artefact and site classification and seeking for environmental reasoning behind historical events. As part of this tradition the first surveys emerged, which actively considered resources and the relation of humans with environment.
Historical and Human Geography	Landscape = Part of History	The association of geography with history was attested as early as Herodotus *Historiae*. From the Annales and the understanding of time scales (Braudel 1949) and the employment of such notions in Archaeology (Bintliff 1991; Knapp 1992a, 1992b), to the introduction of 'Geographical History' by Myres (1953) and the 'Chamber theory' by Lehmann (1939) the long term relations between people and their geographical space became crucial to understanding the role of environment and geography in patterns of human behaviour.

Evolution/ Ecological Approaches	Landscape = Subsistence, survival, evolution	New Archaeology as early as the 1960's used ecology to approach socio-economic questions, focusing on cultural adaptation to environment. Important was the introduction of Earth Sciences, Geoarchaeology and Environmental Analysis, as part of understanding the natural background of human activities (Butzer 1971; Bintliff 1977).
Settlement Archaeology/ Settlement Pattern Studies	Landscape = Human Relations	The concept of 'settlement patterns' appeared as early as the 1950s (Willey 1953) and within a decade they were heavily influenced from different directions. Gradually settlement archaeology crystallised its own units of studies, such as the 'region' (Binford 1964; Bintliff et al. 1988; Kardulias 1994) and its own methodological considerations and 'sampling theory' (Flannery 1976; Cherry and Shennan 1978). This led to larger scale regional surveys (e.g. Braidwood and How 1960; MacDonald and Rapp 1972) and by the 1970's the 'New Wave' surveys (Bintliff 1994; Cherry 1994) became popular. The latter are characterised by high intensity, inclusion of the rural landscape (Cherry and Shennan 1978) and focus on the rise of complex societies. In the 1980s and 1990s settlement archaeology shifted to 'Landscape Approach', characterised by increasing multi-disciplinarily and subscription to concurrent methodological trends. Statistics, introduced in the 1950s and 1960s, are now productively employed to produce settlement pattern models and site hierarchies (Moody 1987). Researchers focus on the role of 'non-sites' and conduct 'siteless surveys', emphasising on geomorphology and geology.

		Within the realm of inter-disciplinarity, demographic archaeology (Bintliff and Sbonias 1999, 2000) and archaeological GIS are widely employed. Simultaneously, with the increase of survey projects and methodological avenues, issues of survey comparability (Dyson 1982; Keller and Rupp 1983; Cherry 1983; Mattingly 2000; Alcock and Cherry 2004a) and the role of predictive models (Kamermans 2000; Kamermans et al. 2004) especially with regards to the use of GIS (Gaffney and Van Leusen 1995; Kvamme 1997) emerged.
Post-Modernism	Landscape = Natural and Cognitive element	Although the landscape was considered to entail certain symbology early in archaeological research (Flannery 1976; Renfrew 1976; Renfrew et al. 1982), it was theorised at a later stage. Hodder (2002) and Johnson (2004) discussed the sociology of landscape, while its association with ideology and socio-political relations were analysed slightly later (Knapp and Given 2004). Landscape as notion that can be embodied by individuals was discussed by Cosgrove (1984, 1985 and 1989) and was widely used in landscape phenomenology (Heidegger 1977; Tilley 1994).
	Landscape = Power	The landscape as active element in the negotiation and institutionalisation of political power (Bender 1992; Rehak 1995).
	Landscape = Inequality	The landscape as active element in the establishment and maintenance of economic and socio-political inequality (Hamilakis 2002).
	Landscape = Agency	The role of active individuals in the ideological manipulation of landscape (Bourdieu 1984; Giddens 1984; Dobres and Robb 2000).

	Landscape = Time, Space ⇔Place	The investigation of landscape in different chronological periods and scales (Barrett et al. 1991; Rossignol and Wandsnider 1992; Gosden 1994; Knapp 2003).
	Landscape = Memory	The ideological formation of landscape through human experience and social memory (Rowlands 1993; Schama 1995; Kuna 1998; Brady and Ashmore 1999; Alcock 2002; Van Dyke and Alcock 2003.).
	Landscape = Identity	The currently proposed theoretical association that merges aspects from all above relations, with particular focus on materially expressed human behaviour in varying landscape potential. Key notions are: boundaries, spatial inclusion/exclusion, uniqueness, attachment, community vs. individuality.
Landscape Archaeology		Landscape Archaeology is a discipline in its own right, encompassing traits from all above traditions (David and Thomas 2008; Darvill 2008). Being the development of settlement archaeology and born by New Archaeology and New Geography, it produced a great number of intensive regional surveys (Crumley and Marquardt 1987; Kardulias 1994; Bintliff et al. 2000; Papadopoulos and Leventhal 2003; Alcock and Cherry 2004a) and focused on different times and scales (Bintliff and Howard 1999; Whitelaw 2000; Pettegrew 2001). Finally, it is characterised by focus on understanding of site formation, taphonomic processes (Wilkinson 2004) and landscape historicity (McGlade 1998).

CHAPTER 2

METHODOLOGY

To effectively study human-landscape relations and their impact on identity expression, this study proposes and tests analytical units at three scales of spatial investigation. These units comprise sites and individual artefacts from the Kouris, Vasilikos and Maroni valleys. Therefore, they vary in geographic scale, artefact quantity and quality, both remarkably diverse by virtue of their active exposure to post-depositional processes and the myriad conditions affecting archaeological visibility. As one of the goals of this study is to establish a comparative, lexicon to discuss activities, through which people construct, demonstrate and negotiate their identities in space, it first introduces a comprehensive description of the case studies' natural landscape and then appraises the potential of incorporating cognitive elements. It subsequently addresses the methodological and terminological limitations of such undertaking and the degree to which they interfere with the archaeological surveys under examination. Finally, it discusses the three scales of investigation in separate sections.

Appraising Natural Landscape

A closer look at the general characteristics and productive capacity of the Kouris, Vasilikos and Maroni (also Ag. Minas) rivers outline common aspects that are usually absent in general locational comparisons. To begin with, the three rivers are typical Mediterranean fluvial systems (Milliman and Syvitski 1992; McNeill 1992: 16-17, 20; Liquete *et al.* 2005: 472). They form part of a broad river network, which drains in a radial pattern the south slopes of Troodos Massif (fig.2.1) (Bagnall 1960: 13; Pantazis 1966: 19; Gass *et al.* 1994: 4; Boronina *et al.* 2003: 130; Waters *et al.* 2010: 229). The adjacent valleys are geologically distinguished by three zones: the upper igneous area, followed by the central 'Chalk Plateaus' and terminating with

the coastal fertile alluvial terraces (Christodoulou 1959: 17; Bayley 1995: 155; Boronina *et al.* 2003: 134). Common features include canyon-like valleys, raised beaches, river terraces and accelerated erosion (Schiffer 1987: 251; McNeill 1992: 284-285; Roose 1996: 13; Griesbach 2000: 16; Montanarella 2001: 202), which affects sea depth and is argued to impede development of ports and irrigation systems (De Vaumas 1959, 1961; Gass *et al.* 1994: 4-6). Ports are additionally affected by alluvial downwash and entrenchment of river streams, which is characteristic of the three valleys (Christodoulou 1959: 9).

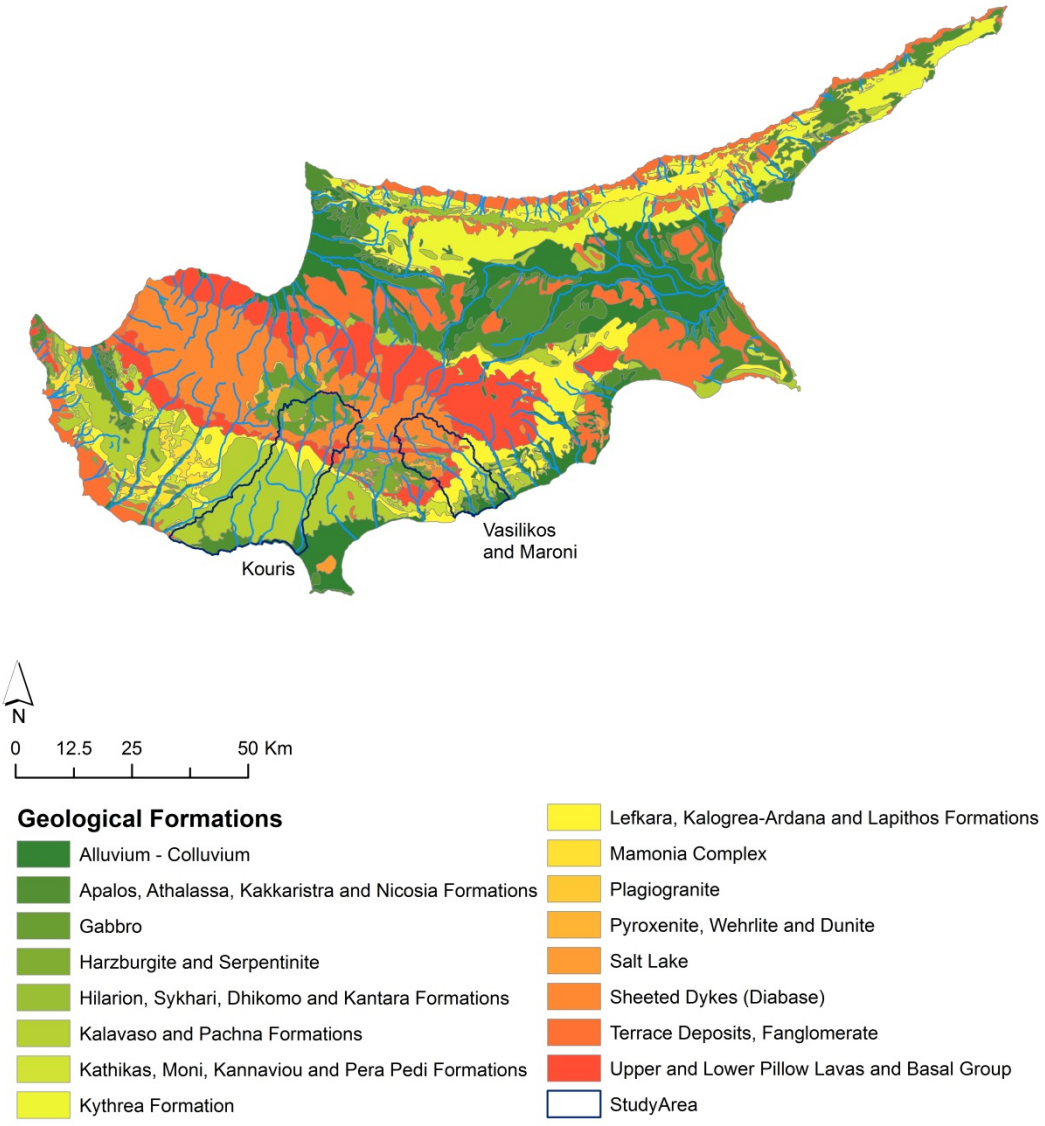


Figure 2.1 Cypriot geological diversity and the study area (produced by the author on ArcGIS with data from the DGRC).

Cypriot climatic conditions affect the rivers' equilibrium (Jansen and Painter 1974), which in an optimal state, facilitates water transport without erosion (Probst 1992; Ludwig 1997). During rainfall, streams descend in torrents and the supply of water and sediment exceeds the dispersal capacity of the receptor basin (McManus 2002; Liquete *et al.* 2005: 471), resulting in choked, perpetually shifting streams (Schiffer 1987: 252; Roose 1996: 13; Frederick 2001: 68; Molynar *et al.* 2006; Waters *et al.* 2010: 228) and wide flood plains (Devillers 2004). Simultaneously, high temperatures dry out the streams, leaving behind coarse material carried as down-wash that impedes river courses. As a result, in most cases, streams run only part of their length before dissipating into valley fills. Consequently the most suitable areas for habitation are found close to springs and shallow aquifers, such as the Lefkara formation (Burdon 1954: 321-322; Constantinou *et al.* 2002: 2, 83; Boronina *et al.* 2003: 135).

The south of the ophiolithic complex of Troodos area, close to the investigated case studies, is rich in mineral resources (Pantazis 1966: 139) and one of the five richest cupriferous zones in the world (Constantinou *et al.* 2002: 2). Although the present study recognises the importance of copper, it cannot overlook ethnographic attestation that despite the relatively modern re-development of mining in these areas, the economy of Cyprus remained essentially rural with the highest percentage of population focusing on cultivation of inherited land (Christodoulou 1959: 62: with examples from the 1920's; Ionas 2000:6: with examples from the late 19th century). In addition to the rich mineral deposits, the geographic area under scrutiny is characterised by ample water, timber, arable land, and natural access roads suitable for transport systems (Kassianidou and Knapp 2005: 235). Along the same line of thought, proximity to the sea does not necessarily ensure active participation in extra-island trade; maritime proximity can also support arguments regarding access to nutritional resources and salt for food conservation (Ikram 2000: 663-668; Laubier 2005: 16-20; Georgiou 2006: 430), or short-distance intra-island travelling for various purposes.

Another useful dataset is the effects of rainfall variability in the aforementioned areas (Kypris 1995: 12; Boronina *et al.* 2003: 133; Fatta and Anayiotou 2007: 35) and its devastating results, which are ethnographically associated with famine and immigration (Christodoulou 1959: 28). Annual rainfall in Cyprus is principally confined to three months, causing saturation of soil that is subsequently lost to significant run-off (Roose 1996: 22; Waters *et al.* 2010: 228), while the remainder percolates into the water table or is lost to evaporation (Christodoulou 1959: 37; Boronina *et al.* 2003: 130). These hydrological phenomena demonstrate the diachronic significance of underground water resources, which occur mainly in lowland areas and around deltaic deposits (Christodoulou 1959: 40). These are not always suitable for domestic consumption, as their salinity can be affected by limestone leaching (Constantinou *et al.* 2002: 2; Boronina *et al.* 2003: 135). As far as subterranean water supplies are concerned, the Kouris, Vasilikos and Maroni valleys occupy favourable geographic locations in the Limassol Lowlands. The uplands of the valleys, however, are the least suitable areas, as they consist of impenetrable igneous rocks, while the Chalk Plateaus (fig. 2.1 - Lefkara, Kalograea-Ardana and Lapithos formations) are notoriously bad aquifers (Christodoulou 1959: 41; Pantazis 1966: 139; Verhagen *et al.* 1991), where intense karstification creates underground ducts of non-potable water (Constantinou *et al.* 2002: 85). Therefore, researchers on Cypriot hydrology argue that domestic water requirements are generally covered by available springs (Boronina *et al.* 2003: 135).

Despite problems surrounding this seemingly unpromising land (Caraveli 2002: 232), anthropologists noted that traditional or pre-modern societies living in challenging landscapes inherit empirical knowledge of soil properties that assist peasants in managing crops, even in the most unsuitably imbalanced conditions (Howes 1980: 338, 345; Howes and Chambers 1980: 325; Meehan 1980: 381; Abd-Ella *et al.* 1981; McClure 1989: 1; Warriner and Moul 1992: 279; Christodoulou 1959: 62). Consequently, information from traditional land workers, traditional and

current vegetation and land exploitation strategies are argued to be insightful in landscape studies (Atherden 2000: 62).

Based on late 18th-early 19th century CE traditional land exploitation patterns, Christodoulou (1959: 158-159) and Ionas (2000: 8) argued that the semi-arid climatic conditions of Cyprus made dry cropping the most prevalent type of farming with cereals covering the greater part of agricultural land. Viniculture, which is almost omnipresent in Cyprus, with qualitative diversities related to elevation, soil type and precipitation (Hamilakis 1999: 43; McNeill 1992: 68), is not restricted by climatic limits. In fact, both Christodoulou (1959: 158-159) and Constantinou (*et al.* 2002: 3) discussed that the retentive character of the calcareous soils of the Chalk Plateaus renders them suitable for this cultivation and contributing significantly to local economy. Similarly, the carob tree was and is a ubiquitous xerophytic species, which, according to Davies (1970:460), up until the late 1960s was the most abundant crop bearing tree on the island, later replaced by the olive tree.

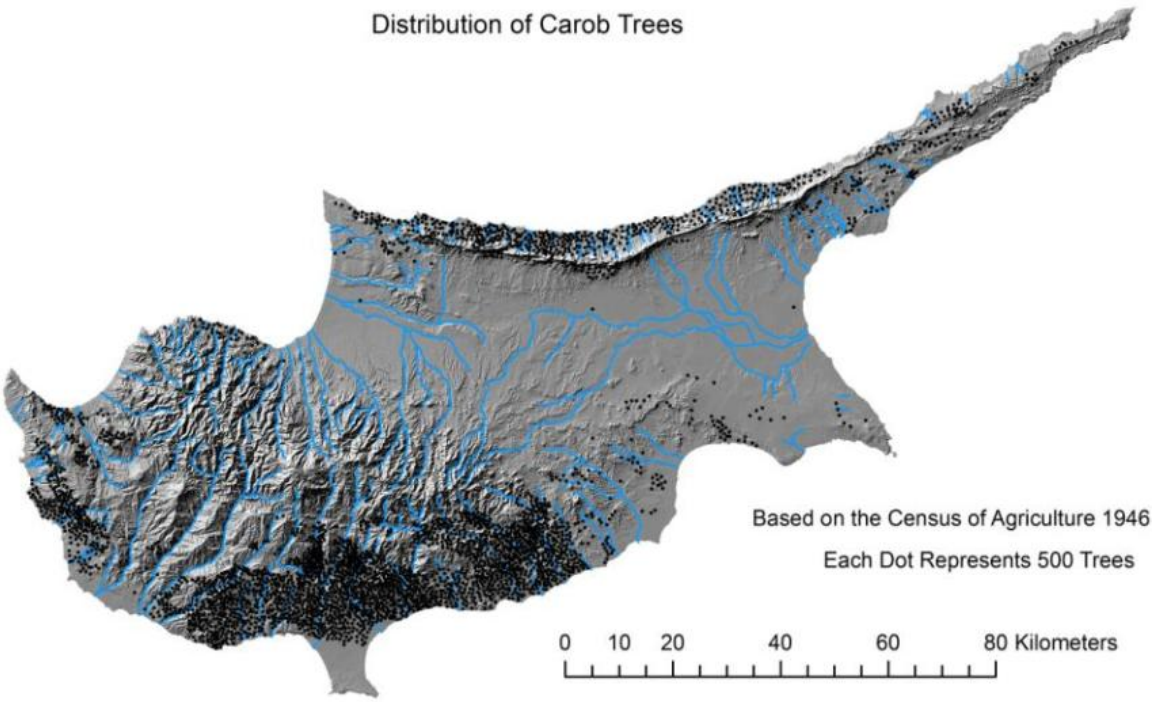


Figure 2.2 Christodoulou's map of carob tree distribution (adapted from Christodoulou 1959: 168, fig. 93).

Likewise, based on ethnographic studies, viniculture is not a staple, but a valuable agricultural export (Catarino 1993: 14; Rhizopoulou and Davies 1991: 43). The carob tree favours coastal areas concentrated in a zone within 10km from the sea and ceases to be important beyond the 20 km range (Christodoulou 1959: 168; Orphanos and Papaconstantinou 1969). Interestingly, the area under investigation is colloquially known as "the region of the carobs" (fig.2.2) (Christodoulou 1959: 211; Pantazis 1966: 19).

Olive is a highly important crop tree in Cyprus (Gregoriou 2002; Hadjiparaskevas 2005: fig. 2; Avraamides and Fatta 2008: 809), one long exploited as staple and export. The olive tree is less flexible than the carob in terms of climatic, soil and altitude tolerance. Regardless, it is ubiquitous in the island, fits into all methods of farming, can be easily grafted, grows on steep slopes and rocky ground and is remarkably resistant to changing climatic conditions including frost (Christodoulou 1959: 171; Breton *et al.* 2009: 1060). Akin to the carob tree, it thrives in the area under study, whose soil characteristics and micro-climatic conditions foster this vegetation type.

Based on the above information, a thorough investigation of the three valleys' landscape characteristics highlights some noteworthy similarities. Following previous studies on the meanings of the association of communities with their surrounding space (Soja 1989: 79; Acuto 2005: 212, 222; Tilley 2006: 12), it is likely that similarities and differences between the landscapes of the Kouris, Vasilikos and Maroni valleys have material consequences. Fertile coastal alluvial valleys, chalk plateaus suitable, varied elevation zones, direct access to the sea, inland and coastal routes and mineral resources provide suitable conditions for continuous habitation. Consequently, alterations in settlement patterns and/or drastic changes in the symbiotic relationship between communities and the surrounding landscape can benefit from an investigation that also incorporates the cognitive aspects of landscape.

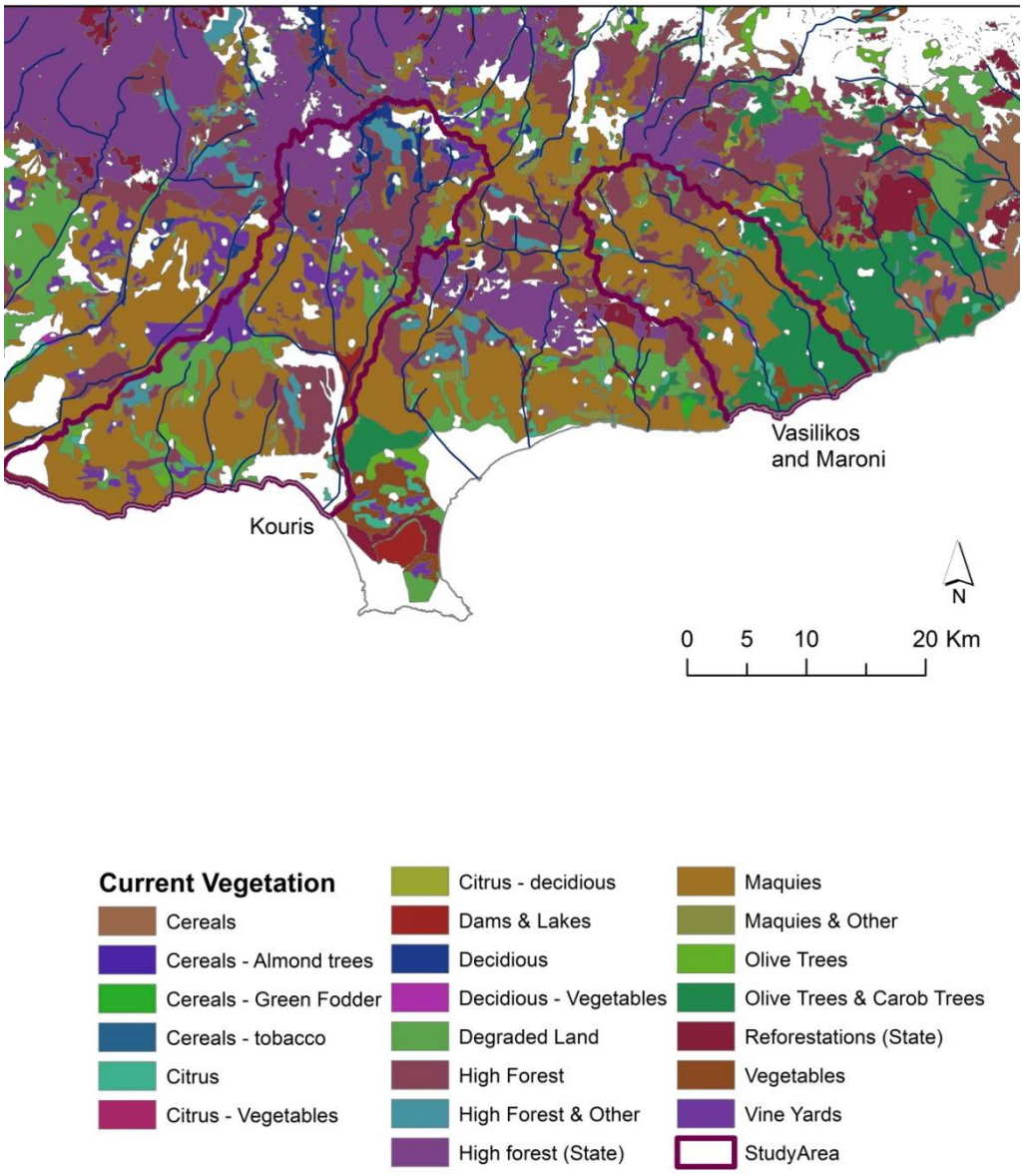


Figure 2.3 Current vegetation of area under investigation (produced by the author with data from the DGRC).

Incorporating Cognitive Landscape and Identification

"Landscape is not merely the world we see. It is a construction, a composition of the world; in short, an ideological concept" (Cosgrove 1984: 13). Cosgrove's work was, and remains, particularly influential in geographical (Thrift 1989: 151; Watts 1992: 122), anthropological (Gupta and Ferguson 1992: 8; Hirsch 1995: 1) and

archaeological studies (Ingold 1993: 153, 157; Knapp and Ashmore 1999: 1; Anschuetz *et al.* 2001: 161).

Landscape has traditionally been perceived as usually referring to the surrounding environmental settings with the necessary resources for sustaining life. However, researchers gradually placed importance on other issues such as its impact on economic strategies, development of regional behaviours, attachment to land (Parker Pearson and Richards 1994: 6; Cosgrove 2006: 54) and diachronic identity formation (Daniels 1993; Ryden 1993: 66; Schama 1995; Mitchell 2002; Cosgrove 2006: 49). As newer approaches discussed landscape's cognitive aspects, landscape is now a more subjective notion, and being subjective its understanding is in many aspects nebulous (Stoddart and Zubrow 1999: 688; Wilkinson 2003: 4; Bender 2006: 303; Tilley 2006: 7; Tagliagambe 2008: 61-62). In fact, landscape is a key concept in geography, architecture, history, archaeology, anthropology and philosophy, but in each discipline it is given a different definition (Cosgrove 1984; Bender 1993; Hirsch and O'Hanlon 1995; Corner 1999; Casey 2002; Olwig 2002; Smith 2003; Raffestin 2012: 124).

Cosgrove was the first to crystallise landscape's cognitive dimensions and inspired future researchers to focus on metaphysical aspects such as memory (Thomas 2001: 175; Acuto 2005: 226-227; Zedeño 2008: 213; Van Dyke 2008) and experience (Low 1986: 862; Roberts 1987: 80-81; Crumley and Marquardt 1990: 73; Ingold 2000: 134; Anschuetz *et al.* 2001: 161; Stewart and Strathern 2003: 1; Ahmed 2006: 11; Ashmore 2007: 264; Rapoport 2011: 891), that Tilley (2004: 31) has argued as the foundation of identity formation.

This interrelation is additionally championed by Lefebvre (1991: 286), Hitchcock and Bartram (1998: 31-37) and Barnes and Sheppard (2000: 5), who established the theoretical basis of landscape and the relevant notions of 'space' and 'place'. More explicitly put by Casey (2008: 47), while space provides the description of a measurable area, place designates more explicitly and relationally this experience. In this line of thought, Ingold (1994: 738), Acuto (2005: 219) and Maher (2010: 34)

supported in their research that landscape represents a relation between communities and space. Others focused on the evaluation of the dynamics of this relation to investigate processes of identity formation and its association with exertion of power in its various forms (Orser 2005: 84; Stovel 2005: 146; Tilley 2006: 15). Finally, many discussed the cognitive association of people with landscape as one of the most fundamental forms of embedded experience (Merleau-Ponty 1962; Heidegger 1962; Casey 1996; Layton 1999; Smith 1999; Beaudry and Mrozowski 2001: 120; Van Dyke 2003: 180; Casana 2007: 213; Shaw 2013: 3-4). For that reason this study views cognitive landscape as a useful concept when investigating material similarities and differences in areas of comparable natural characteristics.

In similarity to material culture, it appears that landscape is loaded with a plurality of meanings that are dependent on the identities intended to be displayed by agents and groups. Researchers have long discussed that the spatial expression of these groups is equally important to their material expression (Stark 1998: 7, 10; Goodby 1998: 161; Lazarri 2005: 194; Angoletti 2006: 8; Ashmore 2007: 256). However, before assessing this reflexive relationship, it is necessary to present the meaning and connotations of identity, which is a central theme in the present study.

The exact definition of identity is remarkably relational (Friedman 1992: 853; Taylor 2010: 3), due to the multitude of aspects that it can comprise and the significant body of related literature from different disciplines (Giddens 2001: 29-30; Stovel 2005: 149; Cosgrove 2006: 50; Tilley 2006: 9; Jenkins 2008: 24; Davis 2009: 71-72; Walker and Leedham-Green 2010; Wetherell 2010: 3-4). In archaeological research scholars have widely focused on gender (Conkey and Gero 1997) and ethnicity (Shennan 1989; Jones 1997; Sterry 2008: 33) but less so on social identity. Thus, issues of scale, involving distinctions between individual and group were, and are, rarely discussed. Researchers used this to suggest that finer scale and multi-disciplinary approaches should be employed in order to achieve a more inclusive investigation of this topic (Fisher and Thurston 1999: 631; Carr and Neitzel 1995: 11;

Feinman 2012: 35-36). For reasons of clarity then, the present research follows the description that identity is the understanding of a common set of values that make individuals or a group of individuals distinguishable from 'others' through the conceptualisation of symbolic boundaries (Olwig and Kastrup 1997; Lamont and Molmar 2002: 168; Malpas 2012: 229).

While sociologists argued that identities are socially produced (Bourdieu 1996: 66; Taylor and Spencer 2004: 2), correlated with social relations (Edley and Wetherell 1995: 165; Lawler 2008: 143, Jenkins 2008: 6) and require mutual knowledge of the self and the others, anthropology researchers emphasised the notions of 'inclusion' and 'exclusion' (Gupta and Ferguson 1997: 13; Woodward 1997; Davis 2009: 74-77), which vary in different social and cultural contexts (Pader 1982: 54-56; Yelvington 2002: 240-243). Studies of inclusion and exclusion in natural and cognitive landscape (e.g. Bender *et al.* 1997: 148; Knapp and Ashmore 1999: 7; Ingold 2000; Peterson and Drennan 2005: 5) have provided valuable information concerning groups of individuals that share and control, or aspire to control particular environmental settings.

Taylor (1988: 6), Hitchock and Bartram (1998: 30) have described the aforementioned relationship between individuals and groups with their surrounding landscape as an "interlocking system of sentiments, cognitions, and behaviours that are strongly space specific, socially and culturally determined and maintaining", which they subsequently termed "territoriality". Other researchers described territoriality as the vehicle for the manifestation of attachment to land, control and conflict over land rights and land development (Sack 1986: 1-2; Stewart and Strathern 2003: 10; Leach 2005: 299; Tilley 2006: 19; Zedeño 2008: 211; Raffestin 2012: 126). However, the geographic, let alone archaeological demarcation of territory often remains a challenge. Following that, the present study primarily focuses on the discernment of material boundaries that potentially shed light on issues of group identification and subsequently and when possible attempts to explore their spatial connotations.

Boundaries are recognised as forming the means for connection or separation of individuals or groups (Crumley and Marquardt 1990: 74; Koyman 2006: 426), bestowing a sense of belonging and contributing to the construction of social space (Parker Pearson and Richards 1994: 24-25; Sibley 1995: 3; Ashford *et al.* 2000: 474; Soja 2000: 95; Tagliagambe 2008: 61-62; Rapoport 2011: 896). Concerning material culture, artefact variability across space is often referred to as 'style', which is a recurrent term in archaeology, mainly associated with ceramic material and often used to articulate the character of the boundaries (Dietler and Herbich 1998: 256; Gosselain 1998: 82; Hegmon 1998: 265-266). Nonetheless, this study does not rely on ceramic style as indication of cultural identity (Wiessner 1983), due to the widely challenged assumptions of this correlation (Upham *et al.* 1994; Maher 2010: 42). It rather focuses on settlement patterns, architectural production and burial ground spatial organisation, as probable indications for the establishment and negotiation of boundaries. Establishment and negotiation of boundaries are often argued as dynamic indicators of social relations amongst people and between those people and their environment (e.g. Kantner 2008: 44; Stafford and Hajic 1992: 138-143 Parsons 2004: 9-12).

Space management and identification of the reasons that boundaries become established are the principal goals of regional archaeology (Dewar 1991; Dewar and McBride 1992; Wandsnider 1992; Lightfoot and Martinez 1995; Wells 2001: 108; Ashmore 2002; Bender 2002; Kantner 2008: 42; Attema *et al.* 2010: 1), while the process through which relationships and interaction of communities lead to formation of an integrated social whole falls under the rubric of 'regionalism' (Kowalewski 2008: 226). The latter is a central interpretive tool in understanding the social organisation of Bronze Age Cyprus (Chapter One, pp.26-29). In politico-economic terms, Bintliff (1997: 33) described regionalism as the configuration, in which societies were loosely integrated into wider networks, yet developed and maintained localised trajectories. However, while regionalism is often treated as self-explanatory (Isard 1975; Isserman 2004), its reflexive connotations are poorly understood. Namely, the relation between landscape with territoriality manifested in the attachment to specific land, creation of

local identity and aspiration of rights and control over that land, and material demonstration of socio-economic boundaries is largely absent from discussions on the Cypriot Bronze Age settlement patterns.

Following the above, this chapter proposes a methodology to effectively investigate the relationship between identity expression in communities and their surrounding landscape. As landscape is a central theme in this study, it is necessary to analytically present the methodological and terminological limitations of survey-based observations, both generally in Cypriot archaeology and specifically for the three valleys under investigation.

Methodological Limitations

Post-depositional processes are a key element in comprehending the formation of accumulated material designated as 'site'. Therefore an inclusive investigation of the above processes is required to reveal not only the degree of change in Bronze Age landscapes, but also the terminological criteria employed in the archaeological surveys under examination.

Before proceeding to address specific problems, it is useful to situate the examined chronological period (c.2250-1100 BCE) into its palaeo-environmental context, as the Bronze Age picture is undeniably much different than the landscapes described in the previous section. Unlike other areas of the Mediterranean, Cyprus lacks extensive diachronic empirical data of its environment including climatic change (Butzer and Harris 2007: 1935, 1937; Wasse 2007: 48); an exception being a recent publication on a 250-year (AD 1830-2006) precipitation reconstruction (Griggs et al. 2014). Consequently, the present research relies on narrowly dated data from the island and diachronic data mainly from Greece and Anatolia. These data suggest that by c. 4000 BCE (mid-Holocene) and about 2000 years prior to the Cypriot Bronze Age, climatic alterations and their consequences, for example in sea level and river alluviation, reached a point of relative stability typified by slower, less

dramatic shifts (Poole 1992; Roberts and Wright 1993; Noller 2008: 27; see also Wilkinson 2003: 24 on SW Turkey; Casana 2008: 429). Namely, while sea level continued to fluctuate, equalising a number of factors ("isostatic effects"), changes were by some metres only (Bintliff 2012b: 15, 24).

Aside from the relatively slow-acting natural factors, living populations also influence landscape changes such as erosion, soil depth and vegetation. For example, cyclical events of population density and settlement expansion and abandonment all contribute to soil disturbance, vegetation change, erosion and alluviation (Gumbricth et al. 1996: 273-274; Bintliff 2002: 419). Researches further discuss that prolonged human impact on landscape involves both periods of relative stability and short phases of alluviation or accelerated soil loss (Bintliff 2012a: 214), while intense human occupation has been investigated in association with soil fertility changes, which may result from several cycles of exploitation, abandonment and recovery (Butzer and Harris 2007: 1933, 1939; Shiel and Stewart 2007: 103; Casana 2008: 433). As a result of anthropogenic and a series of climatic, geological and topographic influences, soils follow a cyclical pattern of pedogenesis, affected by the parent material, existing soil and its subsequent re-deposition (Shiel 1999: 68, 70, 72). Therefore, although existing soils are often argued to largely reflect the underlying sediment or parent rock (Shiel 1999: 72; Butzer and Harris 2007: 1939), one should be cautious with this assumption in the archaeological context, especially when lacking geomorphological studies. With the above as a backdrop, one should proceed cautiously to erosion assessment and soil characterisation.

Erosion is a typical phenomenon of the Mediterranean and discussed by many researchers as the most ruinous for archaeological landscape investigation (Lock and Stančič 1996; Rackham and Moody 1996; Gillings and Sbonias 1999; Forbes 2000: 97; Mattingly 2000:5; Taylor 2000: 24; Cherry 2003: 153; Attema *et al.* 2010: 20). Regarding Cyprus, natural hill slope erosion has been estimated at 0,5-4,7 kg^2/year (Wells *et al.* 1998), which places the island within a globally recognised

rubric as exhibiting the lower end of accelerated erosion (Kosmas *et al.* 1997). Consequently, many argued that human activities such as deforestation and overgrazing are simultaneously accountable for exacerbating and accelerating erosion and landscape alteration (Dutton *et al.* 1976: 48; Bell 1981, 1982, 1983; Evans 1990; McNeill 1992: 311-325; Forbes 1997: 204-205). Additionally, the detrimental human impact of hydrological adaptation (Esse 1991: 12-14; Blondel 2006: 713-716), such as the creation of wells and irrigation systems, may contribute to ecosystem disruption, intensification of overbank deposition, water logging of sediments and vacillating salinization; the latter primarily responsible for artefact chemical deterioration (Schiffer 1987: 245; Mollina 2006: 200).

Cyprus proves challenging to landscape analysts, having 50% of its land surface classified as stripped, eroded or incised and a further 14,5% devoid of soil, a result of constant land use and abuse (Wells 2001: 135-136). Consequently, archaeological material is subject to relentless upheaval by everything from subtle to prolonged trampling (Schiffer 1987: 126), to abrupt and prodigious mechanised soil re-location, manipulation of riverine and sea terraces, hilltop-levelling, road cutting and surfacing, cliff sculpting, re-terracing and the re-allocation of disturbed soil heaps (Dutton *et al.* 1976: 48; Frederick and Krahtopoulou 2001: 83).

In addition, the distribution of surface material is heavily influenced by fluvial environments (Ferring 2001: 82; Bintliff 2002: 427), which may rapidly cover a site, expanding or contracting the spatial extent of material culture (Schick 1986: 79) with important implications for site-size estimation (Hey 2006: 114 *cf.* Shennan 1988: 323-328; Orton 2000: 120-122) and eventually the interpretation of their role in settlement systems (Robertshaw 1994: 113; Alcock 2002: 2; Hey 2006: 124). While the southern coast of the island lacks large rivers with such destructive potential, the resultant semiarid climate of ephemeral streams (Leopold and Miller 1956; Schumm and Hadley 1957; Schumm 1977; Bull 1991) makes them prone to violent floods and high rates of erosion and aggradation (Patton and Schumm 1981; Ferring 2001: 83; Alexakis et al. 2013: 108). Consequently, despite the

aforementioned moderate post-4000 BCE sea-level fluctuation, it has been suggested, based on examples from Greece, that river deposits in-filled coastal bays and affected the original landscape of prehistoric maritime sites, which often became land-locked (Bintliff 2012b: 15). The degree, to which this affects the case studies under examination, is assessed in Chapters Three-Five.

Finally, in addition to the heavily compromised archaeological surface information, erosion factors affect archaeological visibility, which is an abundantly discussed topic throughout the formation of theory and methodology in archaeological survey (Hope-Simpson 1984: 116; Fentress 2000: 44). The intensity of such factors has significant implications for the identification and description of archaeological sites, which is evident in the variability of 'site' identification methods.

Terminological Limitations

'Site' is a generally accepted "archaeological construct" with its various interpretations affected by preconceived perceptions of habitation and lifestyle (Foley 1981a: 10-14; Dunnell and Dancey 1983: 268; Cherry 1984: 119; Haselgrove 1985: 14; Gallant 1986: 417; Bowden *et al.* 1991: 108; Cherry *et al.* 1991: 45-47; Dunnell 1992: 27; Carman 1999: 20-22; Given *et al.* 1999: 23-24). This is why the concept of 'site' receives various definitions, depending on chronological period, geographical position, visibility, landscape, and research goals of different survey projects (Plog and Hill 1971: 8; Doelle 1977: 202; Plog *et al.* 1978: 387; Schiffer *et al.* 1978: 14; Cherry 1984: 120; McManamon 1984: 227; Cherry *et al.* 1991:45-46; Alcock *et al.* 1994: 138; Jameson *et al.* 1994: 221-223; Barker 1995: 44-51; Barker *et al.* 1993: 244-246; Given *et al.* 1999: 23; Mattingly 2000: 6; Banning 2002: 36; Alcock and Cherry 2004b: 4, Orton 2000: 112). To date, some researchers perceive it in terms of association and quantity of artefacts (Anderson 1984), others impose strict quantity criteria (Warren 1982) or artefact variety criteria (Jones 1985), still others emphasise the spatial discretion of artefacts (Ammerman 1985).

In geographical terms, 'site' refers to individual places with specific attributes that form part of a spatial analysis and can be classified according to size function and form (Wagstaff 1991: 9). Notably, there is a general consensus between archaeology and human geography on the designation of site' (Keller and Rupp 1983: 27-30; Hope-Simpson 1983: 45-47) as an area with evidence of human behaviour and activity (Heizel and Graham 1967: 14; Hole and Heizer 1965: 33; 1969: 59; 1973: 86-87; McManamon 1984: 226; Bintliff *et al.* 1999: 141), or a spatially independent cluster of material culture (Schiffer *et al.* 1978: 1; Plog *et al.* 1978: 389; Banning and Fawcett 1983: 293; Banning 1988: 15-17; Renfrew and Bahn 2006: 54, 586), which may include areas of different function and whose artefacts have spatial relationship. This definition is sometimes associated with a minimum number of artefacts in a defined area (Hall 1985: 30), or a high density cluster within a lower background level (Mills 1985: 83). Despite the challenges of 'site' recognition and classification, archaeologists developed various models for estimating the sites' spatial extent (Foley 1981b: 165), or artefact distribution and density (Dunnell 1992: 34; Alcock *et al.* 1994: 138; Renfrew and Bahn 2006: 93), with the aim to elucidate the formation of spatial relationships and possible patterning.[1]

Considering the above, the terminology implemented in this research emphasises the known anthropogenic impact on archaeological landscape as well as the degree of rivers' sedimentation, current vegetation, current degree of erosion, and available information on human activities. The basic criteria employed in site identification are:

- The probability of locating a site within a given geographical area in terms of subsistence resources (see also Halstead and O'Shea 1989a: 3; Stein 2001: 37).

[1] Some of these are the "Monument Model", the "Earthwork Model", the "Uniform Distribution Model", the "Bulls-eye" or "Fried-egg", the Mathematical models for clusters and artefacts, the "Contagious Distributions", the "Palimpsest model", the "Off-site" or "Intersite" Model, the Distributional or "Non-site" model, the "Place Model", and finally the "Paleolandscape Model".

- The impact of erosion and alluviation on potsherd concentrations (Terrenato 2000: 66), which may affect an assessment of a 'site' and
- The consequences of alluviation, colluviation and anthropogenic disturbance in archaeological visibility (Frederick 2001: 64; Attema *et al.* 2010: 41), which equally affect identification and comprehension of activity areas.

The proposed criteria are applied to recorded 'sites' of the survey projects presented in the following section. These are, however, initially treated as find spots until their formation and function is more comprehensible. In order to extract the most accurate and comprehensible of what were recorded as 'sites', it is important to evaluate the methodological and terminological limitations of the surveys under investigation.

Recording Sites in the South-Central Coast of Cyprus (pp. 82-87, tbls. 2A-2B)

The surveys under scrutiny are the Kent State University Survey at Episkopi (Episkopi), the Sotira-*Kaminoudhia* Survey (SKS), the Sotira Survey (SSP), the Kouris Valley Project (KVP), the Alassa Project, the Vasilikos Valley Project (VVP), the Maroni Survey (Maroni), the Maroni Valley Archaeological Survey Project (MVASP) and the *Tsaroukkas*, Mycenaeans and Trade Project (fig.2.4). Smaller projects such as the Erimi-*Kafkalla* and Psematismenos-*Trelloukkas* surveys and the Kalavasos and Maroni Built Environment Project (KAMBE) are used collaboratively. The above projects employed different goals for regional or site-oriented perspectives, had common focus on the Bronze Age material culture, yet lacked the analytical focus in the study of landscape characteristics and the detailed theoretical framework that would support a rigorous survey methodology.

Maroni Survey for instance aimed to establish sequence of habitation in the LBA and adjacent periods to conduct comparative material studies, expand knowledge of architecture, town planning and daily life and acquire proficient knowledge of Maroni's foreign relations in the LBA (Cadogan 1983: 154). Nonetheless, up to the

present the Maroni valley is predominantly investigated in terms of the spatial relation of two LC sites, Maroni-*Vournes* and Maroni-*Tsaroukkas* (Chapter Four, p.100-101) (Manning *et al.* 1994b: 89; Manning and Conwell 1992: 281-283; Manning and Fisher 2012; Manning et al. 2014), and earlier occupation patterns in the valley rely largely on excavated EC/MC tombs from Psematismenos and Maroni villages (Webb *et al.* 2007; Webb *et al.* 2008; Georgiou et al. 2011). The Alassa project had similar aims, as it sought to investigate the area now covered by the Kouris dam. After discovering LC sites, including a voluminous structure, investigation was restricted to the ashlar building of Alassa-*Paleotaverna* (Chapter Six, p.166-169) (Hadjisavvas 1986: 63).

The VVP, influenced by a larger coverage area and a more flexible time frame, employed a different approach. Although the general goals were similar to the aforementioned examples, the project presented a higher degree of detail and methodological flexibility dependant on the progress of survey results. The central aim of the VVP was to establish diachronic settlement patterning (Todd 2004: xvii), investigate occupation gaps, answer questions of diachronic population clustering and dispersal, determine the special use of various parts of the valley and their communication networks, explain dynamics of change between occupation periods, contextualise the lack of archaeological evidence in certain chronological periods and appreciate the role of natural resources in the formation of settlement patterns (Todd 1978: 189-190 *cf.* Bylund 1960; Hudson 1969; Sallade 1978). The application of the latter goal has chiefly focused on copper, whose extraction and trade largely directed research and interpretation of Bronze Age sites.

The degree to which copper directed archaeological interpretation is also observed in the implementation of wider aspects of landscape studies within smaller surveys that focused on areas without direct spatial association with known copper mines. For example the Episkopi survey, in order to appreciate the location parameters of the excavated ECIII-LCIA Episkopi-*Phaneromeni*, conducted intuitive surface survey in a wider region, not strictly within the catchment area of the Kouris river. This

survey is currently the most substantial source of archaeological information on the Bronze Age Symboulos, Paramali and Avdhimou valleys, as Swiny (1981; 2004: 56) recorded archaeological features and established a representative collection of pottery and other artefacts (Chapter Five, p.132-140). Similarly, SKS provided an ecological context to archaeological recoveries by gathering ethno-archaeological data and creating a palaeo-environmental record (Held 1988: 53). At a later stage, it developed a reference database to document the changing environment, by recording all pre-modern cultural and floral, faunal and geological material (Swiny and Mavromatis 2000: 435; Swiny 2004: 59). Finally, in recent years the KVP has turned focus to issues of regional settlement patterning in the Kouris valley through the recording and excavation of new sites in the northern part of the valley.

In sum, the archaeological surveys under study are characterised by a lack of homogeneity in survey strategies. We can further observe that, despite their aim of establishing diachronic settlement patterning, they focused on the Bronze Age, the understanding of which is heavily influenced by the settlement pattern models discussed in Chapter One (pp.11-19). Namely, the adjacent space and specifically human-environment, inter-community, inter-regional and international relations were principally investigated through two parameters: copper and sea.

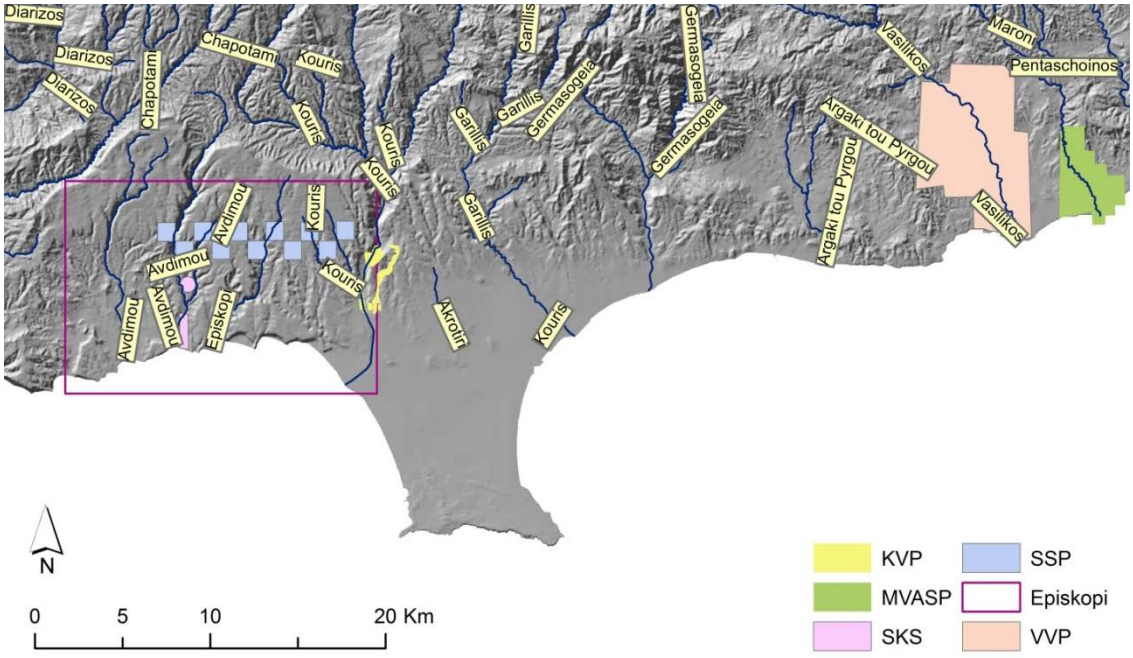


Figure 2.4 Map showing the extent of the archaeological surveys under investigation (produced by the author on ArcGIS).

The role landscape played in archaeological interpretation can also be observed in the limited attention given to post-depositional processes that affected each survey project. The VVP - the most extensive survey- was limited to brief comments on weather conditions and factors affecting archaeological visibility, reported as "sometimes unfit for publication" (Todd 2004a: 48). Further, specific issues such as agricultural terraces and their problematic dating (Gomez 1987: 354), land consolidation, creation of roads and field boundaries, road and dam construction, which resulted in the creation of modern refuse and slag heaps were given brief description. Recorded problems included limestone and gypsum quarrying, building construction, limited accessibility to military areas and industrial pollution, fires, and tourist development (Todd 2004a: 51). Similarly, post-depositional processes at Maroni such as vegetation encroachment, ploughing and traditional land occupation patterns were discussed for their impact on archaeological visibility (Manning *et al.* 1994b: 89-91).

The SKS, perhaps due to its limited extent, was more analytical in its presentation of problems of destruction, dislocation and concealment of sites from natural and anthropogenic agents. The survey recognised the crucial role of geomorphological studies with special mention of erosion, colluviation and dry farming practices. The SKS identified particular problems in relation to drainage morphology of small tributaries and arroyo influence on the obscure depositional sequence of sediments and evaluated the impact of contemporaneous local practices in artefact displacement (Held 1988: 58). Erosion was also of primary focus for the Episkopi (Swiny 1981: 55) and Sotira surveys, which recorded the percentage of cultivable land and varieties of wild plants and attempted to reconstruct the relation between dry farming and paucity of material culture (Swiny and Mavromatis 2000: 435). Finally, the KVP is currently developing a more inclusive publication of its relevant landscape studies that may include an assessment of post-depositional processes and visibility (Bombardieri, September 2010: personal communication).

With consideration to these limitations, there is an insufficient understanding of how landscape and factors interfering with site recovery affect the development and use of a standardised terminology, the criteria of which are presented in tbls.2A-2B at the end of this chapter (pp.82--87). Specifically, rarely was a distinction between locus of activity and a discrete site made; moreover, archaeological sites were often characterised by artificial borders, which make difficult attempts to detect off-site activities, evidence of mobility or patterns of material density (Bintliff 2000a: 201). The latter, discussed in a following section, is an oft mentioned problem in archaeological survey publication and one of the primary impediments to future comparative studies of accumulated material culture (Barker 1991: 4; Driessen 2001: 53; Attema *et al.* 2010: 7).

To conclude, based on the preliminary analysis of the theory and methodology employed in the above survey projects, it is clear that problems of survey data integration and consequently a comparative research are less impeded by the employment of different methodologies and techniques than by insufficient attention to the natural and social aspects of the surrounding landscape (see also Wells 2001: 1908; Halstead and O'Shea 1989a: 2; Whitelaw 2000b: 143) and its concomitant importance in the formation and expression of human identities and relations.

Bronze Age Ceramic Typology and Archaeological Survey in Cyprus

Problems of site identification and dating further affect the contextualisation of material evidence and, thus, hinder comprehension of its spatial expression. These problems are closely associated with the EC/MC ceramic typology. Trying to incorporate material culture in the traditional tripartite chronological system of Bronze Age Cyprus (Chapter One, pp.34-35, tbls.1A-B) has proven a particularly challenging endeavour (Coleman 1985: 140). Pottery is a central issue due to a widespread insufficiency in context recording and the limited amount of contextually secure examples. More precisely, initial information on typical EC and

MC pottery was sporadic and derived exclusively from cemetery material that is not directly comparable with, nor indicative of, domestic material culture (Stewart 1962). The excavation of the first settlements with EC/MC elements made apparent the strong regional character of pottery (Merrillees 1992: 47), a characteristic argued to have prevented the establishment of an island wide typology and serviceable chronology (Barlow *et al.* 1991).

The traditional chronology of the Cypriot Bronze Age has strongly influenced this tenuous situation. In 1899 Myres and Ohnefalsch-Richter (1899: 11) divided the Bronze Age into an early and late period. In 1926, however, Gjerstad (1926: 262-289) established a common classification system for the history of Cyprus and introduced a tripartite system for the Bronze Age, which was only partially accepted and adhered to by colleagues (Myres 1926: 289; Stewart and Stewart 1950: 9; Catling 1973: 166). For instance, Catling treated the EBA and MBA as one entity in his 1962 publication to stress the contrast and differences observed with the LBA. A similar approach was employed by Stewart (1962) in the *SCE* IV: 1A, where he was assigned to study the EBA, but extended the results of his research into the MBA. It was in 1988 when Frankel (1988) suggested a unified treatment of the EC/MC under the term Prehistoric Bronze Age, stressing the importance of understanding a period of almost 900 years (c.2400-1500 BC) as culturally homogeneous. Knapp (1990b: 148) embraced this terminology and attempted to bridge the gaps created in traditional chronological system with a re-evaluation (p. 35, tbl.1B), which is also not widely accepted. Georgiou (2006: 69) suggested that the changes or adjustments proposed by Knapp were terminological and did not address the core of the chronological system. However, this generalised critique is not yet supported by sufficient argumentation, as Knapp's chronology usefully consolidated a wide array of material evidence and incorporated the 'transitional' periods of the previous chronological systems.

Treating the EC/MC, a period of 900 years, as a unified entity, limits opportunity to discuss in detail any social, economic and political change occurring over these 9

centuries. Undeniably, such detail is hardly available from the fragmentary survey material (Webb and Frankel 2004; Heilen et al. 2008: 603-604). For example, the traditional distinguishing criteria of shape and decoration used to identify EC and MC Red Polished (RP) pottery inhibit inclusion of small surface potsherds. This problem is exacerbated by the traditional classification of pottery as EC RP and MC White Painted (WP), whose division is unclear across the island (Stewart 1962: 210; Merrillees 1965: 140; Catling 1962: 165-166; Manning 1993: 39; Steel 2004a: 119, 132; Herscher 1981: 79; 1991: 45; Georgiou 2006: 68-70). This issue has been partly, yet effectually, tackled by Georgiou, who has re-evaluated the criteria for dating sites based on pottery; however, as mentioned previously, such schemata are comparatively ineffectual for survey ceramic material. Georgiou suggested that Red on Black (RoB) pottery is indicative of the MCIII, Proto-Base Ring (Proto-BR), Proto-White Slip (Proto-WS) and Bichrome Wheel Made (BiW) are indicative of the LCIA and Red Polished Mottled (RPM) is typical of the ECI-II rather than MBA (Coleman *et al.* 1996: 336-338; Todd 1985; Frankel and Webb 1999: 97-99; Georgiou 2000). Finally, the recent publication of *Trelloukkas* cemetery discussed the above criteria in detail and provided tremendous advances concerning pottery characteristics of the ECI-II (Georgiou *et al.* 2011). However, local diversity and the relatively narrow temporal spectrum covered by this analysis, still prevents its applicability to chronologically and regionally diverse cemeteries.

Considering that Georgiou's criteria along with other detailed pottery studies (Barlow *et al*. 1991) post-date all archaeological surveys under investigation with the exception of the KVP, the available material description is applicable only in hindsight and requires revisiting. It is stressed that although the employment of updated pottery classification can provide material and chronological coherence, ceramic clusters recorded from spatially discrete find spots, do not provide adequate evidence for discerning chronological duration, namely if an area was inhabited or used continuously during the EC/MC. Moreover, it is difficult to ascertain which part of that 900-year period the recovered pottery represents. It is obvious, then, that our understanding of fragmentary RP pottery deriving from

archaeological surveys is rather crude and absolute chronology is provided only through the study of securely sealed contexts. For that reason, the present research incorporates excavated data to narrow down the chronological spectrum reflected by surface pottery.

Comparing Survey Methodology

The surveys in discussion can be classed as 'new wave' regional survey projects, due to their high intensity, diachronic focus, and use of 'region' as conceptual background for historical and archaeological questions (Wells 2001: 108; Cherry 2004a: 24; 2004b: 8; Attema *et al.* 2010: 14-15). The difference in the area under discussion lays in the fact that the investigated projects lack significant a foundation of precursory chronologically related archaeological knowledge to build upon (Attema *et al.* 2010: 19). As the surveys cover areas of different size with environmental and topographical heterogeneity, surveyors tended to adjust their collection strategies depending on terrain characteristics and degree of accessibility (Banning 1996: 27). This, alongside the implementation of different survey coverage practices, involving intuitively selected localities (Episkopi, KVP, fig.2.5), quadrats (SKS and SSP, fig. 2.5), swaths (MVASP, fig.2.6-2.7) and transects (VVP, fig.2.6), testifies to a different perception of the role and impact of topography in settlement patterns and thus of the definition of 'site'. One can observe the consequences of perceptive diversity in the different criteria for 'site' identification. When available, these criteria were either highly qualitative (Episkopi, MVASP), or strongly quantitative (KVP, SKS, SSP) and often intuitive (VVP, MVASP, Episkopi).

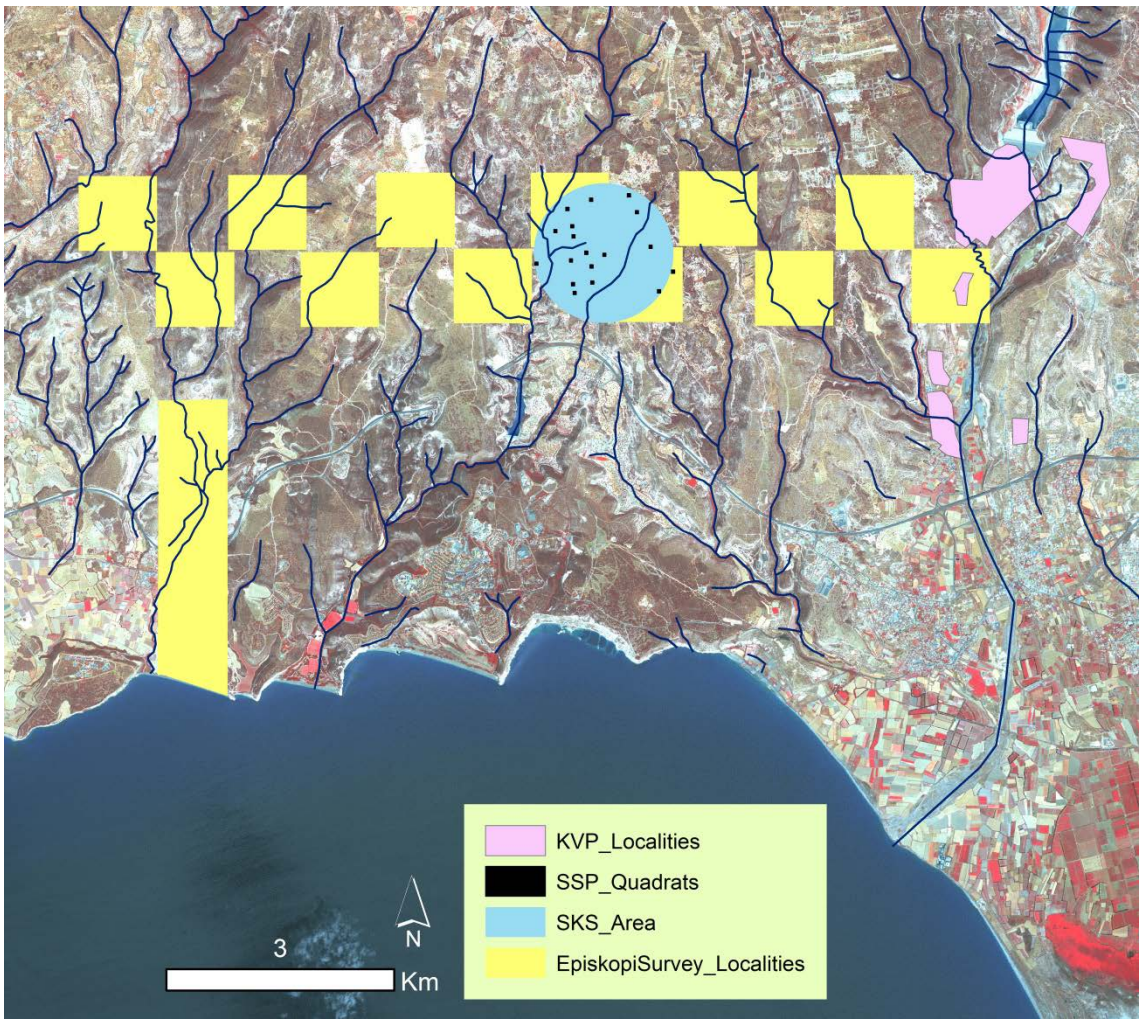


Figure 2.5 The Kouris valley surveys (produced by the author on ArcGIS and input data from Swiny 2004: 57; Held 2003: 472, fig. 15.1; Bombardieri: personal communication).

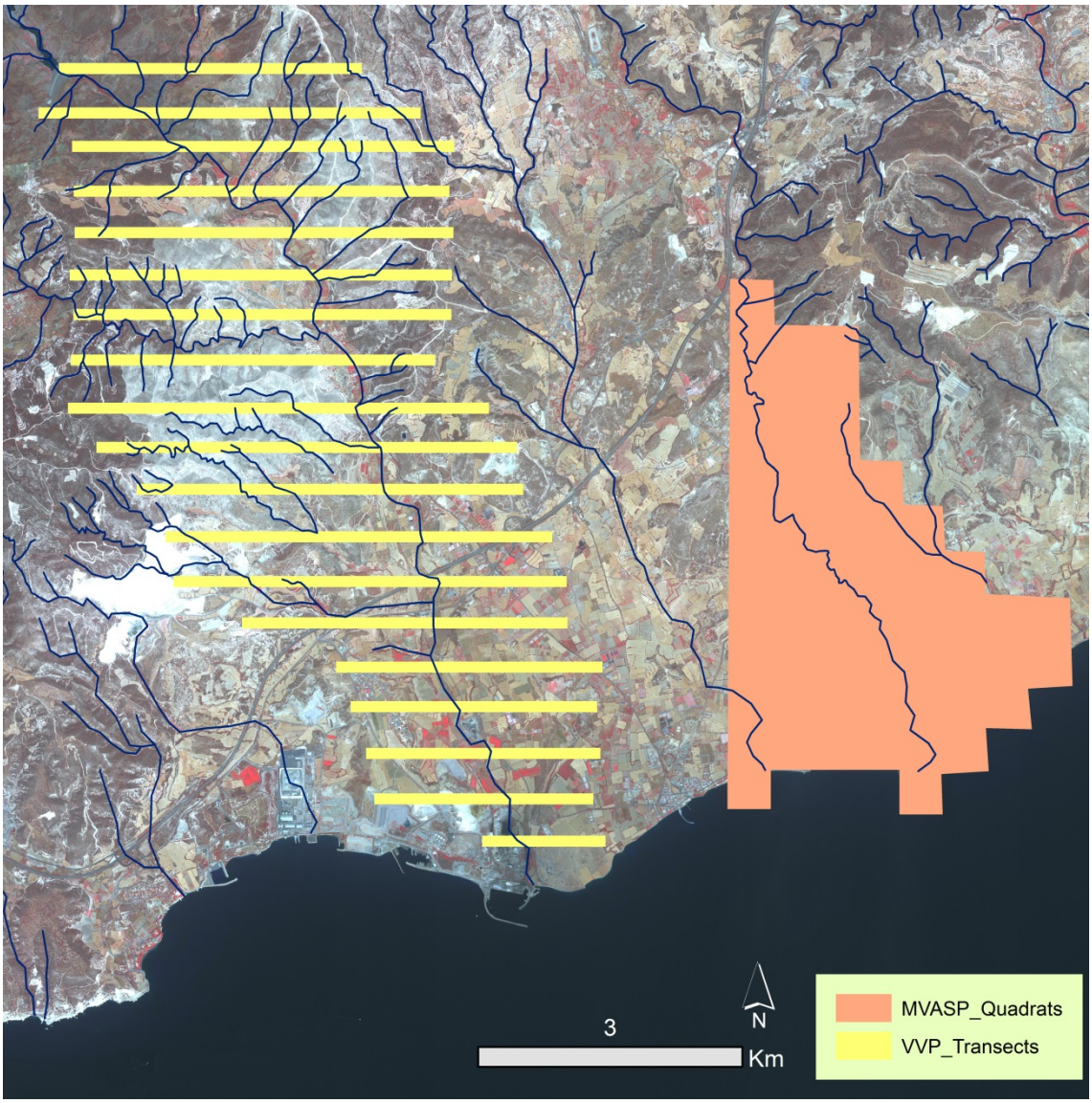


Figure 2.6 The Vasilikos and Maroni valleys surveys (produced by the author on ArcGIS with input data from Todd 2004a: 49, fig. 3.4; Manning and Conwell 1992: 271, fig.1).

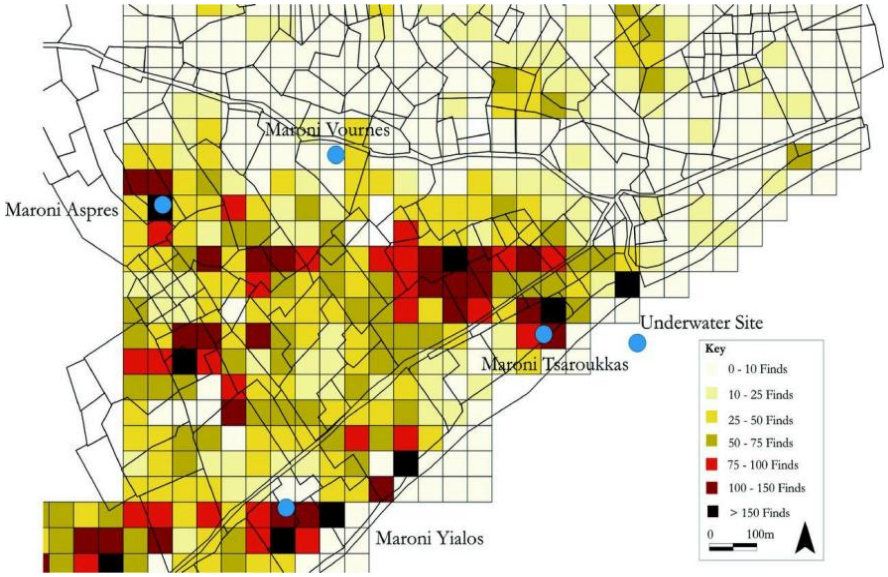


Figure 2.7 MVASP survey methodology close-up (Manning and Conwell 1992: 271, fig.2).

Therefore, as in many cases, a principal challenge in the present comparative study results from problems of undisclosed methodology (Zanger *et al.* 1997: 10; Millett 2000b; Alcock and Cherry 2004a; Menchelli 2008: 31; Vanhaverbeke 2008: 5) especially concerning site development, and site function terminology (Cherry *et al.* 1991: 28-29; Bintliff *et al.* 1999: 141; Given *et al.* 1999: 23-24; Cherry 1994: 96; Rupp 2004: 60). Namely, while challenges do derive from a difficulty in fruitfully combining different methodologies and techniques to establish an interregional comparison (Millett 2000b: 93), theoretical inconsistency is probably a more severe obstacle. Specifically, different coverage strategies, survey duration and collected material are quantifiable and more comprehensible elements than poorly explained terminology and theoretical interpretations (Plog *et al.* 1978: 401-403; Wilkinson 2000: 220; Nance 2003: 308; Bintliff 2000a: 209). Finally, integrating these quantifiable elements requires the implementation of a standard inclusive recording and publication platform, through which future researchers may perform their own assessment and propose their own interpretation of the data.

The present study's methodology will outline the elements it considers essential in this platform and argues for a more central role for the inclusion of landscape characteristics in survey data interpretation by emphasising archaeological visibility, natural and anthropogenic post-depositional processes (Boismier 1991: 18; Bintliff 2000a: 205; Frederick and Krahtopoulou 2000: 85), the spatial extent of sites and their longevity (Bintliff and Snodgrass 1988; Wilkinson 1992; Bintliff 2000a: 209; Millett 2000b: 221; Favory and Raynaud 2000: 225). Such an approach may enable a more secure incorporation of intuitive surveys, which usually carry negative connotations (Swiny 2004: 59). To achieve comparative, thus combinatorial research, this study employs a multidisciplinary, multi-scalar methodological approach (Smith and Peregrine 2012: 12). This will form the core of an investigation of open, constructed and concealed landscape, through a Large, Middle and Small Scale Analysis respectively. A choice of three levels of analysis is employed to facilitate incorporation of both surface and excavated material from fields, structures and tombs.

Three scales of investigation

Large Scale Analysis: Open Space

In the Large Scale Analysis I aim to comparatively investigate patterns of occupation in the Kouris, Vasilikos and Maroni valleys and appraise the associations between those patterns and surrounding landscape characteristics. Additionally, I look to understand the resilience of place-making practices through continuation and disruption patterns of permanent occupation. Continuation and disruption may provide evidence for fluctuating relations between communities and their surrounding landscape, which potentially have economic and socio-political implications. The present study seeks to understand those implications, employ them to bridge the methodological diversity amongst survey projects and demonstrate that it may not be an insurmountable problem for comparative studies (Dunnell 1992: 34; Alcock *et al.* 1994: 138; Smith 2012: 322-323).

In a study largely based on survey information, 'sites' are the most detailed information concerning habitation patterns, while artefact density and the spatial dispersal of material clusters are central considerations. Artefact density analysis often entails application of quantitative methods, the use of which in archaeology, has received mixed interdisciplinary support (Drennan 1996: v-xi). Paradoxically, researchers studying the impact of statistics in archaeology consider the use of complex mathematic formulas and intricate statistics to endow archaeological material with credibility (Drennan 1996: 254; Bentley and Schneider 2000: 465; Cherry 2004b: 11), while researchers employing statistics or using existing statistical data in archaeological survey contexts criticise the mathematical measurement of human decisions as deterministic and de-humanising, particularly when forming predictive models (Haciguzeller 2006: 494). Therefore, to achieve balance between the quantitative and qualitative analyses of data, the present research combines the above with archaeological observations on landscape characteristics. It is important to note that the available and accessible information concerning artefact density is insufficient to produce analytical density maps. That is, the assemblages are

available in a relational rather quantitatively accurate form. Therefore, this study largely relies on sites with the highest relational amount of material assemblage. In order to enhance the utility of the available information, I incorporate information from geology, geomorphology and vegetation provided by survey publications, personal observations and extensive and detailed data provided by the Department of Geology of the Republic of Cyprus (DGRC). Based on these attributes, I distinguish key localities by their visibility, regardless of their proximity to known sites, in:[2]

High: areas whose visibility that, at the time of archaeological survey, were moderately affected by dense vegetation, alluviation, soil transportation and anthropogenic disturbances such as land, architectural and agricultural development (especially terracing of uncertain technological origin) (Whitelaw 1991: 405; Frederick and Krahtopoulou 2000: 79). Areas of high visibility are ploughed soon before archaeological survey and located at a considerable distance from areas associated with high alluviation or colluviation.

Medium: areas with visibility that, at the time of archaeological survey, were affected by vegetation and modern activities, yet, remain sufficiently exposed to undertake archaeological survey with or without a collection strategy adjustment and a notable number and variety of finds recorded.

Low: areas of very poor visibility that, at the time of archaeological survey, were due to dense vegetation, modern construction, pollution or fire damage and indisputable alluviation and/or colluviation. In these areas, survey was limited and planned coverage was not achieved.

Issues of archaeological visibility as introduced in the Boeotia survey's prehistoric sites and crystallised in the theory of "hidden landscapes" (Bintliff et al. 1999) are addressed and analysed where applicable -and appropriate- in each case study, in order to appreciate local landscape particularities and the history of archaeological

[2] For similar studies see Schiffer *et al.* 1978: 6‐8; Connolly and Baxter 1983; Verhoeven 1991; Wandsnider and Camilli 1992: 177‐180; Terrenato 2000; Banning 2002: 46‐47; Thompson 2004; Stark and Garraty 2008.

research. Such issues include the varying preservation of material evidence from different chronological periods, the potential coverage of sites by later multi-period sites and/or their extensive off-site material, and the problematic visibility of short-lived sites, especially in areas exposed to prehistoric erosion, alluviation and colluviation, such as the valleys' lowlands (Bintliff et al. 1999; Van Leusen et al. 2011; Bintliff 2012a). In that vein, aside from concentrating on recorded Bronze Age sites, this study additionally addresses the connotations of small artefact assemblages found within extensive concentrations of post-dated recorded sites, and uses information regarding post-depositional processes related to post-Bronze Age sites. Such information is only available in few occasions from the Vasilikos valley.

Following the above, a similar classification is proposed for the discernment of erosion degree, based on natural characteristics such as elevation, soil deposition characteristics and vegetation quality and quantity. Find spots are categorised depending on soil type and slope which influence the degree of erosion; that is, the formation of surfaces by the removal of soil, rock and sediments through the wearing and transport action of gravity, wind and water (Wysocki *et al.* 2000: E-6). Other analysable soil characteristics to help determine the erosive character of locales include soil granularity and percentage of sand, silt, clay particles and organic matter (Torri and Borselli 2000: E-189; Fryrear 2000: G-195). Erosive degree is categorised into:

High: Areas with surface slope 5-35% (Wagstaff 1982: 76), high degree of soil particle detachment related to grain weight and angle of friction (Torri and Borselli 2000: E-171-E-173), lack of, or minimal existence of vegetation (Torri and Borselli 2000: G-185), low soil hydraulic roughness (Torri and Borselli 2000: E-178) and spatial association with rills and gullies.

Medium: Areas with surface slope between 1% and 5%, low degree of soil particle detachment, low soil hydraulic roughness, vegetation coverage and no spatial association with rills and gullies.

Low: Areas with surface slope lower than 1%, low degree of soil particle detachment, low soil hydraulic roughness, vegetation coverage and no spatial association with rills and gullies.

Based on the above, the present study assesses the survey through variously weighted criteria, a combination that can be classed under 'Fuzzy logic' methodology. This methodology specifically assesses the degree to which something occurs in certain given conditions (Hatzinikolaou *et al.*2003: 170), contrary to 'probability percentage' that measures whether something occurred or not (Aldenderfer 1998: 93). The given conditions are based on criteria provided by the researcher for each case study and depend on the nature of questions asked. In this study, archaeological visibility and degree of erosion are the principal conditions under consideration. Additional conditions entail on the one hand, proximity to water sources, copper, gypsum and clay and on the other, soil productivity and land terrain. Beyond landscape characteristics, the analysed classification methods rely also on comparative quantitative aspects of ceramic artefacts. However, prior to presenting the proposed site classification, it is necessary to incorporate a short discussion on "site" and "off-site" definition.

Site vs. Off-Site

Changes in the theoretical and methodological aspects of archaeological survey as outlined in the previous sections have affected the perception of site, the definition of which varies among survey projects. It is worth mentioning that, due to the likelihood that every part of landscape has been a locus of human behaviour at some point, some archaeologists embraced 'non-site' surveys, with focus on artefact scatters (Banning 2002: 81 with references). This does not necessarily suggest that site-oriented surveys did not recognise the spread of human activity across the landscape, but rather that they also acknowledged the challenges of reconstructing the plurality of such activities through fragmentary survey material.

Some researchers argued that the increasing intensity of survey methods negatively affected the potential for reconstructing the 'larger picture' traditionally aimed for archaeological surveys, and replaced it with a "myopic" focus on micro-regions (Caraher et al. 2006: 7-8). However, others argued that although high intensity survey may rely on decreased geographic coverage than extensive surveys, its spatial consistency may enable a more accurate reconstruction of complex processes affecting the artefactual record (Fentress 1999: 44). Such complexity is not limited to high-density and potentially long-occupied material areas, but also to temporary or periodic activities surrounding what archaeologists understand as settlements.

Off-site or background scatters, a frequent phenomenon observed in surveys, refers to low-density artefact distributions that appear almost continuously throughout the landscape between acknowledged sites. Although often not considered, explaining such phenomenon creates more questions than answers that may be better understood by referencing natural and cultural post-depositional processes.

A challenge in this study, then, is to understand this lack of consensus regarding the way off-site scatters are perceived and investigated. Researchers have variously interpreted off-site scatters as non-habitation activity areas, meaningless background noise, manuring material, or the result of geomorphological processes (Wilkinson 1982; Bintliff and Snodgrass 1988; Alcock et al. 1994; Mee and Forbes 1997: 40; Bintliff et al. 2002). Others suggested they may represent vestigial habitations, surviving in different degrees of preservation depending on post-depositional and taphonomic processes (Bintliff et al. 1999; Barker et al. 2000; Bintliff et al. 2002). Even the common perception that such scatters were the result of manuring is not widely accepted (Snodgrass 1991 contra Alcock *et al.* 1994) and not always materially and ethnographically supported (Mee and Forbes 1997b: 34; Forbes 2013: 551).

On some occasions off-site material was discussed as a low-density halo of artefacts surrounding a recognised high-density area that merge to form a more generalised

background (Wilkinson 1989: 34-35; Bintliff and Howard 1999: 54-55). These could represent gradually decreasing densities of off-site material. This phenomenon however, appears likely to be case-specific, for it has not been generally documented in other survey projects (e.g. Alcock et al. 1994: 141-142). Therefore, as off-site material should be a topic pertaining to the problems and particularities of each survey project, the answer to these questions is far from clear and each survey may contribute in different ways to the understanding of low-density scatters. Regarding material dating as early as the Bronze Age, the diachronic effect of such processes is almost near impossible to reconstruct and it may be helpful to employ firmer criteria when defining a site.

Wilkinson, through his long research in the Middle East, where low-density material was appearing at even higher densities, encouraged a quantified approach to deal with off-site material and assist in the understanding of the limits of recognised sites (Wilkinson 1982, 1989, 1990, 1994). On the other hand, Given presented a minimum of 23 factors (cultural, post-depositional and methodological), which create and affect surface artefact density figures to argue that it may not be useful or practical to conduct direct quantitative comparisons of density figures in the "current state of research" (Given 2004: 19). Ten years after, despite various attempts at quantifying material density variation, they still appear to embrace, often successfully, specific case studies, and despite their local success, they are probably more locally useful than cross case-study applicable. Therefore, it may be more useful if an attempt to meaningfully compare survey data, does not quantify the ambiguity surrounding off-site scatters. This is not to suggest that quantitative information should be ignored, but rather to encourage its use as auxiliary instead of attempting to achieve "objective descriptions" (Terrenato 2004: 43-44, 47).

An important aspect of the survey projects under investigation is that only the VVP mapped low-density material scatters. In the Maroni valley the proximity of such scatters to known sites has facilitated their incorporation into the excavated site's extent often via verification through trial excavations or geophysics survey

(Manning et al. 2014). When post-depositional processes were understood to a reasonable degree, some concentrations were characterised as possibly background noise or off-site material. In the Kouris valley, the surveys are site-oriented and despite covering a wide geographic area, archaeologists only mapped scatters of high material density, which when adjacent to tombs, were considered settlements (Swiny 1981). Therefore, the VVP and the high number of its recorded Bronze Age sites, presents a classification challenge in this study. In addition, although the project mapped low-density scatters, in the most recent publication, Todd (2013) incorporated them into areas believed to be part of sites, as evidenced through the high material density areas. This is not necessarily incorrect, because although the relation between areas with different material density may not be established without excavation, it is generally accepted that human activities extend beyond habitation zones.

Based on different combinations of the above, the following classification is proposed:

A. Sites

    1. **Cemeteries**: Sites with evidence of at least one tomb.

    2. **Permanent Settlements**: Sites with evidence of architectural remains and a considerable amount and variety of artefacts (coarse ware, stone tools), which represent an established and secure chronological span.

    3. **Specialised sites**: Sites with evidence of specialised activities such as metallurgy (slag) or pottery production (e.g. wasters).

The division between cemeteries and settlements in the EC/MC is clearer than the LC. In the LBA one can observe a gradual reduction in the typical EC/MC extramural collective burials and a shift of preference to intramural burials (Keswani 2004: 84-144). A consequence of that is the extremely low visibility of LC burials in archaeological survey, and the meaningful division of settlements and cemeteries

achieved only through excavation. In the recording of an LC site through survey, one may consider, however, the high possibility of a cemetery.

Another important topic of consideration is the ambiguity in the division between specialised sites and settlements. Namely, archaeological excavations revealed evidence both for specialised activities within generally domestic sites, such as the metallurgy workshop at Enkomi-*Ayios Iacovos* (Courtois 1982: 152, fig. 1), and sites largely dedicated to a specialised activity, such as Sanidha-*Moutti tou Ai Serkou* (Todd and Pilides 2004) and Apliki-*Karamallos* (Kling and Muhly 2007). Therefore, classifying surface evidence in either settlement or specialised site does not exclude the possibility of additional functions. It rather emphasises the most common material assemblages associated with particular site types.

B. Off-Sites

The term is used to characterise lower density and variable material surrounding the aforementioned sites. These may be the result of dwelling sites of non-continuous use (occurring at intervals), for example farmsteads or small settlements, areas of frequent visit, such as agricultural fields, pastoral land and vantage points, and routes**.** In addition, some may reflect intensive agricultural activities, which contributed to material placement, especially in areas with evidence of post-Bronze Age activity. Finally, sherds and other artefacts that appear to clearly be the result of displacement and deposition through erosion and alluviation are not included in this study's maps, although mapped by the relevant publications.

Without excavation one cannot successfully achieve a clear understanding of the character of the off-sites, or the chronological association of a site's spread in a given area. However, the proposed classification acknowledges the mobility of individuals and activities beyond habitation areas, the association of which with the encompassing landscape may be insightful in the reconstruction and regional

comparison of settlement patterns. Mobility is a recurrent concept of inter-disciplinary consideration from sociology (Kaplan 2002; Sheller and Urry 2006), cultural geography (Cresswell 2006; 2010), and landscape phenomenology (Schama 1995; Tilley 1994; 2006; Ahmed 2006), and an active element in territorial organisation of communities, which some researchers have suggested is an indication for identity formation and expression (Phillips 2003; Sellet *et al.* 2006; Tilley 2006; Knapp and Van Dommelen 2010; Van Dommelen and Knapp 2010).

However, as mentioned above, sole focus on survey material can only contribute to a limited extent in discussion of site function, or past human relations. For that reason, the present study incorporates all available excavated and published Bronze Age material from the three valleys under investigation.

Middle Scale Analysis: Constructed Space

In the Middle Scale Analysis this study employs a spatial perspective on excavated architectural remains between the ECI and the LCIII and proposes a diachronic perspective of the relation between spatial form and social relations, as exemplified by Hillier and Hanson (1984: x). Beyond a traditional focus on function and architectural style (Lawrence and Low 1990: 466; Trigger 2007: 38-40), it analyses the spatial organisation of, or that resulting from, human activities. This approach may contribute towards a three-dimensional view of space; the third being the area experienced by the community using a structure. The combination of the above elements has been argued to provide a more inclusive understanding of the structural layout and architecture from settlements, as it embraces settlement planning and expansion mode as primary indicators of space organisation, and different degrees of architectural monumentality as manifestations of the employment of symbolic power through structure (Eco 1980: 38-39; Hillier and Hanson 1984: ix; Trigger 1990: 122; Dovey 1999; 2005: 291; Leach 2005: 308).

Following Knapp and Ashmore (1999: 7, 20-21), Snead and Preucel (1999: 173) and Leach (2005: 308), who support that communities experience and conceptualise organised space as part of their identity, this research attempts to associate constructed space with landscape potential from a diachronic point of view, with the aim to productively incorporate the architectural predecessors and successors of structures and their cognitive connotations. This is, in part, influenced by Hillier and Hanson's theoretical conceptualisation of constructed space, the 'Space Syntax Analysis', which seeks to demonstrate "internal knowledge" within a community (Hillier and Hanson 1984: 198), namely the abstract rules underlying architectural forms (Hillier and Hanson 1984: 12; Romankievicz 2009). These abstract rules have been discussed in association with the concept of "Habitus" (Bourdieu 1990: 53), which Bourdieu (2005: 43) described as "a system of long-lasting (rather than permanent) schemes or schemata or structures of perception, conception and action". Acknowledging that the concept of "habitus" was adopted from architecture (Panofsky 1967), its use for the investigation of social dynamics through constructed space is particularly apposite. "Habitus" as a sense of space, is analysed in Hillier and Rooksby (2005), in which they conclude that architecture, as an organisation of space through segregation, "enables and constraints the social capital, that is, the resources made available by participation in socio-spatial networks" (Dovey 2005: 291). Architectural analysis then, can incorporate functions that the designer intended to give to space, the way the designer determined the physical aspects of structure, based on available technology, and the way structure was determined by its physical characteristics in order to perform that given function (Barceló 2010: 142).

To conclude, through the incorporation of landscape and diachronic space segregation philosophy, the middle scale analysis aims to demonstrate the interpretative potential of a theoretically supported spatial approach; one that assesses open and constructed space in the same context. Finally, additional information is provided by concealed space and its incorporation in meaning-laden landscapes; a relation scrutinised through the final, Small Scale Analysis.

Small Scale Analysis: Concealed space

The final area through which to investigate the spatial expression of identities is concealed space, exemplified by Bronze Age burials. This choice is based on a widely supported argument that, despite the interred no longer being active members of communities, the way they are perceived and how their identity is renegotiated, can provide insight into how people manipulate space in the formation and expression of their own identities (Finch and Wallis 1993: 50-51). The parameters through which this expression is investigated are initially the number of internments in each burial chamber and the number of chambers comprising burial complexes. As there exists variable investigative rigour and detail in the publication of tombs, the assessment of artefact numbers or detailed ceramic decorative patterns would be irresponsible. However, useful indicators of conscientious diversity can be found in the variety of artefact types, the association of certain pottery wares and the combination of preferred shapes, the existence of unique rare artefacts at a local and subsequently regional level and aspects of artefacts imbued with symbolic meaning. This study incorporates these observations into a detailed landscape analysis, and akin to the Middle Scale Analysis, will proceed to the articulation of a pattern for this relation.

The Small Scale Analysis focuses on artefact contextual uniqueness and distinctiveness amongst community burial assemblages, particular valleys and the wider regions. Tomb assemblages are discussed in terms of burial chamber numbers and combinations and their accessibility/reusability or conscious association with individuals or groups. The present research follows that display of association with a particular burial assemblage can provide evidence of identity negotiation through the material establishment of social and potentially political boundaries (Banning 2000: 157*;* Renfrew 2001: 131; Hodder 2004: 29).

Most importantly, this study incorporates observations on the spatial distribution of contextually unique elements in the analysed landscape to provide a link between material and behavioural variability and landscape productivity and diversity. Such a

link is hoped to better communicate the importance of natural and especially cognitive landscape in archaeological interpretation. Therefore, the three levels of analysis work both independently and complementarily towards developing a holistic understanding of the relation between landscape and identity and the important role landscape plays in archaeological investigation.

Multi-Scalar Analysis in Practice

The present study embraces aspects of economy through an in-depth study of natural landscape. Basic information regarding natural resources is obtained by the DGRC and includes coastline, geology, geomorphology, hydrogeology, rivers and sub-watershed, ground water capacity, copper mines, soil types, land use and vegetation. Additional information derives from personal observations on Quickbird 2009 satellite images and personal communication with Dr R. Shiel from the Department of Agriculture, Newcastle University.

This information is used when relevant from the site's initial recording by survey projects, placement on traditional maps and description, to discussions of different theoretical aspects of identity formation and transformation. The results presented for each case study are the outcome of an effort, which includes:

Data Accumulation

- Site visits, geo-referencing and recording of personal observations on erosion and archaeological visibility.
- Creation of relational databases to store and organise the available published data.
- Enhancement of dataset information based on observations on stored survey material from MVASP, SKS, SSP, KSU and KVP.

- Attainment and digitisation of Cadastral plans from the Department of Lands and Surveys of the Republic of Cyprus.

- Acquirement of digital information regarding geology, soil types, hydrogeology and vegetation of Cyprus and a Digital Elevation Model from the DGRC.

- Attainment of information regarding land development for the villages of Psematismenos, Maroni, Tochni, Mari, Zygi, Kalavasos, Episkopi, Erimi, Sotira, Avdhimou and Paramali from the respective presidents of community councils and the villages' official websites, when available (Kalavasos: www.kalavasos.org; Tochni: www.tochni.org.cy; Mari: www.mari.org.cy; Maroni: www.maroni.org.cy; Zygi: www.zygi.com).

- Participation in excavations at Erimi-*Laonin tou Porakou* (2011).

- Participation in the Tochni-*Lakkia* preliminary seasons (2011-2013) and recording of exposed archaeological section.

- Conduct of surface survey and excavation at Tochni-*Lakkia* (2012-2013) and comparison with the VVP survey results.

- Participation in excavations in the Maroni complex (2012-2013).

Data Manipulation

- Location of recorded sites on Satellite images (Quickbird 2009), based on traditional maps, descriptions of publications and personal observations.

- Classification of sites based on erosion, visibility, density and variability of finds.

- Association of site categories with information obtained by DGRC, using ArcGIS and MicroDEM software, in order to examine the relation of

communities and landscape (Gaffney *et al.* 1995: 213; Mattingly and Witcher 2004 : 184; Laurenza *et al.* 2005: 127-128; Blake 2007: 233; Conolly 2008).

- Recording of observations regarding continuation/abandonment of sites.

- Use of published information from excavated sites: Kalavasos-*Ayios Dhimitrios* (Todd 1989; South 2002), Kalavasos Village tombs (Karageorghis 1978b: 23-24; 1979: 692-693; 1985: 915, 920, 922; 1987: 44-45; 1989: 793-794; Hansen 1979: 297; Nicolaou 1980: 64; Cullen and Wheeler 1980; Nicolaou 1980-1981: 53; Pearlman 1985; Todd 1979a: 283-284; 1979b: 34, 45-63; 1980: 5; 1986; 1996: 21-22; 2004b: 145-160; 2007), Kalavasos-*Mangia* tombs (Johnson and Hordynsky 1982: 65; Karageorghis 1975: 40; 1976a: 48; 1976b: 851-853; 1977: 714-715; 1977: 28; 1986a: 51; 1986b: 62-63; McClellan *et al.* 1988: 202-209; Nicolaou 1975-1976: 44; Todd 1977: 28; 1978: 186; 1979a: 284; 1979b: 33; 1986; 2004b: 78-82; Todd and Pearlman 1986 in Todd 1986: 212-213), Maroni-*Vournes* (Cadogan 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1992a), Maroni-*Tsaroukkas* (Manning *et al.* 1994a; Manning *et al.* 1998; Manning *et al.* 2002), Episkopi-*Phaneromeni* (Carpenter 1981; Herscher 1981; Swiny 1986), Episkopi-*Bamboula* (Weinberg 1983), Erimi-*Laonin tou Porakou* (Bombardieri 2010, 2012a, 2012b, 2013), Erimi-*Pitharka* (Vassiliou and Stylianou 2004; Flourentzos 2010; Papanikolaou 2012), and Sotira-*Kaminoudhia* (Swiny *et al.* 2003).

Concluding Remarks

The comparative aspects of this research involve two valleys in close spatial association, Vasilikos and Maroni, the relation of which has not yet been articulated, in order to investigate local dynamics and diachronic advancement towards regional and inter-regional interaction networks. In addition it incorporates valleys with common material and landscape characteristics, without presenting direct spatial association to those aforementioned, in order to determine whether

the aforesaid local and regional systems followed an island-wide pattern or maintained a strong regional character.

The subsequent chapters follow the proposed methodological structure with the investigation of Vasilikos and Maroni followed by the Kouris valley. A chapter dedicated to structured space summarises the Middle Scale Analysis with additional archaeological evidence from areas peripheral to the river valleys. Similar practice is employed in the Small Scale Analysis, where I incorporate tombs from the area between Kouris and the Vasilikos and Maroni valleys, in order to in-fill spatial and material lacunae. Finally geographical data are combined in designated maps, in order to support the proposed interpretations, which are compiled in the final chapter.

Table 2A: Vasilikos and Maroni Survey Information

Survey Name	**Kalavasos and Maroni Built Environment Project**	**Maroni Survey**	**Maroni Valley Archaeological Survey Project**	**Vasilikos Valley Project**
Code	**KAMBE**	**Maroni**	**MVASP**	**VVP**
Pre-Survey Archaeological Information	Excavations by the BM Expedition and the DA. See also: VVP and MVASP.	Excavations by the BM Expedition.	Excavation of Bronze Age tombs by the BM Expedition. See also: Maroni survey.	Short reports from the DA and sporadic information from the BM.
Director(s)	S. Manning and K. Fisher	G. Cadogan, D. Smyth	S. Manning and D. Conwell	I. Todd
Duration	2008-up to date with two 3-week seasons and two 5-week full field seasons.	Inconsistent duration, parallel to the Maroni-*Vournes* excavation in the 1980s.	1990-1993: reconnaissance survey 1991 and 1993: intensive survey	1975-1989 (interrupted)
Coverage	Kalavasos-*Ayios Dhimitrios*, Maroni-*Vournes*, Maroni-*Tsaroukkas*, Tochni-*Lakkia*. A 5-week season is estimated to cover approximately 7 hectares.	An unspecified area surrounding Maroni-*Vournes*.	14,5 m^2 of the south Maroni river, between Psematismenos and the coast.	Between the area south of the Kalavasos dam and river estuaries. Estimated 20% coverage of the valley.
Survey Methodology	Geophysics survey: Conductivity, Ground-Penetrating Radar, Magnetometry-Fluxgate, Magnetometry-Optical, Resistivity-Twin Probe.	Geophysical prospecting. Intensive surface survey.	Extensive survey of the designated area and intensive survey of promising localities. Remote sensing. Underwater survey. Excavation of 22 trial trenches through random sampling.	Initially intuitive survey of "promising areas" with full collection in promising locations and partial collection in other localities. Later a standardised sampling procedure was introduced employing 100m width transects of 2,5-4,5km length in 400m intervals. This strategy covered 20% of the valley and was believed to embrace more terrains because it crosscut various environmental systems. Often the transects would be stratified to cover equally diverse landscape settings, by dividing the area in environmental zones, with the adoption of a quadrat survey unit.

Survey Name	Kalavasos and Maroni Built Environment Project	Maroni Survey	Maroni Valley Archaeological Survey Project	Vasilikos Valley Project
Methodological Limitations	Limitations associated with the equipment performance in the particular environmental characteristics of the area of investigation.	This survey did not approach Maroni as a geographically consistent area.		Three out of 21 transects were not surveyed due to proximity to military zones, close to the copper mines. This limited considerably the potential for understanding the influence of copper resources in settlement patterning. The extent and intensity of the survey was often affected by economic resources and limited staff.
Collection Methodology	Full coverage of survey squares from Maroni complex and Tochni-*Lakkia*.	No collection	Creation of three E-W 500m swaths, including different terrain types, whose parts were partly or totally collected depending on artefact representation. The swaths were systematically walked in regular transects of 5x50m, with 5m spacing between surveyors, involving observation, collection of diagnostic artefacts, in-field paper recording and subsequent database entry. Two blocks of the MVASP survey grid covered Psematismenos-Trelloukkas and collected all visible pre-modern artefacts.	Inconsistent. Sometimes full collection, other times collection of "representative" artefacts. After the establishment of the survey transects, if a site was believed to be continuing beyond the limits of a transect, the survey would expand accordingly. The Kalavasos dam area was totally surveyed.
Recording and Storage Methodology	Digital Database.	Recording of diagnostic artefacts.	Paper recording on the field and database entrance. The material was counted, classified, weighted, bagged and stored with the exception of selected material that was discarded in the field after being counted. The	Recording of all surveyed material but collection only of diagnostic pottery and relatively light ground stone tools.

Survey Name	Kalavasos and Maroni Built Environment Project	Maroni Survey	Maroni Valley Archaeological Survey Project	Vasilikos Valley Project
			material is stored at Maroni-Vournes and Larnaka regional museum.	
Landscape Information	GIS maps by G.M. Andreou and D. Sewell.	No information	No information beyond general visibility remarks.	Environmental Assessment by Gomez et al. 2004. Brief information on weather conditions and archaeological visibility on each site.
Visibility and Post-Depositional Processes	See VVP and MVASP.	Sporadic information	Available through personal communication with S. Manning and G. Cadogan and personal observations during the summer of 2012.	Published information on the condition of survey localities.
Terminology	Unavailable criteria	Unavailable criteria	No published criteria, but they may be deduced from the description of the material culture characterising the recorded "sites".	Unavailable criteria.
Available Publications	Fisher et al. 2011; Fisher 2012; KAMBE, The Kalavasos and Maroni Built-Environments Project: www.ithaca.edu/KAMBE/results2/	Unpublished notes of D. Smyth (accessed by the author).	Manning and Conwell 1992; Manning et al. 1994a.	Todd 1977, 1978, 1979a, 1979b, 1980, 1981, 1982, 1986b, 1996, 2004a, 2004(ed.).

Table 2B: Kouris Survey Information

Survey Name	**Kent State University Project at Episkopi**	**Kouris Valley Project**	**Sotira *Kaminoudhia* Survey**	**Sotira Survey Project**
Code	**Episkopi**	**KVP**	**SKS**	**SSP (Land Behind Kourion)**
Pre-Survey Archaeological Information	Cyprus Survey records, unpublished museum records and cadastral maps. Further information was acquired by local farmers, shepherds and rural constables (Swiny 1981: 55). The survey followed the excavation of Episkopi-Phaneromeni (Swiny 2004: 56).	Great depth of historic knowledge associated with the Kouris valley (See Chapter Five, pp.207-209)		Excavations of Sotira-Teppes, Sotira-*Kaminoudhia* and Episkopi Survey.
Director(s)	S. Swiny	L. Bombardieri and A. -M. Jasink	S. Held	S. Swiny and C. Mavrommatis
Duration	4 week season in 1979	4-5 week seasons between 2007 and 2009	1,5 week reconnaissance survey and 3,5 weeks systematic survey	6 week season in 1997
Coverage	Localities from Episkopi, Erimi, Kandou, Sotira, Paramali and Avdhimou.	9 km^2 from both banks of the North Kouris valley, covering a 40% sampling of the territory	20% of the catchment area of Sotira-*Kaminoudhia*.	15 km^2 surrounding Sotira-*Kaminoudhia* and Sotira-Teppes (Swiny 2004: 58).
Survey Methodology	Intuitive survey of 'potentially rewarding areas', located close to arable land and perennial water sources (Swiny 1981: 56). Based on the above, the expedition divided cadastral plans into number plots, which were sometimes also subdivided arbitrarily. Statistical analysis of pottery (Swiny 1981: 58).	Topographical and geophysical prospecting. Intensive surface survey.	40 contiguous E-W unstratified transects of 50m width around Sotira-*Kaminoudhia*.	Total collection of 15 quadrat units.

Survey Name	Kent State University Project at Episkopi	Kouris Valley Project	Sotira *Kaminoudhia* Survey	Sotira Survey Project
Methodological Limitations	The Episkopi and the KVP are not characterised by the close project cooperation observed in the Maroni valley. Namely, goals and methodology are diverse and rarely interdependent. The intuitive character of the survey affects its reliability.		Undisclosed	Undisclosed
Collection Methodology	Total collection	40% sampling of the designated area. Total collection of designated fields.	Total collection	Total collection by groups of 3-5 people, spaced between 10m and 16,6m, who covered completely 40 contiguous E-W un-stratified transects of 50m widths at average speed, collecting both diagnostic and undiagnostic artefacts (Held 1988: 54 *cf*. Plog et al. 1978: 389-393)
Recording and Storage Methodology	Recording of all collected material in a now lost database. Storage of diagnostic artefacts and samples from undiagnostic pottery. The pottery, which was recorded, counted and stored according to its provenance, created a reference collection.	Recording of all collected material and creation of digital data collection, analytical cartography and satellite imaging.	Paper recording and statistical analysis of average speed of surveyors.	Stored with the Episkopi survey material.
Landscape Information	Geographical notes accompanying the description of each site, emphasising on geomorphology and vegetation	General environmental assessment of the south coast of Cyprus. No information concerning the particular landscape of Kouris, beyond general geology and geomorphology.	In depth study of the geomorphological characteristics of the area, including the impact of contemporaneous anthropogenic landscape alterations.	General description of landscape and attempt to create a palaeo-environmental reference collection.

Survey Name	Kent State University Project at Episkopi	Kouris Valley Project	Sotira *Kaminoudhia* Survey	Sotira Survey Project
Visibility and Post-Depositional Processes	Briefly mentioned in Swiny 1981.	Not published, although survey data and notes were digitally accessed for the purposes of this study.	Undisclosed	Reconnaissance survey was employed to evaluate the topographic, ecological and archaeological settings of the investigated area.
Terminology	Cemetery: area with 1+ dromoi, Settlement: observable cluster of artefacts regardless of type but including hand stones and saddle querns and covering >100 m^2, Farmsteads: Smaller material clusters	Site: discrete area of pottery concentration higher than 3,5 sherds per 100 m^2 and evident topographical distinction.	Site: Pottery and architecture, Find spot: less than five artefacts or sherds from one vessel.	Farmstead: discrete ceramic scatters between 17x17m and 60x60m. No information regarding the term 'settlement'.
Available Publications	Swiny 1981; Herscher and Swiny 1992.	Bombardieri and Jasink 2010; Bombardieri et al. 2008a; Bombardieri et al. 2008b; Bombardieri et al. 2008c.	Held 1988, 2003.	Swiny and Mavromatis 2000.

CHAPTER 3

LARGE SCALE ANALYSIS: VASILIKOS VALLEY

Research Directions

To say that prior to the mid-1970s the Vasilikos valley was an archaeological terra incognita is not an overstatement. Despite the earliest published information concerning the valley's archaeological nature dating back to late 19th century (Reinach 1891: 188; Myres and Ohnefalsch-Richter 1899: 9), the sporadic and inconsistent character of that information was not revisited beyond descriptive reports. As part of the British Museum Expedition at Maroni (Johnson 1980: 7-13) archaeological activities of an unknown extent and intensity explored yet unidentified localities in the area surrounding the modern villages of Kalavasos and Mari (Todd 2004c: 18). Subsequently, the Swedish Cyprus Expedition recorded sites and individual finds in a more systematic, site-oriented mode (Gjerstad 1926: 14). Minor archaeological activities followed, consisting of rescue excavations by the Department of Antiquities in early 1940s at the village of Kalavasos (Dikaios 1953: 319), which remained a principal area of investigation until 1976. Before that date, no archaeology researcher or institution investigated the Vasilikos valley as a geographically defined entity, or a settlement system. Consequently, this relatively underdeveloped region attracted attention following the Turkish invasion of the island in 1974, when Karageorghis suggested the archaeologically rich area be subjected to survey, a call answered by Todd in subsequent years.

Considering the relative archaeological obscurity of the Vasilikos valley, the discovery of a large number of sites via diachronically developing survey techniques situated the VVP as one of the most intensive and successful survey projects in Cyprus (Iacovou 2007: 14). The VVP recorded in total 146 sites (fig.3.1) (Todd 2004: 176-177; 2013: 165-166), including the identification and excavation of a significant Neolithic settlement (Todd 1987), the rescue of a substantial number of tombs from

various chronological periods, and the placement of Vasilikos Valley within the LBA world with the excavation of a settlement containing a substantial ashlar building. Additionally, the VVP revealed a number of sites subsequently excavated by various projects (Rautman *et al.* 2003; Clarke 2007) and is currently being investigated under the KAMBE project (KAMBE Project, http://kambe.cast.uark.edu). Despite the wide chronological breadth of the VVP, subsequent research has focused on its Bronze Age component (Todd 2004: 179-184). Therefore, a diachronic, multi-period comparison within the Vasilikos and other regions remains an open question.

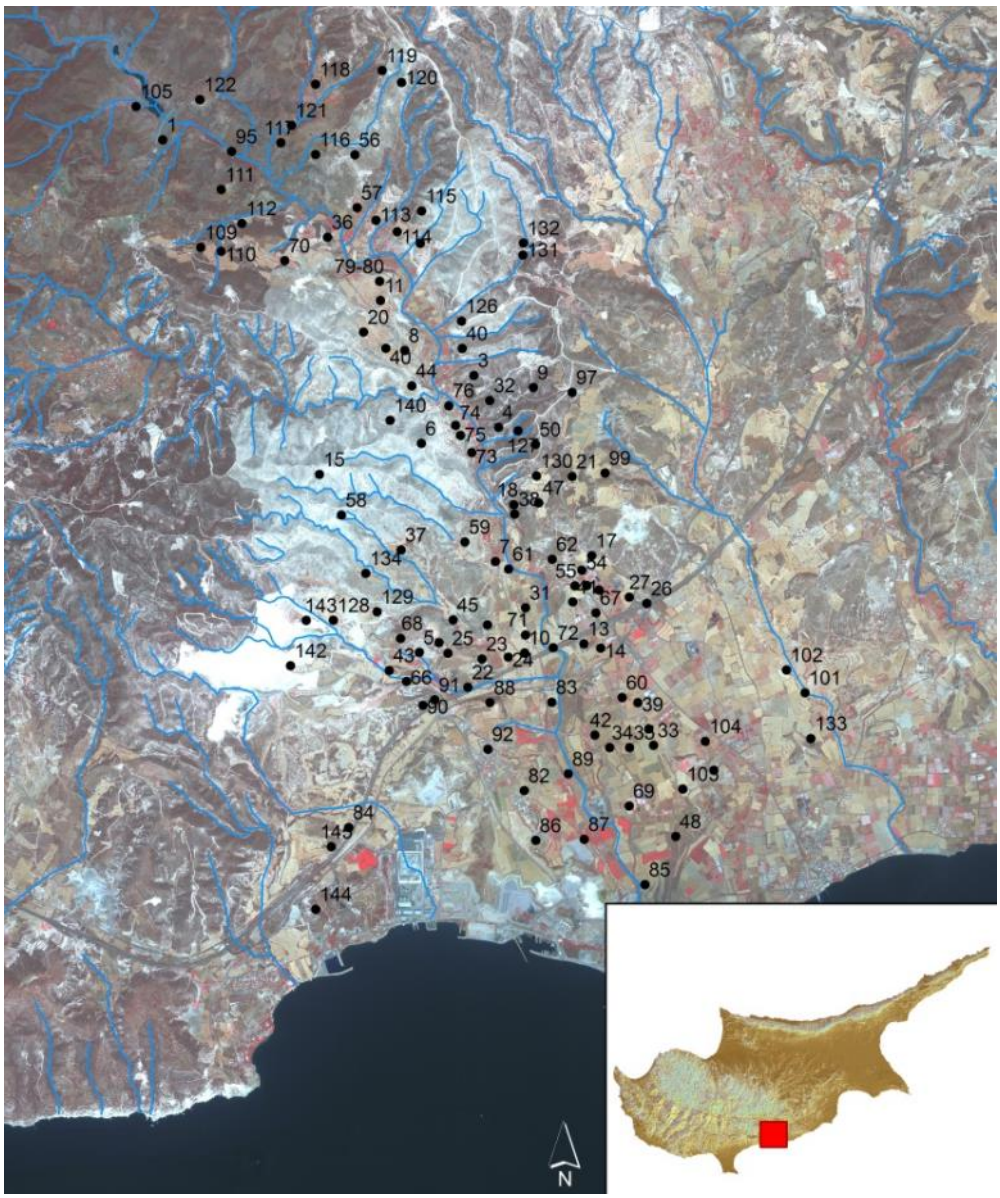


Figure 3.1 The Vasilikos Valley Project recorded sites – see number index in pp. 153-155 (produced by the author on ArcGIS with data from the DGRC and Todd 2004, 2013).

The present study continues this Bronze Age focus, by investigating its concentration and dispersal throughout diverse landscape settings, while insisting on the necessity of methodological and theoretical consistency with subsequent Iron Age investigations.

The Landscape in Brief

The natural characteristics of the Vasilikos valley heavily influence the post-depositional processes discussed in Chapter Two (pp.51-54). It is useful to recall that the archaeological and geomorphological make-up of the valley comprise an igneous-volcanic highland (shown in brown hues), a central chalk plateau (green and blue) and an alluvial plain (pink) in discreet zones, the impact of which on the spatial expression of material culture is central to this chapter (fig.3.2).

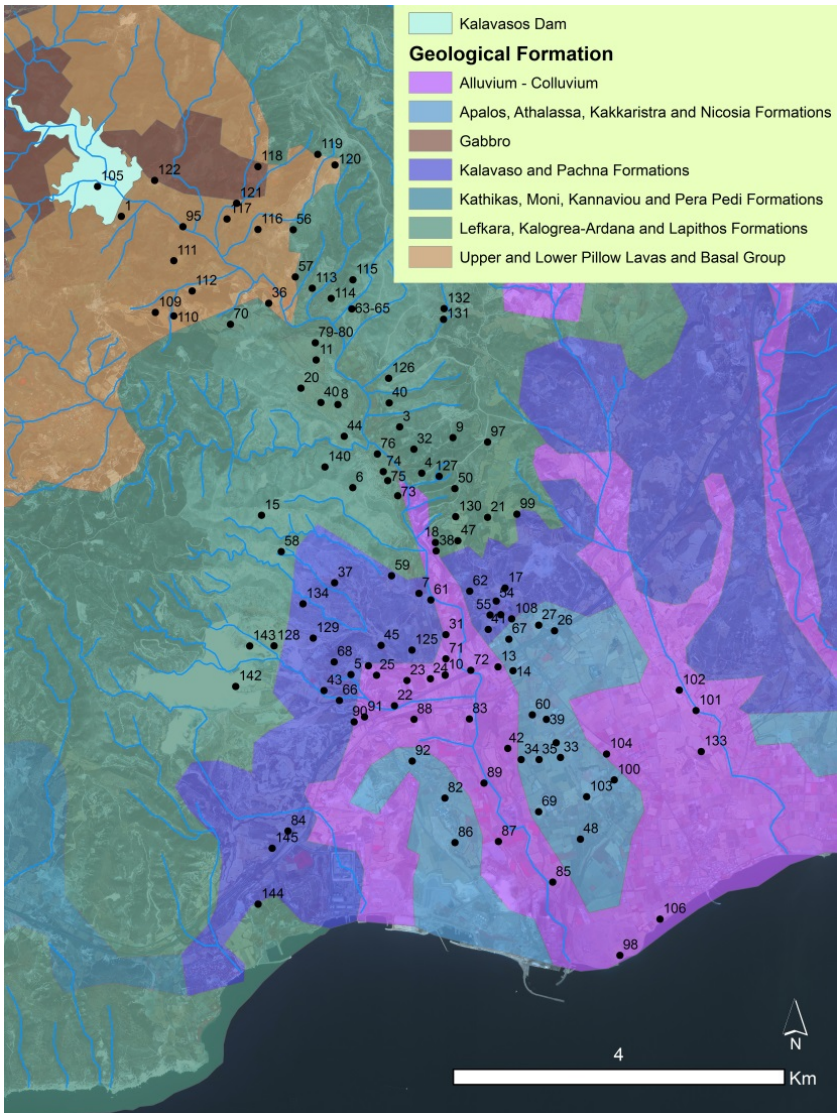


Figure 3.2 The Vasilikos Valley geological formations (produced by the author on ArcGIS with data from the DGRC).

Based on information from the DGRC, the Vasilikos valley geological profile includes what may be classified as shallow, light soils in the central and N part of the valley, adjacent to the Troodos slopes, and in the area of the so called “Chalk Plateaus” (green and blue). Deeper soils, the result of alluviation and colluviation occur along the river and into the fertile plain in the S and SE of the valley (pink). Finally, mapped in light blue, the Apalos, Athalassa, Kakkaristra and Nicosia formations comprise low hills, with light erodible soils, but lower limestone percentage than the aforementioned Chalk Plateaus. The duality of uplands and lowlands, hilly and plain terrain, with soils of varying depth and provenance is of critical importance for understanding the diachronic relation of the Bronze Age communities of the Vasilikos valley and the other valleys under investigation (figs.3.3-3.5).

Figure 3.3 Vasilikos uplands (personal photography from the area E of the Kalavasos dam).

Figure 3.4 The Chalk Plateaus (personal photography from the area NE of the Kalavasos village).

Figure 3.5 The Vasilikos lowlands (personal photography from the SE edges of the chalk plateaus).

The chalk plateaus hilly terrain and the bedrock's geological consistency renders its soils shallow, prone to erosion and generally suited to natural vegetation. Namely, fertility and large-scale productivity is enabled by anthropogenic topographical manipulation (terracing) and the occurrence of favourable climatic conditions, which jointly maintain the productively fine texture of the soils. The deeper soils of the lowlands, which are largely the result of alluviation and colluviation are well aged, generally rich in bases and fertile (Noller 2008: 28). Taking under consideration the fluctuating topography Mediterranean landscapes, the extensive productive use of deeper soils has resulted in selective regional degradation (Griesbach 2000: 15-16), with the most prominent example being the overexploitation of Terra Rossa. Consequently a vicious circle characterises the Vasilikos valley, whereby shallow, nutrient-poor soils suffer from erosion, and fertile soils are deteriorated by diachronic exploitation (Troeh *et al.* 2004: 186-189, 197-199).

This distinction has been important for farmers in the more recent years in the Vasilikos valley (fig.3.6). Based on information from the past 50 years, the central part of the valley is covered in maquies while areas adjacent to the river banks are covered in vegetables and olive trees.

The N Vasilikos encompasses a combination of high forest, maquies and olive trees along agricultural terraces, while perceptible change in vegetation patterns occurs in the S and especially SE of the valley, which is predominantly covered by olive and carob trees. Therefore, the natural heterogeneity of soils, observed in the modern maps, across different elevations and micro-environmental zones may provide an opportunity – indication and not paradigm- to evaluate the relationship between spatial location and landscape characteristics in the Bronze Age, and assess the role of landscape in diachronic settlement patterns.

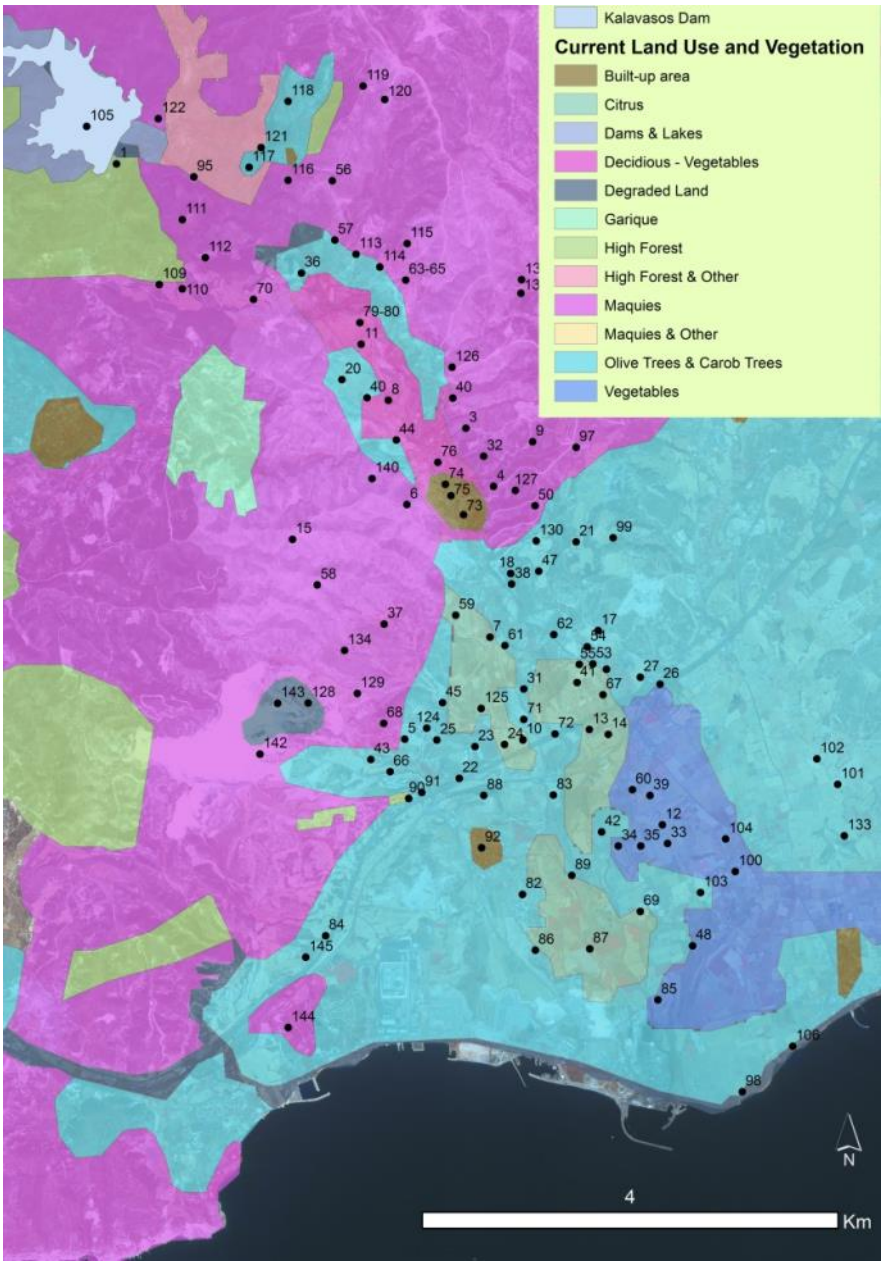


Figure 3.6 The Vasilikos Valley current land use and vegetation (produced by the author on ArcGIS using data from the DGRC).

The maps above do not reflect Bronze Age geological or vegetation profiles. They are, instead, used as an indication of the geological, geomorphological and eventually landscape diversity characterising the Vasilikos valley, which for the purpose of this study is divided into uplands and lowlands, hilly and plain terrain and shallow and deeper soils. Through this division one may study separately the lowland plain, typified by deeper, clay-rich soils, the central chalk plateaus, comprised of highly erodible shallow calcaric soils and patches of deeper soil across the valley, as the result of colluviation, and finally a northern mountainous area of igneous rock, a great part of which was excluded from the Vasilikos Valley survey.

The EC/MC Kalavasos Communities

The present study revisited material published by the VVP (Todd 2004; 2013), and investigated the landscape characteristics of identified sites during frequent visits to the Vasilikos valley between 2009 and 2014. According to the above criteria, it identified three intriguing observations for subsequent examination in this section. These include the minimal representation of EC material, a concentration of recorded MC sites in the chalk plateaus and absence of contemporaneous material evidence from the Vasilikos lowlands, and finally curiously higher concentration of EC/MC material in the west contrary to the east of the valley. In the following image (fig.3.7) cemeteries are marked in black, whereas sites and off-sites with red. Names are mapped only for sites mentioned in this section; however the reader can access all the site locations and names in pp. 153-155.

The Elusive EC

Starting with the first observation, the paucity of archaeological evidence for the EBA contrary to the MBA is a recurrent topic (South 1995: 189; Herscher 1980: 17-21) and derives from the former's documentation being limited to a single cemetery (Chapter Seven, pp.304-308). Moreover, there exists no secure connection between

EBA or MBA settlement and cemeteries for the entire valley, a consequence of settlement excavation being limited to a few trial trenches at Kalavasos-*Laroumena* (Todd 1993).

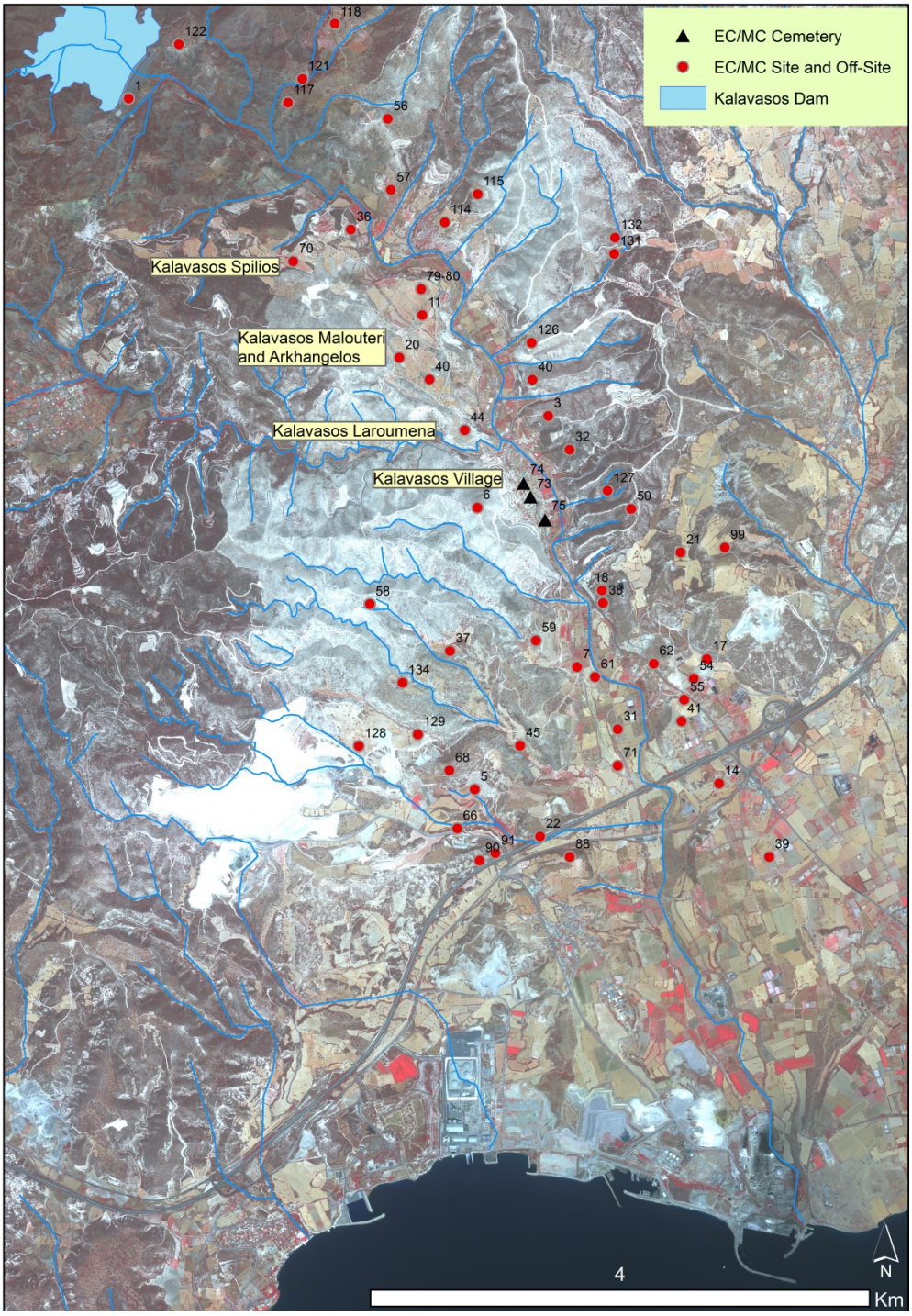


Figure 3.7 Vasilikos EC/MC archaeological evidence (produced by the author on ArcGIS).

Remarkably, recorded find spots with classified MC pottery, according to 1970s criteria, number over 100. This number was later accepted to represent constituent components of larger occupation clusters than individual sites (Todd 1986a: 187; 2007: 328, South 1989: 315-316), to the extent that on several occasions a concentration of sites from a geographically consistent area amalgamated into a single cluster (fig.3.8) (Todd 2013: 76, fig.10).

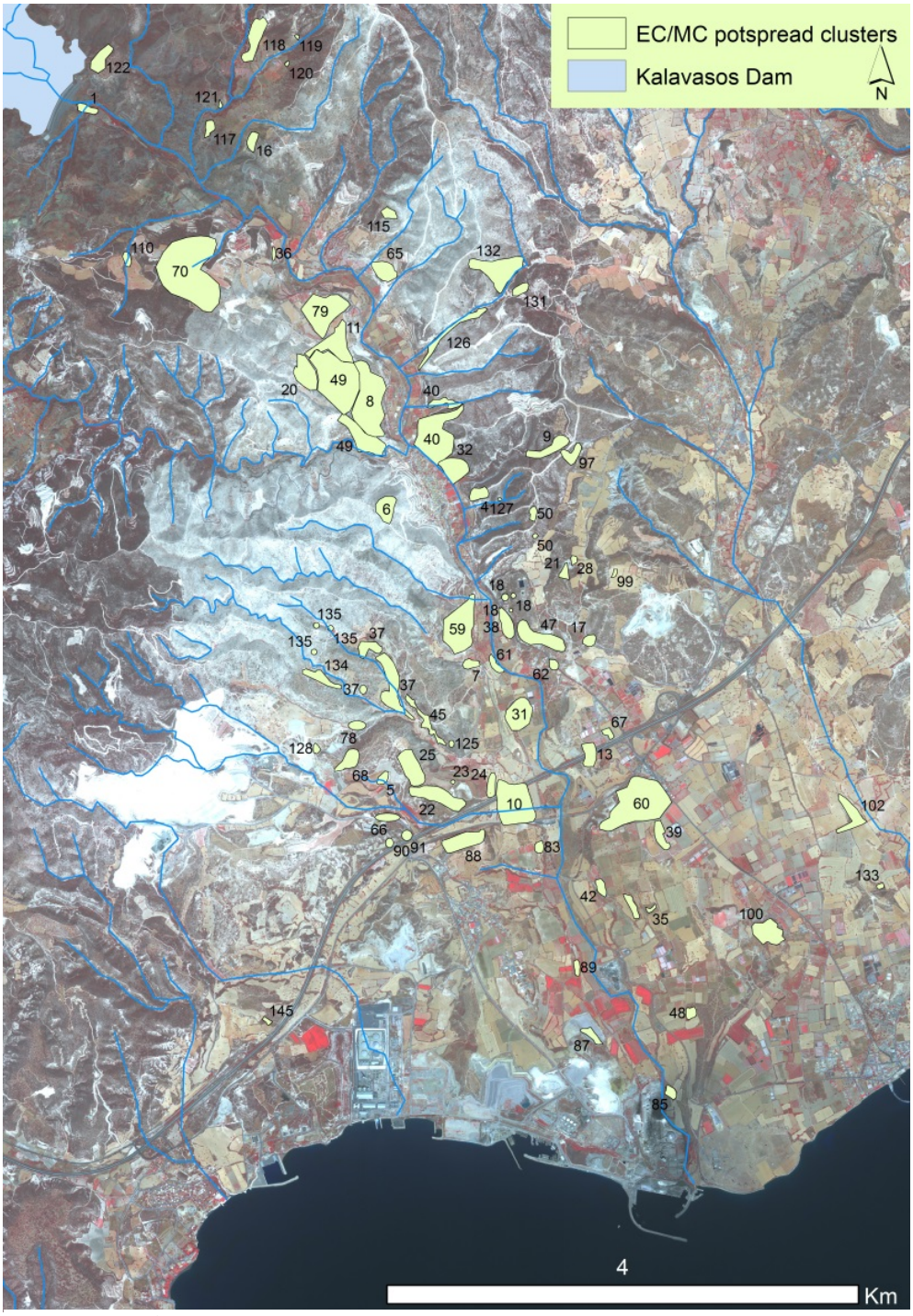


Figure 3.8 EC/MC site clusters (produced by the author on ArcGIS using data from Todd 2013: 76 rectifying on Quickbird 2009).

Aknowledging that fragmentary pottery cannot assist in refining chronological classification, and that Todd's chronological criteria for MC sites were based on the occurrence of RPM sherds (Todd 1985), which Georgiou later contextualised in the EC (Georgiou 2000; Georgiou et al.2011), currently the most robust evidence of EC occupation in the Vasilikos derives from the ECII-III Kalavasos Village *Cinema* (Chapter Seven, pp.301-308) and ECIII elements from the Kalavasos Village *Panayia Church* and *Mosque* tombs (Chapter Seven, pp.308-323). The burial evidence indicates that permanent occupation was present in the Vasilikos' chalk plateaus at least during the ECII-III; however, the question of where the habitation areas are located remains.

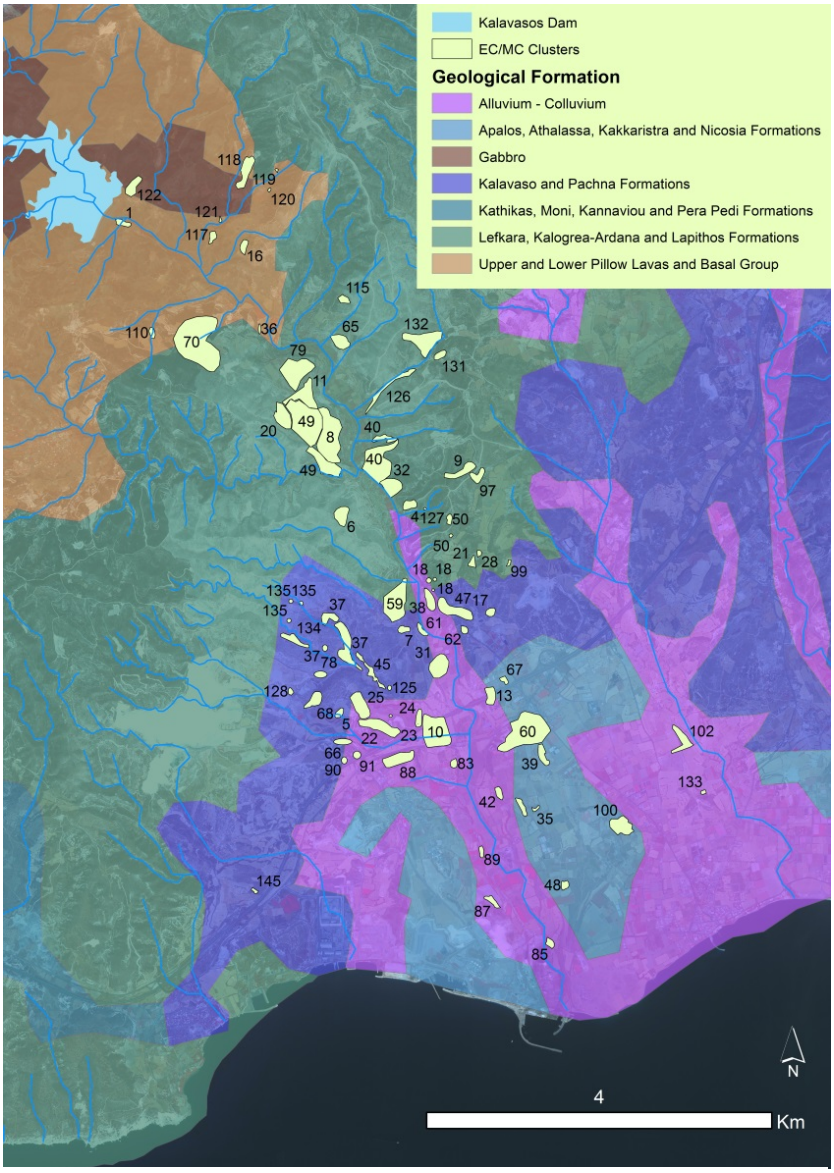


Figure 3.9 The association between EC/MC clusters and the Vasilikos geological formations (produced by the author on ArcGIS with data from the DGRC).

Based on the available EC-MC excavation evidence (Knapp 2013b: 311-322), it is likely that settlement and cemetery areas are established in relatively close proximity; therefore the Vasilikos' EC habitation areas are expected to be located within the chalk plateaus (fig. 3.9, blue and green). Although the *Cinema* tombs are not incorporated into the later ECIII-LCIA *Panayia* and *Mosque* cemeteries, they are located a few meters to the south and provide clear evidence of continuous habitation presumably in multiple occupation cycles.

Burial evidence dating between the ECII (c.2200 BCE) and the LCIA (c.1550 BCE) corresponds to approximately 650 years of continuous habitation in the general chalk plateaus area. Therefore, one can assume that EC sites are likely obscured by extensive and multi-phased MC sites and/or their off-site scatter (Bintliff et al. 1999: 149), and may be considered "hidden landscapes" (Chapter Two, pp.68-69). Finally, although one cannot pinpoint specific locations within the chalk plateaus solely on the basis of RPM sherd occurrence, EC habitation is primarily and more extensively mapped into a specific landscape zone, namely upland, hilly terrain with relatively shallow soils, and probably reflects comparable settlement patterns with the MC. For that reason this chronological period is addressed along with the MC and mentioned as EC/MC.

Uplands vs. Lowlands

The superimposition of cemeteries and permanent settlements on the satellite image illuminates the widely discussed issue of the smaller number and extent of recorded EC/MC sites in the coastal lowlands (pp.136-152, tbls.3B-C). Sites, probably reflecting settlements, are almost exclusively recorded N of the new motorway in the Larnaka highlands. This observation may assist in a more detailed analysis of occupation placement preferences. Referring to tbl.3B at the end of this chapter (pp.136-151) or S.1 (DVD), one may observe that site clusters along with the majority of the EC/MC find spots are situated along the central chalk plateaus, on shallow and highly erodible soils.

Gomez, who investigated the geology and geomorphology of Vasilikos, associated the notable lack of sites on or among fertile soils in the southern valley with poor archaeological visibility, being the result of alluviation and colluviation (Gomez *et al.* 2004: 7-10). Is the small number and extent of EC/MC archaeological sites in the fertile plain an issue of "hidden landscapes" or does is reflect aspects of the communities' attitude towards land use in the Vasilikos landscape? It is interesting to note that abundant archaeological evidence has been recorded across the Vasilikos plain and at the coastal LBA Tochni-*Lakkia* (fig. 3.2. site 98), which may suggest that this EC/MC materially deprived area was likely undesirable for habitation during that period. These questions will be addressed through an investigation of the available environmental and post-depositional processes information.

However, before proceeding to finer resolution landscape analysis of the Vasilikos lowlands, it must be noted that although the concept of "hidden landscapes" can be substantiated in prehistoric Greek sites, it probably does not correspond to the examined case studies. Given and Knapp (2003: 269), based on the SCSP results, argued that although Early Prehistoric Cypriot sites (Neolithic and Chalcolithic) are arguably smaller than sites of later chronological periods, the large sites of the MC onwards are frequently spatially equalling or even occasionally surpassing those sites post-dating them, including Roman. Further, despite difficulties in recognising undecorated wares during surveys, Bronze Age sites, when recorded for instance in the VVP, Episkopi, KVP and also in the more recent SCSP are considered anything but vestigial (Given and Knapp 2003: 269). In comparison with the Boeotia survey, the material of which formed the basis of the "hidden landscapes" theory, the Kouris, Vasilikos and Maroni valleys are smaller in scale and river width and length. Finally, the recovered prehistoric sherds are *not* noted as being considerably more fragile or degraded than later pottery types. Therefore, while identification of Bronze Age pottery in later artefact concentrations may provide an indication of some type of activity, a lack of such EC/MC potsherds in the Vasilikos lowlands, may also reflect an intentional pattern.

It has, in many occasions, been demonstrated that spatial association with a river system can result in sufficient alluvial coverage of sites to create their obscurity, especially if situated in the flood plain or the river estuaries (Brown 1997: 41; Frederick 2001: 57-58; Todd 2004: pl. XXXVII: 1; Todd and Warren 2012: 48: for example Kalavasos-*Mangia)*. However, Vasilikos' alluviation patterns in different parts of the valley have not yet been reconstructed. It is particularly intriguing to associate a low (50cm) alluvial coverage observed in the c. 1400-1300 BCE coastal Tochni-*Lakkia* (site 98), located a few hundred meters E of the estuaries with a severe alluvial coverage of EC/MC sites dating 4-5 centuries before, especially when detailed palaeo-environmental information is lacking. Based on alluvial patterns, one can speculate that the range of the flood plain has probably not altered critically in the years between the MC and the LC, and perhaps the communities, similar to other case studies from Brown's research (1997: 34-37), would have long avoided areas potentially subject to continual alluvial blanketing or associated with the low workability of the deep, clay-rich lowland plain soils.

Given the lack of fluvial or geomorphological reconstruction of the Vasilikos valley, this remains a hypothesis. Therefore, it is also useful to assess the possibility that the lack of EC/MC material culture might be related to dramatic sea level change. Following, recent estimations by Howitt-Marshall (2012: 111), Lambeck and Purcell (2005) and Morhange *et al.* (2000) which are also based on previous research in Cyprus by Gifford (1978) and King (1987), and considering the previous argument on climatic and environmental alterations since 4000 BCE (Chapter Two, pp.51-52), it is likely that sea-level alterations in the coast of the Vasilikos valley were not dramatic. In fact, unless a dramatic event (for instance tectonic) occurred, it is rather unlikely that the 18th century BCE coast was located 3km inland from the 14th century coast. This remains to be verified through geological investigation.

Given the above factors, it appears plausible that the distribution of EC/MC sites is multivariate and not exclusively associated with issues of archaeological visibility. One variable is the erosion rate difference between the chalk plateaus and the

fertile plain, a factor that, when increased, has facilitated the exposure of archaeological remains in the hilly plateau of the central Vasilikos valley (French 2003: 20-21). Notably, in Near Eastern contexts, it has been argued that material evidence demonstrates higher chances of surviving in the uplands -above the limit of cultivation- than in the lowlands, which are characterised by intense colluviation, enduring settlement and cultivation processes (Wilkinson 2004: 58). This hypothesis may be verified with trial excavations on MC find spots located in the lowland plain. Finally, one should consider the economic practices of the EC/MC communities, which for instance included deer hunting (Reese 1996; Croft 2003: 439-440; 2006: 277-281; Fall et al. 2012: 2338), and the nature of agricultural practices, which in similarity with examples from Greece and Italy, may have favoured shallow, light soils for the purpose of household-based gardening (smallholder agriculture).

The Vasilikos Agricultural Economy

Geology is fundamental to understanding soil type distribution; however, while available information may only provide indications for the Bronze Age it may be sufficient as "part of the key to the past distribution" (Shiel 1999: 72). Soils change depending on natural conditions and cyclical patterns of use by humans (Shiel and Stewart 2007: 103; Butzer and Harris 2007: 1939). However, it may be that the valleys' lowlands diachronically served agricultural purposes, while habitation and non-agricultural activities were focused on the less fertile limestone hills. A similar hypothesis is discussed for the Northern Levant by Casana (2008: 431) on the basis of freshwater spring patterns. Benefiting from alluvial and colluvial sediments, the lowlands tend to be deeper and better suited to agriculture due to their higher nutrients and organic matter, enriching soils eroded from elsewhere (Shiel and Stewart 2007: 95). In fact, even if their constant use led to thinning and relative deterioration, this may not have dramatically affected harvesting at subsistence level (Bintliff 2012b following Shiel 2000). At the same time, it should be noted that different crops have varying rainfall, nutrient and seasonality demands, and thus

farmers probably had a wide range of options that permitted adequate and flexible subsistence (Shiel and Stewart 2007: 104).

Different soil types of varying qualities may facilitate different agricultural economies, and it is notable that land workability is more attractive than soil fertility (Farinetti 2011 cf. van Joolen 2003). For instance, Bintliff (2012b: 51) argues for the early farming communities of Neolithic Greece that a simple 'ard' or scratch plough, drawn by cattle improved cultivation speed and potentially expanded the areas under agricultural management. Greater support for this hypothesis would come from inclusion of information on the soil depth requirements of pertinent crops. In the case of wheat and lentils, for instance, this depth need not exceed a few centimetres.

According to Farinetti (2011: 22), hoe agriculture is facilitated by lighter soils, not too deep (≤30cm) on moderately steep and well drained slopes. To the contrary, she discusses heavy terrains with clayey texture with overly or insufficiently drained soils as impracticable for hoe agriculture. One should consider, however, that certain crops such as olives and vines thrive in the soils where shallow rooting cereals are ill-adapted (Halstead 1987: 78); this data , then, may be used to support the use of the uplands for small scale, household-based agricultural economy. However, does this exclude the agricultural manipulation of the lowlands?

It is useful to also consider the natural processes that may alter the texture of soils that are considered poorly workable. For example, Hussein and Adey (1995: 357) discussed that wet/dry cycles may change soil structure and improve infiltration, water holding and ease of cultivation. Although there is no standard pattern to support a complete understanding of these processes, they have been documented and discussed as "tilth mellowing". This may support that, despite a potential lack of complex ground-breaking technologies, it is likely that empirical observation on soil structure in conditions of varying moisture and temperatures may have influenced decision making concerning crops variety and the period of certain activities. Hussein and Adey (1995: 358) discuss African soil types, where wetting

through rain, and drying, changes the soil structure and mechanical properties, creating the possibility for planting cereals without the use of deep plough. Namely, differential wet/dry cycles contribute to changes in porosity and strength and may lead to internal cracking of the matrix, slaking and dispersion (Hussein and Adey 1995: 366). This phenomenon is also observed in the aforementioned "impracticable" clayey soils (Hussein and Adey 1995: 260). Following this, one can argue that it is unlikely that the fertile, nutrient rich lowlands of the valleys were not used for agricultural purposes due to incompatible available agricultural technologies, as sufficient tilth mellowing may have occurred, especially between Late October through March, when most rain falls in Cyprus (Knapp 2013b: 7) .

Arguably, manual cultivation is more common in vegetable gardens and vineyards, probably for household consumption. In fertile lands, however, work animals were probably a necessity (Halstead and Isaakidou 2011: 62). The percentage of the communities' population obtaining tract animals is unclear, although animal traction and the use of the elbow plough is evidenced in terracotta models as early as the EC (Karageorghis 1991b: pls. LXV-LXXXV, CII.1), while an example of pack animals was found on a terracotta model in a MBA tomb from Kalavasos (Chapter Seven pp.317-320). Agricultural activities are further documented in the number of querns, grinders and pounders attested in EC/MC settlements throughout the island (Knapp 2013b: 303-307).

Regarding palaeo-botanic evidence, Hansen (1991) summarised prehistoric plant usage from the Neolithic to the Bronze Age, documenting cereals such as einkorn, emmer wheat and burley, legumes such as peas, horse bean, lentils and vetch and smaller amounts of olive, flax and wild fruits such as fig, pistachio, plum, pear and grape (Hansen 1991:L 233-234). These plants appear also in Bronze Age sites (Knapp 1994: 283-287; Adams and Simmons 1996a, 1996b: 225-226). In fact, Hansen (1988) suggested that plants used or exploited during the Bronze Age were more or less the same as the previous chronological period and were probably exploited continuously

throughout the Mediterranean from the Neolithic to the Classical era. This may support a combination of an agricultural economy alongside wild plant gathering.

Finally, it is important to note that the above arguments are *not* employed to exclude the probability of short-lived EC/MC sites in the Vasilikos lowlands; sites which were possibly frequently shifting location in relation to agricultural activities (Bintliff 2011: xv). Equally, this study recognises that one cannot exclude the possibility of a wide variety of temporary activities of low or no archaeological visibility taking place in the lowlands. Based on the available material and landscape evidence, it appears that the preferred areas for long-term occupation in the EC/MC were the chalk plateaus. However, their distance from the lowlands is not so considerable as to prevent its frequent use.

The Bronze Age habitation in the Vasilikos valley is misrepresented, as it is not possible to develop a refined chronology based solely on surface evidence that will demonstrate sites of contemporaneous habitation. For that reason the implementation of models seeking to define catchment areas and potential territories, such as Thiessen Polygons are probably not useful for the investigated case studies. On the following map (fig.3.10), one may observe that the areas delineated by the polygons, do not accurately reflect estimated site extent based on potspread, primarily due to the polygons' reliance on findspots. In addition, limited clusters such as the peripheral 48, 100 and 145 are represented by erroneous, extensive and arbitrary catchment area. It appears, then that the Thiessen Polygon's linear estimations may not be successfully employed in the Vasilikos landscape, as they do not consider the aforementioned geomorphological characteristics of the valley.

To conclude based on the available material evidence, the area presenting the highest density of EC/MC permanent occupation is characterised by its proximity to shallow erodible soils (fig.3.9).

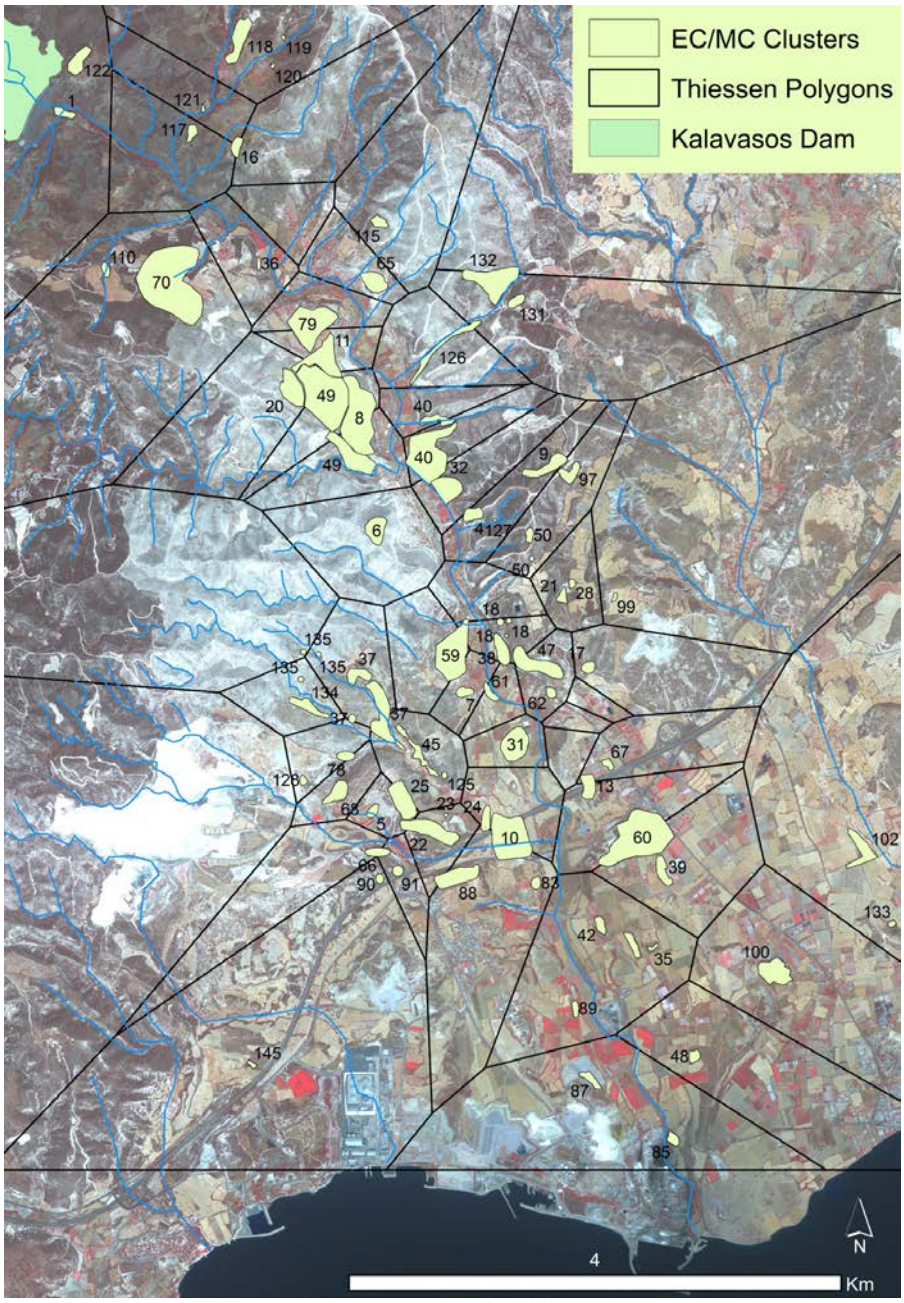


Figure 3.10 Employing Thiessen Polygons on the EC/MC clusters (produced by the author on ArcGIS).

As discussed, no permanent occupation areas are indisputably identified in the fertile plain below the chalk plateaus, which based on the landscape assessment, may be interpreted in three ways: (1) the limited agricultural land across the main course of the river in association with extensive grazing was adequate to sustain small-scale, household-based agricultural communities, (2) the available agricultural technologies, namely a shallow plough or the use of hoes, was more applicable in

the aforementioned soils, (3) the extensive fertile lowlands was reserved for agricultural activities rather than permanent occupation.

The proposed hypotheses add to existing suggestions of the possible defensive location of the settlements, their association with existing economic networks (Georgiou 2006: 445-446), and their voluntary distance from the stagnant and malarial waters of river estuaries (Frankel 1974: 9-10 *cf.* Angel 1972 and Barker 1981: 21; Deckers 2002: 78). The above suggestions, although plausible, are solely based on two parameters, namely distance from the sea and elevation. It is necessary therefore, to assess additional issues such as the previously discussed soil diversity, freshwater quality (Todd and Warren 2012: 49), and the agricultural economy of the EC/MC communities. Within this approach, it is also necessary to reconsider the disproportionate amount of permanent occupation sites between the east and west of the valley.

East vs. West

A visibly larger body of EC/MC sites have been recorded on the W relative to the E side of the Vasilikos valley. The valley's surveyors frame this inequality within the relationship of W Vasilikos with a natural route leading northwards to copper mines (Todd 1977: 27-29; 1978: 186-187; 1979b: 31-35; 1982: 64-66; 1986a: 186; 1988: 140; 1989: 43-44; 1993: 82, fig.1). While there is inadequate evidence to support or reject this hypothesis, it presents a rather deterministic relationship between human behaviour and the natural landscape of the Vasilikos valley that may mask a more nuanced explanation. For instance, the area W of the valley encompasses a higher number of river drainages, which are favoured as water sources by settlements, and more extensive areas of the chalk plateaus. Lack of EC/MC sites in the SE side of the valley could be associated with a lack of streams, the narrower spread of desirable shallow soils and hilly terrain, potential problems of archaeological visibility associated with a relatively lower degree of erosion, and the

extent of archaeological survey (Todd 2004: fig.16), which omitted the majority of the E Vasilikos valley (Chapter Two, p.65, fig.2.6).

Considering the above possibilities, archaeological and geological reasoning may be used in various combinations for settlement analysis. Nevertheless, reasonable settlement pattern emerges in the above multivariate analysis, in which EC/MC occupation favours side drainages in the upland's hilly terrain and shallow erodible hills overlooking the lower plain and its darker, deeper more fertile soils. The location of the sites may be indicative of specific types of agricultural activities, such as shallow soil gardening, in association with grazing, which may have been temporally continuous yet spatially rotational (Pollard 1999: 80; Troeh *et al.* 2004: 355; Halstead and Isaakidou 2011: 64), a method employed to avoid the unsustainable damage caused by continuous grazing within confined areas (Christodoulou 1959: 190, fig.104).

The above pattern, is not employed exclusively, as at least one site deviates. Ora-*Betaleyi* (122) is the northernmost material cluster or activity area observed in the survey material (fig.3.7). Based on the high amount and variety of recovered surface evidence, Todd and South considered it a settlement that was established upon an excellent vantage point atop a hill with eastern views, set opposite the area of the modern Kalavasos dam, E of Vasilikos, overlooking the copper mines to the W (South 1995: 189; Todd 2004b: 127-128). Interestingly, the artefact concentration area is not surrounded by a vast amount of off-site material, despite the high degree of erosion. It appears then, that Ora-*Betaleyi* is not a typical EC/MC agricultural community, particularly as its placement also permits the exploitation of nearby copper and timber resources, potentially as part of the community's annual activities.

Conclusions

To conclude, EC/MC human-landscape interaction in the Vasilikos valley spanned 900 years (2400-1500 BCE), a period that can be considered conservative in its economic

activities and spatial location of settlements. The latter is typified by sites situated within common landscape settings, with the extent of habitation during each individual period remaining unknown. Habitation in particular spatial settings for remarkably long periods entails both natural and cognitive aspects of landscape (Cosgrove 2006: 53). Hence, the present study introduces the possibility that this conservatism in conjunction with the formation of strong local/community identities may have been developed, as suggested by Hall (2006: 189) and Tilley (2006: 8), through homogeneity and cooperation in community activities.

Permanent settlements may also be viewed as place-making practices, which involve persistent demarcated areas of interaction and demonstrate limited deviation from a strong and locally based community identity. Finally, the long-term and persistent occupation of a specific area may be suggestive of attachment to landscape (Brück and Goodman 1999: 12). This contrasts with gradual depopulation and a shift observed in the LBA towards the southern parts of the valley and specifically the fertile lowlands.

The LC Vasilikos Individuals, Groups and Communities (fig.3.11)

A series of questions accompany an island-wide shift in settlement patterns during the LBA. Proposed explanations often entail the economic impetus to enter an established international trade market based on external demand for copper (Knapp 2008: 132-133, 137; Beaujard 2011: 15; Driessen and Frankel 2012: 67). This argument, sustains a circular interpretation, in which the evidence for copper intensification is based on the movement of settlements south, while the movement south is synchronously the result of copper intensification and its subsequent exportation (Kassianidou 1998: 226-227).

This chalco-centric model, while reliant on what is undeniably the most important natural source of the island, does not facilitate the inclusion of alternative or supplemental factors in this shift of people. However, as seen in

the EC/MC examples, location choices can involve a variety of natural and cultural factors, which although not as economically predominant as copper, should not be excluded from the interpretation of this remarkable settlement shift.

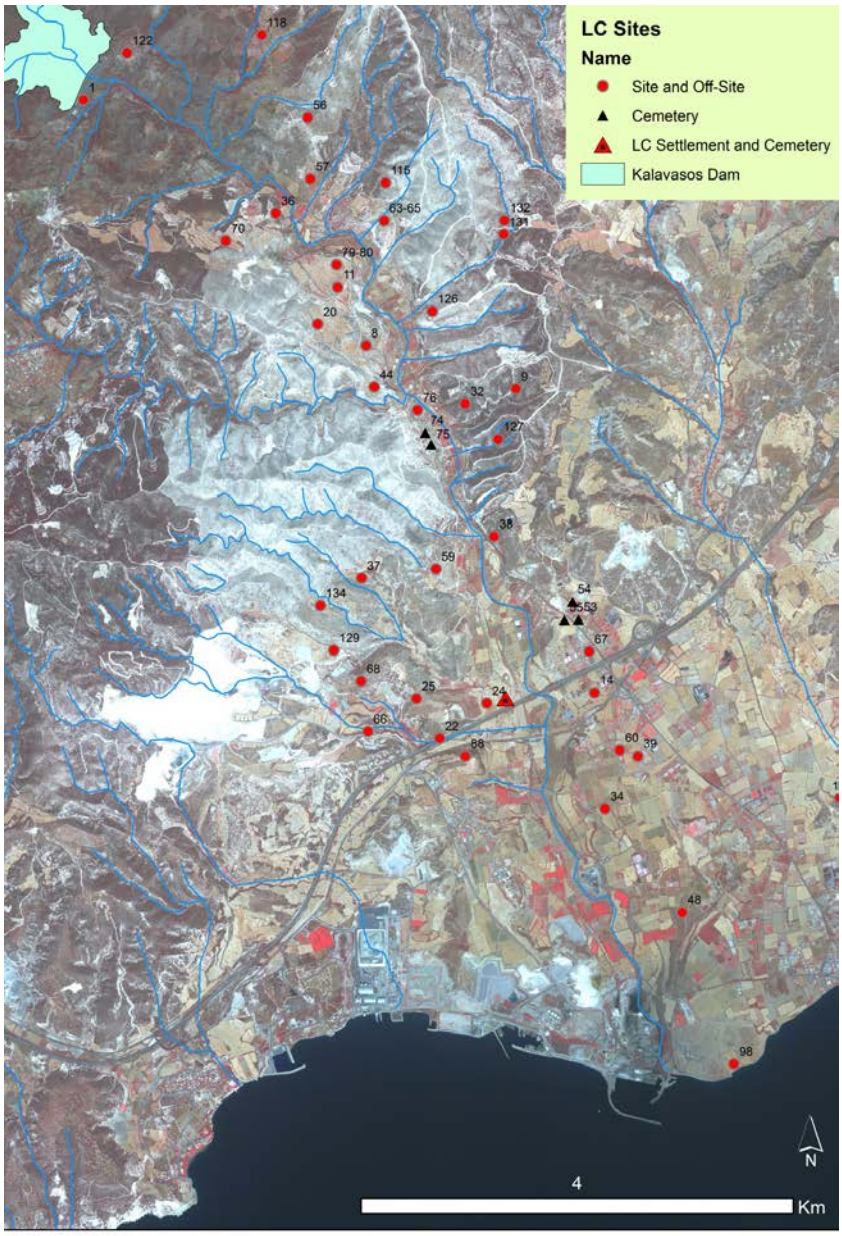


Figure 3.11 The Vasilikos LC archaeological evidence (produced by the author on ArcGIS).

Previous attempts to reconstruct the LC settlement patterns, (Catling 1962; Keswani 1993; Knapp 2008: 138-142) have at times included other economic resources, such as agriculture and trade, which were, however, embedded in multi-component and centrally controlled settlement systems. These sources have not been explored to as extensively as the copper economy, but have rather been used only as constituent elements of a copper economy. Therefore, the reciprocal relation between settlement shift, the gradual participation of the island in international trade and the incipient stages of these complex settlement systems require additional investigation. The insufficient explanatory power of a chalco-centric theory is further supported by the problematic incorporation of the Vasilikos valley into prevailing settlement patterns (Chapter One, p.7-13) and economic models. This misfit is primarily due to the inland (non-coastal) location of its most important LBA site, Kalavasos-*Ayios Dhimitrios* (Knapp 2008: 142).

The sole reliance on copper, when considered alongside the productive potential of the landscape surrounding the new permanent occupation at Kalavasos, generates questions regarding the role of the natural landscape in settlement patterns shift. To answer these questions, the present study analyses the recorded LBA in a similar manner to their EC/MC counterparts, to establish a more inclusive interpretation of the reasoning behind their relocation (fig.3.12). More precisely, I initially superimposed the locations of sites and cemeteries, over the general geomorphology map. Allying geomorphological and archaeological data demonstrates that despite a focus location shift to the south, sites align with the edge of the chalk plateaus. However, contrary to the previous chronological period, Tochni-*Lakkia*, or site 98 (Chapter Four, Appendix I, pp.194-205), a permanent site likely involved in specialised industrial activities, *was* founded on the coast adjacent to the Vasilikos estuaries.

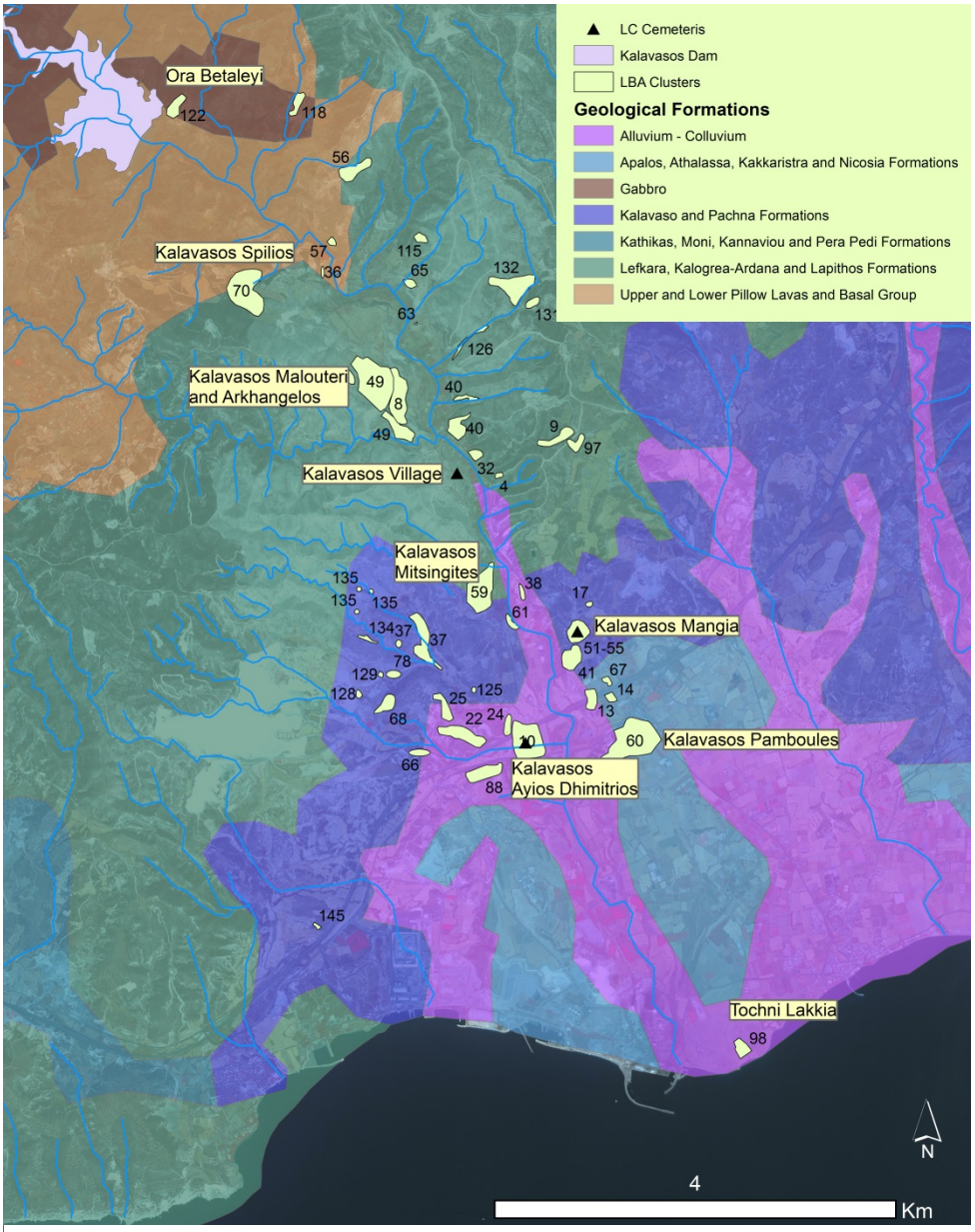


Figure 3.12 The LC clusters in association with geological formations (produced by the author on ArcGIS with data from Todd 2013 rectifying on Quickbird 2009).

An additional general observation of the LC settlement pattern is the lower number of activity clusters overall, but their higher concentration around the LC complex of Kalavasos-*Ayios Dhimitrios*. Further, the extensive EC/MC complex to the NW of Kalavasos village contracted, the LBA tombs in Kalavasos village are relatively few and suggest fragmentary continuation into the LCII (Todd 2007: 326), while the small clusters to the central E of the valley are almost devoid of LC material culture. Notably, Ora-*Betaleyi* indicates material persistence, further supporting its unique topographic and economic continuity in the LBA.

The above observations can be discussed along various interpretative avenues that may be individually or jointly valid, and suggestive of the gradual and complex character of this settlement pattern shift. In spatial terms, this alteration is observed in the establishment of permanent habitation towards the south of the valley and closer to the coast (pp. 127-152, tbls.3A-3C). However, in landscape terms the new centre of activities, Kalavasos-*Ayios Dhimitrios,* lies near the same setting, without intruding, on the heart of the fertile plain. The position likely suggests a significant increase in the plain's manipulation during the LBA (Bogaard and Isaakidou 2010: 194), an observation materially established in the settlement's large-scale agricultural product storage. Namely, agricultural economic intensification and exploitation of the lowlands, is also supported by the construction of a building encompassing at least of two large rooms housing an impressive number of storage pithoi (see Chapter Six, pp.280-283) (Keswani 1993: 76).

Following the above, the LBA materially marks the employment of new agricultural practices and possibly also technologies, which resulted in the increasing industrialisation of the Vasilikos landscape. Differences in productive scale, resource control, especially subsistence goods, as often argued, probably had an impact on power dynamics (Sahlins 1972: 215-219; Dietler 1996: 87-89; Hayden 1996: 127-128; Wiessner 1996: 4-5). Therefore, in this new association of communities with the landscape, one can expect that the latter is ascribed with new symbolic aspects.

An important question is how is this change addressed in existing interpretative models? Knapp (2013b: 398) supports that agricultural intensification was initiated by the concentration of population into urban centres and the need to provide subsistence to specialists. However, based on the available evidence, it appears that agricultural intensification resulting from new agricultural technologies, the easier and more intensive manipulation of the lowlands and the subsequent economic benefits was likely one of many motivations for settlement pattern change. This is further supported by the fact that, despite the change in the settlement patterns,

the small distances between the EC/MC and the LC do not alter the catchment area of occupation zones significantly. In fact, the most drastic difference is closer proximity and improved accessibility to the sea (fig.3.13).

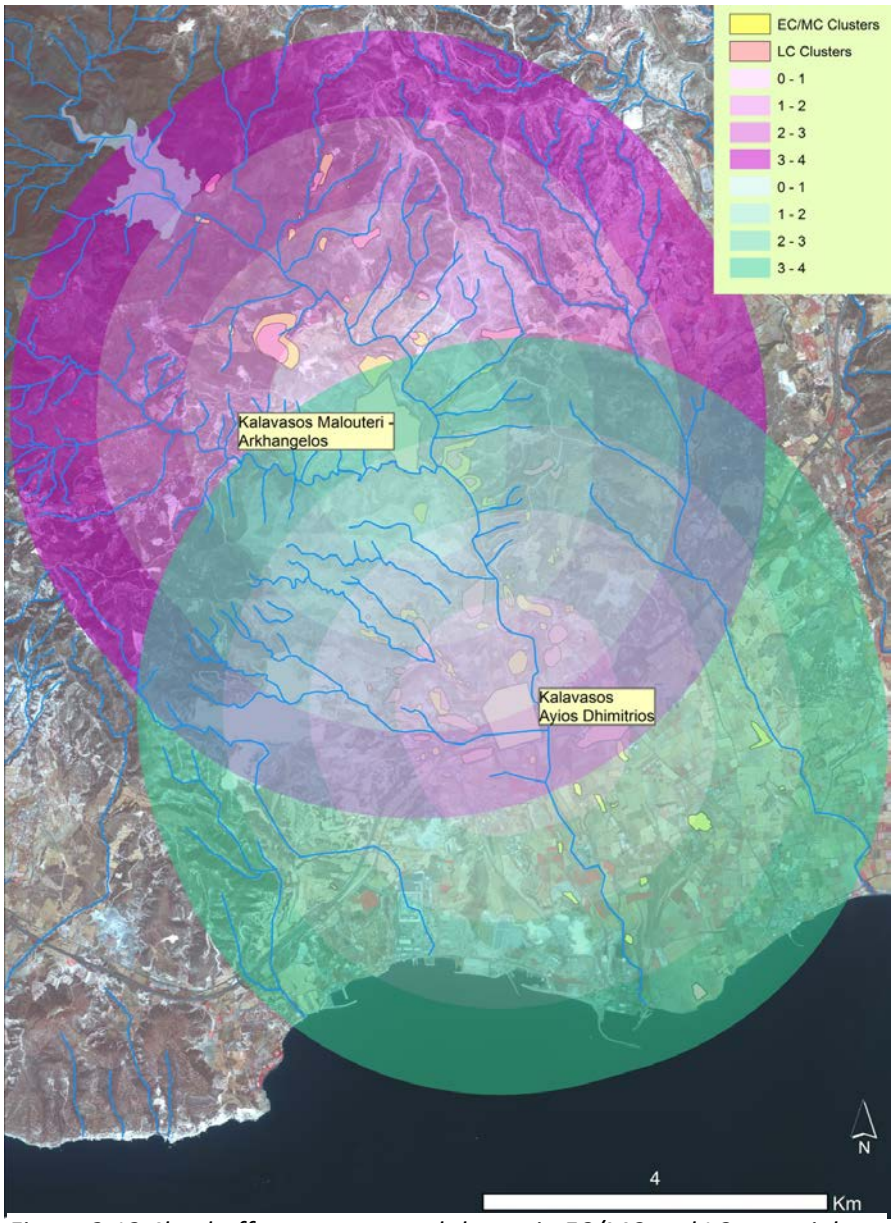


Figure 3.13 4km buffer zones around the main EC/MC and LC material clusters (produced by the author on ArcGIS).

When mapping a 4km buffer zone around the main clusters of the EC/MC in green and the LC with blue, it appears that not only are they overlapping but also they both contain uplands and lowlands and their aforementioned soil variability. The choice of 4km zones in this particular case is based on Georgiou's (2006: 445-446) estimation

that a distance of 3-4km in the elevation of 100m may be walked within 30-50 minutes. However, the time required to walk these distances depends on the terrain, direction and whether by foot or by pack animal, among other factors. It appears, then, that the settlement pattern change from the EC/MC to the LC in the Vasilikos valley is not spatially dramatic. However, altering proximity to certain resources and soil types may reflect a change in the scale of their exploitation. Namely, scale change was such that a perpetual 30-50 minute walk contributed significantly to time management.

Considering travelling time and given Vasilikos valley's extent, it may be more useful to consider the concept of 'settlement chambers', rather than territories or catchment areas. The concept of settlement chamber (Bintliff 2009: 107) was introduced as "Siedlungskammer" by Lehman (1939) and represents an area containing sufficient resources to support a flourishing agro-pastoral settlement, without excluding further advantages, such as road and sea networking. Following this concept, it appears that settlement shift in the Bronze Age did not alter settlement chambers - a far less dramatic spatial transformation than has been previously suspected.

Therefore re-aligned and altered power dynamics observed in the LBA settlement patterns can be viewed through a comparative examination of patterns of continuity and discontinuity in areas of different landscape characteristics. To begin with, one may observe continuation of use/habitation, but to a much smaller extent, of Ora-*Betaleyi*, a small multifunctional site of the EC/MC overlooking the copper mines to the W of the valley. Ora supports the hypothesis of the relative isolation of mining villages (Knapp 1998: 7) from the mines where initial smelting of copper took place (South and Todd 1985: 46) and regarding part-time mining in association with farming (Knapp 1998: 4 *cf.* Ehrenreich 1996, Mac Millan 1995 and Godoy 1985). In addition, as mentioned above, the number of sites located N of the modern village of Kalavasos are gradually decreasing, while an increase is observed in the central valley. In this area, *Ayios Dhimitrios* is established.

This large-settlement encompasses industrial edifices, is associated with agricultural products processing and, to a lesser degree, with metallurgical activities (South 1983: 64-66; 1995: 192-194) via bureaucratic organisation employing seals, script (Smith and Hirschfield 1999: 129-130; Smith 2002: 20), inscribed seals (Courtois 1983: 128-129; Porada 1989: 33) and use of weight standards (Courtois 1983: 123; South 1989: 86). Domestic areas of this LBA urban centre provide evidence for woodworking and metalworking activities, evidenced by 150kg of slag recovered from the excavated area of *Ayios Dhimitrios* (South 1995: 192), a hearth, and crucible fragments (South 1982: 65). However, evidence for specialised, industrial-scale production, aside from olive processing, has not yet been excavated at *Ayios Dhimitrios*. Such evidence has been recorded at a specialised pottery production site at Sanidha-*Moutti tou Ai Serkou* (Todd and Pilides 2004) (Chapter Four, pp.183-184), which included pottery identical to examples from Kalavasos-*Ayios Dhimitrios* (Todd and South 1992: 193). Finally, new intriguing information is provided by the newly investigated Tochni-*Lakkia* (98) with evidence for pottery production activities (pp.201-202).

The Specifics of Gradual Alteration

Based on the co-existence of MBA RP and LBA WS II ware and the 'lack' of sufficient LCI material to sustain occupational continuity, Todd and South (1992: 203) suggested that some MBA sites were re-used or re-occupied in the LCII. However, it is unclear if the lack of LCI material is related to issues of ceramic classification surrounding the MCIII and LCIA pottery typologies (Merrillees 1971; Manning 1999) or the problematic distinction of LCI plain and monochrome ware that characterises domestic areas (Crewe 2009a: 79). Indisputable LCI contexts are represented in diagnostic fine ware of one LCIA tomb from the Kalavasos Village *Mosque/Mavrovouni* cemetery (Pearlman and Todd 2007: 26), one tomb from *Panayia Church* (Pearlman 1985: 164; Todd and Pearlman in Todd 1986: 193) and

perhaps elements from T.4 of *Ayios Dhimitrios*, which South suggests have been used since the LCIB (South 1989a: 317).

The most materially substantiated and secure LBA chronological phase is the LCII, as attested in the cemeteries of Kalavasos-*Mangia* (Todd and South 1992: 197) and *Ayios-Dhimitrios* (Todd and Pearlman in Todd 1986a: 196-197, 203-204, 212; McClellan *et al.* 1988: 201-222; South 1989a: 317; 1995: 191) (Chapter Seven, p.227-232) (Todd and South 1992: 195; McClellan *et al.* 1998: 221). Possible LC architectural remains are recovered in the modern village of Kalavasos (South 1984: 17; Todd 1988: 134), while sites with evidence for less extensive occupation during the LCII are attested in *Agiasmata*, *Arkhangelos* and *Malouteri* (South 1985: 116), *Mitsingites* and *Vounaritashi* (fig.3.12) (Georgiou 2006). The above provide more robust evidence for bridging LCIA and LCII (South 1985: 115), which can further be viewed in the coexistence of Proto-BR and BR II pottery.

Consequently, as mentioned above, the shift in settlement trends is not likely as sudden and dramatic as previously suspected. In fact, settlement pattern changes are probably related to the gradual diversification of the economy and production scale, which may be related to different agricultural practices, and the need for an extra-community outpost. For that reason, the shift in occupation patterning accommodates the increasing requirements of agricultural product storage, organised distribution, and strong inter-connection between economically diverse parts of the valley. These components may include multifunctional communities engaging in animal husbandry, secondary products processing and part-time mining, the management of the rich fertile landscape of the lowlands and a coastal gateway community.

The centre of economic interaction, Kalavasos-*Ayios Dhimitrios*, is structurally and functionally distinct. The symbolic importance of its ashlar building is demonstrated in its construction above wealthy antecedent tombs (Keswani 1996: 236; South 1997: 171; Manning 1998: 42) and other near-contemporaneous tombs (South 2000: 355), traditionally associated with 'elite' groups (Goring 1989: fig. 13:1; South 1995:

191; 1997: 161; 2000: 349-353; Keswani 2004: 87). The incorporation of exotica (Eriksson 1993: 27-28; South 1997: 167) and the spatial association of the tombs with a distinct constructed space provided the basis of argumentation for the continuation of a social hierarchy from the LCIIA to the LCIIC (South 1989: 319 *contra* Merrillees 1992: 321). Following this reasoning, many researchers support, on the one hand, that the wealthy LCI-IIA burials are associated with 'elite' groups, and, on the other, that the LCIIC ashlar building belonged to 'elite' groups with ideological or even kin-based ties with the former groups (South 1997: 171; Manning 1998; Fisher 2007: 290). Nevertheless, the association between the c. 1450 BCE entombed and the c. 1350 BCE elite group(s) and their relation to the construction and management of the ashlar building is unclear, as are the associated logistics, such as the period of time required to erect this substantial structure.

Trial trenches aimed at reconstructing the diachronic use of Kalavasos-*Ayios Dhimitrios* and the relation between the funerary and the domestic landscape provide material evidence that the early and poorly understood architectural function and associated tombs date to the LCIIA:1 and LCIIA:2-LCIIB (South 1989a: 320). During the LCIIC, contemporaneous spatial association of constructed and concealed space cease and Building X is restored, reconstructed or "monumentalised" (Fisher 2007:219), with impressive ashlar masonry enclosing extensive storage facilities comprised of *in situ* pithoi and industrial installations (Keswani 1989b: 12-19). Similar alteration of place making is attested in contemporaneous settlements such as Maroni-*Vournes* and *Tsaroukkas* (Johnson 1980; Cadogan 1988: 130, 230; Manning *et al.* 1994b: 85, 88) and Alassa-*Pano Mandilaris* (Hadjisavvas 1991: 173-175, tbl.17.1) and can be considered as equally indicating changing power dynamics and manifestation of different identities (Hall 2006: 189). These trends beg the question, what are the material manifestations of such dynamics?

Transition and Abandonment in the Vasilikos Valley

Socio-Economic Aspects

From the incipience of the Bronze Age, the EC/MC communities of Kalavasos concentrated in the Vasilikos central chalk plateaus. This rural society was in economic terms household-based and relatively equalitarian, a condition attested by tombs dug in the Kalavasos village (Chapter Seven, pp.304-325). The ECII-III tombs are single internments (Todd and Flourentzos 2007: 33, 36-37), the number of which gradually increases in unstandardised mode throughout the 900 years of permanent occupation. The collective, multi-interment tombs of the MBA are generally associated with the emergence of ancestral veneration, which some scholars associate with the transmission of land rights and property and ultimately the access and control of resources (Keswani 2004: 11 *cf.* Goldstein 1976, 1981; Renfrew 1976; Chapman 1981, 1995; Charles 1995; Morris 1991). Numerous researchers consider the access to, and eventual control over, resources as the avenue for development of economic, social and eventually political power (Simon 1973: 7; Gamble 1981: 226; Johnson 1982: 417; Claessen and Van de Velde 1985: 254; Shennan 1985: 117; Earle 1989: 85; Webster 1990: 345; Arnold 1991: 62; Earle 1991: 5-9; Knapp 1986a, 1986b, 1990b, 1993a: 87; Wason 1994: 149); themes, at best, ambiguously represented in material culture before the LCIIA.

The MC burial evidence of Vasilikos contains examples of diversity and distinction; however its socio-political connotations cannot for the moment be assessed. Lack of identifiable institutionalised ideological power symbols may indicate that during the MBA no patterned and institutionalised inequalities (Hodder 1982a: 152-153; Feinman 1991: 247; Knapp 1993a: 98; Rousseau 1985: 36-37; Van Buren and Richards 2000: 4), suggestive of politically stratified societies, existed. However, undeniably, economic and social inequality existed to some degree.

The shift from single to collective internments demonstrates the first steps towards expression of group identity. This shift potentially also marks the first attempt at transitioning from achieved to ascribed identities (Tilley 2006: 10). The formation of

group identity demonstrates active efforts to access benefits associated with the acquisition and manipulation of certain resources, such as extensive agricultural land (Weinberg 1956: 121; Netting 1990: 47; Keswani 2004: 51-55; 2005: 349; Dunn-Vaturi 2003: 177) and possibly more exclusive copper ore control.

Despite close proximity of some settlements to copper and sporadic and fragmentary evidence for metalworking (Todd 1993: 83), metal artefacts occur frequently in burial clusters over a wide area, a testament to its widespread accessibility. As discussed in Chapter Seven (pp.322-323), the burial evidence points to a general accessibility to these resources and provides no clear indication of established or exclusive control of copper by individuals or collectives (Frankel 1993: 61). Despite diversity in the amount and type of metal artefacts occurring in the EC/MC chambers, there exist no excavated tombs with a distinctively larger metal assemblage, a similar occurrence found in other contemporaneous sites such as Pyrgos-Mavrorachi (Chapter Seven, pp.330-334). Therefore, the degree of copper resources control, the available infrastructure for mining and the impact of this source of wealth on the formation of socio-political identities in the EC/MC community is unclear and, based on the available evidence, may be interpreted as general attempts by groups and subgroups at asserting their position in a changing *status quo* (Peltenburg 1994: 159; Keswani 2004: 17).

A changing *status quo* and a generally competitive environment promote uncertainty, out of which, Bauman (1996: 19) suggests, identities are born. In different terms, Giddens (1991: 5; 1994) discusses identity formation in fluctuating conditions as the result of a process of self-reflexivity that aims to establish control of the past to secure the future. Self-reflexivity eventually finds its counterpart in institutional reflexivity, which is materially evident in the LC.

Politico-Economic Aspects

Through the competitive power struggle for larger-scale exploitation of natural sources, the population gradually shifted south; in the heart of a fertile plain and close to the coast; a new setting that becomes an arena for inter-group competition. The establishment of the ashlar building is a consequence of this struggle by an economically opportunistic group, to house the industrialisation of agriculture within an architecturally imposing and ceremonially unique building (South 1988: 227; South and Russel 1993: 203), in order to ensure its success in the negotiation of their socio-economic status. A lot of focus has been aimed at elucidating the socio-political implications of Building X (Fisher 2007, 2009a, 2009b), often with overwhelming emphasis on its symbolic aspects to the detriment of its functional characteristics (Chapter Six, pp.280-283).

Beyond its unique architecture, the distinctive character of Building X stems from its scale and diversity of activities within its walls (South 1995: 194). To begin with, it contains two large storage rooms with *in situ* pithoi that according to gas chromatography analyses were used for olive oil storage (Keswani 1992; 1993: 76). In addition, Building X is the only structure to contain evidence for the use of CM inscriptions (Smith and Hirschfeld 1999: 129-130; Smith 2002: 19; Goren *et al.* 2003: 250; Ferrara 2012: 20-21, 59), and contains the greatest number and variety of shapes and decoration of Mycenaean pottery and local imitations (South 1988: 228, fig.2, pl. XXXV; Antoniadou 2005: 66; 2007: 496), a significant number of which are concentrated in a masonry lined shaft and associated with animal bones (South 1988: 227; South and Russell 1993: 306). The production activities and bureaucratic paraphernalia are not confined within the walls of Building X, but extend into adjacent buildings, which in part, employ ashlar masonry and bear evidence of olive oil production (South 1997: 159). Consequently these economic activities amalgamate agricultural land, copper and trade that was likely organised at Tochni-*Lakkia*, the support hub for this economic and socio-political establishment (see Monroe 2011: 94 on the multiplicity of activities attested in ports).

Tochni-Lakkia and Trade Reconsideration

Tochni-*Lakkia* provides new insight into LBA activities and places the island's interactive character in a new light (Chapter Four, Appendix I, pp.194-205). As mentioned, the excavator of *Ayios Dhimitrios* highlights the role of copper in the site's economy in place of the agricultural products in the Vasilikos valley, and relates the site to an ashlar building of similar architectural plan dug at Maroni-*Vournes* (South 2002: 64). Similarly, Keswani slotted the agricultural products of the Vasilikos valley into a regional redistributive system, supported by South (2012: 223) and Knapp (2013b: 398). Within this system, the role of agricultural products as marketable extra-community commodities, is overshadowed by copper, the material traditionally considered the main product of export from the Vasilikos valley, particularly in exchange for exotica. However, the pathway, access route and presence of these exotica are not yet sufficiently reconstructed.

The retained agro-pastoral character of the ProBA (Knapp 2013b: 348) and the large scale agricultural production, which appears equally possible to have motivated settlement pattern shift, coincides with intensification of copper production by the LBA (Knapp 1986a; 1989; 1994: 282-290; Muhly 1986, 1989; Keswani 1993; Peltenburg 1996; Pickles and Peltenburg 1998). This coexistence prompts the question: does copper's importance in the Bronze Age economy warrant the exclusion and depreciate the selective social, economic and political pressures of other products?[1] If one assumes that Tochni-*Lakkia* provided the potential for anchorage, then its establishment greatly increased access to the Vasilikos valley, enabling an intra-island and possibly also an international trade system. Another question then is: which products were channelled through these exchange networks?

The productive capacity and variability of the Vasilikos' landscape, demands the serious consideration for both alternative material and organisational economic configurations, beyond rigid copper-oriented economic schemes. Intensified

[1] Knapp 2008: 312: written sources refer to sweet oil, timber, horses, ivory and ship's beams channelled from Alashiya to the international market of the LBA Eastern Mediterranean.

agricultural production evidenced by the estimated 50000L capacity of the stored pithoi (South 1989a: 321), suggests that it may be more useful if we reconsider the market potential of agricultural products, specifically olive oil. Traditional interpretations support that this storehouse of oil serviced a limited regional economy. Ethnographic parallels regarding annual oil consumption (Keswani 1993: 77 *cf.* Carothers and McDonald 1979; Schacht 1981) of a population housed within the estimated 11ha of *Ayios Dhimitrios* (South 1989a: 319; 1996: 39; 2002: 60) conclude that the oil stores of Building X far exceed the needs of the estimated population. Keswani and Hadjisavvas then consider the olive oil to have been redistributed along with other products throughout, but *not* beyond, the valley to smaller mining and agricultural villages (Keswani 1993: 77; Hadjisavvas 1996a: 133).

Beyond quantitative problems resulting from population estimates linked to non-excavated areas (Whitelaw 2001: 16; Iacovou 2007: 8), this interpretation overlooks the excellent location of *Ayios Dhimitrios* within a highly productive landscape, evidence for household-based agricultural activities within the domestic compounds of *Ayios Dhimitrios* (South 1980: 43) and the possibility of different scales of agriculture throughout the valley. It is probable that domestic areas of *Ayios Dhimitrios* were also providing the ashlar building with olive oil, but it is yet unclear if this interaction involved exchange of products or services. Similarly, it is difficult to characterise the relationships between *Ayios Dhimitrios* and the 'supportive villages' as part of a redistributive system. Located in the heart of the most extensive and at the time most productive area of Vasilikos, *Ayios Dhimitrios* likely did not depend on the import of agricultural products from the chalk plateaus. In fact any reciprocal relation between the two parts of the valleys should consider the direct accessibility *of Ayios Dhimitrios* to extensive agricultural land and its unimpeded access to the exchange point of Tochni-*Lakkia*.

It is, then, more plausible that the chalk plateaus cluster participated in this system through copper exploitation and pastoralism, wild plant gathering and other products, rather than exclusively agriculture that was likely undertaken for

household consumption. Consequently, these sites may represent mining (Hardesty 1988: 101; Knapp 1998: 13) or multi-functional communities (Hardesty 1988: 1-5), yet subjected to an unknown degree of control, when social and economic demands materially appear to be significantly higher (Stech 1985: 103). The relation of these sites with copper resources located less than 3km NW is unclear, due to research restrictions (the presence of a military base) in the area around the copper mines.

Therefore, the degree of control imposed by a potential group of opportunistic aggrandisers based in the ashlar buildings, and the role of individuals in the regional and even inter-regional economic networks is likely far more complex than thus far suggested. Being landscape-oriented, this study focuses on the high potential of olive oil as a marketable product and supports that along with copper and possibly some examples of perishable materials, olive oil also supported extra-community, intra-island and perhaps extra-island trade. Despite written sources mentioning olive oil in the Mediterranean trade networks (Hadjisavvas 1996b: 130-131 *cf.* Palaima 1991: 280-281), a lack of material evidence problematises the certain placement of Vasilikos olive oil into the international market. However, excluding this possibility is equally irresponsible, as researchers long supported that oil and wine are highly amenable to long-term storage and distance travel and therefore "commercially successful" commodities, important to 'elite' markets (Butzer 2005: 1776).

At a regional scale, *Ayios Dhimitrios* may have been providing Tochni-*Lakkia* with copper and agricultural products in exchange for imported products. The opportunistic and multivariate role of Tochni, which includes pottery production and probable domestic activities, merits reconsideration of the nature of economic activities taking place in this coastal area and reconfiguration of the articulations of the Vasilikos valley. Tochni's evidence for pottery production and domestic facilities raise questions regarding the introduction of ceramic and textile into maritime trade. Nevertheless, discussing the dynamics of participation in the highly complex international trade of the LBA Eastern Mediterranean, especially through a non-excavated site, is challenging.

Abandonment: The End of their World?

Despite the rich landscape, facilitating a wide array of economic activities and networking possibilities, Kalavasos-*Ayios Dhimitrios* is abandoned in the LCIIC (c. 1200 BCE) and material evidence recovered from the Vasilikos valley proper between the LCIIC and the CA period is notoriously sporadic and fragmentary (Todd and Warren 2012: 50-51). However, the abandonment of permanent habitation areas does not necessarily equate with the abandonment of surrounding environmental resources. Rather, the choice to cease use of the ashlar facilities reflects the socio-political marginalisation of a previously prosperous network, products management system and area. The failure to adapt to a socio-economic reconfiguration ensured that no longer could *Ayios Dhimitrios* support large-scale agricultural exploitation, and no longer could Tochni actively participate in maritime exchange with other parts of the island or extra-island elements.

One interpretation may involve climate factors adversely affecting agriculture to the degree that a building with large storage facilities was no longer useful. Although Cyprus is currently lacking extensive palaeo-environmental information, some data may derive from pollen analysis of the salt lake associated with the LC Hala Sultan Tekke. According to this study, agriculture in this area gradually declined since 1200 BCE due to drier conditions and became important again after c. 850 BCE (Kaniewski et al. 2013). This observation was compared with derived climatic and agricultural proxies from Gibala-Tell Tweini from Syria, where researchers identified a short period of agricultural decline between 1200 and 1100 BCE. Kaniewski et al. 2013 associates this drought event with crop failures, "dearth and famine", which although not for the moment widely testified in the material culture, is undeniably a factor that should be taken under consideration, especially viewing a dramatic settlement pattern alteration, such as abandonment.

From a different perspective, abandonment demonstrates that once strong connections and webs of inter-reliance and cooperation were necessary for the cohesion and endurance of a robust socio-economic system (Blanton *et al.* 1996;

Feinman 2000). In absence of any indication of copper exhaustion (Kassianidou 1998: 226-227; Knapp 1998: 17; Wells 2001: 134), it is useful to look to the fragility of Tochni, the link between the valley's productive goods and maritime networks. The collapse of this economic system is largely related to a tenuous reliance on external systems of communication and networking, which were essential for the commercial success of products (Sahlins 1972: 186-187) and the economic prosperity of the associated communities. Indeed, the abandonment of the Vasilikos sites coincides with a contemporary crisis of the Eastern Mediterranean (Snodgrass 1994: 172). Consequently, the decline of a region's economic wellbeing was a response to a problem of networking ties well beyond its 'border'.

Despite recurrent attempts to quantify networking ties (Borgati *et al.* 2002; Hanneman and Riddle 2005), it is particularly difficult in the Vasilikos Valley, as elsewhere, to assess the potential for economic network articulations for the Vasilikos valley as in other case studies (Golitko *et al.* 2012: 510), due to a lack of adequate excavated sites and the complex nature of international trade in the Eastern Mediterranean. Still, connectivity is a widely discussed critical element in the political and economic success of settlements and systems (Knappett *et al.* 2008; Mizoguchi 2009). The abandonment of *Ayios Dhimitrios* is the abandonment of a socio-economic system, the success of which was based on the obtained wealth of the community members and manifest in landscape industrialisation and strong economic interdependence. In losing Tochni, their gateway site, they lost a vital node of interaction, a node which, through other coastal sites or through extra-island networks, introduced objects of immense power/prestige symbolism and commodity wealth into the Vasilikos. It must be asked then what are the cognitive connotations of abandonment?

As discussed, the EC/MC Vasilikos community developed within in a particular landscape, through the gathering of certain constituent elements (Malpas 2006: 29; Rapoport 2001: 900), and its identity was expressed through this enduring relationship of occupation. The subsequent shift in occupation patterns reflects a

shift in the constituent elements of place-making, the maintenance of which Fonrobert (2004: 71) is argued as an exigency for the continuity of collective identity. The formation of new places in different landscape settings involves different elements and points to the difference structures of behaviour, socio-economic practices and identity (Tilley 2006: 8), as landscapes have been argued to generate social relations (Tilley 2006: 21).

The most remarkable shift in identity expression in the Vasilikos valley is probably not the transition from the EC/MC to the LC, but rather the abandonment of the LC socio-economic system and the concomitant population movement or 'diaspora'. The collapse of this network led to negative demographic alteration in the valley, one that is tantalisingly synchronous with increased prosperity at Kition and Palaepaphos (Webb 1999: 305; Iacovou 2006: 326; 2008a: 637). Notably, the LCIIC communities previously centred in the Vasilikos system can be suggested to have been "deterritorialised" (Bauman 1992; Appadurai 1995) with their new identity being expressed through movement. Rapport and Dawson (1998) aptly called agents that participate in such movements "migrants of identity", who need to achieve their identity status in unfamiliar landscapes. This dramatic shift of identity manifestation is a fundamental feature in the Vasilikos diachronic trajectory, and forms a key element of a comparative analysis with the following case studies.

Table 3A: Vasilikos Landscape Characteristics

Site Name	Current Soil Type	Current Vegetation	Erosivity	Erosion	Visibility
Asgata *Ayia* Mari*na*	Eutric Lithic Leptosols and Eutric Skeletic Regosols	Maquies	High	Medium	Low
Asgata *Kambos*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	Medium	Low
Asgata *Neron tou Phani*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Low
Kalavasos *Agkastromeni*	Gypsiric Regosols and Leptic Gypsisols	Maquies	Medium	High	Medium
Kalavasos *Alonia tou Pano Zyou*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Medium
Kalavasos *Ammos*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Low
Kalavasos *Andronikidhes*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	Medium	Medium
Kalavasos *Argaki*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	Medium	Medium
Kalavasos *Argaki tou Tahiri*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Medium
Kalavasos *Argaki tou Yeorgyiou*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Citrus Trees	High	Medium	Low
Kalavasos *Argakia East*	Lithic Leptosols and Epipetric Calcisols	Citrus Trees	High	Medium	High
Kalavasos *Arkhangelos*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Vegetables	High	Low	High
Kalavasos *Ayiasmata*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	High
Kalavasos *Ayios Dhimitrios*	Lithic Leptosols and Epipetric Calcisols	Citrus Trees	High	Medium	Medium
Kalavasos *Ayios Kaloyeros*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Olive and Carob Trees	High	Medium	High

Site Name	Current Soil Type	Current Vegetation	Erosivity	Erosion	Visibility
Kalavasos *Ayios Yeorgyios Kephala*	Calcaric Cambisols and Calcaric Regosols	Vegetables	High/ Medium	Low	High
Kalavasos *Ayious*	Calcaric Cambisols and Calcaric Regosols	Citrus Trees	High/ Medium	Low	High
Kalavasos *Ayious East*	Calcaric Cambisols and Calcaric Regosols	Citrus Trees	High/ Medium	High	Low
Kalavasos *Bamboulos*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Medium
Kalavasos *Cambanari*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Maquies	High		
Kalavasos *Draconikiaes*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Olive and Carob Trees	High	Medium	Medium
Kalavasos *Fournia*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	High	Low
Kalavasos *Gipsari*	Gypsiric Regosols and Leptic Gypsisols	Maquies	High/ Medium		
Kalavasos *Gouppos*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	High	Medium
Kalavasos *Ipsopamboulos*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Olive and Carob Trees	High	High	Medium
Kalavasos *Kafkalia III*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	Medium	High
Kalavasos *Kafkalia I-II*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	Medium	Medium
Kalavasos *Kafkalia IV*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	Medium	Medium
Kalavasos *Kafkalia V*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	Medium	Medium
Kalavasos *Kafkalia VI*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	Medium	Medium
Kalavasos *Kafkalies 107*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	Medium	Medium

Site Name	Current Soil Type	Current Vegetation	Erosivity	Erosion	Visibility
Kalavasos *Kafkalies 26*	Gypsiric Regosols and Leptic Gypsisols	Maquies	High/ Medium	Medium	Medium
Kalavasos *Kafkalies 27*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	Medium	Medium
Kalavasos *Kambanaris*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Olive and Carob Trees	High	High	High
Kalavasos *Kampos 29*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High		
Kalavasos *Kampos 30*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High		
Kalavasos *Kaoukkos*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	Low	High
Kalavasos *Kaparovouno*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	High	High	Low
Kalavasos *Kaphkalia A*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	Low	High
Kalavasos *Kaphkalia B*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	Medium	High
Kalavasos *Kaphkalia C*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	Medium	Low
Kalavasos *Kharkokolymbos*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	Medium	High
Kalavasos *Khorapheri Vounaritashi*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Medium
Kalavasos *Khorapheri West*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Medium
Kalavasos *Kokkinokremmos*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	Medium	Low
Kalavasos *Kokkinoyia*	Lithic Leptosols and Epipetric Calcisols	Vegetables	High	Low	High
Kalavasos *Kondon Klisourin*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Vegetables	Medium	High	Low

Site Name	Current Soil Type	Current Vegetation	Erosivity	Erosion	Visibility
Kalavasos *Kopetra*	Calcaric Cambisols and Calcaric Regosols	Citrus Trees	Medium/Low	Medium	High
Kalavasos *Krommidhia*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	Low	High
Kalavasos *Laos/Pamboules*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	High	Low
Kalavasos *Laroumena*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Vegetables	High	High	High
Kalavasos *Latomari/Argakia*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	High	Medium
Kalavasos *Livaoudhin*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium		
Kalavasos *Lourca*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	High	Medium
Kalavasos *Lourca North*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	High	Medium
Kalavasos *Loures*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	High	Low
Kalavasos *Malouteri*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Olive and Carob Trees	Medium	Medium	Medium
Kalavasos *Mandres tou Sani*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Medium
Kalavasos *Mangia I*	Gypsiric Regosols and Leptic Gypsisols	Citrus Trees	High/Medium	Medium	Medium
Kalavasos *Mangia II*	Gypsiric Regosols and Leptic Gypsisols	Citrus Trees	High/Medium	Medium	Medium
Kalavasos *Mangia III*	Gypsiric Regosols and Leptic Gypsisols	Citrus Trees	High/Medium	Low	Medium
Kalavasos *Mangia IV*	Gypsiric Regosols and Leptic Gypsisols	Citrus Trees	High/Medium	Medium	Medium
Kalavasos *Mangia T7 and T8*	Calcaric Cambisols and Calcaric Regosols	Citrus Trees	Medium/Low	Medium	Medium

Site Name	Current Soil Type	Current Vegetation	Erosivity	Erosion	Visibility
Kalavasos *Mangia V*	Gypsiric Regosols and Leptic Gypsisols	Citrus Trees	High/Medium	Medium	Medium
Kalavasos *Markotis*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Medium
Kalavasos *Mazeri*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	Low	High
Kalavasos *Melisotriba*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	High	High
Kalavasos *Melisotriba East*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	High	High
Kalavasos *Mersinia*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Low
Kalavasos *Mitsingites*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Citrus Trees	Medium	High	Medium
Kalavasos *Pamboules*	Calcaric Cambisols and Calcaric Regosols	Vegetables	Medium/Low	Low	High
Kalavasos *Pamboulos tou Haji Mikhaili*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	Medium	
Kalavasos *Perivolia I*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Olive and Carob Trees	Medium	Low	Low
Kalavasos *Perivolia II*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Olive and Carob Trees	Medium	High	Medium
Kalavasos *Pervolia*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Vegetables	Medium	High	Low
Kalavasos *Petra I*	Eutric Lithic Leptosols and Eutric Skeletic Regosols	Forest	High	High	Medium
Kalavasos *Petra II*	Eutric Lithic Leptosols and Eutric Skeletic Regosols	Maquies	High	Medium	Medium
Kalavasos *Pidieri*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	Low	Medium
Kalavasos *Plakes*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Degraded Land	Medium		

Site Name	Current Soil Type	Current Vegetation	Erosivity	Erosion	Visibility
Kalavasos *Potamia*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Olive and Carob Trees	Medium	High	Low
Kalavasos *Potima I*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	High	High
Kalavasos *Potima II*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	Medium	High
Kalavasos *Potima III*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	Medium	Medium	Medium
Kalavasos *Psoumadhes*	Calcaric Cambisols and Calcaric Regosols	Olive and Carob Trees	Medium/Low	High	Low
Kalavasos *Sirmata*	Calcaric Cambisols and Calcaric Regosols	Citrus Trees	Medium/Low	Medium	Medium
Kalavasos *Skhisti Petra*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Maquies	Medium	High	Medium
Kalavasos *Sokopra*	Epipetric Calcisols and Leptic Chromic Luvisols	Citrus Trees	Low	Medium	Medium
Kalavasos *Spilios*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	Medium	High
Kalavasos *Tenta*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	High	High
Kalavasos *Vasilikos River Bridge Site*	Calcaric Fluvic Cambisols and Vertic Cambisols	Olive and Carob Trees	Low	Medium	Low
Kalavasos *Village Cinema*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	Medium	Low
Kalavasos *Village Mosque/Mavrovouni*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	Medium	Low
Kalavasos *Village Other Areas*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	Medium	Low
Kalavasos *Village Panayia*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	Medium	Low
Kalavasos *Village Plot 37*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	Medium	Low

Site Name	Current Soil Type	Current Vegetation	Erosivity	Erosion	Visibility
Kalavasos *Yeromano*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Medium
Kalavasos *Yeroskhinia*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	medium
Kalavasos *Yirtomylos*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Vegetables	Medium	Medium	Medium
Kalavasos *Yirtomylos T1*	Calcaric Rendzic Leptosols and Calcarid Leptic Cambisols	Vegetables	Medium	Medium	Medium
Kalavasos *Zoulofdidhes*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Degraded Land	Medium	High	Medium
Mari *Alonotopo*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	Low	High
Mari *Asprous*	Lithic Leptosols and Epipetric Calcisols	Maquies	High		
Mari *Kalotsikous*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	Medium	Low
Mari *Kopetra*	Calcaric Cambisols and Calcaric Regosols	Olive and Carob Trees	Medium/Low	Medium	High
Mari *Kopetra Loura Kaphkaloudi*	Calcaric Cambisols and Calcaric Regosols	Olive and Carob Trees	Medium/Low		
Mari *Kremmos tou Sani/Livadhia*	Epipetric Calcisols and Leptic Chromic Luvisols	Olive and Carob Trees	Low	Low	Low
Mari *Mazera*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	Medium	Low
Mari *Mesovouni*	Calcaric Fluvic Cambisols and Vertic Cambisols	Citrus Trees	Low	High	Medium
Mari *Moutsounin/Mandra tou Rirou*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	High	Medium
Mari *Paliambela*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	Medium	Medium
Mari *Skali I*	Calcaric Cambisols and Calcaric	Maquies	Medium	High	Medium

Site Name	Current Soil Type	Current Vegetation	Erosivity	Erosion	Visibility
	Regosols				
Mari *Skali II*	Calcaric Cambisols and Calcaric Regosols	Maquies	Medium	Low	Low
Mari *Village*	Lithic Leptosols and Epipetric Calcisols	Built up area	High	Medium	Low
Maroni Limni/Yialos		Olive and Carob Trees			
Ora *Ammouthia*	Eutric Lithic Leptosols and Eutric Skeletic Regosols	Olive and Carob Trees	High	Medium	Medium
Ora *Apsrokhorapha*	Eutric Lithic Leptosols and Eutric Skeletic Regosols	Olive and Carob Trees	High	Medium	Medium
Ora *Betaleyi*	Eutric Lithic Leptosols and Eutric Skeletic Regosols	Maquies	High	High	High
Ora *Klitari*	Eutric Lithic Leptosols and Eutric Skeletic Regosols	Maquies	High	Medium	High
Ora *Lakxia Constandi*	Eutric Lithic Leptosols and Eutric Skeletic Regosols	Maquies	High	High	High
Ora *Loures*	Eutric Lithic Leptosols and Eutric Skeletic Regosols	Maquies	High	High	Medium
Ora *Mazokambos*	Eutric Lithic Leptosols and Eutric Skeletic Regosols	Maquies	High	Medium	Low
Ora *Mersinia*	Eutric Lithic Leptosols and Eutric Skeletic Regosols	Maquies	High	High	Medium
Psematismenos Petres tou Kathisi	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	High
Sanidha Moutti tou Ayiou Serkou	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Forest	Medium	High	High
Tokhni *Kapsala*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Medium
Tokhni *Lakkia*	Epipetric Calcisols and Leptic Chromic Luvisols	Olive and Carob Trees	Low	High	High
Tokhni *Latomaes*	Skeletic Calcaric Regosols and	Maquies	Medium	Medium	Medium

Site Name	Current Soil Type	Current Vegetation	Erosivity	Erosion	Visibility
	Calcaric Lithic Leptosols				
Tokhni *Mesovouni*	Calcaric Cambisols and Calcaric Regosols	Olive and Carob Trees	Medium/Low	Low	Medium
Tokhni *Mouthkia*	Calcaric Cambisols and Calcaric Regosols	Vegetables	Medium/Low	Medium	High
Tokhni *Oriti North*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Medium
Tokhni *Oriti South*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Maquies	Medium	High	Medium
Tokhni *Petreli*	Calcaric Cambisols and Calcaric Regosols	Olive and Carob Trees	Medium/Low	Low	Medium
Tokhni *Petreli North*	Calcaric Cambisols and Calcaric Regosols	Olive and Carob Trees	Medium/Low	Medium	Medium
Tokhni *Styllos*	Lithic Leptosols and Epipetric Calcisols	Olive and Carob Trees	High	Medium	Medium
Tokhni *Zorpas*	Calcaric Cambisols and Calcaric Regosols	Vegetables	Medium/Low	Medium	Low
Vasa *Livadhia*	Eutric Lithic Leptosols and Eutric Skeletic Regosols	Maquies	High	High	Medium
Zygi *Petrini*	Epipetric Calcisols and Leptic Chromic Luvisols	Olive and Carob Trees	Low	Low	Medium

Table 3B: VVP Archaeological Information

Colour	Description	EC/MC Total	LC Total
	Uplands, hilly terrain	53 (32 Site and 21 Off Site)	40 (20 Site and 20 Off Site)
	Lowland plain	9 (1 Site and 8 Off Site)	10 (4 Site and 6 Off Site)
	River banks and alluvial plain	9 (3 Cemeteries and 6 Off Site)	4 (1 Site, 2 Cemeteries and 1 Off Site)
	Not recovered, yet known site		

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Asgata *Ayia* Mari*na* - *1*	2ha	Off Site	Off Site	MBA, LBA, CA, R, LR, Med		Todd 2004b: 29-30, fig.48, Pl. XVII: 1.
Asgata *Kambos - 110*	0,42ha	Off Site	Off Site	CL, MBA, CA, Hel, R, LR, Med		Todd 2004b: 30-32, figs. 22-23, 40, 48.
Asgata *Neron tou Phani - 109*	0,81ha	Site	Site	CL, MBA, CA, LR		Todd 2004b: 32, figs. 22, 48.
Kalavasos *Agkastromeni – 6*	1,125ha	Site	Off Site	Neolithic, MBA	EC/MC	Catling 1962: 161, site 14; Todd 2004b: 32-33.
Kalavasos *Alonia tou Pano Zyou - 3*	8,75ha	Site	Off Site	CL, MBA, LBA, CA, R	EC, MC, LC	Todd 1988: 137; 2004b: 33-34, fig. 24, pl. XXX:2.
Kalavasos *Ammos - 4*	1,5ha	Off Site	Off Site	MBA, LBA, CA	EC, MC, LC	Todd 1977: 27; 1978: 186; 1979a: 284; 1979b: 31; 1988: 137; 2004b: 34; Johnson and Hordynsky 1982: 65 (site 51).
Kalavasos *Andronikidhes - 5*	0,5ha	Site?	Off Site	MBA,LBA, CA, R	EC, MC, LC	Todd 2004b: 34-35, figs. 25-26.
Kalavasos *Argaki - 129*	0,375ha		Off Site	MBA, LBA, CA, R	EC, MC, LC	Todd 1988: 134; 2004b: 35-36, figs. 25-26, pl. XXX: 1.

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Kalavasos *Argaki tou Tahiri - 127*	0,06ha	Off Site	Off Site	MBA, LBA	EC, MC, LC	Todd 2004b: 36-37, figs. 25, 34.
Kalavasos *Argaki tou Yeorgyiou - 7*	0,9ha	Off Site		CL, MBA, CA, LR	EC/MC	Todd 2004b: 37, fig.24.
Kalavasos *Argakia East - 125*	0,175ha	Off Site		Neolithic, MBA, CA, Med	EC/MC	Todd 2004b: 37-38, figs. 26, 34.
Kalavasos *Arkhangelos - 8*	13,75/16,50ha	Site	Site	CL, MBA, LBA, CA, R, LR	EC, MC, LC	Todd 2004b: 38, figs. 26, 34
Kalavasos *Ayiasmata - 9*	5ha	Site	Site	MBA, LBA, CA, R	EC, MC, LC	Todd 1977: 27; 1979a: 284; 1979b: 31; 1988: 135; 1989: 43; 2004b: 38-40, figs.23, 29, Pl.XXVII:2; Stanley Price 1979a: 125; Johnson and Hordynsky 1982: 65 (site 5).
Kalavasos *Ayios Dhimitrios - 10*	14ha	Off-Site?	Site	MBA, LBA, CA, R, LR	LC	Todd 1988: 137; 2004b: 40-41, fig. 24. Extensive bibliography in Chapters 3 and 6.
Kalavasos *Ayios Kaloyeros - 11*	5,25ha	Site	Site	MBA, CA, R, LR, Med	EC, MC, LC	Extensive bibliography in Chapter 3.
Kalavasos *Ayios Yeorgyios Kephala - 12*				Neolithic, CA		Todd 1977: 27; 1979b: 31; 1988: 135; 2004b: 41-42, figs. 23, 29; Johnson and Hordynsky 1982: 65 (site 37).
Kalavasos *Ayious – 13*	1,6ha	Off Site?	Off Site?	CL, MBA, LBA, CA, R, LR	EC, MC, LC	Johnson and Hordynsky 1982: 65 (site 18); Todd 2004b: 42-43, fig. 26.
Kalavasos *Ayious East - 14*	0,5ha		Off Site	MBA, LBA, CA, R, LR	EC, MC, LC	Todd 2004b: 43, figs. 2, 26, 30, 32, 33, Pl. XXXV: 1.

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Kalavasos *Bamboulos - 15*				MBA		Todd 1979a: 285; 1979b: 31; 2004b: 43-44, fig.26; Johnson and Hordynsky 1982: 65 (site 36).
Kalavasos *Cambanari*				CA		Johnson and Hordynsky 1982: 64, 65 (site 49); Todd 2004b: 44, fig. 23.
Kalavasos *Draconikiaes - 17*	1,56ha	Off Site	Off Site?	MBA, LBA, CA, LR	EC, MC, LC	Todd and Pearlman in Todd 1986b; 2004b: 45.
Kalavasos *Fournia - 18*		Off Site		MBA, CA	EC/MC	Todd 2004b: 45, figs. 24, 26.
Kalavasos *Gipsari*				CA	EC/MC	Todd 1988: 137; 2004b: 45-46, fig. 4.
Kalavasos *Gouppos - 20*	3ha	Site	Off Site	MBA, LBA, CA, R, LR	EC, MC, LC	Todd and Pearlman in Todd 1986b: 203.
Kalavasos *Ipsopamboulos - 21*	0,625ha	Site		CL, MBA	EC/MC	Todd 1989: 43; 2004b: 47, figs. 23, 29.
Kalavasos *Kafkalia III - 23*		Off Site		MBA, CA	EC/MC	Todd 1988: 138; 2004b: 47-48, fig. 24; Pl. XXXVIII:2.
Kalavasos *Kafkalia I-II - 22*	5ha	Site?	Off Site	Neolithic, MBA, LBA, CA, R	EC, MC, LC	Johnson and Hordynsky 1982: 64-65 (site 22); Todd 2004b: 49-50, fig. 26.
Kalavasos *Kafkalia IV - 24*	1,35ha	Off Site	Site	MBA, LBA, CA, R, LR, Med	LC	Todd 1978: 186; 1979a: 31; 2004b: 48-49, fig.26, Pl.XXXVI:2; Johnson and Hordynsky 1982: 64 (Kafkalia II), 65 (sites 20 and 21).
Kalavasos *Kafkalia V - 25*	5,25ha(MBA)	Site?	Site	Neolithic, MBA, LBA, CA, LR	EC, MC, LC	Johnson and Hordynsky 1982: 64, 65 (site 23).

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Kalavasos *Kafkalia VI - 124*	0,225ha	Off Site		Neolithic, CL, MBA		Johnson and Hordynsky 1982: 64, 65 (site 24); Todd 1989: 47; 2004b: 51-52, fig. 26.
Kalavasos *Kafkalies - 107*				CA		Todd 1989: 48; 2004b: 52-53, fig. 26.
Kalavasos *Kafkalies - 26*				CC		Karageorghis 1969: 19, figs 66-67, 69; 1970: 207, 209-211; Nicolaou 1970: 398; Caubet 1973: 6; Todd 1979(b): 31; Johnson and Hordynsky 1982: 55 (site 28); Todd and Pearlman in Todd 1986a: 211; Todd 2004b: 53, fig. 26.
Kalavasos *Kafkalies - 27*				CC		Karageorghis 1982: 44; 1983: 907; Todd and Pearlman in Todd 1986b: 214.
Kalavasos *Kambanaris - 28*	0,5ha			CL, MBA	EC/MC	Karageorghis 1983: 49-50; 1984: 926-927; Todd 2004b: 54.
Kalavasos *Kampos - 29*						Todd 1978: 186; 1979b: 32; Todd 2004b: 54, fig. 24.
Kalavasos *Kampos - 30*				C		Unavailable information.
Kalavasos *Kaoukkos - 31*	5,2ha	Site?		MBA, LR, Med	EC/MC	Unavailable information.
Kalavasos *Kaparovouno - 32*	4,5ha	Site	Site?	MBA, LBA, CA, R	EC, MC, LC	Johnson and Hordynsky 1982: 65 (site 45): 66.
Kalavasos *Kaphkalia - 33*	0,96ha			MBA, Hel, Med		Todd 1988: 137; 2004b: 56, fig. 24.

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Kalavasos *Kaphkalia B - 34*	0,48ha(R), 3ha(Med)		Site	MBA, LBA, CA, CC, R, LR, Med	LC	Johnson and Hordynsky 1982: 65 (site 46); Todd 2004b: 56-57, figs. 26, 27.
Kalavasos *Kaphkalia C - 35*	0,075ha			MBA, CA, Med		Todd 1978: 186; 1979a: 284; 1979b: 32; 2004b: 57, fig.26; Johnson and Hordynsky 1982: 65 (site 47).
Kalavasos *Kharkokolymbos - 36*	0,5ha	Off Site	Off Site	MBA, LBA, CA, Hel, R, LR	EC, MC, LC	Johnson and Hordynsky 1982: 65 (site 48); Todd 2004b 57-58, fig. 26.
Kalavasos *Khorapheri Vounaritashi - 37*	36ha	Site	Site	MBA, LBA, CA, R, LR	EC, MC, LC	Todd 1988: 135; 2004b: 58, figs. 22, 40.
Kalavasos *Khorapheri West - 135*	1ha		Off Site	MBA, LBA, CA, Hel, R	LC	Johnson and Hordynksy 1982: 65 (site 43), 66; Todd 1988: 138; 2004b: 58-60, figs 23-26, 34, Pl. XXXVII:3, XXXVIII:1.
Kalavasos *Kokkinokremmos - 38*	3ha	Site?	Off Site	MBA, LBA, CA, R, LR		Todd 2004b: 60-61.
Kalavasos *Kokkinoyia - 39*	1ha	Off Site	Off Site	Neolithic, MBA, LBA,CA, R, LR, Med	EC/MC	Todd 1988: 138; 2004b: 61-62, figs. 24, 26.
Kalavasos *Kondon Klisourin - 40*	1ha	Off Site		MBA, LBA, CA	EC/MC	Cook 1946: 119-120; Young 1948: 530; Dikaios 1953: 315, 319, 331, 333; 1962: 106-112; Todd 1977: 29; 2004b: 62-63, fig.26, 35, Pl.XLIV:2-3, XLV:1-4. Karageorghis 1979: 693; Stanley Price 1979: 126. More by J. Clarke.

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Kalavasos *Kopetra - 41*	4ha			LBA, LR		Todd 2004b: 63-64, fig. 24, Pl. XXVIII:3.
Kalavasos *Krommidhia - 42*				MBA, CA		Todd 1979a: 284; 1979b: 32; 2004b: 64-65, fig.26, 36, Pl.XLIII:2; Rautman and McClellan 1990; McClellan and Rautman 1991; Rautman and McClellan 1992; McClellan and Rautman 1994; Rautman 2003. More by the Kalavasos-Kopetra Project.
Kalavasos *Laos/Pamboules - 43*	11,25ha			CA, R, LR		Todd 1978: 186; 1979b: 32; 2004b: 65-66, fig.26; Johnson and Hordynsky 1982 (site 69).
Kalavasos *Laroumena - 44*	10ha	Site	Site	Neolithic, MBA, LBA, CA, R	EC/MC	Todd 2004b: 66-67, figs. 25-26.
Kalavasos *Latomari/Argakia - 45*	1,06ha			MBA, LBA, CA, R, LR		Todd 1979a: 285; 1979b: 32; 1988: 135; 1993; 2004b: 67-72, figs. 23, 24, 29, 37, Pl. XXV: 1-3, XXVI: 1-3, XXVIII: 1-3.
Kalavasos *Livaoudhin*				LBA		Johnson and Hordynsky 1982: 65 (site 38), 66; Todd 1988: 138; 2004b: 72-73, figs. 26, 34.
Kalavasos *Lourca - 47*	8,25ha	Site?		MBA, CA, Med	EC/MC	Catling 1962: 164; Åström 1972: 195, 382, n.1; Todd 1977: 29; 1979b: 32; 2004b: 73

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Kalavasos *Lourca - 130North*	0,45ha			CA		Todd 2004b: 115-116.
Kalavasos *Loures - 48*			Off Site	MBA, LBA, CA		Todd 1978: 186-187; 1979b: 32; 1988: 137-138; 2004b: 73-75, figs.24-25, pl. XXVIII:2; Johnson and Hordynsky 1982: 65 (site 7).
Kalavasos *Malouteri - 49*	19,12ha	Site	Site	MBA, LBA, CA, Hel, R, LR, Med	EC, MC, LC	Todd 2004b: 75, fig. 24.
Kalavasos *Mandres tou Sani - 50*	1ha	Site/Off-Site		MBA, LBA, CA	EC, MC, LC	Johnson and Hordynsky 1982: 65 (site 26), 66; Todd 2004b: 75-76.
Kalavasos *Mangia I - 51*				LBA	LC	Todd 2004b: 76-77, figs. 23 and 29, Pl. XXVII: 1.
Kalavasos *Mangia II - 52*			Cemetery	LBA	LC	Todd 1977: 27; 1978: 186; 1988: 137; 2004b: 77-78, fig.24; Stanley Price 1979: 126; Johnson and Hordynsky 1982: 65 (site 13).
Kalavasos *Mangia III – 53*			Cemetery	MBA, LBA, CG, CA, LR	LC	Todd 2004b: 78-79, fig. 26, fig. 38, Pl. XXXVIII:3, XXXIV: 1-3, XL: 1-3, XLI: 1-2.

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Kalavasos *Mangia IV - 54*		Off Site		LBA	MC/LC	Karageorghis 1975: 40; 1976b: 852-853; 1977: 28; 1979a: 289; 2004b: 79, Pl.XXXVIII:3; Nicolaou 1975-1976: 44; Johnson and Hordynsky 1982: 65 (site 9); Todd and Pearlman in Todd 1986b: 212; McClellan et al. 1988: 203.
Kalavasos *Mangia T7 and T8 - 108*		Off Site		LBA	LC	Karageorghis 1976a: 48; 1977: 714-715; Todd 1977: 28; 1978: 59; 1979b: 33; 2004b: 70, Pl.XXXVIII:3, XXXIV:1; Johnson and Hordynsky 1982: 65 (site 9); Todd and Pearlman in Todd 1986b: 213; McClellan et al. 1988: 203.
Kalavasos *Mangia V - 55*		Off Site		LBA	MC/LC	Todd 1979a: 284-285; 1979b: 33; 1988: 138; 2004b: 79-80; Johnson and Hordynsky 1982: 65 (site 8); McClellan et al. 1988: 203.
Kalavasos *Markotis - 56*	5,25ha		Site	Neolithic, MBA, LBA, CA, R, Med	EC, MC, LC	McClellan et al. 1988: 204-205 and passim.; Todd 2004b: 80, Pl. XXXIV: 2-3, XL: 1.
Kalavasos *Mazeri - 57*	1ha		Off Site?	Neolithic, MBA, LBA, CA, R, LR	EC, MC, LC	McClellan et al. 1988: 208-209; Todd 2004b: 81-82, Pl. XLI: 1-2.

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Kalavasos *Melisotriba - 113*	2ha			CL, MBA, CA, R, LR		Karageorghis 1986a: 51; 1986b: 62-63; McClellan et al. 1988: 206-208 and passim; Todd 2004b: 80-81.
Kalavasos *Melisotriba East - 114*	0,1ha					Todd 1978: 187; 1988: 135; 2004b: 82-83, fig.22, pl. XXII: 1; Stanley Price 1979a: 126.
Kalavasos *Mersinia - 58*	0,54ha					Todd 1988: 135; 2004b: 83, fig. 22.
Kalavasos *Mitsingites - 59*	6,25ha	Site	Site	Neolithic, MBA, LBA, CG, CA, Hel, R, LR, Med	EC, MC, LC	Todd 2004b: 84, fig. 22.
Kalavasos *Pamboules - 60*	20ha	Off Site	Site?	CL, MBA, LBA, CA, R, LR, Med		Todd 2004b: 84-85, figs. 22-23.
Kalavasos *Pamboulos tou Haji Mikhaili - 142*				Neolithic		Johnson and Hordynsky 1982: 65 (site 44): 66; Todd 2004b: 85, fig. 23.
Kalavasos *Perivolia I - 61*	1,125ha	Site		MBA, Med	EC/MC	Todd 1977: 28; Cullen in Todd 1978: 191-193; Todd 1979b: 33; 1988: 138; 2004b: 85-87, figs. 24, 26, 34, 39, Pl.XXXIV:1-4; Johnson and Hordynsky 1982: 65 (site 4).
Kalavasos *Perivolia II - 62*	0,56ha	Site?		MBA, CA, LR	EC/MC	Selected references : Dikaios 1936: 78; 1962: 133-140; Cook 1946: 120; Ostlung and Engstrand 1960: 194; Todd 1977: 29;

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
						1978: 186; 1979b: 33; 2004b: 87-89, fig. 26, 35, Pl.XLIII:1, XLIV:1; Hordynsky and Ritt in Todd 1978(1): 190-191; Karageorghis 1979: 693; Stanley Price 1979: 126; Johnson and Hordynsky 1982: 65 (site 35); Clarke and Todd 1993.
Kalavasos *Pervolia - 126*	1,35ha	Off Site	Off Site	MBA, LBA, CA, R	EC, MC, LC	Todd 2004b: 89, fig. 25.
Kalavasos *Petra I - 111*	1,75ha			CA, Hel	LC	Johnson and Hordynsky 1982: 65 (site 50), 60; Todd 2004b: 89-90, figs. 26, 34.
Kalavasos *Petra II - 112*	0,625ha			LBA, CA, CC, Hel, R, LR		Johnson and Hordynsky 1982: 65 (site 33): 66; Todd 2004b: 90, fig. 26.
Kalavasos *Pidieri - 134*	2ha	Site?	Off Site	MBA, LBA, CA, R	EC, MC, LC	Todd 2004b: 90-92, fig. 24; Pl. XXVIII:1.
Kalavasos *Plakes - 143*				CC, R		Todd 2004b: 92, figs. 22, 40, 48.
Kalavasos *Potamia - 140*		Off Site		MBA, CA, R, LR	EC/MC	Todd 2004b: 93, figs. 22, 40, 48.
Kalavasos *Potima I - 63*	0,09ha			R, LR	EC/MC	Todd 2004b: 93-94, figs. 25, 34.
Kalavasos *Potima II - 64*	0,357ha			CL, MBA, LBA, CA, LR	EC/MC	Todd 2004b: 95
Kalavasos *Potima III - 65*	2,625ha	Site	Site?	MBA, LBA, CA, Med	EC/MC	Todd 2004b: 95, fig. 23.
Kalavasos *Psoumadhes - 66*	1ha	Off Site?	Off Site	MBA, LBA, CA	EC, MC, LC	Todd 2004b: 95-96, figs. 24-25.

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Kalavasos *Sirmata - 67*	1,27ha		Off Site	Neolithic, MBA, LBA, CA, LR	LC	Todd 1988: 135; 2004b: 96, fig. 24; Pl. XXIII:2.
Kalavasos *Skhisti Petra - 68*	2,25ha	Off Site?	Off Site	MBA, LBA	EC, MC, LC	Todd 1988: 135; 2004b: 96-97, figs. 23 and 24, Pl. XXIII: 3.
Kalavasos *Sokopra - 69*	5,75ha			Neolithic, LBA, CA, LR		Todd 2004b: 97-98, fig. 25.
Kalavasos *Spilios - 70*	40ha	Site	Site?	Neolithic, MBA, LBA, CA, R, LR, Med	EC, MC, LC	Todd 1977: 28; 1979a: 285; 1979b: 33; 2004b: 98-99, fig. 26, 36; Pl. XLI:3; Johnson and Hordynsky 1982: 65 (site 14); Rautman and McClellan 1987; McClellan and Rautman 1989; Rautman 2003.
Kalavasos *Tenta - 71*	2,6ha	Off Site		Neolithic, CL, MBA, LBA, CA, R, LR, Med	EC/MC	Todd 2004b: 99-100, fig. 25.
Kalavasos *Vasilikos River Bridge Site - 72*				Neolithic, MBA		Johnson and Hordynsky 1982: 65 (site 30), 66; Todd 2004b: 100-101, fig. 26.
Kalavasos *Village Cinema - 73*		Cemetery		MBA	EC	Todd 1988: 135; Todd 2004b: 101-104, figs. 22, 23, 40, Pl. XX:3, XXI: 1-3. See also Chapter Seven.
Kalavasos *Village Mosque/Mavrovouni - 74*		Cemetery	Cemetery	MBA, LBA	EC, MC, LC	Todd 2004b: 104-105, figs 2, 26, 34, 41, Pl. I, XXXV: 1-3, XXXVI:1, XLIII:2. Extensive bibliography in Chapter Seven.

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Kalavasos *Village Other Areas - 77*						Gomez 1987: 355, 356; Gowlett et al. 1987: 139-140; Todd 2004b: 105-106, fig. 26, Pl. XXXVI:3, XXXVII:1-2.
Kalavasos *Village Panayia - 75*		Cemetery	Cemetery	MBA, LBA	EC, MC, LC	Todd and Pearlman in Todd 1986b: tombs; Todd 2004b: 106-107, fig. 24, 42, Pl. XXIV: 1-2, XXX:1-2. Extensive bibliography in Chapter 7.
Kalavasos *Village Plot 37 - 76*			Site	LBA	LC	Todd and Pearlman in Todd 1986b: 204-211; 1988: 134; 2004b: 107, fig. 43, Pl. XXXII:3 and Appendix I.
Kalavasos *Yeromano - 115*	1,5ha	Off Site	Off Site	Neolithic, MBA, LBA, CA, Hel, R	EC, MC, LC	Todd and Pearlman in Todd 1986b: 196-197, 203-204, 214-216; 1988: 134; For tomb 51 see Pearlman 1985; for Tomb 56 see Appendix I in Todd 2004b; 2004b: 107-108, fig. 44, Pl. XXX:2.
Kalavasos *Yeroskhinia - 78*	0,75ha			MBA, LBA, CA	EC, MC, LC	Unavailable information.
Kalavasos *Yirtomylos - 79*	6ha	Site	Off Site	Neolithic, CL, MBA, LBA, CA, R, LR	EC, MC, LC	Todd 1986c for Tombs 46-48; Details for other tombs excavated prior to 1987 are listed in the Appendix b Todd and Pearlman in the same Volume.Tomb 2: Merrillees 1985 and

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
						Pearlman 1985. Details of tombs 57-72 are provided in Todd 2004b: Appendix I; Todd 2004b: 108, figs 44-45; Pl. XXXI: 3, XXXII:1-2.
Kalavasos *Yirtomylos T1 - 80*				R	EC, MC, LC	Todd 2004b: 108-109; Fig. 42, Pl. XXXI:1-2.
Kalavasos *Zoulofdidhes - 128*	2,75ha			Neolithic, MBA, LBA, CA, R, LR	EC, MC, LC	Todd 2004b: 109-110, fig. 22.
Mari *Alonotopo - 82*				CA, Med		Todd 1979a: 285; 1979b: 34; 2004b: 110-111, figs. 25, 34.
Mari *Asprous - 144*				R		Todd 1979a: 285; 1979b: 34; 1988: 135; 2004b: 111-114, figs. 23, 29, Pl. XXII:2-3, XXIV: 2-4; Karageorghis 1985: 922 (Gyrtomylos); Flourentzos 1988: 235 (Ghyrtomylos).
Mari *Kalotsikous - 83*	0,45ha	Off Site		MBA, CA, R		Nicolaou 1985: 326 and pl. LIX:2; Flourentzos 1988; Todd 2004b: 114.
Mari *Kopetra - 84*				Hel, LR		Todd 2004b: 114-115, fig. 25.
Mari *Kopetra Loura Kaphkaloudi - 145*				R, Med		Johnson and Hordynsky 1982: 65 (site 27), 66; Todd 2004b: 116, fig. 26.
Mari *Kremmos tou Sani/Livadhia - 85*	0,81ha	Off Site		MBA, CA		Todd 2004b: 116-117.
Mari *Mazera - 86*				CA		Johnson and Hordynsky 1982: 65 (site 17), 66; Todd 2004b: 117, fig. 26

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Mari *Mesovouni - 87*	0,75ha	Site?		Neolithic, CL, MBA, LBA, CA, Hel, LR		Karageorghis 1980: 42-43; 1981: 1022-1023; Hadjisavvas 1988: 113-115; 1992: 34-40; Todd 2004b: 117-118, fig. 25.
Mari *Moutsounin/Mandra tou Rirou - 88*	5,2ha	Site	Site?	Neolithic, MBA, LBA, CG, CA, R, LR, Med	EC, MC, LC	Todd 2004b: 118.
Mari *Paliambela - 89*	0,7ha			Neolithic, MBA, LBA, CA, Med		Johnson and Hordynsky 1982: 65 (site 32), 66; Todd 2004b: 118, fig. 28.
Mari *Skali I - 90*	0,3375ha	Off Site		Neolithic, MBA, LBA	EC/MC	Myres and Ohnefalsch-Richter 1899: 9; Gjerstad 1926: 14; Catling 1962: 166; Todd 1977: 29; 1979b: 35; 2004b: 125.
Mari *Skali II - 91*	0,35ha			MBA, LBA, CA	EC/MC	Todd 1977: 29; 1979b: 34; 2004b: 119, fig. 28.
Mari *Village - 92*				CA		Karageorghis 1978b: 24, 45; 1979: 675-676, 693; Todd 1979a: 285; 1979b: 34; 1998: 22-23, figs. 5-6; 2004b: 119-121, fig. 28, 46; Pl. XXXV:3, XLVII:2-3; Stanley Price 1979a: 128; Johnson and Hordynsky 1982: 65 (site 15).
Ora *Ammouthia - 121*	0,16ha	Off Site		MBA	EC/MC	Dikaios 1953: 319; Watkins 1973: 38, 42-43; Todd 1977: 29; 1979a: 285; 1979b: 34-35; 2004b: 122-123, fig. 26, 47, Pl. SLVI: 1-

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
						3; Karageorghis 1979b: 693; Stanley Price 1979a: 129; Johnson and Hordynsky 1982: 65 (site 25).
Ora *Apsrokhorapha - 118*	3,5ha	Site?	Site?	MBA, LBA, CA, R, LR, Med		Johnson and Hordynsky 1982: 65 (site 40), 66; Todd 2004b: 123-124, fig. 26.
Ora *Betaleyi - 122*	2,5ha	Site	Site	MBA, LBA, CA, Med	EC, MC, LC	Johnson and Hordynsky 1982: 65 (site 41), 66; Todd 2004b: 124, fig. 26.
Ora *Klitari - 117*	0,5ha	Site?		Neolithic, MBA, CA, LR	EC/MC	Karageorghis 1978b: 44; 1979: 677; 2004b: 124-125, fig. 16, Pl. XLIII:3; Hadjicosti 1977.
Ora *Lakxia Constandi - 119*	0,15ha			MBA, LBA, CA, LR		Vita-Finzi 1973; Todd 1977: 27; 2004b: 125-126; Stanley Price 1979a: 156.
Ora *Loures - 116*	0,625ha	Site?		MBA, CA, R, LR		Todd 2004b: 126, fig. 22.
Ora *Mazokambos - 95*	1,5ha			MBA, LBA, Hel, LR		Todd 2004b: 126-127, fig. 22.
Ora *Mersinia - 120*	1ha	Off Site		MBA, LBA, CA, R		Todd 2004b: 127-128, figs. 22 and 48, Pl. XVI:3, XVIII:1-2.
Psematismenos Petres tou Kathisi	0,0036ha					Todd 2004b: 128-129, fig. 22, XIX:1.
Sanidha Moutti tou Ayiou Serkou			Site	MBA, CA, LR	LC	Todd 2004b: 129-130, fig. 22. More information and extensive bibliography in Chapter 4.
Tokhni *Kapsala - 97*	3ha	Off Site?		MBA, LBA, CG, CA, R	EC/MC	Unavailable information.

Site Name	Material Distribution	EC/MC Site Type	LC Site Type	VVP Date	PhD Date	Publication
Tokhni *Lakkia - 98*			Site	LBA, CA, CC, Hel	LC	Johnson and Hordynsky 1982: 65 (site 29: Kalavasos mines); Todd 2004b: 130-131, figs. 22 and 48. More details in Appendix I.
Tokhni *Latomaes - 99*	0,5ha			Neolithic, MBA, CA, Hel	EC/MC	Todd 2004b: 131, fig. 22.
Tokhni *Mesovouni - 133*	0,75ha	Off Site	Off Site	Neolithic, MBA, LBA, CA, Hel, R	EC, MC, LC	Todd 2004b: 131-132.
Tokhni *Mouthkia - 100*	3,94ha			MBA, CA		Unavailable information.
Tokhni *Oriti North - 132*	10ha	Site	Off Site	MBA, LBA, CA, R, LR, Med	EC/MC	Todd 1988: 137; 2004b:132-133, fig. 24.
Tokhni *Oriti South - 131*	1,125ha	Site	Site	MBA, LBA, CA, R, LR	EC, MC, LC	Todd 2004b: 133-134, fig. 28.
Tokhni *Petreli - 101*	1,13ha	Off Site		MBA, CG, CA, R, LR	EC/MC	Todd 1978: 187; 1979b: 35; 2004b: 134, fig. 24, Pl/ XXXVIII:2.
Tokhni *Petreli North - 102*	2,5ha			MBA, R	EC/MC	Todd 2004b: 134-135, fig. 27.
Tokhni *Styllos - 103*	0,279ha			CA		Todd 1979a: 286; 1979b: 35: 2004b: 136-137, fig. 27; Hadjisavvas 1992: 66, 117.
Tokhni *Zorpas - 104*	0,45ha			CA, R		Todd 2004b: 137-138, fig. 24, Pl. XIX:2-3.
Vasa *Livadhia - 105*	0,5ha			LR		Todd 2004b: 138-139, fig. 24.
Zygi *Petrini - 106*	2ha			LR		Todd 1979a: 286; 1979b: 35; 2004b: 139-140, fig. 27.

Table 3C: The EC/MC

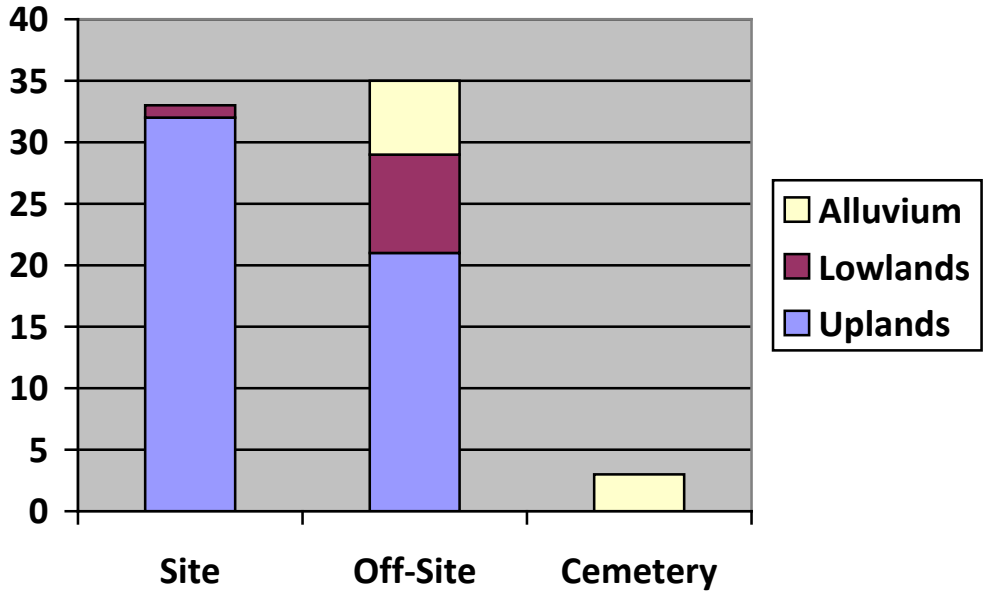
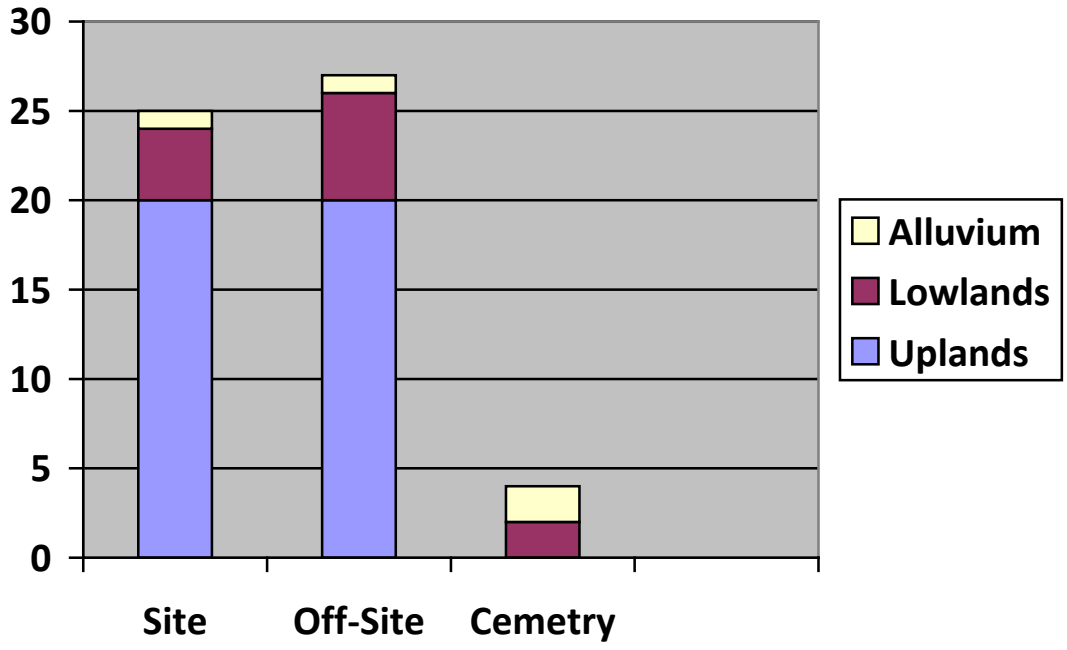


Table 3C: The LC



List of Sites in Numerical Order

1. Asgata-*Ayia Marina*
2. Asgata-*Locality Unknown*
3. Kalavasos-*Alonia tou Pano Zyou*
4. Kalavasos-*Ammos*
5. Kalavasos-*Andronikides*
6. Kalavasos-*Angastromeni*
7. Kalavasos-*Argaki tou Yeoryiou*
8. Kalavasos-*Arkhangelos*
9. Kalavasos-*Ayiasmata*
10. Kalavasos-*Ayios Dhimitrios*
11. Kalavasos-*Ayios Kaloyeros*
12. Kalavasos-*Ayios Yeorgyios Kephala*
13. Kalavasos-*Ayious*
14. Kalavasos-*Ayious East*
15. Kalavasos-*Bamboulos*
16. Kalavasos-*Cambanari*
17. Kalavasos-*Draconikiaes*
18. Kalavasos-*Fournia*
19. Kalavasos-*Gipsari*
20. Kalavasos-*Gouppos*
21. Kalavasos-*Ipsopamboulos*
22. Kalavasos-*Kafkalia I-II*
23. Kalavasos-*Kafkalia III*
24. Kalavasos-*Kafkalia IV*
25. Kalavasos-*Kafkalia V*
26. Kalavasos-*Kafkalies*
27. Kalavasos-*Kafkalies*
28. Kalavasos-*Kambanaris*
29. Kalavasos-*Kampos*
30. Kalavasos-*Kampos*
31. Kalavasos-*Kaoukkos*
32. Kalavasos-*Kapparovouno*
33. Kalavasos-*Kaphkalia A*
34. Kalavasos-*Kaphkalia B*
35. Kalavasos-*Kaphkalia C*
36. Kalavasos-*Kharkokolymbos*
37. Kalavasos-*Khorapheri/Vounaritashi*
38. Kalavasos-*Kokkino Kremmos*
39. Kalavasos-*Kokkinoyia*
40. Kalavasos-*Kondon Klisourin*
41. Kalavasos-*Kopetra*
42. Kalavasos-*Krommidhia*
43. Kalavasos-*Laos/Pamboules*
44. Kalavasos-*Laroumena*
45. Kalavasos-*Latomari/Argakia*
46. Kalavasos-*Livaoudhin*
47. Kalavasos-*Lourca*
48. Kalavasos-*Loures*
49. Kalavasos-*Malouteri*
50. Kalavasos-*Mandres tou Sani*
51. Kalavasos-*Mangia I*
52. Kalavasos-*Mangia II*
53. Kalavasos-*Mangia III*
54. Kalavasos-*Mangia IV*
55. Kalavasos-*Mangia V*
56. Kalavasos-*Markotis*
57. Kalavasos-*Mazeri*
58. Kalavasos-*Mersinia*
59. Kalavasos-*Mitsingites*
60. Kalavasos-*Pamboules*
61. Kalavasos-*Perivolia I*
62. Kalavasos-*Perivolia II*
63. Kalavasos-*Potima I*
64. Kalavasos-*Potima II*
65. Kalavasos-*Potima III*
66. Kalavasos-*Psoumadhes*
67. Kalavasos-*Sirmata*
68. Kalavasos-*Skhisti Petra*
69. Kalavasos-*Sokopra*
70. Kalavasos-*Spilios*

71. Kalavasos-*Tenta*
72. Kalavasos-*Vasilikos River Bridge Site*
73. Kalavasos-Village-*Cinema Area*
74. Kalavasos-Village-*Mosque/Mavrovouni Area*
75. Kalavasos-Village-*Panayia Church Area*
76. Kalavasos-Village-Plot 37
77. Kalavasos-Village-Other Areas
78. Kalavasos-*Yeroskhinia*
79. Kalavasos-*Yirtomilos*
80. Kalavasos-*Yirtomilos* Tomb 1
81. Kalavasos-Locality Unknown
82. Mari-*Alonotopo*
83. Mari-*Kalotsikous*
84. Mari-*Kopetra*
85. Mari-*Kremmos tou Sani/Livadhia*
86. Mari-*Mazera*
87. Mari-*Mesovouni*
88. Mari-*Moutsounin/Mandra tou Rirou*
89. Mari-*Paliambela*
90. Mari-*Skali I*
91. Mari-*Skali II*
92. Mari-Village
93. Mari-Locality Unknown
94. Maroni-*Limni/Yialos*
95. Ora-*Mazo Kambos*
96. Psematismenos-*Petres tou Kathisi*
97. Tokhni-*Kapsala*
98. Tokhni-*Lakkia*
99. Tokhni-*Latomes*
100. Tokhni-*Mouthkia*
101. Tokhni-*Petreli*
102. Tokhni-*Petreli North*
103. Tokhni-*Styllos*
104. Tokhni-*Zorpas*
105. Vasa-*Livadhia*
106. Zyyi-*Petrini*
107. Kalavasos-*Kafkalies*
108. Kalavasos-*Mangia* Tombs 7 and8
109. Asgata-*Neron tou Phani*
110. Asgata-*Kambos*
111. Kalavasos-*Petra I*
112. Kalavasos-*Petra II*
113. Kalavasos-*Melisotriba*
114. Kalavasos-*Melisotriba East*
115. Kalavasos-*Yeromano*
116. Ora-*Loures*
117. Ora-*Klitari*
118. Ora-*Aspro Khorapha*
119. Ora-*Lakxia Constandi*
120. Ora-*Mersinia*
121. Ora-*Ammouthia*
122. Ora-*Betaleyi*
123. Sanidha-*Moutti tou Ayiou Serkou*
124. Kalavasos-*Kafkalia VI*
125. Kalavasos-*Argakia East*
126. Kalavasos-*Pervolia*
127. Kalavasos-*Argaki tou Tahiri*
128. Kalavasos-*Zoulofdidhes*
129. Kalavasos-*Argaki*
130. Kalavasos-*Lourca North*
131. Tokhni-*Oriti South*
132. Tokhni-*Oriti North*
133. Tokhni-*Mesovouni*
134. Kalavasos-*Pidieri*
135. Kalavasos-*Khorapheri West*

136-139. Sites not in area covered by Todd (ed.) 2004.

140. Kalavasos-*Potamia*
141. Site not in area covered by Todd (ed.) 2004.
142. Kalavasos-*Pamboulos tou Haji Mikhaili*
143. Kalavasos-*Plakes*
144. Mari-*Asprous*145. Mari-*Koupetra-Loura-Kaphkaloudi*

CHAPTER 4

LARGE SCALE ANALYSIS: MARONI VALLEY

Research Directions

Maroni Valley is an archaeologically rich area, informally known in the late 19th century as 'the place' to obtain Mycenaean pottery from "productive" tombs (Furtwaengler and Loeschcke 1886: 26-29). Activities bordering archaeology and institutionalised looting revealed a number of Bronze Age burials, especially within the Maroni village and its coastal vicinity, whose finds were collected to comprise museum displays. During these expeditions, recording was dictated by what was "worth preserving" according to the British Museum. Consequently a significant amount of valuable information, especially regarding local material culture, is unavailable. Johnson (1980) undertook the difficult task of reorganising the British Museum Expedition at Maroni notes and published the most accurate information concerning excavated tombs, which is at present accessible online through the British Museum Digitisation Project (Maroni in Ancient Cyprus in the British Museum: www.britishmuseum.org).

Among the explored areas, the British Museum Expedition noted Maroni-*Tsaroukkas* and Maroni-*Vournes*, "another site" –likely *Yialos*- and a "Site B". In addition, sporadic reports include sites from other chronological horizons. Future research increased this figure, with Catling recording 5 Bronze Age sites (Catling 1962), Stanley-Price adding two sites from Choirokoitia (Stanley-Price 1979a: 127), and Manning reporting his knowledge through hearsay on the existence of more sites (Manning and Conwell 1992: 273). Maroni progressively attracted academic attention, from which more specific research questions have arisen, especially concerning the relation between the contemporary LBA sites of *Vournes* and *Tsaroukkas*. One avenue of investigation was the excavation of *Vournes* during the 1980's (Cadogan 1983: 154), in addition to a short unpublished survey by Smyth. This survey focused on existing sites and

described surface visibility and artefact density from the area surrounding *Vournes*. Despite this information, what Smyth names "site" is not sufficiently insightful and my understanding is that he is referring to areas of close proximity to *Vournes*, which may form part of the same LBA complex.

During the 1990s a new attempt at answering the question employed detailed reconnaissance survey in an effort to re-organise available information and re-investigate the valley more methodically. The MVASP was undertaken with the aim to evaluate the history of diachronic human habitation and "settlement hierarchy", using the areas related to known archaeological sites (Manning and Conwell 1992: 273). Beyond surface survey, the MVASP conducted excavations at *Tsaroukkas* and Maroni-*Aspres* and introduced new research directions emphasising the involvement of the coast in LBA maritime trade (Manning *et al.* 2002: 107). Mycenaean pottery was central to this investigation; hence the name *Tsaroukkas*, Mycenaeans and Trade Project. The study area subsequently expanded to the sea off of *Tsaroukkas* with a preliminary underwater survey (Manning *et al.* 2002: 112).

With the wider availability of non-intrusive archaeological field technologies, the KAMBE was established in order to recover through geophysical survey the urban plans at Kalavasos-*Ayios Dhimitrios* and Maroni-*Vournes*, and study the relation between architecture, urbanism and social transformation. At the same time new research questions stimulated investigation of pre-LBA data, the answers to which initiated surface surveys at Psematismenos-*Trelloukkas* and pottery contextualisation through comparison with assemblages from contemporaneous sites (Webb *et al.* 2007; Webb *et al.* 2008).

Diverse methodologies and innovative technologies are continuously employed at Maroni Valley to investigate recurrent questions, providing current and future research with data from a small but significant number of Bronze Age sites (fig.4.1): Psematismenos-***Trelloukkas*** (Duemmler 1886: 214; Ohnefalsch-Richter 1893: 429, 458, 467; Myres and Ohnefalsch-Richter 1899: 11, 14; Gjerstad 1926: 14; Catling 1962: 153, no.136-137; Johnson 1980: 40; MacLaurin 1980: 165-167; Karageorghis

1983: 915; Todd 1985; Flourentzos 1993; Manning *et al.* 2004: 86, 88; Christou 1995: 818; Georgiou 2000, 2001, 2006: 174-175: no.363; Steel 2004b: 106), Psematismenos-***Palia/Koliokremmos*** (Stewart 1962: 387; 1962: 153: no.136-137; Nicolaou 1967: 67; Stanley Price 1979a: 156; Christou 1995: 818; Georgiou 2000: 47-49; 2006: 362: no.362; Frankel and Webb 2006a: 138; Webb *et al.* 2007), Maroni-***Vournes*** (Karageorghis 1983: 930-933; Cadogan 1983- 1989, 1992a, 1992b, 1996; Herscher 1984: 25; 1998: 324-326, 2001; Cadogan and Domurad 1989; Manning 1999: 126, 135, 145, 165, 188, 190, 322; Cadogan *et al.* 2001), Maroni-***Tsaroukkas*** (Johnson 1980; Cadogan 1992a; Manning *et al.* 1994a, 1994b; Manning and De Mitta 1997; Manning 1998; 1999: 176; Manning and Monks 1998; Herscher 1998: 324-6; Steel 1998a: 143; Cadogan *et al.* 2001;), Maroni-***Aspri Moutti*** (Catling 1962: 152: no.113a; Georgiou 2001: 51;), **Maroni Village** (Johnson 1980: 39-40; Herscher 1984: 23: n.4; Georgiou 2006: 171, no.344), Maroni-***Maraes*** (Steel 2004b: 106; Georgiou 2001: 49-59;) and Maroni-*Aspres* (Manning *et al.* 1994b).

Despite the technological and methodological innovation employed in the Maroni valley research, theoretical perspectives seem to adhere to a more traditional path. Publications from site reports to articles in scientific journals regarding the LBA evidence of Maroni valley focus primarily on a probable administrative centre controlled by a dominant 'elite' group, whose ambiguous emergence is explicable through persistent group competition (Manning 1998: 45-48). Similarly deductive approaches are employed for the investigation of the relation of Maroni with the neighbouring Kalavasos-*Ayios Dhimitrios*, where another administrative centre, controlled by elites was constructed a short time after *Vournes*.

The problems of interpreting the close proximity of two probable administrative centres resulted in suggestions of Maroni being the port or gateway community of *Ayios Dhimitrios*, without any substantiation beyond geographic location (Courtois 1986: 89; Hadjisavvas 1992a). It is obvious, then, that the optimal connection between strict focus on topography and monolithic theoretical schemata has yet to be achieved.

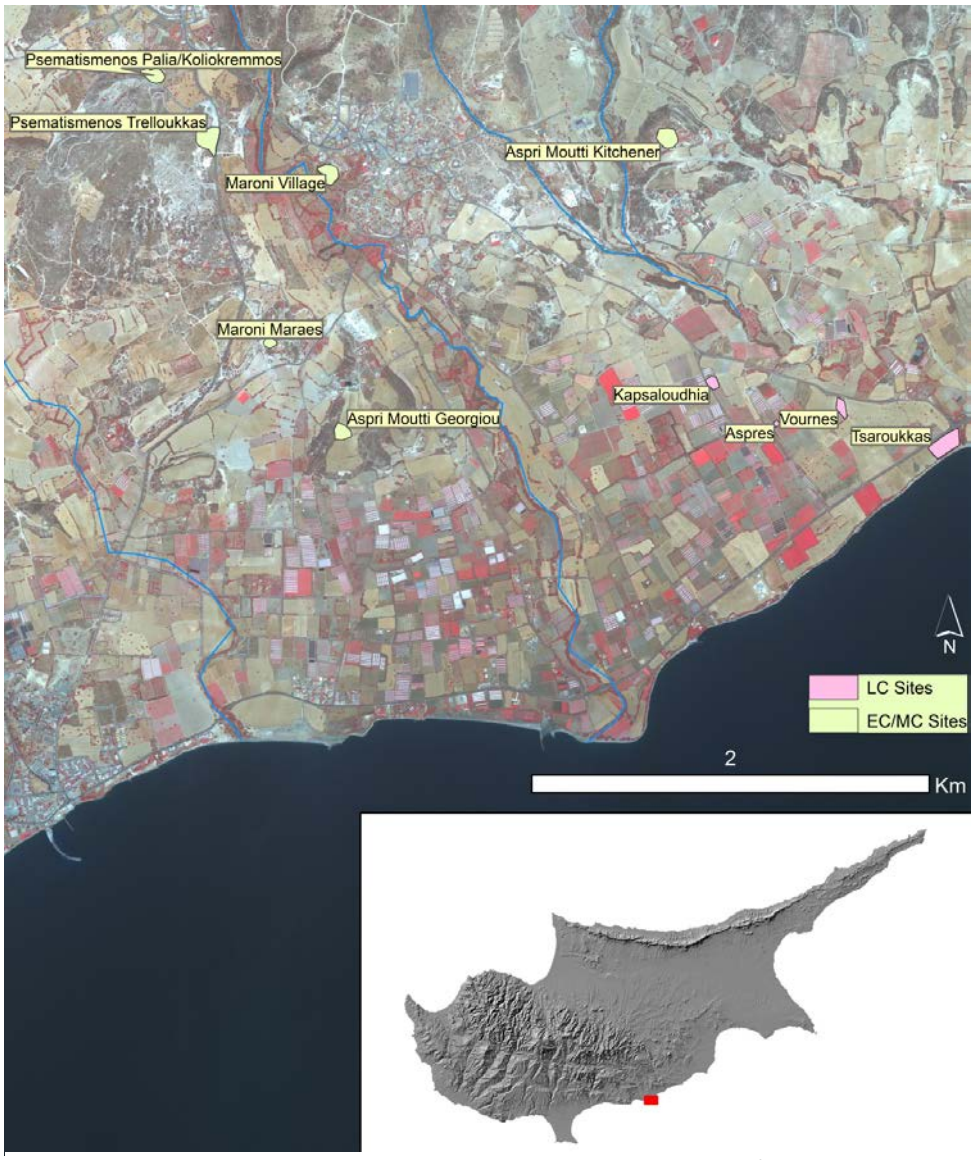


Figure 4.1 Maroni Valley Bronze Age archaeological evidence (produced by the author on ArcGIS with data from Manning and Conwell 1992; Georgiou 2000; 2001; Manning et al. 2014).

Landscape in Brief (tbl. 4A)

As mentioned in the introductory chapter, Maroni (or Ag. Minas) River belongs to the typical fluvial systems of Cyprus and the Mediterranean region in general, while, notably, it is smaller than Vasilikos and significantly narrower than Kouris (Constantinou 2004: 45). The surveyed component of the valley starts south of the

modern village of Maroni, around Psematismenos village and extends towards the coast, encompassing a variety of soils (fig.4.2), in a pattern reminiscent of the Vasilikos valley. Namely, in similarity to the Vasilikos valley to the west, the surveyed component of the Maroni valley is characterised by low hills with light, shallow and highly erodible soils (green, blue, light blue) primarily of calcaric provenance with a lower plain of dark coloured, clay-rich soils (pink).

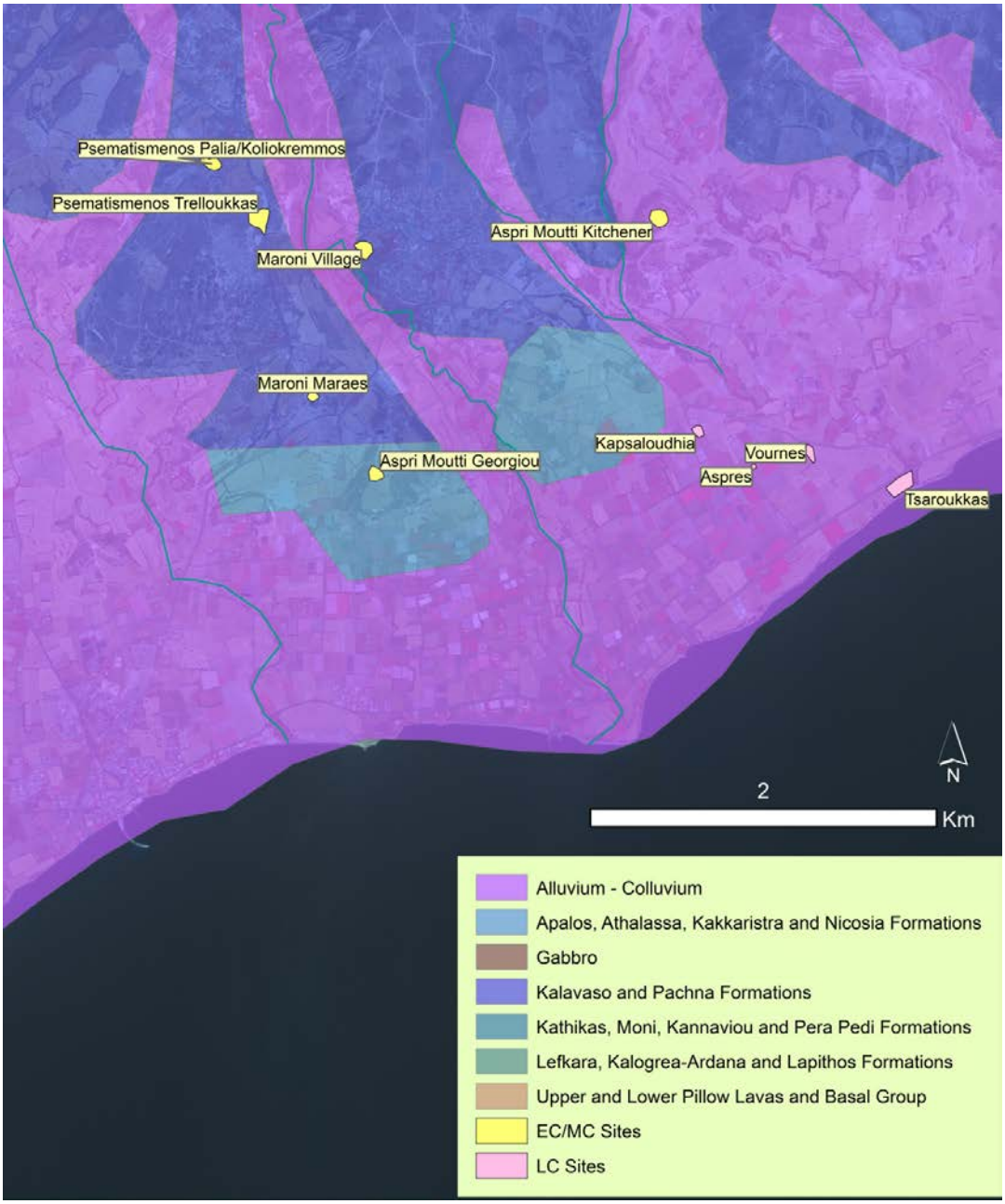


Figure 4.2. Maroni geological formations and archaeological evidence (produced by the author on ArcGIS with data from the DGRC).

The lower part of the valley along with the alluvial and colluvial deposits adjacent to the river, are relatively more fertile, due to their high water retention and their formation related to the erosion of genetically more mature soils. Therefore, it is often observed that they facilitate the growth of a wider variety of vegetation types (Noller 2008: 28). The river flood plain, however, is narrow and fluvial sediments are not extensive.

Beyond the fertile zone of the watercourse, the uplands adjacent to rivers comprise shallow soils, which although typical of arid regions and suitable for forest and semi-forest vegetation, their manipulation does vary geographically. Due to their low water retention, they are, in modern times, often characterised as agriculturally insignificant, despite their wide use as grazing lands (Spaargaren 2000: E-139, E-152, E-158). The uplands' shallow soils and high calcium sulphate percentage do not permit a wide variety of flora. This, however does not necessarily distress xerophytic vegetation, dry farming or grazing (fig.4.3) (Spaargaren 2000: E-152). In general, however, nutrient imbalance, stoniness and dissolution of gypsum through percolating water today render these soils the least popular for agricultural activities.

Figure 4.3 Goats on the road from Maroni to Psematismenos (personal photography).

Based on the above information, one can distinguish the Maroni in uplands and lowlands with different types of soils that were possibly discernible in the Bronze Age. Such distinction can be observed in modern vegetation maps and information from Christodoulou (1959) on traditional rural patterns of Cyprus, which point to the southern Maroni valley being one of the most suitable areas for olive and carob cultivation in the whole island (fig.4.4) (Jones 1953; Jones *et al.* 1958; Davies 1970: 466. Ionas 2000: 10 *cf*. Gaudry 1855: 137-138; Mas Latrie 1879: 13-17, 20, 32-33; Sakellariou 1890: 48). This may indicate an enduring central role of agriculture in the Maroni valley, a hypothesis tested through the lens of diachronic settlement patterns of the Bronze Age valley.

Figure 4.4 Olives at Maroni coastal fields (personal photography taken from Maroni – Tsaroukkas).

Maroni in the EC/MC

Researchers recorded EC and MC occupation and cemetery evidence in the S and SE of Maroni village (Karageorghis 1967: 299; Johnson 1980: 39-40, pl. LIX: 308-313; Georgiou 2006: 349), underneath houses (Herscher 1984: 23, no.4) and in the locality *Maraes* W of the village (fig.4.5) (Georgiou 2001: 49-59, 69; 2006: 350, no.346). The exact number of recorded tombs is unknown, as extensive looting rendered potential archaeological features unrecognisable (Todd 1985: 56; Georgiou 2000: 49). Additionally, Catling mentioned the existence of references to an EC settlement in the locality of Maroni-*Aspri Moutti* (Catling 1962: 152: no.113a), a place name noted in Kitchener's maps (Stylianou and Stylianou 1980: 422, fig.205, 429-430, figs.204m-204n; Wallis 1992: fig.15; Shirley 2001: 48, fig.20), however its exact location remains unverified (Manning *et al.* 1994b: 86, 88; Webb *et al.* 2007: 106 *cf.* Dikaios inv. No.1944/III-9/2). Similar issue characterises Skarinou-*Giorfyrka* to the NE of the Maroni valley and in association with Pentaschoinos River, where Catling recorded a presently non-located site based on information on the discovery of an ECIII-MCI tomb by the Department of Antiquities (1962: 153, no.147). Georgiou revisited the locality and located no archaeological surface material (2006: 174, no.359); therefore the site's only constructive purpose may be to prompt further archaeological investigation N of the surveyed area.

Psematismenos is the most important EC/MC area of Maroni valley, based on the results of rescue excavations of tombs at *Trelloukkas* and *Palia/Koliokremmos* with comparable pottery to Marki-*Alonia*, (Webb *et al.* 2007; Webb *et al.* 2008) and surface investigation, which points to the existence of a corresponding settlement (Johnson 1980: 6, 40; Flourentzos 1993; Georgiou 2000, 2001). Similar to the Vasilikos Valley the number of recovered cemeteries is disproportionate to the number of contemporary settlements; a problem exacerbated by the lack of other known EC/MC sites in the Maroni valley. This disparity prevents any detailed discussion on the role of Psematismenos in its immediate landscape, aside from information from the burial record, which advocates for agro-pastoral economy (Georgiou *et al.* 2011: 356).

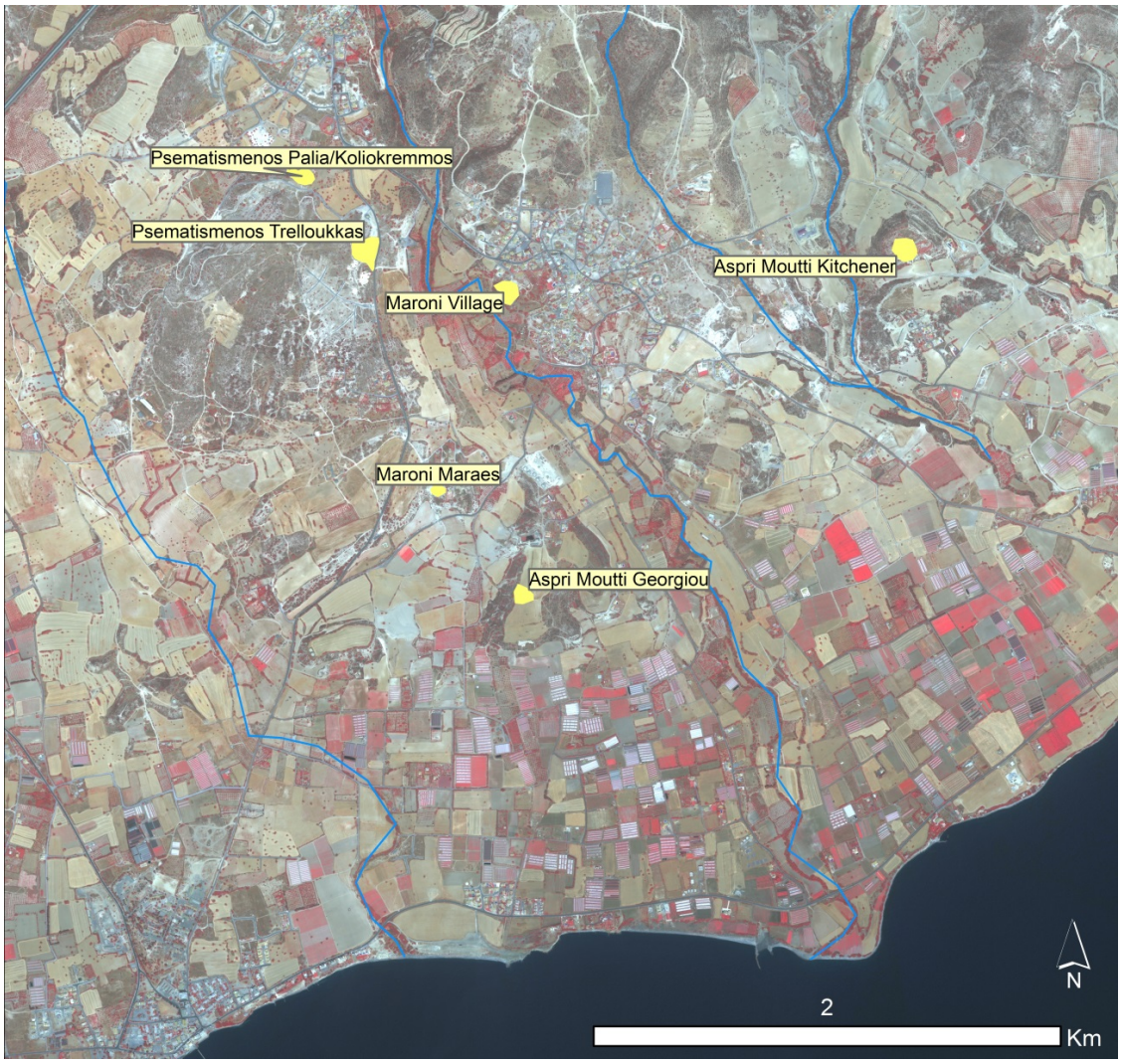


Figure 4.5 The EC/MC evidence from Maroni Valley (produced by the author on ArcGIS with data from Georgiou 2000; 2001; Georgiou et al. 2011).

The placement of Psematismenos on the chalk plateaus west of the valley, overlooking fertile land, points to a similar configuration observed in the Vasilikos valley (pp.191-192, tbl.4A-B and S.2 DVD), the main occupation areas of which are located within an hour's walking distance from Maroni Valley (Georgiou 2006: 445-446). Nonetheless, the most securely identified contemporaneous sites from the Vasilikos are located W of the river, at a relatively further distance from the lowlands than Psematismenos, Maroni-*Aspri Moutti* and Maroni village that located on both sides of the Maroni river. The land between the two valleys is surrounded by EC/MC sites located in the uplands

(fig.4.6). This configuration raises questions regarding the absence of sites in this area, also discussed in Chapter Three (pp. 98-101) and the nature of the relations between Kalavasos and Psematismenos communities. Is the lack of sites a matter of archaeological visibility? Does it reflect the desire of local population to reserve this land for agricultural activities, or an economic preference for lighter, shallower soils?

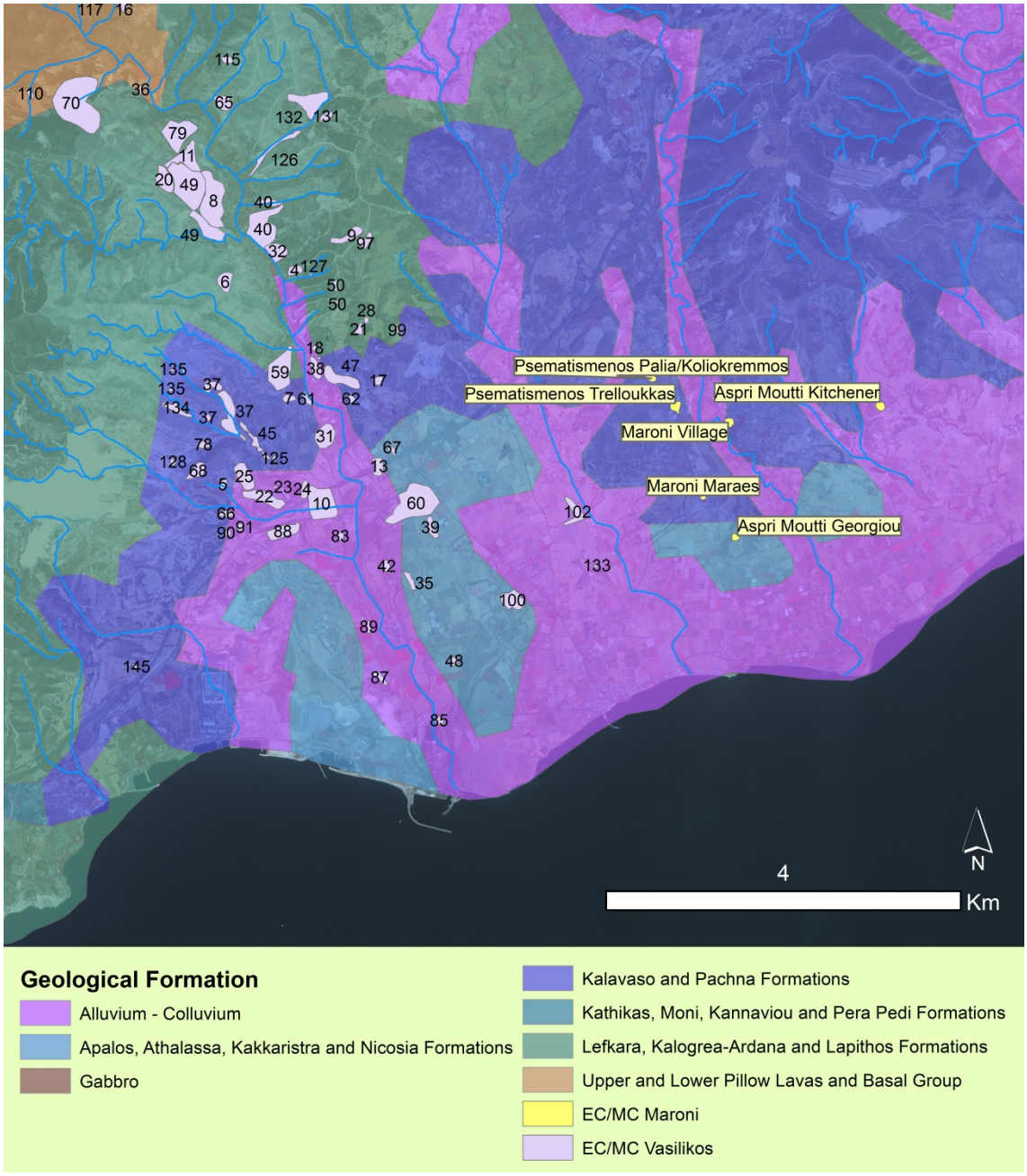


Figure 4.6 The Vasilikos and Maroni EC/MC archaeological evidence (produced by the author on ArcGIS).

Absence of settlements may be related to the lack of active streams, unlike the area E of Maroni River (Constantinou 2004: 54-55, fig.2.7, 229, fig.6.1). Further, while this area has not been surveyed by either VVP or MVASP (Chapter Two, p. 65, fig.2.6), its location between two river systems raises issues of archaeological visibility. Although researchers have discussed that the Holocene river courses on the island have remained generally constant punctuated by episodic flow (Knapp 2013b: 6), one may not discount the possibility that alluviation and colluviation contributed significantly to the coverage of smaller sites or activity areas in the lowlands (Chapter Three, pp.98-101). Similarly, one may not discount the probability that areas with deeper and less workable soils and more frequent alluviation episodes, such as the lowlands, were not considered suitable for establishing a permanent settlement in the Bronze Age.

The lack of archaeological information obscures the relation between Kalavasos and Psematismenos, which although located within an hour's walking distance, are not inter-visible. Despite this, one may still observe similarities and differences based on the spatial location of the sites. For example, Psematismenos, in similarity to Kalavasos is located on the chalk plateaus, however, the survey data suggest it was continuously occupied for a longer period of time (ECI-MCIII) (Georgiou 2001: 49) and included Maroni-*Maraes* and Maroni Village potentially as additional burial grounds for the Psematismenos settlement. Based on the natural landscape characteristics, economic activities at Psematismenos likely comprised agriculture and animal husbandry. Despite limited evidence regarding copper objects or resource accessibility (Ohnefalsch-Richter 1893: 35; Myres 1897: 171; Webb *et al.* 2007: 109, 111), the location of the site 9 km to the SW of the closest copper mines suggests that direct engagement with mining activities was unlikely.

Finally, contrary to Kalavasos, the area of Psematismenos presents no evidence for continued occupation into the LBA. In fact, archaeological evidence ceases at the end of the MBA, just when permanent occupation at Psematismenos is understood to have ended. Whether abandonment was gradual or sudden, planned or drastic can be

clarified with excavation. What is more, even though this transition occurs during a period of disruption on the island (Knapp 1986a, 1988a, 1994: 282-290; Knapp *et al.* 1994: 224-229; Steel 2004a: 149-186; Keswani 2004: 156-157; 2008: 133; Peltenburg 2008: 145), current scholarship suggests that abandonment of the EC/MC occupation areas was gradual, and involved existing communities and probable external mobile entrepreneurial elements (Manning and De Mita 1997).

Late Bronze Age: Globalisation

The majority of researchers of Bronze Age Cyprus regard the impetus for and social repercussions of a reorientation of settlement patterns from relatively inland rural settlements to coastal towns was largely a product of international trade, especially the external demand for copper (Steel 2004a; Crewe 2007a: 6-11; Leonard 2000; Manning and De Mita 1997; Manning *et al.* 2002: 97-106; Beaujard 2011: 15). These approaches, however, also point to a necessity of higher resolution analysis of the incremental aspects of this transition so as to discern the plausibility of alternative or co-existing avenues of interpretation.

A sherd scatter throughout *Vournes*, the remains of the Basin Building in the southern part of *Vournes* (Cadogan 1986: 42; 1988: 230; 1992a: 51; 1996: 15; Cadogan *et al.* 2001) and two tombs from Maroni-*Kapsaloudhia* provide the earliest LBA evidence in the LCIA Maroni valley, (fig.4.7) (Cadogan 1984: 2-3; 1988: 229). Recent small-scale excavations at *Tsaroukkas*, revealed a stratum containing MCIII/LCIA pottery (Manning June-July 2012: personal communication), however the limited area of the trench creates questions regarding the provenance of the extremely compacted red soil encasing this pottery. Similar deposits are recorded in a trial trench between *Vournes* and *Tsaroukkas* (LV31/23), in association with small sherds of Canaanite jars that potentially date to the LCI. Slightly later evidence comes from LCIIA-B tombs from a cemetery area at *Vournes* that pre-dates the construction of the ashlar building (Manning 2013: 517, fig.A13), an undertaking that eventually interfered with the tombs (Cadogan 1988: 230; Manning *et al.*

1994b: 88). Another set of tombs dating to the same period was excavated at *Tsaroukkas* (Johnson 1980; Cadogan 1988: 130; Manning *et al.* 1994b: 85).

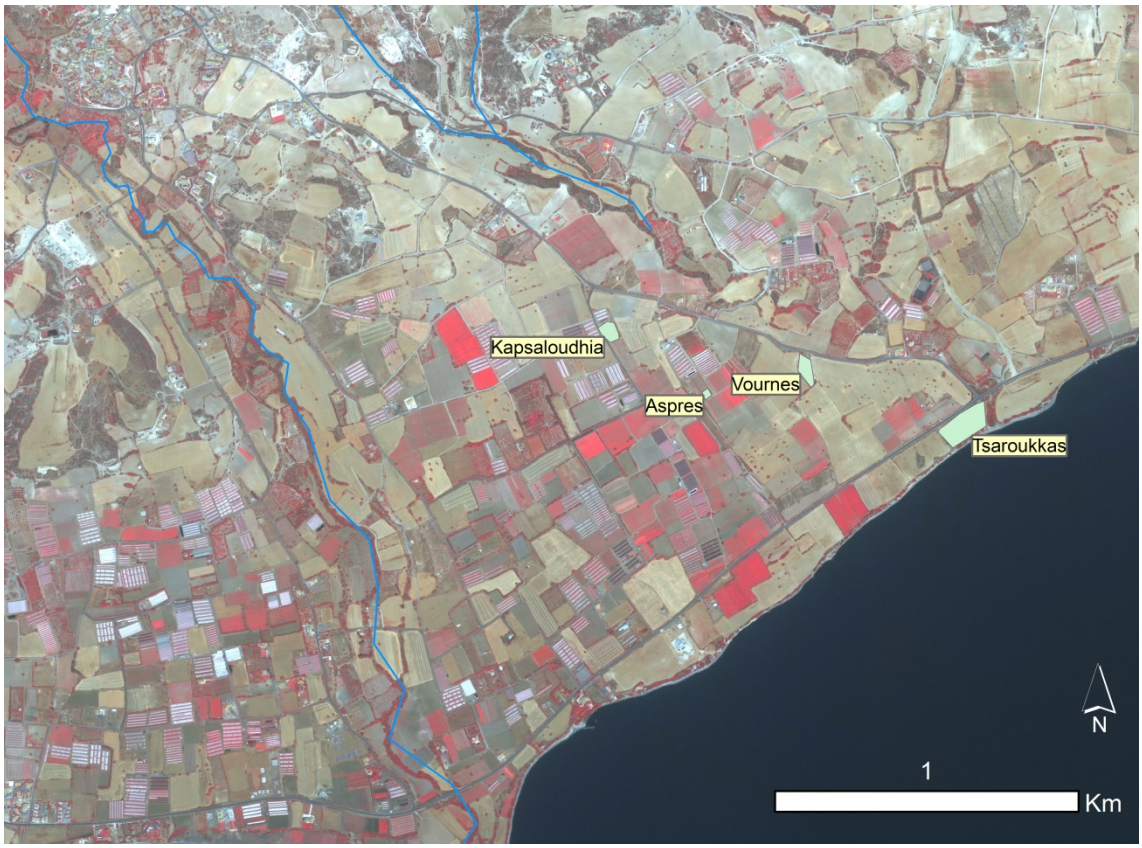


Figure 4.7 The LC archaeological evidence from Maroni valley (produced by the author on ArcGIS with data from Manning et al. 2014).

This cemetery is also associated with later stratified architecture spreading across a distance of c. 220m to the coastal field (Manning *et al.* 1994b: 93-94). The LCIIC construction of the ashlar building of *Vournes* only slightly pre-dates Building X of *Ayios Dhimitrios* (South 1997: 173; Cadogan 1988: 231; 1992b:53; Manning 2013: 517, fig.A.13) and is similarly constructed of ashlar masonry with strong evidence for agricultural products processing and storage; activities that also spread to the adjacent West Building (Chapter Six, pp.283-289). Finally, traces of a similar ashlar structure were partly excavated at Maroni-*Aspres*.

Setting the functional evidence of the ashlar building aside, materials such as a probable stylus, an inscribed PW pithoid jar and some inscribed loom weights,

helped support a primarily administrative role for the building (Cadogan 1992a: 52; 1996: 17; Fisher 2007: 236). This character is further supported by Fisher, who analysed the building's monumentality and technological sophistication (Fisher 2007: 232), and Manning (1998), who discussed the interpretative potential of the building's location above antecedent rich tombs. Nevertheless, the available content of the structure and the materially supported activities suggest there is also an intriguing practical side to the building's history. Based on the available evidence, this study considers the probability that the buildings' complex nature involved an industrialised agricultural character, organised through a form of bureaucratic administration; thereby, the ashlar building of *Vournes* encompass a combination of functions and meanings (see also Thomas 2005: 118).

As for the relation of *Vournes* and *Tsaroukkas*, recent results of a short excavation season in June 2012 provide additional material evidence supporting the most accurate interpretation of the spatial association of the two sites. Excavations of a trial trench in the SW of *Vournes* revealed a rubble wall with pottery dating to the LCII (Manning et al. 2014: 13, fig.4), the discovery of which encourages on-going geophysics survey in the area and creates a new spectrum of archaeological understanding of the use of space during the Bronze Age. This discovery does not fundamentally alter current interpretations of the sites (Manning 1998: 45). Namely, despite the lack of architectural evidence throughout the 500m between the two areas, understanding their diachronic associations and interpreting their spatial and politico-economic relations are likely semantic. Whether they are part of one town or one complex of sites incorporating different activities, *Tsaroukkas* and *Vournes* share strong material ties and intertwined historical trajectories. It is probable that they provide an example of dispersed specialised socio-economic professional and domestic activities. The existence of non-built-up areas between them does *not* ensure or indicate their separation, as several researchers argue that the unconstructed space may entail mobility, occupation and interaction (Barrett 1994: 91; Brück 1999: 60; Soja 2000: 16; Whitelaw 2001: 16; Wilkinson 2003: 45; Doucet 2008: 98-99; Sisti 2008: 89; Tagliagambe 2008: 69; Taylor 2010: 195-196; El-

Shorbagy 2011). The term 'Maroni complex' is considerably more useful in describing the spatial relation of the sites under discussion, as it embraces the diversity of activity areas in a common economic and socio-political configuration. Regardless, one still needs to observe this complex within a wider geographical sphere, in order to contextualise its functions. Of particular interest is the relation with the neighbouring and contemporaneous Kalavasos-*Ayios Dhimitrios*, discussed in Chapters Three (pp.112-115) and Six (pp.275-283).

Beyond general ceramic parallels, which point to chronological similarities and the potential sharing of a common pottery source/workshop (Johnson 1980: 44), the spatial association of the two sites in their surrounding landscapes should additionally be considered within a comparative scheme, as it provides useful novel contextual framework of their common material characteristics (fig.4.8). The Maroni complex, like *Ayios Dhimitrios* is located in the heart of agricultural land (pp.191-193, tbls.4A-B), yet, by contrast, is conveniently located closer to the coast. The distinct location of the two sites suggests regional particularities and dissimilar priorities that influenced the choice of place-making (Maciocco 2008: 6-10; Sisti 2008: 79; Tagliagambe 2008: 63-64), while their proximity to one another (fig.4.8) and their establishment, being the result of settlement reallocation closer to the alluvial plain, brings to the fore questions regarding the degree of inter-community communication and the extent of land control.

So far, their symbolic role in economic and socio-political claims has been situated, as discussed above, within discussions concerning their construction above antecedent tombs. From a different point of view, and following Harmanşah's research in Upper Mesopotamia, the dominant size and material durability of buildings in the landscape, may indicate territorial claims (Harmanşah 2011a: 56). If this is the case, the question then is what motivated the establishment of potential territorial markers?

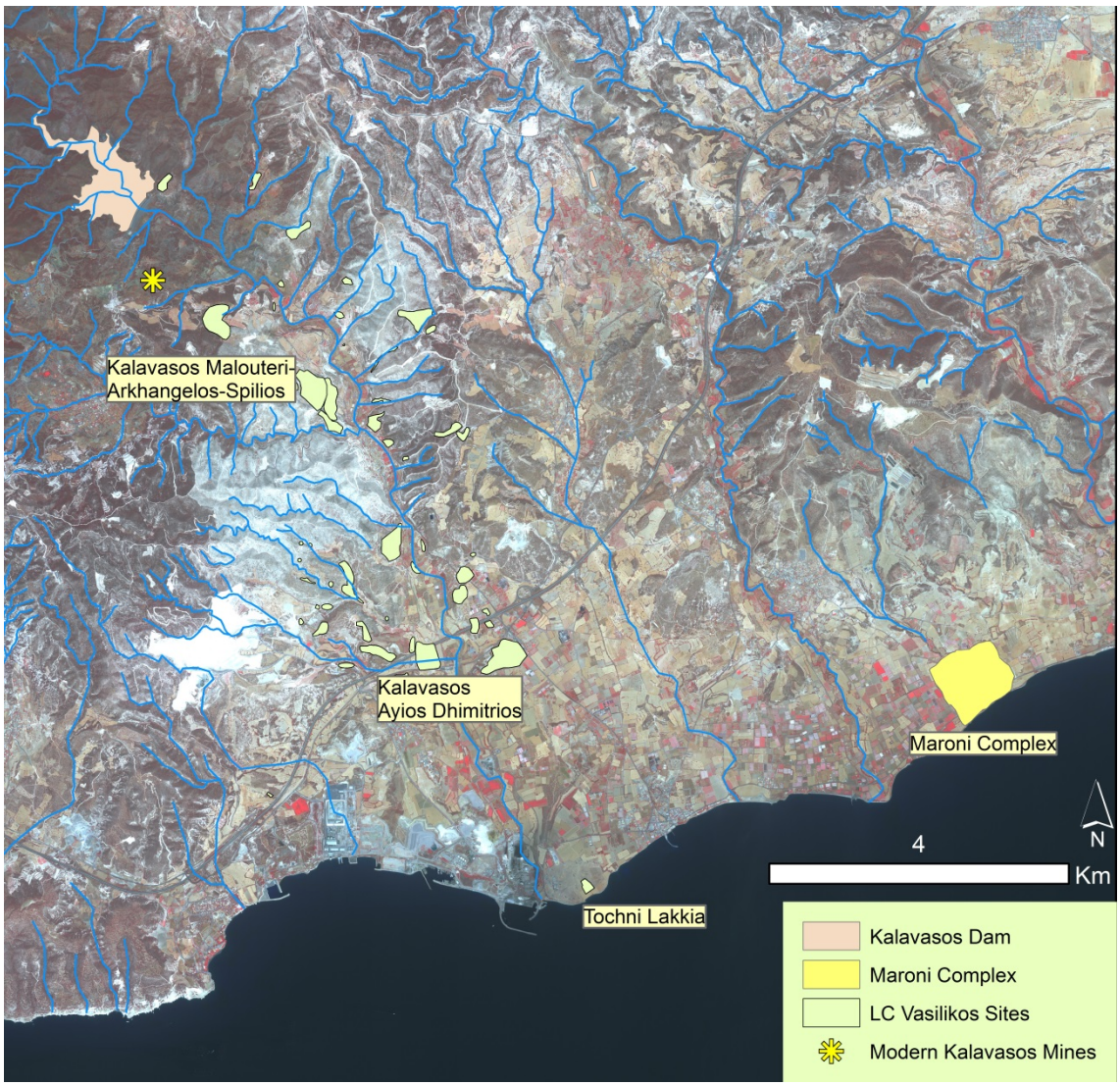


Figure 4.8 Vasilikos and Maroni valleys in the LC (produced by the author on ArcGIS).

Diachronic Inter-Regional Interaction

Incipience

The Maroni valley is characterised by a continuous EC and MC inland occupation taking advantage of the light, shallow, erodible soils of the chalk plateaus, likely favourable for small scale agricultural production, without excluding the use of the adjacent narrow alluvial plain. The excavated material culture from the tombs (Chapter Seven, pp.325-330), points to a rural, household-based community, with access to metal and communication networks extending beyond the valley toward

Alambra (Coleman and Barlow 1996: 336; Georgiou 2000: 61; Webb *et al.* 2007: 124), Vounous and *Ayia Paraskevi* (Hennessy *et al.* 1988:13, fig.10: Vounous T.70A: 12). The differences of burial deposits with the relatively contemporary *Cinema* Tombs from the Vasilikos (Chapter Seven, pp.305-308), and similarities to excavated tombs from Pyla and Larnaka to the E (Georgiou 2001: 70, T.4 at Pyla), supports Psematismenos' distinct communication networks, pursuits and interests from the neighbouring Kalavasos. This does not reject the possibility of their interaction, but rather indicates their autonomous character and may imply their unprecedented establishment in the two areas (Georgiou 2006: 445-446; Knapp 2013b: 263; Webb and Frankel 2013: 73).

Typically, conspicuous consumption viewed in the EC/MC burial activities was the means of manifesting differentiation and/or uniqueness at a community level, which commonly and sharply contrasts with the fairly homogeneous material culture found in the associated excavated settlements (Swiny 1989: 20; Steel 2004a: 129-131). Researchers have long linked this behaviour with competitive groups and supported that it demonstrates one way of establishing land rights through heritage (Weinberg 1956: 121; Shnirelman 1992: 28; Keswani 2004: 51-55; 2005: 349; Dunn-Vaturi 2003: 177). The practice of multiple burials at Psematismenos is observed as early as the ECI-II and later at Kalavasos in the ECIII, likely suggesting the continued need for establishment of land rights. The need for ascribed identities at Maroni valley pre-dates its counterpart in the Vasilikos. This may be supported, considering, among other archaeologically invisible factors, Maroni's relatively spatially limited agricultural resources enabling primarily cultivation and husbandry; contrary to Kalavasos' closer proximity to copper mines that are assumed to have been exploited (Todd 2013: 25).

Such a lengthy, continuous and demographically successful occupation in a landscape of few resources likely required the expression of a conceptual attachment to land (Driessen 2010: 43). That is, increasing population in a stable agricultural environment may lead to resources insecurity and eventually to what

Price and Feinman (2010: 3) have referred to as the re-negotiation of interpersonal and group relations. As the main source of dispute in the Maroni valley appears to be agricultural land, one may link the enduring occupation at Psematismenos and clear attachment to ancestral groups as early as the ECI-II with land-related insecurity. When tensions between communality and group interests render cohesion untenable, more dramatic measures may be taken, including the reorientation of settlements resulting in new configurations.

Transition

Materially, the process of this transition is far from clear, in part due to a lack of excavated sites and the problems surrounding the existing chronological segregation of Bronze Age Cyprus (Chapter Two, pp.60-63). In the Maroni valley, surface finds from Psematismenos as recent as the MCIII, and LCIA data from Maroni point to chronological continuity with spatial interruption. Adherence to the prevailing dating system entails risk of associating this spatial break with an abrupt shift of the settlement system. However, a higher resolution consideration of the chronological span between MCIII and LCI (c.1700-1400 BCE) shows that this shift was a gradual process. In fact, three centuries of human interaction ensure the complexity of this transition. Therefore, it is best if it is not *solely* interpreted in terms of external copper demand, or the participation in international trade, as the reality likely involved interacting agents and groups in a landscape with wider productive potential. Similar to the Vasilikos valley, this shift could also be explained in terms of the tensions inherent in establishing land rights in an agriculturally productive area (Sack 1986: 33).

Reconfiguration of power in the landscape may not be viewed as a single, dichotomous event that separates insular traditional rural societies from an internationally articulated urban centre. The difficulty in comprehending this exceptionally important chronological span is not a matter of material culture, but likely of perspective. In the Maroni Valley there were two chronologically linked and

materially expressed themes: a) the permanent occupation and practice of agricultural activities in the uplands and possibly in the lowlands until MCIII and b) the permanent occupation and practice of agricultural activities in the lowlands further to the E and the established participation in external trade networks by the LCIA. Agricultural activities in the lowlands are spatially continuous throughout, while Knapp, in his most recent publication, supports the continuation of the agro-pastoral character of the PreBA into the ProBA (Knapp 2013b: 348); in this case, the difference lays in the spatial association of occupation areas and cemeteries with varying types of agricultural land.

Between the MCIII and LCI, more intensive and/or extensive agricultural activities, potentially new agricultural technologies (Chapter Three, pp.101-104) and the competition over land rights may have required the establishment of permanent occupation of the lowlands and, as in the case of the Vasilikos valley, settlement pattern change is probably linked to scale of production. In essence, the spatial association of the sites and their surrounding resources remains the same, but alters occupation focus. This becomes clearer when one estimates a buffer zone of 3km surrounding the EC/MC with the LC clusters (fig.4.9).

Following that, it is useful to examine if a long-term change in settlement patterning may be motivated by various factors and involve multiple agents and groups of opportunistic aggrandisers co-operating through negotiation, consensus and competition (Peltenburg 2012: 16), rather than solely the personal aspirations of a specific 'elite' group. Undeniably, gradual intensification of activities in the coastal lowlands introduced the community to new professional avenues, involving maritime activities and trade. A material correlate of such trade is found in the LC tombs of *Tsaroukkas* (Catling 1962: 148; Manning and Conwell 1992: 281-3; Manning *et al.* 1994b; Manning and Monks *et al.* 1998), which, despite their small number, exhibited a truly expansive material network of imported artefacts sufficient to support that participation in trade was probably not exclusively enabled by elite competitive social promotion and maintenance (Sherratt and Sherratt 1991; Manning 1994). Rather, it

likely also involved multiple self-interested, aspiring agents operating at multiple scales of operational capacity, who achieved economic symbiosis through negotiation, cooperation, consensus, possibly some form of implicit or explicit coercion, or a combination of these.

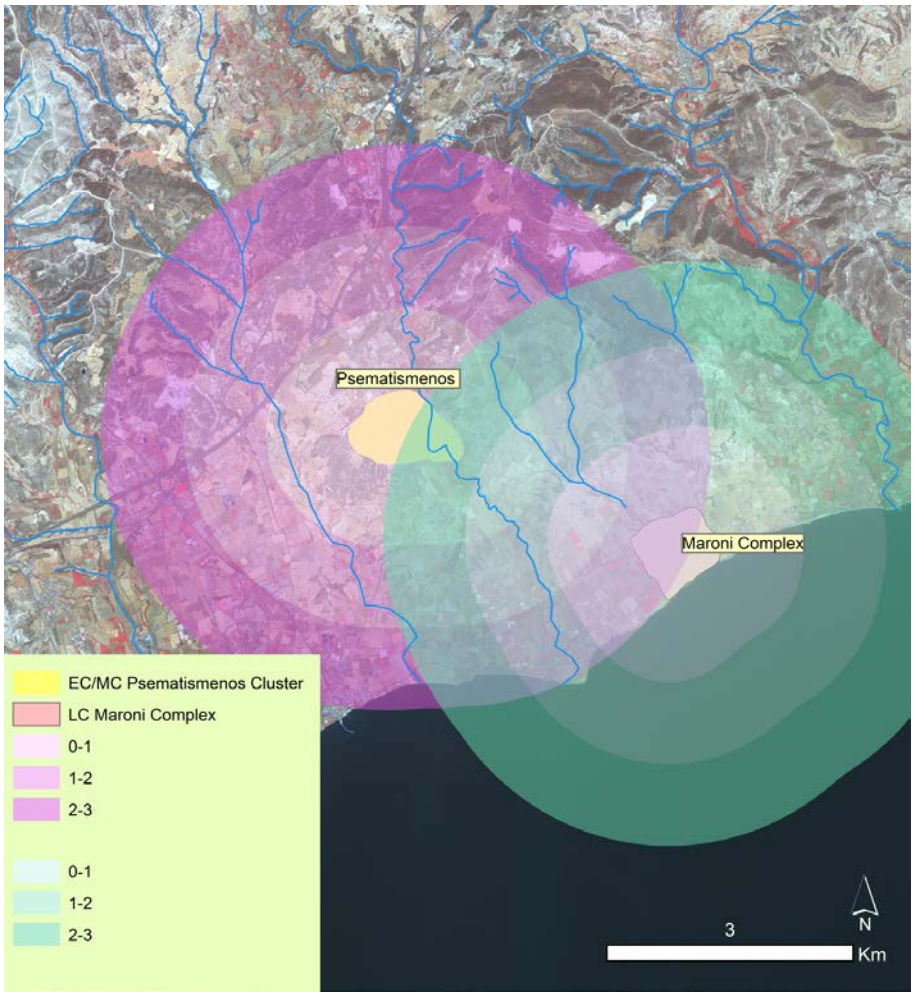


Figure 4.9 3km buffer zones around the main EC/MC and LC material clusters (produced by the author on ArcGIS).

Material Establishment

As discussed in Chapter Six, as the connotations of monumental architecture are a popular topic (Hillier and Hanson 1984: ix; Trigger 1990: 122; Dovey 1999, 2005: 291; Leach 2005: 308), research on LC settlements is often surrounding ashlar buildings and is defined by specific politico-economic configurations. The

characterisation of antecedent tombs below the ashlar buildings as elite - a conception insistent on their symbolic inherited status - has further supported the consideration of monumental architecture as a symbol of political domination (Manning 1998: 45). Researchers employed this approach at both *Ayios Dhimitrios* and Maroni, with the latter defined according to the selective preservation or emptying of antecedent tombs (Cadogan 1986: 42). At Maroni these tombs served as the deep foundations of the Ashlar Building. According to Manning (1998: 42; Manning and Monks 1998: 350-351), this behaviour is suggestive of changing ideological structures, which he associates with on-going competition, resolved with a dominant group gaining control over the entire region (1998: 48). The basis of his argument is the interruption of the continuous use of a burial ground by the construction of a building, suggestive of the establishment of a regional ruler and polity. Indisputably, the construction of a large structure over a cemetery involves a decision-making group. However, decision-making hierarchies are not always materially expressed in settlement hierarchies or structural hierarchies (Chapman 2005: 79). Therefore, we need to introduce additional data regarding the buildings' spatial organisation and contemporaneous material culture, to help support, clarify or challenge the symbolic connotations of these structures.

The ashlar buildings are predominantly public and their form and content suggest a function linked to agricultural production and large-scale storage. These buildings represent a single link in a chain of interdependent economic activities comprised of agricultural production, craft specialisation and trade, of which the latter has attracted significant attention (Knapp 2008: 8). In other words, the imported artefacts found in tombs have been used to emphasise only one economic aspect of the landscape, largely to the analytical subjugation of the fertile agricultural land, in publications. Unquestionably, Maroni participated in international economic networks, as evidenced by the stone anchors of visiting ships reused as building materials (Manning *et al.* 2002: 122), and the recovery of a functionally and chronologically homogeneous ceramic assemblage off the coast (Manning *et al.* 2002: 159). This cannot sufficiently argue if Maroni was a vital port to the island

proper. It should be comprehended though as an important link to the valley's populace during a time of unparalleled material expression and opportunity.

Maroni and Tochni-*Lakkia* (Appendix I, p.194; Chapter Three, pp.121-123) were possibly anchorages and/or exchange points, whose existence was made possible by the nature of Bronze Age seafaring.[1] Based on a re-evaluation of prehistoric technology and maritime environmental conditions, the seafaring technology and comprehension of the sea itself appears to have been much more sophisticated in the LBA, than initially suspected. The 'professionalism' of maritime trade then, freed travel routes from the constraints of opportune environmental windows (Frost 1995: 1; Knapp 1997b: 155; Berg 2007: 403 *contra* Roberts 1991: 55-56; 1995: 308-310; Casson 1995: 21; Georgiou 1997: 117), permitting access to local and extra-community merchants and the practice of exchange at different scales, even along the poorly suited south-central coast of Cyprus (Sawicky 2007: 32).

Even though trading of products is an important feature of the economic organisation of Maroni, it reflects only one facet of the economic capability of the site. Based on landscape characteristics, the economies of Maroni and Vasilikos probably incorporated agriculture, animal husbandry and crafts specialisation. Therefore, the economic link between local products and imported artefacts probably involved multiple groups engaging with the socio-economically distinct (or 'elite') composed of opportunistic aggrandisers that organised the ashlar buildings' economic activities with potentially influential consequences for other groups' relations. However, the degree to which such group controlled individual, household or group-based economic activities is not established. Finally, even though export from Maroni and *Ayios Dhimitrios* may have been centrally organised by one or more economically dominant groups, there is equally supportive material evidence for the existence of parallel coexisting professional groups of merchants (see also Chapter Seven, pp.361-363) (Manning and Hulin 2005: 271; Beaujard 2011: 17; Monroe 2011: 93).

[1] See also Howitt-Marshall 2012: the LBA Kouklia-*Achni* anchorage.

Abandonment

Aside from the probable environmental roots of the LBA crisis, discussed in the previous chapter (p.124), the abandonment of *Vournes* and *Ayios Dhimitrios* should be additionally associated with the strong interdependence of the aforementioned groups of varied economic potential, who no longer used or relied upon these socio-economic establishments. Similarly to the Vasilikos valley, the abandonment of *Vournes* and *Tsaroukkas* may signify the vulnerability and failure of a unidirectional economic system (Knapp 1996a: 55; Osborne 2005: 12), during what is understood to be a crisis period (Knapp and Cherry 2004: 166; Deger-Jalkotzy 2008: 395; Beaujard 2011: 19). Namely, it is possible that the inflexible settlement and economic patterns of Vasilikos and Maroni were inadequate to endure this crisis, contrary to other LC sites, experiencing their own unique challenges and enacting their own particular response to the Mediterranean crisis (Halstead and O'Shea 1989a on the connotations of diverse responses to uncertainty).

The south-central coast of Cyprus is distinguished by a unique localised settlement pattern, involving highly functional sites. The economic basis of the pattern was the production and exchange of products such as probably copper and, to a yet not fully understood extent, agricultural products. The establishment of Tochni and Maroni facilitated the economic transcendence of their regional bounds; however material evidence of these sites cannot yet indicate potential economic or political dependence on, or subordination to, a centralised island-wide establishment. The participation of these sites in international trade, if through an island-wide network, may entail relations that are not materially discernible, likely due to their low formalisation (lack of seals, archive). This is additionally supported by the devastating effects of the LBA crisis on Maroni and *Ayios Dhimitrios*, a phenomenon that affected the various locales of the island to markedly differing degrees (Keswani 1996: 228; Sherratt 1998; Iacovou 2005: 128-129). If Maroni and *Ayios* Dhimitrios were part of a centralised island-wide politico-economic formation (Chapter One, pp.19-23), why were they so abruptly abandoned? It appears that the

particular combination of goods, scales of operation, route accessibility and agents involved was such, that a spatial reconfiguration was more advantageous than a non-spatial solution (Minc and Smith 1989: 9 *cf.* Halstead and O'Shea 1989a).

Island-Wide Aspects

By focusing on differential access to the number and forms of Mycenaean pottery, Antoniadou observes that Enkomi and Kition comprise greater variety of forms than 'secondary' and 'tertiary' sites that contain a "rather limited repertoire" (Antoniadou 2004: 176-9; 2007: 495, fig.7). She uses this observation to argue that smaller sites potentially 'imported' Mycenaean objects from primary centres and that those artefacts held dissimilar meanings in contemporaneous contexts (2007: 496). While recognising the inconsistencies and limitations of excavated and published material, Antoniadou suggests that Mycenaean pottery was integrated into the lifestyle of urban centres, while in smaller sites it was used as a symbol of urban lifestyle and participation to international trade (2007: 496). Antoniadou's discussion on inter-island exchange networks of imported goods considers rather insufficiently the issue of differential site duration, while accepting *a priori* the settlement pattern models discussed in Chapter One. A more comprehensive approach to landscape and local histories, as proposed in this study, can support an alternative interpretation.

The coastal location of Maroni and Tochni (fig.4.8), points equally to the likelihood of direct access to imported artefacts, suggesting, at least partial, independence from larger economic networks related with urban polities. Island-wide marine communication through coastal navigation (tramping) (Knapp 1997b: 156; Parker 1992: 20-21; Knapp and Cherry 2004: 144 *cf.* Braudel 1972: 103-104) is possible (Betancourt 2008: 209), but it should not strictly be viewed an exclusively formally organised politico-economic relation, but instead part of an established economic exchange destination system (Manning and Hulin 2005: 280). Beyond Mycenaean pottery, the Vasilikos and Maroni valley tombs contain an array of contextually

unique imports including scarabs, cylinder seals, pendants and even a Hittite figurine (Chapter Seven, pp.355-356).

Access to a variety of unique objects or small samples of imported material implies that there probably existed different scales of exchange activities and networks. Such variance is made comprehensible if permitting the existence of both supply and demand operating at different scales, rather than spheres (Nove 1983: 225; Appadurai 1986: 15-16; Kopytoff 1986: 77; Miller 1991: 200). The general trade of products and their appearance in different scales and frequencies may indicate a degree of economic autonomy among individuals and groups and possibly both direct and indirect participation in the international trade. It is equally likely that everything between small coastal boats and more heavily laden ships interacted with *both* elite aspiring kinship-based groups (Earle and Smith 2012: 242) and organised and networked opportunistic professional groups, in small ports and larger coastal markets (see also Ionas 2000: 12 on similar exchange patterns during the late 19th century CE Cyprus). Following this, one should consider both the extent of the full range of anthropogenic material manipulation including resource acquisition, production, transport, distribution and consumption (Burns 2010: 291) and the degree of archaeological visibility of its constituents (Knapp 1990a: 129; Betancourt 2008: 210), before any sweeping characterisation of the trade system is made.

Researchers have extensively discussed different economic networks of the LBA Mediterranean and there is a widespread understanding of the existence of different markets for distinct products (Knapp 1991: 52; Haldane 1993: 348-349). Such markets are characterised by accumulation of varying interaction from centralised political control, localised polity control, freelance entrepreneurial trade to ceremonial gift exchange (Knapp 1993b: 332; Knapp and Cherry 2004: 128). The rich variety of material culture accompanying the Uluburun shipwreck (Bass 1986; Bass *et al.* 1984, 1989), argues that a variety of products co-travelled on boats, visiting several ports and exchange points (Burns 2010: 300). Further, Sherratt

suggests that in the midst of international trade activities, most LC urban centres maintained a coastal outlet (Sherratt 1999: 101, footnote 44), despite varying sophistication.

Many researchers regard Cyprus as a transhipment point between the Aegean and the Near East from the MBA onward (Åström 1988; Matzourani and Theodorou 1989), based on written sources which refer to non-Cypriot products (tin, ivory, lapis lazuli) sent from *Alashiya* (Portugali and Knapp 1985: 65; Knapp and Cherry 2004: 145). How did these products make their way to the island in sufficient amounts to be subsequently exported? Knapp states that "private enterprise is not nearly as visible as palatial initiative in either archaeological or documentary evidence, yet there is no doubt that it existed alongside state-level trade" (Knapp 1993b: 338-339; Knapp and Cherry 2004: 142). Thus, imported artefacts from Maroni and Kalavasos may also represent examples of informal trade. Therefore, accessibility to these artefacts does not suggest socio-political sophistication similar, equal to or even comparable to Enkomi or other 'primary' sites, but reflects varying scales of economic potential along a spectrum of activity enabled by the socio-economic circumstances of this international period and, in part, by the two valleys local histories and particularities.

Mediterranean-Wide Aspects

Knowledge, technology and infrastructure permitted participation in international trade networks (Renfrew 1972: 304-307; Foxhall 2007: 247) inferred from the imported artefacts of settlements and tombs. The process of this participation, as discussed in Chapter One (pp.24-26) is often far from clear. At Vasilikos and Maroni both direct participation in international trade and participation in formal and informal island-wide networks that possibly comprise the *Alashiya* of the 14th-13th century written sources is plausible. A question then remains as to which materials were exported via the south-central coast trade routes and at which scale(s) exchange was undertaken to introduce these rare and presumably valuable exotica

(Appadurai 1986: 4, 39-40; Kopytoff 1986: 71; Renfrew 1986b: 157; Miller 1991: 122; Knapp 2013a: 21). Considering that in the areas under investigation, the imported goods varied in quantity, form and material such that there were few of any given artefact, with the exception of the relatively abundant Mycenaean pottery, it is probable that exchange occurred at different scales, *both* formally and informally, involving individuals, households, groups, with one or more such collectives such as the economically powerful 'elites', probably associated with the ashlar building.

Copper figured actively in local economic activities, yet its role in external trade remains obscure. Did it operate within and through inter-island networks, organised by *Alashiya*, through larger harbours and into the wider Mediterranean system? Was it directly exported from smaller coastal sites such as Tochni and Maroni? Further, did these latter sites rely on copper solely? A reasonable material and theoretical argument could be made that even if copper figured prominently in the Cypriot economy, exportable surplus could comprise a large variety of products. It is widely accepted that many perishable goods were involved in the international trade (Knapp 1991; Haldane 1993; Cline 1994: 61, 95; Betancourt 2008: 215, note 27; Mee 2008: 364-365), including wine, oils and unguents (Negbi and Negbi 1993: 319; Cline 1994: 60, 95), further supported by the existence of imported/exported closed vessels (Cline 1994: 95). Large amounts of olive oil stored at a moderate distance from the coast should not, then, be excluded from the Mediterranean international exchange network. Taking into account that olive pressing is seasonably confined to a few months per year (Foxhall 2007: 5; Youssef *et al.* 2011: 1245), surplus storage of oil was necessary (Halstead and O'Shea 1989a: 6), and exchange of agricultural surplus plausible, when the circumstances are favourable (Marston 2011: 194).

Olives are common, and together with carob, the most highly marketable agricultural product of the region (Davies 1970: 462). There is evidence to suggest that olives were brought to the ashlar building to be processed, stored and organised for transport and likely trade, however the scale at which this operated is unclear. The dimensions and weight of pithoi (Keswani 1989b) and the countersinking of others

into the ground suggest deliberate immobility. Visiting interested intra-valley or extra-valley parties could facilitate access and transport of their content and was permitted by the existence of internal open public spaces, reinforcing the public-inclusive aspects of their suggested central economic character. The question of who could access the agricultural products of Maroni and whether exchange was local or inter-regional remains intriguing, considering the coastal location of Maroni Complex.

Another important artefact/product of considerable import is the WS II 'milk-bowl', the most frequently occurring imported object from the Eastern Mediterranean in the LBA Aegean, after the Canaanite jars (Cline 1994: 60; Karageorghis 1999: 125; Artzy 2001: 107, Bergoffen 2001: 145; Yon: 2001: 122, Oren 2001: 128, fig.142). The discovery of a pottery workshop at Sanidha-*Moutti tou Ai Serkou* 15 km from the investigated area, demonstrates that we should approach the commercial role of WS pottery with a new perspective (Artzy 2001; Knapp 2013b: 404).

Sanidha is located 15km NW from *Ayios Dhimitrios* and founded sometime during the MCIII-LCI (Todd and Hadjicosti 1991: 39, Herscher in Todd and Hadjicosti 1991: 51; Todd and Pilides 2001: 27). The most important phase of occupation dates to LCIIB and is represented by a large amount of WS sherds. Tellingly, a significant number lack the characteristic slip or painted decoration, while other painted sherds appear to have deformed during firing (Herscher in Todd and Hadjicosti 1991: 58; Todd and South 1992: 199; Todd and Pilides 1993: 109). Other LBA ceramic types appear in very small quantities (Todd and Hadjicosti 1991: 39), while Mycenaean pottery is noticeably absent (Herscher in Todd and Hadjicosti 1991: 52; Todd and Pilides 2003: 170). The WS II pottery from Sanidha contains the same colour variations found in *Ayios Dhimitrios*, suggesting the association of the two sites (Herscher in Todd and Hadjicosti 1991: 52). The 15km between them, however, render discussions of their relation problematic, for traditionally, pottery workshops were located outside the corresponding urban centres (Vermeule and Wolsky 1990: 83, 397-399). The extent to which the pottery manufactured in Sanidha was distributed, whether destined for

local use or also for island-wide distribution is unknown. [2] While it is tempting to suggest that *Ayios Dhimitrios*, the closest known urban economic centre, was organising distribution and trade of the Sanidha pottery, it is equally possible, given the current evidence, that Sanidha took advantage of *Ayios Dhimitrios* economic centrality as facilitator, to export its wares. The socio-economic relation of *Ayios Dhimitrios* with smaller settlements becomes more intricate with the discovery of a pottery kiln containing LBA pithos sherds at Tochni-*Lakkia* (Appendix I, pp.201-202).

The central role of south-central coast of Cyprus in pottery production is further supported through its proximity to the basalt rich area of southern Troodos (Courtois 1977; Courtois and Velde 1980), particularly the village of Kellaki, which Courtois (1970: 83) regarded as the potential source of the WS clay. A southern coastal provenance is also suggested for the WSII pottery recovered from Kommos, Crete. (Tomlinson *et al.* 2010: 217-218).

Similarly, another probable Cypriot pottery participating in the international trade is the PW. Observations of visual similarities through petrographic and chemical analysis of Cypriot pithos sherds from Antigori, Sardinia and Kommos, Crete suggest a probable south-central part of the island provenance, [3] importantly indicating maritime transportation. Cypriot pithoi and primarily plain ware pottery are additionally attested in the Point Iria (Lolos 1995: fig.18; Vichos and Lolos 1997: 330-331; Mee 2008: 365; Day 1999: 62; Karageorghis 1999: 123; Lolos 1999: 43; Vagnetti, L. 1999: 194; Vichos 1999: 79), and the Cape Gelidonya wrecks (Bass 1967: 123, fig.132.14-16), but at least in the former case have been considered part of the kitchen ware of the crews, as the transportation of a large numbers of pithoi,

[2] Artzy *et al.* 1981: 39: Previous neutron activation analysis of the WS suggests that the pottery found in LC settlements was not local, but rather coming from a variety of sources, implying either that clay was brought to the site from a distant resource, or that pottery manufacture centres were located close to the clay resources and then distributing the finished products.

[3] From Minet el-Beida: Schaeffer 1949: Figs: 86.22, 23, 27, Pl.XXXI:2; Kommos: Watrous 1992: 157-158, fig.70, Pl.52, Tomlinson *et al.* 2010: 202; Agrigento: Karageorghis 1993: 584; Cannatello Sicily: Karageorghis 1993: 584, fig.3, Deorsola 1996: 1037, pl.VIa; possibly Tell Nami: Artzy 1997: 10. For a general reference of these finds: Jones and Day 1987: 262-263 and Appendix, tbl.3.4; Karageorghis 1999: 124: is referring to Kalavasos-*Ayios Dhimitrios* being a possible centre of production of such pithoi.

especially containing olive oil is probably unfeasible by Bronze Age maritime technology. However, there is yet insufficient evidence to discount the role of transportation vessels in extra-island trade of agricultural products (Artzy 1997: 10-12 *cf.* Davies and Faulkner 1947: 43, pl. VIII).

To conclude, based on the discussed landscape potential and their impact on human interaction, one can argue that it is more useful to temper the economic centrality of copper with evidence for supplemental or associative products operating at local, regional intra- and extra-island scales and acknowledge the gradual facilitation of these alternative exports long-developing, more complex socio-economic system that has been traditionally upheld. Namely, olive oil and other agricultural products transported through plain and monochrome ware (Fitzgerald 1940: pl. LVI: 13; Åström and Åström 1972: 718-723), and potentially WS pottery should be discussed as additional source of wealth and imported products in the Vasilikos and Maroni valleys.

Despite this economic affinity, it is unclear if the two valleys share a common socio-political configuration. Thus, a question remains: What is the character of the relation between Vasilikos and Maroni? Answering this question may help reveal the background relations supporting what extra-island elements referred to as “Alashiya”.

Two Valleys. Two systems?

Ayios Dhimitrios and Maroni present chronological, structural and functional similarities in different degrees of elaboration. *Ayios Dhimitrios* provides clear evidence for administrative paraphernalia and a wider array of professional activities. On the other hand, Maroni, a more pragmatic site clearly focused on processing and storage of agricultural products and exports. Both ashlar buildings served a variety of functions and, their structural characteristics and material content point to a necessity of a space for the processing and storage of agricultural products. This functional similarity raises questions regarding the close spatial

proximity of the two ashlar buildings and their associated prosperous communities. The construction of two large buildings, 7km distant, attests to the sheer productive capacity and potential for intensified and extensive exploitation of the surrounding landscape. Contrary to the EC/MC, the fertile land between the two valleys likely required a more organised and concerted effort to achieve the desired degree of economic productivity.

From a diachronic perspective, the two valleys concentrated their productive efforts on the natural resources around and probably between the Vasilikos and Maroni rivers since the EC. However, the degree they communicated or cooperated is unknown. Material heterogeneity and evidence for dissimilar extra-community contact by each valley's inhabitants – seen in the variety of imports - illuminates local particularities, which are in the present study interpreted as evidence for distinct community identities. In addition, the shift of settlement patterns was nearly contemporaneous, with only a slight antecedence of Maroni, suggesting similar economic and technological trajectories, and behavioural patterns, which point to closer economic ties for the MCIII/LCIA. Were these ties of a socio-political character, closer to the political institution than the social contract? Were Maroni and *Ayios Dhimitrios* part of the same standardised dictatorial system, or did they provision independent yet cooperative local/ regional communities connected in economic expediency? Were the sites spatially one socio-political unit or were they local landmarks indicative both spatial and conceptual boundaries? This study investigates the above questions through two hypotheses.

Ayios Dhimitrios is a spatially and likely demographically extensive site, with a higher concentration of bureaucratically-organised economic activities (Smith and Hirschfeld 1999: 129-130; Smith 2002: 19). Maroni, by contrast, is a smaller settlement, located in a spatially more limited valley. One hypothesis posits Maroni's economic dependence on *Ayios Dhimitrios*, in which it was subjected to, or influenced by, the latter's socio-political sphere. In this system, people living in both valleys have access to both ashlar buildings, which are local economic centres. The

people and their settlements share strong economic and socio-political ties, centred on, and expressed in *Ayios Dhimitrios*. Namely, copper and agricultural products are transported to *Ayios Dhimitrios* and redistributed to communities through the large common room of Building X and further to Tochni-*Lakkia* for exchange with international products via inter- and potentially extra-island routes. Maroni, as part of this inter-valley system is largely limited to the adjacent agricultural land, the products of which are transported to its ashlar building and redistributed to communities, through the large common room of the ashlar building. Some of this surplus is exchanged for imported items and/or transported to other parts of the island, potentially also Tochni. The proximity of Maroni to the coast explains the need to exploit maritime routes (Gale 1991: 200; Ionas 2000: 10),[4] which are facets of a complex economic network organised by, at least the two valleys, in order to accommodate the economic potential of a highly productive landscape. The decision making (elite) group controls both ashlar buildings and economically exploits the intervening land.

An alternative hypothesis may explain the establishment of Maroni and *Ayios Dhimitrios* for the same primary reasons as the first hypothesis, but with the aim to retain local boundaries through landmark construction. According to this hypothesis, the two valleys retain strong economic ties, but function independently at the socio-political level. The settlement patterns at Maroni valley shift in such a way that the centre of activities is in the E of the valley, potentially focusing on the fertile land of that area. Consequently, the sites of Maroni preserve their strong local identity, but at the inter-valley level they interact closely through their professional identities. These boundaries separate the two sites/systems in the socio-political sphere with localised decision-making groups of diverse potential. Namely, they existed as two independent socio-political entities/polities, which controlled their adjacent region to varying degrees. These entities likely participated through their anchorages in an island-wide and potentially international exchange

[4] Weeks 2003: 1, 14-17: Discussions on the more sustainable sea transportation of bulk cargoes, particularly metals.

network; however, their association to what *Alashiya* may represent can for the moment only be speculated. Were they connecting links in an island-wide economic network? Did they participate in decision-making regarding the export of their products? Or did they likely sustain a combination of formal and informal interactions that permitted wider economic benefit?

Based on the evidence discussed up to this chapter, one cannot provide a detailed answer; however the incorporation of the architectural and burial analysis of Chapters Six and Seven can sustain a more detailed hypothesis. For that reason, this section is limited into demonstrating the two sites' almost contemporaneous abandonment at a slightly earlier stage than other LC settlements (Manning 2013: 517, fig.A13), as a possible indication of locally independent or interdependent economic spheres. Following that, this study identifies two factors contributing to their rapid decline, namely, their economic interdependence and their narrow economic focus. This relatively simple and opportunistic foray into inter-valley economic exchange was insufficient to weather the storm of socio-economic turmoil that neighbouring, more economically diversified systems endured.

Epilogue - Stories of Identities

Throughout the vast chronological period under scrutiny different identities and interactive modes are observed, eventually establishing the backdrop of the LCIIC urban communities. A particular landscape was continuously occupied through the EC/MC, both for its natural attributes, and probably also some cognitive associations (Thomas 2008: 303; Rose 2012: 759). This landscape is the background of community identity in the EC/MC, as resource anxiety, amongst other archaeologically invisible factors, instigated manifestation of additional aspects of identities through multiple burials. Despite the addition of these aspects, community identity is retained in the localised situation of burial deposits. Population increase and its various demographic connotations in these same landscapes probably required territorial form of land definition to ensure inclusive and cohesive participation in resource manipulation. The

means through which this was accomplished may be viewed in the gradual increase in group burials, which are often associated with kinship-based identity (Sahlins 2011a: 10-11, 14; 2011b: 229).

At the end of MC, the relation between group identity and landscape appears different, and is spatially expressed through a shift in habitation patterns. Through place-making, a new relation was established, whereby issues of land rights manifested in the constructed space above subterranean, concealed, and ancestral space. Competition over land rights seems to be perpetual, and involves architecture. However, the gradual transformation in the proximity to different types of agricultural land should not only be viewed in terms of competitive behaviour, but also in terms of intensified, and likely technologically more advanced, agricultural exploitation that required a closer spatial relation to the settlements (Wattenmaker 2009: 116).

The new spatial configuration and its consequential material culture provides evidence that, by the LCIA, the Maroni valley directly or indirectly participated in the international trade networks of the Mediterranean. This participation encouraged local economies to increase their avenues of wealth accumulation and display and presumably led to successful attempts to acquire socio-political status (Sherratt 1999: 174-175). This system provided the opportunity of wealth acquisition independently of land ownership, and fundamentally altered the close ties between community identity and landscape. Within this framework new professional identities emerged, equally used for negotiation and determination of economic and socio-political status, to the detriment of kinship-based identities' manifestation. The construction of settlements with urban infrastructure supports the existence of an economically successful decision-making group or groups with the influence and power to directly impact planning and organisation of activities that sustained these primarily economic systems. Based on the construction of buildings above pre-existing cemeteries, it is plausible that the core of this decision group, which sought to establish its status through constructed space, shared kinship ties.

In similarity with the Vasilikos valley, the LC Maroni communities exhibit increased focus on landscape industrialisation, which involved an array of materially attested professional identities; an essential phenomenon at the core of the local on economic system. Throughout this system, new parameters of socio-political competition were developed beyond participation in kinship-based groups. These are the professional identities of individuals, people who possessed unique knowledge and skill sets with particular economic networks who provided access to special services and exotic artefacts through the international trade of the Mediterranean. However, the complex urban establishments of Maroni and Vasilikos were short-lived and abandoned during the LCIIC, to great demographic effect evident in the sporadic examples of CG material in the valley (Appendix I, p.205, fig.11).

The demographic alteration of Maroni, similar to the Vasilikos valley, demonstrates the de-territorialisation of parts of the valley, with a large percentage of population becoming “migrants of identity” (Rapport and Dawson 1998). This common characteristic binds Maroni to the Vasilikos and intimates the close economic and possibly socio-political association of the two valleys, which synchronously retained their community identity through the ashlar buildings that signified their respective local influence. Nevertheless, comparing the Maroni and Vasilikos valleys provides only a snapshot of inter-regional relations between two neighbouring areas of the Bronze Age Cyprus. In order to better comprehend the relation of these small-scale societies, this study introduces a remote and larger case study: the Kouris valley.

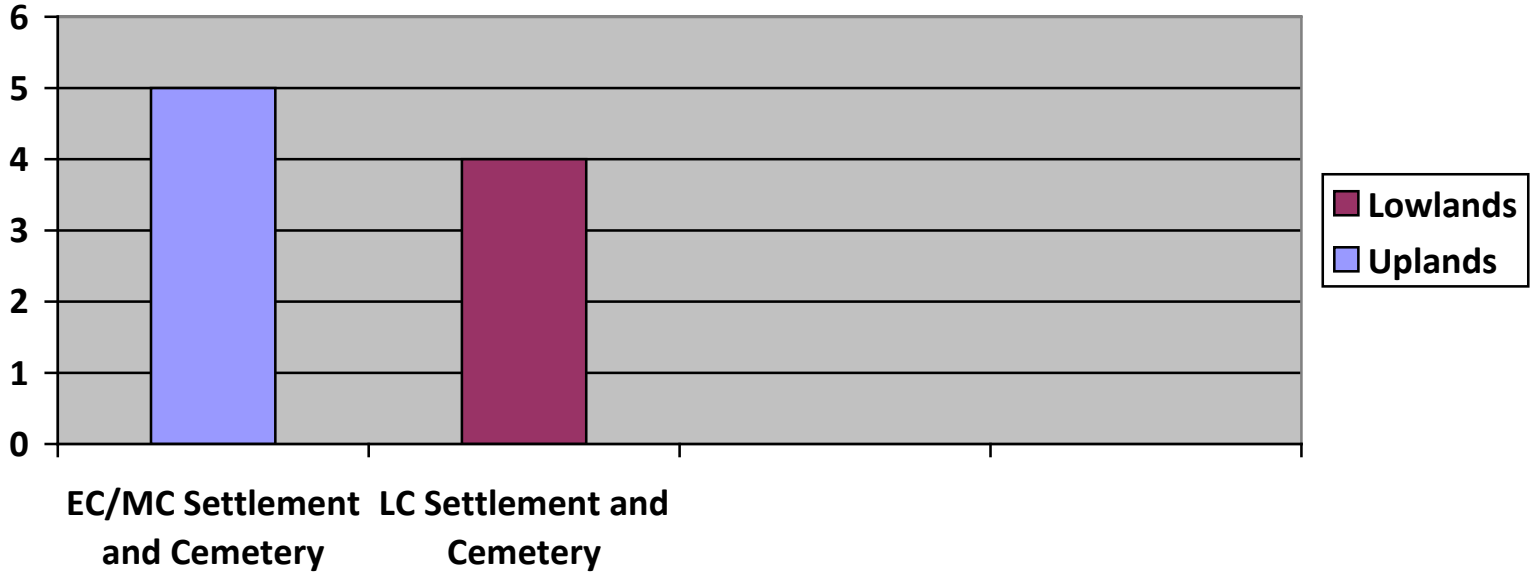
Table 4A: Maroni Landscape Information

Site Name	Current Soil Type	Current Vegetation	Erosivity	Visibility
Maroni *Apsri Moutti*	Gypsiric Regosols and Leptic Gypsisols	Olive and Carob Trees	High	
Maroni *Aspres*	Calcaric Cambisols and Calcaric Regosols	Olive and Carob Trees	Medium	Medium
Maroni *Kapsaloudhia*	Calcaric Cambisols and Calcaric Regosols	Olive and Carob Trees	Medium	Medium
Maroni *Karayiannidhes*	Gypsiric Regosols and Leptic Gypsisols	Olive and Carob Trees	High	Medium
Maroni *Maraes*	Calcaric Cambisols and Calcaric Regosols	Olive and Carob Trees	Medium	Medium
Maroni *Petrera*	Skeletic Calcaric Regosols and Calcaric Lithic Leptosols	Olive and Carob Trees	High/Medium	High
Maroni *Tsaroukkas*	Epipetric Calsisols and Leptic Chromic Luvisols	Olive and Carob Trees	Low	Medium
Maroni *Viklari*	Epipetric Calsisols and Leptic Chromic Luvisols	Citrus Trees	Low	Medium
Maroni Village	Gypsiric Regosols and Leptic Gypsisols	Built up area	High	Low
Maroni *Vournes*	Calcaric Cambisols and Calcaric Regosols	Olive and Carob Trees	Medium	Medium
Maroni *Yialos*	Epipetric Calsisols and Leptic Chromic Luvisols	Olive and Carob Trees	Low	High
Psematismenos *Palia/Koliokremmos*	Gypsiric Regosols and Leptic Gypsisols	Olive and Carob Trees	High	Medium
Psematismenos *Trelloukkas*	Gypsiric Regosols and Leptic Gypsisols	Olive and Carob Trees	High	Medium

Table 4B: MVASP Archaeological Information

Colour	Description	EC/MC Total	LC Total
	Uplands, hilly terrain	5 Sites (probably merging to 3)	-
	Lowland plain	Few elements of 1 site	4 Sites (probably merging to 1 large site)
	Not recovered, yet known site or non-Bronze Age site		

Site Name	Material Distribution	EC/MC Site Type	LC Site Type
Maroni *Apsri Moutti*	Unknown	Site	
Maroni *Karayiannidhes*			
Maroni *Maraes*	Exposed tombs	Cemetery	
Maroni *Petrera*			
Maroni *Kapsaloudhia*	25 ha	Cemetery	Cemetery
Maroni *Aspres*			Site
Maroni *Tsaroukkas*			Settlement and Cemetery
Maroni *Vournes*		Site?	Settlement and Cemetery
Maroni *Viklari*			
Maroni Village	Exposed tombs	Cemetery	
Maroni *Yialos*			
Psematismenos *Palia/Koliokremmos*	Exposed tombs	Cemetery	
Psematismenos *Trelloukkas*	2,5 ha	Settlement and Cemetery	


6
5
4
3
2
1
0
EC/MC Settlement and Cemetery
LC Settlement and Cemetery
Lowlands
Uplands

Appendix I: Tochni-*Lakkia*

Tochni is located on an inhospitable coast characterised by alluvium, material downwash, river and stream entrenchment and active erosion (Christodoulou 1959:9), Tochni-*Lakkia* (Cadastral map reference: LV 37, 125/1, 126, 127/2, 129, 129/1, 129/2, 238; 1:5000 ma series 55/XXI, 300424) (fig. 1).

Figure 1 Tochni-Lakkia location close-up (map provided by Dr D. Sewell).

The absence of detailed information on Tochni in recent publications of this chronological period (Knapp 2008, 2013: 31, fig.2), is related to the fact that until 2010 the chronology, function and extensive evidence for a Bronze Age site, located 600m E of the Vasilikos estuaries, was largely unclear (Todd and Warren 2012: 50). During the VVP, Tochni-*Lakkia*, or site 98, was regarded as an Iron Age settlement with few, yet notable diagnostic LBA specimens. Despite the exposed section of the site at the sea's edge, including such finds as WS sherds and fragments of a 'wall bracket', the low representation of the LBA on the field surface critically impeded suggestions concerning the existence of a LBA port on this locality (Todd 2004b: 133-134). The perseverance of natural erosion, noted in all VVP visits on the site (1979, 1986-1987, 1989-1990), and its acceleration due to modern development eventually created the conditions for a serious review of Tochni-*Lakkia*.

Situated underneath the BBC World Service Mediterranean Relay Station (BEMRS), a few hundred meters E of the Vasilikos cement factory and the exploded Evangelos Florakis Naval Base at Mari, Tochni-*Lakkia* is entrenched in developed land and far from archaeologically ideal. Natural and cultural post depositional processes operate relentlessly, with river alluviation continuously decreasing archaeological visibility up until the construction of the Kalavasos dam in 1987 (Gomez et al. 2004: 7-10), while recent costal development with the construction of breakwater off the Vasilikos cement factory has diverted the powerful surf into the southern extent of *Lakkia* (Andreou 2014: 53) .

The Site

The site has become the coast, rising to a maximum of 4m above sea level on its NE area. Modern farming of the field have improved the archaeological visibility of *Lakkia*, which, based on the stratigraphy of the exposed coastal section, has created a 20-50cm deep plough above 1,5m of archaeological deposits. The archaeologically productive extent of the section is shorter than the total estimated breadth of the

site, as visibility is impeded by vegetation and discarded modern building debris, which has likely minimised erosion and altered local tidal patterns. Consequently, a site visit in 2010 by D. Sewell and the author revealed a drastically different picture than that observed by the VVP survey team, emphatically demonstrating the need to record and monitor erosion in an indisputably multi-period and multi-functional site. By June 2011, we carried out emergency recording of information soon to be lost after erosion. We initially took GPS measurements to ascertain erosion rate, then produced a section drawing detailing the largest uninterrupted section of *Lakkia* (fig. 2).

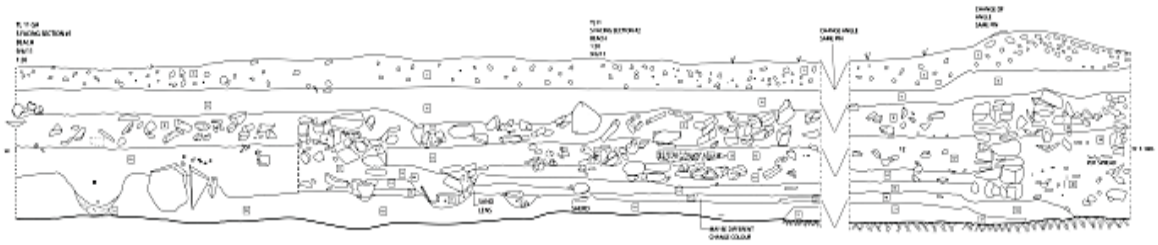


Figure 2 Section drawing of building remains (drawn by the author, June 2011).

Based on these observations, we assigned numbers to several features and photo-documented and described in detail a series of buildings. We further recorded two large sections via LIDAR 3D laser scanning, with the assistance of M. Williamson and K. Fisher of the Centre of Advanced Spatial Technologies at the University of Arkansas. The aforementioned recording provides future research with a reference picture for comparison and consideration.

During the first short season, we recorded 28 features including walls lacking mortar, floors, pits, dump deposits and internal building installations. During this investigation, we noted three distinct building complexes and photo-documented and surveyed with 3D laser scanner 2 of those. Building complex 1 is estimated to be 7m long with 1,2m preserved stratigraphy and comprises a sunken pithos and a probable bench (fig. 3). Based on pottery evidence, this building dates to the LBA and provides no evidence of extensive Iron Age reuse.

Figure 3 Building 1. Note pithos on the left quarter of the picture (personal photography, June 2011)

Building complex 2 is estimated to be 5m long with 1,6m preserved stratigraphy and includes multiple floors interrupted by a distinct abandonment layer, separating the LBA from the CA use. The latter is evidenced through a Bichrome IV jug collected from the exposed section. Finally, building complex 3 is estimated to be 5m long, includes multiple floors and internal features, for instance pithoi and storage jars. This complex does not provide distinct LC levels and is believed to represent a CA structure, which potentially replaced an antecedent building.

Other poorly associated walls have been recorded along with dump deposits, containing packed stones and a significant number of PW sherds, 2 distinct gravel layers containing small fragments of WS pottery and copper alloy debris, and enigmatic rounded features, likely representing LC chamber cuts. The latter were found in association with LBA fine ware (WS, BR, and Mycenaean) and their perplexing nature can be clarified only after excavations. Finally, at least three

concave stone lined features have been recorded, encompassing a fill of light grey clay pointing to pottery production activities (fig.4).

Figure 4 Enigmatic stone lined feature containing clay-like substance (personal photography, January 2013).

Although such activities have been ascertained in the LR site of Zygi-Petrini (Manning et al. 2000), 500m to the E, the Tochni-*Lakkia* features are stratigraphically associated with LBA levels. Collected material from the section, the beach and later from the field include pottery, stone tools, ceramic loom weights, 2 undiagnostic stone anchors and an eroded drafted ashlar block of unclear date. Finally, a preliminary snorkel survey directly off the beach and in the surf zone observed a notable amount of pithoi and coarse ware fragments, but no evidence for the ancient shore line.

Revisits made to Tochni-*Lakkia* by the author the following year made apparent the devastating effects of erosion upon *Lakkia*. Particularly salient were losses of architectural, ceramic and stone material (fig.5). These observations prompted a

multi-lateral effort to survey the settlement employing methodological efforts combining landscape and archaeology.

Figure 5. Wall in Building 1 gradually deteriorating between June 2010, June 2011 and January 2012 (personal photography).

With the assistance of graduate students of Cornell University and the valuable contribution by the ceramicist Dr A. Georgiou, the field was divided into 20m units and surveyed with traditional archaeological observation methods by 6 walkers. The collected material was counted and recorded in the field and returned to its spatial origin. Limited to the area outside the BEMRS, recorded pottery mainly comprised Bronze Age pithos wares, observed in various densities across the surveyed area, slightly decreasing towards the N and E (figs.6-7).

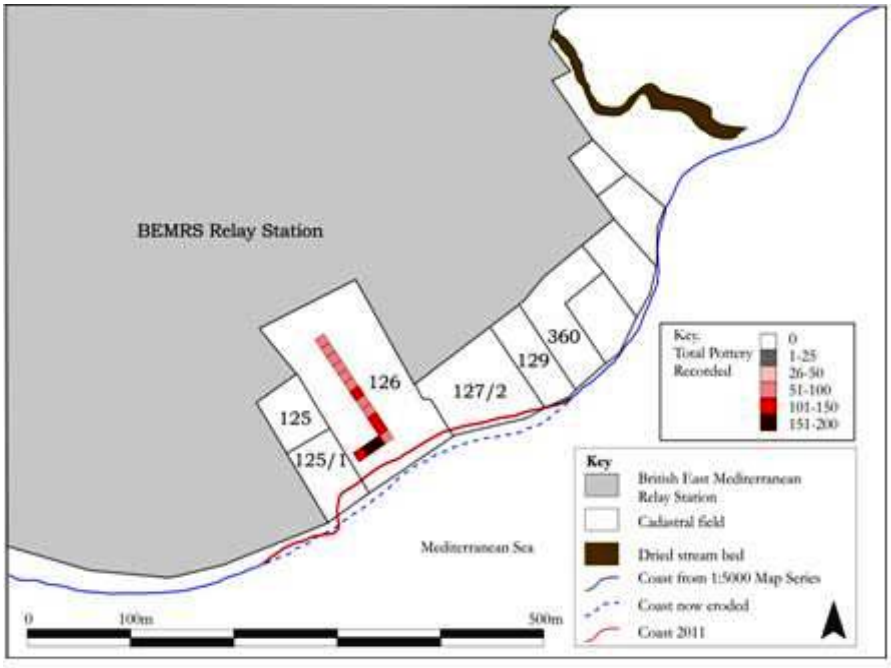


Figure 6 Plan of surveyed area showing pottery density (produced by D. Sewell).

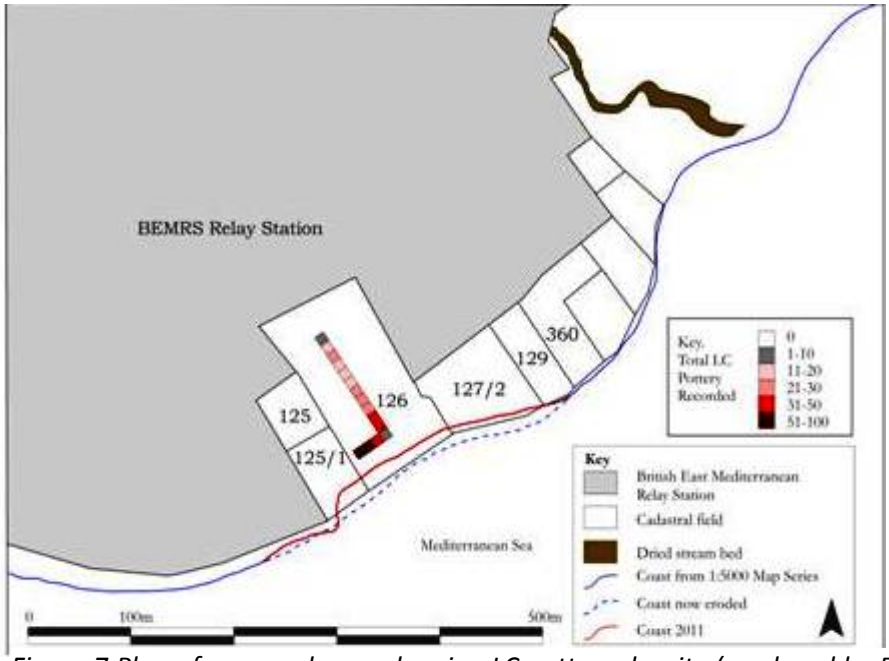


Figure 7 Plan of surveyed area showing LC pottery density (produced by D. Sewell).

The surface survey produced a large quantity of LBA pithos (mostly Group II: 3-4) (Keswani 1989b: 16, fig.17:18-28; 2009: 108, fig.1) and PW sherds, along with smaller quantities of WS, BR, Mycenaean and Canaanite jar sherds pointing to an LCIIC date that may reasonably extend into the LCI-LCIIA according to the discovery of a WS I bowl rim. A second period of occupation is evidenced by the notable number of CG and CA date, which overshadowed the LBA pottery during the VVP survey. The majority of surface Iron Age pottery recorded in 2012 is CG with examples of Bichrome, Black-on-Red, Plain and White Painted wares, including the neck of a WP III CG amphora, decorated in vertical panels.

Geophysical survey running along with the pedestrian survey resulted in no considerable anomalies – a problem associated with the proximity of readings taken to the broadcasting elements of the relay station and the particularly stony surface of the field. Pedestrian survey results confirm that *Lakkia* extends away from the coast and into the BEMRS. The fenced BEMRS area was visited by the VVP, who reported little surface evidence, a result due likely to lack of ploughing. In 2012, the narrow area directly S of the BEMRS was investigated via pedestrian transect survey

all the way to the Vasilikos estuaries (c.500m), within which 8 pottery scatters with identifiable LC and Iron Age pottery were recorded . The location of these finds formed the basis of a preliminary site size estimation of approximately 750 x 250m.

Moreover, the visual inspection of the exposed section, revealed an intriguing feature. Figs.8-9 show a heavily eroded chamber, comprising of fire-cracked stones, ash, Bronze Age pithos sherds and a burnt, petrified surface with a potsherd adhered to it. Based on the above characteristics, but with lack of comparable contemporary material evidence, it is assumed that this feature is a pottery kiln. If this is the case, then this feature is the only pottery kiln recovered from a LBA context that is accompanied by sufficient supplementary evidence to support this function. Beyond the pyrotechnical installation, a visual inspection of this poorly accessible and eroded section revealed another stone lined installation filled with a substance believed with reasonable assurance to be unfired clay.

Figure 8. Section of probable pottery kiln from Tochni-Lakkia (picture taken by D. Sewell, June 2011).

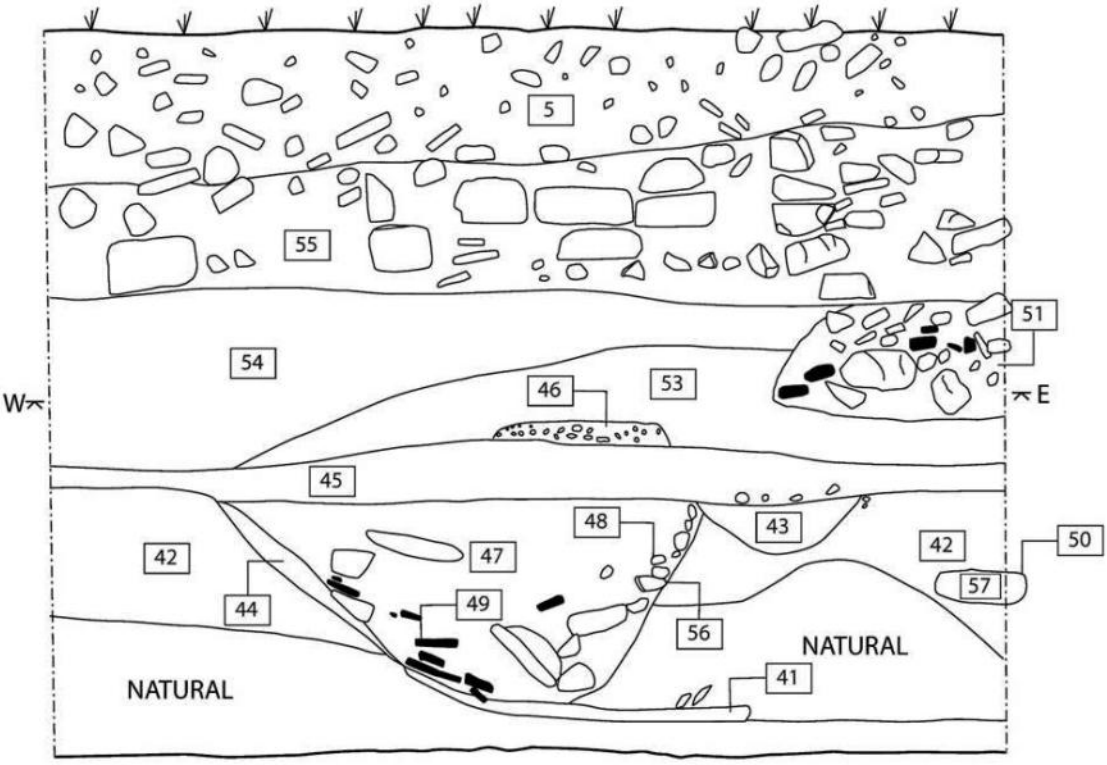


Figure 9 Section drawing of probable pottery kiln (drawn by the author, June 2012).

Importantly, despite indisputable evidence for pottery production at Sanidha-*Moutti tou Ai Serkou* (Todd and Pilides 2001: 35-36; 2004) and Morphou-*Toumba tou Skourou* (Vermeule and Wolsky 1990: 141, pl.71), no associated kiln feature has been identified with the pottery wasters and the enigmatic 'fire bars' in either site. Even in slightly earlier examples, such as the pottery production area excavated at Phlamoudhi-*Melissa*, the reported 'pottery kiln' is evidenced by a poorly demarcated installation described as a 'pit', irreparably disturbed by the subsequent occupation of the building (Smith 2008: 59, fig.37). Finally, brief online information suggesting the existence of a potential kiln at the chambers of the LCIII Erimi-Pitharka, on the basis of an ovoid shaped feature in association with a probable ventilation mechanism, lacks a meaningful correlate, and should only be seriously considered following supplemental publication (Erimi Pitharka, Department of Antiquities: www.mcw.gov.cy, October 2012).

Finally, the 2012 visit at Tochni recorded a submerged ring of large stones c. 1,5m in diameter (fig.10). The occurrence and function of this feature remains unclear. Is it coincidental, or is it associated with a type of well? Considering the brackish quality of the water so close to the sea (Constantinou et al. 2002: 2; Boronina et al. 2003: 135), water drawn for consumption may be ruled out, making any interpretation as a well difficult to sustain. However, because the LBA shoreline has yet to be established and correlates of wells this close to the sea exist in comparable climates and landscapes (Åström 1998; Galili and Rosen 2011: 280-282), the hypothesis of a well cannot be discounted.

Figure 10 Submerged circular feature (picture taken by D. Sewell, June 2012).

To conclude, Tochni-*Lakkia*, initially characterised as an Iron Age settlement containing LBA elements may be confidently characterised as a multi-period, multifunctional site, key in our understanding of the settlement patterns of the Vasilikos valley and of its widely debated relation to the neighbouring Maroni valley in the LBA. The position and content of Tochni-*Lakkia* has invaluable interpretive imports, as it is located precisely where LBA settlement were thought not to exist, in all interpretive models thus far produced. The landscape and economic perspectives

of the Vasilikos valley, traditionally studied according to the absence of a coastal site (Sherratt 1999: 101; South 2002: 63), may now be reassessed.

Lack of Bronze Age archaeological sites in the coastal area of the Vasilikos has generated various interpretations, from settlement defensibility to health maintenance (Frankel 1974: 9-10; Deckers 2002: 78), without a comprehensive consideration for the landscape characteristics. The continual erosion of Tochni-*Lakkia* revealed sufficient evidence to challenge traditional interpretations, which, on the one hand discuss the landscape in terms of material visibility and on the other subject Kalavasos-Ayios Dhimitrios, which appears to be the most important LC site of the Vasilikos valley, to unilinear models of direct participation to the international trade of the Eastern Mediterranean.

While it is uncertain whether the exchange points, rather than ports of Tochni-*Lakkia* and Maroni-Tsaroukkas engaged with intra-island and/or more extensive extra-island exchanges, their association with two distinct economic centres may point to their local autonomy. It is plausible that the sites were engaging in close economic activities and were interacting in a way that bespeaks of interdependence. Perhaps most tellingly, these coastal settlements are notable for their near contemporaneous abandonment and associated shift in permanent occupation patterns. Indeed, the CG period is notoriously elusive in both valleys (fig.11), despite the presence of CA tombs and a sanctuary (Cadogan 1992a: 54; Todd 2004b: 181-182), leading researchers to suggest that the valleys were abandoned in the LCIIC.

Figure 11 The sporadic CG evidence from the Vasilikos valley (produced by the author on ArcGIS with data from Todd 2013).

CHAPTER 5

LARGE SCALE ANALYSIS: KOURIS VALLEY

Lack of systematic archaeological investigation of the Bronze Age in the area of Limassol affects the spatial consistency of the data under scrutiny and produces an inevitable chasm between the Vasilikos and Kouris survey data. The examination of the Kouris, the third and final valley, aims to fill this chasm with its dense archaeological information. The valley is distinguished by its geographical size and exceptional archaeological continuity, both indispensable themes for inclusion in the present study (fig.5.1) (Constantinou *et al.* 2002: 91). In contrast to the aforementioned valleys, the wide extent of archaeological exploration at Kouris permits the incorporation of areas not strictly located within the catchment area of the river (Swiny 1981, 2004). These areas spread to the west of Episkopi village, surrounding torrents and tributaries in the villages of Sotira (Limassol), Avdhimou, Anogyra and Paramali.

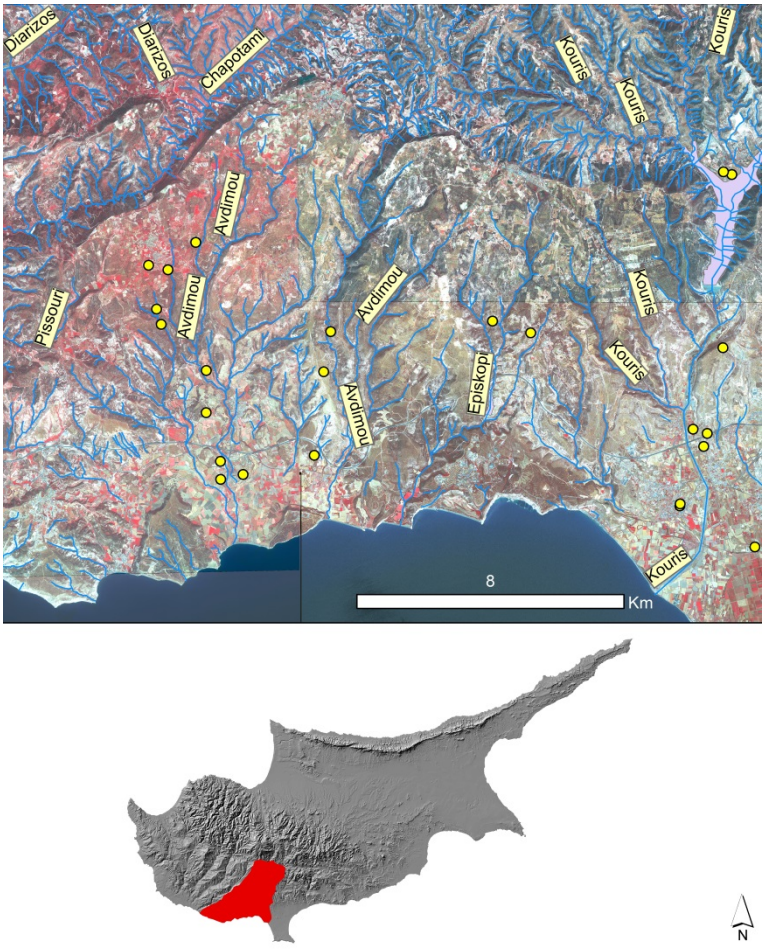


Figure 5.1 The Kouris, Symboulos, Paramali and Avdhimou valleys archaeological evidence (produced by the author on ArcGIS with data from Swiny 1981, 2004; Bombardieri 2010b).

Research Directions

The discovery of a remarkable sequence of prehistoric sites at the area associated with Kouris is largely due to the evident Hellenistic and Roman remains of Kourion hill, which attracted archaeological attention of variable legality and quality. It is not surprising that a considerable amount of artefacts from Kourion are dispersed throughout the world in museums and private collections. The ancient city of Curium, with the sanctuary of Apollo Hylates is mentioned by Herodotos (*Histories* 5.113.1), Arrian (*Anabasis* 2.22.2) and Strabo (*Geographica* 14.6.3) and has been visited by travellers fascinated by the classical world as early as 1738 (Cobham 1986: 265). In 1820 Vidua tried to confirm the general area of the ancient city through the investigation of inscriptions, which were later published (Mitford 1971: n.38, 45, 84). Pease visited Kourion in 1839, illustrated a tomb and recorded the text of an inscription from the sanctuary of Apollo, honouring a Ptolemaic ruler (Mitford 1971: n. 38; Buitron and Oliver 1988; Severis 2002: 1045–7). Nevertheless, it was 6 years later that attention was drawn on the Hellenistic archaeological evidence by Ross, a German antiquarian, who remarked the Doric columns of a building and their association with Ptolemaic inscriptions (Ross 1845, 1910: 85; Mitford 1971: 3).

Unquestionably the most notorious archaeological figure related to Kourion is Cesnola, who focused on the investigation of the cemeteries surrounding the chapel of Ayios Ermogenis between 1874 and 1875 (Cesnola 1877: 302-337; see also McFadden 1971; Swiny 1991: 1-6; Kenna 1972: 655-656). Unverifiable information concerning his activities points to his exploration of the sanctuary and likely the Kourion Acropolis. Cesnola's private notes are largely misleading, while his description of the 'Curium Treasure' is rather fictional, inspired by Schliemann's excavations at Troy.

The repute of 'Curium Treasure' attracted the attention of the British Museum expedition that in 1895 excavated Cypro-Archaic, Cypro-Classical and Hellenistic tombs. By the end of the 19th century, Kourion is referred to as a "vast cemetery" with a significant number of rock-cut tombs surrounding the prominent Kourion and

adjacent hills (Kiely 2009: 64; 2010a). The art historic value of the artefacts was the main attraction of Captain Hake in 1882, who was commissioned to undertake archaeological investigations during Lord Kitchener's Survey of Cyprus (Shirley 2001). Williamson and Christian and other private individuals conducted parallel investigations of doubtful legitimacy and scientific rigor, material from which is currently located in private collections. These investigations were partly supervised by Ohnefalsch-Richter (1893: 480; Myres and Ohnefalsch-Richter 1899: 7).

Excavations resumed at Kourion in 1895 by the British Museum. Despite questionable methodology and practice, this expedition marks the first attempt of inclusive archaeological investigation of the neglected Cypriot material culture (Steel 2001: 163–164). Similar to the Maroni excavations, the investigation targeted imported artefacts and largely ignored local pottery, which was scarcely recorded and often discarded. However, it presents a serious attempt at recording contextual correlations of artefacts and creating a chronological and cultural framework for the social development of Cyprus for the 2nd and 1st millennia. This framework was crucial to the work of Swedish Cyprus Expedition.

The period after the Cyprus Expedition is undeniably characterised by systematic and scientific archaeological investigation. The areas of the sanctuary, the acropolis of the Classical city of Kourion and the LBA remains of *Bamboula*, previously investigated by the British Museum, were included in the excavations of the University of Pennsylvania Museum (Daniel 1948; Davies 1989). The researched sites include the Iron Age cemetery of *Kaloriziki* (Dikaios 1933; Daniel 1937; McFadden 1954; Benson 1973) and the Classical, Hellenistic and Roman burial ground spatially associated with Ayios Ermogenis (McFadden 1946; Benson 1956). Future research includes the excavation of a basilica on the acropolis, the reinvestigation of the sanctuary of Apollo Hylates (Buitron-Oliver and Dietrich 1996), the study of the area associated with the Hellenistic and the Roman theatre, the Roman cemeteries of the E gate of the Acropolis (Parks *et al.* 1996-1999, 2001), and the controversial reinvestigation of Episkopi-*Bamboula* (Walberg 2003).

Concurrently, the Department of Antiquities conducted restoration on known sites and salvage excavations at Kaloriziki, the acropolis, the Neolithic Sotira-*Teppes* (Dikaios 1961a; Swiny 1982: 12–19), the Chalcolithic Erimi-*Bamboules* (Dikaios 1936; Heywood and Swiny 1981; Bolger 1985, 1988), an important number of Bronze Age tombs at Erimi-*Kafkalla* (Gjerstad 1926: 15; Dikaios 1951: 199, fig. 3; Catling 1962: 150, no.45-6, 163, no.83-4; Karageorghis 1972: 1008; 1973: 612; Swiny 1979: 251-262; MacLaurin 1980: 176-183, fig. 91-2; Swiny 1981: 61-64; Hadjisavvas 2000b: 670; Belgiorno 2005.), the LBA complex of Alassa-*Paleotaverna* and *Pano Mandilaris* (Hadjisavvas 1986, 1989, 1994, 1996, 2000a, 2003a, 2003b), and the intriguing LC and Iron Age site of Erimi-*Pitharka* (Vassiliou and Stylianou 2004; Flourentzos 2010; Papanikolaou 2012). The number of known EBA and MBA sites increased with the Kent State University survey at Episkopi, analysed in the tables at the end of the chapter (pp. 247-251) and the excavation of Episkopi-*Phaneromeni* (Carpenter 1981; Swiny 1986). Further survey was conducted during the excavation of Sotira-*Kaminoudhia* and its suggested catchment area. Finally, Jasink and Bombardieri directed an interdisciplinary archaeological survey of the Kouris geographical system and recorded 14 sites (Bombardieri 2009: 287-288; 2010b: 33; Bombardieri and Jasink 2010: 263). The ECIII-LCI Erimi-*Laonin tou Porakou*, part of this inventory, is currently being excavated.

In conclusion, the Kouris valley's remarkable volume of archaeological information contributes to the present research through an encompassing and rigorous theoretical framework and in-depth investigation of the multifarious landscape.

Landscape in Brief

Contrary to its intensive archaeological investigation, the Kouris geological portrait is poorly studied, as there is currently no inclusive publication focusing on the geological catchment area of the river. Consequently, the available sources used in the present research are digital maps provided by the DGRC and independent

studies conducted during archaeological surveys and excavations (Xenophontos 1996; Rapp 2003; Constantinou and Panayides 2012; Zomeni 2012).

The landscape analysis covers parts of the Kouris containing Bronze Age archaeological evidence. Alassa is the northernmost limit and located at the confluence of the Kouris and Limnatis rivers, while the Kouris estuaries form the southernmost limit. A preliminary observation evinces Kouris as a wider river, with numerous springs and probable navigation, as suggested by Hadjisavvas (1986: 62). Contrary to the Vasilikos and Maroni, the Kouris is associated with a narrower variety of geological formations, most predominant of which being the Pachna formation (blue) that spreads between the villages of Kandou and Alassa (Xenophontos 1996: 193), and a sizeable fertile area (pink) surrounding the Akrotiri peninsula (fig.5.2). The dual distinction between upland and lowland alluvial plains is more pronounced in this valley (S.3 DVD).

Researchers have extensively discussed the role of river alluviation and poor archaeological visibility at the Kouris valley (Xenophontos 1996: 183). The conspicuously fertile land surrounding the areas of Kolossi and Akrotiri, along with the geographically recorded formation of the Akrotiri salt lake (Swiny 1982: 162-165; Hadjipaschalis and Iacovou 1989: 52; Blue 1997; Talbert 2000: map 72), is suggestive of substantial alterations to the landscape. Such alterations are capable of covering to obscurity Bronze Age coastal settlements. However, as Brown (1997: 34-37) exemplified that communities tend to avoid domestic settlement in marshy lands in favour of constructing dwellings on structurally more suitable geological formations, alluviation may be better discussed in terms of its impact on non-permanent or small sites. This is also supported by the establishment of permanent settlements in relatively elevated locations overlooking the Kouris river-course and delta, such as Episkopi-*Bamboula* and Erimi-*Kafkalla* (Swiny 1981: 51-87; Leidwanger and Howitt-Marshall 2008: 20; Kiely 2010b: 56). It is noteworthy that although Episkopi is located within the area of the alluvial lowlands, it was founded on a low hill protected by chronic alluviation.

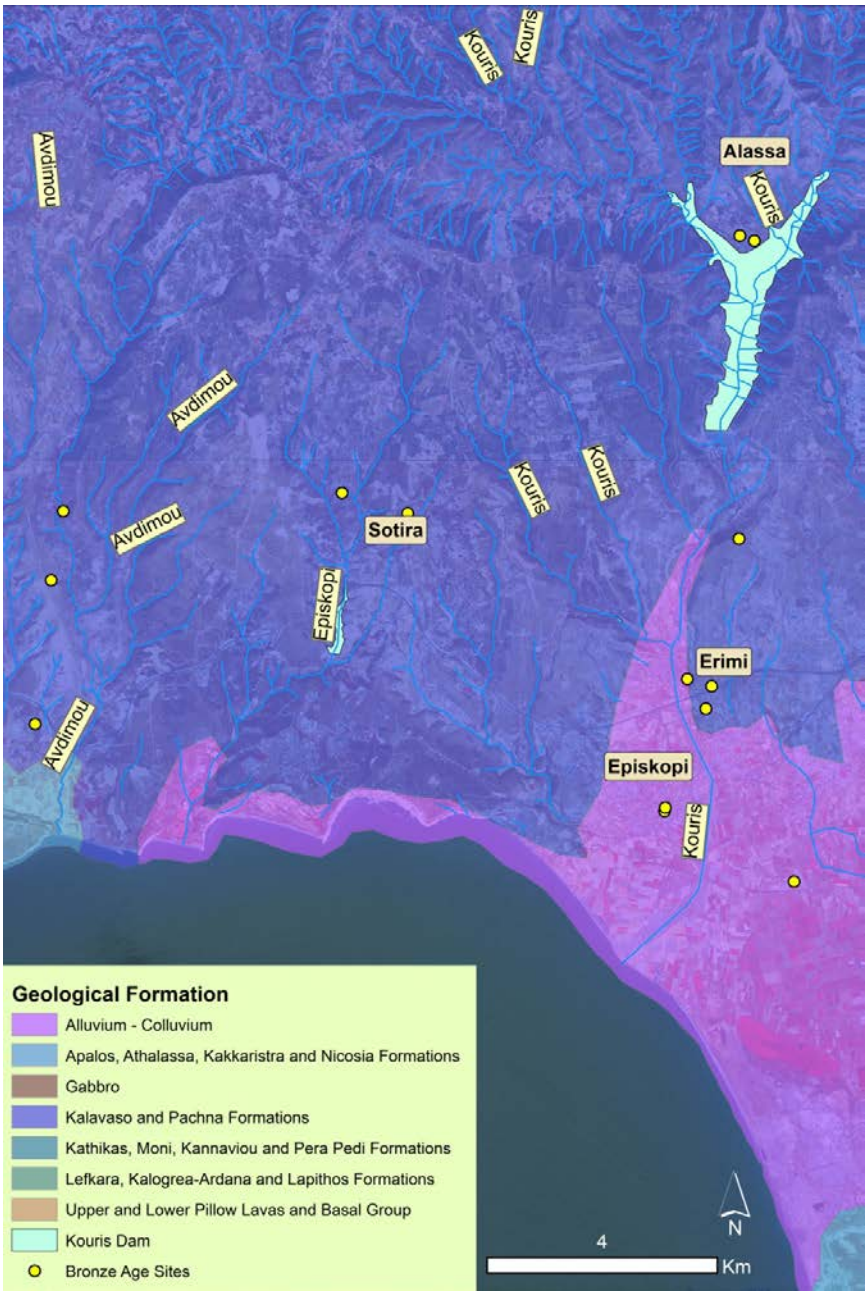


Figure 5.2 Kouris valley main geological formations (produced by the author on ArcGIS with data from the DGRC).

Current vegetation distribution shows higher variability in the fertile SE part of Kouris, across the river and its estuaries, while wild forest vegetation diffuses at the mountainous area, west of the Kouris dam. Maquies are the predominant vegetation E of the dam and in the villages of Sotira, Avdhimou, Anogyra and Paramali, W of Kouris. These areas are highly affected by land degradation of both

anthropogenic activities and high erosion rate of the adjacent soil types. Olive and carob trees encircle the S and E of Erimi village (Davies 1970: 466), with maquies in the N. While it is not possible to reconstruct the complete palaeo-environment of the Kouris, the valley and environs are remarkably distinguished by a dichotomy (figs. 5.3-5.4), with particularly fertile land in the SE and highly erodible, light, shallow-soil agricultural landscapes in the NW. This spatial dichotomy is a diachronic characteristic reflected in the settlement patterns of the Kouris valley from the onset of the Bronze Age.

Figure 5.3 Contrast between the Kouris uplands and lowlands (personal photography taken from Episkopi village, June 2012).

Figure 5.4 The Kouris fertile lowlands (personal photography taken from Kourion, June 2012).

EC/MC at the Kouris: North and South

EC and MC occupation is concentrated in the villages of Episkopi and Erimi with the excavated domestic and cemetery areas of Episkopi-*Phaneromeni* and Erimi-*Laonin tou Porakou* (fig.5.5). The excavated Erimi-*Kafkalla* cemeteries, whose disturbed, looted and destroyed content is currently unavailable, are not yet firmly associated with an excavated settlement. In addition, the exact number of tombs is unknown, but estimated at approximately 227 (Swiny 1981: 62).

The same survey collected and recorded diagnostic pottery suggestive of a spatially related occupation area located at the SW of the cemetery. The lack of overlap is based on the observation that the closest dromoi to the occupation debris are located at least 250m to the N. The recorded permanent settlement includes 137 lithic artefacts, while the predominantly MC pottery does not chronologically correspond to the cemetery, as its surface pottery provides a date between ECIII

and LCIA, while the domestic debris is reported to date between MCIII and LCI (Swiny 1981: 64.).

Swiny's survey located a possible EC/MC settlement in the locality *Balies* (also *Pelentros*) in the village of Kandou, located opposite *Kafkalla* (Catling 1962: 150: no.47; Swiny 1979: 262-263; 1981: 64-65). A total surface collection sampling strategy suggests the majority of diagnostic ceramics as RPM III, a smaller percentage classed as RPP and few examples of DPBC, pointing to MCII site abandonment (Swiny 1981: 65). The domestic character of the site is evidenced by 9 querns and 2 hand stones, and a lack of tombs, comprising the focus of Swiny's intuitive survey (Swiny 1981: 55; 2004).

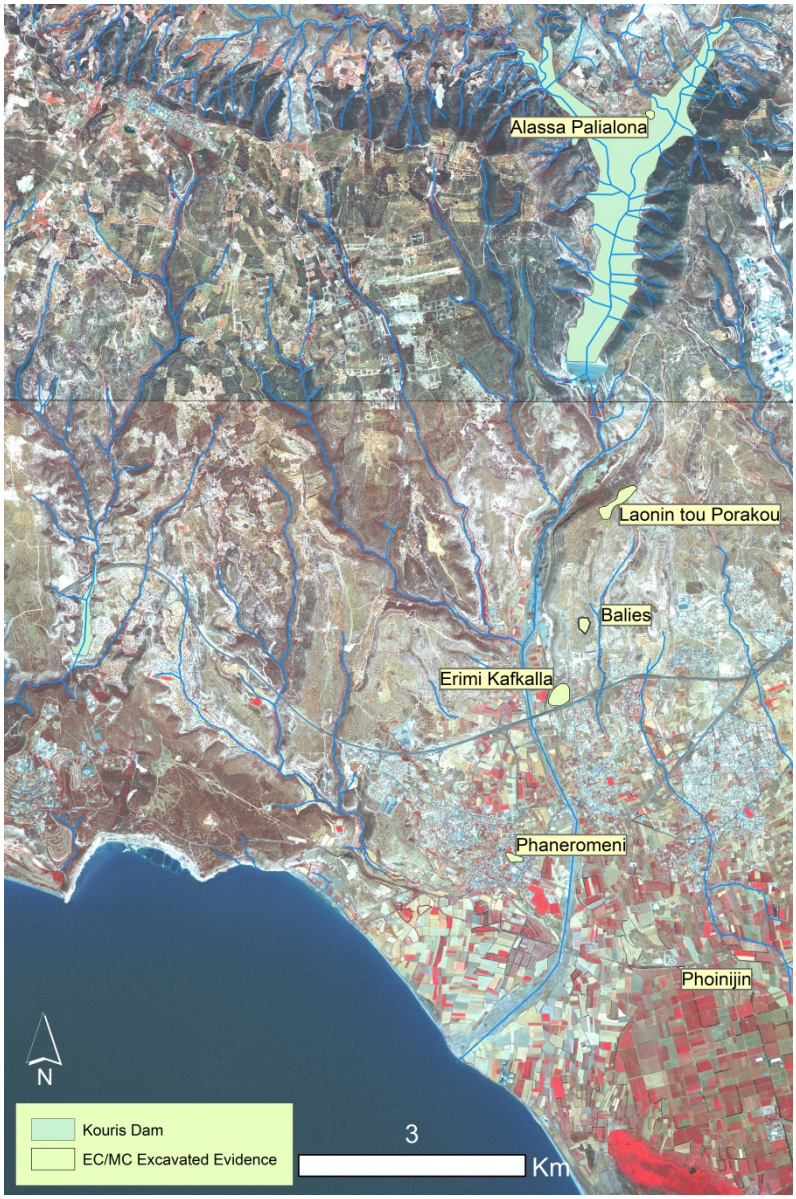


Figure 5.5 The EC/MC-LCIA archaeological evidence (produced by the author on ArcGIS with data from Swiny 1981; 2004).

A cemetery may be located at the highly eroded plateau E of *Balies* despite the hill not being formally reported as investigated. During the re-evaluation of the available information, Georgiou alters site chronology from Swiny's MCI-MCII to the ECIII-MCII (Georgiou 2006: 372: no.385), introducing the possibility that a number of Erimi-*Kafkalla* tombs were contemporaneous with the domestic evidence of *Balies*.

Problems of spatial and chronological correlation are oft encountered in the Kouris valley. For example, Episkopi-*Kafkalla* (not illustrated on the maps) initially reported by Gjerstad 1926 (1926:15) as an unknown number of destroyed tombs, is a problematic Bronze Age cemetery locus subjected to rescue excavations and re-investigation between 2000 and 2005 (Karageorghis 2000: 670, 672; Belgiorno 2005: 225), without an identifiable corresponding domestic area. Similarly, Episkopi-*Phoinijin*, located 2,5km E of Episkopi-*Phaneromeni* (Karageorghis 1965: 225-226; Nicolaou 1966: 29; Swiny 1979: 251; 1981: 59-61) introduced new questions of spatial association with water resources. At a distance of 1,5km from Kouris, the closest fresh water source, Swiny (1981: 60-61) suggested *Phoinijin* was likely insufficient to sustain permanent settlement. However, the discovery of a RPP bowl in association with a mud brick wall, may suggest otherwise (1981: 60). Unfortunately, this remains an open question as trench backfilling has diminished secure contextualisation. Topographically, *Phoinijin* can be considered either an off-site associated with subsequent agricultural activities, or an activity area. If this is the case, the location of *Phoinijin* in the fertile land to the SE of Kouris, may suggest deliberate settlement to access this part of the valley, possibly to benefit from the abundant wild vegetation and to practice agriculture. As discussed in the Vasilikos (Chapter Three, pp.98-101), the location of EC/MC sites on the valleys' uplands, does not exclude the possibility of short-term sites or temporary activities in this area. However it provides an indication of locational preference.

Excavated Sites

The excavated settlements of Episkopi-*Phaneromeni* and Erimi-*Laonin tou Porakou* both provide ECIII-LCIA dates. In contrast to the aforementioned sites, the available excavated examples present firmer chronological continuity. This is possibly related to issues of archaeological visibility of the surveyed plots, where the predominant pottery type favours a narrower chronological range. From a different point of view, the observed settlement patterns can be associated with a diachronic process of population clustering in two areas, related to different economic activities (pp. 249-250, tbls.5B-C).

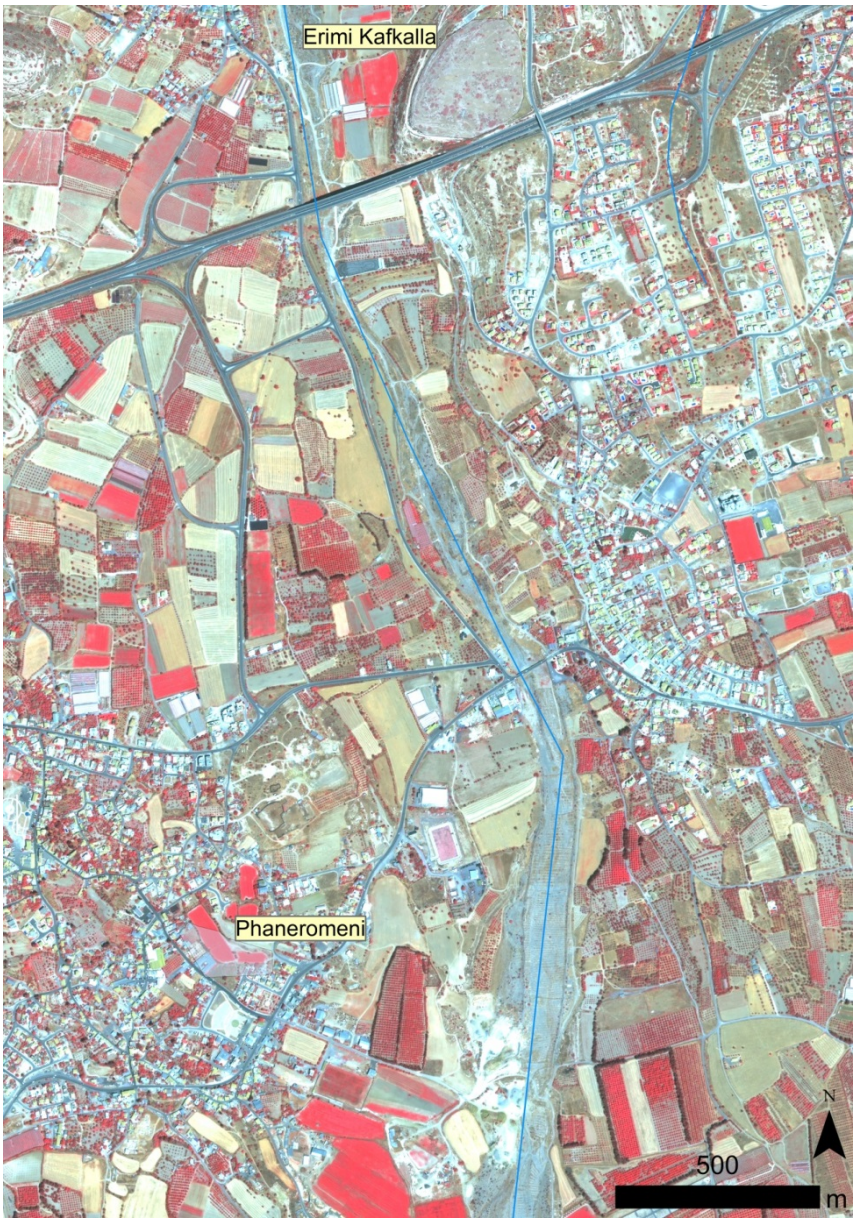


Figure 5.5 Episkopi-Phaneromeni close-up (produced by the author on ArcGIS).

Phaneromeni, located to the south of Kouris, on a low hill and near the fertile alluvial plain (fig.5.6), is a rural settlement, where uniformity of activities is reflected in the material culture. The available archaeological evidence conveys a domestic compound with typical architectural, structural and spatial organisation for the period (Chapter Six, pp.258-259). There is a closely located cemetery, but no further specialised areas recorded within or near the settlement. *Phaneromeni*, similar to Kalavasos and Psematismenos is in close spatial association with the shallow soils of the upland areas. Similarly, Erimi-*Kafkalla*'s setting combines agriculturally fertile soil resulting from alluviation and colluviation, and low hills with shallow erodible soil, likely suitable for small scale agricultural activities, depending on the available technology (Chapter Three, pp.101-104). The site's longevity should *inter alia* be viewed in association with the beneficial environmental settings required of a rural village.

Further to the North Erimi-*Laonin tou Porakou* is located within an eminently pastoral land (fig.5.7).[1] Notably, it is spatially associated with a smaller alluvial plain, limited on the Kouris banks, and probably for that reason the material culture of the site suggests various economic activities. A two-phase occupation covered the low hill, on top of which, a workshop has been excavated, while the remains of a domestic compound associated with a cemetery were found at a lower level (Chapter Six, pp.260-263). Due to limited excavation, demographic dimensions are unclear, but it is plausible that *Laonin tou Porakou* was a specialised settlement related to a non-excavated site in the area of Alassa-*Palialona*, known for its MC burial remains (Chapter Seven, pp.336-337) (Flourentzos 1991: 7). The latter is located within a small fertile valley - an advantageous location for an agricultural community. The establishment of this relation is based on the fact that Erimi-*Laonin tou Porakou* is not a typical EC/MC settlement; rather, it contains evidence for a concentration of economic activities, including an identifiable textile workshop (Bombardieri 2011).

[1] The general area is now called 'mandres', meaning animal farms.

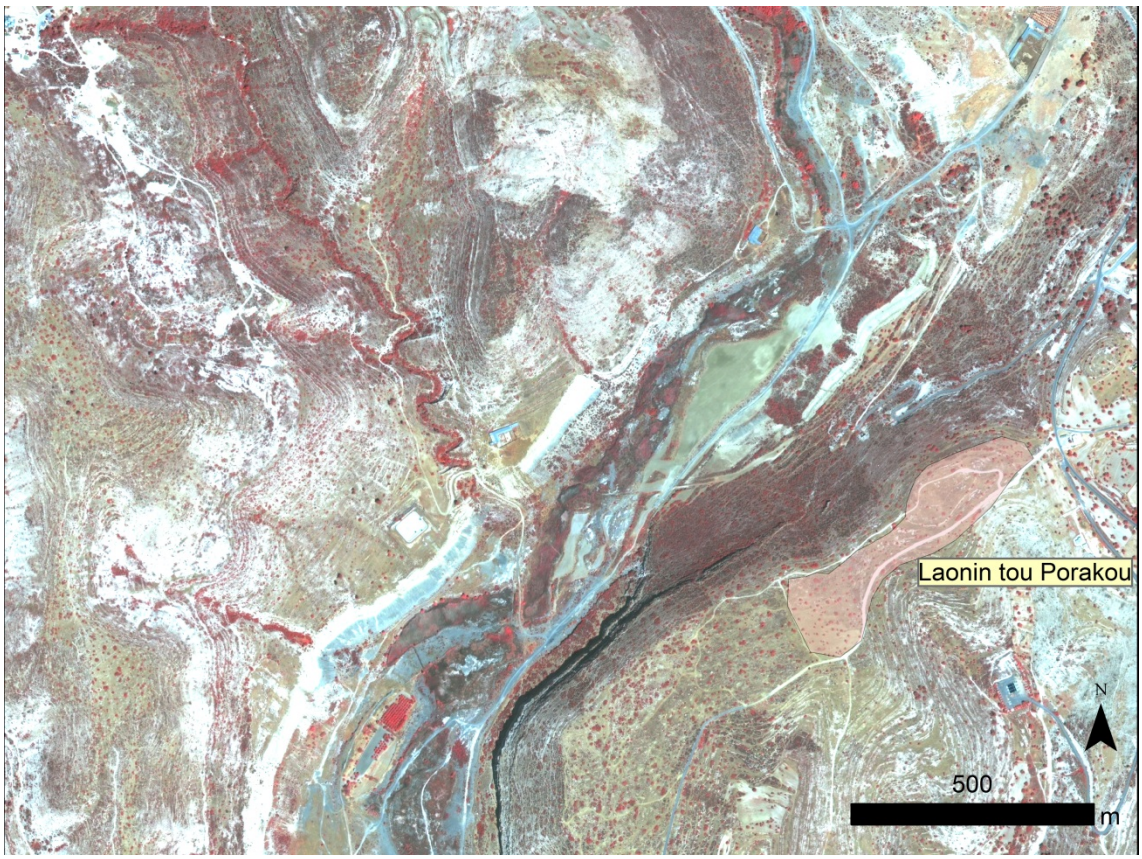


Figure 5.7 Erimi-Laonin tou Porakou close-up (produced by the author on ArcGIS).

Comparable specialised settlements have not yet been noted from the Episkopi environs, which likely points to different economic activities and network participation between the two parts of the Kouris. The Episkopi area largely bears evidence for agriculture and small scale animal husbandry, organised at a domestic scale through family groups with remarkable multiply interred tombs (Chapter Seven, pp.340-342). These briefly published tombs are linked with strong kinship-based groups associated with land ownership and heritage (Weinberg 1956: 12; Keswani 2004: 51-55; 2005: 349; Dunn-Vaturi 2003: 177). Simultaneously, the available information from *Laonin tou Porakou* is suggestive of a higher degree of specialisation, embracing animal husbandry and related secondary products, in this case, textile production.

The N Kouris sites are far from known copper mines, yet relatively close to the sulphide-rich ores. The closest copper mine is Ayios Mamas-*Skourka*, the earliest unquestionable LC in situ mining activity, supported by the coexistence of LCI sherds

and slag (Hadjisavvas 1986: 64, no.7-8; 1989: 35; 1994: 112; Swiny 1982: 77), which is located at least 12 km from *Laonin tou Porakou*. Therefore, the economic basis in the north of the Kouris during the EC-MC is speculated to be large scale animal husbandry, smaller-scale agriculture, secondary products processing, wild vegetation gathering, hunting and probably exchange through intra-island routes while, in the South, primarily larger-scale agriculture and wild vegetation gathering (see also Halstead and Isaakidou 2011: 64 cf. Karavidas 1931 for similar case studies from Crete).

Common pottery types suggest perpetual contact between the areas N and S of the valley, most strikingly because the evidence from *Laonin tou Porakou* does not present local particularities; it instead belongs to the general *Phaneromeni* tradition, pointing to regional pottery production (Bombardieri 2011; Carpenter 1981: 64; Herscher 1976: 11-19). The frequent communication between the sites and their participation in a common economic framework is also supported by the topographic settings of *Laonin tou Porakou*, overlooking the Episkopi bay that is located over 10km to the south (fig.5.8).

Figure 5.8 View from Erimi-Laonin tou Porakou (personal photography, August 2011).

The localised, community-based economic activities and population interaction continued after the abandonment of the EC/MC sites with the re-establishment of permanent occupation areas in the same landscape settings. During the LCIA, settlement drift is observed in the Kouris valley with the abandonment of *Phaneromeni* in favour of *Bamboula* and the abandonment of Erimi-*Laonin tou Porakou* in favour of Alassa-*Paleotaverna* and *Pano Mandilaris* (fig.5.13). The newly established settlements are exceptionally close to their EC/MC counterparts. Episkopi and *Laonin tou Porakou* are abandoned after damages caused by alleged earthquakes, which must have also affected the *Kafkalla* associated settlement without, however, instigating abandonment of its general area. Erimi-*Kafkalla* cemetery provides evidence of use until LCIIB-C (Kiely 2005: 129 *contra* Swiny 1981: 63 and Georgiou 2006: 371, no.384 who support LCIA) without a confirmed associated domestic compound. This conclusion is supported by surface evidence found in a probable settlement at Kandou (Christou 1995: 804: figs. 12-14), adjacent to *Balies*, which provides pottery comparable to *Bamboula* and Alassa. Importantly, the earthquake's aftermath promoted abandonment of the settlement premises, but *not* the general landscape, which remained exploited in a similar mode until the LCIII. This persistence marks a striking difference from the previously analysed Vasilikos and Maroni valleys, and may be associated with existing durable economic networks. Important questions pertain to the character of these networks, particularly whether they were local, regional or interregional. An answer can be provided after the analysis of the neighbouring river valleys.

West Kouris

The torrents adjacent to the villages of Sotira, Paramali and Avdhimou, with the same nomenclature respectively, are the principal area of the Episkopi survey. This survey underscores a chronological diversity between the Kouris sites and 16 find spots located to the west of the river and interpreted as settlements that, in most occasions, are spatially associated with cemeteries.

Symboulos – Sotira

An important Philia-EC site at the Symboulos valley (p.249, tbl.5B), Sotira-*Kaminoudhia*, was both excavated and subjected to catchment area survey (fig.5.9) (Held 1988; Swiny and Mavromatis 2000). Survey exposed a probable settlement, Sotira-*Troullin tou Nikola*, approximately 1km W of *Kaminoudhia*, with a date to the MCII-MCIII (Swiny *et al.* 2003: 468-469), and two find spots at *Sterakovou* and *Koratzies* (not illustrated on the map) consisting of EC and MC pot-spreads (Swiny and Mavromatis 2000: 440). These find spots represent possible off-site activities, which however, remains speculation until more material is published.

Kaminoudhia is located between two streams and less than 1km from the Symboulos torrent. The adjacent soils are shallow and erodible with colluviation material concentrating in small areas, mainly plateaus. The current soil profile is at present considered notoriously ill-suited, unproductive and prone to erosion (Calcisols, FAO Corporate Document Repository: www.fao.org/DOCREP, March 2012). It is, however, appropriate for xerophytic vegetation and grazing, and meet with some agricultural success when irrigated, as evinced by modern vegetation maps. As discussed in the previous case studies, shallow erodible soils may be preferred for household-scale, garden agriculture, especially when suitable tools for manipulating deeper, clay-rich soils are not yet available. This does not exclude the possibility of agricultural exploitation of the nearby alluvial plains, despite a lack of material substantiation (see also Chapter Three, pp.98-101).

The architecture and burials discussed in Chapter Seven (pp.342-346) corroborate the conception of a small household based rural village. The agro-pastoral lifestyle is manifest in the co-occurrence of domestic and non-domestic activities in the settlement and lack specialised function or activity areas (Swiny *et al.* 2003: 23). Evidence from the tombs does not point to noticeable economic variability or patterned inequalities, but instead an introverted community, whose external communication is attested by the few metal artefacts from the settlement area (Swiny *et al.* 2003: 373, 380; Giardino *et al.* 2003: 392). The site was abandoned by the end of the EC and subsequent archaeological evidence comes from *Troullin tou*

Nikola, dating to the MCII. The chronological association between the two sites is unclear, as pre-MC pottery is likely outnumbered by predominant and subsequent MC types.

Envisaging the catastrophic end of *Kaminoudhia*, the possibility of re-establishing a settlement in the same landscape, as observed also in the neighbouring Kouris valley, should be considered. *Troullin tou Nikola* is located at the confluence of the Symboulos and a tributary with comparable geological and geomorphological characteristics as *Kaminoudhia*.

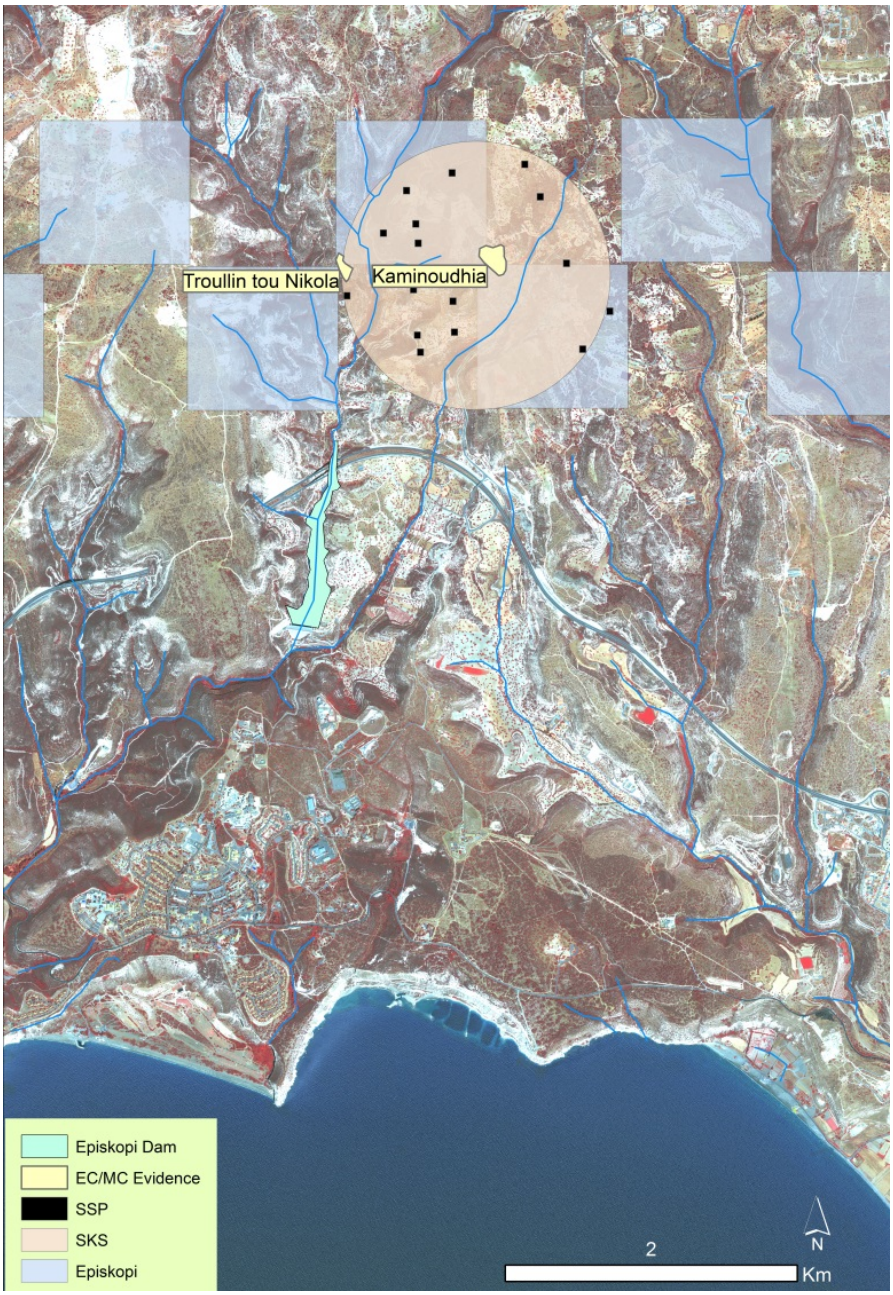


Figure 5.9 The Symboulos valley EC/MC archaeological evidence (produced by the author on ArcGIS with data from Swiny 1981; 2004).

Systematic surface investigation points to the domestic character of the site, based on the collection of diagnostic MC pottery including coarse ware, and stone artefacts, such as saddle querns, pounders and rubbing stones. Tombs are located at the base of the promontory location of *Troullin tou Nikola*, close to the W bank of Symboulos (Held 1988: 59; Swiny and Mavromatis 2000: 435-438). Similar spatial association is observed with the location of the Erimi-*Laonin tou Porakou* cemetery at the base of the hill, where the settlement and workshop are located (Bombardieri 2011).

Importantly, the spatial association between *Kaminoudhia* and *Troullin tou Nikola* provides finer chronological evidence to support the general observation of EC/MC habitation within the same landscape, which is reflected, for example in the Vasilikos, through a high density of recorded sites generally dating to the EC/MC.

After the abandonment of *Troullin tou Nikola*, there is no evidence for continued occupation in the N part of the Symboulos River. Swiny's survey did not record LC pottery from Symboulos, however his investigation excluded the abutting coastal area. Considering contemporary population movement, closer to deeper soils and toward the coast in valleys, such as Maroni and Vasilikos, one could reasonably speculate that the lack of LC information is related to the limited extent of archaeological survey. Nonetheless, Swiny investigated coastal zones further to the west, without identifying LC pottery.

Paramali

The valley associated with the torrent W of Symboulos takes the name of the nearby village, Paramali (p.250, tbl.5D). The torrent merges with a tributary 2,5km from the coast, which is part of the modern village of Avdhimou. Episkopi survey recorded Paramali-*Pharkonia*, Paramali-*Mandra tou Pouppou* and Avdhimou-*Shylles*, all located at the W of the stream, with the latter situated south of the streams' confluence (fig.5.10). The three probable settlements comprise recognisable domestic areas and associated cemeteries, spreading across the stream. Swiny mentions that the area

between *Pharkonia* and *Mandra tou Pouppou* contains a thin spread of pottery and a gaming stone (Swiny 1981: 68), possibly pointing to the mobility of the local population and the existence of multiple activity areas.

Later survey of the area added the site of Paramali-*Lochos* or *Lakkos* (Herscher and Swiny 1992: 72; Swiny and Mavromatis 2000: 435-438), located opposite *Pharkonia*, at what he mentions as a considerable distance from water. This distance formed the basis of the suggestion that *Lochos* was a special function site (Herscher and Swiny 1992: 72); however discovery of Bronze Age burial evidence from the area could challenge this opinion, when a more specific chronological association is established.

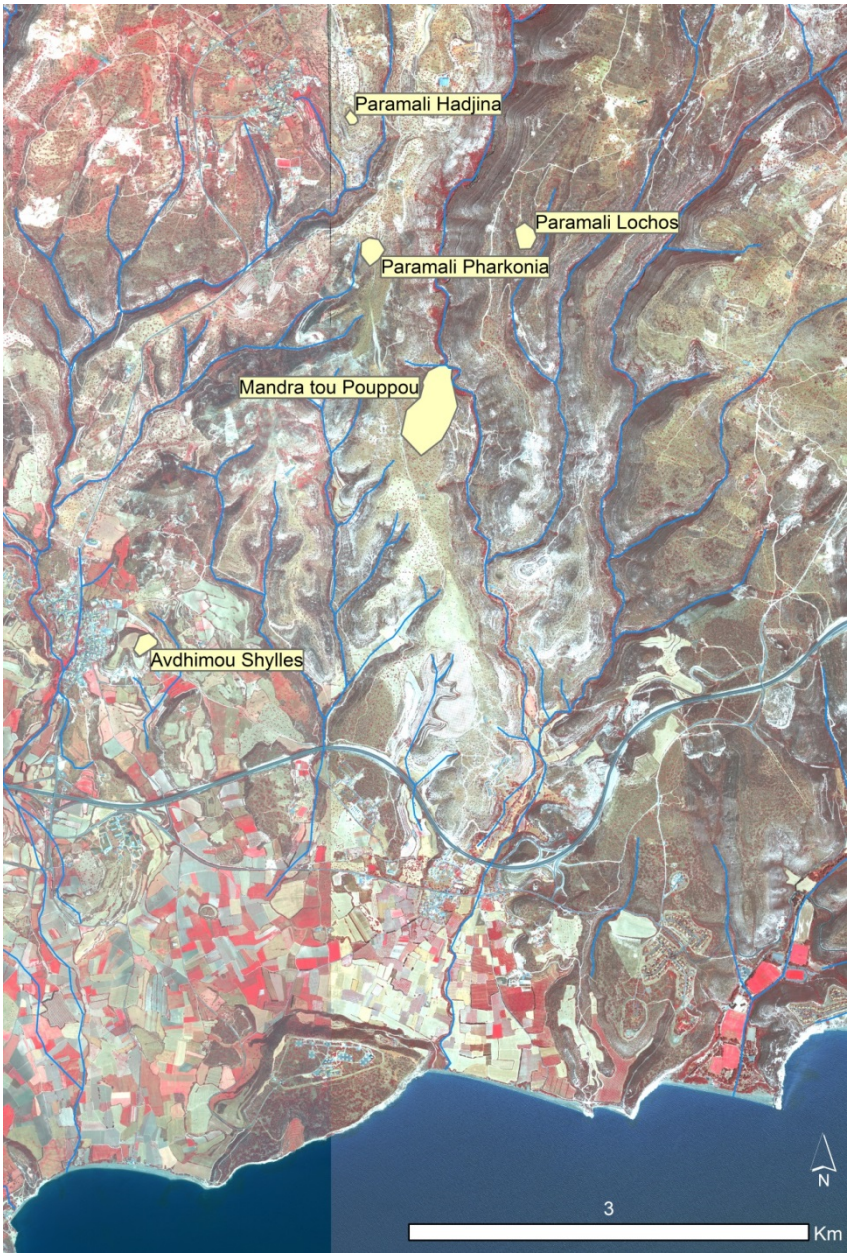


Figure 5.10 The Paramali Valley EC/MC evidence (produced by the author on ArcGIS with data from Swiny 1981 rectified on Quickbird 2009).

Although this study has not precisely located *Lochos*, based on the distribution of both active and non-active streams, it appears that its general area is rich in water resources and Swiny's observation may be based on the available and visible water resources during his survey.

Chronology and contextualisation are adversely affected by diachronic looting, natural and anthropogenic erosion, therefore the discussed chronological associations are used judiciously, by incorporating Swiny's (1981: 83-86), Herscher's (1976, 1981) and Georgiou's (2006: 62-68) pottery observations. Paramali-*Hadjina*, located 600m N of *Pharkonia*, consists a cluster of small tombs likely dating to the ECI-II, providing the earliest Bronze Age evidence for Paramali (Herscher and Swiny 1992: 75). Comparable date is proposed for the earliest pottery from looted tombs from *Pharkonia*, whose 3 cemetery clusters date between ECI and MCI (Swiny 1981: 68; Herscher and Swiny 1992: 70-75; Swiny and Mavromatis 2000: 435; Swiny *et al.* 2003: 391), while no analytical information accompanies the domestic debris. Finally, pottery possibly dating to the ECIII is mentioned among the surface finds of *Lochos/Lakkos*, whose predominant occupation period dates well into the MC (Herscher and Swiny 1992: 72; Georgiou 2006: 376: no.393).

Mandra tou Pouppou comprises at least three cemetery clusters and an area with highly concentrated domestic debris (Swiny 1979: 271-273; 1981: 67-68; Swiny and Herscher 1992: 70; Georgiou 2006: 376: no.394), an indisputable indication for a settlement. The pottery associated with the cemeteries points to an earlier date (MCI-II) than the corresponding ceramics from the suggested settlement area (MCIII-LCI).[2] This does not preclude the existence of an earlier occupation phase underneath the surface finds, likely associated with the tombs. Similar dates are provided by *Lakkos/Lochos* with 2 dromoi clusters probably dating to the MCII-III and a settlement or specialised function site with a slightly later date (MCIII-LCI) (Georgiou 2006: 376, no.393). The cemetery and settlement of Avdhimou-*Shylles*, located 2km from the coast, provides comparable chronological association. The pottery associated with the burial cluster slightly pre-dates the domestic debris,

[2] Georgiou 2006: 376, no.394: proposes the MCI-III for the general complex of Mandra tou Pouppou.

which itself dates to the MCIII-LCI (Swiny 1979: 273-276; 1981: 68-69; Georgiou 2006: 367: no.379).

Similar to Kouris, the Paramali valley and its perennial stream encompasses two clustered population areas: a southern area, closer to the coast and adjacent to the Avdhimou bay, and the Paramali sites, located between 4 and 6 km from the coast. The area surrounding Paramali is currently characterised by soil prone to erosion, suitable for xerophytic vegetation and currently covered with maquies. Similar to the area surrounding Erimi and Sotira, the Paramali hinterland is suitable for animal husbandry and small-scale agriculture. In addition, the landscape provides protection from all directions, especially at *Pharkonia*. Avdhimou-*Shylles*, on the other hand is situated close to an open and fertile plain between the Paramali and Avdhimou rivers. The soil fertility of this area is sharply contrasted with the surrounding degraded land. Today the valley is used for olive tree, citrus and cereal cultivation along with a thin strip of vineyards, suggesting that agriculture has long had predominant role in the local economy.

To conclude, the anthropogenic use of the valley is one of duality, similar to that of the Kouris, Vasilikos and Maroni valleys, until occupation is interrupted for unknown reasons at the end of the MCIII on both parts of the Paramali valley. Occupying the same valley system does not necessarily support co-operation within the Paramali sites, a dynamic currently supported only by their comparable chronological abandonment. The dual concentration of sites, though, points to similarities in settlement systems, which sustain agriculture, animal husbandry and the economic networks linking different clusters of the valleys.

Avdhimou

A large number of burial clusters are located across the Avdhimou valley and the adjoining tributaries (fig.5.11). The clusters have, in most occasions, been associated with an adjacent settlement, identified as an area with domestic debris accumulation (p.251, tbl.5E). Still, no firm chronological association is achieved; a

problem largely related to the lack of excavations and the small number of comparable EC/MC settlement assemblages, with the exception of *Phaneromeni* (Carpenter 1981).

Figure 5.11 The Avdhimou Valley EC/MC evidence (produced by the author on ArcGIS using data from Swiny 1981 and rectifying on Quickbird 2009).

The sites spread from the eastern bank, over the river and primarily situate W of the river. Anogyra-*Peralijithias* is the northernmost settlement, located W of a tributary; probable settlements or off-site activity areas, Anogyra-*Kolokos* and

Anogyra-*Livadhia* west of *Peralijithias*; the cemeteries of Anogyra-*Kannavokampos* and Anogyra-*Trapezi* are situated along an adjacent tributary W of the river, approximately 8km from the coast; the Avdhimou-*Büyük Tarla* settlement is located to the E of the river; a probable settlement associated with burial clusters, Avdhimou-Ambelovounos is located to the W of the river, SW of *Büyük Tarla*, and probable settlements of Avdhimou-*Alatomi*, Avdhimou-Stympouli and the cemetery of Avdhimou-*Amolo* are situated approximately 2km from the coast. Two more sites are known from Avdhimou; the cemetery of *Kamares* (not illustrated on the map) with 4 excavated tombs, and a site called *Koilades* with a cluster of non-researched, looted tombs, probably associated with *Alatomi*, 250m to the SW.

The enigmatic site of Anogyra-*Trapezi* provides the earliest evidence for occupation in the Avdhimou valley. A tomb with suggested Philia elements was excavated by the Department of Antiquities (Dikaios 1961b: 14-15; 1962: 141-149), but its re-discovery was not possible by Catling (1962: 149: no.13) or Swiny (1979: 292-296; 1981: 74-75). Georgiou (2006: 364: no.372) mentions the re-location of the site in 2005 and based on previous reports dates it to the Philia and ECI-II periods. The inadequate archaeological evidence associated with this enigmatic tomb cannot be accounted beyond geographical reference points. Materially supported and intensified occupation on the valley can be discussed with the establishment of Anogyra-*Kannavokampos* (Karageorghis 1968: 292; Swiny 1979: 296-297; MacLaurin 1980: 241: fig. 119: 2-3; Swiny 1981: 75-76), Avdhimou-*Ambelovounos* (Swiny 1979: 286; 1981: 72-73), Avdhimou-*Amolo* (Swiny 1979: 278-282; 1981: 69-71) and Avdhimou-*Stymbouli* (Swiny 1979: 276-282; 1981: 69-71) in the ECI, with evidence of continued occupation in the early MC and burial evidence dating up to the MCII. To sum up, the ECI-MCI occupation is concentrated yet again to the N and S of the valley on hilly terrain.

A shift in settlement patterning is observed in the ECIII/MCI with the establishment of new occupation areas at Anogyra-*Kolokos* (Swiny 1981: 76-77), Anogyra-*Livadhia* (Merrillees 1977: 43; Karageorghis 1978a: 884, 893; Stanley Price 1979a: 156 and 133; Swiny 1979: 301-309; 1981: 77-78; 1986: 71-76; Weinstein Balthazar 1990:

263-264), Anogyra-*Peralijithias* (Merrillees 1977: 43; Karageorghis 1978a: 884, 893; Stanley Price 1979a: 156 and 133; Swiny 1979: 301-309; 1981: 77-78; 1986: 71-76; Weinstein Balthazar 1990: 263-264), Avdhimou-*Alatomi* (Swiny 1979: 282-286; 1981: 71-72), Avdhimou-*Büyük Tarla* (Swiny 1979: 287-292; 1981: 73-74) and probably Avdhimou-*Kamares* (Vavouranakis and Magginis 1995; Magginis and Vavouranakis 2004) and Avdhimou-*Koilades* (Karageorghis 1969: 486-89; Swiny 1979: 285-6), with evidence of continuation until the MCIII. MCIII is the chronological frame with the densest archaeological evidence in the Avdhimou valley. Several of the aforementioned sites are assigned later dates by Swiny; however, with subsequent increase in the evidence of EC/MC pottery from excavated settlements and further pottery classification research, Georgiou provides a reviewed and widely supported new date.

The ECIII/MCI-MCIII activity areas of Avdhimou are concentrated 2km from the coast, at *Büyük Tarla*, located 3,5km from Avdhimou, and Anogyra-*Peralijithias*, located almost 10km from the coast. Among these, *Büyük Tarla* is distinguished by the existence of architectural remains and the extent of what was identified as domestic debris (fig.5.12), with Swiny estimating the area covered with thick pot-spread at 17,5ha (Swiny 1981: 73). Site size estimations based on pot-spreads and densities of contemporaneous sites do not exceed 7,5ha (*Peralijithias*) (Swiny 1981: 77) and in most occasions oscillate between 3-4ha. Remarkably, despite the density of MC material, there exists no firm evidence of LC occupation in the valley; although Swiny extends some of the MC dates to the MCIII/LCI. Similar to its neighbouring tributary valleys, the areas of Anogyra and Avdhimou are abandoned at the end of the MC.

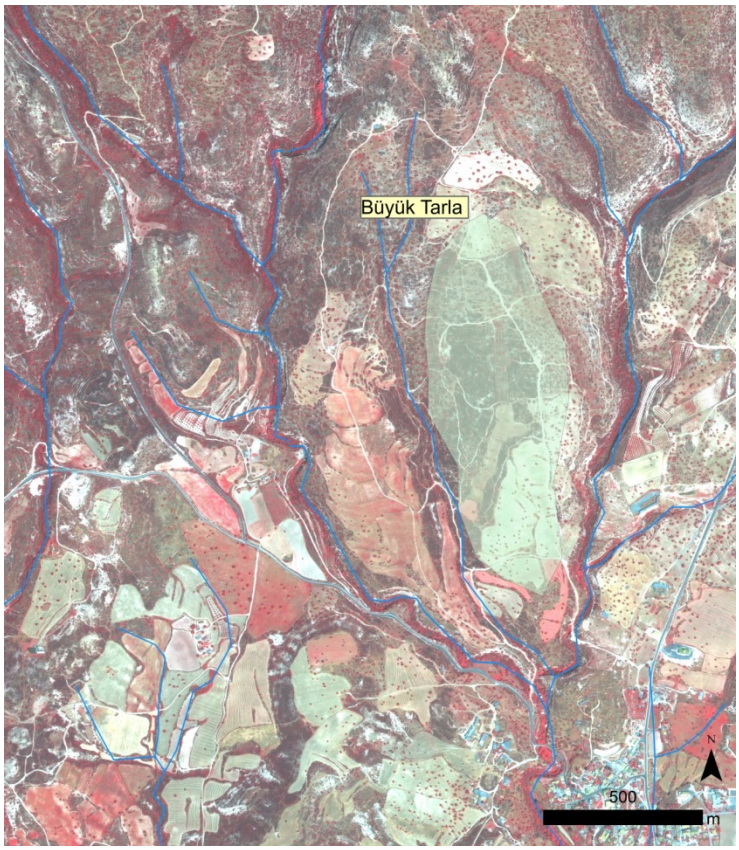


Figure 5.12 Avdhimou- Büyük Tarla close-up (produced by the author on ArcGIS).

Diachronic occupation in the area is likely associated with its agricultural exploitation contemporaneously with Avdhimou-*Shylles*, while occupation at Anogyra is probably related with the prevalent pastoral land. Notable, is the convenient location of *Büyük Tarla* at the edge of the hilly terrain with its shallow erodible soils, and in association with slightly more fertile soils associated with colluviation, providing the opportunity for exploitation of both domesticated and wild vegetation. In association with its equidistant location between the Avdhimou cluster and Anogyra-*Peralijithias* it may be supported that it acted as a link between the two parts of the valley. Its size, indicative of higher population concentration, may be related to its role as a communication node between the various parts of the Avdhimou valley. However, the valley's relation with the contemporaneous elements of the Paramali valley remains obscure, as their short intervening distance is characterised by hilly terrain, likely limiting expedient communication to routes through the lowlands.

In sum, while the minor valleys under discussion follow a similar chronological framework as the Kouris valley, their communities, for reasons that can only be speculated, have not maintained the MC settlement areas and subsequently migrated to yet unknown location(s). These locations may be Episkopi-*Bamboula* or Kouklia-*Palaepaphos* (Catling 1979; Maier and Karageorghis 1984: 46-47; Maier and von Wartburg 1985: 146-148; Rupp *et al.* 1992: 290; Sørensen and Rupp 1993: 6-7), located 12km E and W respectively, or other yet unidentified areas. Concurrently, the lack of LC archaeological evidence from the aforementioned valleys could be associated with the intuitive character of Swiny's survey and the problematic archaeological visibility of off-site activity areas (Chapter Two, pp.70-72). Systematic reinvestigation of the area during the 1990s has yet to add LC sites or elements, and the only site with confirmed and undisputable LCIA elements is Paramali-*Mandra tou Pouppou* (Swiny 1979: 271-3; 1981: 67-8; Herscher and Swiny 1992: 70; Georgiou 2006: 376: no.394).

Kiely associates the abandonment of these sites with the newly established *Bamboula* and Alassa to the S and N of the Kouris respectively. He also uses the term "synoicism" to explain the concentration of population in areas - control points along mining routes, as part of a copper-oriented economy. Kiely also briefly mentions intensified agriculture in the general observations as an activity-shift towards the alluvial fertile lands (Kiely 2005: 130). Even though he introduces the idea of organisation of landscape exploitation by a group of 'elites', he hesitates to put it forward (Kiely 2005: 131-132) due to insufficient information on the process leading to the creation of large storage facilities in fertile plains, discussed in the following section.

The abandonment of a fertile area such as the Avdhimou valley in a period of economic diversification and intensification raises questions. Kiely and the author hesitate to support total abandonment of these valleys based solely on the lack of surface evidence; Kiely introduces an interpretative avenue which favours the control of the area from a distance, through the establishment of archaeologically invisible farmsteads. Kiely supports this opinion mainly on the lack of LC burial

evidence suggestive of permanent occupation (Kiely 2005: 132). However, as noted in Chapter two, p.69), LC burials are often intramural and with very low surface visibility.

The abandonment of sites from Symboulos, Paramali and Avdhimou valleys, along with the abandonment of Pyrgos (Belgiorno 1995: 61; 1997: 119), a metallurgy settlement (Chapter Six, pp.263-264), at the end of MBA suggests intriguing settlement dynamics that may be investigated under a different perspective and in association with the establishment of LBA sites at Limassol (Karageorghis 1977: 714, 718, figs. 24a-b; 1978a: 888-893, figs. 29-36; Christou 1995: 804, fig.25; Violaris 2012: 20-21), *Bamboula* and Alassa. Is this shift reflective of new networking routes (Kiely 2005: 142-143) or perhaps new community relations associated with an increased agricultural production scale and land right contentions? Is the establishment of settlements with urban foundations and monumental architecture simply evidence of more formalised relations, or does it also signify the result of a long process of land negotiation within local communities, and possibly neighbouring regions?

The LC Evidence

The LC evidence from the Kouris valley is primarily concentrated at Alassa and Episkopi-*Bamboula*, along with burial evidence from Erimi-*Kafkalla* and the enigmatic LCIII site at Erimi-*Pitharka* (fig.5.13). The economic and socio-political relation of the two major clusters is obscure, as Alassa is not directly associated with a known mine and *Bamboula* has no clear evidence of an associated port (Christou 1997: 371). Alassa bears a number of characteristics of primary coastal centres (Keswani 1993: 77; Knapp 2008: 138), yet is located at least 12km from the nearest coast, while *Bamboula*, despite its closer proximity to the coast, lacks the architectural elaboration and functions of primary centres, while possessing an urban infrastructure. Therefore the sites do not conform to the traditional settlement pattern models discussed in Chapter One (pp.11-19), but rather

demonstrate local (economic and socio-political) particularities. Episkopi-*Bamboula* is located upon a relatively elevated plateau near the Kouris river. As mentioned, the alluviation of the wide Kouris fan would have covered any activity within its catchment area (Christodoulou 1959: 41; Pantazis 1966: 139; Xenophontos 1996: 183); therefore the location of *Bamboula* is understood in terms of its proximity to the fertile estuaries *in tandem* with protection from alluviation. The site bears evidence of town planning (Weinberg 1983: 7), urban infrastructure, such as wells, access to imported artefacts (Murray *et al.* 1900: 57, 72-74; Benson 1972: 64-138), script use in the form of pot-marks as early as the LCIA (Daniel 1941; Weinberg 1983: 25; Hirschfeld 2008) and seal use starting from the LCIIA (Porada 1948; Smith 2012: 39), with the earliest impressions on clay dating to the LCIIB (Smith 2012: 43). No remarkable economic inequalities are detected in the domestic material culture despite the independence of domestic units (Chapter Six, pp.266-268) (Weinberg 1983: 9) - a contrary configuration to the agglutinative architecture of the EC and MC (Chapter Six, pp.264-265).

In addition, no large storage facilities, comparable to Building X at *Ayios Dhimitrios* or the West Building of Maroni-*Vournes*, have been excavated, even though the location of the site signifies the importance of agriculture for the local community. Agricultural activities likely served household or group level consumption, as no central processing and storage area has been recovered from which the products would be channelled to intra-valley or inter-regional trade networks. This observation can be questioned by the imported artefacts and the enigmatic cellar of a domestic unit found to include a number of storage jars with incised CM marks, all supporting the active direct or indirect participation in extra-community economic networks. However, no anchorage, port or exchange point is associated with *Bamboula*, despite it being located 2km from the nearest coast, unless such a point is located closer to the Kouris river and subsequently obscured by diachronic alluviation, or has been submerged following sea-level change. Obtaining exotica may be related to entrepreneurial trade through inland or coastal routes. Entrepreneurial, rather than centrally organised trade within and through

Bamboula is further supported by the lack of large-scale storage and export evidence. The origin of entrepreneurs or potential boats can only be speculated (see Artzy 1997: 5; Sherratt and Sherratt 1991: 358; Monroe 2011: 94). Episkopi is not closely associated with mines or areas with strong evidence of metallurgical activities, which could introduce copper to an intra-island or international market;

therefore, the question as to which products were exchanged for the recovered exotica remains (Chapter Seven, p.243-246).

Figure 5.13 The Kouris Valley LC evidence in association with the EC/MC-LCIA habitation areas (produced by the author on ArcGIS with data from Weinberg 1983; Hadjisavvas 1986; Papanikolaou 2012).

Storage facilities in the Kouris valley are found in Alassa, where the modern landscape altered dramatically with the construction of the Kouris dam in the late 1980s. The triangle between the river tributaries is fertile; however it covers a geographically restricted area. Despite traces of metallurgical activities found in four areas of Alassa, Hadjisavvas (1989: 39) supports that the site was predominantly agricultural.

Finally, Erimi-*Kafkalla* is central to our understanding of the industrialisation of landscape and the Kouris valley production system. *Kafkalla* is a rural community located 7km from Alassa and 2,5km from *Bamboula*, close to the river and its narrow alluvial plain. It is possible for it to communicate with both sites through natural routes, an observation that prompts questions regarding the degree of co-organisation and control in these relations.

Based on the available architectural evidence, that is the employment of impressive construction material and techniques (Channel Six, pp.270-275), and the material evidence for decoration/marking of large storage pithoi with seal impressions (Smith 2012: 39), Alassa is a primary candidate for influencing the economic relations of Kouris valley. Production and storage organisation is further supported by the discovery of the largest number of seal impressed pithoi and the largest variety of highly symbolic iconographic representation, discussed in the following section (Caubet *et al.* 1987: 47, no.14, pl. XV:5; Christou 1993: 738, fig.40; 1994: 671; 1995: 819; Hadjisavvas 1994: pl. XIX; Feldman and Sauvage 2010: 140-144).

Ashlar, Pithoi and Landscape Control

Landscape control is materially substantiated in the enigmatic site of Erimi-*Pitharka*. The site comprises four areas with a complex of chambers and architectural remains (Papanikolaou 2012:310), located at a short distance from the cemetery of *Kafkalla* (Vassiliou and Stylianou 2004: 183). The description of the chambers is reminiscent of the cellar- storage room excavated at Episkopi-*Bamboula* (Benson 1969: 20-21) inside a house and filled with storage jars, dating to the LCIIC-LCIIIA (Chapter six,

pp.268-269). Based on the excavated evidence, the *Pitharka* chambers included a large number of pottery fragments, including lamps, the so-called wall-brackets and large number and variety of stone tools (mostly querns), dating to LCIIC-LCIIIA (Vassiliou and Stylianou 2004: 183). Proto-WP ware extends this date to LCIIIB (2004: 188).

According to Papanikolaou (2012: 311), area I includes the architectural remains of a large 375m^2 building that employs sizeable rectangular stones, imitating ashlar blocks. The surface scatter, largely composed of pithos sherds, points to the storage character of this building more so than its suggested "administrative" role. This so-called "pseudo-ashlar" building dates to the LCIIC-LCIIA, but the area bears evidence of earlier use, based on two LCI-II burials found underneath the building's foundations.

Area II consists of three retaining walls in association with rock cut basins connected with carved canals/drains reminiscent of Erimi-*Laonin tou Porakou* (Papanikolaou 2012: 312). This evidence in addition to two rock cut chambers with ground stone tools, pithos and coarse ware sherds support the existence of a workshop. Area II additionally encompasses the remains of a large building, referred to as "monumental" and discussed as an important building overlooking the Kouris valley (Papanikolaou 2012: 312). It is possible that the remains of Erimi-*Pitharka* are suggestive of a more complex function in the area than the simplistic denotation of a "supporting agricultural village"; a definition influenced by settlement pattern models and inconsistent with the excavator's additional description of the existence of administrative buildings (Papanikolaou 2012: 314).

A more dynamic role is evident if consideration is given to a series of chambers, caves or rock cut installations from Area IV. Within, were found pithos and coarse ware sherds, imported Mycenaean vessels, imported and locally produced Canaanite jars, monochrome ware, coarse ware and plain white pottery with widespread examples bearing pot marks (Vassiliou and Stylianou 2004: 189). Over 35% of pottery comprises of pithoi fragments, some of which preserved evidence of decoration (Vassiliou and Stylianou 2004: 191). Most importantly pithoi with

comparable decoration were excavated at Episkopi-*Bamboula* and associated with the use of common local clay sources (Pilides 2000: 110-111). The concentration of such vessels in storage facilities could stand-in for a large/central storage area employed for a regional Kouris economic system; a system in which agricultural products are processed, stored and distributed within intra-valley and interregional economic networks, and alongside other products evidenced by the multiple functions witnessed in the chambers' accoutrements (Vassiliou and Stylianou 2004: 183).

The site excavators refer to *Pitharka* as a settlement, prompting the question of whether, after abandonment, the community or part of the community of *Bamboula* settled at Erimi. Intriguing interpretations are furthered by the discovery of a three-stepped capital at the field surface (Vassiliou and Stylianou 2004: 185), traditionally related with ritually loaded contexts dating to the LCIIC-LCIIIA. The three stepped capital, associated with Aegean immigrants in previous research, prompted investigation of the ethnic identity of the population who "lived" and "worked" in this area (Vassiliou and Stylianou 2004: 198). Discussions of ethnic identity are largely based on the perception that the stepped capital is associated with ashlar masonry that has traditionally been assigned an Aegean origin (Karageorghis 1971b), despite the absence of parallels from the mainland (Webb 1999: 181). This study, does not consider necessary the direct association of cultic activities with the subterranean complex.[3]

The LC *Pitharka*, especially Area IV, can be classified as a specialised function area, probably associated with a settlement in Areas I and II. Comprehensive publication of the 2007-2008 site revisit and excavation will provide useful, including the Department of Antiquities' concise reports on the discovery of a probable pottery kiln (Erimi-*Pitharka*, Department of Antiquities: http://www.mcw.gov.cy, October 2012). In a brief and non-illustrated report, the kiln is described as an ovoid-shaped feature with traces of burning and what have been interpreted as ventilation holes. However, it is not known if it is associated with pottery production or other

[3] Smith 2012: 45 describes *Pitharka* as 'habitation structures built below the ground'.

activities related to agricultural products processing and storage, which are materially predominant at Erimi-*Pitharka*.

Flourentzos (2010: 9-10) suggests that the complex published by Vassiliou and Stylianou is a workshop, while the finds from his later exploration are suggestive of a cult or administrative complex. The cultic and/or administrative character was based on the surface discovery of fragments of a consecration horn, the aforementioned stepped capital, and the excavation of Mycenaean terracotta basins/bathtubs, which Karageorghis (1998: 281) considers as part of "purification rituals".

However, the stepped capital and the fragment of consecration horn are neither *in situ* nor in context. Moreover, recent contextual re-assessment of the bathtubs supports their central role in industrial activities, in particular textile production (Fisher 2006-2007: 85-86; Mazow 2006-2007). The industrial character of *Pitharka* is also substantiated by the association of bathtubs from Area I with carbonised mud brick, sherds and grape seeds (Papanikolaou 2012: 312). In addition, despite the traditional interpretation of stepped capitals as free standing votive monuments (Du Plat Taylor 1957: 16; Karageorghis 1971b; Maier and Karageorghis 1984: 99), Webb, through her comprehensive study of ritual architecture in LBA Cyprus, suggests that these served an architectural function (Webb 1999: 181). While there exist examples of stepped capitals (though not *in situ*) that could be associated with secular buildings,[4] such cannot be suggested for horns of consecration that are widely associated with Aegean immigrants (Loulloupis 1973: 242; Renfrew *et al.* 1985: 413; Papadopoulos and Kontorli-Papadopoulou 1992; Papadopoulos 1997), and have also been assigned ritual character (Nilsson 1950: 184-185; D'Agata 1992; Powell 1977: 70-80; Willetts 1978; Rutkowsky 1979: 226; Hitchcock 1998: 163-168). Nonetheless, thus far no architecture or secured archaeological context can sufficiently support the existence of a ritually loaded area at *Pitharka*.

[4] For example Kouklia Evreti and Arkalou: Karageorghis 1984: 947, fig. 147; 1985: 842; Maier 1985: 118, n. 74.

Despite interpretative issues, *Pitharka* is important for its contribution to site classification systems and the establishment of chronological continuation from the LC to the Iron Age (Flourentzos 2010: 10). The distinct character of *Pitharka* further derives from its location along a significant communication node in the Kouris valley that links Alassa and Episkopi. These sites bear evidence of participation in a common bureaucratic system, at least in the LCIIC-LCIIIA, which coincides with the establishment of *Pitharka*. When this bureaucratic and associated economic system declined, Alassa and Episkopi are abandoned, while *Pitharka* maintains its spatial occupation without disruption. This continuation is unlikely to be associated with the unique ritual character assigned to *Pitharka*, but rather to its location in a highly productive landscape; a quality sustained by Iron Age politico-economic demands.

The Connecting Seals

New approaches on seal evidence inject novel perspective into the power dynamics of the Kouris valley. Smith proposes that only the Kouris valley can provide material substantiation of the politico-economic cooperation of two contemporary settlements (Smith 2012: 40). Alassa-*Palaeotaverna* and Episkopi-*Bamboula* employed the wooden roller as their tool of bureaucratic administration/organisation. This distinction was made on the fact that the wooden roller was predominantly used at Alassa to mark the pithoi found in the ashlar building, while at Episkopi smaller marked vessels were located throughout the domestic compounds. Smith demonstrates the gradual elaboration and re-carving of seals alongside a proliferation of ways of marking by the LCIIIA (Smith 2012: 43). During this period the iconographic themes of *Bamboula* from Areas D, E and F share parallels with *Paleotaverna*, which Smith used to suggest a common bureaucratic system (Smith 2012: 43), while admitting that only a single wood roller is common to both sites (Smith 1008: cat.no.25-26; 2012: 80). It is interesting to observe that Smith associates the diverse signing/marking practices from *Bamboula*'s Area A with maritime trade (fig.5.14) (Smith 2012: 46).

Artefactual distinctiveness between Areas A and E is also seen in their architectural remains. Weinberg noticed that the domestic compounds of Area E were more carefully laid out with clear common orientation and indicating a deliberate plan, while employing ashlar masonry in larger and more robust walls (Weinberg 1983: 50, pl.14a). In contrast, the houses in Area A often shared party walls characterised by more repairs, less sturdy wall construction (1983: 53-55) and were situated close to the gate adjacent to the walls and oriented to the SE (1983: 30-31). Based on the above, Smith supports that Area A was populated by merchants engaged in long distance trade due to their proximity to the coastal road (Smith 2012: 46). Interestingly, the domestic structures of Area E are constructed above earlier tombs (Weinberg 1983: 36-37), contrary to Area A (Benson 1972: 4, 10).

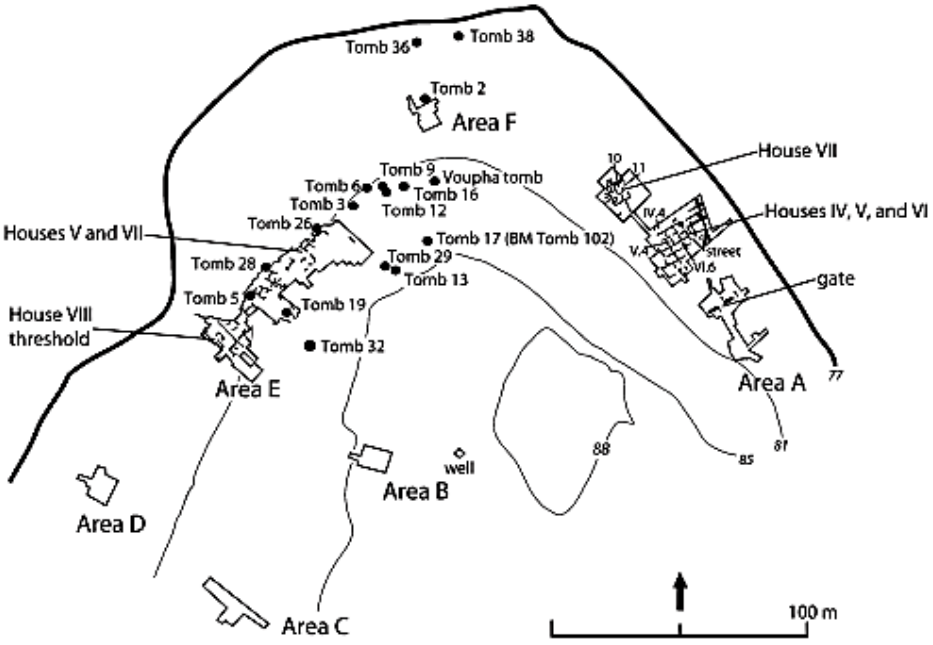


Figure 5.14 Episkopi-Bamboula plan (Smith 2012: 44, fig.2).

This diversity can be additionally interpreted as a difference/contrast between the professional identity of groups of traders and groups of landowners, discussed in Chapter Seven. The latter focused on securing land ownership through a kinship based group affiliation through spatial coexistence with the group of ancestors buried below their domestic units. The more frequently renovated architectural

remains of Area E are suggested to reflect the wealthiest part of the settlement (Weinberg 1983: 50; Smith 2012: 46), despite the high number of imported artefacts uncovered in the domestic component of Area A (Kiely 2010b). Based on the above, direct participation in international trade and access to large amounts of imported artefacts does not ensure the economic, or likely, socio-political status of a merchants' professional identity. In fact, people associated with land ownership and management were probably involved in a more complex bureaucratic system with Alassa; a relationship which provided the resources to invest in architecture and social capital. At the same time, evidence for smelting, seen in crucibles and tuyeres, was found only in Area E, despite the widespread occurrence of copper and bronze objects in the settlement (Benson 1972: 135-138; Weinberg 1983: 49). This may indicate a specialised activity occurring in Area E but not necessarily the control of certain copper ores.

The seal evidence not only supports strong economic and likely socio-political connection between the two parts of the valley, but is also an indication of the connecting role of agriculture at Kouris between Episkopi with Alassa. Episkopi is located closer to the fertile lowlands and provides access to the sea trade routes, while Alassa is located inland within a more limited fertile zone and in presumed association with different economic networks. Importantly, in the LCIIC, Erimi-*Pitharka* is established, containing storage facilities, the products of which may later have been channelled to both Episkopi and Alassa and their respective networks. It is also plausible that Episkopi engages in exchange with Alassa, importing oil, probably wine, products related to animal husbandry, such as textiles and likely copper, while exporting agricultural surplus and imported products. Consequently, the settlement patterns observed in the LC Kouris valley are in principle similar to the EC/MC, but at a larger scale and a more elaborate, patterned, organised and likely formalised manner, which includes direct or indirect participation in the international trade.

The advantage of the Kouris system is probably a lack of strict dependence on trade with both coastal networks, potentially associated with what *Alashiya* has come to

represent, and the general Eastern Mediterranean international network, evidenced by its survival of the economic crisis and continuation and reconfiguration in the LCIIIA. When *Ayios Dhimitrios* and Maroni are abandoned in the LCIIC, Kouris valley witnesses the monumentalisation of Alassa, the successive building phases at Episkopi, the establishment of Pitharka and likely an intensified intra-valley economic cooperation. Finally, these sites were soon abandoned for areas later forming the core of the Iron Age kingdom of Kourion, indicating, at the same time, a strong regionally developed economic reconfiguration.

Regional vs. Local

Regionalism, drawn from pottery assemblages, is a widely accepted concept (Merrillees 1971; Åström 1972; Frankel 1974: 49; Merrillees 2008: 115-116; Crewe 2009a: 79; Maguire 2009a: 39), especially until the early LBA (Merrillees 1971: 70; 1983a: 25; Manning 2007: 117; Manning *et al.* 2002; Crewe and Knappett 2012: 180), whereas standardisation of form and decoration develops through the LCIIC-LCIIIA, eventually becoming island wide and suggesting a certain degree of centralised control (Costin 1991: 2; Knapp and Cherry 1994: 159-160; Steel 2010: 112). Jacobs investigated the plain ware of Alassa-*Pano Mandilaris* to discern whether regional pottery may actually reflect local particularities (Jacobs 2009: 91). Keswani investigated the regional variation of LCII-III pithoi with focus on the comparison between Alassa and the Kalavasos, to observe diversity in fabrics, colours, application of slips, firing practices and decorative patterns (Keswani 2009: 114-115), which could be associated with a different chronology of the establishment of the storage facilities (South 1997: 172-173; Hadjisavvas 2003b: 436). Local or regional particularities in the general appearance of the pithoi can be suggestive of different clay sources and production centres and points to a lack of standardised pithos distribution throughout the island. Considering the functional storage role and often 'elite' association ascribed to these vessels (Keswani 2009: 107), any island-wide economic or socio-political control cannot be supported on the basis of this particular material group.

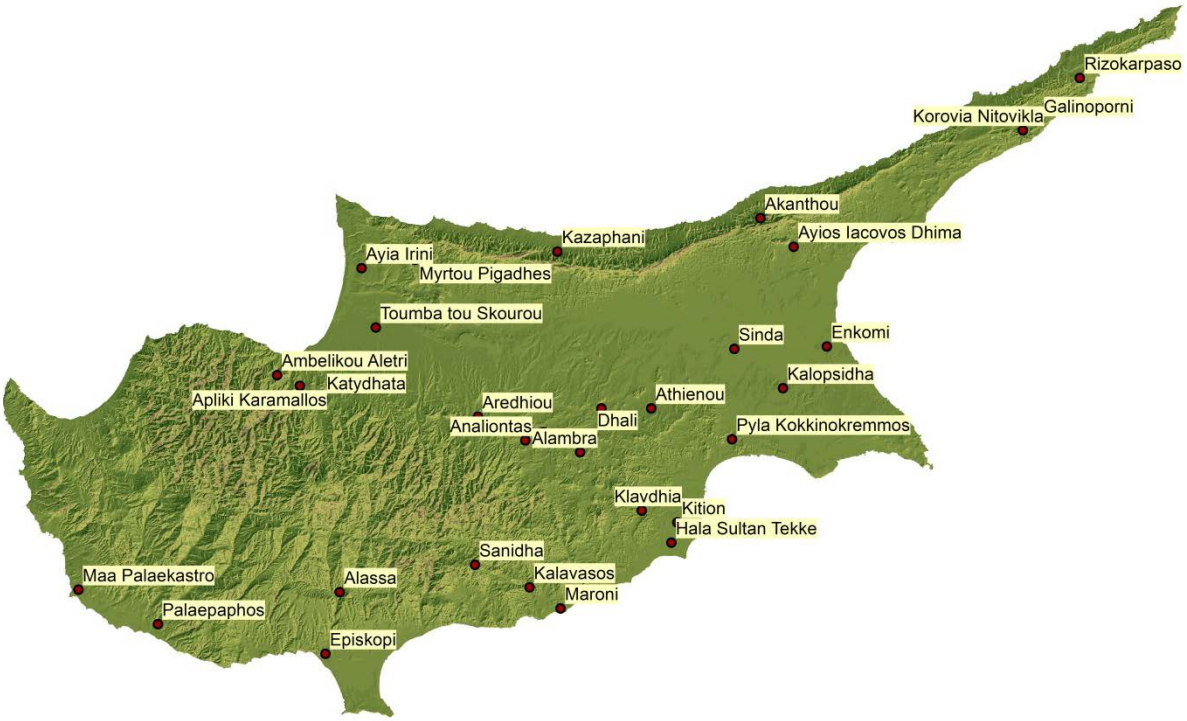


Figure 5.15 Map showing mentioned sites with pithoi evidence (produced by the author on ArcGIS).

The degree of the pithoi standardisation remains an intriguing topic (Keswani 2009: 121; Pilides 2000: 107-112), despite being classified by Keswani (1989b; 1992). Keswani's analysis suggests a preferred mode of transportation and a generally desired volume for certain products within economic transactions between parts of the island and possibly extra-island markets (Pilides 2000: 52; Stovel 2005: 154). An examination of localised decorative patterns of pithoi can help identify how various regions participated within an economic network based on agricultural products (fig.5.15). The techniques and iconographic representations of the seal-impressed pithoi from Alassa are crucial to our understanding of this process.

Such impressions have not been recovered in the extensive pithoi assemblages of *Ayios Dhimitrios* and Maroni, or other sites such as Pyla-Kokkinokremmos, Morphou-*Toumba tou Skourou*, Myrtou-*Pigadhes* or Apliki-*Karamallos*. However they *do* occur in small amounts at Episkopi-*Bamboula*, Maa-*Palaekastro*, Kouklia-*Evreti* and *Asprogi*, Hala Sultan Tekke, Kition, Enkomi-*Ayios Iacovos*, Athienou-*Bamboulari tis Koukounninas* and Analiondas-*Palioklichia* (Smith 2012 with

references). Despite observations on recurrent iconographic themes, there is currently no available example of overlapping seals, with the exception of the aforementioned wooden roller from Alassa and Episkopi.

Keswani discusses the association of decorative variations with local identity expression at Kalavasos, while admitting that the lack of seal impressions on pithoi from Kalavasos and Maroni may be associated with their abandonment in the LCIIC and the possibility that this decorative practice represented a chronological development of the late LCIIC-LCIIIA (Keswani 2009: 122). Pilides suggests that the diversity in marking practices was associated with a wide-ranging necessity of, or preference in, the means of registering storage and exchange (Pilides 2000: 108), and therefore reflects a regional practice. The lack of seal impressed pithoi or fragments from the LCIIIA Kition (Pilides 2000: 31), and the discovery of only one example from Hala Sultan Tekke (Åström 1985: 181, fig. 1-2), further supports the regional, rather than chronological/temporal character, of marking practices and the probable existence of multiple and distinct networking spheres.

The Kouris valley shows ties of unknown nature with the areas of Maa and Kouklia. Pithoi with impressed decoration occur in large quantities in Maa (Keswani 2009: 122), prompting Pilides to discuss compositional similarities on pithos sherds from Maa and Alassa. She further introduces the possibility that pithoi from Alassa are likely to have been made and transported from the Paphos region (Pilides 2000: 110-111); a suggestion supported by their decorative similarities. Even though it is not possible to discuss with certainty issues of centralised vs. localised production of these vessels, contact between Alassa and the Paphos region is well-attested, contrary to contact between Alassa with Vasilikos and Maroni. Is this an indication of localised economic interaction spheres?

Concluding Remarks: Space and Identities

The Kouris valley is distinguished from the Vasilikos and Maroni by the remarkable chronological continuity of the prehistoric record. This continuity provides an insight into the character and relations within the Kouris valley, which is a geographically demarcated, but socio-economically fragmented area. The fragmentation is preserved from the EC through to the LC and settlement pattern shifts do not alter essentially the general picture of the valleys before the LCIIC. The contemporaneous establishment and abandonment of occupation areas in the N and S of the Kouris suggests their close interaction and not necessarily their organisation under one decision-making group, at least before the LCIIC-LCIIIA.

Similar to the patterns observed at the Kouris valley, the Symboulos, Paramali and Avdhimou valleys demonstrate localised occupation. However, permanent occupation ceases by the end of the MC. Therefore, the Kouris and adjacent valleys do not display settlement pattern change comparable to the Vasilikos and Maroni valleys, seen in the establishment of new occupation areas closer to the coast. At Kouris, EC/MC occupation areas are characterised by minor localised changes in the LC, which suggests that the economic sources and communication and interaction routes did not drastically alter (see discussion on settlement chambers in Chapter Three, p.114). The coastal population of Episkopi-*Bamboula*, despite its rural and family oriented character did not develop large-scale storage edifices similar to Building X of Kalavasos or the West Building of Maroni; however it did participate in the international trade. On the contrary, the specialised area found at Erimi-*Laonin tou Porakou* was followed by another specialised area of multiple activities at Alassa-*Paleotaverna* and Erimi-*Pitharka*. Namely, areas, with workshops during the EC/MC, developed into areas, where industrialised activities took place in the LC. The community identity of Erimi-*Laonin tou Porakou* transformed then, to the urban professional identity of Alassa, while the community identity of *Phaneromeni*, maintained its character, despite interior divisions: the professional groups of merchants and landowners.

Finally, when *Ayios Dhimitrios* and Maroni are abandoned, Alassa and Episkopi are rebuilt and reconfigured, suggesting a relative economic prosperity. In this period, Erimi-*Pitharka* is established probably to accommodate the needs of an intensified economy, one that initiated closer contact between Alassa and Episkopi. Erimi-*Pitharka*, with strong industrial evidence, can be incorporated in the expanded economic manipulation of the valley. Intensification of economic activities in the 'crisis years' may have led to closer cooperation between the various parts of the Kouris, encouraging the formation of regional identity. Namely, the LCIIC-LCIIIA in the Kouris valley marks the transition from local, community identities to a wider regional identity, which potentially formed the basis of the subsequent Iron Age kingdom of Kourion. Indeed, despite the abandonment of Alassa and Episkopi, the Kouris valley is not abandoned. Kaloriziki succeeds Episkopi as the new centre at the south of Kouris, and the intensive agriculture-related economic activities of Alassa possibly shifted closer to the productive landscape of Erimi.

To conclude, the Kouris valley diachronic settlement patterns and the formation of multiple community identities within a communication nexus, reflect a successful landscape organisation. When communities manage and control the fragmentary landscape, their localised identities are undermined by a regional manifestation, which is not attested in the previously discussed case studies. Such differences in the perception of open space (landscape) call for a comparative investigation of the perception of constructed space (architecture), especially when its material similarities have directed the majority of comparative studies of the three valleys.

Table 5A : Kouris, Symboulos, Paramali and Avdhimou Valleys Landscape Information

Site Name	Current Soil Type	Erosivity	Current Vegetation	Visibility	Visibility_Notes
Anoyira *Kannavokambos*	Skeletic Calcaric Rergosols and Calcaric Lithic Leptosols	High	Maquies	High	
Anoyira *Kolokos*	Skeletic Calcaric Rergosols and Calcaric Lithic Leptosols	High	Forest	High	
Anoyira *Livadhia*	Skeletic Calcaric Rergosols and Calcaric Lithic Leptosols	High	Forest	High	Surface leveling for agricultural purposes surfaced a large amount of material.
Anoyira *Peralijithias*	Calcaric Rendzic Leptosols and Calcaric Leptic Cambisols	High	Forest, bushes and few olive trees.	High	
Anoyira *Trapezi*	Skeletic Calcaric Rergosols and Calcaric Lithic Leptosols	High	Maquies	High	The vegetation in the area was burnt, improving visibility but negatively affecting material culture recognition.
Avdhimou *Alatomi*	Skeletic Calcaric Rergosols and Calcaric Lithic Leptosols	High	Almonds and vines but mostly degraded land.	Medium	
Avdhimou *Ambelovounos*	Calcaric Rendzic Leptosols and Calcaric Leptic Cambisols	High	Maquies	Medium	
Avdhimou *Buyuk Tarla*	Calcaric Rendzic Leptosols and Calcaric Leptic Cambisols	High	Cereal and olive trees	High	

Avdhimou *Shylles*	Skeletic Calcaric Rergosols and Calcaric Lithic Leptosols	High	Maquies, wild pistachio bushes and wild cereals.	High	Bedrock was either visible or covered with a thin deposit of soil.
Avdhimou *Stympouli*	Calcaric Cambisols and Calcaric Regosols	Medium	Vines and olive trees.	Medium	
Episkopi *Phoinijin*	Epipetric Calcisols and leptic Chromic Luvisols	Low	Vegetables	Low	
Erimi *Kafkalla*	Lithic Leptosols and Epipetric Calcisols	High	Carob trees, olive trees, bushes.	Low	Top soil and bushes affecting the dromoi visibility.
Kandou *Balies*	Calcaric Fluvic Cambisols and Vertic Cambisols	Medium	Vegetables	Medium	
Paramali *Mandra tou Pouppou*	Skeletic Calcaric Rergosols and Calcaric Lithic Leptosols	High	Maquies and lentisc bushes.	High	
Paramali *Pharkonia*	Skeletic Calcaric Rergosols and Calcaric Lithic Leptosols	High	Maquies	High	
Sotira *Kaminoudhia*	Lithic Leptosols and Epipetric Calcisols	High	Cereals, olive and carob trees, pine and lentisc on the rocky slopes.	Medium	

Table 5B: Kouris, Symboulos, Paramali and Avdhimou Archaeological Information

Site Name	**Artefact Accumulation**	**Given Chronology**	**Site Classification by Swiny**	**Estimated Site Area**	EC/MC SiteType	LC Site Type	Elevation Range
Alassa *Paleotaverna*	Medium	MCII-III	Recovered by the Department of Antiquities.	12 ha with *Pano Mandilaris*		Settlement	220-230m
Alassa *Palialona*	Medium	LCII-III		Unavailable	Cemetery		240-250m
Alassa *Pano Mandilaris*	Medium	LCII-III		12 ha with *Paleotaverna*		Settlement and Cemetery	220-230m
Anoyira *Kannavokambos*	High	ECI-MCI	Cemetery	Unavailable	Cemetery		300m
Anoyira *Kolokos*	High	ECIII-MCI	Settlement and Cemetery	Unavailable	Off Site		380m
Anoyira *Livadhia*	High	ECIII-MCI	Settlement and Cemetery	5ha pottery scatter	Off Site		420m
Anoyira *Peralijithias*	Low	ECIII-MCIII		7ha occupation debris	Site		430-440m
Anoyira *Trapezi*	Low	Philia-ECII			Cemetery		280m
Avdhimou *Alatomi*	Medium	ECIII-MCI	Small cemetery-settlement complex	4ha occupation debris	Site		40m
Avdhimou *Amolo*	Medium	ECIII-MCIA	Small Cemetery	Unavailable	Cemetery		50m

Table 5C: Kouris Valley Close-Up

Alassa *Palialona*	ECIII-MCI	240-250m
Alassa *Paleotaverna and Pano Mandilaris*	LCII-LCIII	220-230 m
Episkopi *Bamboula*	LCIA-LCIII	80m
Episkopi *Phaneromeni*	ECIII-LCIA	70m
Erimi *Kafkalla*	ECIII-LCII	100-110m
Erimi *Laonin tou Porakou*	ECIII-LCIA	250-270m
Erimi Pitharka	LCII-LCIII (CG)	100-110m

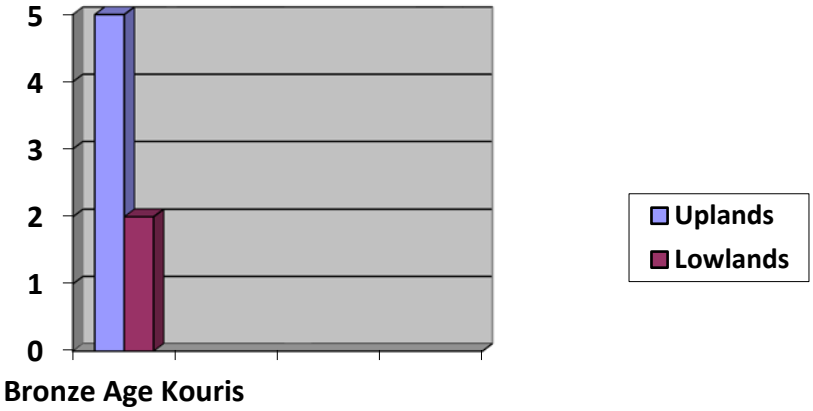


Table 5D: Paramali Valley Close-Up

Paramali Mandra tou Pouppou	MCI-II (cemetery), MCIII-LCIA (settlement) (Swiny), MCI-III (Georgiou)	180 m
Paramali Pharkonia	ECI-MCI	230-240 m
Avdhimou Shylles	MCIII-LCI(?)	50 m

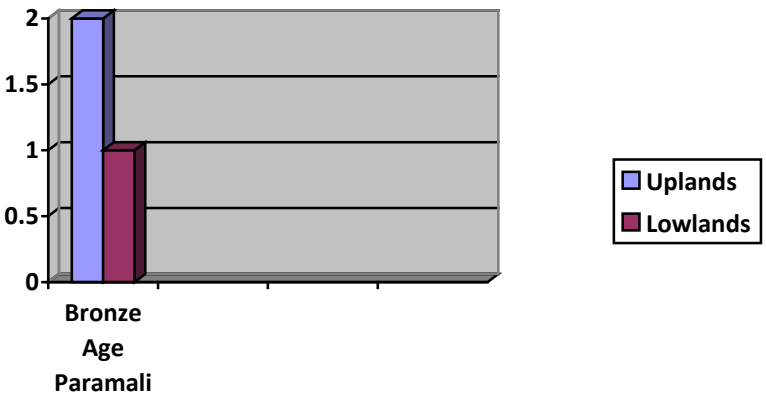


Table 5E: Avdhimou Valley Close-Up

Anoyira *Kannavokambos*	ECI-MCI	300m
Anoyira *Kolokos*	ECIII-MCI	380m
Anoyira *Livadhia*	ECIII-MCI	420m
Anoyira *Peralijithias*	ECIII-MCIII	430-440m
Anoyira *Trapezi*	Philia-ECII	280m
Avdhimou *Alatomi*	ECIII-MCI	40m
Avdhimou *Amolo*	ECIII-MCIA	50m
Avdhimou *Ambelovounos*	ECI-MCI	110-120m
Avdhimou *Buyuk Tarla*	ECIII-MCIII	130-140m
Avdhimou *Stympouli*	ECI-MCI	40m

CHAPTER 6

MIDDLE SCALE ANALYSIS: CONSTRUCTED SPACE

Constructed, structured, divided and bounded space is the topic of the Middle Scale Analysis, which examines the association between the case studies' landscape characteristics (Chapters Three-Five) and the different types of buildings within them. The proposed synthesis and contrast of multi-period and multi-regional elements enables a new perspective on the spatial and chronological framework under scrutiny. The novelty of this approach pertains to the evaluation of the role of architecture both as structure and concept, with focus on the expression of identities. The available architectural data derive from: Sotira-*Kaminoudhia*, Episkopi-*Phaneromeni* and Erimi-*Laonin tou Porakou* of the EC/LCIA Kouris valley; Pyrgos-*Mavrorachi* of the EC/MC Limassol area; Episkopi-*Bamboula*, Alassa-*Paleotaverna* and Alassa-*Pano Mandilaris* of the LC Kouris valley; Kalavasos-*Ayios Dhimitrios* of the LC Vasilikos Valley and the Maroni complex (*Vournes* and *Tsaroukkas*) of the LC Maroni valley (fig.6.1).

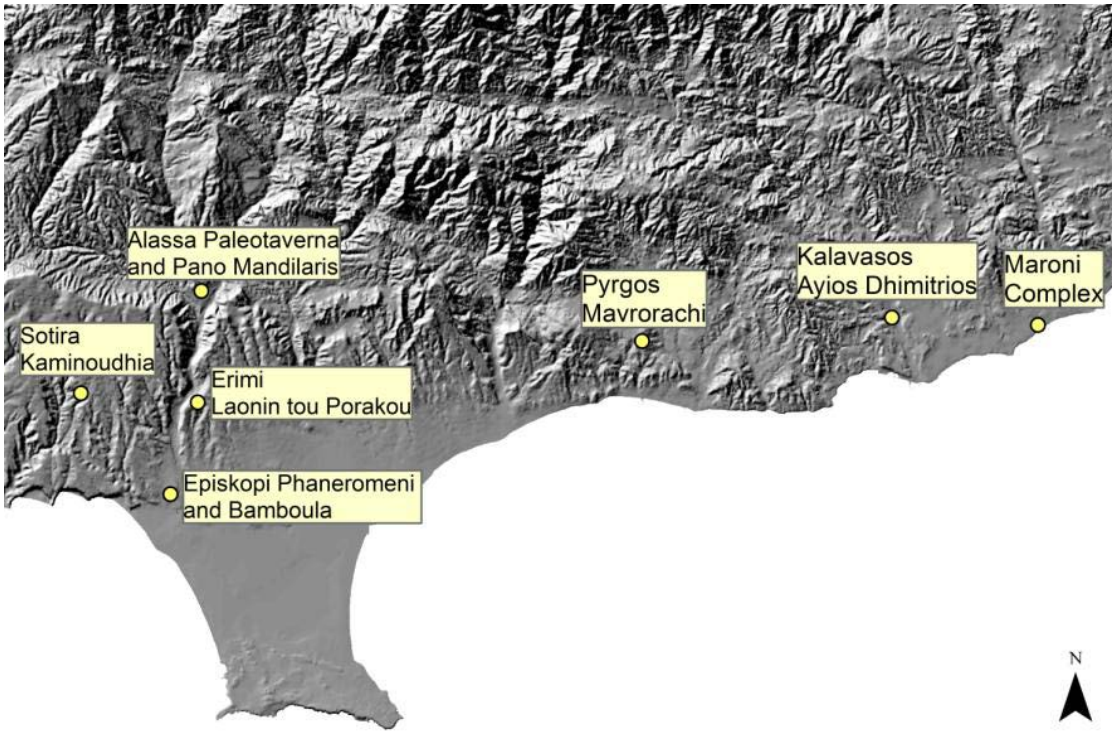


Figure 6.1 The Bronze Age architectural data under investigation (produced by the author on ArcGIS).

Fundamental to this discussion is a group of LC buildings long studied for their impressive ashlar masonry; a material regarded as constituting monumental architecture. Monumentality, a word heavily loaded with symbolism (Hillier and Hanson 1984: ix; Trigger 1990: 122; Parker Pearson and Richards 1994: 3; Dovey 1999, 2005: 291; Leach 2005: 308; Kolb 2012: 138), is widely used both as constituent and indication of stratified urban societies since Childe (1951). The combination of these connotations and the post-Enkomi excavation of the ashlar buildings under study has heavily influenced their interpretation and situated them at the core of settlement pattern models (Chapter One, pp.11-19) often with unequal consideration of the consequences of their surrounding landscapes. Consequently, despite general comparisons (Courtois 1986; Hadjisavvas 1992a; 2009: 131; Cadogan 1996: 17; Manning 1998: 42; Iacovou 2008a: 626-627), the ashlar buildings have not yet been compared inclusively, truncating the use of more recent theoretically and methodologically innovative research (Fisher 2007, 2009a, 2009b). To help change this, in this chapter I provide a locally and regionally based perspective. This perspective illuminates these structures by considering architectural forerunners operating within the same landscape and contemporaneous non-monumental, often domestic structures, which, through a different lens, researchers have viewed as encompassing enduring social relations and identity expressions (Kunstadter 1984: 300; Souvatzi 2008: 1; Earle and Smith 2012: 238).

Architecture of the Mind

A remarkable amount of ink has been spent detaching architecture from traditional art history perspectives in an attempt to derive, support and disseminate knowledge from more practical, scientific architectural examination. This endeavour demonstrates the widely held importance of rallying inter-disciplinary approaches to archaeological context analysis and judiciously applying social and architectural theory to material culture. Following this concept, researchers tend to agree that

constructed space is not merely an artistic or structural achievement, but also a symbolically-laden visual expression of a combination of traditions (Dovey 2005: 291; Bretschneider 2007: 11; Schoep 2007: 220-224, 235; Živković 2010: 169; Harmanşah 2011a: 56), relations (King 1980; Bourdieu 1989:17; 2000: 134, 242; Lawrence and Low 1990: 466; Lefebvre 1991: 227; Jenkins 2008; Moore 1996: 97), identities (Smith 2003; Dovey 2005: 284; Leach 2005: 298), knowledge and technology (Fitzsimons 2007: 104; Oates 2007: 180; Schoep 2007: 229). However, currently, the employment of widely acknowledged and applied cognitive architectural dimensions to chronological snapshots is academically encouraged, yet argued to be methodologically inadequate and underutilised (Leach 2005: 308; Drennan and Peterson 2012: 80; Thompson and Pluckhahn 2012: 49). For example, the widely discussed suggestion that structured space is a vehicle for identity construction and legitimisation of power (Lefebvre 1991: 216-217; Markus 1993; Parker-Pearson and Richards 1994; Laffineur 2007: 118; Schoep 2007: 229; Fisher 2009a; Knapp 2009; Kolb 2012: 138; Thompson and Pluckhahn 2012: 49) may hardly contribute to our understanding of the emergence of power or the existence of alternative sources of identity construction and manifestation.

Chronological and spatial contextualisation is important for fleshing out the above notions. For that reason, this study is following research stressing the importance of incorporating the landscape, upon which structures were built and developed, in order to contextualise observations on spatial organisation (Barrett 1994: 91; Brück and Goodman 1999: 12; Soja 2000: 7; Lycett 2001; Smith 2003; Johansen 2004: 110, Driessen 2007: 74; Feinman 2012: 27). Researchers have often observed that architectural analyses seeking out the socio-political implications of buildings, have frequently limited their focus to buildings, thereby overlooking the powerfully informative conceptualisation that the founding and development of structures are actually place-making practices characteristic of a given time and spatial setting (Bretschneider 2007; Driessen 2007: 73: n.2; Schoep 2007: 220-22). However, one cannot overlook that recent research by Pauketat (2007), Wiessner (2009: 196), Shepard (2012: 365-366), Thompson and Pluckhahn (2012: 49) has employed a

more theoretically grounded and methodologically serviceable approach that evaluates the impact of numerous aspects of material culture to assess the formation and expression of equal and unequal relations in constructed space.

Similar problems are found to affect the general appreciation of monumental architecture, which is widely argued to be a social boundary-making power strategy (Abrams 1989; Trigger 1990; Brentschneider *et al.* 2007; Oates 2007: 161; Fisher 2009a: 184). The often uncritical use of this popular theory and the *a priori* recognition of power structures in the creation and development of monumental buildings may entail risks of overlooking the often cooperative origins of powerful groups and underestimating the functional potential of structure and the mechanical properties of construction materials. Additionally, it may promote a rigid concentration on power structures, theorising a singular group and rendering invisible a widely posited array of agents (Knappett 2005: 22; Yoffee 2005; Cunningham 2007: 25; Harmanşah 2011a: 56; 2011b: 624; Shepard 2012: 366) with distinct and cohesive identities.

A useful integration of the functional and cognitive aspects of architecture into a serviceable explanatory framework requires a combination of theory and extensive knowledge of the relevant material data within and around the buildings. The present study uses this information to situate the emergence of LC monumental architecture in its diachronic spatial context from the onset of the Bronze Age.

The EC Sotira-*Kaminoudhia*

Swiny directed the excavation of 3 areas from the estimated 1ha site *Kaminoudhia* (fig.6.2) (Swiny *et al.* 2003: 9). The settlement comprises CL, Philia and EC components, of which the latter are the best preserved with evidence for different construction and modifying phases, subdivision of space and furnishings. The general character of domestic components is agglutinative expansion of rectangular and often irregularly shaped open (Unit 1/Area A, Unit 12/Area B) and closed spaces

(fig.6.3-6.4) (Swiny *et al.* 2003: 34). The latter frequently contain niches, benches, plaster bins, clay and lime plaster troughs, "orthostats", hearths and enclosures made of limestone slabs or bedrock. Wall construction typically consists of foundation/lower courses of irregularly shaped stones and mud brick on the higher levels.

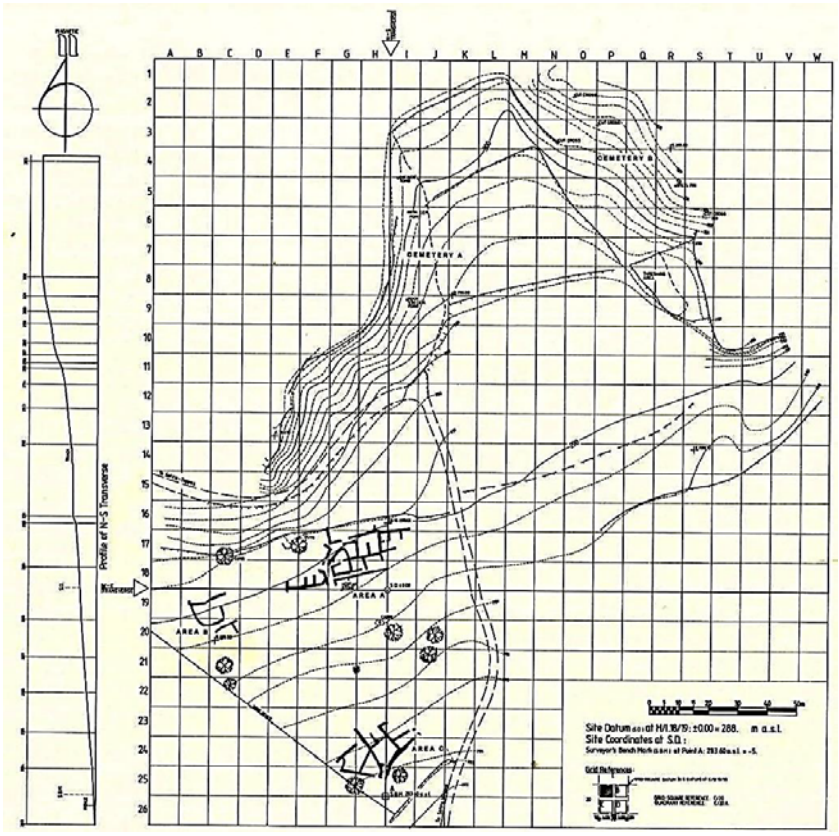


Figure 6.2 Sotira-Kaminoudhia (Swiny et al. 2003: 6, fig.1.13).

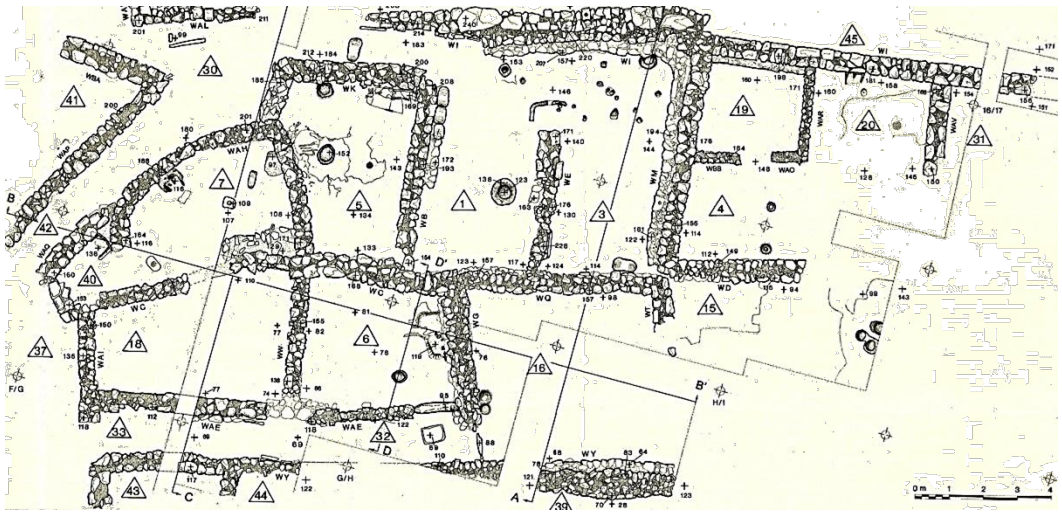


Figure 6.3 Sotira-Kaminoudhia Area A (Swiny et al. 2003: fig.2.16).

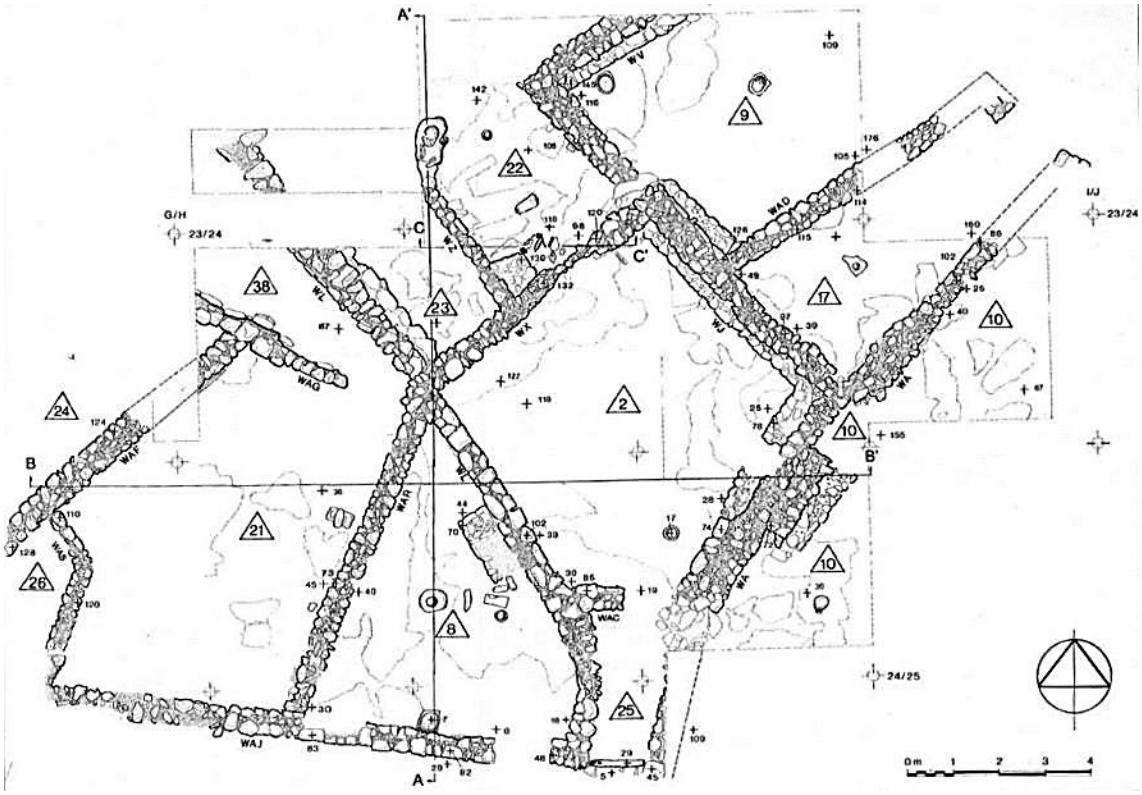


Figure 6.4 Sotira-Kaminoudhia Area C (Swiny et al. 2003: fig.2.18).

The excavators relate that a noticeable aspect of Sotira are the shallow cultural deposits, with bedrock located at maximum 1m below the present ground surface (Swiny *et al.* 2003: 10). Considering the central role of bedrock in local architecture, commonly used as habitation surface, this is not surprising. Even in areas where bedrock surface was geomorphologically ill-suited to construction, it was levelled, using Terra Rossa fill or physical removal, to achieve horizontal habitation (Swiny *et al.* 2003: 54). Bedrock was also modified through the cutting of foundation trenches to house walls, resulting in excavated occupation debris emerging at the same level as masonry. Conclusively, bedrock appears to be an essential component of structured space, conforming to the general observations of the Large Scale Analysis, that during the EC/MC, communities potentially favoured settlement construction on the hilly uplands and the calcareous plateaus (Chapter Three, pp.98-106).

The catastrophic end of Sotira left the site with pottery, ground stone tools and other artefacts distributed equally in the excavated area, aiding in the identification of the function of several structured compounds. However, beyond the quantity and variety of the generally common material culture, what distinguishes spaces at Sotira is the placement of fixed elements such as hearths and stone basins, and the varying characteristics of closed and open-air structures. Among these, the unique Unit 12 of Area B, interpreted as a potential cult area, based on the existence of a large stone trough facing three boulders, and the lack of the aforementioned typical domestic or craft activity accoutrements (Swiny *et al.* 2003: 34-37; Swiny 2008: 48-49). However, Swiny mentions that the spatial distinction of domestic units is untenable and spaces are often characterised on their content as multifunctional (Units 7 and 40/Area A) (Swiny *et al.* 2003: 23), pointing to the rural character of economy and the small scale of non-domestic economic activities. Following Souvatzi, who discusses the role of households as networks of relationships and as physically bounded domestic groups (Souvatzi 2008: 2 *cf.* Ilcan and Phillips 1998), it may be suggested that the spatial merging of these social formations at Sotira may provide evidence of strong community identity, something further attested in the burial evidence discussed in the following chapter (Chapter Seven, pp.342-346).

The ECIII-LCIA Kouris valley

Episkopi-Phaneromeni

At a slightly later chronological period, *Phaneromeni* was established with buildings employing irregular stones at the lower courses of the wall and mud brick for superstructure, with some being faced with irregularly shaped havara blocks (Carpenter 1981: 60). The role of bedrock is obscured, due to a lack of sufficient information regarding site plan and the foundation of the buildings, described only as employing “red sandy soil” for levelling (Carpenter 1981: 61). The architectural norm in ECIII-LCIA *Phaneromeni* comprises organically agglutinative structures

arranged around open spaces with few examples of space segregation modification phasing (fig.6.5).

Figure 6.5 Episkopi-Phaneromeni Area A (Swiny 1989: fig.2.4).

Habitation at *Phaneromeni* ended with an alleged fire destruction event (and residual archaeological layer) and significant material culture below the rubble (Carpenter 1981: 62). Materials include a variety of stone tools, gaming stones, jewellery, fragments of a clay crucible and RP pottery. Unfortunately, a lack of detail in recording and publication does not permit further elaboration of space segregation; however, based on the available information it may be suggested that, in similarity with Sotira-*Kaminoudhia*, domestic and other activities merged indoors and outdoors, while people experimented with new wall construction techniques.

Erimi-Laonin tou Porakou

Erimi-*Laonin tou Porakou* is located in the N Kouris, slightly post-dates *Phaneromeni* and presents a remarkably different space segregation philosophy. Most obvious is the clear distinction between domestic and working spaces, located on different parts of a hill and providing an early indication of what Soja discusses as "spatialised" identities (fig.6.6) (Soja 2000: 9). The domestic compound of Erimi, excavated in Area B, is identified based on its pottery assemblage, the majority of which encompasses small sized vessels for food consumption (Bombardieri 2009: 286). The domestic unit is organised around an open air rectangular courtyard containing a hearth, while structured space contains benches directly carved into bedrock, also used for wall foundation settings (fig.6.7).

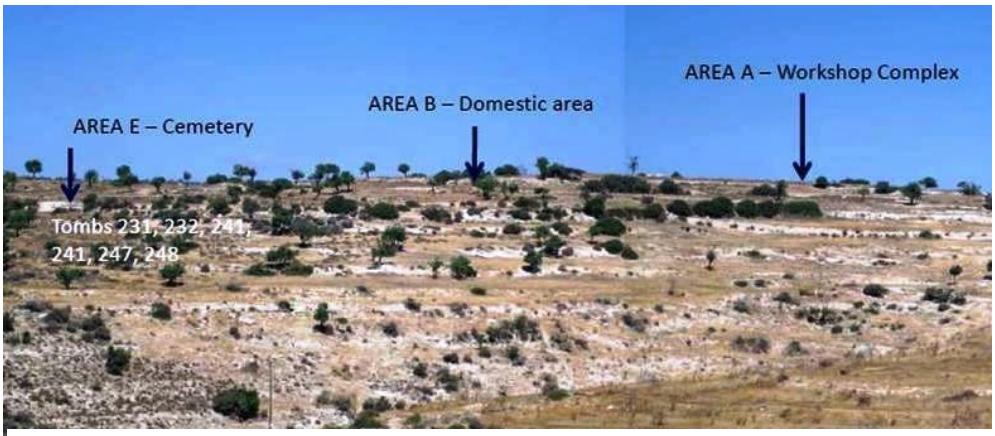


Figure 6.6 Erimi-Laonin tou Porakou (Bombardieri 2011 forthcoming).

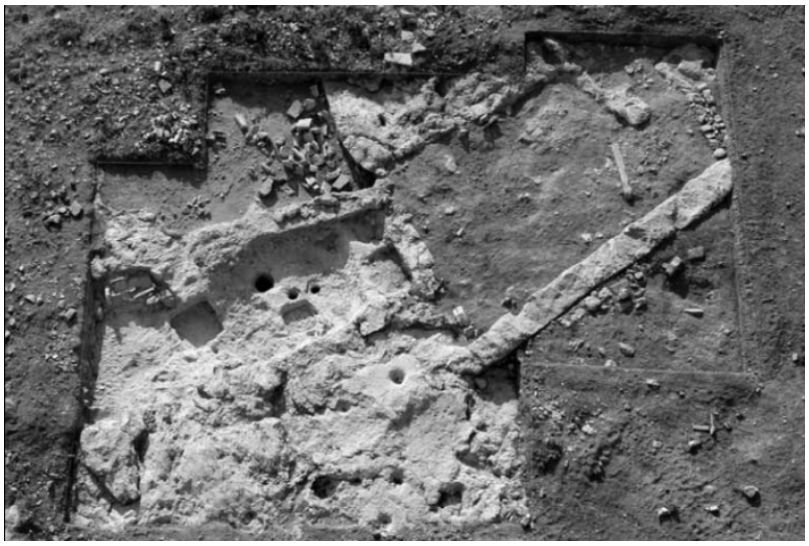


Figure 6.7 Laonin tou Porakou Area B – Domestic compound (Bombardieri 2011 forthcoming).

The limited extent of excavated domestic areas prevent further elaboration on space function, however based on the available information it may be considered a typical MBA domestic structure (Swiny 1989: 20-21; Frankel and Webb 1996: 53-54; 2000: 763). What is interesting concerning space segregation philosophy is the spatial separation of this structure from a workshop complex (Bombardieri 2010a).The workshop complex designation is largely based on spatial arrangement and contents indicative of industrial activities, most likely textile production. The structure represents two phases (ECIII-MCI/II and MCII/III-LCIA) (Bombardieri 2012a: 56), of which the latter is believed to have ended with earthquake (Bombardieri 2010a). The open-air complex, founded on bedrock, was carved to form working pits and deep interconnected basins employing a series of flow channels (fig.6.8).

Figure 6.8 Laonin tou Porakou Area A – Workshop (Bombardieri 2011 forthcoming).

The walls of the storage area employed river stones on the lower and mud brick for the upper courses, however, an atypical technique employed thin stone slabs to cover the core of a wall, comprised of smaller stones (Bombardieri 2011). Additionally, the S wall of a room was built not upon bedrock foundation but rather by employing medium sized squared slabs, which covered smaller stones used for filling. Such slabs were also employed in the formation of a kiln or oven found in

association with supporting impressions for storage vessels (fig.6.9) (Bombardieri 2012a: 56). Interestingly, the MCIII/LCI evidence from Kissonerga-Skalia (Paphos) Area B demonstrates a similar construction technique, also referred to as atypical and incorporates a drying-kiln, which Crewe and Hill associated with beer production (2012: 213, 215, fig.4). The most remarkable feature of the storage area is the installation of a large worked limestone block of 1 x 0,43m, on which a door socket is preserved (Bombardieri 2011). A similar but smaller worked stone was used for the threshold of another storage room.

Figure 6.9 Laonin tou Porakou Area A – Workshop (Bombardieri 2012a: 56).

Similarly to *Phaneromeni*, Erimi is abruptly abandoned in the LCIA, leaving behind large material assemblage, which aids the identification of different settlement components and their relevant construction methods. Erimi-*Laonin tou Porakou* is a site of high significance, where one can document the use of new construction techniques, utilising worked stone slabs in walls and other structurally important parts of the buildings, such as the entrance. Moreover, a new construction procedure that replaced bedrock for wall foundation with stone slabs is

implemented. Stone slabs are noted also at *Phaneromeni*; however, lack of detailed description may indicate that they were irregularly shaped, therefore unmodified. The new techniques were employed only in the storage area of the workshop, pointing to a correlation between building function, and construction techniques and materials. A similar configuration is observed at Pyrgos-*Mavrorachi*, the best preserved components of which date to the MCII.

The EC/MC Pyrgos-*Mavrorachi*

The evidence from Pyrgos-*Mavrorachi*, especially for the MC, points to a thus far unique activity complex in an area used during the EC and MC. Additionally a workshop complex extends to a number of rooms and open spaces, with evidence suggestive of metalworking,[1] olive oil and wine production. Although Belgiorno assigns a wide range of industrial activities (Belgiorno 2006; Lentini and Scala 2006; Lentini 2010; Belgiorno *et al.* 2010), these are not included in the present study, due to lack of sufficient evidence and incomplete publication. The construction techniques of this complex's walls comprise a core of medium sized stones faced with limestone slabs, a marked contrast to the poorly preserved EC components of the site, built using irregularly shaped stones (Belgiorno *et al.* 2012). There is no reference regarding the role of bedrock in the construction of occupation areas; however there is evidence, at least from the workshop area, of use of large stone slabs around features (Belgiorno *et al.* 2010).

In similarity to Erimi-*Laonin tou Porakou* the domestic activities are separate from the presumably industrial. At a small distance from the workshop, a spatial arrangement was excavated, comprising an agglutinative cluster of rectangular and irregularly shaped rooms and open spaces, typical of EC/MC domestic architecture (Swiny 1989: 20-21). Despite a cultic interpretation (Belgiorno 2010), it is more likely that this arrangement was a domestic area, based on architectural plan,

[1] Kassianidou 2008: 254 on the problematic interpretation of the suggested smelting furnaces.

construction technique and excavated content, which includes animal bones and pottery related to food consumption. This complex employed different construction materials and was deliberately segregated from the workshop area, creating what can be considered a delineated space for professional identity manifestation (Sack 1986: 17; Belford 2001: 111-114; Crewe and Hill 2012: 207) until its abandonment in the MCII (Belgiorno 2010).

General Comments on the EC/MC

In many cases, EC and MC settlements spatially overlap in their landscape settings. The spatial continuation and persistence of RP pottery along with the rural character of the excavated domestic compounds throughout this transition, then, may obscure on-going processes of space segregation philosophy and industrialisation. These processes, based on the examined case studies, include a shift in the perception of domestic and work space between the EC and MC, which potentially points to a degree of formalisation of large-scale production activities (Sack 1986: 176-177) and emergence of spatially bounded professional identities; a concept previously discussed by Knapp (2003: 566).

Another development that may be observed is technological elaboration, despite the morphological continuity of structures. That is, the MC adoption of large stone slabs, sometimes worked to dress a core of irregularly shaped stones of (sub)-rectangular structures. This technique increased wall thickness, however, it is unknown if this facilitated upper floors. Importantly, it noticeably altered the appearance and impression of walls and, to a degree, interrupted their strong dependence on bedrock. The spatial homogeneity and spread of this technique in contemporaneous settlement compounds is not sufficiently recorded or mentioned

if it follows obvious patterns,[2] with the best examples preserved in workshop areas in Erimi and Pyrgos.

Even so, the available data adequately demonstrate changing behaviours, attitudes and potentially relationships with architectural elements, which are argued to be conservative in nature (Parker-Pearson and Richards 1994: 62; Van Gijseghem and Vaughn 2008: 112). The establishment of a new spatial philosophy and the spatial expression of professional identity at community level may suggest that buildings destined for public/community use were constructed with more durable and labour-intensive materials than their domestic counterparts. Consequently, they may reflect a communal effort organised, though, by a decision-making group (Drennan and Peterson 2012: 74-45; Kolb 2012: 138).

These processes are further examined in LBA ashlar buildings constructed in the valleys under investigation. The ashlar structures form the principal samples for LBA architectural studies and their symbolic values are analysed in Fisher's (2007) doctoral research. Lack of material evidence affects discussions on the development of these buildings from predecessor structures, and their structural origins and inspiration remain largely obscure. The subsequent section investigates both domestic and public-administrative structures, in order to establish their association with the previously examined samples and with one another. In addition it examines a potential link between diachronic and regional architectural traditions.

[2] Coleman *et al.* 1996: 23-24: in Alambra B.I/W.N/R.2 found in association with hearth, B.VI/W.BK/R.22; Swiny *et al.* 2003: 55-56: Sotira-*Kaminoudhia* in Area A/Unit 1/WI, Area A/Unit 3/WE, Area A/Unit 5/WO, Area A/Unit 33/WBF, Area C/Unit 22, Area C/Unit 38a.

LC Architecture

Episkopi-Bamboula

Upon its discovery, Carpenter referred to *Bamboula* as the product of relocation from *Phaneromeni* after its destruction (1981: 65). Due to the chronic interruption of excavation and the poorly published and controversial resumption of investigation by the University of Cincinnati, the site has rarely been used in a comparative or fruitful way for our understanding of the LBA at the Kouris valley; an exception is Kiely's work through the British Museum material (2005; 2009; 2010). Despite the exposure of an interesting array of features dated from the LCIA to the LCIIIA (Weinberg 1983: 4-5), a lack of imposing architecture and the discovery of an impressive ashlar building at Alassa-*Paleotaverna* has significantly affected its academic consideration. To rectify this omission, the present chapter associates constructed spaces of *Bamboula* with their contemporaries in the area under investigation.

Bamboula is characterised by spatially distinguished domestic units (fig.6.10) (Weinberg 1983: 9) with pre-conceptualised plans that point to a new definition of public and private domains, and probably new spatial ideologies (Brück 1999: 64; Van Gijseghem and Vaughn 2008: 122). Namely, houses of 5-6 rooms constructed on walls with stone foundations and mud brick superstructure became the norm. Tripartite rectangular structures are the dominant house plan, however, four L-shaped room complexes existed contemporaneously (figs.6.11-6.12) (Weinberg 1983: 52). Beyond diachronic changes in wall thickness, domestic structures started to employ large rough-hewn rectangular blocks at the corners and doorways (Weinberg 1983: 34), while bedrock was often worked in order to create working basins or interior surface spaces (Weinberg 1983: pl.12A), similar to Erimi-*Laonin tou Porakou*.

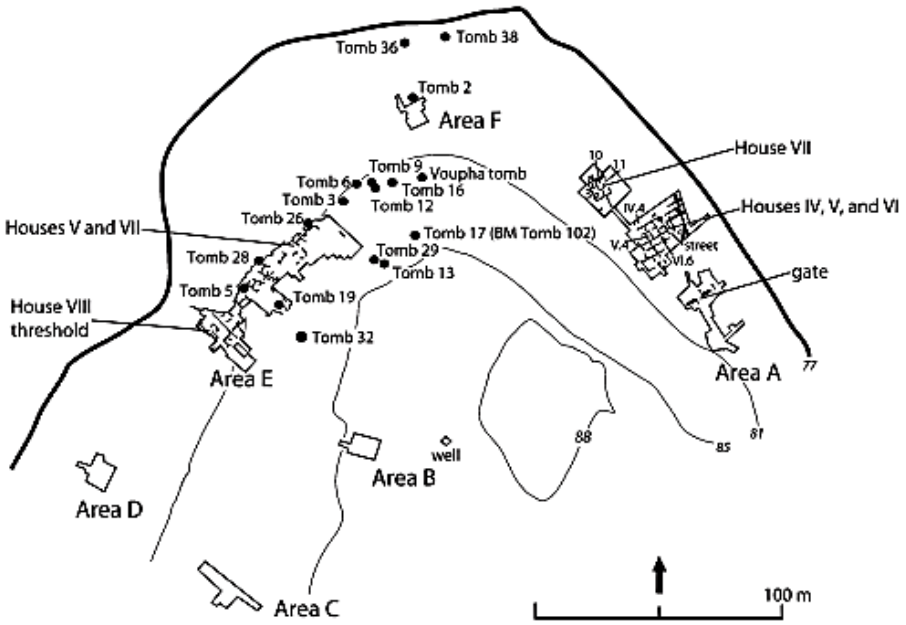


Figure 6.10 Episkopi-Bamboula Site Plan (Smith 2012: 44, fig.2).

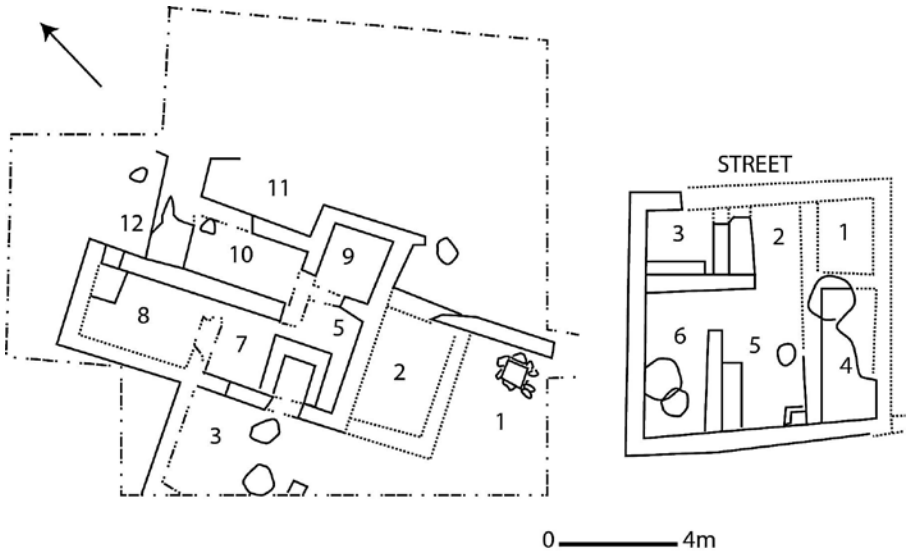


Figure 6.11 Episkopi-Bamboula Buildings A.VI and A.VII (adapted from Weinberg 1983: figs.8-9 on Adobe Illustrator)

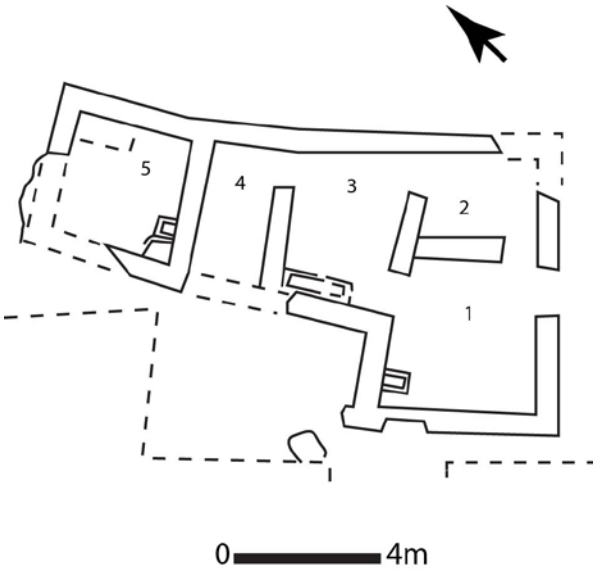


Figure 6.12 Episkopi-Bamboula Building A.VIII (adapted from Weinberg 1983: fig.10 on Adobe Illustrator).

Even though Weinberg argued that the excavated area is too limited to reveal town planning (1983: 9), a street with hard lime floor found between the houses, part of a circuit wall believed to have been constructed as early as LBA (1983: 4) and a masonry lined well from Area B (1983: 32), provide unambiguous evidence of what Soja (2000: 8) identifies as planned, integrative urban infrastructure. This is also supported by pre-determined house plans (Batty and Longley 1994: 44) that are markedly different from the agglutinative nature of the EC/MC architecture and reflect the existence of town planning, settled property boundaries (Earle 2000: 39-40) and more autonomous households (Souvatzi 2008: 253). Therefore, it appears that lack of a distinguished ashlar building cannot adequately support a lack of socio-economic complexity.

This is further supported by an array of identified spaces and activities. Most archaeologically and architecturally interesting, is a large cellar found in a house in Area D with an average height of over 2m (fig.6.13). The cellar structure was the product of the opportunistic expansion of a natural cave and addition of a tunnel, without employing masonry. It included a number of storage jars and other large vessels, securely dated to the LCIIC (Benson 1969: 20-21), few figurines and 14 examples of CM signs (Weinberg 1983: 25; Ferrara 2012: 21). The presence of such feature in a non-monumental domestic structure encourages a different understanding of the extent of the CM script and suggests varied usage and

function beyond central administration, also argued for the case of Enkomi (Hirschfeld 2002).

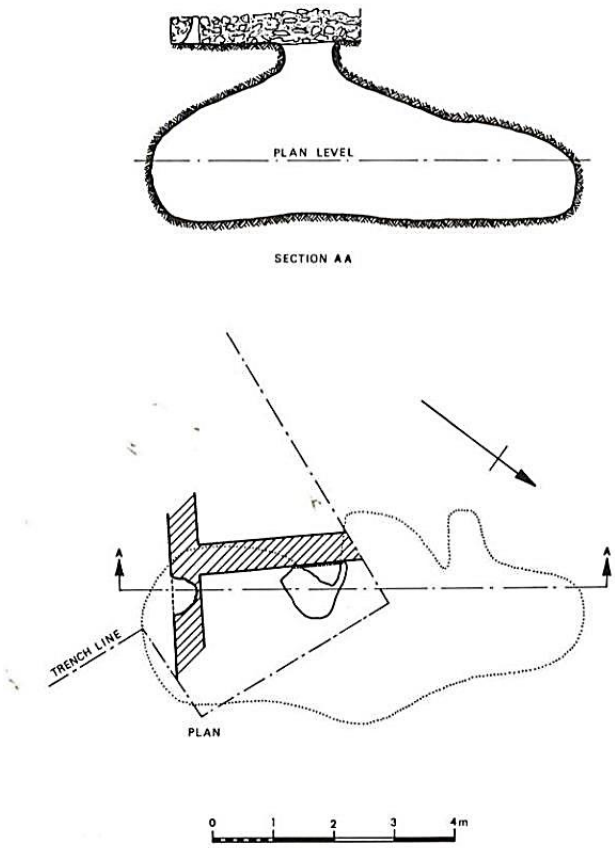


Figure 6.13 Episkopi-Bamboula, Area D: The cellar (Weinberg 1983: fig. 17).

Finally, much like other examples of domestic and public/administrative architecture, the Area E structures of *Bamboula* were constructed above a number of LBA tombs. Antecedent burials potentially belonging to ancestors were carefully incorporated into building plans with the conscious effort to situate the entrance of tombs outside domestic structures and on the side of streets (Weinberg 1983: 36). As there is no information concerning their integrity, the degree to which the construction of houses and streets interfered with tombs is unknown.

To conclude, *Bamboula* is exemplified by its domestic character, a designation supported by its architecture and context. Nevertheless, some architectural examples share characteristics with ashlar structures, such as their space

segregation philosophy of a tripartite architectural plan, spatial relation with ancestor tombs and use of large worked stones, which implies a shared tradition in the spatial allocation and philosophy of the LC structures. The presentation of the three ashlar buildings and the related domestic architecture, where available, can further support this relation.

Alassa-Paleotaverna and Pano Mandilaris (fig.6.14)

The sites of Alassa demonstrate a clear division of LCIIC-LCIIIA domestic, public-administrative and industrial compounds (Hadjisavvas 1991). Similarly to *Bamboula*, several habitation units were identified at *Pano Mandilaris* along a street located above pre-existent tombs (Hadjisavvas 1986: 66; 1994: 110). The walls were skilfully constructed using larger stones particularly for the doorways and founded on bedrock. In most occasions the floors were formed on levelled bedrock, with occasional rendering with Terra Rossa and paving with flat stones and pithos sherds, as observed in few cases at *Bamboula* (Hadjisavvas 1986: 66; Weinberg 1983: 54).

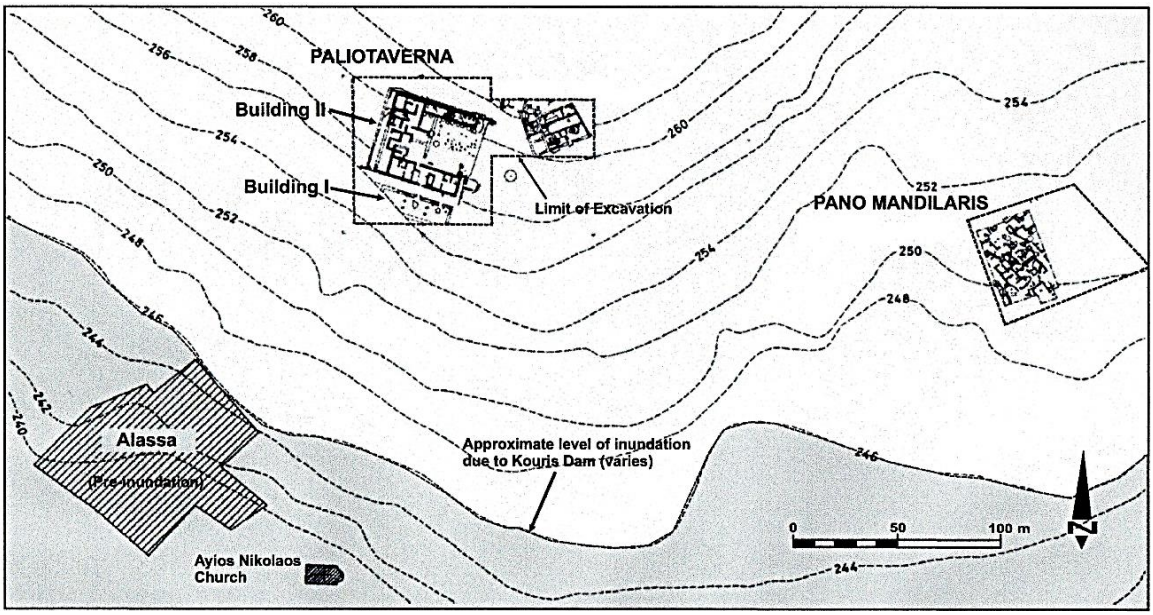


Figure 6.14 Alassa Paleotaverna and Pano Mandilaris (Fisher 2007: 387: fig. 7.28)

The core of walls consisted of used querns, pithos sherds and broken ashlar blocks, while dressed stones were found in rooms and open spaces. Employing bedrock to

create features and furnish structures was a common practice (Hadjisavvas 1986: 66), probably indicating the continuation of a construction technique observed in the preceding Erimi-*Laonin tou Porakou*.

At a distance of 250m from *Pano Mandilaris*, archaeologists excavated 400m^2 of ashlar structures at *Paleotaverna* (fig.6.15). The structures maintained the traditional use of bedrock for foundations and employed ashlar masonry, orthostats, pillar bases and high quality floors. Building II, the main ashlar structure, followed a Π shaped plan with a central court, which Hadjisavvas suggests was almost entirely -and uniquely- constructed of ashlar masonry, employing massive blocks of up to 4,92 x 0,75 x 0,45m (Hadjisavvas and Hadjisavva 1997: 143). Despite the plethora of ashlar blocks, there is currently insufficient evidence to support the construction of Building II *entirely* of ashlar masonry. Undeniably, the construction of this building employed distinctively large ashlar blocks, especially when compared to the ashlar buildings of Maroni and *Ayios Dhimitrios*. However, contrary to the other case studies, *Paleotaverna* was not abandoned in the LCIIC, but rather modified to a symmetrical plan (Hadjisavvas 2003b: 436), maintained until abandonment in the LCIIIA (Hadjisavvas 1991: 173).

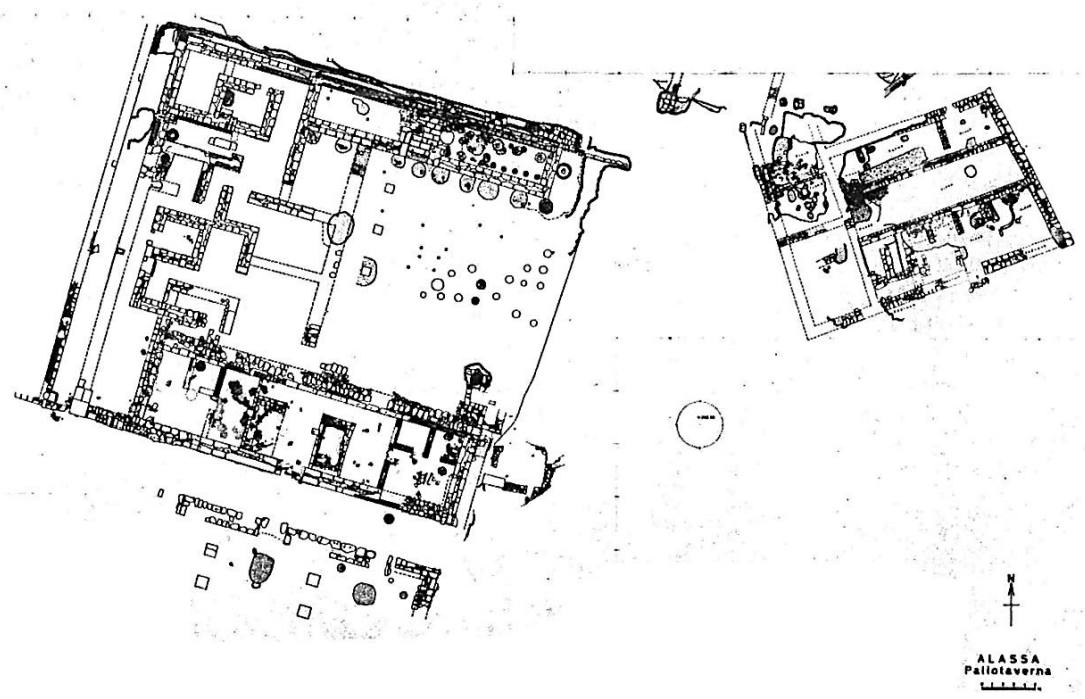


Figure 6.15 Alassa-Paleotaverna Building II (Hadjisavvas 2009: 133, fig.3).

Notably, based on the different construction material of internal walls and the fact that they were not integrated with exterior walls, Hadjisavvas suggests that they formed part of a LCIIC renovation (Hadjisavvas 2000a: 396), despite a lack of secure dating.

As the site's publication is not extensive and the excavation area limited, answers to questions regarding the size of the open court, its fixed elements and the nature of its access routes are tenuously supported. Fisher suggests that the court is poorly integrated with the general plan of the building, as for example the central court of Building X of *Ayios Dhimitrios*, examined in a following section (Fisher 2007: 242). The lack of publication details regarding the placement of pithoi, which are important, often fixed and diagnostic elements of LCIIC buildings, renders second-generation research problematic. Indeed, brief reports mention the excavation of 16 or more pithoi in two rooms on the other site of the N wall of the court (Hadjisavvas 2003b: 433). These rooms access the court through a short hallway paved with large rectangular slabs.

The central court provided access to the N and W wings, while access to the S wing was possible through a rectangular room. The S wing was also accessible from the street, through a relatively wide door way (2,6m wide), embellished with two rectangular ashlar blocks on the floor, which, according to Fisher's general approach, were used as elements of symbolic entrance to meaning-loaded spaces (Fisher 2007: 243). The doorway led to the largest constructed closed space of Building II, a room containing a hearth constructed by a monolithic block, enclosed on three sides with mud brick (Hadjisavvas and Hadjisavva 1997: 145), likely surrounded by orthostats and spatially related to a small rectangular pit (fig.6.16). In the same room a large (3,25 x 5,25m) stone-lined feature, of unknown function was sunken 1,86m into bedrock (Hadjisavvas and Hadjisavva 1997: 145). It is likely that this feature was used for water collection similarly to the basin of the LCIIB Maroni Basin Building – discussed in a following section. However, I hold alternative interpretive views to Fisher who suggests this installation was a symbolic expression of control over the valuable resource of water, or that it was used for ritual

purposes (Fisher 2007: 245). My divergence is based on the fact that the Kouris landscape and especially the fertile valley, where Alassa is located (Chapter Five, pp.232-235), is an important source of water, the effective and practical control of which is yet not materially supported. While I regard the construction and the spatial allocation of the ashlar building as a choice encompassing both practical and cognitive aspects, I consider more plausible that the placement of the basin served to prevent several isolated *ad hoc* trips to the fresh running water of Kouris, by storing large amounts for uninterrupted use, necessary for an array of activities (ritual and/or secular) requiring both water and fire (for example olive oil production: Forbes and Foxhall 1978: 37-47; Esse 1991: 123).

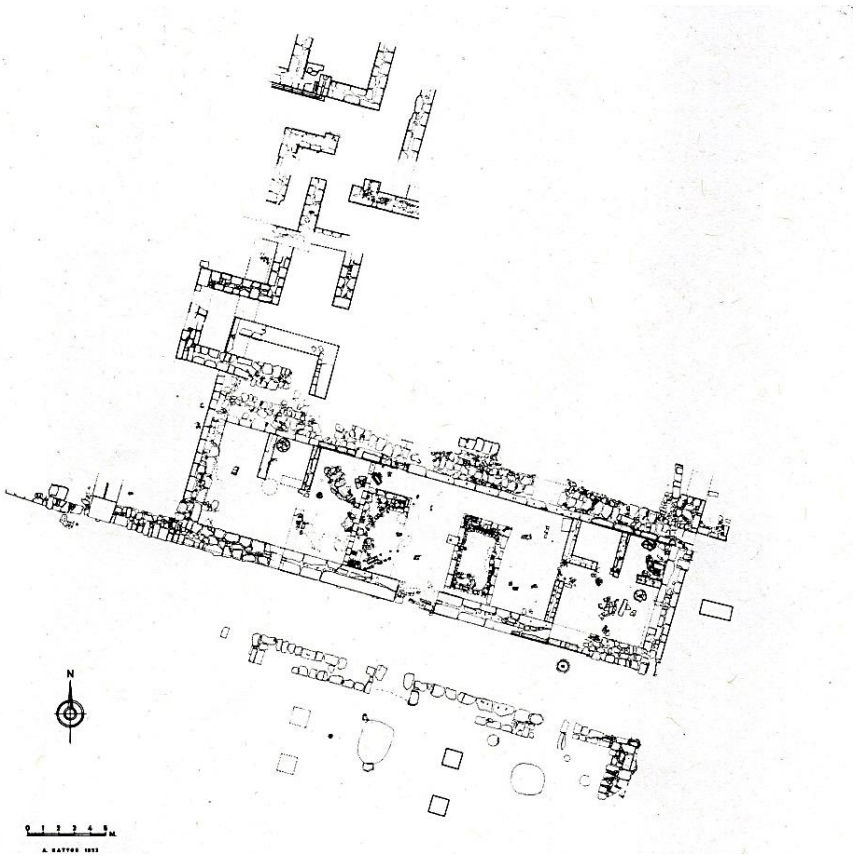


Figure 6.16 Alassa-Paleotaverna Building II: The S wing (Hadjisavvas 1994: 109: fig.2).

Hadjisavvas (1996b: 32), supports the cultic nature of the south wing, based on the existence of the hearth and the discovery of a bathtub in an adjacent room without, however, providing material evidence for their cultic or symbolic connotations.

Fisher (2007: 247), on the other hand, assigns a ritual-ceremonial function, based on the symbolic role of hearth as control over fire and its transformative properties. This bathtub is found to the W of two identical rooms of the S wing and in association with what Hadjisavvas (1994: 109) identifies as a "well", and Fisher (2007: 247) a "toilet", for its small orifice (0,28 x 0,22m). Consequently, if one discounts any practical interpretation of the hearth and the large basin, then it is possible to support a ritual-ceremonial context for the S wing. However, other spatial elements, such as the bathtub and the 'well' or 'toilet' may not be easily considered ritual, due to their probable association with industrial activities; activities that can, however, be associated with the practical functions of the hearth and the basin, rendering a cultic interpretation tenuously substantiated.

Ritually significant or not, Alassa is a materially and architecturally distinct site. *Paleotaverna* stands out due to size, elaboration of ashlar masonry, use of seal impressions on pithoi (Hadjisavvas 2001a: 63), discussed in Chapter Five (pp.235-242), and gives the impression of an economically and socio-politically elaborate entity (Webb and Frankel 1994: 19). Despite these distinctions, significant correlates with Maroni and *Ayios Dhimitrios*, particularly through elite structures, administrative centres and symbols of power (Hadjisavvas 2000a: 396) are common. While I am in accordance with the last interpretation, I consider that ascribing a residential character to the buildings requires additional material evidence to counter-balance the strong public qualities and the lack of firm archaeological evidence for domestic activities.

The LC monumental structures are often characterised as elite family residences, due primarily to their superimposition over rich multiply-interred tombs. However, while kinship relations are based on alliance through descent or affinity, households are generally defined by activity-sharing relations (Brück and Goodman 1999: 5-7; Souvatzi 2008: 12). This is based on anthropological studies (Bender 1967; Hammel and Laslett 1974; Cheal 1991: 125-132; Roberts 1991: 62-63; Goodman 1999: 145 and examples in Souvatzi 2008: 9-20) that suggest that cooperation is not an

exigency among family members, and kinship relations are not a criterion to identify households. Therefore, an association of the kinship relations among the elite groups and the characterisation of these buildings as residences probably require additional material evidence.

Kalavasos-Ayios Dhimitrios

Ayios Dhimitrios comprises both domestic structures and an ashlar building, with the latter combining structural elaboration and a higher elevation, ensuring the considerable and consistent post-excavation attention (fig.6.17). The domestic area of *Ayios Dhimitrios* consists of distinct multi-roomed rectangular and L-shaped structures found in two areas bisected by the modern motorway.

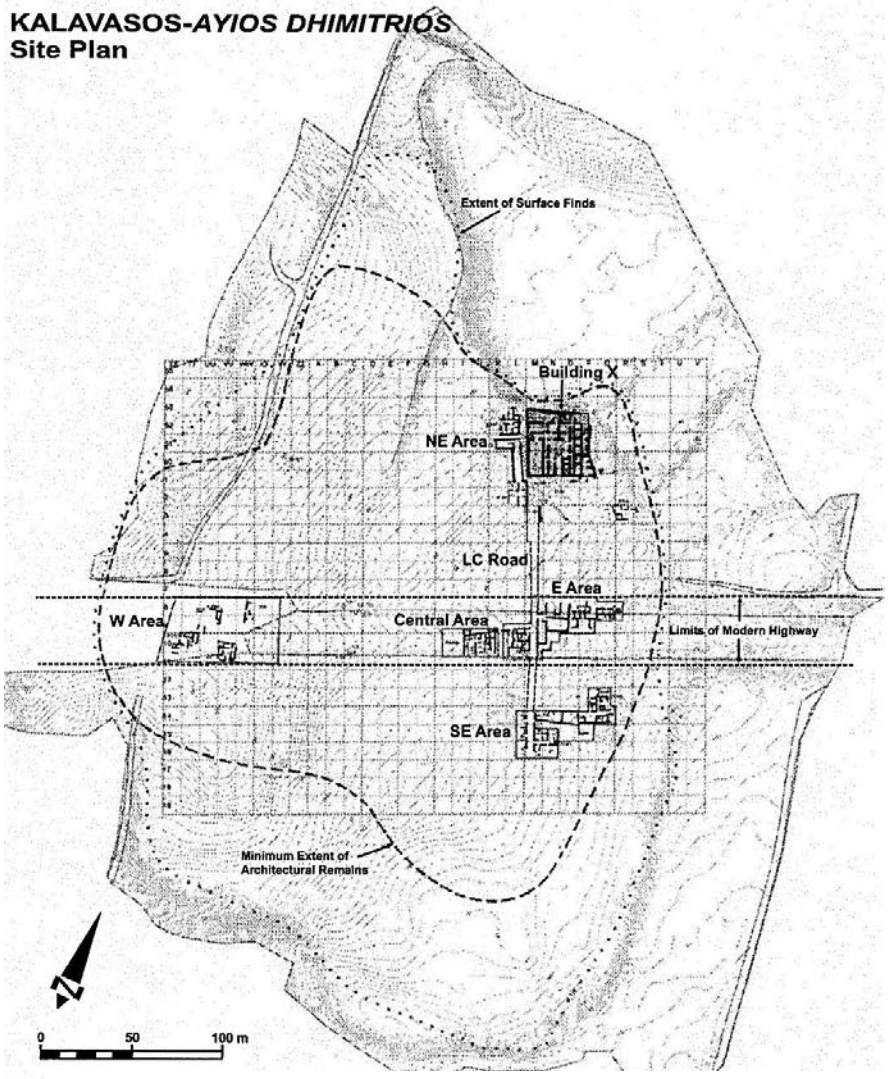


Figure 6.17 Kalavasos-Ayios Dhimitrios general site plan (Fisher 2007: 375: fig. 7.15).

These domiciles are founded on havara, constructed of irregular stones, often dressed with uncut stones (South 1982: 62), furnished with benches built against the walls and endowed with plaster and pithos sherd floors (South 1980: 33), and in some occasions included wells (1980: 36). A typical building comprises 7 rooms with a size range from 2,3 x 2m to 3,8 x 3,6m (South 1982: 64). Some rooms are notable for their content, for example A.24, which is a relatively long rectangular room with large, flat stones placed on its thicker and denser floor, countersunk by a decorated ceramic bathtub (fig.6.18) (South 1980: 39; see Philokyprou 2011: 48 on flooring in ancient bathrooms).

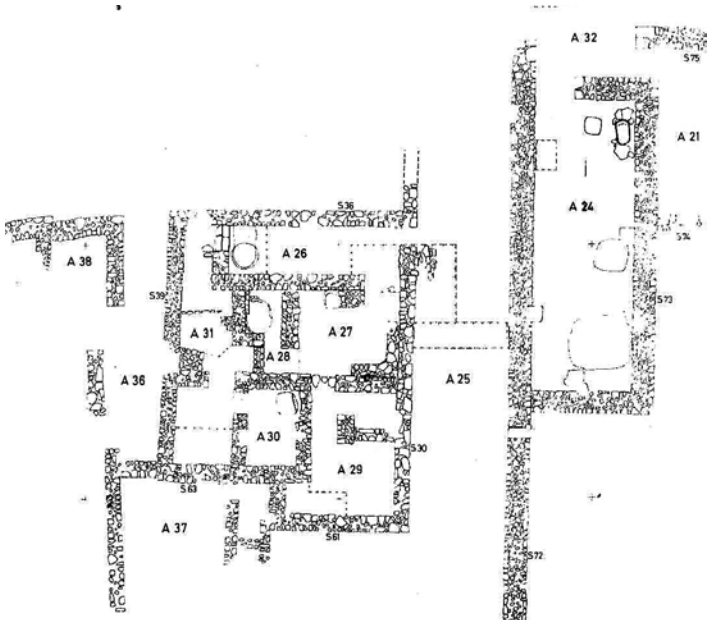


Figure 6.18 Ayios Dhimitrios room A.24 and adjacent rooms (South 1980: 36).

A.102, part of a multi-room structure incorporated five pithoi, with more pithoi uncovered in the same building (fig.6.19) (South 1980: 43). Pithoi have been excavated in several multi-roomed structures, but not in significant concentrations, indicating that intensive cultivation of olive and other agricultural products was probably not undertaken solely to "meet the ever-increasing needs for the emerging elites" (Hadjisavvas 2012: 157). Another building contained an impressive amount of metal artefacts, along with pieces of slag, a crucible fragment and a hearth, which suggest small-scale smelting activities (South 1982: 65).

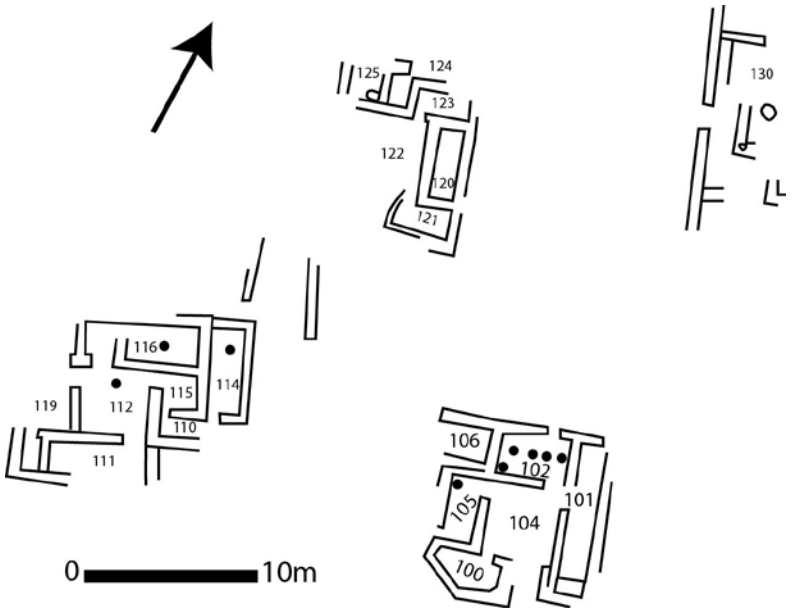


Figure 6.19 Room A.102 in context (adapted from South 1980: 43: fig.6 on Adobe Illustrator).

The domestic area of *Ayios Dhimitrios* was constructed above earlier, often looted tombs (South 1980: 45; 1982: 61, 66), without secure provenance of when looting was undertaken. This phenomenon was repeated for the structurally elaborate buildings constructed around B.X. In general, these buildings contain a larger amount of imported and less common artefacts found in association with ground stone tools typical in smaller, clearly domestic structures of the SE and SW areas (South 1983: 104). At the same time, their intermediary architectural elaboration between the modest domestic structures and the impressive B.X. are characterised by South (1991: 134) as possessing a "semi-official" wall style, due to their thickness and occasional use of ashlar blocks, particularly for wall termini.

B.III is an example of a 'semi-official' structure, comprising 14 rooms of varying size and being diversely floored using bedrock, very thin plaster or stone paving (fig.6.20) (South 1983: 102). B.III was related to liquid processing, based on the discovery of a stone bench adjacent to a jar (South 1983: 103). However, the content of the rooms, namely the typical ground stone tools (South 1983: 102): querns, grinders, hammers, pestles, pounders and mortars do not point to any distinct function. One room (A.129) contained a significant collection of bronze and stone weights, recovered in a small hole, cut into the bedrock floor (South 1983:

103; Courtois 1983). This suggests a particular function that, while not necessarily belonging to the room, likely signifies some standardised bureaucratic activity belonging to the building.

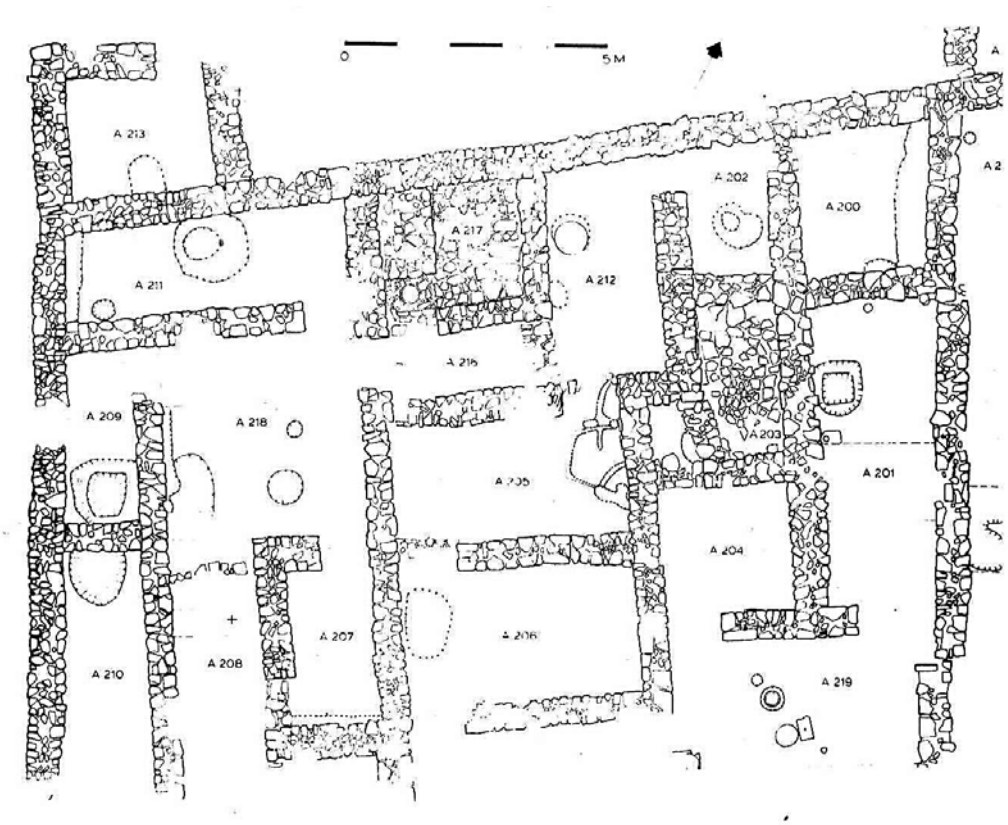


Figure 6.20 Kalavasos-Ayios Dhimitrios, Building III (South 1983: 102: fig.3).

B.VIII is another example of a 'semi-official', multi-room structure containing a bench-lined corridor leading to a cluster of small rooms containing storage vessels, including Canaanite jars (fig.6.21). The corridor leaded to an at least partially roofed, rectangular court and another complex of small rooms (South 1984: 16). South interprets this building along with B.III as private residences of relatively high status occupants, despite mentioning a lack of evidence for domestic activities, such as cooking, sleeping, waste disposal, etc. (South 1984: 17). Russell suggests that domestic activities were likely enacted in the upper stories or in open areas, based

on cooking ware being the most plentiful fabric among the potsherds in the W, Central, E and SE areas of *Ayios Dhimitrios* (Russell 1989: 6).

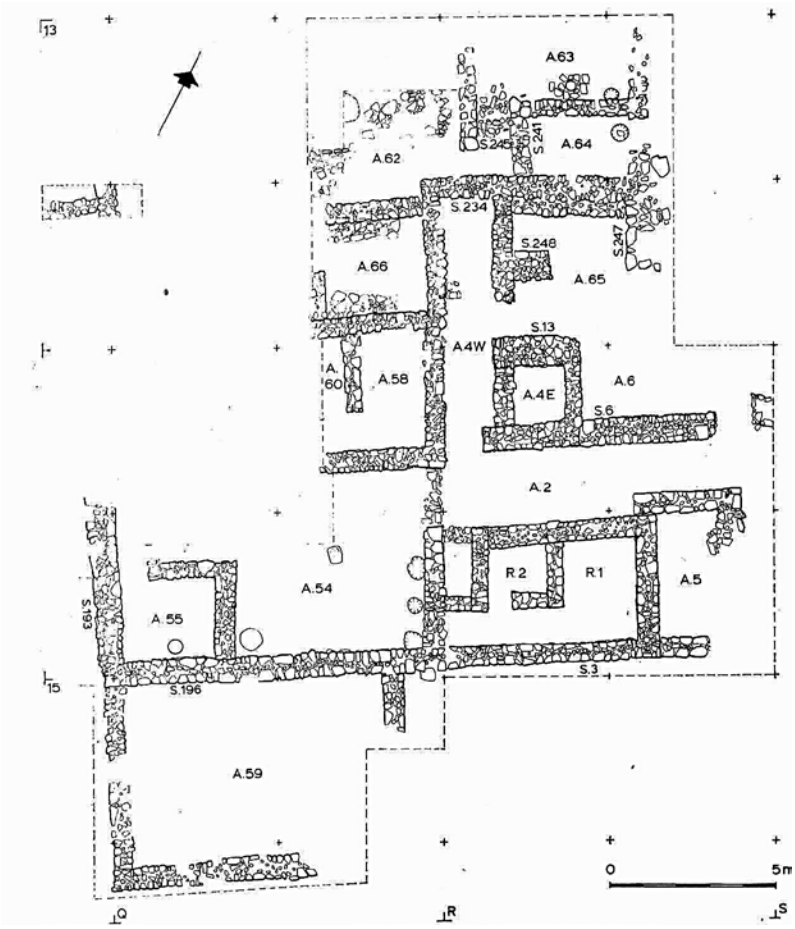


Figure 6.1 Kalavasos-Ayios Dhimitrios, Building VIII (South 1984: 16: fig.1).

Additional adjacent structures contain clear evidence for industrialised agricultural activities, such as B.XI, where a large rectangular basin was found sunk in the pebble floor related to a small pithos, stone tools, limestone weights, fragments of large ceramic and stone basins and olive pits (South 1991: 134), which seemingly point to olive oil production (fig.6.22). B.XIII includes stone benches constructed against its walls and associated with a large, often grouped, assemblage of ground stone tools, pithos sherds, spindle whorls and a rectangular stone basin (South 1992: 141). This material association points to industrial activities, probably characterising a professional group and not exclusively a domestic group within the limits of B.XIII. Finally, the way in which those buildings link with B.X is unknown. In

some occasions South included those buildings in the administrative area, which she estimated to approximately 5000m^2 (South 1996: 42). However, one cannot overlook the probability of these buildings being of autonomous, yet interdependent economic character; a concept analysed below.

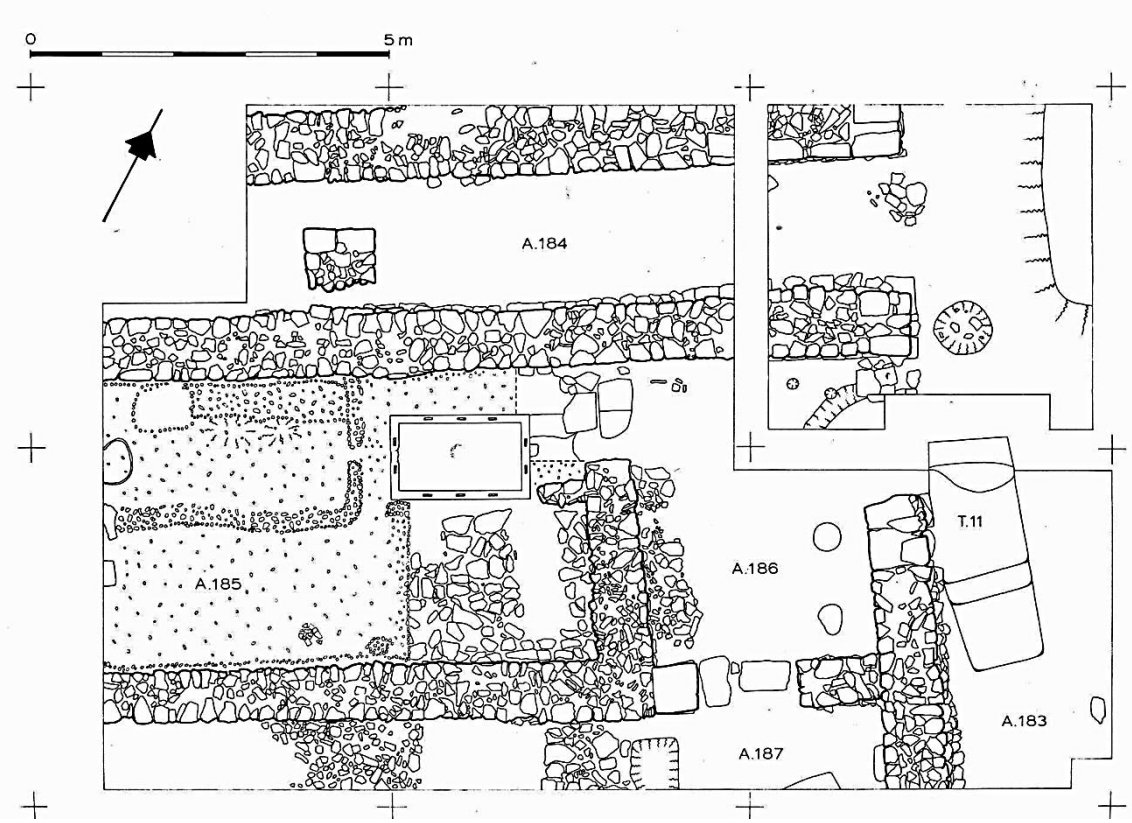


Figure 6.22 Kalavasos-Ayios Dhimitrios, Building XI (South 1991: 136).

The culmination of architectural complexity at *Ayios Dhimitrios* was achieved in the ashlar B.X, which dates to LCIIC, bears evidence of LCIIA:2/LCIIB construction, and was built above an LCIIA:1 cemetery (fig.6.23) (South 1997: 173). Fisher rightly suggests that B.X was probably "monumentalised" in the mid-LCIIC (Fisher 2007: 219). Ashlar masonry was widely used in B.X, the core of which measures 30,5 x 30,5m and involved a square structure with a central open court and a generally tripartite plan. One entrance located to the S, leading directly to the court is generally considered the main entrance to the building. In fact, Fisher suggests that the W and E entrances were used as "service entrances" for materials (Fisher 2007: 222, n.28), thereby excluding the central court from such function.

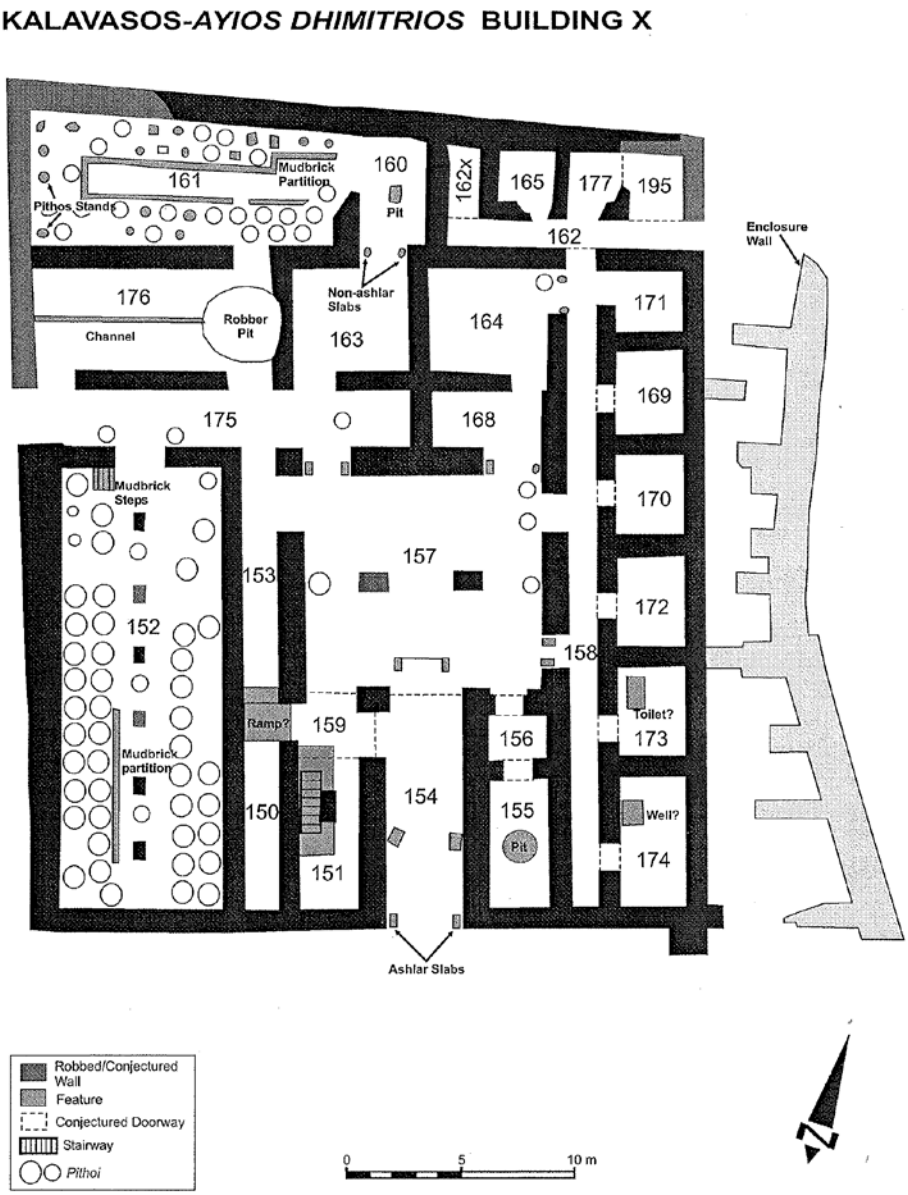


Figure 6.23 Kalavasos-Ayios Dhimitrios, Building X (Fisher 2007: 377, fig. 7.17).

This court is bound to the E and N by rooms of variable sizes and with a large storage room to the W. It was significantly smaller than the court excavated at *Paleotaverna* and employed fixed elements such as pithoi, a large stone block visible from the entrance, and a large pit, probably the base of an orthostat (Philokyprou 2011: 47, fig. 17), and probably a second such block symmetrically

opposed to the first (South 198: 17). The N and W wings of the court have strong storage character, while a series of rooms to the E present greater interpretive challenges, due to their size, content and a lack of knowledge regarding their entranceways. An oft discussed feature found in one of these (A.173) is a masonry lined shaft, excavated to 3m depth, including broken bowls and cups of mainly imported pottery in association with animal bones, an assemblage interpreted as the result of elite feasting (South and Russell 1993; Wright 2004a: 96-97; Hamilakis and Sherratt 2012: 188, tbl.12.1).

The Pithos Hall is a prominent feature of B.X, found W of the central court and has the highest ashlar elaboration score in Fisher's dissertation (2007: 225). Its structure is composed of rubble core walls dressed in ashlar blocks with drafted margins, containing well-built rubble socles, six monolithic ashlar columns across the longitudinal axis of the room and a thick white plaster floor (fig.6.24). In this room 50 massive pithoi were standing aligned and 6 were sunk with their rims at floor level. A similar but less imposing storage room is found at the N of the court, containing 45-60 pithoi of smaller size (Keswani 1989b: 15-16, Group II).

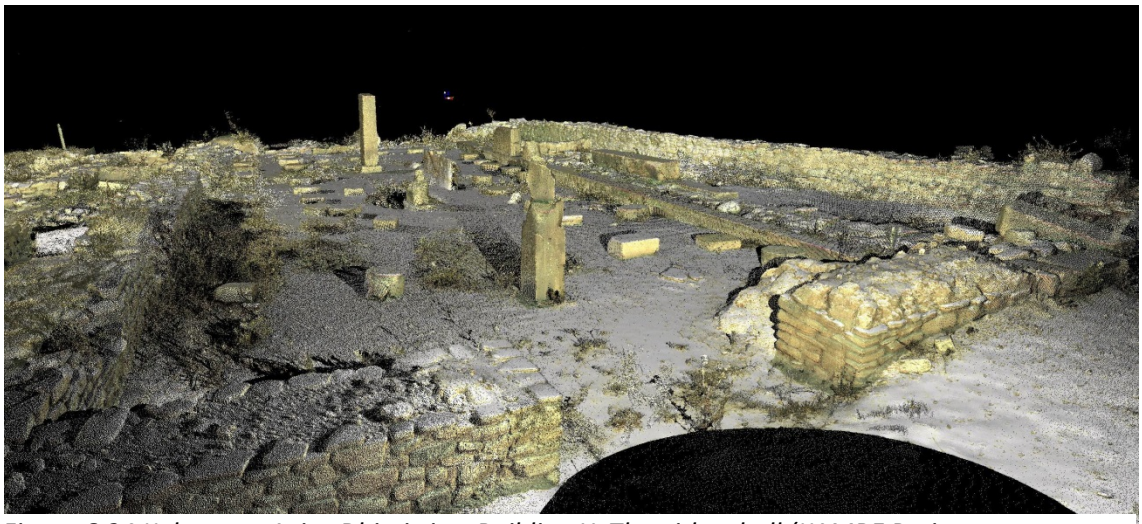


Figure 6.24 Kalavasos-Ayios Dhimitrios, Building X, The pithos hall (KAMBE Project: http://kambe.cast.uark.edu, 6 March 2013).

Kalavasos-*Ayios Dhimitrios* is distinguished from the other LC sites under analysis because of the existence of a probable town plan, evidenced by a street found to the W of B.X, and potentially linking with the domestic compounds of the SW and

SE area. Fisher considers that the same street, to which he ascribes a ceremonial or processional character, widened as it approached B.X (from 4,3m to 6m), the presumed administrative centre of the city (Fisher 2007: 220). Assigning administrative character to B.X is based on the architectural elaboration exceeding the functional requirements of the building (Trigger 1990: 119-120), the aforementioned shaft with evidence of feasting and the discovery of 5 inscriptions (Masson 1989: pl.XIII, figs. 60-63; Smith 2002: 20-25). Following that, Fisher suggests that "important" visitors used the "main" entrance to the building (Fisher 2007: 222), while he argues that the court was a "public inclusive" area suitable for social interactions (2007: 221). While it is plausible that the purpose of the central court involved social interaction as part of a ceremonial or symbolic environment, material evidence suggests that, the central court was additionally a functional necessity in a building which incorporated an array of industrial and storage facilities, as these involved the staggered, high mobility of a large number of individuals. Similarly, the large number of pithoi, consisting of 50000L of olive oil (South 1989a: 321; Keswani 1993: 76), point both to a large industrial unit specialising in the processing of agricultural products and to the ideological manipulation and symbolic justification for some formalised politico-economic activities (Fisher 2007: 228). Intriguingly, this complex is situated a few kilometres W of a similar building at Maroni-*Vournes*.

The Maroni Complex

The LBA excavated components of Maroni derive from *Aspres*, *Vournes* and *Tsaroukkas* (Chapter Four, pp.167-171). The present study aligns with Manning (1998: 45; Manning et al. 2014) regarding the existence of dispersed town planning, with at least *Vournes* and *Tsaroukkas* comprising elements of the same entity. This interpretation is based on ongoing geophysics survey and the excavation of a trial trench in the area between *Vournes* and *Tsaroukkas* with a wall dating to the LBA (Manning et al. 2014).

In the mid-1990s, when Manning conducted excavations in and around the area where Johnson (1980) reported to have located the British Museum tombs, a series of rubble built walls were unearthed (Manning *et al.* 1994b: 94). Tsaroukkas architecture employed typical LBA domestic construction method consisting of rectangular multi-room units (fig.6.25), founded on bedrock and constructed with irregularly shaped stones and mud brick. Despite the limited excavation area, the unearthed walls display structural variation with examples of diverse widths, including a 2m wide wall with comparatively elaborate construction techniques, employing larger stones on its two faces and a disused anchor (Manning *et al.* 1994b: 97). Based on the direct coastal location of the settlement, Manning et al. (1994b: 98) consider that this wall was used to deflect waves, while simultaneously forming part of a large impressive building. The site was also constructed above antecedent tombs, excavated in a completely destroyed or looted state (Cadogan 1988: 230; Manning *et al.* 1994b: 88). The chronological period of looting is unknown, as the site suffered extensive disturbance by the British Museum excavations.

Figure 6.25 Maroni-Tsaroukkas excavated component (KAMBE Project: http://kambe.cast.uark.edu, 6 March 2013).

Moving to the N, Maroni-*Vournes*, due to its proximity to *Ayios Dhimitrios* has been traditionally associated with the Vasilikos Valley, while later studies contrastingly consider *Vournes* a different entity, often applying the term "administrative centre" (Cadogan 1996: 18; Fisher 2007: 235-236). Based on the available extent of excavation, *Vournes* includes an Ashlar Building, the West Building and the Basin Building (fig.6.26). The latter dates to the LCI and is identified as a lime-plaster workshop (Cadogan 1983: 160), while the first two date to the LCIIC, with the Ashlar Building noted by Cadogan to slightly pre-date the West Building (Cadogan 1986: 42).

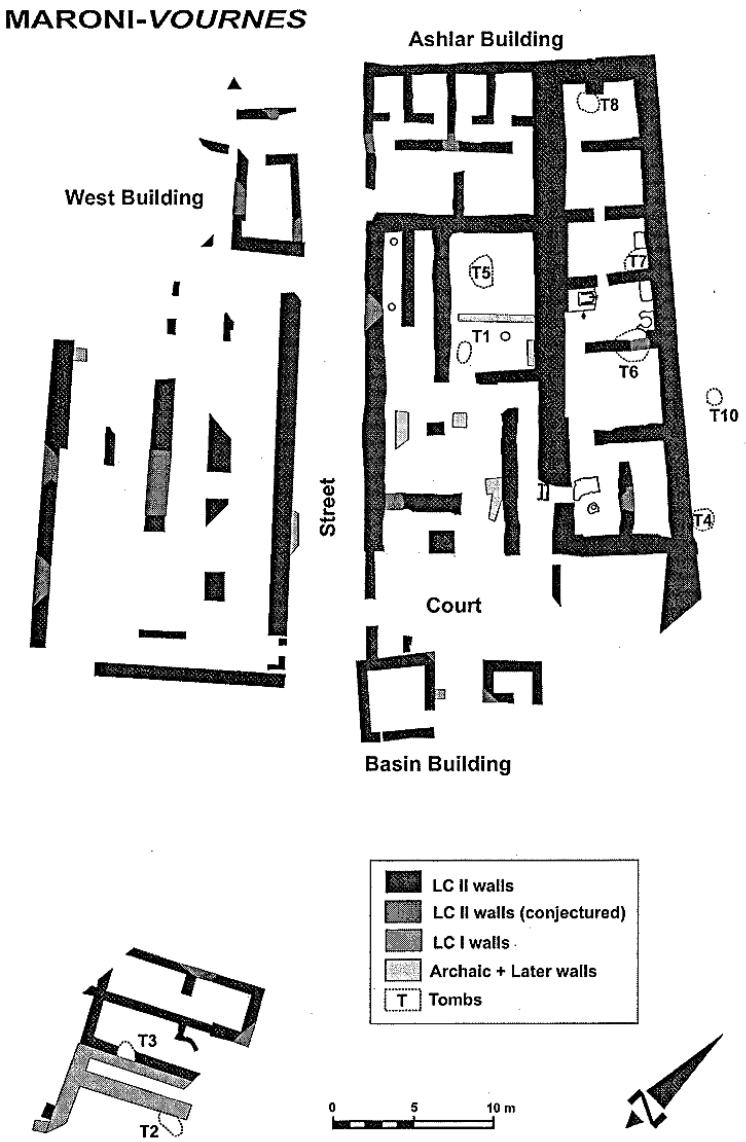


Figure 6.26 Maroni-Vournes excavated component (Fisher 2007: 383: fig. 7.24).

The most completely excavated, large and structurally complex unit at *Vournes* is the Ashlar Building with dimensions of 30,5m x 21m (fig.6.27). Its slightly trapezoid shape, distinguished by a roughly tripartite division, comprises a lengthy series of rooms at the E, a complex of smaller rooms at the N and a large rectangular area between these areas. This latter area was built from the highest volume of ashlar blocks, from which some have been extracted, as evidenced by robbers' pits. Some ashlar blocks are preserved as facing in the E rubble and stone core walls, a practice also evidenced in the NNW end of the E wing.

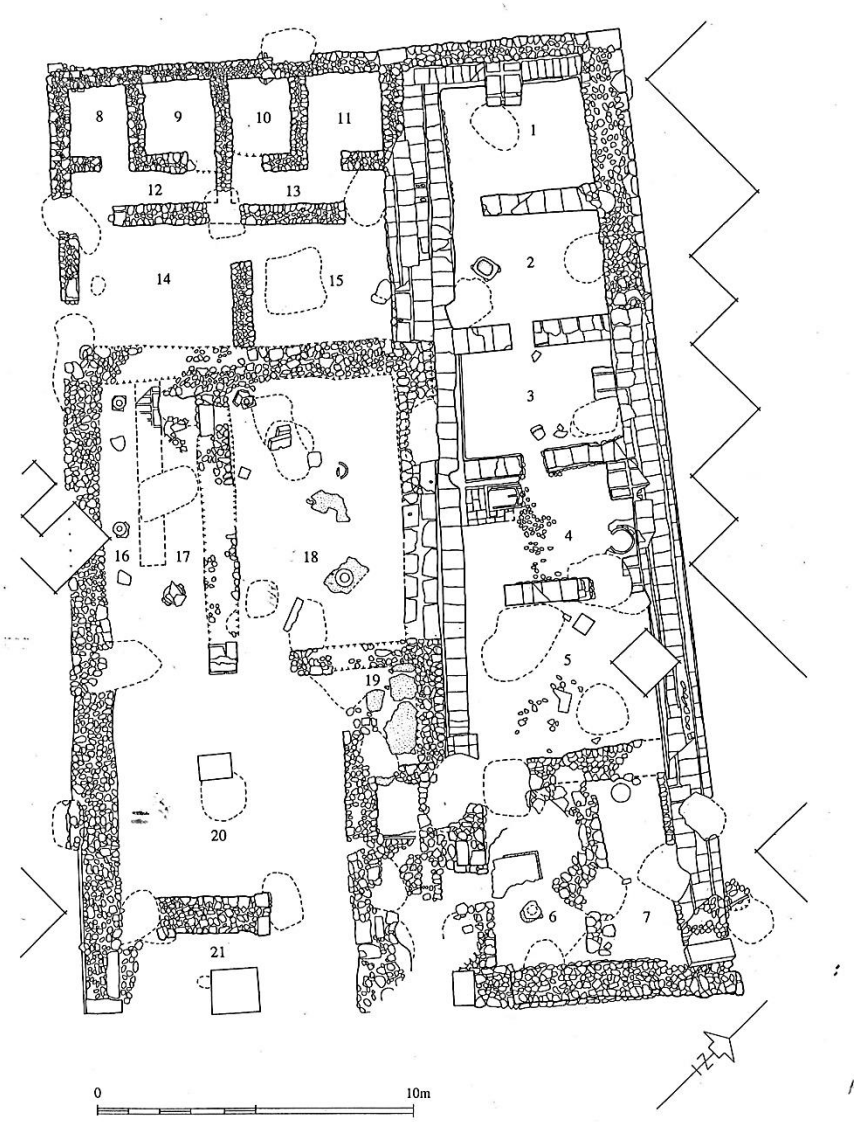


Figure 6.27 Maroni-Vournes Ashlar Building (Cadogan 2001: 63, fig.13).

Based on the most complete plan, published by Cadogan (1992a, fig.3), it is not possible to identify with certainty a central court as described at *Paleotaverna* and *Ayios Dhimitrios*; thus, this study employs the more useful descriptor of the SW room complex. Its presumed central location has prompted Cadogan to suggest that it was an important open space (1987: 81), with its widest entrance widest entrance (2,65m) demarcated by a large ashlar block, which Fisher interprets as support for a potential balcony (2007: 232); an assembly suggestive of monumentality. Another relatively smaller block was located in the first room of this wing and was probably used as the base of a supporting column. The three rooms to the N of this room complex show evidence of at least 10 pithoi, indicating a storage function.

This 'central court' creates interpretive problems concerning its spatial relationship to the N wing. The N wing appears to have had limited accessibility to the W, removing direct communication with the other two wings, at least at ground level. Similar challenges affected the communication of the SW room complex with the E wing. Based on the available evidence one may assume that the E wing was accessible via the S façade, however the disturbance of the record does not permit certainty. At the same time the 'central court' and the E wing communicated through an interior corridor, despite their different external doorways. Fisher considers the use of gypsum slabs to the N of that connecting hallway, right before accessing the 'central court', as symbolic indicators of the "socio-politically and ideologically important space" (Fisher 2007: 234). However, this meaning-laden paving does not expand into the SW room complex, additionally considered by Fisher as an important space, where the use of natural havara paving was preferred.

Undeniably, the E wing presents a different character than the SW room complex. It was constructed of less impressive materials, including stone rubble walls and mud brick. The finds include an olive press and olive pits, pithoi, querns and a stone trough attached to the N (Cadogan 1983: 159), suggesting an industrial character related to olive oil production and probably processing of other agricultural products. The E wing was reportedly slightly lower than the central hall, often

assuming a semi-subterranean configuration (Cadogan 1992a: 53: e.g. Room 7). Finally, internal communication with the NE industrial areas was restricted to a single narrow doorway in the SE of the building, which Manning (1998a: 49) associates with the control of crafts production.

Another interpretively challenging feature is the NNW room of the building, which raises a number of questions regarding its purpose; a problem, made more acute by the abandonment of the buildings in the LCIIC and the displacement of material culture (Cadogan 1987: 83). The construction characteristics of this unit, which comprise relatively thin rubble walls, remind of typical LBA domestic structures; however the small size of the rooms and probably their symmetry suggest that specialised activities were taking place. The only excavated finds are incised loom weights, which may be associated with a yet unknown scale of weaving. Consequently, the Ashlar Building generally shows strong characteristics of agriculture related industrial activities, such as olive processing and product storage. For that reason it is difficult to firmly associate the 'central court', which is not *sensu stricto* central (Cavanagh 2001: 120-121), with administrative or ceremonial activities based only on the presence of ashlar masonry; an inconsistent criterion not associated with administration or ceremony, but storage, in the interpretation of the neighbouring West Building.

The West Building is generally discussed separately from the Ashlar Building, despite their close spatial correlation. Based on its symmetrical plan and the excavation of pithos sherds, Cadogan (1998: 231) supports that it was a storage area. However, despite lacking material evidence for an administrative function, it employs ashlar blocks for columns or column bases, features that Cadogan (1996: 17) and later Fisher (2007: 236) associate with the structure's monumentalisation. Consequently, the ashlar masonry found in the West building, which was approximately the same size and alignment as the Ashlar Building, is assigned a markedly different interpretation than its counterpart in the "central hall", which also bore evidence of storage. Interpretative diversity is related to the discovery of

a probable stylus (Cadogan 1982: 161), inscribed loom weights (Cadogan 1983: 161; 1987: 83) and one inscribed PW pithoid jar (Cadogan 1992a: 53) in the Ashlar Building, which are interpreted as remnants of economic administrative functions with significant socio-political power.

Despite the scale, or spatial extent of the administrative control being unclear, Maroni-*Vournes* has the least architecturally elaborate ashlar building among its peers, and yet, along with *Ayios Dhimitrios* and *Paleotaverna*, it has been characterised as a far-reaching and influential administrative centre, with deep socio-political implications for the surrounding landscape.

Remarks on Ashlar Buildings

The three ashlar buildings share remarkable similarities. However, beyond their structural adherence to a wider tradition, their final designs and functions indicate local particularities. For example, the ashlar complexes are tripartite, and despite unique internal configuration, the areas within generally comprise an open public inclusive area (court), storage facilities and workshop segments; an arrangement reflecting a long tradition of households with rooms surrounding a courtyard on three sides (Wright 1992: 275-277; South 1996: 44; 2012: 223). This complex blueprint discourages the assignation of a singular function, while their locally unique internal configuration points toward regionally if not locally-based politico-economic organisation.

Taking into consideration the combination of facilities and activities in the ashlar buildings and Fisher's application of the Space Syntax Analysis, many consider the central courts as public spaces. As mentioned, Fisher strongly supports the key role of central courts in ritual ceremonial practices (Fisher 2009a: 202). However, this role may be overemphasised, and potential ritual-ceremonial activities that may have occurred are potentially economically integrative strategies closely linked to the functional character of the buildings.

Central courts, due to their large area, wide entranceway and accessibility to all segments of the tripartite configuration may have equally been functional. These open areas are sufficient to accommodate large numbers of individuals and animals, serve as loading/unloading bays and access both raw and secondary stored products in adjacent rooms. The public character and practical accessibility of the courts are further supported by the facilitated accessibility through halls and walkways to storage rooms containing voluminous concentrations of immobile pithoi. Many pithoi were sunk into the floor suggesting that frequent visits were made to storage rooms to access their goods rather than the pithoi serving as transport vessels themselves. Moreover, subterranean storage suggests a consideration for the maintenance of optimal environmental conditions of long term storage (Perreira *et al.* 2002; Youssef *et al.* 2011: 1249). Together, these observations are in accordance with the construction of a large public space facilitating high mobility and wide accessibility for individuals, members of households, merchants, craftspeople and the elites formally organising this system.

In addition, researchers long supported that in societies where people spent a substantial amount of time engaging in subsistence practices, feasting is an important arena for identity and power negotiation and competition (Dietler 1990: 362; 1996:92; Dietler and Hayden 2001; Spielmann 2002; Russell and Bogaard 2010: 63; Chicoine 2001: 432; Bray 2003: 2-3; Dietler 2003: 277-278; Goldstein 2003: 145; Giedelmann Reyes 2007: 222). While the central courts very likely served as venues for such, there is insufficient evidence to suggest this was limited to distinct groups.

The importance of feasting lays in the fact that it entails intense human interaction and the potential to cohere and underline group identity and community identity through the creation of common memories (Dietler 2001: 77; Meskell 2003: 48; Van Dyke 2003: 194; Day and Wilson 2004: 44; Halstead and Barrett 2004: 11; Pappa *et al.* 2004: 41; Souvatzi 2008: 243; Chicoine 2011: 433), to transform social relations (Hayden 2001: 30; Adams 2004: 57), and even social systems (Giddens 1979: 206; Thompson 1989: 56). If a social body is considered to contain some inherent

economy, or professional diversity, then large scale feasting likely involves an array of agents and variety of occasions from the various celebratory rites of passage (Driessen 2007: 90), to the ritualised maintenance of food sharing and other economic strategies (Appadurai 1981: 494; Pollock 2003: 18; Dietler and Herbich 2001; Wright 2004b: 73). Such ritual and ceremonial activities are largely confined to seasonal circles and prescribed intervals, rather than the daily basis (Chicoine 2011: 450), opening the remainder of the year to the more practical aspects of life. The central court, then, as a dynamic space in a building with substantial material correlates for intensive agricultural production, is a conflation of the sacred and profane; an arena in which the practical cohesion necessitating survival enabled by subsistence production, networking and exchange was reaffirmed by the symbolic cohesion of the community in communal feasting, passage rites and disputation, which also involved an element of competition (Pappa *et al.* 2004: 39).

Further, while the widespread use of ashlar masonry in the LCIIC was a novel construction technique in the three valleys, it may also be considered an elaboration of the ancestral MC workshop (see Erimi-*Laonin tou Porakou* above) and LC domestic compound practice of employing local, workable natural resources for structural improvement and elaboration. It can further be suggested that the development of facilities with strong public qualities, used by ever more members of the community (collectives, merchants and other professionals), required the construction of more labour intensive, large, durable and internally complex structures (Moore 1996: 139; Belford 2001: 111-114; Johansen 2004: 324); a decision which was probably made by a socio-economically distinct group, but likely maintained through consensual rather than coercive means.

Based on the investigated evidence, the LBA architecture employs more durable/monumental materials in communal areas. The best example is *Ayios Dhimitrios*, where at least three levels of structural elaboration correspond also with degrees of public use and accessibility. Domestic areas, specific households, rarely employed larger stones on the corners of structures; the designated, ‘semi-

official' buildings, with evidence of professional specialisation by groups, infrequently used ashlar masonry; while B.X used ashlar blocks and orthostats in the public space and the Pithos Hall. On the one hand, impressive architecture can be considered a tool for promoting elite identities (Pollock 2003: 25; Fisher 2009a: 184); however, ashlar masonry may not be exclusively associated with the aim to communicate politico-economic inequalities. Aside from being used along a spectrum of aggrandising endeavours, it is possible to also have served community-wide purposes, such as providing stability and durability for public structures, in which the community invested heavily (Souvatzi 2007: 46). The processes through which the community contributed to the construction and maintenance of these structures are obscure. In the lack of material evidence for coercive mechanisms one may assume that these processes involved a certain degree of negotiation and consensus, with some benefits bestowed for greater responsibility or networking advantages.

Finally, according to Philokyprou the strategic use of ashlar buildings for foundations achieved unparalleled structural stability and damp proofing for masonry by reducing capillary action (Philokyprou 2011: 45). It was, thus, a time and resources consuming investment possibly achieved through collective effort (Fitzsimons 2007: 103; Laffineur 2007: 120; Ristvet 2007: 198), with the decision taken by a socio-economically distinct group.

Concluding Remarks

A contentious issue amongst researchers is that diachronic architectural analysis can provide new insight into regional practices and community identity, and can answer questions regarding the relation of these entities and the nature of their administrative role (Belluschi 2007: 323 and Canizaro 2007 in general). Following this line of thought, it appears useful if the degree of cooperation involved for the construction of these buildings is scaled back to a local level, and the degree of administrative activity undertaken within each valley, and re-evaluated.

Alassa demonstrates the highest degree of administrative infrastructure, followed by Kalavasos and then Maroni, in which administration can be inferred from the material culture of the 'Ashlar Building'. Additionally, the spatial relationship of Maroni and *Ayios Dhimitrios* may suggest independent efforts to cognitively encapsulate the landscape of a specific area (Sack 1986: 2; Armitage 2002: 155; Pfaff-Czarnecka 2002: 127; Leach 2005: 299; Belluschi 2007: 321), while synchronously establishing socio-economic networks with neighbouring regions (Chapter Four, pp.185-188). As symbols of local landscapes, the products of which were involved in processing and storage, they were administratively important, helping to maintain the socio-economic cohesion of the valley by providing the physical locus for the region's population to both directly or indirectly interact. It is difficult, then, to assess ownership and residence, particularly in light of the immense communal effort required for their construction and the multitude of agent-based configurations from the individual to the corporate likely operating within and through them, through a series of formal and informal relations (Valle 1992; Beaudry and Mrozowski 2001: 120; Armitage 2002: 135; Leach 2005: 308; Ristvet 2007: 198; Shepard 2012: 366).

The existence of an elite group, commonly referred to as an administrative body is not necessarily synonymous with ownership of the structures or the related agricultural products. Rather, in absence of sophisticated or extensive psychological or physical coercion mechanisms and explicit paraphernalia of formalised relations, it is possible that this group is associated with production control, and facilitation of intra- and inter-regional exchange. Importantly, then, there is likely a more sophisticated opportunistic organisation of communal potential, to the wider material benefit of those participating, particularly of the elite group, operating in parallel with those more traditional and informal exchange and interaction networks within and between regions.

The role of buildings as symbols of the local landscape is further argued by their association with agriculturally productive areas. Knapp (2013b: 360) already

discussed that the construction of ashlar buildings served several interdependent and co-evolving purposes; they physically secured productive land through their placement within it, ensured a sense of permanence and stability in the strength and scale of their design, and generated and perpetuated an awareness of natural place through their use of local material (through this is arguably secondary to the efficiency of material proximity and utility of is properties). It may be suggested that such endeavours sought to synchronously enable the socio-economic interaction of agents and achieve the productive benefits of intensified agricultural production and storage. Importantly, then, the focus of these functions created in the ashlar buildings an arena for the enactment and interaction of professional identity and the negotiation of social economics organised with unparalleled formality. This arena was a melting pot of aspiration and opportunism in which some groups and individuals prospered to the detriment of others. The key to success of the system, then, is probably not in the active or passive coercion by the elites, but the maintenance of mutual benefit (Hendon 2000: 44). It would then require a balance by those aspiring to more, to provide sufficient economic incentive to justify and secure their position of relative control and social, economic and political benefit.

It is particularly intriguing to unfold the complex relations amongst these elite groups and with co-existing, less influential groups. The elites are distinguished through their economic and likely socio-political influence and their privilege of access to material, social and symbolic resources compared to a series of other groups, which are commonly discussed as the 'non-elites'. The available evidence indicates that amongst the latter it is possible to identify groups of professionals, families and households that enjoyed varying degrees of accessibility to material, traditionally identified with 'elites'. Whether these groups can be conceptualised as 'sub-elites' (Baines and Yoffee 2000: 16) is unclear. Equally unclear are the similarities between the elite groups of each case study, as there is no standard material and structural vocabulary (e.g. Bamboula has no ashlar building) to serve as a common denominator among them. This may suggest that while the socio-economic relations within the analysed case studies are asymmetrical, they are yet

more complex than previously understood, and the monumental architecture less exclusively a symbol of one elite group, than of various levels of population, accessing it and interacting within it. Namely, although the ashlar building construction reflects the decision of the most influential group at a given time and the desire to confirm or reaffirm power and status, there is insufficient and conflicting evidence to support that its meaning was limited to that group.

Identities in Constructed Space

Cognitive aspects have already been assigned to the ashlar buildings through Fisher's research. Fisher associates theoretical approaches of environmental psychology (Rapoport 1990b), archaeology of monumental structures, and architecture in order to support and elaborate the symbolic role of ashlar masonry at Enkomi, Kalavasos, Maroni and Alassa. His dissertation and subsequent articles, while analytical (Fisher 2009a, 2009b) rarely contextualise the buildings within their landscapes. Considering that Space Syntax Analysis, first applied to the Cypriot context through his dissertation, is a post-interpretational and predominantly descriptive method, its final results largely derive from and support pre-existing models of explanation, with their own problems and limitations (Chapter One, pp.11-19). Although Fisher, in many occasions, modifies the interpretation of activities in certain rooms, he maintains the researchers' views on the buildings as elite structures and sometimes residences. Further, Fisher's interpretation of the symbolic representation of the ashlar buildings often yields asymmetrical focus on the cognitive aspects of architecture to the detriment of their functional characteristics.

In alignment both with Fisher and previous research, this study supports the vehicular role of architectural symbolism in expressing agency and identity (Eco 1980: 38-39; Steadman 2010: 29; Thomas 2005: 118), but following Rapoport (2005: 124) encourages a closer look into its role in identity shaping and manifestation at different socio-economic levels. This approach is also based on the concept that the

way people experience and conceptualise organised space is part of their identity, whether it is local, economic or social (Knapp and Ashmore 1999: 7, 20-21; Soja 2000: 24; Snead and Preucel 1999: 173; Leach 2005: 308).

Further, it is agreed among researchers that activity segregation in built space marks the passage from collectivist to individualistic identities and relations (Papaconstantinou 2005: 15 *cf*. Duncan 1981; Turan 1990; Van Gijseghem and Vaughn 2008: 122). This boundary contrasts with the results of the burial record analysis presented in the following chapter, which suggests the reinforcement, or reaffirmation of group, kinship-based identity. Therefore, identities expressed underground likely differed from what communities choose to display on the structured living space (Swiny 1997: 206; Keswani 2004: 153-154; Webb and Frankel 2010; Knapp 2013a: 24). Consequently, sole focus on architectural remains might provide incomplete and misleading information. Ross and Steadman (2010: 80) in their volume on agency and identity in the Ancient Near East argued that the study of identities is more effective when pursuing multiple avenues of investigation. Further, Rapoport, a widely cited scholar in the study of symbolic role of architecture supports that as life is not limited to activities undertaken within the walls of buildings, but rather permeates the landscape around them "one...cannot only look at 'architecture'" (1990a: 12), but should take in to consideration its surroundings, even to a regional level (2005: 19).

With these guidelines and taking into consideration the surroundings of the buildings and the diachronic use of the associated landscape one may discuss that the ashlar buildings of *Paleotaverna*, *Ayios Dhimitrios* and *Vournes*, aside from bearing indications of increased workload (Jones 2010: 14), were symbols of both local administration and communities prospering within defined landscapes. Namely, this type of architecture may reflect a cumulative attempt and can be viewed as a physical expression of multiple interaction networks. Constructing such buildings was a process that likely required a pre-existing set of local economic and social networks of knowledge and labour (Wright 1992: 117; Ingold 2000: 194-200;

Hamilton et al. 2008: 177; Philokyprou 2011: 43), including experienced quarry workers, masons and people and equipment capable for transporting stones (Wright 1992: 89; Ristvet 2007: 202-203). Beyond the communal effort and use of local materials, the communities rendered the ashlar buildings landscape markers - possibly implying a degree of attachment and boundary construction (Sack 1986: 32; Kolb 2012: 156-158) and local identity (Vavouranakis 2007: 276).

Consequently, these buildings provided the opportunity for communities to "indulge into webs of meaning" (Vavouranakis 2007: 278), via the expression of multiple identities through economic and administrative skills, control over landscape (elite socio-economic identity and kinship-based group identity), specialised craft skills (professional identity), co-operation in large scale construction projects and industrialised agricultural production activities (community identity) and the development of localised characteristics (regional identity). The key to maintaining the favourable balance between the practical and cognitive aspects of buildings in archaeological research is not to allow these webs of meaning to obscure or marginalise the practical functions and economic activities within and around the structures.

CHAPTER 7

SMALL SCALE ANALYSIS: CONCEALED SPACE

The Bronze Age burial record is the final dataset under examination and aims to enforce the arguments proposed in the previous open and constructed space analyses (Chapters Three-Six). By examining the widely discussed topic of the social importance of death (Gordon and Marshall 2000: 2) and the social dimensions of mortuary practices (Saxe 1970; Binford 1971; see criticism by Hodder 1982b; Parker Pearson 1982; Brown 1995: 9-12), this study investigates the role of burial landscape as a place-making practice. This is based on researchers, who advocate the importance of a fundamental need to relate past and present and the necessity of its incorporation in discussions of space and identity (Gordon and Marshall 2000: 15; Roberts 2000: 132; Parker Pearson 2005: 124, 132). Following this argument does not favour the dead over the living in understanding identity, however it does suggest that, as identity creation ceases or diminishes significantly and is at least inactive upon a person's death (Mellor 1993: 19-20; Mulkay 1993: 32-33), the cessation of an individual as active agent in 'other's' life, signifies the cessation of flexibility and negotiability of their identity. Consequently their identity is often assigned social dimensions by external agents (David et al. 2008), usually discussed in association to the rise of heritage issues (Finch and Wallis 1993: 50-51).

The present chapter examines various dimensions of identity through a highly resolved contextual analysis of an archaeologically challenging material. The conceptual difficulties in extracting information from burial evidence are compounded by diachronic looting, intrusive modern development, time restrictions of rescue excavations and incomplete tomb architecture, context description, publication of tomb finds and spatial associations. These common problems are exacerbated by existing problems of chronology and contextualisation, resulting from the diachronic use of tombs and multiple burial interments at different stages of burial treatment (Keswani 2004: 41. *cf.* Nikklason 1991; *contra*

Webb 1992: 88). Thus, the accurate association of burial goods with specific skeletons is difficult and often impossible to achieve.

Such limitations may burden the Bronze Age burial evidence with academic mistrust and limit confidence in its potentially inter-regional comparative study. Pottery types, metal rich assemblages and imported objects consistently influence research direction (Keswani 2004; Webb 2005; Knapp 2006), relegating spatio-temporal relationships of burial clusters, spatial association of burial depositions, and frequency ratios between common and uncommon objects in local and regional assemblages to speculation. Consequently, poorly published cemeteries and burial assemblages lacking the sufficient detail for inclusion, are commonly omitted from island-wide and regional economic and socio-political interpretative endeavours (e.g. Keswani 2004).

Investigated Material

In addition to burial assemblages from the three case studies the present research includes the land between the Vasilikos and Kouris valleys to supplement this study with a spatially continuous archaeological dataset (fig.7.1).

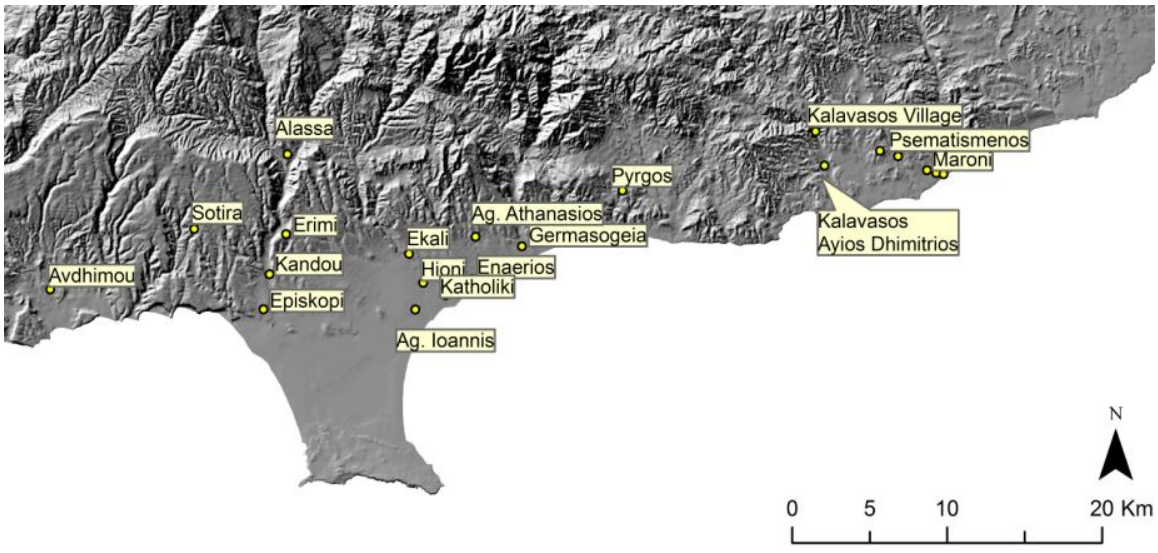


Figure 7.1 Distribution of the Bronze Age burial evidence under investigation (produced by the author on ArcGIS).

Based on a general evaluation of the available material, the Vasilikos and Maroni cemeteries are the most conclusively published assemblages, due to the systematic manner of their excavation. This is evident in the available publications, which provide detailed depiction of tomb architectural and material analysis. Consequently, the present research can securely access a total of 182 excavated chambers dating from the ECI to the MCIII/LCI and 139 from the LC. The largest share of EC/MC data comes from Kalavasos village with 72 examples, followed by 53 examples from Psematismenos and Maroni, 16 from Sotira, 13 from Pyrgos, 11 from Erimi, 7 from Limassol, 6 from Avdhimou, 2 from Alassa and 2 from Episkopi. The LC is represented by 30 tombs from Maroni, 50 from Vasilikos valley, 27 from Limassol, 37 from Episkopi and 8 from Alassa. These figures do not reflect the known number of tombs from each area, but rather the number of contextually secure samples.

The initial criteria set to record diversity among assemblages are tomb location and architecture (Parker Pearson 2005: 12-13), ratios between pottery shapes, and distribution and frequency of uncommon objects (Pader 1982: 60-61; O'Shea 1984: 15-20; Miller 1991: 122). These criteria form the structure of a database, which includes information regarding number of chambers and interments, osteoarchaeological information when available, pottery shapes with general information on ware types, metal artefacts, spindle whorls, stone objects, contextually unique objects and unique combination of objects and general notes on the assemblages and their chronology. Some of the existing chronologies are updated in this study, based more recent research on RP pottery (Barlow *et al.* 1991; Coleman *et al.* 1996; Georgiou et al.2011). These alterations are necessary, as tombs excavated during the 1960s and 1970s were analysed using chronological criteria based on the available range of publications and often lacked settlement data (Gjerstad *et al.* 1934; Dikaios 1940; Stewart and Stewart 1950).

Upon commencement, it was soon apparent that lack of publication prevented accurate recording of ratios between decorated and undecorated vessels. However, lack of such distinctions is not detrimental to the objectives of this research, for, in

occasions when publications are as complete as possible (Todd 1986c, 2007), I have not noted any widely applicable pattern between decorated and undecorated vessels. Rather, in similarity with Georgiou *et al.* (2011: 347), I observe that ceramic variety is related primarily to different chronologies or particular pottery wares and shapes. Diversity of pattern has emerged, however, from the occurrence of certain pottery shapes and wares and the frequency of spindle whorls, stone objects and non-local artefacts.

Theoretical Considerations - Identity Underground

As mentioned in Chapter Two (pp.48-51) The exact definition of identity has received varying analyses and applications among different disciplines (Jenkins 2008: 24; Walker and Leedham-Green 2010: 1; Wetherell 2010: 3-4), resulting in a general mistrust in its use (Brubaker and Cooper 2000: 34; Malešević 2002, 2003; Ashton *et al.* 2004: 82). In archaeology the material characteristics useful for identity interpretation attracted the attention of post-processualists (Johnson 1989: 189-190), who have been intrigued by the cross-cultural diversities of 'identity' and 'individuality' (Shanks and Tilley 1987: 62; Hodder and Hutson 2003: 10). The above prompted identification of key features for understanding identity expression, such as the socially and culturally varying notions of 'inclusion' and 'exclusion' (Pader 1982: 54-56; Gupta and Ferguson 1997: 13; Woodward 1997; Yelvington 2002: 240-243), which may render identities flexible and situational (Williams 1995: 8-9; Fotiadis 1997: 108-109; Hodder and Hutson 2003: 9). Researchers further discussed how identities are socially produced (Bourdieu 1996: 66; Taylor and Spencer2004: 2), correlative to social relations (Edley and Wetherell 1995: 165; Lawler 2008: 143 Jenkins 2008: 6) and require mutual knowledge of the self and of the others (Brubaker and Cooper 2000:8; Ashton *et al.* 2004; Jenkins 2008: 5); thereby requiring a diversity of interpretive avenues (Keswani 2004: 9; Charles 2005: 16).

Individuality is a popular issue of debate (Jenkins 2008: 208 with references) with some scholars doubting the role of agency in individuals as important or archaeologically recognisable (Thomas 2000: 149-150; Shennan 2002:212), or that a

distinction between society and individuality exists (Burkitt 1991: 189), due to the unpredictable behaviour of agents (Benwell and Stokoe 2006: 23-24; Burkitt 2008: 26). Inevitably, it is often pointed out that various theories regarding individual identity are not systematically evaluated through archaeological data (Trigger 2007: 470), providing the opportunity for open evaluation in this research.

It is widely discussed in sociology that individuality or selfhood is the earliest developed facet of self-awareness in humans and probably the most robust (Jenkins 2008: 70; Fowler 2008: 291-292; Tallis 2010: 184). While individuality is argued to comprise a variety of structures aiming to promote distinction from a group of elements (Bapty and Yates 1990), it is at the same time discussed as inseparable from the "web of others" (Bruner 1991: 114), with agents being constituents of communities and indirectly components of a broader culture. While Jenkins (2008: 70) discusses individuality as a specific view of a person's self, he also suggests that identification with elements outside the individual is highly flexible. This does not assume that external identification is antithetic to the conceptualisation and manifestation of individuality (*contra* Brubaker 2004: 64-87), but external processes affect deeply the formation of groups of individuals with a distinct identity. Jenkins identifies as group a clearly bounded, homogeneous and distinguishable assembly of people (Jenkins 2008: 8). Further, through his study of group sociology, he concludes that individuals require both "collective internal definition" and "collective external definition" (2008: 105), which he examines though a threefold distinction (2008: 39):

-The individual order: of embodied individuals

-The interaction order: constructed on relationships between individuals

-The institutional order: of organisations, patterned and established lifestyles

These orders may co-exist and do not assume an evolutionary progression. For example, the individual order, namely the internal self-definition and the concept of selfhood entails human interaction (interaction order), or external definition

(Jenkins 2008: 40 *cf.* Cooley 1962, 1964). Human interaction is observable in agents not only seeking to "be something" but also seeking to be "seen to be something or somebody" (Jenkins 2008: 42). This is often related with the aspiration of achieving the institutional order - the general acceptance of the individual's status.

Investigating the association of these three orders throughout the Bronze Age Cyprus is useful to understanding the social interaction dynamics that generated phenomena traditionally explained through the formation, competition and dominance of elite groups. As archaeologists have long emphasised the role of burials as social events and arenas of status display (Cannon 1989; Barrett 1990: 182; Mizoguchi 1993: 224-225; Keswani 2004: 1; Bennet 2005; Cannon 2005: 40; Pearson Parker 2005: 32; Sarauw 2007: 76-77), the role of people who organised burials and participated in this rite of passage are argued as equally important to the identity and status aspirations of the deceased (Gordon and Marshall 2000: 1; Harding 2000: 171-176; Charles 2005: 15).

Methodological Considerations

Contrary to the previously investigated architectural and the fragmentary survey data, the burial record's chronological integrity provides complementary information on the expression and transformation of identity. Moreover, it may provide insight into the conscious display of new identity relations, including professional, inter-community and extra-community. To accomplish this study's aims (Chapter One, pp.30-31), I initially examine the tombs within the clusters to which they belong, subsequently within their area/region and finally within the complete research assemblage. The degree of detail is different in each example, however in all examples I examine (i) the number of chambers sharing a dromos, (ii) the number of interments sharing a chamber contemporaneously and diachronically, (iii) the nature of available osteo-archaeological information in such instances (iv) variety and frequency of pottery shapes and wares and (v) artefact contextual, local and regional frequency.

Examining these topics may contribute to a better understanding of changing patterns in human relations, with probable implications for the formation of groups with shared identities. Further, burial assemblages with particular frequency ratio of pottery shapes may indicate different practices characterising either the deceased or their impact on the people responsible for their burial (Renfrew and Bahn 2004: 429-468; Parker Pearson 2005: 3). Finally, it is often argued that unique or low frequency items may comprise identity markers of individuality, potentially associated with the principal occupation of the deceased, or potentially their family, or even economic and social status (Appadurai 1986: 22, 44; Gell 1986: 111-114; Parker Pearson 2005: 86; Rakita and Buikstra 2005: 7-8).

A: The EC/MC

The Kalavasos Cemeteries

The burial evidence from Kalavasos village is concentrated in three locations: the *Cinema*, the *Panayia Church* and the *Mosque/Mavrovouni* (Chapter Three, p.95, fig.3.7). The last two share spatial continuity and chronological overlap, while the area between the *Panayia Church* and the *Cinema* bears no evidence for Bronze Age burial activities. Chambers and a large dromos are additionally recorded at Kalavasos-*Mitsingites/Kokkinokremmos*, yet due to only partial excavation, they provide unclear chronological information (Todd 2004b: 85-86; 2013: 89). The *Cinema* tombs date to the ECII/ECIII, while the *Panayia* and *Mosque* tombs represent a later date, ECIII-MCII and MCIII/LCI (Chapter One, pp.34-35, tbls.1A-1B). The spatial and chronological distinction of the cemetery clusters may shed light on more refined temporal phases of the surrounding unexcavated settlements, which are represented by a wide chronological range of surface material (Chapter Three, pp.136-152, tbl. 3B).

Cinema (S.3)

Based on information from 17 excavated and published chambers, of which two (T.30 and T.31) have not been re-located by the VVP (Todd 1977: 28; 1979b: 34; 1986c: 210-211), the *Cinema* tombs are distinguished by single interments containing pottery, metal artefacts and objects of personal adornment. The chambers are characterised by a distinctively low amount of burial offerings, which may be related to partial destruction of the chambers by a bulldozer. The RP, BP and RPM pottery accompanying the burials point to local origins (MacLaurin 2007: 203), with sporadic evidence of small incised vessels probably with affinities shared with northern and central Cyprus examples (Lassen *et al.* 2007: 191-196; Coleman *et al.* 1996: fig. 54; Dunn-Vaturi 2003: fig. 28: 6). Common pottery shapes include bowls, jugs and juglets, examples of amphorae from 2 tombs and 6 BP bottles, 5 of which derive from a single chamber.

Chambers distinguished by content are:

Chamber 77: with 5 BP bottles (Todd and Flourentzos 2007: 37-38) with parallel examples from Alambra (Coleman *et al.* 1996: fig. 54) and *Vounous* (fig.7.2).

Chamber 26: with 14 RP vessels including bowls, jugs, amphorae and a cooking pot (Todd 1986c: 207-208).

Chamber 78: with a large amount of metal artefacts (Todd and Flourentzos 2007: 36-37), including a sword with the tip bend upwards, an axe, a small knife or dagger, a scraper/razor and an awl with a bone handle, a whetstone, a stone pounder and a pithos (fig.7.3).

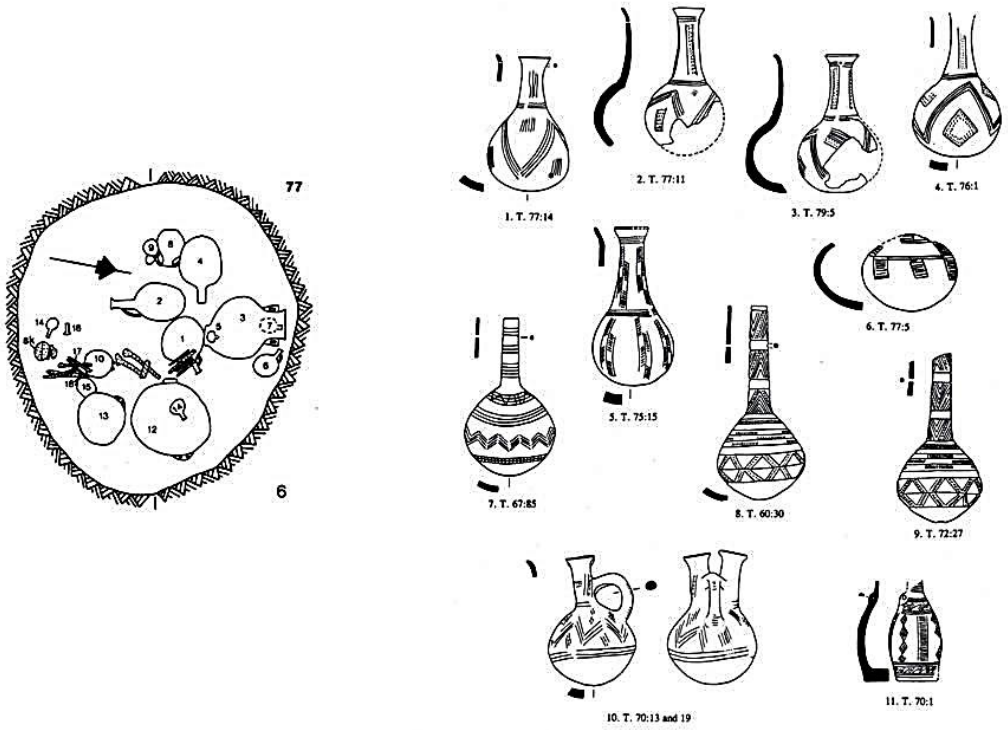


Figure 7.2 Kalavasos-Cinema T.77 (Todd 2007: figs.20, 28).

The BP bottles concentrated in T.77 are unique in the excavated cemetery. Aside from these examples, one bottle occurs in T.76 approximately 8m to the SE of T.77 and some sherds from a looted tomb (T.79) 9m to the SW, reinforcing the argument for deliberate differentiation of T.77. As this pottery is comparable with assemblages from the northern coast (Dunn-Vaturi 2003: fig. 28: 6), this example can demonstrate the higher mobility of a person or group of people and participation in wider exchange networks of artefacts/products (Knapp 2008: 77). Ceramicists suggest that the south coast BrP pottery was a regional fabric, different from the BP of the North coast (Herscher 1991: 47; 2003: 152; MacLaurin 1980: 223; Brewster 2004: 26-30). However, Webb and Frankel (2013: 65, fig.2) argue that the shape of the vessels under discussion reflects a north coast tradition. Regardless, they comprise a distinct deposit, reflecting accessibility to these bottles or participation in a thus far poorly understood economic activity.

T.26 is suggestive of the expression of a distinct identity through a large amount of pottery and relatively higher morphological variability, including a cooking pot and 2

amphorae. Could this assemblage reflect the professional identity of a potter, or the economic identity of a person or group of people distinguished by their wider accessibility to pottery? Answer to these questions is impeded by a lack of information on pottery surface treatment, temper, decoration and firing conditions, resulting from what Todd (1986c: 207) described as a "non-scientific" excavation of this tomb. Analysis of the degree of these vessels' homogeneity could elucidate potential pottery production by a particular agent or household, and the degree of a probable small-scale crafts specialisation.

Finally, T.78 is the most impressive tomb of the *Cinema* cluster. The great accumulation of metal artefacts of currently unknown chemical composition reinforces associations of the interred with the manipulation of the neighbouring copper sources.

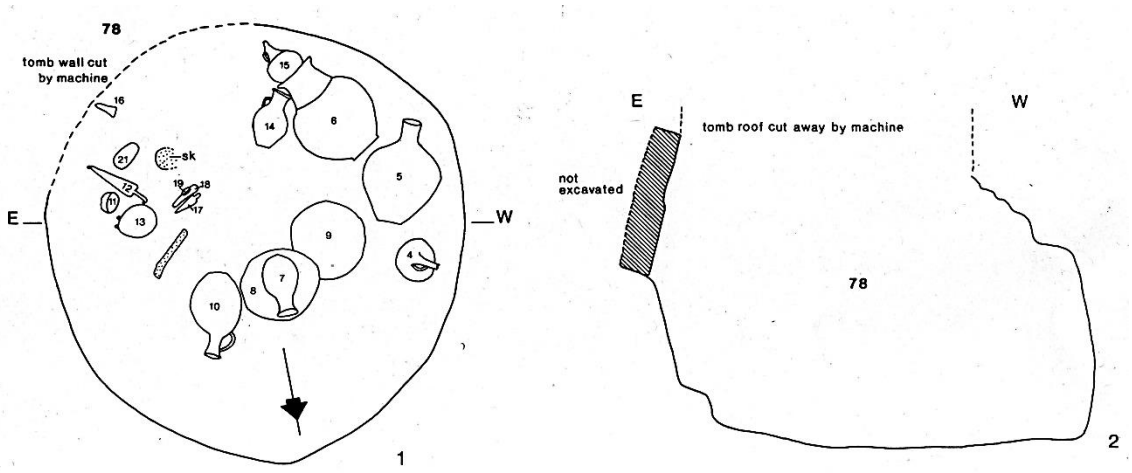


Figure 7.3 Kalavasos-Cinema T.78 (Todd 2007: fig.21).

These burial offerings point to strong ties with copper, probably providing distinct economic and arguably socio-political identity (Thomas 1991: 35; Sarauw 2007: 77; Schon 2010: 236). These ties may equally be formally or informally articulated with an established economic network. Such artefacts may indicate the professional identity of a coppersmith, a hunter (Georgiou *et al.* 2011: 356), or a leather worker, despite the sword (that is a hook tang weapon longer than 39cm) (Lassen 2007: 252) being impractical for leather working. Additionally, this artefact and its context

may indicate the prestige of the occupier in a generally rural society; in other words, the material articulation of a distinct socio-economic identity.

These examples demonstrate that sole focus on the analysed rural landscape of the Vasilikos (Chapter Three, pp.101-106) elucidates only one aspect of the economic organisation of its communities. The burial internments are suggestive of multiple social aspects, which are often obscured by the homogeneity of material culture observed in excavated settlements. In this example, in order to negotiate status and socio/political identity, individuals or groups interacted with extra-community networks or attempted to monopolise certain professions.

Panayia Church and Mosque/Mavrovouni in the ECIII-MCI (S.6)

The burial evidence from the *Panayia Church* and *Mosque* areas is distinguished by two chronological phases: the ECIII-MCI containing 22 chambers and the MCI-MCIII/LCI comprising 25 chambers (Todd 2007: 326). Despite the broader chronological span, and spatio-chronological distinction from the *Cinema* tombs, they signify different behavioural practices that do not chronologically conform to modern dating and classification techniques (Chapter Two, pp.60-63).

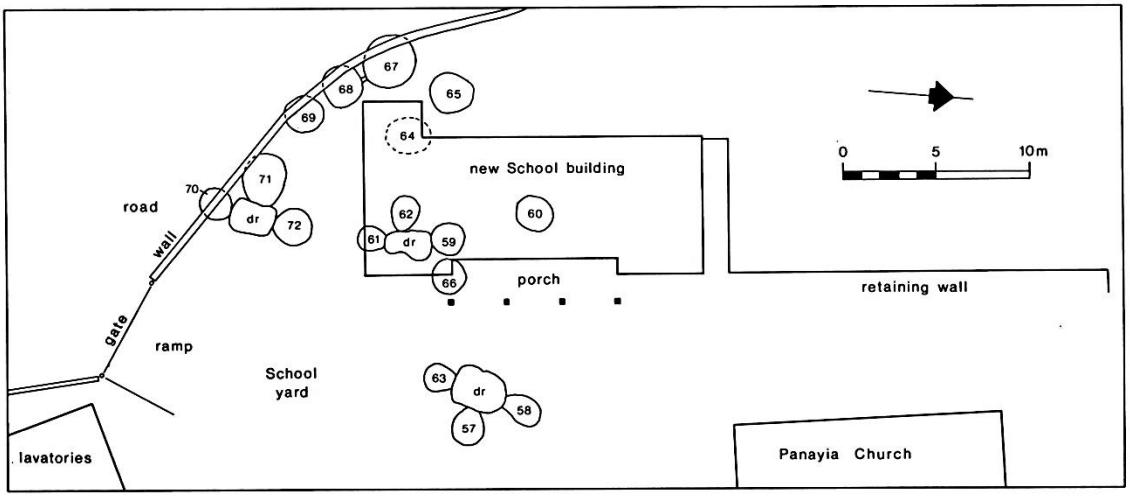


Figure 7.4 The ECIII-MC multi-chamber burials at Kalavasos village (Todd 2007: fig.6).

A general observation on the ECIII-MCI group is the adoption of multiple interments of up to six individuals (fig.7.4) (Moyer 2007: 262, 320). This study associates this phenomenon with the continuous inhabitation of settlements established in the EC, a hypothesis supported only after further excavations. As mentioned in Chapter Three (pp.94-98), most surface finds from the area of Kalavasos date to the MC, which is partly related to the problematic classification of RP pottery. This problem could work to the benefit of arguments for the continuous habitation of EC sites, where the founding population were perhaps less socially cohesive, thus employing single burial interments, only later manifesting inclusiveness as multiple interments, through the establishment of a stronger group and community identity.

Chambers 57, 58 and 63: Copper ⇔ Identity (figs.7.5-7.6)

This cluster comprises three chambers dating to the ECIII-MCI (Todd and Pearlman 2007a: 9-13, 16-17) and contains a minimum number of 7 individuals. Represented pottery includes typical RP and RPM pottery and the most frequent shapes, such as bowls, jugs and juglets in numbers relevant to the interments. Chambers 57 and 58, associated with sexed male skeletons of different age groups, contain a relatively larger number of metal artefacts, including knives, daggers, axes, blades and fragments. Conversely, chamber 63, used for the deposition of 2 women, contained no metal artefacts, nor evidence of looting (Todd and Pearlman 2007a: 16).

A preliminary suggestion could identify the metal assemblage of T.57 and T.58 with a distinct economic and social status/identity expression for the group sharing the chamber complex. Knapp (2008: 78) suggests that certain metal objects, such as spearheads and axes are indicative of high status, as they appear to cluster in relatively wealthy tombs, while Swiny (1997: 205-206) that they also intimate to the longevity of their manufacturing tradition and shape. The distribution of metal in the complex under discussion raises the question: Were metal tools and/or weapons associated with the male gender?

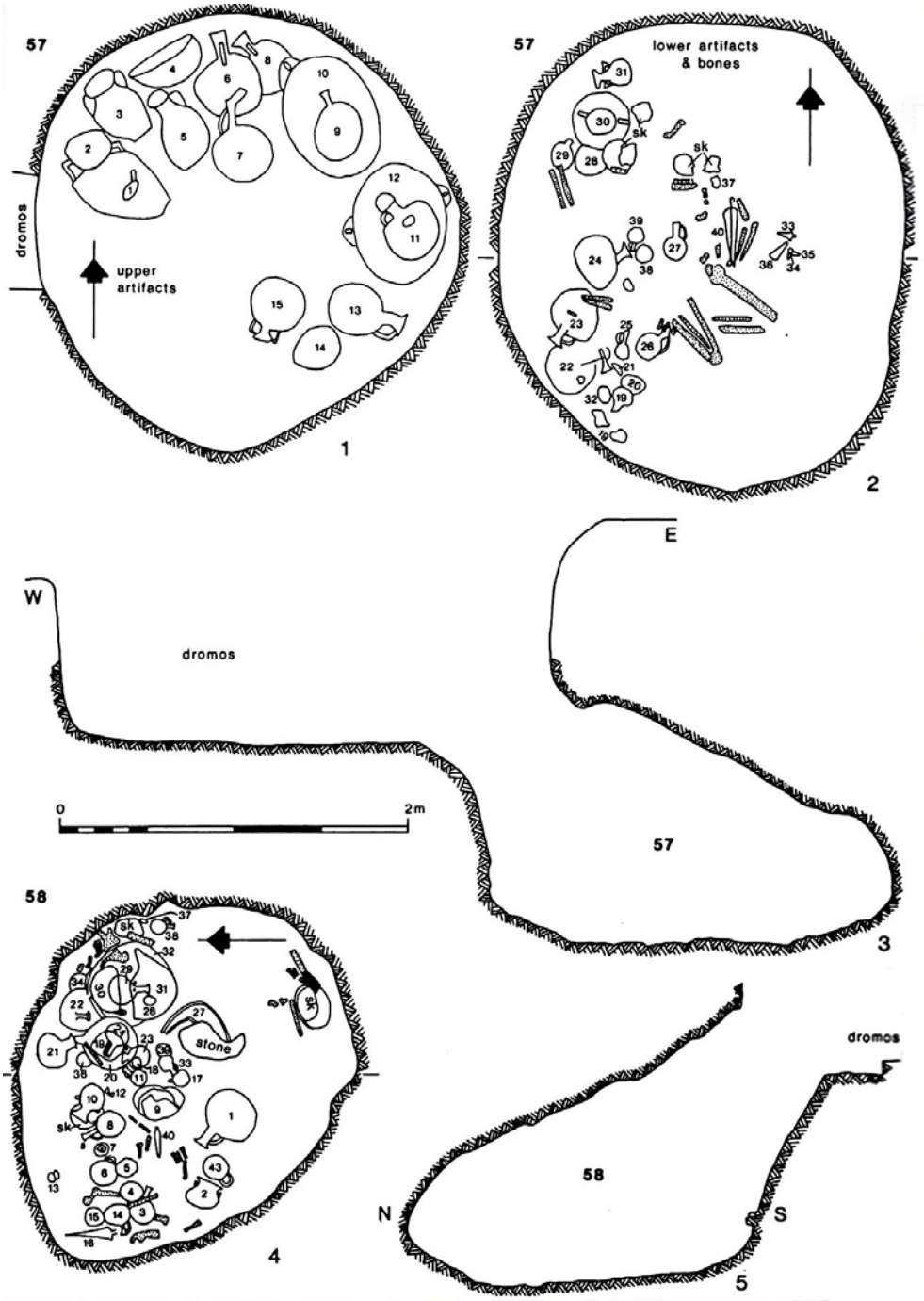


Figure 7.5 Kalavasos-Panayia T.57 and T.58 (Todd 2007: fig.11).

Metal fragments occur in the majority of relatively intact tombs, indicating general access to copper (fig.7.7) and what researchers discuss as low control level by individuals and groups (Keswani 1989: 270-271; Peltenburg 1996: 20; Steel 2004a: 142). Metal tools and/or weapons occur in 8 tombs, of which 3 include daggers or knives. Two of these examples derive from the aforementioned T.57 and T.58 (Todd and Pearlman 2007a: 11-13), while the third belongs to a tomb of an individual of

unknown sex (Todd 1986c: 200-201; Karageorghis 1940-48: 128-129). Female skeletons are associated with copper ornaments (T.59, T.71) (Todd and Pearlman 2007a: 13, 24-25) and small metal fragments (T.67), probably jewellery parts, pins (T.46) and razors (T.67) (Todd and Pearlman 2007a: 20-21).

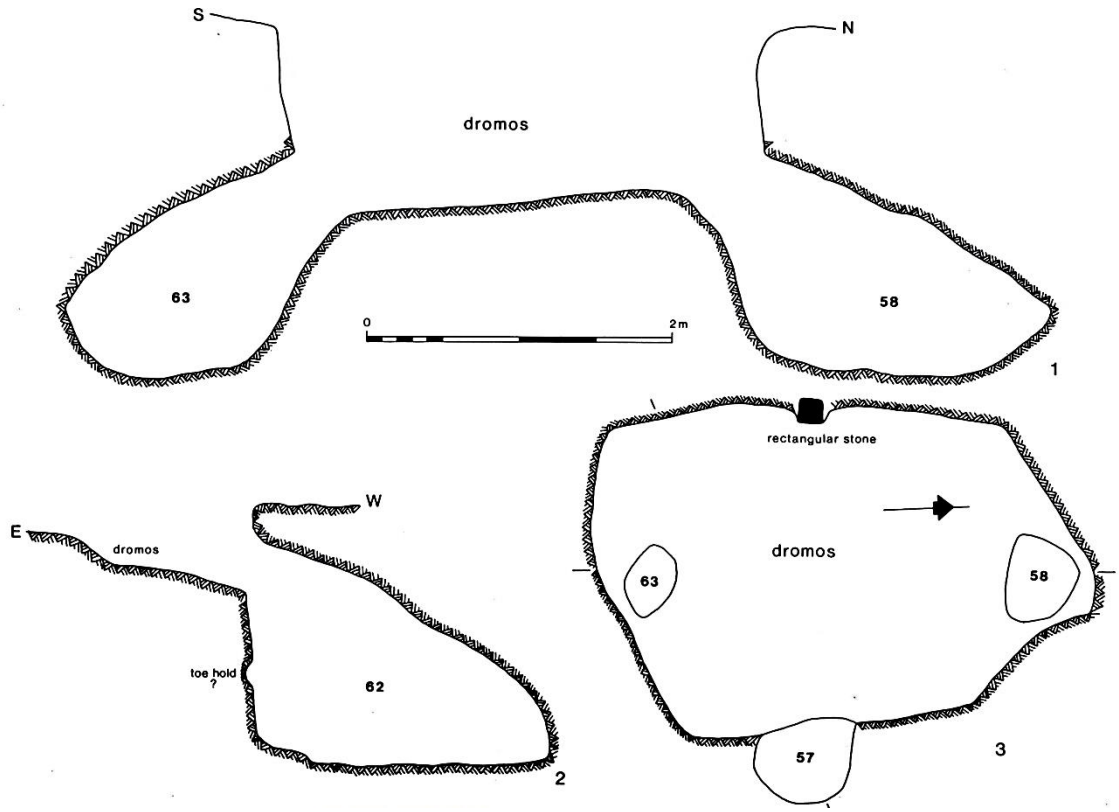


Figure 7.6 Kalavasos-Panayia Plant of T.57-58-63 burial complex (Todd 2007: fig.12).

Following Cannon's study on gender in "mortuary fashion", it seems likely that the female individuals, as reflected in this cemetery, demonstrate wider knowledge and material application of identity display via personal adornment (Cannon 2005: 64). Finally, a copper axe is found in a tomb shared by a male and a female skeleton (T.59) (Todd and Pearlman 2007a: 13), while several chambers with identified male skeletons are found without metal tools (T.67, T.71, T.53) (Todd and Pearlman 2007a: 20-21, 24-25; 2007b: 29-31). Therefore, the association of metal tools with male individuals in the discussed assemblage cannot be characterised by strict material-gender relationships. Rather, socio-economic aspects appear to influence identity expression, which may be related to gender-specific professional activities that were potentially employed to communicate and promote social status.

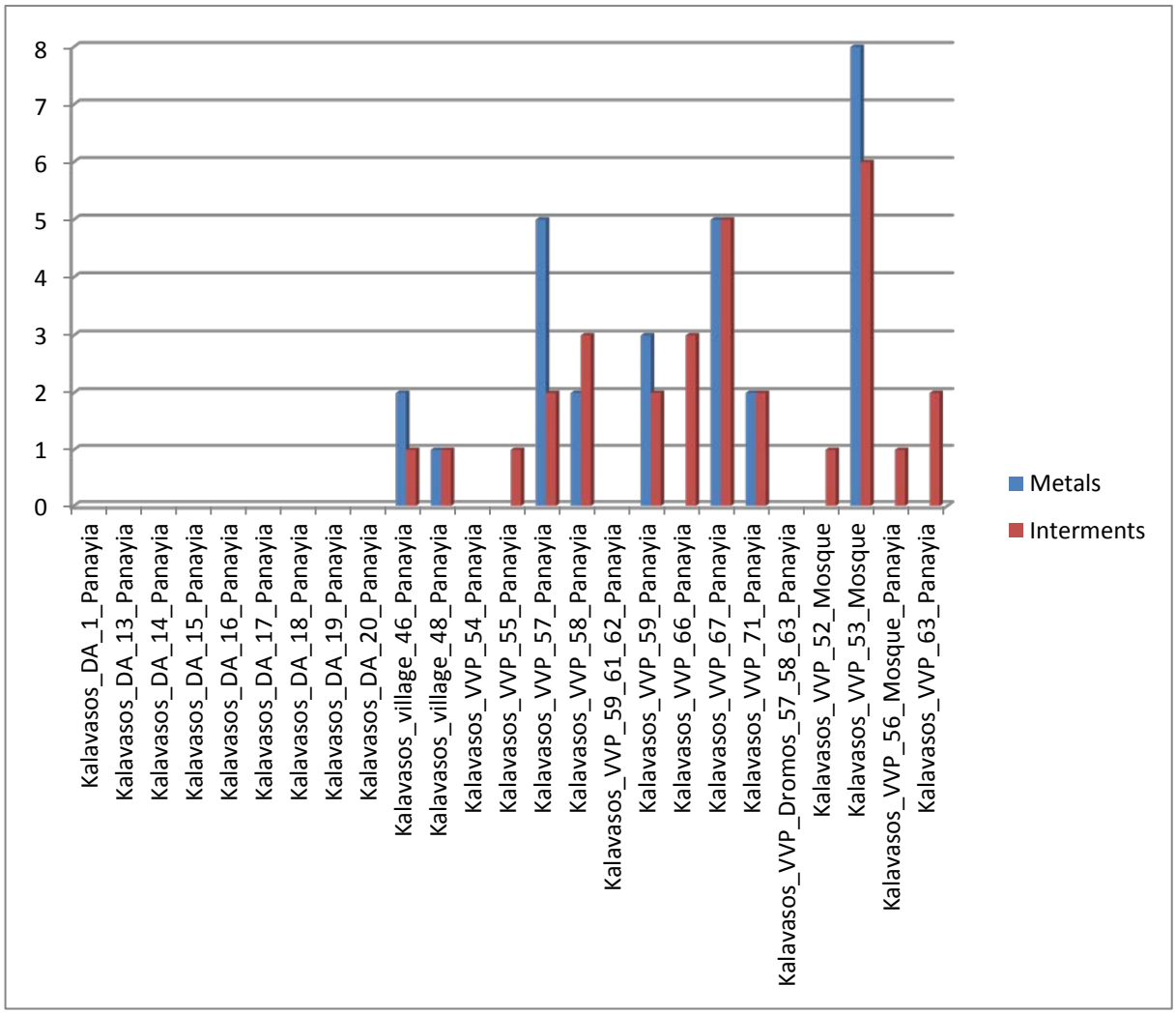


Figure 7.7 Graph showing the association between metal artefacts and the number of interments at the ECIII-MCI burial evidence from Kalavasos (produced by the author).

Chambers 59, 61 and 62 and Chambers 70, 71 and 72: Ancestry ⇔ Identity

Chambers 59, 61 and 62 share a common dromos and date to the ECIII-MCI (T.59), MCI-II (T.61) and MCI (T.62) (Todd and Pearlman 2007a: 10, 13-16) and are associated with at least 7 skeletons, 2 from T.59, 3 from T.61 and 2 from T.62. The tombs include the most frequent shapes, wares and relative frequencies of pottery, but lack the impressive amount and variability of metal artefacts found in the aforementioned 57-58-63 from Kalavasos.

Chambers 70, 71 and 72 share a dromos and date to the MCI-II (T.70), ECIII-MCI (T.71) and MCI (T.72) (Todd and Pearlman 2007a: 10, 23-25), which makes them contemporaneous with the above described cluster, and slightly later than 57-58-63. Six individuals are related to 70-71-72, with two from each chamber. What distinguishes these examples from the aforementioned is the lack of contemporaneity of the constituent chambers.

T.71, the earliest chamber of its cluster, is distinguished by a large number and great variety of pottery shapes, particularly boasting the greatest number of large vessels, all deriving from the second interment (fig.7.8).

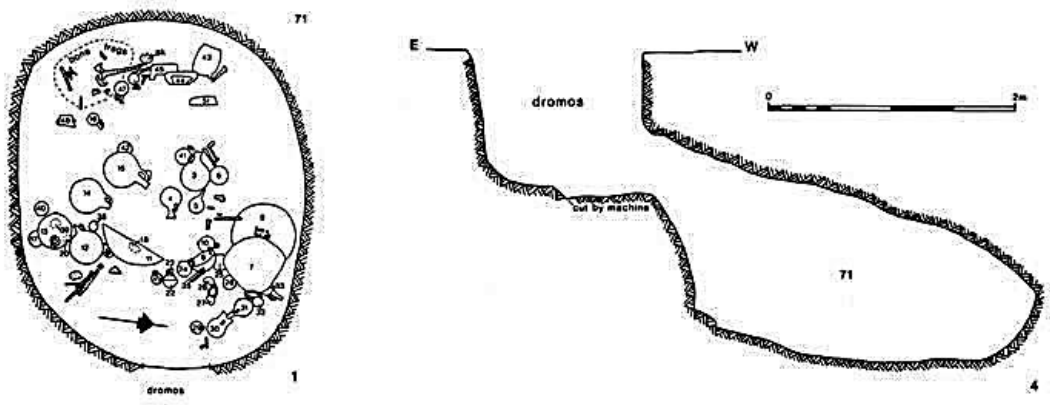


Figure 7.8 Kalavasos-Panayia T.71 (Todd 2007: fig.19:1, 4).

The male skeleton accompanied by this uniquely large pottery assemblage seems either to have been successfully involved in an economic activity that employed such vessels, or alternatively enjoyed a generally more successful economic status enabling their acquisition. Steel supports that it was probably beyond the economic and technological means of individual households to produce their own pottery (Steel 2004a: 131), as evidenced by the lack of EC household pottery production (Swiny 1989: 20; Frankel and Webb 2000: 764), and may have at this time moved to the hands of specialists in small scale (Frankel 1988:29-33; Coleman *et al.*1996: 238-239). Studies on fabric and pyrotechnology of the pottery assemblage under discussion could help flesh out these notions. Interestingly, in this case, conspicuousness and deliberate differentiation is not associated with metal

artefacts. What is more, that later burials cut their chambers from the same dromos, indicates the desire of people to be associated with this individual, creating a group, perhaps linked with its professional identity. Thus, they desired to establish an interaction order for their identity through association with a probable kinship-based group.

Connectivity/Networking ⇔ Identity

The Kalavasos tombs are characterised by uniformity of pottery types and shapes with a very small amount of non-local pottery in the burial clusters. For instance, the WP pottery is a common ware in the central and predominantly N and E Cyprus, but does appear in smaller amounts in contexts in the S coast (Steel 2004a: 235). The representation of WP from the group of chambers under investigation is limited to body sherds from T.46 and T.57 and a WP II fragment from T.67 (Lassen *et al.* 2007: 146, T.67:107). The fragmentary condition of the samples does not permit elaboration, however, notably, the interred or people responsible for their burial, participated in different and/or more extensive communication networks. Interestingly, the pottery-rich T.71, described above, bears no evidence of WP pottery, while T.67, despite absence of metal wealth, presents a unique combination of finds (Lassen *et al.* 2007: 122-148).

This tomb was used for the interment of 2 male and 3 female individuals and is the largest burial chamber, one of the most disturbed and slightly post-dates most of the tombs in the group (ECIII-MCII) (Todd 2007: 20). Aside from the WP example, the tomb is distinguished by a unique pottery assemblage, with vessels decorated with raised features and relief medallions and several composite vessels (Lassen *et al.* 2007: 122, 141). The composite vessels share parallels with Alambra and *Vounous* (Coleman *et al.* 1996: T.101, F590; Dunn-Vaturi 2003: T.56:27, pl.XX), while those with relief medallions share parallels with Lapithos (Stewart 1962: T.308:3), *Vounous* (Dunn-Vaturi 2003: T.65:19, T.72:34, T.77:41), Alassa-*Palialona*

(Flourentzos 1991: T.1:12, T.1:25, T.1:60, T.1:66, T.1:73) and Alambra (Coleman *et al.* 1996: F80, fig. 59), attesting to participation in a wider interaction network.

Relation and communication is also observed with the SW coast of Cyprus, through the DPBC pottery. Examples of DPBC vessels are recorded from T.53 (Lassen *et al.* 2007: 43, T.53:6, 44, T.53:10), T.71 (MacLaurin 2007:235; Lassen *et al.* 2007: 160, T.71:4) and T.57 (MacLaurin 2007: 235; Lassen *et al.* 2007: 69, T.57: 31). Metal tools/weapons and pottery assemblage distinguishes the last two examples respectively. This suggests participation in economic networks with areas to the W, for example Pyrgos and Limassol. Interestingly, Pyrgos tombs, analysed in a subsequent section are distinguished by their generally larger vessels, similarly to T.71. Further, T.53, which included a DPBC amphora and a DP juglet (Karageorghis 1970: 357, fig. 43; Belgiorno 1997: T.21:11, parallels from Pyrgos), may indicate that during the ECIII-MCI Kalavasos began its systematic involvement in economic networks W of the valley. This is made more likely by the contemporaneously denser habitation at the W of the valley (Chapter Three, pp.106-107).

Finally, a notable example of non-local artefacts is the faience beads. Peltenburg (1995: 35) suggested that their local context may attest to a wide reaching, if indirect, access to potential exchange systems. However, South discussed the possibility of their island manufacture on the basis of their large occurrence in contexts devoid of other imports (South 1995: 190). From a methodological and taphonomic point of view, the extraction of small beads demonstrates the systematic and meticulous excavation and sieving of the VVP (Todd 2007: 259); contrary to the salvage character of the Department of Antiquities excavations. Namely, more than 10 beads were recorded from 3 ECIII-MCI tombs by the Department of Antiquities (Karageorghis 1940-48: 121-126, 134-135) and over 4000 from 4 tombs excavated by the VVP (Todd and Pearlman 2007b: 31).

T.53, used for at least 6 interments, included approximately 4000 faience beads of different shapes (Todd and Pearlman 2007b: 29-31; Todd 2007: 260-261). It is unknown as to which individuals the beads belonged, or to how many individual

jewellery articles they represent, due to T.53 containing the largest number of recorded individuals from all the ECIII-MCI tombs (Moyer 2007: 264-269). The associated pottery includes the most frequent shapes, wares and amounts, while metal finds include 2 scraper/razor fragments and several small metal pieces that could be related to jewellery (Lassen 2007: 254-256). What distinguishes this group of people is distinctively high direct or indirect accessibility to faience during the ECIII-MCI. Whether faience was imported or local, related to one or many members of this group, importantly these people shared a group identity and obtained a particular material category that was a direct result of their mutual participation in a unique material acquisition strategy distinct from the rest of the community.

To sum up, the ECIII-MCI burial evidence is characterised by increased effort to display professional identity (see also Driessen and Frankel 2012: 66 on unique pottery types occurring in the MCII-III Dhenia cemetery), wider extent of participation in extra-community networks and group affiliation, contrary to the individuality characterising the ECII-III examples. The ECIII-MCI marks the emergence of group or collective identity expression; namely the symbolic construction of a group through the interaction order. Group identity, which is likely kinship-based (Sack 1986: 2), indicates increased competition over resources, related to population increase and the likely expansion of settlements established in the early EC. Researchers have long associated population increase and continuous habitation in a rural landscape with the negotiation and establishment of land rights and heritage (Weinberg 1956: 121; Shnirelman 1992: 28; Keswani 2004: 51-55; 2005: 349; Dunn-Vaturi 2003: 177; Parker Pearson 2005: 136 *cf.* Charles 1995) in order to claim or maintain their economic status (Ingold 1986: 137; de Hingh 1998: 14). These efforts appear to culminate in the MC burial record.

Panayia Church and Mosque/Mavrovouni in and at the End of the MC (S.6)

This assemblage includes 24 examples dating between the MCI and MCIII/LCI. The MC in the Kalavasos does not contribute newly created multi-chamber clusters,

however elements from the 59-61-62, 57-58-63 and 70-71-72 that date exclusively to the MBA, point to continuation from the ECIII (Keswani 2004: 53). The present analysis notes a slight increase of the number of tombs with up to 7 interments (Todd 1986c: 27). This figure is significantly lower than the mass burials attested at the N and E of the island (Keswani 2004: 54). Moreover, no increase in the number of burial offerings is observed, with the most frequent pottery shapes (bowls, jugs, juglets) remaining the most common finds. Nevertheless, new shapes are introduced, such as amphorae, and new unique objects are used as identity markers.

Figurative Representation ⇔ Identity

Pottery depicting three-dimensional modelled scenes is widely considered a noteworthy symbol of prestige and identity (Steel 2004a: 142 with references), and one vessel, the *Vounous* bowl, has attracted extensive scholarly attention (Dikaios 1932; Frankel and Tamvaki 1973; Morris 1985; Manning 1993; Peltenburg 1994). At Kalavasos, beyond broken sporadic plastic figures found in T.40 (Todd 1986c: fig. 19, 1-2), the most remarkable vessel is a bowl found in the large, but incompletely excavated T.36 (fig.7.9) (Todd 1986c: 27, 89-98).

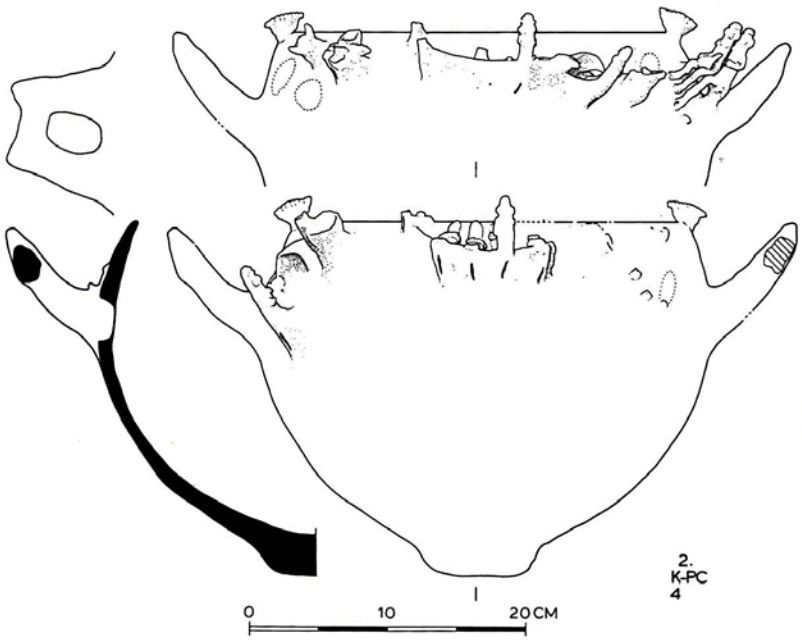


Figure 7.9 Kalavasos-Panayia T.36: RPIII Bowl with Plastic Decoration (Todd 1986: 386, fig.25:2/K-PC4).

Despite insufficient recording of the chamber stratigraphy (Todd 1986c: 25), it is possible to discern at least two deposition phases (1986c: 26) of a minimum of 7 individuals: 5 adult women, 1 adult man and a child. This bowl belongs to the general group of decorated models and vessels recorded from Marki and *Vounous* (Dikaios 1932: 43-46, 76-79, 109, 126; Karageorghis 1940-1948: 151-152; 1971a: 344; 1976a: 21, Todd 2007: 329). It bears a bread (fig.7.10) and winemaking representation (fig.7.11), both likely to reflect quotidian activities of the deceased (Cullen and Wheeler 1986: 152; Cullen *et al.* 1986: 41-42).[1]

The bread-making scene includes 6 human figures, of which two are adequately preserved to be identified as females; one is participating in the act of grinding and the other is standing next to a concave that possibly representing an oven (Todd 1986c: 248-249: figs.I, XXII).

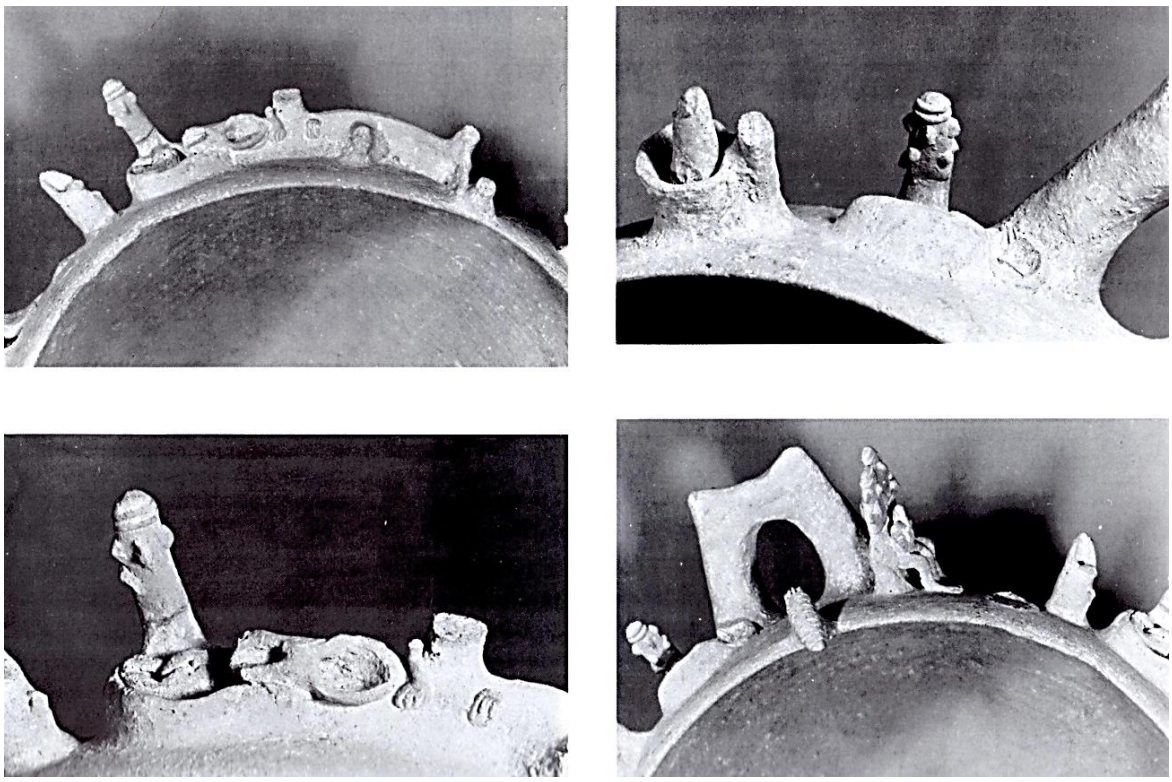


Figure 7.10 Bread-making scene details (Todd 1986: pl.XXII).

[1] On the interpretative limitations of such representations see Binford 1971; Peebles 1971; Shennan 1975; O'Shea 1984; Parker Pearson 2005: 73, 86.

The opposite side of the bowl, demonstrates several activities interpreted as wine making (Karageorghis 2002b: 68-75, figs. 1-5, pl. 2.81): two yoked oxen representing cultivation, a donkey carrying baskets towards a secondary processing area, a figure probably trampling grapes in a trough connected through a pouring vessel to a basin with a male figure overlooking, and a male and female couple holding a jug with cutaway spout sitting on a bench (Todd 1986c: 246: fig. XIX:3, 247: fig. XX, 250: fig. XXIII). Morris supports that pairs of people, a common motif in vessels with plastic decoration, represent a household-based social organisation (Morris 1985: 288), while Bolger (1996:372) uses the same information to argue for the emergence of patriarchal family. In this particular scene the couple may embody individuals waiting to acquire the must or wine, as they do not appear to be actively engaged in the production processes. Herscher (1997: 29-30) associates this scene with the production of alcoholic beverages and their role in ceremonial feasting, which remains a speculation, due to the lack of relevant material correlate from Kalavasos.

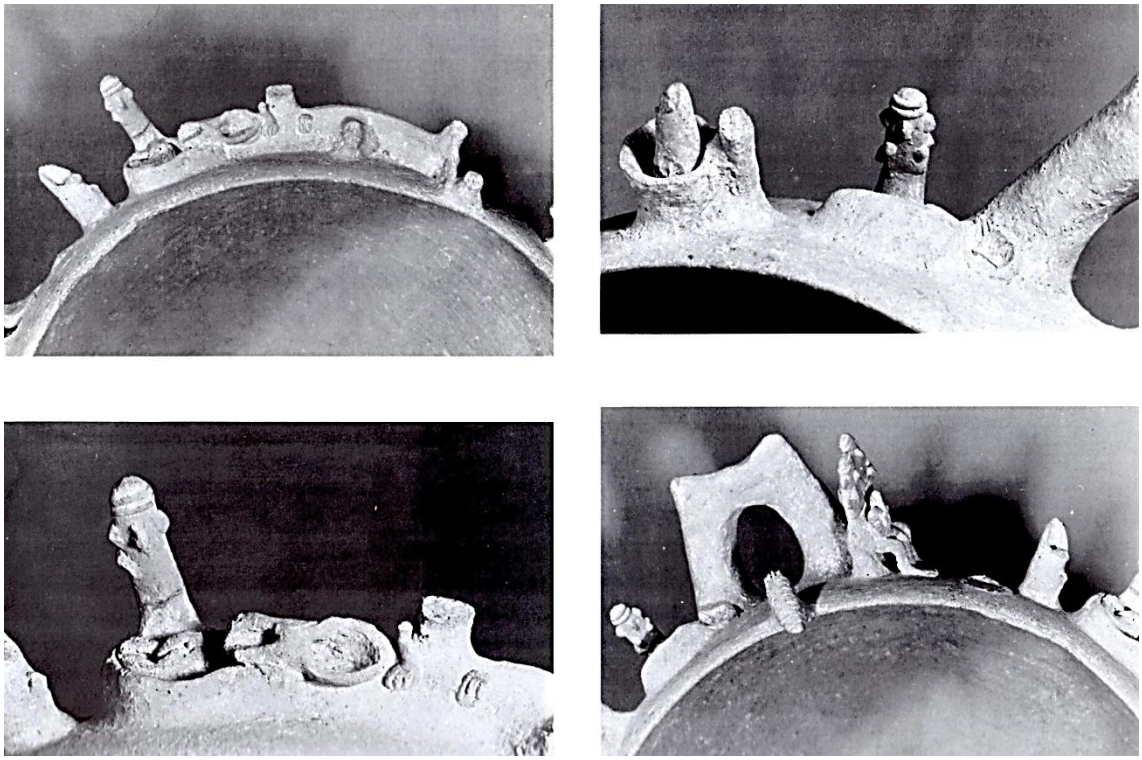


Figure 7.11 Wine-making scene details (Todd 1986: pl.XXIII).

A close investigation on the remaining material assemblage of T.36 points to a noticeable amount of coarse ware-cooking pots, which may be associated with the represented rural activities. Interestingly, cooking pots, stone tools and objects related to household activities are not commonly preferred for burials at the Vasilikos valley (Frankel and Webb 1996: 48); therefore their deposition in this particular assemblage may be associated with the expression of a strong professional identity related to secondary agricultural products. It remains unknown with which or how many individuals this vessel was associated, but its association with the male adult is plausible, if one considers the depiction of male individuals in the wine making.

Metals Tools/Weapons ⇔ Identity

Other artefacts possibly associated with the male adult of T.36 include 2 swords and 2 knives (Cullen *et al.* 1986: 46: T.36:24, 50: T.36:46, 51: T.36:48, 64: T.36:115). The remaining metal artefacts include pins, tweezers, scrapers, earrings and bracelets, which based on the discussed of examples from previous chronological phases, may be associated with the female deceased. Aside from T.36, metal tools/weapons are found in T.37 (Todd 1986c: 27), a tomb with 2 adults of undetermined sex, T.60 (Lassen *et al.* 2007: 90, T.60:16), with one dagger associated with one male and one female adult and T.65 (Lassen *et al.* 2007: 117-118, T.65:34), with a knife associated with a male and a female adult. The sample is admittedly insufficient to base secure conclusions upon (fig.7.12); however, it is noteworthy that there exist 4 examples of tombs with both male and female individuals with no contextual association with knives, daggers or swords. One of these tombs (T.62) was looted in antiquity (Todd and Pearlman 2007a: 16), T.68 was found completely destroyed (Todd and Pearlman 2007a: 22) and T.70 and T.61 were intact (Todd and Pearlman 2007a: 15, 23), with T.61 characterised by a complete lack of vessels with incised decoration.

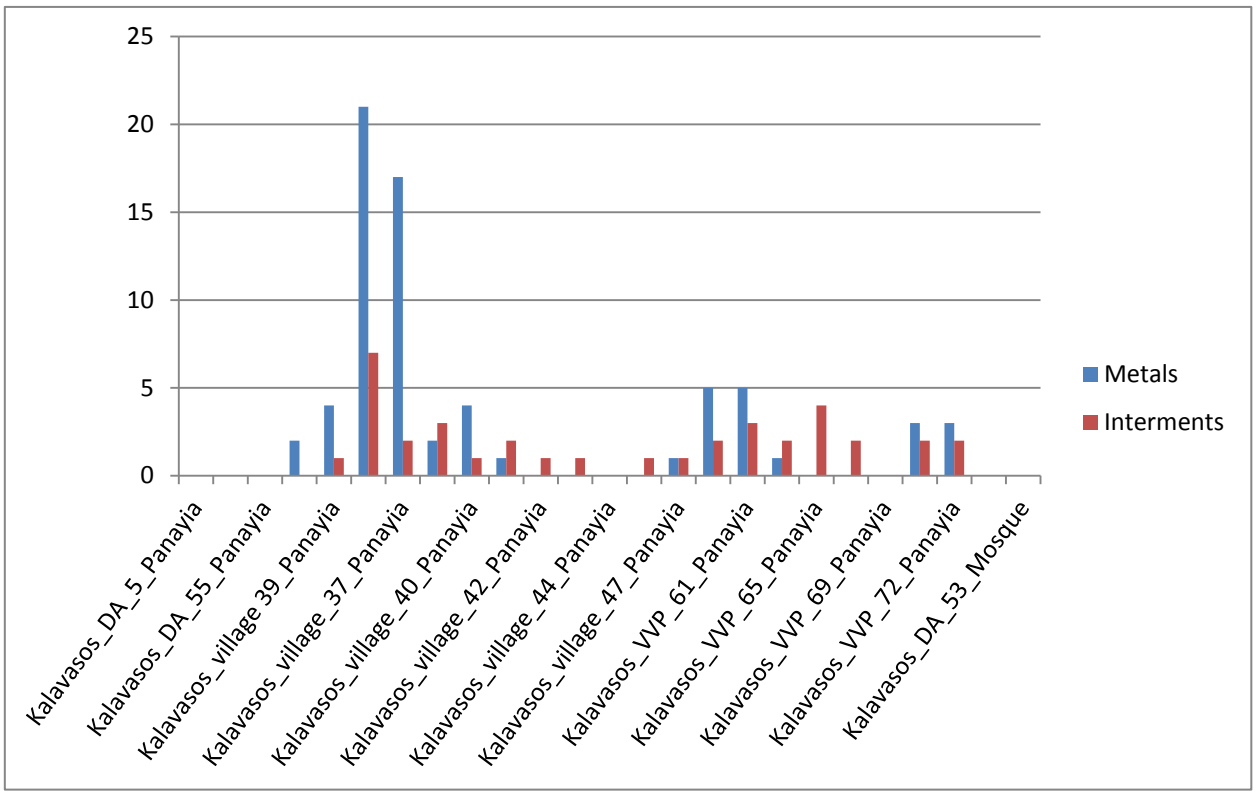


Figure 7.12 Graph showing the association between metal artefacts and the number of interments at the MCI-MCIII/LCI burial evidence from Kalavasos (produced by the author).

T.61 is an impoverished tomb in terms of metal artefacts, considering that almost all other tombs included metal, from small fragments to swords, while the remainder were either completely destroyed (T.68), or poorly recorded (T.53). The clustering of T.61 with the antecedent materially undistinguished T.59 and T.62 implies that the social status of the deceased was likely negotiated through association with an ancestral group. Similar behaviour is attested in 70-71-72, which is not distinguished by metal wealth, but rather seems to use lineage to negotiate socio-political status. These burial clusters date from the ECIII to the MCII, while the general materially-based tomb chronology points to ECIII-MCI and MCI-MCII (sometimes MCI-MCIII). This enforces the opinion regarding promotion of ancestry in a generally competitive environment, in which people perpetuated and elaborated antecedent burial projects.

Linearity ⇔ Identity vs. Metals ⇔ Identity

A focus on linearity is evident in T.36, whose chronological depth (MCII) is significantly more limited than the aforementioned clusters. In this case the negotiation of socio-political status is related to the display of economic/professional identity of a family. T.36 is an impressive and distinguished tomb not only for its size and number of interments, but also for its incorporation of the largest and most varied metal assemblage (razors, spikes, pins, swords, knives, jewellery and silver fragments), examples of WP and DPBC pottery and of course the unique bowl with plastic figures. Therefore we may observe dual competitive strategies of manifesting status, either through a localised ancestry or economic specialisation, probably including access/manipulation of copper.

A similar situation is observed for T.37, used for at least two interments. This tomb is distinguished by its content, being the only other excavated tomb that included a sword and a relatively large variety of metal artefacts, including silver fragments and a silver bracelet (Cullen *et al.* 1986: 92: K-PC 272, 98: K-PC 311). The latter indicate participation in wider economic networks, posing the question: was this participation related to higher accessibility to copper? The question is difficult to answer as most tombs provide evidence for access to copper.

Networking ⇔ Identity

Earle (2002: 168) and Shepard (2012: 367) argued that socio-political status is communicated and negotiated through participation in economic networks. Following this concept, the materially impressive T.36 is characterised by its effort to communicate accessibility to non-local pottery, such as WP (Cullen *et al.* 1986: 45: T.36:21, 46: T.36:22, T.36:23, 58: T.36:85)[2] and DPBC (Cullen *et al.* 1986: 43,

[2] For parallels see Sjöqvist 1934: Lapithos, pl. CVII:6; Åström and Wright 1962: Dhenia, pl. I: 16, pl.II: 2-3.

T.36:13.),[3] a material repertoire that indicates a relatively wider interaction network than other tombs. Another example is T.43, which included one WP III-IV mug and sherds from other poorly preserved WP II, WP III and WP IV vessels (Cullen *et al.* 1986: 103-104: T.43: 1, T.43:3, 105: T.43:6), while T.38 included one RPP vessel (Cullen and Wheeler 1986: 131), typical of Episkopi (Herscher 1976:11; Swiny 1981: 58). The latter was probably associated with the relatively more recent T.38 (MCII-III). Finally T.40 included a four handled amphora (Cullen *et al.* 1986: 88, K-PC 248, T.40:67) with close parallels to a Kition tomb (Karageorghis 1974: pl. VII: 37, 45), and examples from Alambra-Mouttes (Coleman *et al.* 1981: fig.3).

This study considers T.40's affinities with Kition and Alambra, yet it distinctiveness within Kalavasos, as an indication of participation in a general technological framework, while T.43 presents questions as to whether the WP pottery was used to communicate external contact, or a local identity from another part of Cyprus (Balwick 1975: 158; Rizopoulou-Egoumenidou 2004: 113; Akhmadeeva and Kusch 2009: 308 ethnographic examples).

Finally, several tombs contained faience beads, the most prolific example coming from the double interment T.72, followed by T.36. In this case, faience may have exhibited distinct identities related to participation in particular economic networks, however, who they represented is speculative as it is not possible to reconstruct the number of jewellery articles represented, nor evaluate the degree of detail in the excavations methods. Moreover, access to faience in the MC was more widespread, contrary to the previous chronological phase (ECIII-MCI) and thus no longer represented a strikingly unique product.

[3] For parallels from Kouris valley see Swiny 1976: 48; 1981: 84-85; Carpenter 1981: 7-8; Herscher 1981: 81.

Conclusions

Despite the EC/MC Vasilikos valley archaeological evidence being biased by the lack of excavated settlements, the available burial material provides valuable information regarding the diachronic formation and development of identities and spatial behaviours. The ECII-ECIII *Cinema* tombs point to newly established settlements and communities, in which people are buried with no clearly patterned spatial association (see also Frankel 2002: 174). Despite general similarities in material culture that indicates exposure to the same exchange networks, while not presuming economic equality, the tombs displayed their wealth and socio-political identity through larger amounts of metal artefacts or unique pottery assemblages.

Population increase and competition over resources initiated an investment in burial chambers with multiple interments and at times distinct burial clusters, in order to achieve the interaction order of a group identity (Jenkins 2008: 39). It is unclear whether dromoi with three stomia were created contemporaneously, but the later chronology of 2 of the 3 chambers suggests that they were subsequently added to the earlier tomb.

This method of expressing individual identity persisted. Namely, the presence of metal artefacts demonstrates higher accessibility to the copper resources and wealth, and non-local potteries convey extra-community local identity and/or higher mobility. A pattern relating metal tools/weapons with male individuals is possible, however these artefacts are perceived more as tools for displaying professional and social rather than gender identity. The three arenas of competition and negotiation of status during the ECIII-MCI were participation in wider economic networks - a widely documented behaviour in anthropology and anthropological archaeology (Blanton *et al.* 1996: 7; Ames 2010: 17; Shepard 2012: 368), accessibility to metal, and membership in families/groups with extensive land ownership (Johnson and Earle 1987; Earle 2000: 41).

Population increase probably made necessary a more acute focus on kinship relations and the intensified communication of one's connection to ancestrally

imbued locales. Tombs from burial clusters dating exclusively to the MC were sharing dromoi with antecedent tombs constructed in the ECIII-MCI and demonstrating linearity in socio-political conveyance. Manning (1993: 45) suggests that chambers with collective burials represent emergent elite families. However, there is insufficient evidence to support whether these aspiring elites were widely-accepted and/or institutionalised before the LC.

Maroni and Psematismenos (S.7)

Although the available EC/MC evidence for the Maroni Valley is relatively limited, the ECI-II Psematismenos-*Trelloukkas* cemetery provides important information through a number of intact chambers (fig.7.13).

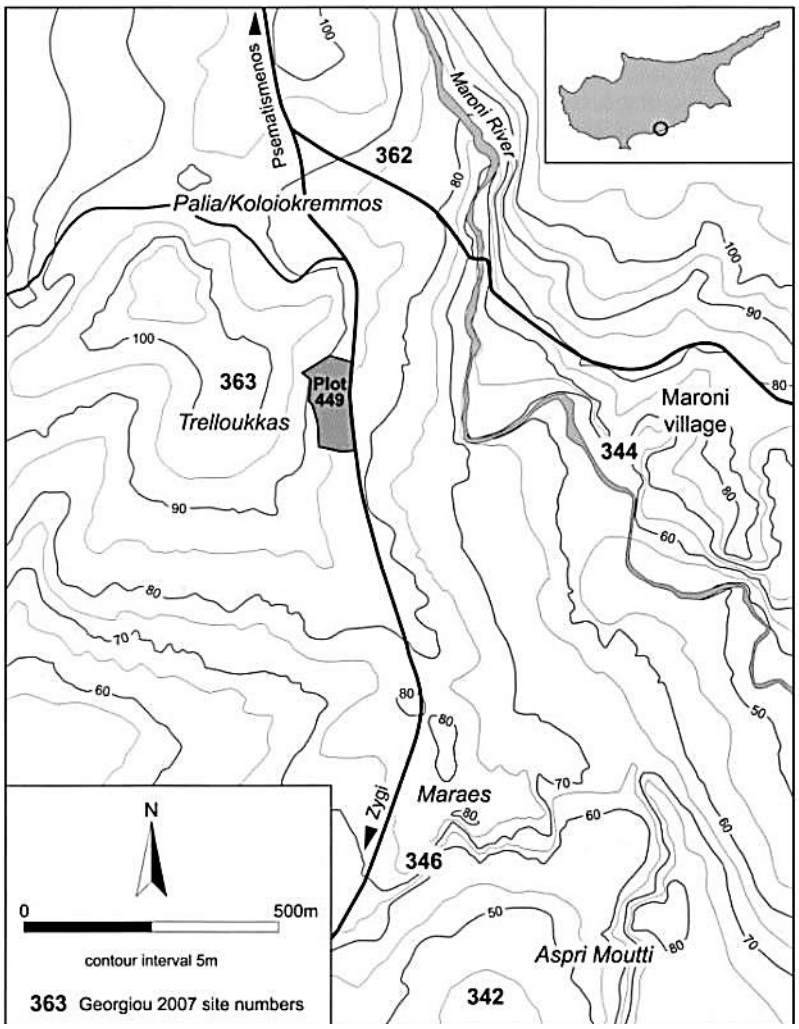


Figure 7.13 Psematismenos-Trelloukkas Cemetery (Georgiou et al. 2011: 9, fig.1.9).

The tombs under evaluation share a series of common characteristics, which may point to kinship-based groups and community identity, in association with unique artefacts throughout various tombs used as markers of individual identities. The burial deposits contain elements similar to contemporaneous tombs from *Vounous* and *Ayia Paraskevi* (Georgiou 2000: 57 *cf.* Hennessy et al. 1988: 17, fig.17; Georgiou 2001: 57 *cf*. Hennessy *et al*. 1988: 13, fig.10; 17, fig.14; Stewart and Stewart 1950: 168, pl.XIX), while contrasting in important ways from the slightly contemporaneous tombs from Kalavasos-*Cinema*.

The Psematismenos tombs comprise clusters of variably sized chambers from large and medium chambers to small pits used for children burials, further supporting the kinship ties of groups (fig.7.14) (Georgiou *et al.* 2011: 340: fig. 9.2).

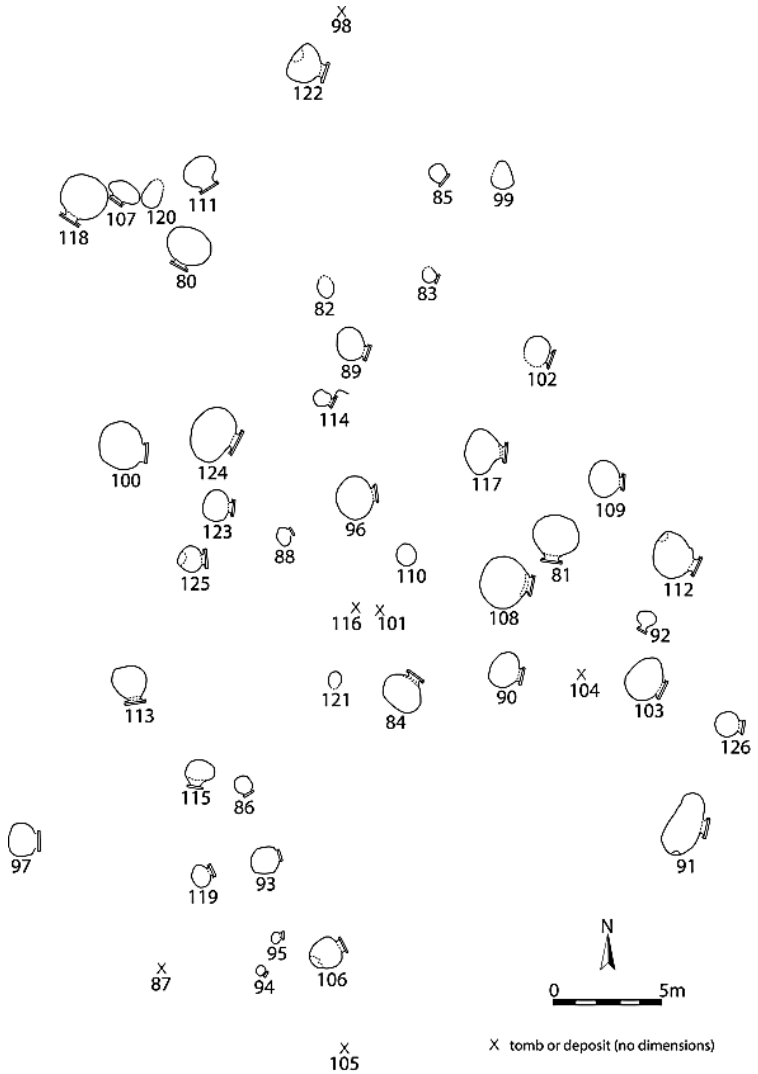


Figure 7.14 Psematismenos-Trelloukkas spatial organisation (adapted from Georgiou et al. 2011: 340, fig.9.2 on Adobe Illustrator).

Contrary to the generally low representation of children and infants in contemporaneous burial assemblages (Keswani 2005: 344; Frankel and Webb 2006: 283; Moyer 2007: 319-320), *Trelloukkas* cemetery contained both (Georgiou *et al.* 2011: 38-41, 61-63, 67-72, 107-113, 126-129, 149-150, 185-190: Tombs 89, 92, 96, 108, 114, 121, 126), in single tombs and in association with other individuals (Georgiou *et al.* 2011: 67-72, 107-113: Tombs 96 and 108). Moreover contrary to the neighbouring single burial *Cinema* tombs, at least ten tombs were used for multiple burials containing between 2 and 9 individuals (Georgiou *et al.* 2011: 159-175: Tomb 124). It is clear, then, that the two communities demonstrate different behaviours of local significance.

Beyond the typical pottery types and shapes, the majority being RP and RPM bowls and jugs, Psematismenos tombs often incorporated cooking pots and jars - uncommon in the Kalavasos tombs. Interestingly the volume of these vessels presents association with the size of the tombs, with large tombs incorporating vessels with large capacity and small tombs and pits including smaller vessels (Georgiou *et al.* 2011: 356). The excavators interpreted this as part of a burial ceremony involving liquid and food consumption, for which evidence is available through animal bones found in or around vessels (Georgiou *et al.* 2011: 19-25 47-61, 107-113 159-175: Tombs 81, 91, 108, 124). Local ceremonial practices are further represented in the association of one jar and a cooking pot in at least 9 examples (Georgiou *et al.* 2011: 13-19, 28-35, 38-41, 63-65, 78-88, 91-96 107-113, 130-134, 159-181: Tombs 80, 84-85 89, 93, 100, 103, 108, 117, 124-125).

Other frequent finds from Psematismenos tombs include tulip-shaped bowls, stemmed cups (Todd 1985:63: fig.6: 28, 34, 65, 67), tripodic bowls (Todd 1985: 63: fig. 6:55,68), and BrP flasks (Georgiou *et al.* 2011: 292), possibly associated with the burial ceremony. Stone tools appear more frequently than in the *Cinema* tombs (Georgiou 2000; Todd 1985; Georgiou *et al.* 2011: 147-149, 159-175, 181-185: Tombs1/99, *Trelloukkas* 1985, 120, 124, 126), but remain uncommon (Todd 1985: 69, no.60, 61).

Diversity at individual level is expressed through unique artefacts such as copper objects, a funnel and a large and uniquely decorated tulip bowl, found in association with a tripod bowl. These finds were not components of materially distinct assemblages, but rather separate examples associated with individuals. Metal artefacts comprise a very small sample, indicating dissimilar access to wider economic networks (fig.7.15). A copper needle accompanying one adult (Georgiou *et al.* 2011: 63-65: Tomb 93) and two pins accompanying a second adult along with a spindle whorl (Georgiou *et al.* 2011: 78-88: Tomb 100) are possibly markers of individual identity, likely associated with the quotidian activities of the deceased or a small-scale professional identity. Similarly, it seems probable that spearheads (Georgiou *et al.* 2011: 19-25, 135-144: Tombs 81, 118) deposited with "unremarkable" pottery finds (Georgiou *et al.* 2011: 356; Webb and Frankel 2013: 75) signify a communicated aspect of identity, whose socio-political importance may have been limited to the burial cluster, or family group, rather than the community.

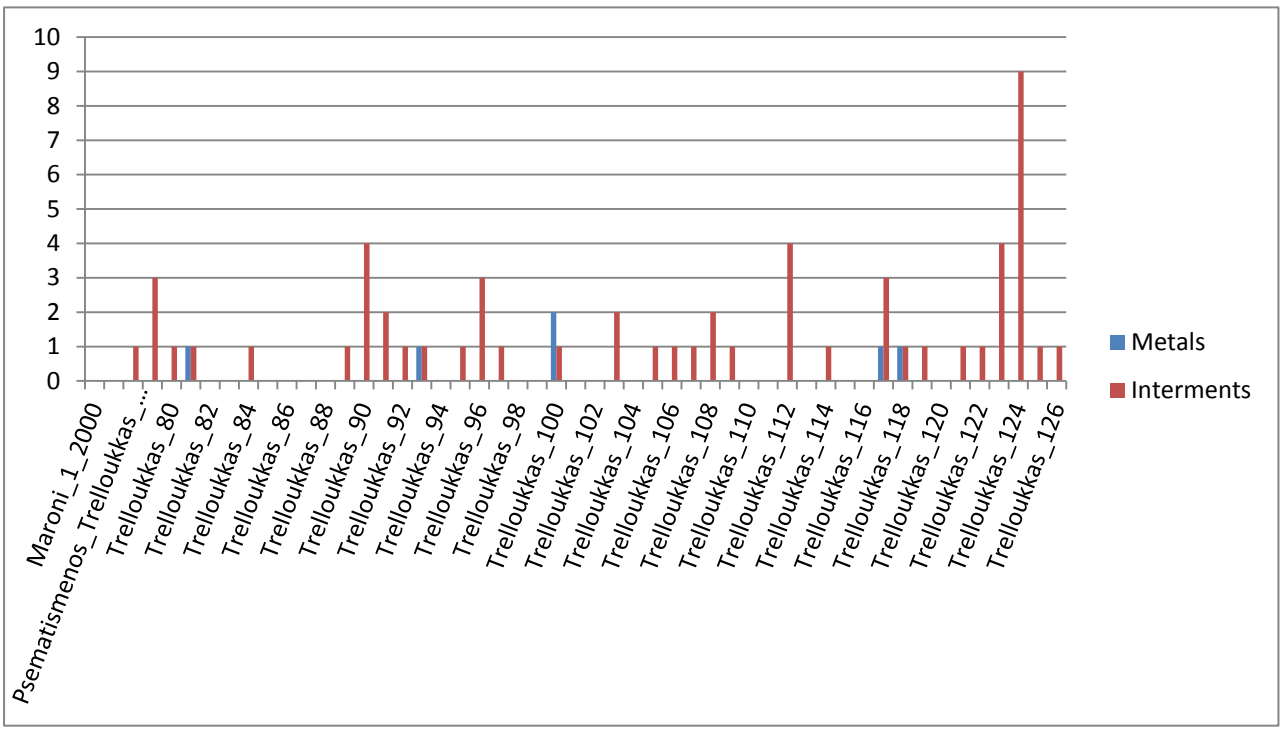


Figure 7.15 Graph showing the association between metal artefacts and the number of interments at EC burial evidence from Psematismenos (produced by the author based on Georgiou 2000; 2001; Georgiou et al. 2011).

Metal does not seem to be a community established symbol of socio-political identity, as the most curious artefact from the assemblage, the aforementioned decorated tulip shaped bowl, is not found in association with any copper artefact. Based on the bowl's size and distinct decoration, Georgiou et al. (2011: 357) support that it was a "symbol of local ritual authority", inspired by examples from the north coast. Nevertheless, there is no material evidence of formal or institutionalised symbols; therefore the importance of this tulip bowl is viewed as appreciated within a small group, possibly associated with small-scale pottery production and experimentation.

To conclude, Psematismenos ECI-II tombs demonstrate that a number of strategies and materials communicate manifestations of both individual and kin group identities. The expression of group identity pre-dates the ECIII examples from Kalavasos, which may be related to the fact that the Maroni valley is geographically smaller, promoting the resolution of issues of land ownership through group identification at an earlier stage. In comparative terms the pottery assemblage from Maroni and Psematismenos includes a larger amount and wider variety of vessels than the *Cinema* tombs, suggesting local patterns of behaviour, in which a larger portion of the belongings of the deceased are deposited in their burial. This is also supported by the deposition of stone tools in at least four examples. Contrary to the *Cinema* tombs, which display wider range of activities seen in spindle whorls and metal artefacts, the abundance of stone tools at Psematismenos points to widespread agricultural activities.

Finally, the use of this cemetery was interrupted in the ECII, probably suggesting abandonment of adjacent settlements and population movement. Contrary to the Vasilikos valley, information regarding the MBA of the Maroni valley is limited (Chapter Four, pp.163-167), deriving largely sporadic surface finds and the excavation of one ECIII-MCI tomb at Maroni village (Johnson 1980: 39-40; Herscher 1984: 23: n.4). Continuity may be demonstrated for Maroni tombs based on the distinct possibility that ECIII-MCI and MBA tombs are located underneath the

modern village (Cadogan 1984: 2-3; Herscher 1984; Cadogan 1992a; Manning 1999: 131; Cadogan *et al.* 2001). To conclude, based on the results of the Large Scale Analysis in the Maroni Valley (Chapter Four, pp.167-169), population was gradually moving south at an earlier stage than the Vasilikos valley, perhaps due to the reliance of a great majority of the populace on a spatially more limited agricultural landscape. Interestingly, the construction of the ashlar building with strong evidence for large scale production and storage of secondary agricultural products at *Vournes* also pre-dates Building X at *Ayios Dhimitrios* (Chapter Six, pp.269-274).

Pyrgos-Mavrorachi (S.8)

Although the Department of Antiquities and Belgiorno excavated several tombs at Pyrgos (Belgiorno 1997, 2002), the data extracted for further research are far from adequate. The majority of reports are published in *BCH* in brief paragraphs sometimes accompanied with pictures of the most 'significant' finds; however, information regarding tomb architecture, number of interments, spatial association of finds, ceramic parallels and the condition and integrity of chambers is unavailable.

Even tombs excavated more systematically suffer from poor skeletal preservation, leading to object-oriented research. This study focuses on 13 tombs,[4] of which 6 were excavated using non-systematic strategies between the mid-1960s and 1970 (Karageorghis 1963: 326; 1964: 326; 1965: 250; 1966: 306-307; 1971a: 357-358). Ten of these tombs date to the ECII-ECIII or ECIII, three tombs to MCI-II, while one of the ECII tombs was reused in the MCII, with a total of 8 interments diachronically (Belgiorno 2002: 10-25).

Based on the amount of pottery recorded from the available examples it is plausible that the EC chambers were used for single interments. Although no definite

[4] The Department of Antiquities dug 21 tombs since 1945, of which the few published provide incomplete information.

numbers of vessel shapes and types are known from tombs dug by the Department of Antiquities, references point to the distinct use of large vessels and pithoi in burial assemblages (Karageorghis 1964: 326), examples of anthropomorphic amphorae (Karageorghis 1963: 326; 1964: 326), metal artefacts and ceramic and steatite spindle whorls (Karageorghis 1966: 306-307). Large vessels were recorded in 6 of 10 EC tombs alongside the most frequent shapes, namely RP bowls and jugs. Such vessels and pithoi do not occur frequently in the previously discussed assemblages or examples from the Kouris valley, indicating a different array of activities and local burial practices. These practices incorporate anthropomorphic amphorae (fig.7.16), which generally date to the ECIII and are characteristic of the Limassol area (Belgiorno 1997: 137). Three such amphorae are reported at Pyrgos and considered indisputable markers of identity.

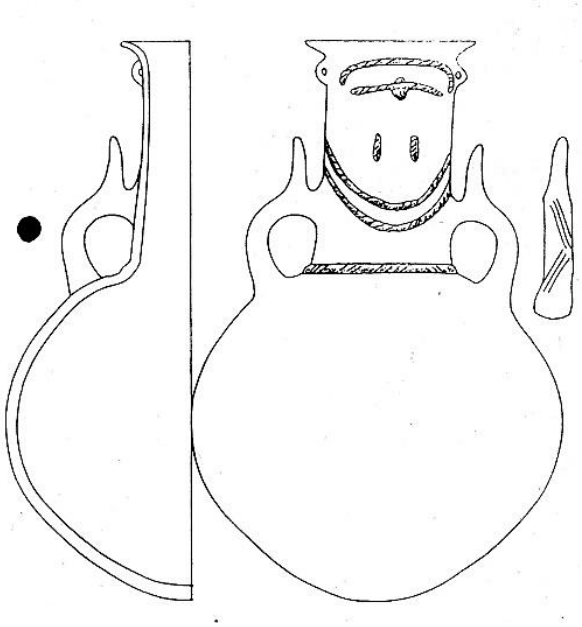


Figure 7.16 Pyrgos-Mavrorachi anthropomorphic amphora (Belgiorno 1997: 132, fig.8).

Although Belgiorno (1997: 119) notes the proximity of Pyrgos to three copper mines (Parekklisia, Mazokampos, Monagrouli), only one pair of metal tweezers and a possible axe were found in 2 EC tombs (Karageorghis 1966: 306). Lack of metal artefacts is likely related to the poor tomb condition, looting and insufficient recording, while a lack of information regarding tomb condition exacerbates the

assessment of this relation. Interestingly, Belgiorno (2000: 3) reported evidence of metallurgical activities from the settlement, such as smelting and casting, noted a widespread presence of copper slag and interpreted some structures as copper smelting furnaces (2000: 8-10: fig.1); thus, copper accessibility was high, a trend becoming more obvious in the MC tombs.

The investigated MBA examples from Pyrgos comprise 4 chambers that, despite being poorly recorded, provide sufficient data to discuss identity display. Metal and associated artefacts occur in abundance with hook-tang weapon and tweezers in one tomb (Belgiorno 2002: 6, no.6-7), one pin from a multiply interred tomb throughout the ECII and MCII (Belgiorno 2002: 10), one coarse bowl assumed to be a crucible from T.4 (Belgiorno 2002: 28, no.1, fig.12:1, Pl.1:5), and finally the coppersmith's tomb (T.21). Since pottery numbers, shapes and types were poorly recorded, the discussion inevitably revolves around the outstanding T.21.

Belgiorno (2002: 119) considers T.21 to belong to a coppersmith (fig.7.17). Axes, knives, tweezers, a copper chisel, a copper necklace and bracelet, an awl, scrapers, along with a stone jar, a whetstone, an anthropomorphic amphora , a ceramic funnel and a relatively large amount of the most frequent pottery shapes and types were deposited with one individual (Belgiorno 1997: 121). The coppersmith was distinguished by wealth and professional identity; means used to negotiate individual socio-political status, further suggested by the anthropomorphic amphora. T.21 is the best example of individual identity expression in the investigated case-studies, and the only MC tomb from Pyrgos with an anthropomorphic amphora. The coppersmith's tomb can be used to support what has already been suggested for the Kalavasos tombs, namely a materially manifested relation between number of interments and display of distinct occupation vs. group identity.

As suggested in the case studies from Kalavasos and Psematismenos, multiple burials were probably related to kinship based groups, displaying strong local identity and negotiating socio-political status through membership. Similarly, the tomb with a strong tendency of affiliation with an ancestral group at Pyrgos is not distinguished by its metal wealth. Consequently, multiple burials may indicate the identity of farming families, while single interments denote other professional identities.

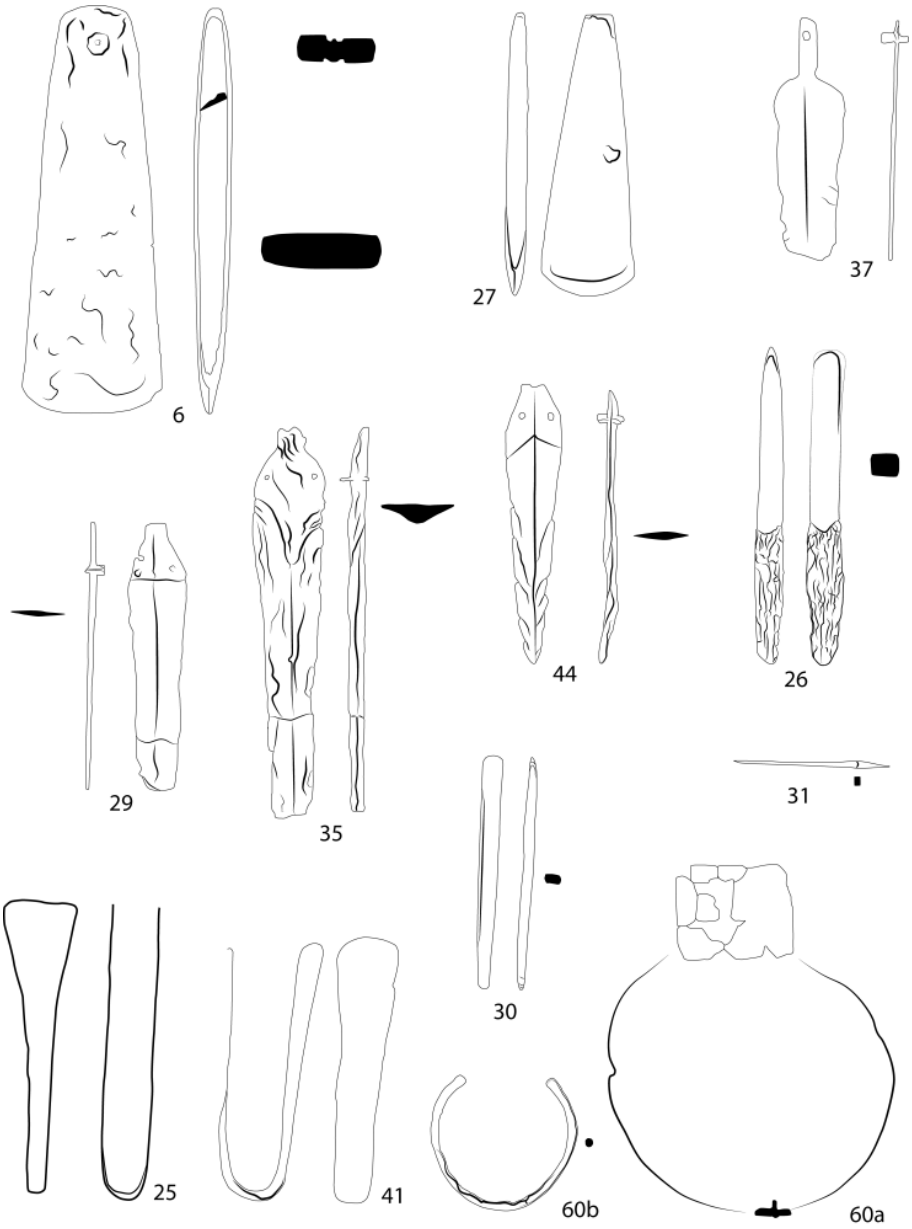


Figure 7.17 The coppersmith's tomb metal assemblage (Adapted from Belgiorno 1997: 140, fig.12 on Adobe Illustrator).

It has long been suggested that intensive occupation alongside agricultural activities is likely to encourage formation and expression of strong local and kinship-based group identity related to land rights and heritage (Keswani 2004: 151; 2005: 349; Knapp 2008: 86), and it is plausible that multiple burials belong to groups that are occupied predominantly with agriculture and negotiated their socio-political status and rights to land through family membership (Finch and Wallis 1993: 52). In contrast, individuals of higher or not land-related economic potential negotiated socio-economic status through economic and professional identity. This argument is further investigated through the analysis of the Limassol dataset.

Limassol

The picture of the Bronze Age underneath the modern city of Limassol is obscure, since published EC/MC remains derive solely from rescue excavations between the mid-1960s and the mid-1970s (Karageorghis 1960: 267; 1963: 324-326; 1964: 324-326; 1965: 250-252; 1966: 306-308; 1977: 714). Information regarding tomb architecture, number of interments, osteological data, stratigraphy and context is lacking. The tombs are published briefly in *BCH*, sometimes accompanied with pictures of infrequent finds, while most pottery information consists of brief reference to wares. This study focuses on tombs with spatial association within a part of the same cemetery, including five ECIII tombs from Limassol *Katholiki*.

Even though number of interments and amount of pottery are not known, the *Katholiki* tombs are distinguished by their variety of deposited artefacts, understood as indications for individual identities. A tomb excavated in 1963 was reported to include 6 tripod bowls and a plank figurine (Karageorghis 1964: 324-326). A similar ECIII tomb comprised cooking pots, 6 tripod jugs, tripod bowls, 3 pyxides and one plank figurine (Karageorghis 1963: 327, fig.55). Although the number of interments is unknown, the basic concept is similar to the first example, characterised by a tendency towards display of individual identity through everyday activities. Differences in the ceramic repertoire in relation to the ceramic

assemblages discussed in previous case studies reflect diverse burial practices and local behavioural patterns.

Another ECIII tomb from *Katholiki* included the "standard bowls and jugs of the RP tradition" alongside a spoon shaped vessel –described as a bowl with long handle, a bird shaped jug, spindle whorls and a steatite pendant (Karageorghis 1966: 308, fig.90). A similar spoon shaped vessel from Avdhimou possibly originates from the W (Vavouranakis and Magginis 1995: 82, fig.6:11), while stone pendants are common finds in the burial chambers from the Kouris valley and surrounding environs. Finally, one excavated ECIII tomb is distinguished by the large size of vessels and deposition of a pithos (Karageorghis 1960: 267), an assemblage reminiscent of Pyrgos examples.

Despite the small sample under examination, the results from Limassol tombs shed light on high mobility and degree of interaction of people from the S coast of Cyprus. *Katholiki* tombs are located approximately 1,5km from the coast in the Limassol lowlands, a contrast with other EC/MC examples used in this study, which are located at least 4km from the coast. *Katholiki* is located in a geographically more accessible area and although no particular local pottery tradition is observed in the material culture, the employment of plank figurines supports the existence of strong local traditions. Namely, the burial practices focus on display of individual identities and less on group or community identity.

Kouris Valley

Due to the geographical distribution of the Kouris sites the present chapter examines the valley in sections: the N Kouris with Erimi-*Laonin tou Porakou* and Alassa-*Palialona*, the S Kouris with Episkopi-*Phaneromeni* and the W Kouris with Sotira-*Kaminoudhia* and Avdhimou-*Kamares*. Prior to data analysis, it is useful to mention that while there is knowledge of tomb excavations at Erimi-*Kafkalla* by the Department of Antiquities, it was not possible to access unpublished information.

N Kouris (S.9)

N Kouris involves the area that surrounds the Kouris dam (Chapter Five, pp.209-213). This area was surveyed before the construction of the dam and is known for its impressive LBA remains. During this survey two probable MBA tombs were excavated at Alassa-*Palialona*, one of which irreparably destroyed and the other belonging to a three chamber cluster. In 2007 the part of the Kouris south of the dam was surveyed by the KVP, resulting in the excavation of an EC-MC complex, including a cemetery with at least nine chambers, dating between MCI and MCIII/LCI. Another cemetery located 400m north of the hill at Ypsonas-*Vounaros*, part of which was excavated by the Department of Antiquities, contains contemporaneous assemblages to the cemetery of Area E and is associated by Bombardieri with Erimi-*Laonin tou Porakou* (Bombardieri 2012b: 2). However, the relation between Erimi-*Laonin tou Porakou* and Alassa-*Palialona* is presently unknown despite the spatial and chronological association of the two sites.

At Alassa-*Palialona* what Flourentzos calls a "tomb" (1991: 7) comprises a three chamber complex, interconnected by a dromos. The MCII assemblage includes a large number and variety of RP III, RP IV and DP vessels, which indicates that the chamber was used for multiple burials, rather than a single interment. The finds include 31 bowls, 10 jugs, 7 juglets, 3 amphorae, of which one is anthropomorphic, 6 tankards, 1 askos, 1 flask, 5 basins, 1 ladle, 1 composite vessel, 3 spindle whorls and 1 unique steatite seal (fig.7.18). Most vessels are related to the south coast pottery tradition; however 2 of the amphorae have uncommon decorative patterns, reminiscent of Pyrgos examples (cf. Flourentzos 1991: 10, no. 24 and Karageorghis 1964: fig.5.6).

Figure 7.18 Alassa-Palialona steatite seal (Flourentzos 1991: pl.XIV:1).

Tomb 1 from Alassa expresses a material concern to convey both ancestral relation and individual identity for one or more deceased in the deposition of an anthropomorphic vessel and a unique steatite seal (Flourentzos 1991: 15, fig.5), which Webb considers an import (Webb and Weingarten 2012: 87). Finally we should note the use of a bench in one of the chambers, an architectural characteristic of tombs from Kouris valley, which has not been recorded in the chambers of all aforementioned examples. The chamber complex, which demonstrates ancestral affiliation related to group identity, cannot provide further detail as to the resources targeted by this group, given the diverse economic potential of the Kouris discussed in Chapter Five (pp.211-212). To the contrary, the neighbouring Erimi-*Laonin tou Porakou* provides wider insight into the economic potential of the buried groups (fig.7.19).

Figure 7.19 Erimi-Laonin tou Porakou cemetery area (Bombardieri 2011 forthcoming).

The available ceramic data from this cemetery point to similarities with the Alassa assemblage and the general south coast tradition. Ceramic counterparts are reported at Alassa (Flourentzos 1991: pl. XVII: 44-45, 53), Anogyra (Karageorghis 1978a: 893-894, fig.38; Magginis 2004: Pl.39: T.26:3), Pyrgos (Gonzato 2008) and most strikingly Episkopi-*Phaneromeni* (Carpenter 1981: fig. 3.16; Swiny 1986: fig. 68-73). The tombs and the workshop area of Erimi-*Laonin tou Porakou* are distinguished by their use of picrolite pendants (fig.7.20), beads and widespread deposition of spindle whorls.

Similarly to Alassa and Limassol, metal finds are infrequent, with the exception of one tomb. Two picrolite disks (*cf.* Swiny 1986: fig. 20, S95, S107), 7 spindle whorls and one juglet, possibly imported from the North, also distinguish this tomb.[5] No skeletal information accompanies this assemblage (Bombardieri 2010a); consequently it is unclear as how many individuals this remarkable material assemblage represents.

[5] Bombardieri 2010a: T.231 based on similarities with a vessel from Psematismenos- *Koliokremmos*, considered by Frankel and Webb 2000:77, Webb *et al.* 2007: 123 to be import from the North.

Picrolite pendants are a local tradition at *Laonin tou Porakou* (Bombardieri 2011), which additionally contained a unique comb-shaped pendant from the workshop area (Bombardieri 2010a).

Figure 7.20 Erimi-Laonin tou Porakou picrolite pendants (Bombardieri 2011 forthcoming).

Spindle whorls were used as identity markers related to the profession of the deceased. Individuality was also marked by the use of jewellery, while group identity was represented through multiple interments. As chambers are not connected by a dromos, multiple burials represent kinship-based groups, without less concern for maintaining linearity. Based on the lack of qualitatively and quantitatively distinct material assemblages, no economic or socio-political inequalities are observed and the community was rather co-operating in a large-scale textile production and to a less degree occupied with agricultural activities. Textile production is a central theme of distinction and self-identification for the Erimi community, while the comb-shaped pendants, which bear similarities to Bronze Age comb-shaped figures, are emblems emphasising the individual's departure from this communal identifier. Therefore, the community was connected by common economic activities, goals and motivations, expressed strongly in the burial record.

S Kouris

As mentioned in Chapter Five (pp.216-217), Episkopi-*Phaneromeni* is one of the first excavated sites containing EC/MC elements (fig.7.21) (Carpenter 1981: 59). Despite published information and knowledge regarding the number and chronology of the tombs, their content is not revealed in detail. Carpenter (1981: 60) referred to an ambiguous number of looted and 6 intact tombs, excavated between 1975 and 1976. Several tombs were used for multiple interments and pottery evidence points to cemetery use between the ECIII and MCIII (1956: 121). Weinberg (1956: 118) in an earlier publication mentions a dozen of tombs, comprising up to 4 chambers, all with multiple interments. Based on pottery finds T.12 is distinguished as the wealthiest, and is associated with a child (Weinberg 1956: 121).

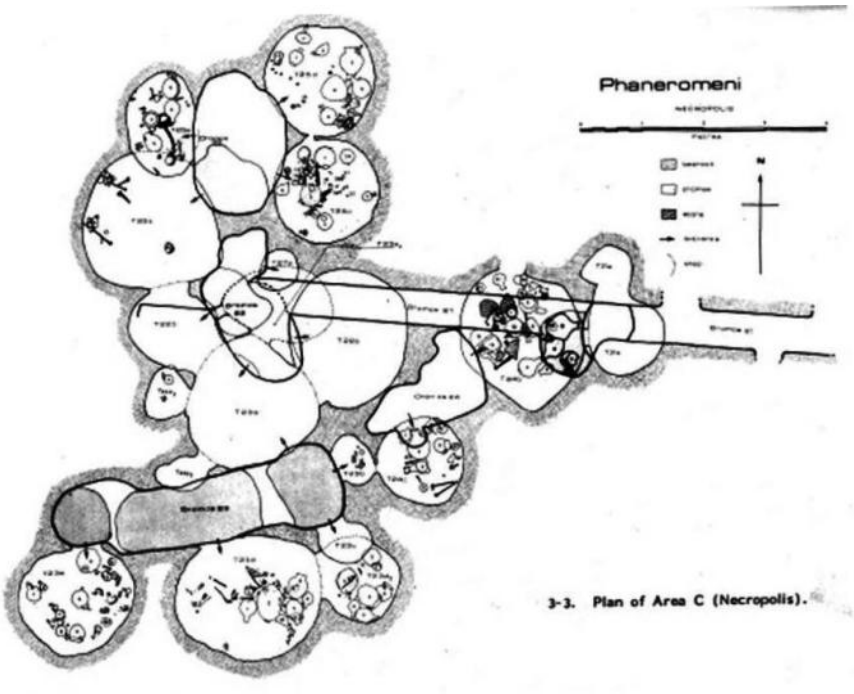


Figure 7.21 Episkopi-Phaneromeni cemetery (Carpenter 1981: 69, fig.3.3).

Pottery, the most common burial offering, is interred in a variety of sizes and shapes, some considered impractical for daily use. In line with this interpretation, some were suggested as produced specifically as burial offerings (Weinberg 1956:

121); however their shape and size was not specified. The rare metal objects found at the time are limited to two bronze pins and two bronze daggers (Weinberg 1956: 121; Duryea 1965: 30: no.8, pl.LXVI.1, 52: pl. LXVI.2; Swiny 1976: 49; 1986: 74-75, M25, B1, M25, B6, fig. 63; 1997: 206, fig. 2b.10).

The publication focuses on a burial complex, which although recorded, was not excavated. This complex comprises a long wide dromos, shared by 10 chambers, the content of which is unknown. The chamber number and common access suggests a strong focus on ancestry and linearity; however there is little evidence to elaborate on the socio-economic connotations for such behaviour.

This complex certainly points to distinct behavioural patterns that are not observed in Alassa, Erimi or the cemeteries W of the Kouris and, despite similarities in material culture between the N and S Kouris, the two areas were likely not regionally linked at this stage (Chapter Five, pp.242-245). Instead, they display community particularities, likely related to their unique economic activities.

Episkopi is located approximately 2km from the sea, while Alassa and Erimi a further 8km inland, indicating potential participation in dissimilar networks. Episkopi-Phaneromeni invested in tomb monumentality (Keswani 2004: 54), focusing more on group identity than individuality, underlining the dual concerns of agricultural land in the negotiation of social identity (Finch and Walis 1993; Saltman 2002: 160), and the need for cooperation at household and agricultural economic level (Keswani 2004: 54-55). Similar expression of linearity was common in the cemeteries of Lapithos and *Vounous* (Keswani 2004: 54), but relatively uncommon at Vasilikos and Maroni. Interestingly, the architectural evidence also supports this intra-valley diversity, where Episkopi, contrary to Erimi-*Laonin tou Porakou*, displays no space segregation between domestic and non-domestic areas (Chapter Six, pp.260-263).

To conclude, the investigated assemblage points to the existence of a two-fold strategy for status negotiation, developing from, at least, the ECIII. Negotiation operates through wealth and/or ancestral affiliation, providing evidence for more

intensive, organised and segregated economic activities. Professional identity gradually was relied on more heavily for social competition, especially in communities with higher access to metal and economic networks, such as Limassol and Pyrgos, where focus on individuality was prominent at an earlier stage. To the contrary, occupational longevity in more traditional communities, among other factors, appears to have selectively pressured inhabitants to communicate ancestral linearity to legitimise the socio-political claims of groups. Alternatively, communities that mutually cooperated in particular economic activities, such as Erimi-*Laonin tou Porakou*, developed and expressed community identity and diminished focus on individuality or linearity.

W Kouris (S.10)

Despite the large number of cemeteries located by Swiny during the 1970s in the S and SW Kouris valley (Swiny 1981: 59, tbl.1), a surprisingly small number of chambers are excavated and published. The current research distinguishes two burial assemblages, comprising 4 tombs from Avdhimou (Karageorghis 1968: 292; 1969: 486-490) and the 11 least looted and damaged tombs from Sotira-*Kaminoudhia* (fig.7.22).

The Bronze Age material from Sotira dates between the ECI and ECIII (Chapters Five-Six, pp.220-223, 255-258), with six chambers dating to the ECI-ECII, four chambers to the ECIII and one small, empty chamber (T.20) containing a child's skeletal remains of uncertain date (Swiny and Herscher 2003: 136-137). These chambers are not materially preoccupied with communicating wealth differentiation and while they tend to cluster, they do not, with the exception of T.20 and T.11, interconnect. These tombs share a dromos and conveyed kin relation between a female adult and a child (Schulte-Campbell 2003: 417-421, 431). Other tombs are notable for their size, for example the small T.12 with the remains of a 3 year old child (Schulte-Campbell 2003: 422).

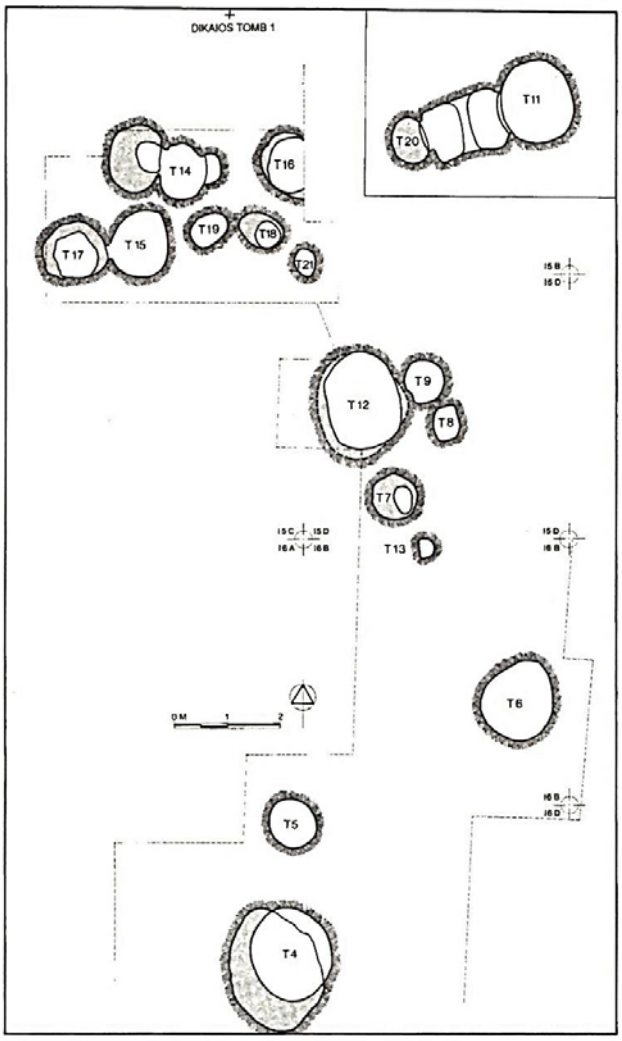


Figure 7.22 Sotira-Kaminoudhia Cemetery A (Swiny et al. 2003: 106, fig.3.1).

The burials show no cogent signs for economic inequality, suggesting that Sotira community was participating in economic activities and similar networks of interaction. Indeed, Sotira-*Kaminoudhia* was a small probably introverted family-based community maintaining a communal, if not household-based, economy (Swiny 1989: 21; Bolger 2003: 35-6, 134; Earle and Smith 2012: 238 *cf*. Sahlins 1972).

The disinterest in multiple burials and tomb architecture suggests that Sotira community was unencumbered by issues of land ownership during the ECIII and social competition did not figure in local burial practices. Despite the modest burial evidence, Sotira community had access to copper sources and knowledge of

metalworking, as suggested by the metal finds and a small 'billet' casting of a dagger blade found in the settlement (Swiny *et al.* 2003: 373, 380; Giardino *et al.* 2003: 392). Based on that, Knapp (2008: 76) suggests that metal artefacts were purposefully not deposited in burials, due to high internal demand for copper. If this is the case, Sotira's inhabitants held a unique attitude toward copper than what was practised among the communities of the other case studies, possibly because of their relatively further distance from copper mines and indirect acquisition of raw material or metal artefacts.

Moving to the W, the examples from Avdhimou also present a distinct picture, related to the slightly later chronology (ECIII-MCI). Avdhimou is known for its surveyed EC/MC material (Chapter Five, pp.226-232); however, only few excavated samples are available for investigation. In this case only four tombs from Avdhimou-*Kamares* excavated by the Department of Antiquities are available for analysis (Vavouranakis and Magginis 1995; Magginis and Vavouranakis 2004). Two of them are single interments (Vavouranakis and Magginis 1995: 68-85), while T.25 contained at least 4 interments (Magginis and Vavouranakis 2004: 155) and T.26 at least 2 (Magginis and Vavouranakis 2004: 155). Pottery shapes and types are comparable across the tombs with departures including a RPM spoon with a bird figure from the singularly occupied T. 15 (Vavouranakis and Magginis 1995: 79: no.12, fig.6:11). Similar vessels are found amongst the Pieridis collection (Karageorghis 1991: 27, no.12), the Ashmolean Museum (Frankel 1983: 120, pl.36, no.1278), in *Vounous* (Dikaios and Stewart 1962: fig.CXLIX, 13, 14) and within the Zintilis collection (Lubsen-Admiraal 1988: 129, fig.5: 130), which is thought to have originated from Paphos.

Another unique object from Avdhimou is a bone pendant (Magginis and Vavouranakis 2004: 98, fig.15), whose lack of parallels prevents a robust interpretation. This pendant comes from T.25, where 3 male adults and a child were interred, but it is unclear with whom it was originally associated. Amongst the finds from T.25 there was a bronze pin and a spindle whorl (Magginis and Vavouranakis

2004: 98, fig. 14, fig.16). The small number and originality of the artefacts, implies that they were possibly accompanying different individuals, as identity markers. It is less likely that they represent the daily activities of individuals, rather than serving as objects of personal adornment. T.14, singularly interred, included one metal dagger, one spearhead and 2 whetstones (Vavouranakis and Magginis 1995: 75, fig.4: 4-5, 8), suggesting markers of individuality in their quotidian character.

Finally, the double interred T.26 is distinguished by large amounts of pottery, including jars and cooking pots, suggesting potential identification with secondary agricultural products or some other occupation. Regardless, this assemblage represents activities that typified or symbolised an important aspect of an individual's life, and as such are interpreted as identity markers. However, despite the importance of individuality in the community of Avdhimou, the existence of chambers with multiple burials demonstrates a joint concern with communicating kinship-based group identity. Finally, status was negotiated through profession and the degree to which an individual, or a group, were articulated in exchange networks. These concerns are likely facilitated by the more accessible geographic location of Avdhimou and to a lesser degree by kinship-based group identity.

In sum, the Kouris valley presents local particularities in that people either focused on individual, group or community identity. The co-concern for identity expression that was noticeably prominent in other case studies strengthens the association between the formation and display of identity, resource availability and economic organisation. Small communities in the uplands, such as Sotira-*Kaminoudhia*, despite bearing evidence for external communication (Swiny 2003: 369), seem to have been less concerned with expressing individual identity at the community level. Communities with specialised functions, such as Erimi-*Laonin tou Porakou* adopted articles of personal adornment to communicate individual identity and maintained community identity through common material depositions in tombs (Pearson Parker 2005: 43-44). Avdhimou, located closer to the lowlands was, based on the finds, a better networked community, where individual identities were more

markedly represented and expressed. Finally, Episkopi was strongly concerned with land rights and its agricultural productivity as a key economic enabler of the community's success and cohesion.

General Comments on the EC/MC Burial Evidence

Even though the EC/MC communities are widely considered to be predominantly rural and village based (Driessen and Frankel 2012: 65), this contextual research demonstrates that the flexibility, variability and diachronic development of how they perceived themselves and interacted with extra-community elements is far from uniform. This may be related with the communities' gradual engagement and preoccupation with landscape control, either for fertile areas or trade route establishment and access. Factors that affected formation and expression of identities have been put forth as the degree of community integrity, extra-community interaction, resources availability and degree of economic equality. Whenever there existed fluctuations in the aforementioned factors, selective pressures induced changes in individual and group identities in ways that best promoted cohesion and thereby reduced tension between social and individual prosperity.

Introverted, household, family-based and relatively equalitarian communities such as Sotira-*Kaminoudhia* did not intend through their modest single interment burial practices to display strong differentiation. The contemporaneous ECI-ECII Psematismenos, also agriculturally-oriented, yet exposed to wider economic stimuli, minimised the economic differences through the expression of group identity, in multiple burials as early as the ECI-II.

In the neighbouring Kalavasos this trend was introduced slightly later, in the ECIII-MCI, when a dramatic change in behaviour or attitude through the emergence of group identity expression, led to a distinct focus on ancestral affiliation and wealth display. Such competition between wealth and ancestry display was not as

prominent in the S Kouris. Based on evidence from Episkopi-*Phaneromeni*, the S Kouris communities primarily employed ancestry as means of establishing, maintaining and expanding of socio-political status. In the N Kouris, Alassa and Erimi practiced multiple burials, yet focused on individual and community identity, reflecting community-wide economic activities. Finally, Pyrgos and Avdhimou, due to their location in areas of higher mobility and articulation with inter-community networks, may have placed a stronger focus on individuality, by employing either unique objects or clear indications of individual identity, such as anthropomorphic amphorae (fig.7.23).

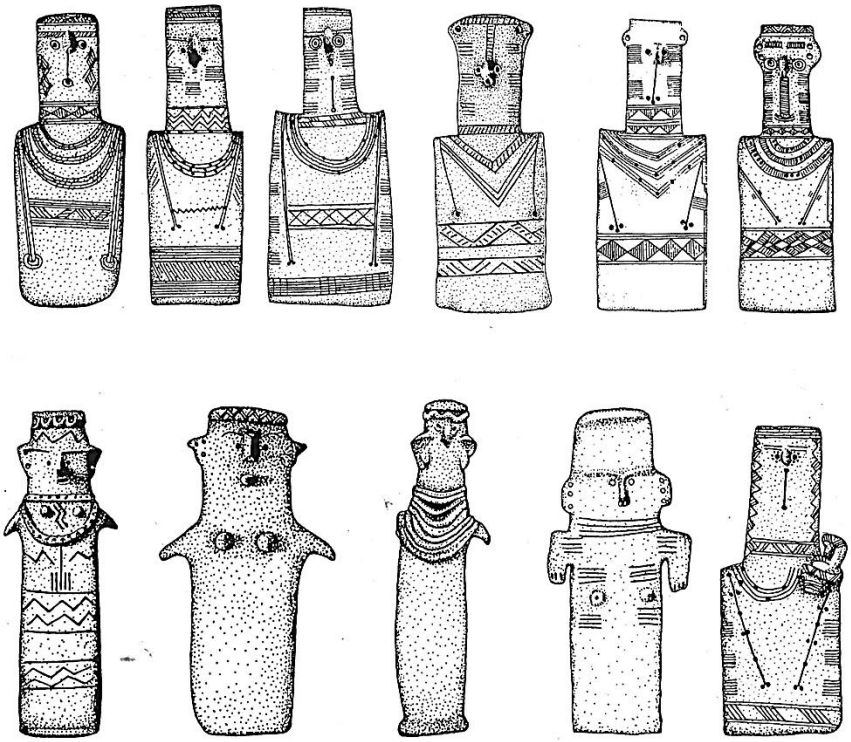


Figure 7.23 Sample of EC/MC anthropomorphic figurines 9 Bolger 2010: 158, fig.19.2, based on Morris 1985: figs. 176-185, 211-212, 214, 228-229).

Anthropomorphic amphorae occur in the general Limassol area and are found mainly at Pyrgos and *Katholiki*, yet are absent from Kalavasos, Psematismenos or Episkopi, located to the E and W respectively, with the exception of one example from *Palialona*. It is likely that due to exposure to different or wider networks and more diverse resources, people embodied a more complex set of identities,

including the individual, professional, group and local; these identities were potentially used differentially to navigate and make comprehensible the interactions within and between the local and inter-local. The individual, professional, group and local identities may also be unified in the largely un-contextualised anthropomorphic plank figurines (Webb 1992: 90; A Campo 1994: 167; Knapp and Meskell 1997: 195).

Fragmentary plank figures have also been recovered at the settlements of Alambra-*Mouttes* (Coleman *et al.* 1996: 202-203, fig.49), Ambelikou-*Aletri* (Belgiorno 1984: 19) and Marki-*Alonia* (Frankel and Webb 1994: 68; Lubsen-Admiraal 1994: 28), but not at Sotira (Steel 2004a: 148). Lacking uniformity in decorative patterns (A Campo 1994: 150), they are interpreted as symbols of individuality within the context of the Bronze Age rise of lineage groups (Knapp and Meskell 1997: 198-199). In other occasions the figures are associated with a shift in the perception of women's role (Bolger 1993; 1996), fertility (Washbourne 1997:28), as counterweight for necklaces (Washbourne 1997: 27) and as power paraphernalia, suggestive of emerging social complexity among group based communities (Talalay and Cullen 2002: 187, 191). The most detailed study of their symbolic aspect for individuality is provided by Knapp and Meskell (*contra* Bolger 2003: 90, 108-109, 188-190), who, using theories of cross-cultural and historical relativism in the understanding and expression of individual identity, avoided limiting interpretation to gender relations.

To conclude, within the three valleys there exist marked and consequential variations, despite researchers emphasising on their common pottery tradition and general communication (Bolger 1996: 167). When the communities' occupation with landscape exploitation and intensification of economic networks provided means to wealth and the interaction order of socio-political status, individuals and groups commenced projects of self-promotion. Those, who, through skill, opportunism and luck, accessed greater material resources and/or participated in wider networks, were probably better able to promote individual and professional identity; others, operating in areas with an inherently limited degree of

participation in economic networks focused on ancestry-based identity to claim, maintain and expand land ownership.

These competitive strategies culminated in the MC-LC transition with a shift in settlement patterns (Steel 2004a: 148) and the subsequent construction of monumental architecture in the LCIIC. Instead of interpreting this shift in retrospect by appealing to the spatially de-contextualised symbolic aspects of these buildings, it is essential to frame them within the culmination of changing behavioural patterns. Such study can provide insight into the economic and socio-political circumstances preceding this material attempt at establishing the institutional order of identity and inequality. It may alternatively demonstrate that competition did not take hold after its material culmination through burial assemblages, but rather, metamorphosed and became additionally an architectural expression and a more salient symbol in the construction of visible boundaries in the landscape.

B: The LC

As mentioned, settlement pattern shift during MCIII/LCI is a widely discussed topic in Cypriot archaeology. However, its diachronic material character in the areas under investigation is obscure, primarily due to the limited amount of existing information. For example, in the investigated case studies, the available survey material lacks chronological detail and there are currently no excavated settlements from the Vasilikos and Maroni with a discernible MCIII/LCIA horizon. In addition, much like the preceding period, the available burial evidence suffers from all the problems discussed in the introductory section, including the long standing illicit collection of imported artefacts, particularly Mycenaean pottery from LC tombs.

These problems undeniably affect archaeological approaches, which in the case of LC Cyprus either focus on specific site comparisons (Karageorghis and Violaris 2012; Keswani 2012), or on general similarities between assemblages with classifiable material (Keswani 2004). Although both approaches are useful for the interpretation of a period of such complexity, an interregional comparative contextual analysis is required to demonstrate more specific aspects of this rich, in many aspects, burial record. Within the confines of the available data, the present research selected the most secure contexts for in-depth spatial analysis and attempted to supplement analysis with information from looted tombs. The available dataset for analysis includes 30 examples from the Vasilikos, 50 from the Maroni Valley, 33 from the Limassol area, 11 from the N Kouris and 37 from the S Kouris valley.

Before analysing the above assemblages it is useful to mention that, based on its material content, the LBA burial evidence has a different character than its EC/MC counterparts (Keswani 2004: 109; Knapp 2013b: 382). The LC is characterised by clear evidence of elite groups, increased participation in the Eastern Mediterranean trade and increased wealth. However, one can observe that the EC/MC tradition of rock-cut chamber tombs continues into the LC, to the extent that such tombs are discussed in the available literature as traditionally “Cypriot” (Keswani 2012: 197). The majority of excavated LC tombs are rock-cut chambers, while variability in their

general shape and plan is generally interpreted as the result of local traditions (Keswani 2004: 110-112, figs. 5.1-5.4, 140). Tomb architectural variation within particular settlements is most notably attested in a large example of tombs from Enkomi dating to the end of the LC, and including chamber, pit, ashlar, shaft and pot burials (Keswani 2004: 140; 2012: 198).

The examples investigated in this study date between the LCI and LCIIIA, with the exception of *Ayios Dhimitrios* and Maroni that are abandoned in the LCIIC. In these examples, one may observe site-specific standardisation of burial types, but myriad combinations of material contents and artefact contextualisation. Based on the above, it can be speculated that the available burial evidence, despite not representing the demographic entirety of society, it is possibly not reflecting a singular social group, in this case the elites. Equally, it is unlikely that it represents the plurality of economic and socio-political potential of the respective populations.

Vasilikos Valley (S.11-12)

The social competition characterising the Kalavasos assemblages continues after the MCIII with the maintenance of the *Panayia* and *Mosque/Mavrovouni* cemeteries. These cemeteries provide few LC examples: possibly T.2 from *Panayia* dating to LCI (Todd and Pearlman 1986: 193; Todd 2007: 326), T.51 from *Mosque* dating to LCI (Todd and Pearlman 1986: 214-215; Todd 2007: 326) and Tombs 10-11 and 22 dating to the LCII (Todd and Pearlman 1986: 196-197, 203-204; Todd 2007: 326). New cemeteries are established further to the S, at Kalavasos-*Ayious* (MCIII/LCI) for the content of which data is unavailable (Todd 1979a: 285; Todd and Pearlman 1986: 194-195), and at *Mangia* and Kalavasos-*Ayios Dhimitrios* (Chapter Three, p.109, fig.3.11). The establishment of new burial grounds are distinct place-making practices, potentially associated with competition over land rights, as new cemeteries were located closer to a high concentration of fertile land. Synchronously, a shift of location may be suggestive of different networking strategies and a reconfiguration of economic activity requiring habitation in new

landscape settings, particularly in lowland plains and closer to the coast. The combination of these factors is further supported through observations of increasing material diversities amongst burial assemblages.

The LCI is evident in T.10 and T.51 of the *Mosque* cemetery, T.2 from *Panayia* and the slightly later T.4 (South and Russell 1989: 48-51), between the W and central area of *Ayios Dhimitrios*. T.2 and T.10 have no information regarding skeletal preservation. Imported artefacts are reported as absent, with the exception of a bichrome wheel made pilgrim flask from T.2 (Todd and Pearlman 1986: 193). The latter tomb also included 3 bronze swords and one bronze dagger. The contemporaneous T.51 included one bronze sword accompanying a male adult and was used to suggest social unrest in MCIII/LCI Kalavasos (Pearlman 1985: 177; Todd and Pearlman 1986: 214-215). This, however, cannot be sufficiently supported due to the lack of violent trauma in the respective burial assemblages. Therefore, the present study may not discuss the swords in these examples beyond their role as markers of gender, professional and social identity. The most significant information from these tombs is the earliest evidence of imported pottery in the Vasilikos burial assemblages (Todd and Pearlman 1986: 214), a phenomenon in synchrony with the earliest LC burials following settlement pattern shift.

Further, the poorly documented T.4 included the earliest LC elements from Kalavasos-*Ayios Dhimitrios*. Used for multiple burials (Moyer 1989: 62), its artefacts cannot be securely contextualised. However, in spatial terms, it marks a crucial point of socio-economic change for the Vasilikos valley, reflected in the shift of burial landscapes. T.4 is characterised by a wider variety of local pottery, 50% comprising WS (South and Steel 2001: 71), and the first example of a cylinder seal (fig.7.24) (South and Russell 1989: 49, K-AD 121). It is unclear whether the seal was used in bureaucratic functions or for personal adornment (Smith 2002: 1-2; 2012: 40-41; Webb 1999: 262-283; 2002: 111-112, 128-138). It is possible that this seal communicated some facet of individual identity, irrespective of the degree, if any, that supported an institutionalisation of this individual's socio-political identity.

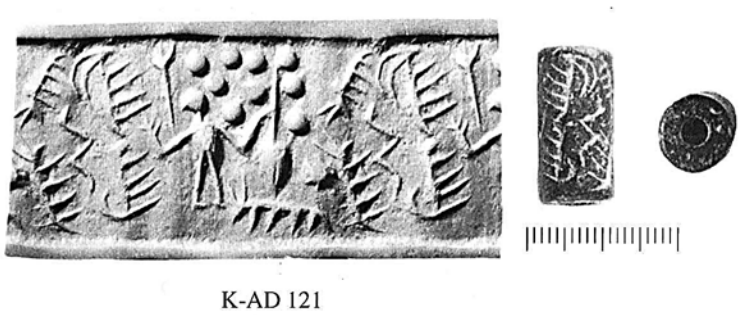


Figure 7.24 Kalavasos-Ayios Dhimitrios T.4 – cylinder seal (South 1989b: pl.XVI, K-AD 121).

The remaining examples from the Vasilikos valley date to the LCIIA-LCIIC and pre-date the excavated architectural components of *Ayios Dhimitrios* that, with the exception of the *Mangia* tombs, were often found stratigraphically superimposing those (Chapter Six, p.280, fig.6.22). Most known tombs are found disturbed, if not looted, yet the intact examples hold an impressive array of artefacts. Gradual increase of imported artefacts attests to the crucial transition to intensification of external contacts and the dramatic increase of wealth that was followed by the construction of impressive monumental architecture.

Despite differences in material quantity amongst the LC tombs, the most important material theme was the widespread access to imported artefacts, probably suggesting a low degree of control in exotica accessibility (Hirth 1998; Appadurai 1986: 39; Stark and Garraty 2010: 52; Earle and Smith 2012: 242). Mycenaean pottery, gold, silver, ivory and faience are commonly imported goods, while artefacts that occur either uniquely or in small quantities involve pictorial Mycenaean kraters, jewellery articles, gypsum vases and stone artefacts (South 2002).

Published contextual analyses of imported artefacts predominantly deal with Mycenaean pottery (*cf.* De Mita 1998; Steel 1998b; Van Wingaarden 2002). Many researchers associate Mycenaean pottery and particularly pictorial kraters with the role of symbolic negotiation and legitimisation of elite socio-political status (South and Russell 1993; Manning 1998: 46; Steel 1998b; Wright 2004a: 96-97; Antoniadou 2005: 66; 2007: 496; Hamilakis and Sherratt 2012: 198; Knapp 2013b: 405). Such

kraters occur in the rich and undisturbed T.11 located beneath the ashlar Building X of *Ayios Dhimitrios* (fig.7.23). The common orientation of T.11 with Building X led excavators to assign an elite status and identity to the entombed group (South and Todd 1985: 46; South 1989a: 318-319; Todd and South 1992: 193; South 1995: 191; 1997: 171). This opinion is further supported by the few but extremely high quality artefacts accompanying them, including two stone seals, two unique gold rings with CM signs, a unique gold, a unique silver and a unique glass pyxis (South 1989a: 318-319). T.11 additionally included at least 17 RL bottles and arm shaped vessels (South 2003: 27). The associated skeletal remains, reflecting 4 burial episodes with 3 female adults and 3 sub-adults (South and Todd 1985: 46; South and Steel 2001: 72), are particularly interesting. Researches consider these individuals as members of an elite family and relate them to the construction and later administration of Building X.

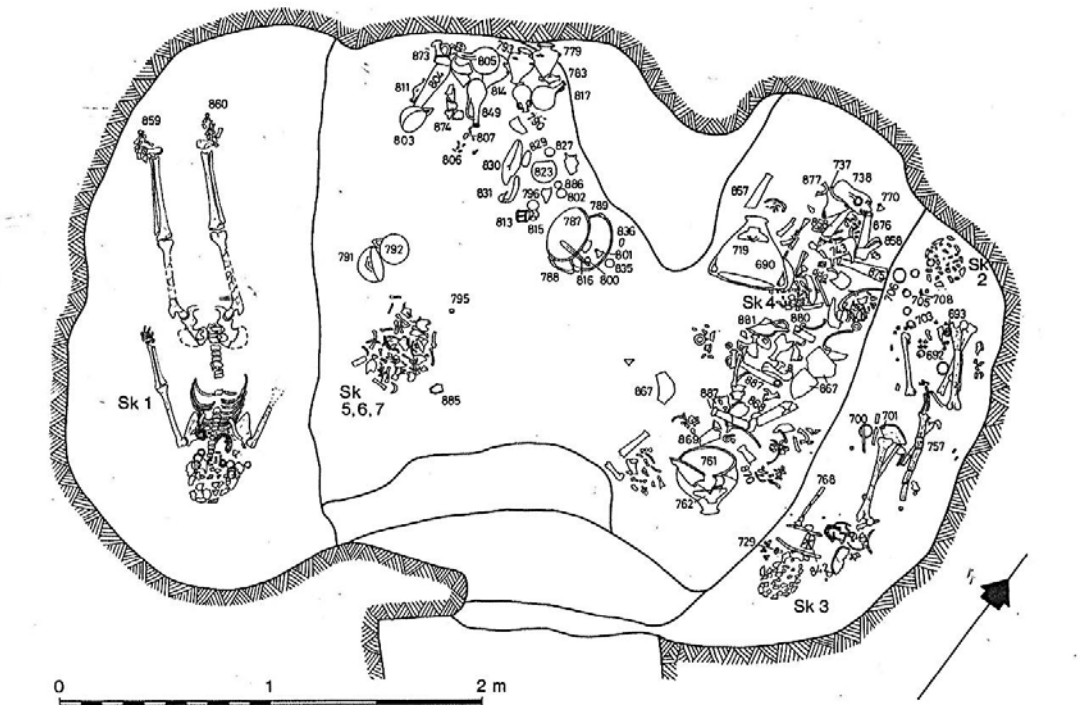


Figure 7.25 Kalavasos-Ayios Dhimitrios T.11 (Bolger 2010: 159, fig.19.4).

The three women and probably their children belonged to a group of wealthy opportunistic aggrandisers, which negotiated or sought to institutionalise their aspired socio-political status. While this assemblage reflects material wealth, the individual finds may also correspond to identity manifestation efforts, particularly the signed rings that possibly served as markers of individual identity. The relation of these individuals with the ashlar building is unclear, as the practice of space construction above antecedent burial landscapes is widely documented in the LBA. In addition, the achieved or ascribed status of the people potentially managing Building X does not necessarily reflect the achieved or ascribed status of the buried individuals long dead before the completion of the construction.

T.12 is another impressive tomb located underneath B.X and includes the burials of 4 infants and a 5 year old, the latter accompanied by a Hittite figurine of a deity on a deer (fig.7.26) (Steel 1994: 201; South 2000: 355). The rarity of a Hittite statuette on the island has been suggested to indicate distinct socio-political status.[6] Considering that this artefact was found associated with a child, the above interpretation assumes that this figurine had a generally accepted socio-political symbolic character and that that status was inherited, ascribed but otherwise not achieved (Renfrew 1986b: 149). Without assuming a socio-political context, an alternative interpretation could support that this unique artefact was a personal belonging of the child or the one who buried the individual, who acquired it directly or indirectly through a formal or informal exchange (Steel 2013: 142). This burial good, then, may have characterised the individual, a particular relationship, or a particular economic interaction that permitted access to a unique object, rather than only symbolising a formalised identity of that child as member of a wealthy group, distinct and marked out from the rest of the community (Parker-Pearson 2005: 102-103).

[6] Todd 2001: 205 the only Hittite finds on the island are a gold ring with a Hittite hieroglyphic inscription from Tamassos; Åström 1989: 16 a silver ring from a tomb from Hala Sultan Tekke and a seal from Hala Sultan Tekke with a Luvian Hieroglyphic sign.

Figure 7.26 T.12 Hittite figurine (South 1997: pl.XV).

Other unique artefacts that could be ascribed with elite socio-political symbolism occur in tombs that are not distinguished by wealth or spatial association with the ashlar building (figs.7.27). The 8 excavated tombs from *Mangia*, located NE of *Ayios Dhimitrios*, contained ivory weights (McClellan *et al.* 1988: 203), a lead weight (McClellan *et al.* 1988: 207) and Mycenaean pottery, including a shallow bowl with bull protomes (McClellan *et al.* 1988: 204). The weights might be associated with the profession of the deceased, succinctly symbolising the wealth and livelihood it provided them in life and the relative wide network such economic activities suggest. The shallow bowl can be associated with the general cult of the bull, which is also evident in a BR bull askos from T.5 from *Mangia* (McClellan *et al.* 1988: 205), 2 BR II bulls from T.1 from *Ayios Dhimitrios* (South and Russell 1989: 44) and a bull depiction on a cylinder seal from T.4 at *Ayios Dhimitrios* (South and Russell 1989: 51). T.1 was used for multiple burial episodes with at least 9 individuals (Moyer 1989: 60). Multiple burials suggest identification with a specific group, most likely kinship based, while the accompanying artefacts promoted their individual identities within subgroups.

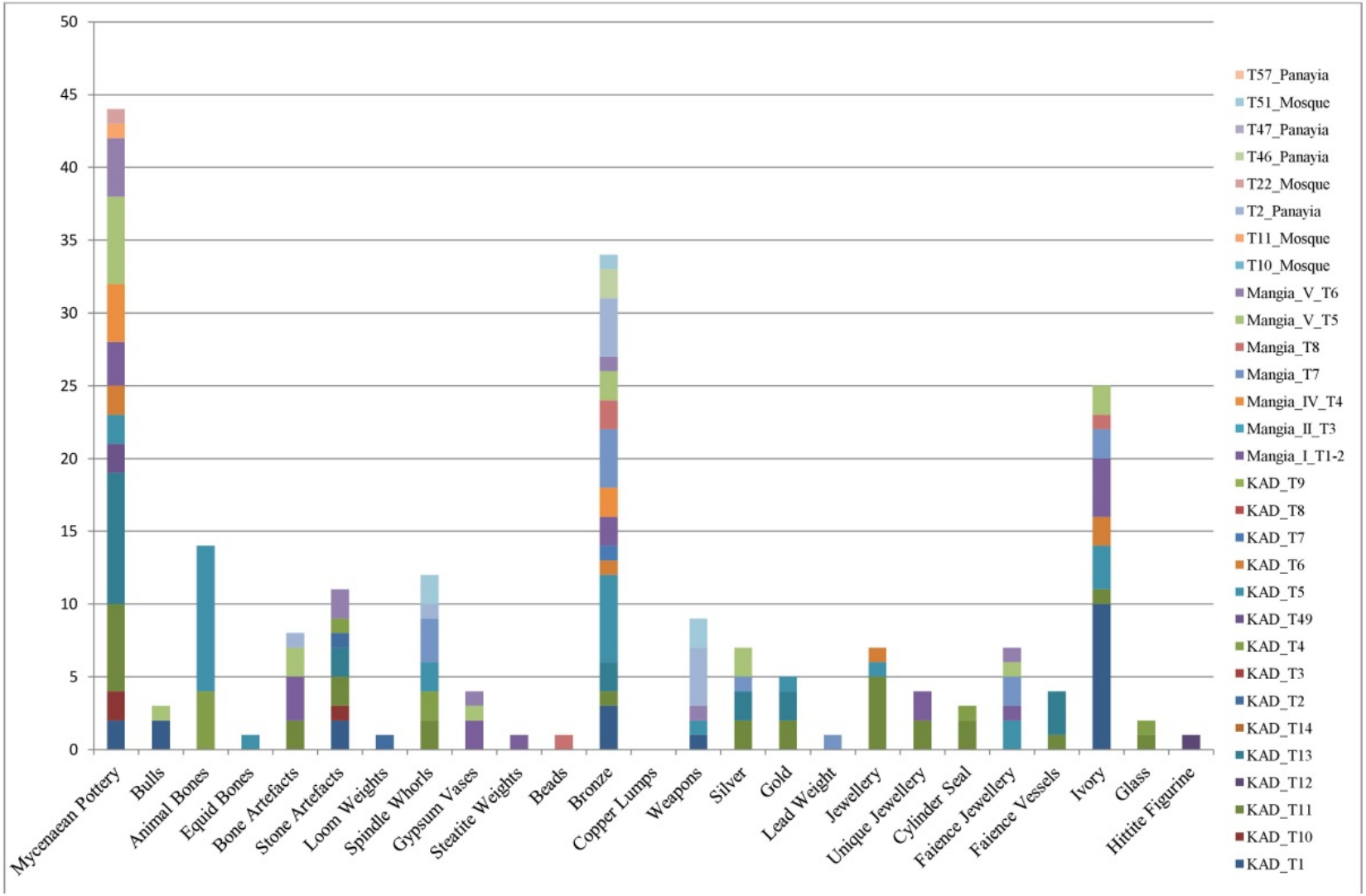


Figure 7.27 Graph showing the frequency and distribution of burial interments in the LC Kalavasos-Ayios Dhimitrios and Mangia tombs (produced by the author with data from South and Todd 1985; Todd and Pearlman 1986; McClellan et al. 1988; South 1989; South and Russell 1989; South 2000; South and Steel 2001; South 2002).

Although the existence of such a group is well attested, the degree of its politico-economic formalisation and institutionalisation remains unclear. Namely, despite evidence supporting a corporate alliance of either kin or professionally successful and well networked people, who effectively negotiated their economic and social prominence, the spread and variety of imported artefacts cannot sufficiently support strict politico-economic control by this group to other members of the pre-LCIIC community surrounding *Ayios Dhimitrios*. In addition, it is difficult to assess if the processes of acquiring these contextually unique artefacts were formal or informal, direct or indirect. Finally, the role of merchants in such an international period can be discussed only upon limited material evidence, such as weights and a pair of gold boat-shaped earrings (McClellan *et al.* 1988: 203).

The evidence from the Kalavasos tombs seems to point primarily to a habitual focus on group membership, within which individuality was expressed through personal objects, artefacts of personal adornment and potentially artefacts reflecting professional identity. Increasing importance of trade is evident in the gradual decrease of WS pottery in burial assemblages (South and Steel 2001: 72), in favour of imported wares. The variety of means by which people expressed their identity suggests that kinship-based groups include individuals that are not necessarily or exclusively related with land ownership and copper exploitation. Finally, evidence for a politico-economic dominant elite group, when viewed with material reflecting a variety of manifested identities, may suggest that intercommunity relations involved a form of consensus, a low degree of accessibility control at least to extra-community resources and possibly a degree of economic interdependence (Chapter Three, pp.120-123).

Maroni Valley (S.13-14)

As discussed in the Psematismenos tombs analysis, the expression of group identity pre-dates a similar phenomenon in the Vasilikos valley. Similarly, the participation of the Maroni valley in external trade pre-dates the endeavours of Kalavasos. Two MCIII/LCI tombs from Maroni-*Kapsaloudhia* include bichrome wheel made and imported Syrian pottery (Cadogan 1987: 82), of unknown duration of use prior to its burial deposition. These tombs comprised 9 chambers and an exceptionally large number of interred, including 16 male adults, 12 female adults and 12 children and infants (Cadogan and Domurad 1989) and indicating a strong focus on group membership and community identity, less evident in the examples from the Vasilikos valley. The pottery assemblage from *Kapsaloudhia* tombs is distinct from contemporaneous examples from Kalavasos (Herscher 1984:25). In fact their choice of pottery shapes and wares indicates access to a more extensive network as evidenced by tankards, BSIII ware, and a proto-WS bowl with zoomorphic handle (Herscher 1984: 27) and parallels from Morphou-*Toumba tou Skourou* (Vermeule: 1974, figs. 17B, 37, 38, 42, 71-73) and Myrtou-*Stephania* (Hennessy 1964, pl. IX-XI, XXXIX: 19, LXIV:1, XLVI), while displaying strong similarities with a contemporaneous tomb from Dromolaxia-*Trypes* to the East (Herscher 1984: 25 *cf.* Admiraal 1982).

The LCII is distinguished by rich tombs excavated throughout Maroni by the British Museum, an initiative motivated by the collection of Mycenaean pottery. This led Manning to suggest that the 26 published tombs represent elite groups (1998: 44), while emptied tombs located beneath the ashlar building of *Vournes*, belonged to an adversarial competitive group that failed in the ideological conflict and was subsequently erased. Contrary to the Vasilikos valley, the construction of the largest and most elaborate structure of Maroni did not preserve underlying antecedent tombs. However, similarly to Vasilikos, the available burial assemblages reflect a widespread accessibility to imported artefacts (fig.7.28), an expectation in accordance with the role of the Maroni complex as a probable anchorage and exchange point (Chapter Four, p.175-178).

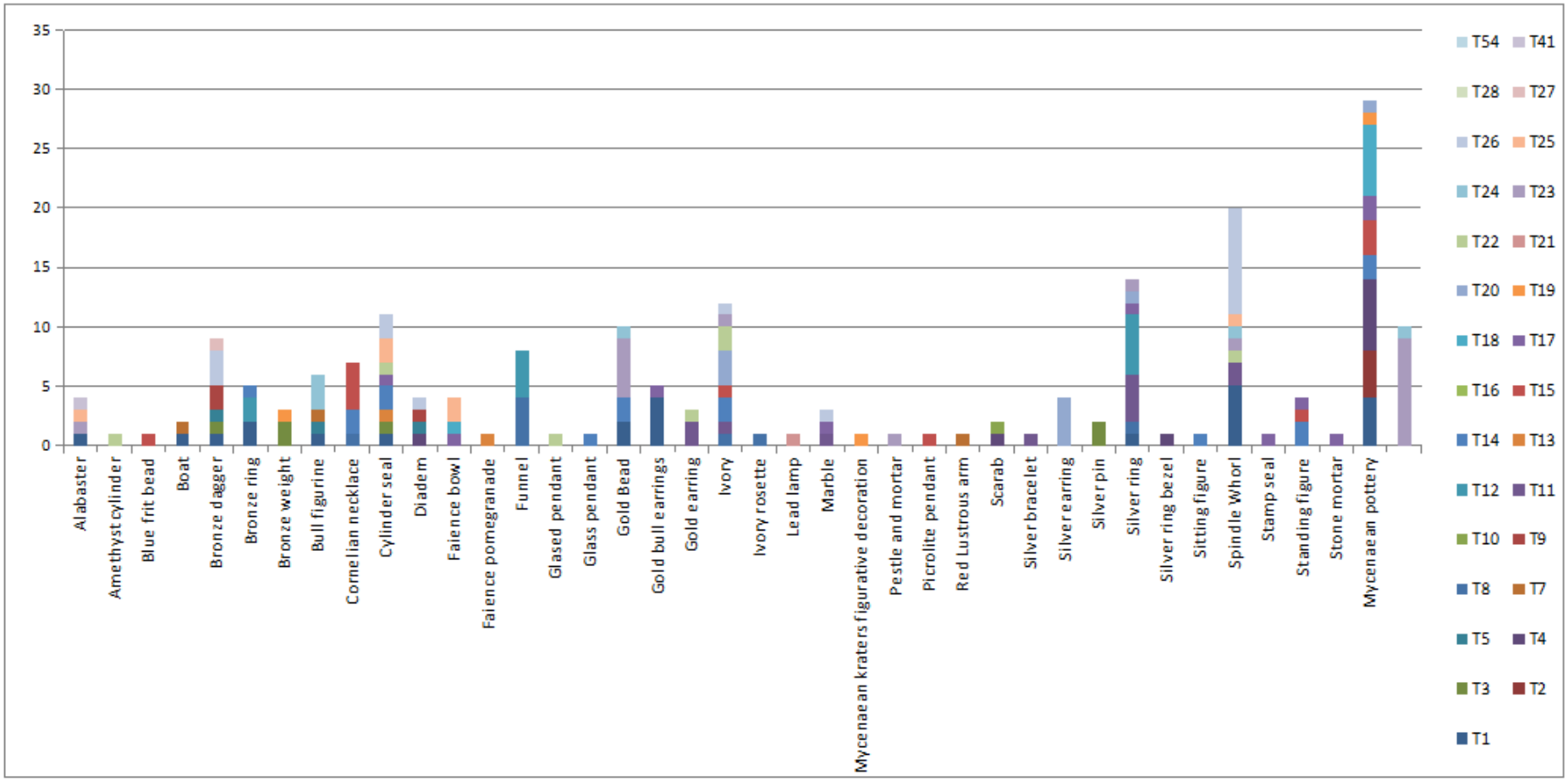


Figure 7.28. Graph showing the Late Cypriot IIA-IIC artefact distribution and frequency at Maroni-Vournes and Maroni-Tsaroukkas (produced by the author using data from Johnson 1980; Manning et al. 1998).

Mycenaean pottery and most importantly pictorial kraters have long been the focus of scientific and amateur excavations in the Maroni valley and other parts of the island (Fitton 2001; Steel 2001). Often targeted by looters, their existence can only be inferred by remaining potsherds from 4 examples of the BM tombs and 8 from subsequent archaeological investigation in the area. Imported pottery comprises a wider variety of Mycenaean shapes such as lekythoi (Johnson 1980: 8,14: T.1; 10, 25-26: T.18, T.22), skyphoi (Johnson 1980: 10, 25: T.18), piriform jars (Manning *et al.* 309, 311, 325, 332-333, 342, 345-6), examples of Minoan pottery (Manning *et al.* 1998: 310: *Tsaroukkas* T.2; Johnson 1980: 8, 15: T.1), and potsherds from unidentified non-local ware. These examples along with the higher variety of local pottery and other artefacts indicate that the Maroni valley acquired wealth through participation in international trade earlier than the Vasilikos.

Furthermore, objects of adornment often appear to have been unique and personalised, such as bull head pendants (Johnson 1980: 8, 15: T.1), silver and gold diadems (Johnson 1980: 20: T.10; 17: T.4; 18: T.5; 19: T.9), a mouthpiece decorated with rosettes (Johnson 1980: 31, Pl.XLIV: T.26), gold and silver rings, a variety of shapes of gold beads and silver rings with bezels (Johnson 1980: 17: T.4; 24:T.17). Other jewellery artefacts include one ivory rosette (Johnson 1980: 21-22: T.14), carnelian necklaces (BM.T.8: Johnson 1980: 19; BM.T.14: Johnson 1980: 21), and a dentalium shell (Manning *et al.* 1998: 342: *Tsaroukkas* T.14). Unique objects associated with individuals include an amethyst cylinder (Johnson 1980: 27: T.22 (BM.167), 2 terracotta boat models (fig.7.29) (Johnson 1980: 15: T.1 (BM.15); 18-19: T.7 (BM.60)), 2 examples of stone weights or probable anchors from two heavily disturbed tombs (Manning et al. 1998: 310: T.2 (MT.052); 338: T.11 (MT.420)) and faience scarabs (Manning *et al.* 1998: 340: pit 18; Johnson 1980: 20: T.10; 17: T.4). These objects may be constructively used for the expression of individual identity or the increased accessibility to unique artefacts facilitated by one's professional identity.

The imported artefacts and anchors may be interpreted in terms of the role of Maroni as an anchorage or exchange point, involving the mercantile potential of the local community, a potentiality further supported by the burial deposition of terracotta boat models and unique objects, and the probable burial association of two anchors,

underscoring the individuals' relationship to trade. While the abundance of unique objects arriving in Maroni is incontestable, they may alternatively suggest participation of the community, in international exchanges through a professional group of merchants. Such individual activities may be attested in cylinder seals found in tombs (Manning *et al.* 1998: 341: Pit 18), bronze weights (Johnson 1980: 17: T.3) and bronze scale pans (Johnson 1980: 15: T.1; 9, 20: T.10).

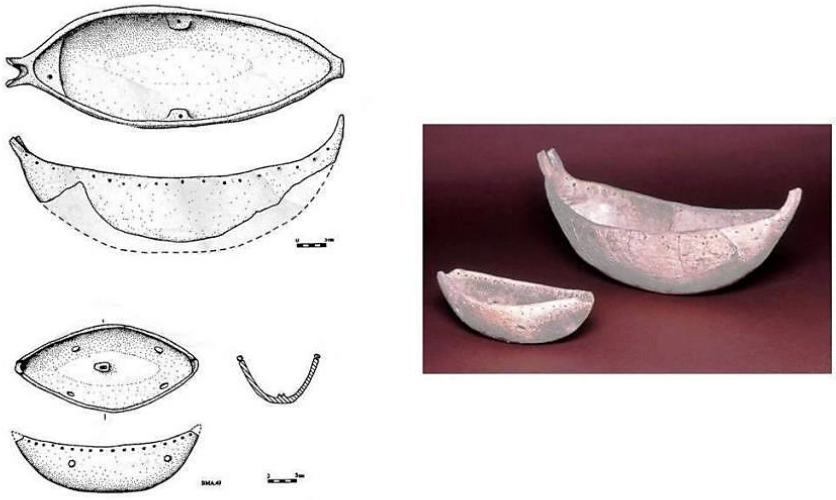


Figure 7.269Maroni-Tsaroukkas terracotta boat models (Manning et al.2002: 109, fig.3 (left); Courtesy of D. Sewell (right))

The Maroni-*Tsaroukkas* tombs point to a relatively wealthier community than *Ayios Dhimitrios*. However, abundance and diversity of material culture may be associated with the fact that some tombs slightly post-date the Vasilikos counterparts. At the same time, material culture from abandoned buildings along and the structural characteristics of the two sites points to *Ayios Dhimitrios* being the wealthier of the two (Chapter Four, pp.185-188). It is clear, then, that there existed different sources of wealth. While Maroni seems to have thrived through external trade, *Ayios Dhimitrios*' dependence upon external exchange was potentially lower. The latter appears to be related to a wider array of professional activities, such as agriculture, copper mining, pottery production and possibly trade, while Maroni was primarily affiliated with agriculture and intensive trade.

Beyond unique imported artefacts and other objects of economic significance, some artefacts were more narrowly distributed, including RL spindle bottles (Johnson 1980:

18), terracotta idols and clay bulls or bull askoi, which appear in 7 occasions, 4 of which are in equal numbers (Johnson 1980: 22: T.15; 28-29: T.24; 10, 29: T.25; 18: T.7). Beyond the widely attested role of these figures in ritual contexts (Webb 1999: 216-219), it is worth considering the possibility that they are also associated with the professional identity of people related to agriculture and the importance of bovines in the domestic economy (Steel 2004a: 126; Swiny 2008: 43 for the ECMC; Halstead and Isaakidou 2011).

As the aforementioned material accompanied an unknown number of individuals for a period between LCIIA1 to LCIIC2, it is very difficult to assess the economic potential of individuals or groups; however, it is possible to suggest that individuals likely with kinship relations sharing a tomb demonstrated more distinct individual identities, likely through their primary professional activities. For example, loom weights appearing in single numbers in 4 separate tombs (Manning *et al.* 1998: 322: *Tsaroukkas* T.3; 335: *Tsaroukkas* T.7; 340: *Tsaroukkas* T.12; 340: Pit 18; 342: *Tsaroukkas* T.14), are considered in this study as the professional markers of one or more individuals, but not all, of the interred group.

To conclude, the LC examples from Maroni present striking differences in material quantity and quality, a patterning indicative of a significantly diversified economy. It appears that active participation in external trade transformed the kinship-based rural community of Psematismenos to the wealthy, trade-oriented community of Maroni, a transition facilitated by the opening up of professions to individuals, rather than simply groups and the display of these professional identities alongside group identity in the material culture of burials. Continuity in the practice of multiple burials may not be strictly associated with land ownership aspirations but it may equally reflect a well-established tradition.

Limassol (S.15)

Information regarding the Limassol tombs dug by the Department of Antiquities is relatively limited. Until December 2012 one could only access reports on the general

relative dating, local pottery types, existence or absence of Mycenaean pottery, infrequently on the existence of uncommon artefacts, rarely on skeletal remains and almost never on the degree of tomb preservation, stratigraphy and architecture. The study began with access to the data of 14 tombs from *Katholiki* (Karageorghis 1978a: 888-893), Kapsalos (Karageorghis 1964: 326), Germasogeia (Christou 1994: 657) and Kandou (Karageorghis 1986c: 828), available only for their geographic references. Some Limassol tombs provided further information, following the discovery of non-burial pits (Violaris 2012: 22, 35-36), comprising the same assemblages as burial chambers (Karageorghis 1978a: 888). Finally, further analytical information became available from the recent publication of 36 tombs and burial features from Limassol (Karageorghis and Violaris 2012).

The above burial features are distributed in the landscape between the Vasilikos and Kouris valleys and this study associates them with a number of MC/LC communities (p.299, fig.7.1). The northernmost is represented by 2 tombs from Ayios Athanasios, 1 from Ekali, too damaged for inclusion in the present study (Violaris 2012: 42-43) and 3 from Germasogeia. The majority of tombs are located within a distance less than 1km from the modern coast. These are the burial complexes of *Enaerios* and *Katholiki*, which are closely situated to Limassol-*Verki* and less than 1km E of Limassol T.272. Modern ground-works made the spatial association of the latter with the *Verki* complex infeasible. *Verki* provides later evidence (LCII) and it is likely that *Katholiki* and the individual T.272 represent two separate communities. Finally a burial complex was located approximately 3km from the coast in the locality *Hioni.*

The earliest published examples from Limassol come from the area surrounding *Hioni* and date to the MCIII-LCIA (Violaris 2012: 30, 32). Despite the limited examples, it is interesting to observe the diversity between these two tombs (T.70 and T.96). The first was used for the burial of at least 7 individuals in three events and contained 2 spindle whorls and local pottery including 3 WP IV-VI jugs, a potsherd with anthropomorphic decoration (Karageorghis 2012a: 77: T.70/14; 148: pl.XVI:14), a fragment of a RP IV vessel with relief decoration representing animal protome (fig.7.30) (Karageorghis 2012a: 77, T.70/13; 148: pl.XVI: 13), and a fragmentary RP IV vessel with a mouflon protome in relief (Karageorghis 2012a: 77: T.70/12; 148: pl.XVI,12). Tomb sharing

represents participation in kinship-based groups, within which there existed sub-groups associated with textile production and accessibility to extra-community pottery. At the same time, individual identities were strongly manifested in anthropomorphic amphorae and artefacts with unique relief décor that eventually became entwined in the general community identity and its distinct RP pottery.

Figure 7.30 Pottery sample from Limassol-Hioni T.96 (Karageorghis 2012a: 152, pl.XX).

T.96 is unique for its sealed stomion (Violaris 2012: 32), despite being disturbed after burial. This disturbance may not be related to looting, as unidentified skeletal elements may have been moved by exhumation, followed by a subsequent burial. The available pottery is local and does not present the ware and shape varieties as T.70, suggesting a group or a member of a group with limited networking. Unfortunately the extent of looting does not permit its contrast with the LCII T.94 from *Hioni*, as only local pottery and one BR II bull rhyton were available (Karageorghis 2012a: 79: T.94/5; 150: pl.XVIII, T.94/5).

The LCI examples from *Katholiki* are part of a rich archaeological landscape that comprises EC/MC burials and the LCIIIB material and Iron Age ritual sanctuary of Komissariato (Violaris 2012: 23). The 5 burial complexes were used for multiple burial events sustaining identities of family groups through mortuary practices. With the exception of one faience bead from T.134 (Karageorghis 2012a: 91: T.134/2; 160: pl.XXVIII:2), they contained no imports. The number of pottery vessels is correlated with the size of the tombs and the estimated number of individuals without any obvious particularities distinguishing them otherwise. The majority of pottery comprises BR I juglets, jugs, bowls and tankards, while T.128 presents the widest range of pottery including a WP VI feeding bottle, 7 WS I bowls and 1 spindle whorl (Karageorghis 2012a: 89: T.128/29; 158: pl.XXVI/29). Therefore, the general pattern of personal identification within groups and subgroups and lack of distinct community burials is additionally evident in the *Katholiki* interments. Similarly the 'isolated' (Violaris 2012: 42) T.272 contained a similar range and number of artefacts as the *Katholiki* tombs.

The *Verki* examples provide undeniable evidence of the economic boom and subsequent diversification of LCII Cyprus. Specifically, kin group burials with local pottery and little evidence for individual identity markers are succeeded by architecturally elaborate metal-rich tombs with imported Mycenaean pottery. For example, T.322 associated with an 18-25 year old female contained PWW ware with potmarks (Hirschfeld 2012: 291-292, 298, figs.12-14; Karageorghis 2012a: 99-100: T.322: 15, 20; 164: pl.XXXII), 2 RL spindle bottles, 4 Mycenaean jars, 1 Mycenaean krater and 1 locally produced krater imitation, along with impressive dagger blades and a dagger with preserved bone hilt (fig.7.31-7.32) (Karageorghis 2012a: 100: T.322/23; 165: pl.XXXIII:23). This tomb also contains a roughly rectangular pit in the centre (Violaris 2012: 44), similar to the contemporaneous but relatively modest T.323 from Verki. T.323 contained one sherd of a Mycenaean vessel and 3 bronze blades (Karageorghis 2012a: 97-101; 167: pl.XXXV).

Figure 7.31 Pottery sample from Limassol-Verki T.322 (Karageorghis 2012a: 164, pl.XXXII).

Figure 7.32 Pottery and metal artefact sample from Limassol-Verki T.322 (Karageorghis 2012a: 165, pl.XXXIII).

T.324 is the least impressive tomb and contained one adult individual buried with local pottery, including 1 RL bottle (Karageorghis 2012a: 102: T.324/2; 168: pl.XXXVI: 2). Consequently accessibility to imported artefacts and productive manipulation of copper were the means of expressing individual and professional identity in the area of Limassol, whose impetus of economic development appears to have been local copper resources.

To the E, the *Enaerios* burial evidence displays striking local particularities. Mortuary features containing material commonly occurring in burial chambers are distributed in 6 areas and date predominantly to the LCII (fig.7.333) (Violaris 2012: 47-51). Violaris associates these features with secondary burial treatment (2012: 22), as the material groups did not always appear homogeneous (2012: 48; Karageorghis 2012a: 105). The artefacts include Mycenaean pottery, a variety of metal artefacts such as daggers, pins, rings, bracelets, a silver pin (Karageorghis 2012a: 109: 621-V/9; 173: pl.XLI:9), a pair of gold earrings (Karageorghis 2012a: 105: 621-III/5; 169: pl.XXXVII:5) and amorphous lumps of copper (Karageorghis 2012a: 173: pl.XLI:15; 177: pl.XLV:18; 178: pl.XLVI:12). Beyond individually unique jewellery, other unique artefacts comprise 1 Egyptian alabaster juglet (Karageorghis 2012a: 109: 621-V/2; 172:pl.XL:2), 1 LMIB cup (Karageorghis 2012a: 112: 621-VI/4; 176:pl.XLIV:4), 1 faience gourd flask unique in Cyprus (Karageorghis 2012a: 84: T.127/1; 155:pl/XXIII:1; *cf.* Yon and Caubet 1985: Kition-*Bamboula*, 68-69, 75, fig.33) and 1 cylinder seal (Karageorghis 2012a: 107: 621-IV/14; 171:pl.XXXIX:14).

Despite the lack of material cohesion, the available evidence sustains the hypothesis for the emergence of new identities related to new economic potentials provided by copper manipulation and participation in international trade through copper and other local products. The material evidence points to more salient economic identities probably associated with the profession of the deceased or their group, strong individuality viewed in unique artefacts and artefacts of personal adornment, including a picrolite pendant (Karageorghis 2012a: 117: 621-VII/13l; 178:pl.XLVI:13), and a strong local (or perhaps professional group) identity evident in the deposition of amorphous copper lumps, some of the earliest evidence of raw metal from Cyprus (fig.7.34) (Charalambous and Kassianidou 2012: 302).

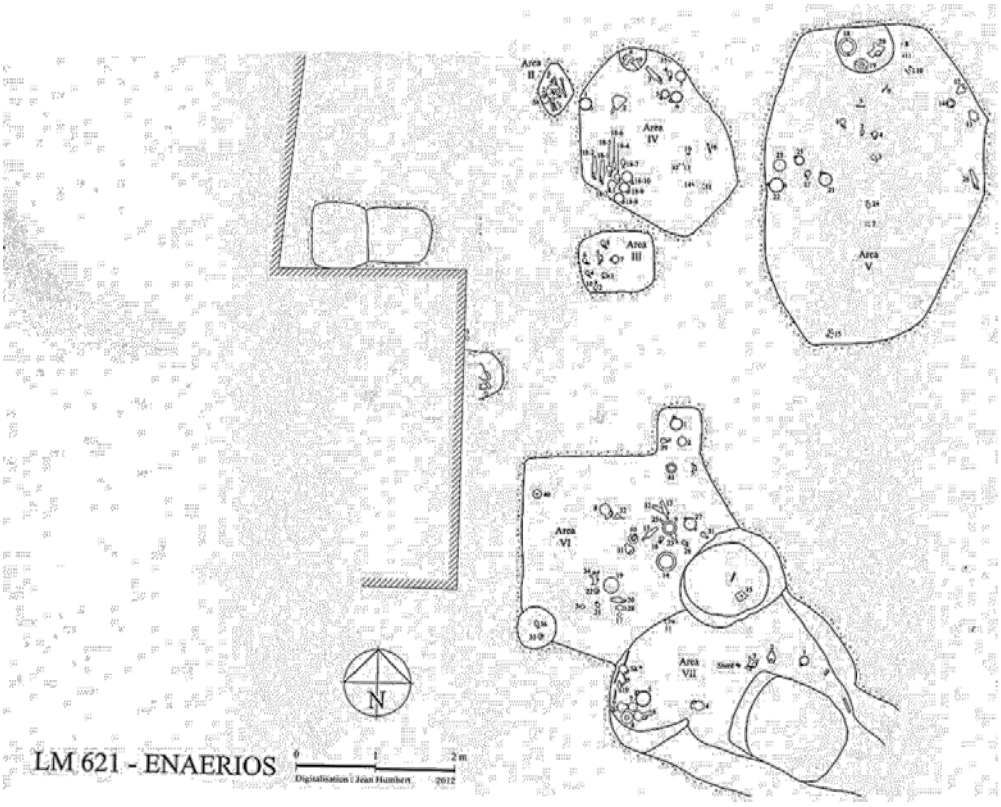


Figure 7.33 Limassol-Enaerios burial ground plan (Violaris 2012: 51).

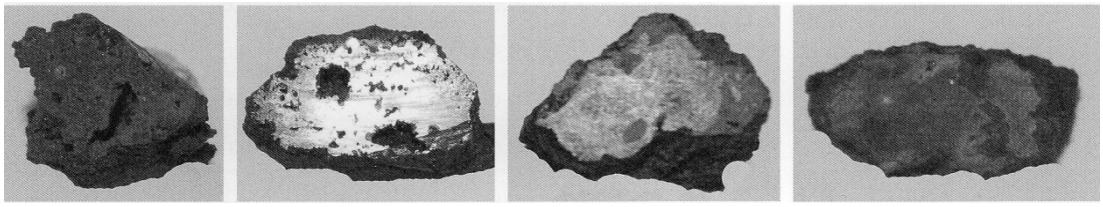


Figure 7.34 Copper Lumps from Limassol tombs (Charalambous and Kassianidou 2012: 308, fig.2).

Local particularities can be further attested from the LCI-II examples of Germasogeia and Agios Athanasios. Ag. Athanasios tombs are two interconnected chambers including at least 6 individuals in T.8 and 2 in T.9 (fig.7.35). The number and variety of finds is proportionate to the number of individuals and chamber size. The ceramic material allows the discernment of individual pottery preferences and thus, probable identities, as evidenced by the WS bowls of T.8 and the composite BR vessel of T.9 (Karageorghis 2012a: 67: T.9/5; 140: pl/VIII:5).

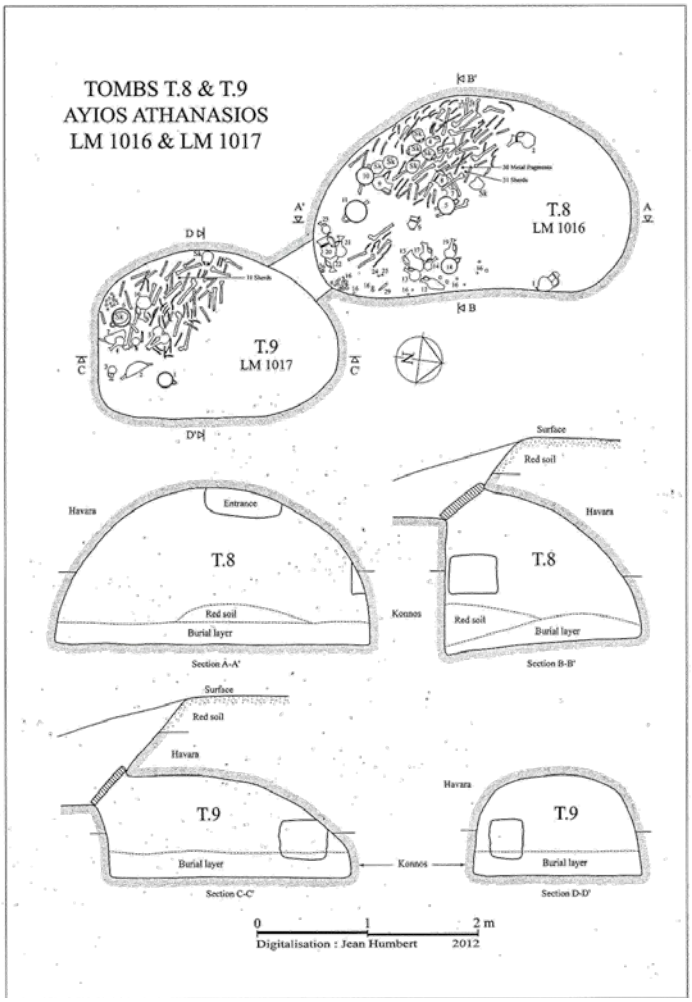


Figure 7.35 Limassol-Ayios Athanasios T.8 and T.9 (Violaris 2012: 26).

At the same time, the participation of these individuals in common subgroups is evident in the shared decorative patterns of beads recovered from both tombs (Karageorghis 2012a: 138:pl.VI; 140:pl.VIII). Despite the predominance of local pottery wares, a fragment of Mycenaean vessel (Karageorghis 2012a: 66: T.8/31-28; 127: pl.V:31-28) suggests a degree of direct or indirect participation of this group in international trade, probably associated with copper exploitation, evidenced by an amorphous lump of copper and the wide variety of bronze artefacts of personal adornment from T.8 (Karageorghis 2012a:pl.VII).

Finally, despite recent bulldozer damage, the Germasogeia tombs present comparable structural and morphological characteristics with the Ag. Athanasios tombs. Ceramic

material comprises local shapes and wares and a BR II zoomorphic askos from T.19 (Karageorghis 2012a: 75: T.19/15; 146: pl.XIV:15), while metal evidence occurs only in T.11, in what Karageorghis describes as a bronze sword (2012a: 71: T.11/10; 144:pl.XII:10). Germasogeia examples are important as they chronologically represent the incipient stages of the economic fluorescence of the Limassol area in the LCII, where population was characterised by varied accessibility to copper. Regardless, this expansion of economic sphere did not correspond to the pronounced political identities, as no burials exhibit evidence for distinction using metal, or any other material for that matter.

N Kouris-Alassa

The earliest LCI examples from the N Kouris, beyond the MCIII/LCI evidence from Erimi-*Laonin tou Porakou*, are found in a MCIII/LCI tomb from Erimi-*Kafkalla*. This tomb deviates from the material homogeneity of the aforementioned tombs. Indeed, it includes one proto-WS bowl and one RoB jug (Karageorghis 2012a: 130: T.9/2-3; 187:pl.LV:2-3), signifying locally-based particularities distinct from *Laonin tou Porakou* (fig.7.36).

Figure 7.36 Erimi-Kafkalla T.9 pottery (Karageorghis 2012a: 187, pl.LV).

Through the LCI-IIA examples of *Kafkalla*, one may observe the transition from group identities to a focus on individual identities, resulting from wider economic opportunism and development during that chronological period. The LCIA/B CS1838 contained a variety of local pottery in association with bronze bracelets, a bronze pin and a bronze ring (Karageorghis 2012a: 181:pl.XLIX:41-43), pointing to wider access to copper resources. By the LCII a bronze scale pan in association with a three-symbol inscription (Karageorghis 2012a: 123-124: T.2/CS1823/12, 18-5; 184:pl.LII:12, 18-5; Hirschfeld 2012: 293-296, 298, fig.1), signalling the professional identity of a merchant is found in T.2, while Mycenaean pottery was interred in the LCIIC T.5 (Karageorghis 2012a: 127: T.5/CS1825/1; 185:pl.LIII:1.

An isolated tomb from Kandou presents an architecturally distinct burial example, involving a carved step on the floor of the tomb, a large stomion, the top of which forms a triangle, two benches for two skeletons and a pit in the centre of the tomb (fig.7.37) (Violaris 2012: 54-56). T.6 may indicate focus on individual identities and an attempt at monumentalising the typical burial chambers in an economically flourishing period. Interestingly, this tomb is not distinguished by its material wealth, as it is limited to local pottery, some bone artefacts for personal adornment and probably one bronze bracelet (Karageorghis 2012a: 129: T.6/10). In this case, the architectural characteristics of the tomb were used for the expression of individual and group identity of the two buried individuals. Further information can be provided with future excavations of the related settlement remains. Thus far, the best supplemental information comes from burial examples found in association with domestic structures from the neighbouring Alassa.

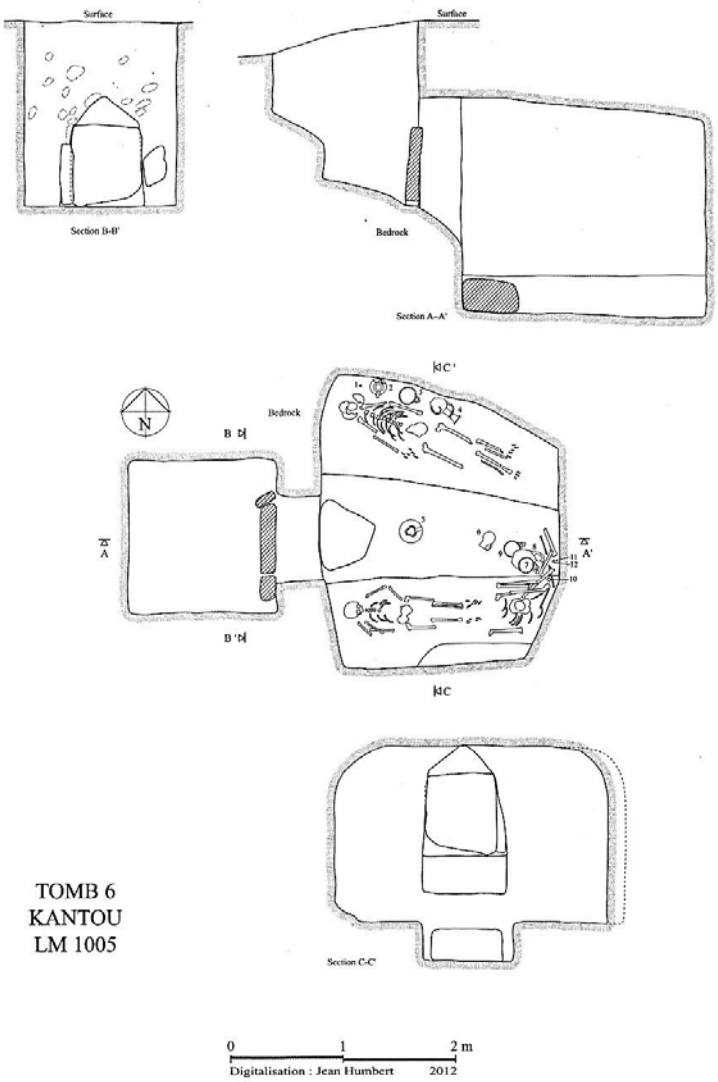


Figure 7.37 Kandou T.6 (Violaris 2012: 55).

The Alassa-*Pano Mandilaris* chambers are not published in detail. Hadjisavvas mentions 8 tombs to discuss the chronology of Alassa, without proceeding to any detailed description of the chambers (1991: 173-175, tbl.17.1). These chambers are found below *Pano Mandilaris* (Chapter Five, p.234, fig.5.13; Chapter Six, p.270, fig.6.14), contrary to *Paleotaverna*, where the ashlar building was not constructed above a pre-existing burial landscape (fig.7.38). This is in stark contrast with the contemporaneous Kalavasos-*Ayios Dhimitrios* and Maroni-*Vournes* and points to a distinct local tradition, likely related to community identity and a different socio-political philosophy. The available tombs date to the LCI, LCIIB, LCIIC and LCIIIA and include local and imported Mycenaean pottery.

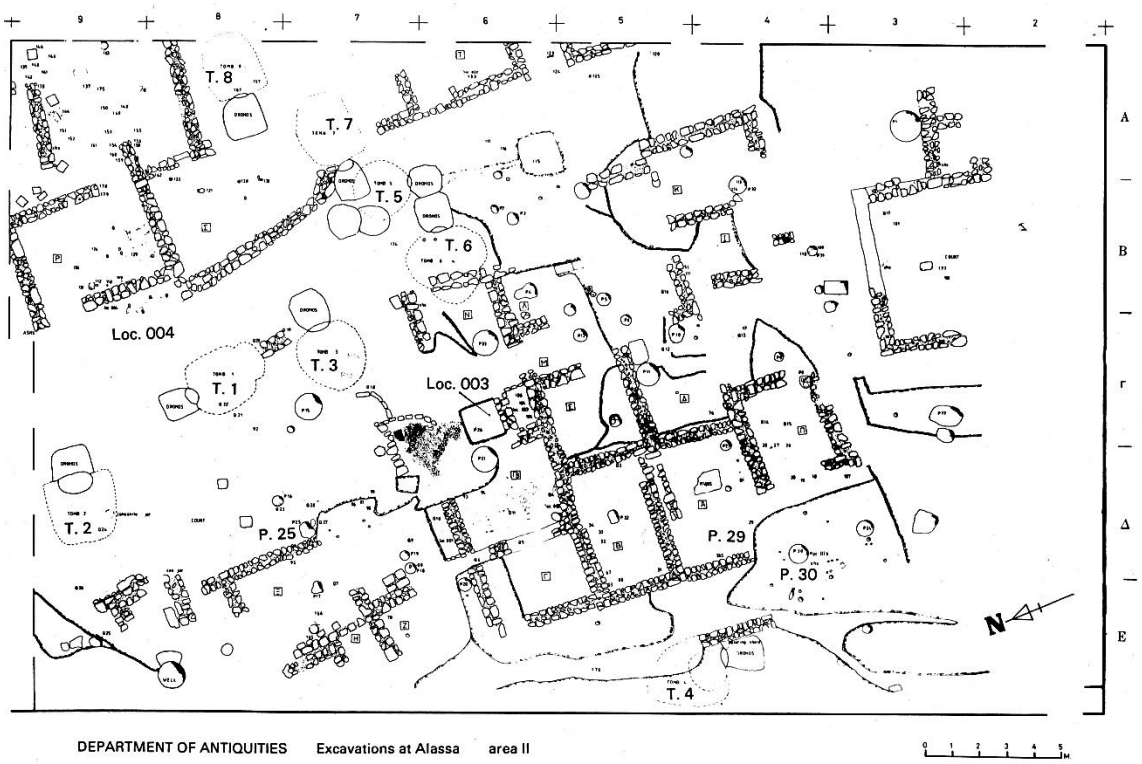


Figure 7.38 Alassa-Pano Mandilaris intramural tombs (Hadjisavvas 1991: fig.17.3).

Contrary to the S Kouris Episkopi-*Bamboula* tombs, these examples were not reused over long periods. However, the reasons for this are unclear as it may relate to a practice of emptying tombs in order to accommodate new burials or serve as a particular local expression. In fact, a distinguishing feature from this assemblage is the use of cists, probably as ossuaries of pre-dating burials in the centre of the chamber floor, often found emptied. Therefore, similar to examples from the aforementioned Limassol tombs and contrary to the other case studies, chambers were cleared out to accommodate new groups, instead of incorporating them into multi-period, multiple burials. Interestingly, burials pre-dating the construction of the LCIIC domestic compounds of *Pano Mandilaris* were not disturbed (Hadjisavvas 1991: 173-175). This suggests an awareness of the existence of antecedent tombs, later incorporated into the plan of new structures, often by following their alignment.

The available data provide information on some distinct features among the tombs. One example is distinguished by a haematite cylinder seal, another by gold jewellery while a third by the amount of pottery (Hadjisavvas 1991: 173-175). Hadjisavvas emphasises the unique architecture of tombs as symbolic representation of unique

socio-political status. In particular T.2, dating to the LCIIIA, contains a stone pillar in front of the chamber entrance (Hadjisavvas 1989: 39, T.2). Such a suggestion cannot be supported without detailed presentation of the associated finds and discussion on possible problems of tomb preservation, including structural interpretations of the pillar. Consequently, the Alassa tombs, though comprising a limited sample, clearly display strong community identity involving different kinship-based groups.

S Kouris – Episkopi-Bamboula (S.16-17)

The Episkopi-*Bamboula* assemblage is distinguished by enduring use of burial chambers, in some cases used from the end of LCI to the beginning of LCIII (Benson 1972: 19-20: T.16). The burial landscape is typically incorporated into the domestic compounds, while tombs include a wide variety of local and imported pottery, symbolically-laden objects and unique artefacts (fig.7.39). These characteristics, along with the use of a mud brick superstructure for some of the tombs (Benson 1972: 15) support evidence for a strong sense of community identity. This phenomenon characterised the S Kouris in the previously discussed chronological period, where this study notes a focus on architectural investment of multi-chamber, multiple burial tombs.

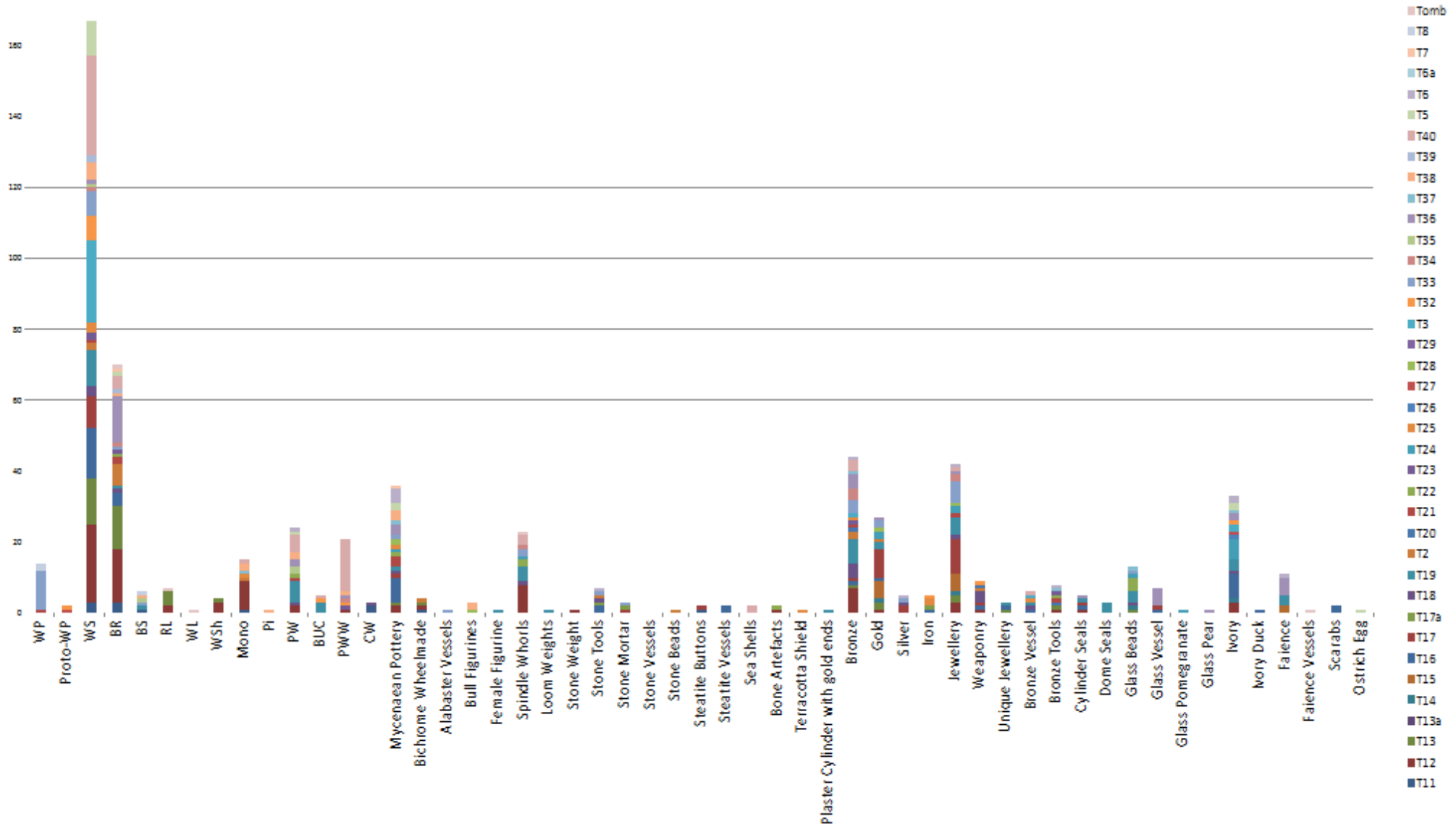


Figure 7.39 Graph showing the Late Cypriot IA-IIC artefact distribution and frequency at Episkopi-Bamboula (produced by the author using data from Benson 1972).

Chambers include a large number of interments from different burial events, which are often difficult to demarcate due to poor tomb preservation, severe looting (Kiely 2010b: 54), and lack of complete excavation notes from the British Museum and the University Museum excavations. This feature includes a striking 52 skulls from at least 6 burial phases from the enigmatic T.19 (Benson 1972: 22-23; Angel 1972: Appendix B, tbl.1), with a side note on the existence of "many babies" (Benson 1972: 22). The tomb dates to LCIIA-LCIIIA, includes a wide variety of local pottery, one Mycenaean jar, ivory, faience and glass beads, one cylinder seal and three dome shaped seals (Kiely 2010b: 54).

Beyond objects of personal adornment and unique artefacts such as the cylinder seal, a female figurine with earrings, a terracotta figurine representing a beaked-faced baby on a swaddling board (Kiely 2010b: 54: object 1896, 2-1.91; Karageorghis 1993b: 14-15), and a unique horse-shoe shaped silver bead, there is no artefact that could be associated with the professional identity of any of the deceased from the general tomb assemblage. Therefore, focus on professional identity as observed in the aforementioned examples was probably not as pronounced in the S Kouris valley. Similarly, despite wide accessibility to imported artefacts attested in architectural remains (Kiely 2010b) tombs do not include the variety of objects displayed in the burial ground of Maroni.

Imported artefacts constitute mainly ivory, faience and Mycenaean pottery, which is documented in all tombs, but appears in approximately 30 out of the 50 excavated examples (Kiely 2010b: 60). Imported pottery from other locations is less common as the Mycenaean and is possibly of Syrian provenance, such as the bichrome jug from T.12 (Benson 1972: 16: B.996), the "domino pot" from T.13 of unspecified provenance (Benson 1972: 18: B.1224), a "polychrome" pilgrim flask from T.2 of unknown provenance (Benson 1972: 11: B.1213) and a fragment of a similar ware from T.38 (Benson 1972: 31: B.1000). The burial assemblage including these finds is not distinguished by wealth or uniqueness. These vessels represent personal belongings of some of the deceased and are not necessarily suggestive of direct participation in international economic networks. Artefacts that may be associated with the identity of people closely engaged in trade or wider networking are a glass pomegranate from

T.24 (Benson 1972: 25: B.1352), dating to LCIIC, an ostrich egg from T.5 (Benson 1972: 13) dating to LCIIB/C and two probable faience scarabs from the very disturbed T.16 (Benson 1972: 19: B.1638-1639), with artefacts dating to LCIA-LCIIIA.

Two categories of material appear in limited instances throughout Episkopi-*Bamboula* assemblage. RL ware appears in only three tombs, 2 from the LCIIA-LCIIIA T.12 (Benson 1972: 16: B.986-987 (bottles)), 4 from the LIA T.13 (Benson 1972: 18: B.981-984 (bottles)), and 1 from the LCIA-LCIIIA T.9 (Benson 1972: 15: B.980 ("spindle jar"). The tombs were looted, making the discernment of whether this class of artefacts was associated with wealthy groups or groups with wider external networking difficult. Regardless, these tombs provide evidence for diverse burial practices, which due to a lack of further information cannot be related to a particular kind of identity. Finally, another rare class of artefact are the bull figurines, which appear in abundance in the Vasilikos and Maroni valleys and in pit finds from *Katholiki* (Karageorghis 1978a: 888). Only 2 bull figurines were found in the Episkopi-*Bamboula* tombs, coming from the LCII T.38 (Benson 1972: 31: B.221-222). The fact that they appear in even numbers, as previously discussed, is suggestive of their role as draught animals and may point to the association of the deceased or their group with intensified agriculture.

A relatively distinct burial complex from *Bamboula* is the BM T.89, with finds dating between the LCIIC and LCIIIA (Kiely 2009: 89). Beyond the locally produced pottery, this tomb holds a faience conical goblet with raised leaves, an Egyptian vase with goose-head lugs and a limestone bowl (Kiely 2010b: 62). In addition, local objects such as a stone mortar (GR 1896,2: 1.22), three pestles (GR 1896,2: 1.38-1.40), a biconical stone spindle whorl (GR 1896,2: 1.37) and a picrolite disc (GR 1896,2: 1.41), appear in association with ivory objects such as a disc with rosette decoration (GR 1896,2: 1.34), pointing to a contextually unique combination of artefacts at community level.

To sum up, a variety of luxury and unique artefacts appear to be in circulation at *Bamboula* with a noticeable increase in quantity and quality from the LCIB, LCIIA-B to LCIIC/LCIIIA (Kiely 2010b: 63). While this assemblage may be influenced by taphonomy (Keswani 2004: 88; Crewe 2009b: 30), and/or diverse perception of the role of

concealed space in identity manifestation, the settlement evidence points to LCIIC/LCIIIA prosperity (Chapter Five, pp.239-242).

Finally, lack of artefacts indicative of professional identities, impressive number of burial interments and an enduring use of chambers point to a concern with maintaining a powerful community identity, in which ancestry-focused aspiring elite groups interacted. Intense focus on linearity may be associated with land ownership issues, and based on the available evidence competition may only be linked to this aspect of socio-economic relations. Lack of ashlar masonry, a key element and a symbol of prosperity at Vasilikos, Maroni and Alassa, may suggest that land ownership and agricultural productivity at *Bamboula* was not formalised or institutionalised to a comparative level.

Concluding Remarks

Material culture found in LBA burial assemblages can be used to support shared common characteristics, particularly in their use of specific local pottery ware and shapes, but also in their selection of imported artefacts or materials. However, the three valleys present strong local particularities in the location of tombs and their spatial association with contemporaneous and later architecture, in their duration of use, number and sequence of depositions, engagement in mortuary ritual related to secondary depositions, material contextualisation and essentially in the different ways identities were manifested. Even relatively neighbouring burial assemblages, such as Kalavasos and Maroni, or those from the same geographical system, such as Episkopi, Kandou, Erimi and Alassa, exhibit strong differences, likely related to diversity in social and politico-economic relations.

In the Vasilikos valley, one can witness a transition from EC single burials, to multiply interred MC chamber complexes with strong evidence for kinship-based group identities. In the LC a shift of settlement patterns and habitation areas closer to different soil types and more extensive fertile land occurs with settlement established above pre-dating burial ground. The LC bears clear evidence for a politico-economic

elite group. However, it appears that less influential groups also benefit from a wide access to imported artefacts. In all burial assemblages, it is possible to observe a stronger focus on individual identities, either through the deposition of artefacts related with one's profession or with combinations of artefacts pointing toward in wider economic networks. The elite tombs of *Ayios Dhimitrios* were constructed before the overlying ashlar building, the construction of which did not interfere with the tombs, but rather followed their orientation when digging their foundations. This deliberate act was interpreted by Manning as the display of dominance of one competing group, members of which constructed the impressive LCIIC building above their ancestor's tombs (Manning 1998). While this is plausible, there is inadequate evidence to support a hereditary or legitimised socio-political status, as this is not yet accompanied by a uniquely acquired and controlled symbol, either an artefact or distinct burial architecture. Namely, it is yet unclear if burial location and subsequent spatial association with an important LCIIC (c.1350-1300) building is reflective of the LCIIA-B (c.1450-1350) perception of the entombed individuals.

The Maroni valley follows a slightly different trajectory with multiple burials as early as the ECI. In addition the LC *Vournes* and *Tsaroukkas* present an interesting peculiarity, in that the tombs pre-dating the construction of the sites were selectively preserved. Some tombs were deliberately emptied during the buildings' construction in order to situate the deep structural foundation. Manning (1998) interpreted this act as an expression of ideological dominance by one of the competing groups, while suggesting that the 26 British Museum tombs entombed elites, based on letters exchanged during the period of their excavation noting the existence of "unproductive" tombs, meaning those without Mycenaean pottery and mainly containing local pottery. The content of the BM tombs is impressive for its communication of professional identities of merchants and expression of individual identities within group members, something that may not be observed in the EC/MC burial evidence. An elite group, is also directly evident in the architectural remains of Maroni-*Tsaroukkas*, however the construction and maintenance of the ashlar building, as discussed in Chapter Six required a certain degree of community co-operation (pp.295-297). Therefore, the degree and extent of control and formality of the potentially ideologically dominant group is unclear.

In the Kouris valley, one can hardly discuss standardisation in burial practices, aside from the employment of general chamber tomb type and the use of a common pottery tradition. Different parts of the valley demonstrate site-specific particularities in the number of interments, longevity, secondary burial treatment and material contextualisation. This may be associated with strong community identities that, contrary to the aforementioned valleys, are materially discernible in the LC burials. The ashlar building of Alassa-*Paleotaverna*, a more architecturally elaborate structure than Maroni (Chapter Six, pp.270-275) was not constructed above antecedent tombs, whereas the *Pano Mandilaris* settlement was superimposed without disturbing the burial below. Therefore, Manning's suggestion is intriguingly limited to the particularities of Maroni. Equally, wealthy tombs including unique imported artefacts were dug at Episkopi-*Bamboula*. These tombs were not disturbed, but instead incorporated into town planning, without necessarily claiming ideological continuity.

The great diversity amongst LC burial assemblages points to the strong regional, if not local character of the analysed case studies and holds no clear evidence of an island-wide practice beyond the tombs' most essential characteristics, namely their multiple interments in chambers carved in bedrock, and inclusion of local contemporary material culture. The available evidence indicates the importance of trade in the coastal communities of Maroni and Limassol, the variability of economic resources of Vasilikos valley, the continuity of competition over land ownership in the ancestral lower Kouris and the co-existence and co-operation of groups at the upper Kouris.

Based on the investigated material, regional diversity is a diachronic phenomenon in the three valleys. Such diversity may suggest that a regional, if not local, organisation of the Bronze Age can effectively replace models of settlement patterns and large-scale interpretations that indirectly presuppose an island-wide common economic and socio-political institution.

To conclude, this study with its focus on diachronic identity expression patterns through burial evidence revealed that a strong local character defined the three valleys. Namely, despite having access to similar material culture, the various communities ascribed different, locally-influenced, meanings to it. By the LBA all case studies display

a wide-reaching access to imported artefacts, the diversity of which became a tool for the expression of individual identities. Finally, the three valleys' communities developed unique approaches to the association of the dead to later economically and socially important architecture. Therefore, despite the employment of a common emphatic symbology associated with cylinder seals and the large amount of Mycenaean pottery, often employed to invoke elite identity, the LC burials bear strong indications for a need to highlight individual and professional identities.

To conclude, beyond locally meaningful burial practices, this study observes that the better networked a community the higher was the concern for the expression of individual identity. By contrast, economically introverted communities were more concerned with kinship-based group identity than with expressing individuality. The landscape of each case study likely contributed to both the modes and character of identity expression. On this basis, one can argue that intra-community and intra-group relations placed greater selective pressure on human behaviour in the Bronze Age than did inter-regional relations. These observations argue that Bronze Age Cyprus may be open to more nuanced, inclusive and multi-scalar interpretations, contrary to proposals of an island wide socio-politically integrated economic institution.

CHAPTER 8

TRAVERSING SPACE: LANDSCAPE AND IDENTITY IN BRONZE AGE CYPRUS

Aims in Retrospect

In this study I addressed general disciplinary and specific spatio-chronological questions, through an analysis divided into three regional and two thematic chapters. Chapters Three-Five are part of a Large Scale Analysis, through which I examined local landscapes and their association with human habitation patterns throughout the Cypriot Bronze Age (c.2300-1100 BCE). As this investigation largely relied on archaeological survey data, it was possible to examine the degree to which integration of such fragmentary evidence can contribute to the development of the larger picture of this chronological period. Finally, it was possible to assess the effectiveness of currently employed settlement pattern models (Chapter One, pp. 11-19), through comparison and contrast with observed local and regional particularities from the Kouris, Vasilikos and Maroni valleys. These particularities often diverge significantly from these model-based interpretations, suggesting that we should incorporate additional information to co-construct the larger picture of the Cypriot Bronze Age, especially the LBA.

The LC is a period with clear material evidence for economic fluorescence, politico-economic inequality and participation in international trade networks. It is also the period when Near Eastern texts mention the copper-rich kingdom of *Alashiya*, commonly identified with the island of Cyprus or part of it. As mentioned in the introductory chapter (pp.19-23), the textual and material evidence seem at odds, and politico-economic interpretations range between an island-wide organisation (Knapp 2013b: 445) and regionally-based elite-household organisation (Peltenburg 2012). The inherent relations between people contributing to the LC phenomenon (elites, a textually evident but materially elusive king, merchants, entrepreneurs, coppersmiths, farmers, masons etc.) are poorly visible both textually and materially.

It is possible, then, that a lack of such information critically affects our understanding of this period.

In Chapter Six, through a Middle Scale Analysis, I examined the spatial expression of the above relations, through a diachronic analysis of architectural production in the three valleys. For the EC/MC it was possible to observe a transition from merged domestic and working spaces in agglutinative architecture to gradual segregation of spaces and the employment of different construction materials. In the LC, architectural segregation is much clearer with the employment of ashlar architecture in distinct buildings in all three valleys. These buildings bear strong social and politico-economic symbolism, which has monopolised comparative studies (Fisher 2007, 2009a, 2009b; Hadjisavvas 2009). In this chapter, I identified aspects of these buildings that may argue for additional symbolic connotations associated with landscape productivity (large storage facilities) and community identity (public-inclusive spaces and evidence for feasting). These buildings, despite their elite symbolism, may also be viewed as conceptual links between the communities and their surrounding landscape. They finally provide indirect evidence for co-existing professional groups (landowners, masons, farmers, administrators, traders), the materiality of which I investigate in the subsequent chapter.

In Chapter Seven, using a Small Scale Analysis, I examined material evidence for different identities through burial remains. The dataset from the three valleys is characterised by strong local and possibly regional particularities, to the extent that common characteristics may be limited in the chamber burial tradition and the use of contemporaneous pottery. Differences in interment number, secondary burial treatment and material contextualisation are pronounced throughout the Bronze Age (see also Keswani 2004). However, it was possible to discern trends in the material expression of identities and a probable transition from a strong EC/MC focus on kinship identities to LC elite, professional and individual identities.

In the final chapter I use the results of all chapters for a general comparative study of the Kouris, Vasilikos and Maroni valleys, based on which I will demonstrate why and how current settlement pattern models are likely ineffective, and why and how a multi-scalar approach may reveal additional information regarding formal and informal relations throughout the Bronze Age.

Kouris- Vasilikos-Maroni: A Comparative Analysis (pp.420-427, tbls.8A-8B)

A central goal of this research was to comparatively study areas scrutinised by theoretically, methodologically and technologically distinct projects. As analysed in Chapter Two, the three valleys were investigated according to different criteria. This lack of standard practice was and is often considered an insurmountable problem for comparative studies and a holistic understanding of the Cypriot Bronze Age. Nevertheless, in this section I argue that it is, in fact, possible to conduct sustainable survey-based comparative analyses, if one methodically integrates material culture with the surrounding landscape.

As mentioned in the introductory section, in-depth examination of interaction spheres between individuals, domestic groups, professional groups and communities, materially crystallised in the architectural and burial evidence, may be used to propose that similarities in material culture could, when framed within their distinct context, derive from different relations. Variety in the material expression of identities may reveal different scales and degrees of interaction. However, it is important not to associate material expression with the emergence of identities, as their emergent stages are likely not archaeologically reconstructible (Clark 2005: 440; Díaz-Andreu and Lucy 2005:1). Namely identity markers reflect existing identities, established through human interaction (e.g. oral communication, visual impression, body language) that researchers argue to lack material remains (Babić 2005: 82-84; Díaz-Andreu 2005: 22-27).

The EC/MC Communities

EC archaeological material deriving from archaeological surveys in the three valleys is biased in surface representation. The most elaborately and contextually secure EC evidence is that deriving from chamber tombs. Based on that material, one can argue that despite a widespread occurrence of a common pottery tradition within the three valleys, the investigated communities demonstrate localised choices in artefact assemblage association, network participation and identity manifestation. Identity manifestation seems to focus on ancestry affiliation, networking possibilities, and expression of individuality. Characteristically, the ECII-III Kalavasos-*Cinema* (Chapter Seven, pp.305-308) and the ECI-II Psematismenos-*Trelloukkas* cemeteries (pp.325-330) display particularities that cannot be solely assigned to material dating. These particularities entail interments that appear in singularly-occupied chambers at *Cinema* and multiply-interred tombs at *Trelloukkas*, indicating dissimilar identity manifestation practices. A collective burial system in the Maroni valley can be viewed as symptomatic of claims to inter-generational property rights; a relation that researchers of the Cypriot Bronze Age mortuary rituals often follow (Keswani 2004: 51-55; 2005: 349; Dunn-Vaturi 2003: 177).

Webb and Frankel (2014: 359) described the EC as a period of "autonomous development", which may correspond to the remarkable differences of the aforementioned sites that are located only a small distance from each other (Chapter Four, pp.164-167). Webb and Frankel generally associate local particularities with household-based organisation, strong kinship relations, self-sustaining villages and small interaction networks. However, they also discuss how population increase changed relationships within and between settlements, leading to a subsequent development of regionalism, possibly to ensure subsistence security (2014: 361). This relation between the available resources (landscape) and population increase has different material expression in the examined valleys that one may relate to their different landscape characteristics. We can assume that strong expression of kinship identities at Psematismenos, contrary to Kalavasos in

the EC, may be related to population increase and the limited agricultural viability of Maroni valley. This phenomenon contrasts the Vasilikos valley resource plurality, the manipulation of which by different individuals and groups probably facilitated and motivated the expression of individual identities at an earlier stage.

The remarkable relationship amongst landscape variability, productivity and connectivity along with the flexibility of individual and group identity expression can be observed in all investigated case studies throughout the EC/MC. For example, the ECIII *Katholiki* and ECIII-MCI Avdhimou cemeteries and probably their yet to be excavated settlement components are located closer to the lowlands and express this relationship differently (Chapter Seven, pp.317-318, 326-328). Limassol and Avdhimou are located in areas of easier access and higher connectivity than the geographically more introverted valley system settlements, and demonstrate wider evidence for the use of individual identity-markers, such anthropomorphic amphorae and figurines, and locally unique ceramic artefacts. In contrast, areas, where intense human interaction with the agricultural landscape likely played a central role in community relationships such as the ECIII-LCI Episkopi-*Phaneromeni* and the ECI-II Psematismenos-*Trelloukkas*, a prevalence of family/group tombs is observed (Chapter Seven, pp.325-330, 340-342). Finally, in areas where communities were occupied with a different range of economic activities, such as textile production at the ECIII-LCI Erimi-*Laonin tou Porakou*, metallurgy at the EC/MC Pyrgos-*Mavrorachi* and possibly MC Kalavasos, there is a corresponding expression of professional identity, noted through the deposition of identity markers. These include picrolite pendants at Erimi (Chapter Seven, pp.338-339), distinct metal artefacts at both Pyrgos (pp.332-334) and Kalavasos (pp.309-312), and pottery with figurative representation of productive activities at Kalavasos (pp.317-320).

Following Van Dyke and Alcock (2003: 3), the observed differences in the use of landscape may provide evidence for the construction of distinct social memories, which researchers have argued as central to the creation and maintenance of

community identities (Basso 1996; Blake 1998). Based on that, the conscious display of plural identities in the case studies may be linked with variability in their association with surrounding landscape productivity. This may entail attachment to landscape's history, inter-generational economic aspirations, and probably a sense of territoriality, which is otherwise materially un-reconstructible for this chronological period in Cyprus.

The MCIII/LCI Open-Up

Beyond the EC/MC burial evidence, locally distinct landscape organisation practices are notable in the variability of responses in the early stages of economic intensification characterising the MCIII/LCI. Namely, although economic activities in the Vasilikos and Maroni valleys shifted focus and location through the gradual depopulation of inland areas and establishment of sites closer the coast and importantly closer to areas of variably productive deeper soils, the Kouris valley settlement patterning seemed immune to the need for spatial alterations. LC Episkopi-*Bamboula* was established within the same area as ECIII-LCIA Episkopi-*Phaneromeni*, while LC Alassa-*Paleotaverna* and *Pano Mandilaris* were established in an area of continual human occupation since the ECIII (Alassa-*Paliambela*). In addition, despite Erimi-*Laonin tou Porakou's* LCIA abandonment, Erimi-*Kafkalla* continued to be occupied uninterrupted along with Erimi-*Pitharka's* LCII establishment in the same landscape (Chapter Five, p.234, fig.5.13).

Based on the examined case-studies, settlement pattern changes traditionally associated with the economic intensification of copper exploitation and trade are not materially manifested in a drastic settlement shift throughout the island. This disparity echoes the plurality, multi-directional complexity and multi-scalar character of what seems to be a poorly understood economic organisation of the Cypriot Bronze Age.

The three valleys' emergence into direct or indirect participation in the Eastern Mediterranean international trade is observed to occur at different stages. As related in Chapter Seven, at Vasilikos valley, isolated faience beads likely associated with a family, rather than a community-wide exchange practice, are recorded in the ECIII-MCI T.53 from Kalavasos-*Mosque/Mavrovouni* (Chapter Seven, pp.315-316), a bichrome pilgrim flask in the LCI T.2 from Kalavasos-*Panayia* (p.352) and possibly a Canaanite jar in the LCI T.51 of *Mosque/Mavrovouni* (pp.351-352). At Maroni valley, access to extra-island pottery is attested at a slightly earlier stage by a bichrome pilgrim flask and a non-local vessel of unknown provenance - possibly a Canaanite jar (Crewe 2012: 237) - from the MCIII/LCIA Maroni-*Kapsaloudhia* (Chapter Seven, p.359). Unfortunately, the early stages of external contact in the Bronze Age Kouris valley are obscured by the omission from publication of a large number of tombs from Erimi-*Kafkalla*. Therefore, the bichrome pilgrim flask recorded from a LCIA tomb from Episkopi-*Bamboula* represents the earliest known and *published* import of the southern Kouris (Chapter Seven, p.378). Importantly, the alleged imported seal found in the MCII tomb at Alassa-*Palialona* (Chapter Seven, p.336, fig.7.18) when considered alongside the lack of imported artefacts from the LCIIA2 T.6 of Kandou (pp.373-374) is particularly intriguing for determining the earliest imports of the northern Kouris (Karageorghis 2012a: 129), as the content of LC tombs that potentially included imports is inaccessible.

Inter-site chronological diversity in the material evidence of participation in extra-island economic networking may suggest that the MCIII-LCIA transitional period unfolded at a different pace in the various communities, rather than uniformly across wider geographically cohesive regions or the whole island. This slow and punctuated emergence may be associated with variation in local economic networks, and locally based groups of elite opportunistic aggrandisers, as discussed in Chapters Three (p.123), Four (pp.174-177), Six (pp.291-292) and Seven (p.355); agents exploiting wider networking potentials than other community members, which may have been intimately linked with the proximate agricultural land, mineral resources, timber and related traditional workings. It remains unclear if the nature of the earliest

imports from the three valleys corresponds to Knapp's (2013b: 349) correlation between participation in "élite-driven" international trade, and the notable socio-political changes observed in the LC. However, the available evidence suggests that participation in international networks materially pre-dates the construction of the LCII urban centres.

The LC Urban Life

Despite the aforementioned variability in the spatial organisation of LBA settlements, the material culture of the three valleys also demonstrates strong commonalities. These are found in buildings' construction techniques, seal and script use, consumption of common pottery types and acquisition of imported artefacts. Such similarities, often perpetuate a perception that the communities embraced comparable socio-political relations; namely, that the archaeologically more visible elites from all sites established and maintained an island-wide common identity much like their Eastern Mediterranean counterparts (Webb 2005: 180-181; Antoniadou 2007: 496; Knapp 2008: 156; 2013a: 28; Webb and Weingarten 2012: 87; Knapp 2013b: 380 *cf.* Feldman 2006; Feldman and Sauvage 2010). In this line of argument, the multi-faceted identities of other individuals and groups, and their associated characteristics are hardly visible.

Some researchers overrelied on common material culture to describe large parts of the communities as 'non-elites' (Hadjisavvas 2012: 164 "masses") and shed no light on the possibility of the socio-economic dynamics of co-existing groups of different dimensions and characteristics (see Maguire 2010: 165: on a study of "communities of practice"). From a different perspective, Feldman and Sauvage (2010: 162) in a study of objects and iconography imbued with widely recognised elite ideology, namely the chariots, concluded that "not all elites were equal", particularly that there existed different ranking elites (see also Steel 2013: 34). Might 'ranking of elites' be otherwise understood as groups, co-existing with elites in the same

settlements or regions, and able to maintain economic prosperity without political strategies?

The present comparative analysis demonstrates that despite a generally common elite material expression viewed in ashlar architecture, seal use and incorporation of imported artefacts in daily life and burials, identity themes are displayed with notable contextual differences in the association, frequency and contextual uniqueness of artefacts. For instance, rare imported artefacts are often found in tombs that are not distinguished by relatively rich contents (Chapter Seven, p.357, 360, 377, tbls.7.27-7.28, 7.39). This may argue that aside from the elites, other groups of varying social, economic and political potential had direct or indirect access to imported goods.

Such groups are visible in the LC architectural remains, for instance Episkopi-*Bamboula* domestic compounds with evidence for direct or indirect participation in international trade (Chapter Five, pp.232-235), the *Ayios Dhimitrios* SE Area houses with evidence for small-scale metalworking and agricultural product storage and the *Ayios Dhimitrios* 'semi-official' buildings (Chapter Six, pp.277-280), which if residential in character, indicate a household/domestic group level metalworking (tuyeres etc.) and exchange (scales and weights). In the ashlar architecture, the role of these groups may only be inferred. The ashlar buildings from all three valleys have been associated with elite symbology. However, the available evidence points also to local differences in the role and perception of these elite groups, which may be associated with differences in the processes and strategies of their emergence.

In the Vasilikos and Maroni valleys the LC ashlar buildings were constructed above antecedent tombs, which were alternatively maintained at Kalavasos-*Ayios Dhimitrios* and cleared at Maroni-*Vournes*. Alassa-*Paleotaverna* ashlar Building II was not constructed above tombs, contrary to the adjacent domestic compound. Following Hodder (1994: 75-80), such spatial diversity may point to a lack of common perception of the role of these impressive buildings. Nevertheless, researchers traditionally considered and investigated them as an independent study

unit (Courtois 1986; Hadjisavvas 1992a; Cadogan 1996: 17; Negbi 2005: 9; Hadjisavvas 2009: 131), and assumed a symbolical homogeneity. Based on this study's comparative analysis, one can observe not only the building's dissimilar spatial association with diachronic local habitation patterns, but also that they entail unique internal spatial configurations (Chapter Six, pp.289-292), which may reflect different spatial philosophies. Namely, it can be argued that the spatial organisation, both in habitation patterns and constructed space in the three valleys reflects local/community-based economic and socio-political particularities, likely associated with a regionally-based organisation. At a community level, socio-economic relations seem to follow local patterns. At a regional, inter-regional and island-wide level these relations are argued to be extremely multi-faceted and involve a great number of individuals and groups interacting in myriad ways (Stark and Garraty 2010: 34; Monroe 2011: 87-88; Knapp 2013b: 398 on individual economic enterprises).

Abandonment vs. Expansion

Local particularities are finally evidenced in the abandonment patterns of the above areas. In the Vasilikos and Maroni valleys two centres of socio-economic interaction and two probable anchorages established within 5km, point to probable participation in an island-wide economic network, and may suggest independent economic spheres for the two valleys (Chapter Four, pp.185-188). Their economic, at least, ties are evident in the almost contemporaneous abandonment of these communities in the LCIIC (South 2012: 223), contrary to sites such as Hala Sultan Tekke, Kition, Episkopi-*Bamboula*, Erimi-*Pitharka*, Alassa and Kouklia that continued without spatial interruption into the LCIIIA (fig.8.1) (Manning 2013: 517, fig.A13). The above differences prompt a re-examination of existing settlement patterns models and the degree to which they influence a nuanced understanding of the Cypriot Bronze Age.

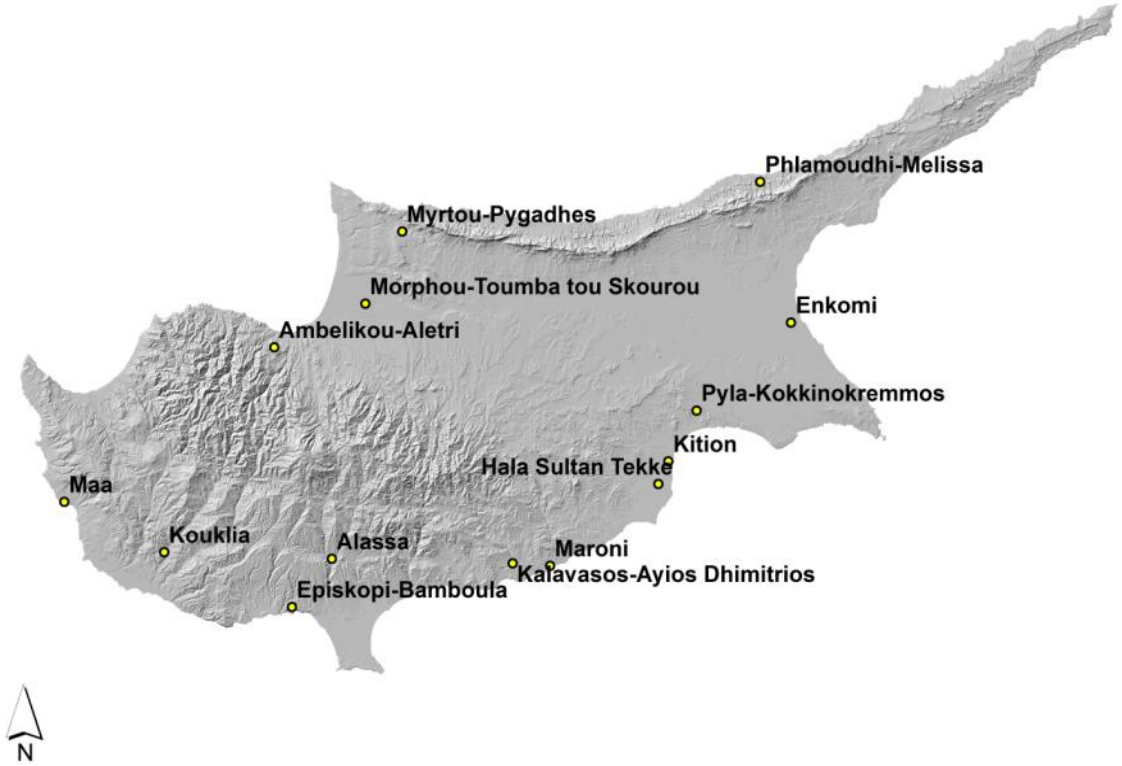


Figure 8.1 Map with mentioned LC sites (produced by the author using ArcGIS).

Thinking Settlement Pattern Models

Settlement pattern models focussing on LBA Cyprus rely on a set of common characteristics such as site proximity to the coast and the copper mines, estimated site size, evidence for different production scales (specialised sites, evidence for storage facilities), construction materials, differential access to materials such as seals, script and imported artefacts, and consumption patterns of imported artefacts (Chapter One, pp.11-19). Based on the investigated data, especially the burial evidence, it appears that these sets of materials may occur in different contexts. It is likely, then, that if artefact archaeological context is not incorporated in interpretation, a comparison of numbers and variety of materials occurring throughout sites may be used as evidence of homogeneity or uniformity. This homogeneity can then form the basis of economic and socio-political interpretations that may not materially reflect differences among sites. Namely this

may lead to erroneous generalisations, where similarities in the material culture obscure differences in contextualisation and identity manifestation.

A useful example of problematic theoretical application is Keswani's discussion on hierarchy and heterarchy in the Cypriot LBA. More recently researchers suggested that hierarchy and heterarchy are not mutually exclusive notions but instead exist in a dialectical relationship (Crumley 2005: 40; Kristiansen 2007: 64; Wynne-Jones and Kohring 2007: 6). Others argued that as hierarchy and heterarchy occur in most social systems, their relation does not merely reflect equality vs. inequality or other dualities (Chapman 2003; 2007: 23; Schoep and Knappett 2004: 23; Campbell 2009: 823). Finally, in a more recent discussion on the distinction between horizontal and vertical socio-political patterns in the Cypriot Bronze Age, Driessen and Frankel (2012: 67) suggested that the true question is not to identify 'hierarchy' *or* 'heterarchy' within a given material context. Consequently, the term 'hierarchy' used by Keswani (1996) to characterise the Vasilikos and Maroni valleys and distinguish them from Enkomi's 'heterarchy' (Chapter One, p.16) should be reconsidered, as the investigated case studies demonstrate a series of informal, yet complex relations of both horizontal and vertical character.

To be more precise, hierarchical relationships can be inferred from distinct differences in architectural material. Maroni and *Ayios Dhimitrios* ashlar buildings contain agricultural processing and extensive storage areas, suggestive of their strong association with land ownership and agriculture. However, incorporation of public-inclusive spaces in these buildings, co-existence of domestic units with evidence for metallurgy, woodworking and production, material evidence suggestive of the existence of merchants (boat models, boat earrings, scales and weights) and a widespread access to unique imported artefacts may suggest that economic interactions were, at least in the aforementioned occasions, sustained through consensus rather than coercion. Lack of control in the accessibility and use of specific materials (e.g. imports) and lack of evidence for symbols of politico-economic control (standardised seals and widespread occurrence of specific

sealings) may also support this argument. Another example is Episkopi-*Bamboula*, where rich burials and evidence for urban infrastructure suggest a degree of politico-economic inequality. This inequality, however, is not materialised in distinct ashlar architecture. In addition, script use, which is often associated with politico-economically distinct groups, is widespread at Episkopi domestic units in the form of isolated signs (Chapter Six, pp.268-269).

As Crumley (2005: 44) argues, heterarchy reflects, a set of unranked relations facilitated through economic networking in multiple scales and dimensions of communication, it becomes increasingly likely that the complexity observed in the LBA Cyprus may be the result of various relations emerging at different times, in different places and under various circumstances. This is in accordance with the variety of groups and agents co-existing and collaborating in different scales in the LBA, as observed in the case studies. As mentioned, these include elite families associated with industrial-level agricultural production, processing, storage and probably trade, merchants and traders (boat models, copper scales and weights), metalworkers (*Ayios Dhimitrios*, Building III, copper lumps in Limassol tombs) and probable potters (Tochni-*Lakkia*, Sanidha). As such non-formalised relations may also be observed prior to the LC urbanisation through the MC burials, it is very difficult to place or describe *the* emergence of complexity in the three valleys (see also Schoep and Knappett 2004: 30; Wynne-Jones and Kohring 2007: 6; Hatzimichael and Whitley 2012: 333).

To conclude, the suggested settlement pattern models, despite diachronically forming a general basis for the successful conduct of material studies, can no longer be regarded as representative of the aggregate picture of Bronze Age Cyprus, as it is more likely that multiple groups participated in interconnected socio-economic networks and maintained interdependent interaction spheres. A central question then, is how can we incorporate these smaller and likely informal scales of interaction with the unparalleled formality of written sources to reconstruct the greater picture of the LC urban phenomenon?

One *Alashiya* – Many Agents

A key goal of this study was to understand the socio-political implications of human-landscape relations and identity expression at different scales of interaction. One of the most intriguing scales of investigation is the island-wide, as it amalgamates all observed patterns from household to local and regional scales. In addition, its complexity involves the widely discussed disparity between material and textual evidence concerning the politico-economic role of *Alashiya* (Chapter One, pp.19-23). Based on the results of this comparative research, in this chapter I examine *Alashiya* both as textual evidence and as a probable denomination of a materially more discernible multi-component politico-economic network.

A number of researchers support that evidence of self-identification, commonly through written sources, is the most accurate source of information for understanding the nature of inter-personal, community, intra-site, inter-site, regional and interregional relations (Trigger 1977: 22-23; 1995: 277; Shennan 1989: 14; Jones 1997: 58; Sherratt 2005: 26-27). As the Cypriot prehistoric record lacks deciphered written sources (Palaima 1989; Smith and Hirschfeld 1999: 129-130; Smith 2002: 19-25), the picture of the island between the 18th and 11th centuries BCE is partly reconstructed from archives of the neighbouring regions, which engaged in economic activities with *Alashiya*. *Alashiya*, generally identified with a part or the entirety of the island of Cyprus, was mentioned as a geographic entity and politically described by extra-island elements, which were part of the conceptual spectrum of the political organisation of Near Eastern states of multiple configurations. The textual information is often used to depict the socio-political organisation of the entire LBA, despite rich material manifestations largely dating between 1400 and 1200 BCE and especially in the LCIIC (c.1300-1200 BCE). Consequently, it is often argued that discussions seeking to assign specific political behaviours formed in Cyprus, based on extra-island written records, inevitably follow a materially dissociated point of view, which lacks a thorough consideration

of the excavated evidence (Peltenburg and Iacovou 2012: 346; Peltenburg 2012: 1-2).

After examining the available information, it is appears possible that textual and material discrepancies are possibly semantic issues (Manning and de Mita 1997: 108) that some link with different preconceptions of the Cypriot LBA (Knapp 2013b: 444), and others with a problematic assessment of the context of Near Eastern political terminology (Peltenburg 2012). Analysing the available primary information, *Alashiya* is a geographic denotation of an area associated with the sea, at times operating within a bureaucratic structure of international relations (Malbran-Labat 1999; Peltenburg and Iacovou 2012: 346), and exerting some form of territorial control related *inter alia* to copper production. Hierarchy within *Alashiya* and wider trade relations are documented through non-standard terminology employed in Near Eastern texts referring to a king of *Alashiya* and other representatives, the socio-political status of which is unclear (RS 94.2173, RS 94.2447+; Yon 2007: 28-29, n.12). This terminology is based on the Near Eastern perception of the person or people actively participating in international economic interactions with the upper bodies of Near Eastern political configurations and does not necessarily correspond to the intra-island perception of this agent or agents.

Therefore, doubt arises in the representativeness and appropriateness of terminology imposed by contemporaneous extra-island agents employing their own socio-political terminology (Sherratt 2005: 35-36 on identity labeling). Questions emerge also on how representative the terminology imposed by researchers relying on more recent or current politico-economic denominations is (Smith 2003: 90 on the various definitions of 'state')? How valid are suggestions that consider *Alashiya* as a unified socio-political entity (Knapp 2008: 144-159, 324-341), when the diachronic dynamics of the construction of socio-political authority, even based on the small valley sample of this study, demonstrate strong local particularities?

As mentioned in the previous sections, at Vasilikos valley one may observe a gradual transition from village-based communities practicing small-scale agriculture

and an unknown extent of copper-related activities in the hilly uplands, to a lowland placement of a town with strong urban components, conspicuous evidence for industrial-scale agricultural product processing, and a probable anchorage with evidence for pottery production (Tochni). At Maroni valley, a similar spatial transition takes place, at a slightly earlier period. Despite more extensive evidence for participation in international trade, the excavated ashlar structure is located closer to the sea and is more modest in size and elaboration (Chapter Six, pp.285-289). At Kouris valley no distinct settlement pattern shift may be observed, with habitation patterns maintaining their EC/MC general location. On the one hand coastal Episkopi, despite evidence for urbanization, does not incorporate an ashlar building, on the other, Alassa, located over 10km inland includes the most impressive ashlar structure (Chapter Six, pp.270-275). In the LCIIC when *Ayios Dhimitrios* (Vasilikos) and the Maroni complex are abandoned, the Kouris valley sites not only continue to be occupied, but also flourish. In addition, new sites with substantial architecture and evidence for industrial activities develop (*Pitharka*) and the first evidence for a regional seal practice is documented (Chapter Five, pp). Are these local particularities in the processes of politico-economic organisation consistent with the Near Eastern textual record? Is there a possible link between the materially observed regional, if not local elites with the textual king of *Alashiya*?

Following the above, the title 'šarru', which is used to describe the correspondent(s) from *Alashiya* in the early 2nd millennium BCE, linguistically corresponds to politico-economically dominant agents of entities, in the absence of terminology associated with chiefs (Fleming 2004: 105, 193). Meier (2000: 170, 260) discussed that 'šarru' in the Amarna period represents various socio-political elements and connotes different meaning depending on the various kings, who employed this term. Even so, is it possible that this externally ascribed status does not correspond to the actual socio-political status of the different so-called rulers? Is, then, the king of *Alashiya*, as discussed by S. Sherratt (1998: 297), a terminological convention to introduce Cyprus, or a part of Cyprus, into a given diplomatic framework?

Despite a lack of material evidence substantiating the existence of a 'šarru', one cannot deny that elite groups of LBA Cyprus emulated aspects of the near eastern ideological sphere, such acquisition of luxury artefacts and symbolic imagery (Webb 2005: 180). However, we still lack explicit material paraphernalia for island-wide politico-economic integration, such as, for example, a distinct administrative building, a distinct (royal) tomb, evidence for veneration of an individual or a group of people (figurative representation), an established and standardised island-wide sealing practice with irrefutable sphragistic evidence, or an archive (Manning and de Mita 1997: 108-109; Avruch 2000: 160). What characterises Cypriot material culture in the period under discussion is, in fact, a lack of both integration and centralisation; a phenomenon further documented in the various responses to the 12th century crisis, which involves settlement destruction, abandonment but also regeneration (Snodgrass 1994; Keswani 1996: 228; Sherratt 1998; Iacovou 2005: 128-129).

Following the above and similarly to Keswani (1993, 1996) the newly examined information advocates a regionally-based organisation of the island during the LBA, without, however, excluding some form of island-wide cooperation/integration to fulfil specific economic goals, such as copper exportation. Namely, the examined evidence may support the proposition that politico-economic relations operated at multiple levels and scales of integration and were controlled by different agents at each scale. It is highly probable that for the large scale exportation of copper an island-wide strategy was implemented, likely formalised by a *primus inter pares*, as many have considered (Manning and de Mita 1997: 106-116; Keswani 2004: 84-84; Peltenburg 2012: 15); a strategy, however, that was probably facilitated by existing local networking as evidenced in the local and regional politico-economic patterns, rather than *ad hoc* established networks or systems of interaction.

Based on the examined burial evidence, local networking systems are materially supported since the EC/MC through unique assemblages with evidence of agent-driven, rather than site-wide extra-community interaction. Contextually unique

artefacts are more clearly discerned and widespread in the LBA and come to include imported goods. Although it is unclear if the acquisition of such artefacts reflects a direct or indirect, formal or informal inter-personal transaction, their particular nature as personal acquisitions and their contrast to larger scale imports of commodities such as Canaanite jars, can, to a certain extent, support an informal character of their obtainment. Namely, as Steel (2013: 142) recently suggested, unique imported artefacts that often appear as "one offs" in burial contexts do not necessarily conform to narratives of elite exchange and may be associated with small scale exchanges of merchants. In addition the great variety of such artefacts occurring in the tombs under investigation may indicate that such informal, small-scale exchanges were an on-going occurrence alongside more organised attempts that instigated short- and long-distance trade. Such informal exchanges, were likely not independent from site-wide economic activities, which support the infrastructure for such exchanges to take place. Therefore, although informal transactions predated formalised large-scale exchanges in the EC/MC and suggest agent and group economic autonomy, by the LC they probably took place simultaneously with formal large-scale exchanges. For that reason, it was necessary in this study to compare the development of formalised trade infrastructure in the three examined valleys.

Integration and formality

Integration with a larger scale network is materially substantiated as operating at a different pace between the MCIII and the LCI (c.1700-1450 BCE) and it is assumed that similar phenomena characterise other geographic regions of Cyprus at this time. As references to *Alashiya* appear as early as the 18th century B.C., it is tempting to argue that an island-wide network was probably initiated by a specific site or local economic network (Webb 1999: 305-308) that was gradually and organically incorporated into the international trade of the Eastern Mediterranean. Based on the 18th century (MCII/III) material evidence in the Kouris, Vasilikos and Maroni

valleys, one may not argue for an excavated site from these valleys to have initiated an island-wide economic network. However, many have viewed Enkomi as a potential candidate, as early as the 16th century (Peltenburg 1996; Keswani 1996: 222; Bolger 2003: 47), or between the 16th and 14th century BCE (Knapp 2013b: 434); an argument based on evidence for consistent copper production, but questioned by Crewe based on pottery evidence (2004: 281).

This island-wide network undeniably facilitated large scale exportation of products-primarily copper. However, we have no material evidence of control over smaller scale exchanges between local networks with each other and with extra-island elements. Namely, imported artefacts are widespread in the island, while architecture and artefacts with elite symbolism are found in all three case studies along with evidence for merchants and traders. Although it is possible that these sites indirectly access these imported artefacts, they still contain clear material indications for locally-based control of their own resources, evident in different strategies for product storage (Chapter Five, pp.235-239) and sealing practices (pp.239-242). Therefore, an island-wide network probably incorporated those autonomous local patterns in a relationship reflecting interdependence rather than strict control. This proposal comes in accordance with Smith (2010: 14), who based on anthropological research, argued that a rigid state ideology and practice may have negative economic effects, as an action of an individual may impact an infrastructure, the success of which depends upon multiple people. In the LC, one may argue that it was probably more beneficial for sites to maintain control of their resources and integrate into island-wide networks through a form of negotiation.

Alashiya, as an economic term, may correspond to this island-wide network, while its political connotations stem from the existence of a representative of this network - a *primus inter pares*; an agent (or an integrated group of agents), who corresponded directly and often as peers with Near Eastern political figures. Undeniably, this agent benefited from the formal organisation of the participation of the island-wide network into an international sphere, but there is yet no

evidence that they contributed actively to the formation or diachronic transformation of this network, or controlled informal networks at regional, local and individual level.

As revealed by the investigated case studies and recently discussed by Peltenburg (2012: 16), local economic networks functioned in a way that places consensus and negotiation over coercion. This strong interdependence characterising groups of different economic identities, or 'elites' of different potential, seem not to have encouraged the emergence of a single politically dominant group, despite evidence for groups of agents benefiting socio-economically from local systems and sharing an island-wide iconographic symbology (Webb 2002: 130-131).

Spheres of Interdependence and Theories of Integration

The above characteristics may be used to argue for relations of interdependence at multiple scales and geographic spheres. *Spheres of interdependence,* as used in this study, are spatially associated with geographically coherent regions and involve an array of agents and groups of various politico-economic potential. These may involve elites associated with variable resources, merchants, entrepreneurs and rich landowners, among others. Based on the examined cased studies, the LC Vasilikos-Maroni sphere flourished in the LCIIC, was short-lived and failed to continue into the Iron Age. By contrast, interaction spheres radiating from the Kouris valley including Alassa and Episkopi, endured into the LCIII and the Iron Age. Based on the ceramic evidence, this valley participated within a western network (Chapter Five, pp.243-244), which was unaffected by, or endured with little disruption, the 1200 BCE century crisis; a network, which also fluoresced into the LCIII configuration of Palaepaphos and Kourion and the Iron Age kingdoms of Kourion and Paphos respectively (Iacovou 2007: 14-17). Another sphere surviving the LCIIC is located to the East of the area under investigation, one that resulted in the monumentalisation of Kition (Keswani 1996: 88; Webb 1999: 188, 291).

The integration of these networking spheres in an island-wide and unparalleled international scale likely required the interaction of multiple agents, including for example, groups of miners, smiths, transporters moving copper from the mine to the coast, merchants and traders. Hypotheses surrounding integration strategies vary significantly, to the extent that Knapp (2013b: 445), a strong supporter of an island-wide politico-economic organisation, argued that different approaches are largely related to the different ways archaeologists perceive aspects of materiality (Chapter One, p.23).

The most recently published interpretation is Knapp's model proposing the existence of a political figure that controlled, at least, copper exportation and international affairs (Knapp 2013b: 438-447). According to this model, this is the most feasible explanation for the exportation of the impressive amount of copper mentioned in the written sources and recovered from the Uluburun shipwreck (Muhly 1972:212; Knapp 1996c:8). In a similar, yet less politically coloured discussion, Kassianidou (2012: 133) proposed that whichever agent or site controlled copper exportation, also controlled its intra-island distribution and circulation. Her proposal is based on the discovery of oxhide ingot fragments in LC sites, which, contrary to previous suggestions concerning their production solely for exportation (Gale 1999: 117), may argue for their use within the island. Using lead isotope analysis, Gale and Stos-Gale (1999: 272) noted that the fingerprint of exported Cypriot ingots (after c.1350 BCE) is consistent with the copper deposits of the Apliki area. Their analysis results, if accepted, could provide further evidence that the ingot production was closely controlled. However, in the absence of ingot moulds, one can only speculate where these were produced. If their production, distribution and exportation were centrally controlled, corresponding production areas and storage facilities are yet to be found. Further, sporadic discoveries of ingot fragments are perhaps inadequate to support a controlled distribution system, as their trade mechanism is unclear.

Finally, if we assume that copper production was an island-wide activity controlled by an agent or a site, it is instructive to contextualise a 14th century reply to a copper request from Egypt by the king of *Alashiya*. According to this letter, the correspondent justifies his inability to supply the requested amount of copper with an epidemic, which killed "all the men of my land and nobody is left to make copper" (Liverani 2001 *cf*. EA35). If this excuse is honest, it suggests that this epidemic affected the metal working population to such a degree that they could not meet quotas nor increase stores. Following this possibility then, this epidemic either spread across Cyprus to such an extent as to kill an island's metal working populations, or more likely metalworkers from a more restricted area, namely the elusive "land of *Alashiya*". If this epidemic never occurred, then some other reason prevented the king from securing copper, suggesting a lack of strict or absolute control over the copper economy and some degree of economic interdependence of the metallurgists and/or traders.

Perhaps even more indicative of a lack of absolute control over particular commodities is another section of the same letter written by the king of *Alashiya*, in which he mentions that "the people of my land speak to me about the lumber that the king of Egypt receives from me. So, my brother, make the payment to me." This may indicate that certain individuals or groups of merchants, which Liverani argues to have been interacting in both informal and more formalised networks (2001: 148-149), held sufficient influence over the economic dealings of the "land" and "king" of *Alashiya* as to warrant the latter's concern and demands for payment. This ambiguous division between private and state spheres of economic exchanges has been noted by Brown (2013: 11), who associated the textual reference of *Alashiyan* persons and the overly mercantile attitude of the *Alashiya* representative in the available gift-exchange correspondence with probable existence of both formal and informal exchange networks. This attitude has been pointed out by Liverani (2001: 148-149), who discussed the notable commercial and practical focus of the available correspondence between *Alashiya* and Assyria, and Knapp, who further mentions

Alashiya's use of merchants as messengers, rather than royal couriers (Knapp 2008: 318 *cf*. EA39: 10-14).

The local character and the group configuration of these economic agents are indirectly raised in Peltenburg's (2012: 12-18) suggestion pertaining to the politico-economic structure of different regional elements of the LBA Cyprus. This approach demonstrates an appreciation of the co-existence of economic groups by proposing a household based configuration, with less consideration on professional groups, the identity markers of which may be witnessed in several LBA tombs (Chapter Seven, pp.380-383). Peltenburg's suggestion is influenced by Schloen (2001: 257-261), who proposed a domestic configuration for the political scene of the 2nd millennium BCE Syro-Mesopotamia and argued that the practice of formalised addressing among local rulers using kinship terms reflects the endogenous perception of socio-political organisation. The idea of 'networked households' as applied in Ugarit is used to understand LC sites based on useful and appropriate material correspondence. However, despite its innovation, Peltenburg's attempt to reconstruct the economic and socio-political profile of LBA Cyprus through its focus on the traditional kinship structuring of Cypriot Bronze Age socio-economics, either focuses exclusively on individuals with relations of co-residence, or merges domestic with kinship groups, which, as discussed in Chapter Six (pp.274-275) are not necessarily synonymous. Namely, although, he demonstrates a probable way in which local politico-economics operated and co-constructed *Alashiya*, his proposal is limited to a single aspect/group, which, while materially conspicuous, reflects only one component of the LC economic and socio-political synthesis.

In sum, these hypotheses, while containing plausible arguments, suffer from an inevitable lack of supporting material evidence, especially concerning the interaction sphere between the various nodes of the aforementioned networks. This raises the question as to whether the lack of relevant material evidence reflects a less centralised organisation of the island-wide interaction sphere. Borrowing elements from the above interpretations, but based on the aforementioned *spheres*

of interdependence and Kristiansen's proposal for "decentralised complexity", it is tempting to consider that an island-wide integration strategy of local and regional economic networks could have been accomplished by a decentralised organisation. Such organisation may involve various groups and locales (Kristiansen 2007: 60; 2010), with varying extents of advantage for the participants, including people of different politico-economic potential (elites). Although Kristiansen's proposal aims to interpret the elaboration of social formations of a wider geographic region, it may be employed at a smaller scale in Cyprus, as it focuses on environments where the productive resources are widespread, rather than concentrated and monopolised (Kristiansen 2010: 169); something that Manning and de Mita (1997: 107) have argued for the case of Cyprus. In addition, Kristiansen stresses that de-centralisation is not the opposite of complexity, and decentralised social processes can operate in complex societies (2010: 176). Therefore, one should not exclude reciprocal relations (interdependence), negotiation, consensus and promotion of economic obligations or debt in complex societies; relations, which, following Smith (2010: 7) may contribute to control and labour mobilisation.

As the most widely investigated "commodity" of Bronze Age Cyprus is copper, this study uses its production sequence in order to explore the aforementioned hypothesis. It is noted, however, that despite copper dominating the publication sphere, undeniably, the lack of material evidence for the various stages of its production, exploitation and transportation challenges and limits our understanding of the chaîne opératoire linking copper extraction with trade (Kassianidou 2012: 132, fig.8.11; Todd 2013: 15-27).

From mine to port

An existing reconstruction of the chaîne opératoire employs SCSP data from the N slopes of Troodos (Chapter One, p.27, fig.1.8) and is based on Knapp's settlement pattern model. This proposal for a reconstruction of intra-island copper economic networks is largely based on Politiko-*Phorades*, the first LC primary smelting

workshop, located and partly excavated by the SCSP (Knapp et al. 1998; Knapp et al. 1999; Given and Knapp 2003:214-219). The reconstruction incorporates archaeological evidence from the area between the northern Troodos foothills and Morphou bay (fig.8.2).

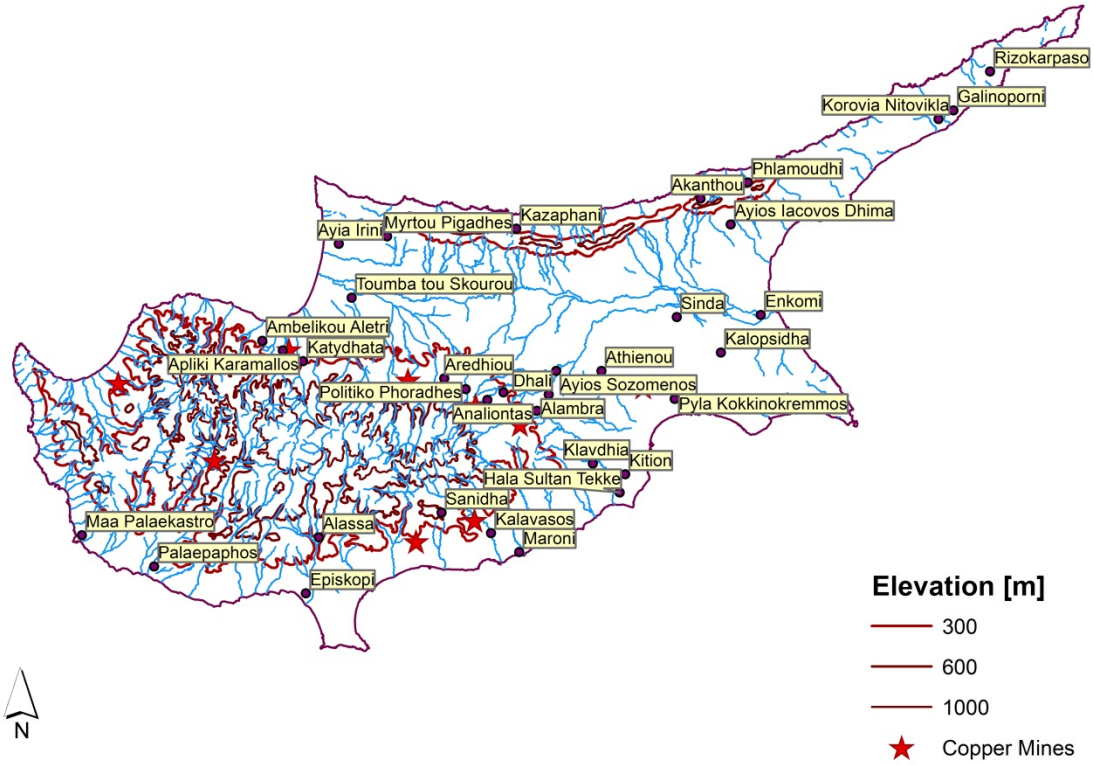


Figure 8.2 Copper Mines and LC Sites (produced by the author on ArcGIS with data from Smith 2012 and the DGRC).

Based on this model Morphou-*Toumba tou Skourou* is characterised as an important town, Myrtou-*Pigadhes* a rural sanctuary, Apliki-*Karamallos* a mining village and Politiko-*Phorades* a smelting site. The model also incorporates known cemeteries from the surrounding area. The sites between *Toumba tou Skourou* and the rich ore bodies of Mavrovouni and Skouriotissa are discussed as agricultural support villages, mining villages, or transport links administered by the Morphou, Enkomi or another unidentified polity (Given and Knapp 2003: 267). As *Phorades* is understood to have produced copper exceeding the immediate area's requirements, Keswani and Knapp suggested that it was probably linked with an island-wide system. Finally, Aredhiou-*Vouppes*, which contained evidence of large scale storage,

was explained as an agricultural support village provisioning mining encampments in the Troodos foothills (Given and Knapp 2003: 268).

Although it is possible to discuss with material evidence the interpretation of individual sites, one can only argue tentatively for their politico-economic association. It is unclear if these sites were administered by *Toumba tou Skourou*, as it is plausible they were controlled by any other primary site, even the relatively distant Enkomi. This is based on Peltenburg's (1996) suggestion that as early as 1700 BC Enkomi was exerting significant influence in the north-central and northwestern part of the island through the establishment of a series of fortified sites linking Enkomi with Troodos. This hypothesis however cannot yet be materially substantiated, as the majority of these sites are not excavated and thus cannot provide clear chronological and functional data (Fortin 1981).

In addition, *Phorades* workshop was estimated to produce copper for local consumption with the possibility of some surplus entering extra-community exchange networks (Knapp 2003: 564). However, it is unclear how this site can be integrated into a system developed for the large-scale exportation of copper, and it certainly complicates claims for island-wide politico-economic control of copper. Notable is Knapp's (2003: 576) recognition that communities were composed of social factions, agents and individuals "promoting, resisting, or suppressing various agendas", without relying on, or referring to their role and actions in the interpretation of *Phorades*. Is it not, then, more productive to consider the influence of these individuals or groups and their different degrees of mobility and motivations for interaction, than seeking to insert their community within a larger network (see also Campbell 2009: 823; Beaujard 2011: 17; Driessen and Frankel 2012: figs. 5.1.-5.2)?

Regardless of the material shortcomings the aforementioned proposal argues sufficiently for a local or regional sphere or interaction, particular for the central NW coast of the island. This local sphere, however, is wanting of a clearer understanding of the products and/or services exchanged among the sites at local

and inter-regional levels. For instance, in the most recent publication of settlement pattern models of the 14th-13th centuries BCE, Knapp (2013b: 355) suggests that production and transport are characteristics of all settlement tiers, while accepting administrative structures only for the coastal centres and the inland towns. It remains unclear why in this interpretation smaller inland sites, agricultural, mining and pottery production sites were not considered to have also been administered locally at a community level.

The puzzling attribution of administrative designation may be related to unclear understanding of the unexcavated sites' function, due to insufficient surface material collected through archaeological surveys. However, based on material evidence from the available excavated LC sites, one can argue that sites of different size and primary function likely involve a variety of activities. For example, the "first tier" administrative site of *Toumba tou* Skourou bears strong evidence for industrialised pottery production, similar to Sanidha-*Moutti tou Ai* Serkou, described as "fourth tier" site (Chapter One, pp. 17-18, fig.1.5-1.6) and located in what is assumed to be the periphery of an economic network (Vermeule and Wolsky 1990: 19-20; Todd 2000; Todd and Pilides 2001). Therefore, it would not be surprising if metalworking and storage facilities and rare imports were found in sites occupying different tiers in this "hierarchy". In fact, many have argued the possibility that some imports may have reached hierarchically lower sites through informal or individual exchanges (Webb and Frankel 1994: 17; Webb 2002: 130; Knapp 2013b: 358 *cf*. Merrillees 1965: 146-157; Steel 2013: 142). It is worth noting, then, the possibility that these informal "encounters" occurred in such frequency and intensity that they formed a significant part of a site's economy and worked along with the official activities supporting the existing settlement pattern models.

Consequently, based solely on the available archaeological data and without incorporating interpretations from the existing settlement pattern models one can follow more flexible and widely applicable interpretations. The problem of limited archaeological material however, remains. Namely, although the Troodos

Mountains provide numerous locales suited for copper extraction (Constantinou 1992; Kassianidou 2012: 127, fig.8.5), archaeological correlates for mining activities, secondary refinement points, intra-island transportation or storage of metal are largely invisible (Berranger and Fluzin 2007: 7); an exception being the aforementioned copper smelting workshop dug at Politiko-*Phorades* (Knapp *et al.* 1998; Knapp *et al.* 1999, 2001, 2002; Knapp 2003: 562) and the poorly investigated exposure of a large deposit of ingot fragments at Mathiatis (Catling 1964: 283; Kassianidou 2009).

Similar problems frame interpretations for Apliki-*Karamallos* (Kling and Muhly 2007), which comprises a smelting workshop in association with domestic spaces and agricultural product storage facilities. Although the site is located inland and close to copper sources, the multitude of attested activities and the frequency of imported pottery, such as Mycenaean and Minoan ware (Kling 2007: 149-168), points to particular material consumption patterns that do not conform to the traditional settlement pattern models, which usually favour exotica consumption in the primary or secondary sites rather than the supporting villages. This disparity, once again appears to require a higher resolution and smaller-scale investigation, focusing on individual and group relations.

Concluding Remarks

When viewing the lack of material representing formal communication networks integrating excavated sites, one may consider a decentralised organisation of large scale economic activities, which likely incorporate regional *spheres of interdependence*. These spheres were integrated to accomplish specific economic goals, and their integration may be achieved through networking and negotiation between groups that already interact at different scales. This form of integration permits a degree of flexibility, which potentially best ensures participation in international networks, and economic security.

Although the information from the case studies supports the existence of informal local networks as early as the EC/MC, it remains unknown exactly how these were gradually integrated into larger regional or island-wide scales. Therefore, based solely on the examined data, it is not possible to assess the degree of complexity and infrastructure of participation in the international maritime networks. Nevertheless, based on geographic proximity to Ugarit, the material elaboration occurring from the MC to the LC (Antoniadou 2005: 66) and extensive evidence of metallurgical activities from its earlier to terminal phases (Antoniadou 2005: 69; Kassianidou 2012: 128, 133) it is plausible that the first *Alashiya*, also discussed as an 'archaic state' (Webb 1999: 305-308), may be spatially associated with Enkomi. However, its territorial or geographical influence is not, for the moment, knowable.

To conclude, it appears that in order to assess the impact of *Alashiya* and the role of contemporary sites between the 18th and the 14th centuries, it is necessary to actively incorporate an evaluation of diachronic interaction spheres at the local level and subsequently assess the applicability of island-wide interpretative models. Following this methodology, one may observe the coexistence of multiple scales of interaction, which although integrated to different degrees of economic intensity and for different purposes, their prosperity probably depended on the local particularities that moulded them.

Discussing Methodology

Following the results of this study, it becomes clear that an inclusive understanding of human-landscape relations, the expression of identities in different scales of interaction and a more nuanced understanding of macro-chronological periods, should be based on an encompassing and rigorous methodology. The combination of multi-scalar and multidisciplinary methods is critical when trying to amalgamate heterogeneous data. This study combined spatial and material evidence, with their biases and limitations in mind, with the aim to develop a clearer understanding of human-landscape relations and materially framed notions such as agency, memory,

experience and identity. Providing a different perspective, then, helped contextualise material groups investigated according to traditional settlement pattern models. The most useful and challenging aspect was the incorporation of datasets, especially those deriving from different surveys, into socio-economic and political interpretations.

How to Integrate Landscape Research Data

One of the goals of this study and central to landscape archaeology is to demonstrate the potential of comparative analysis of data emanating from incongruous sets of information. The most widely discussed notoriously diverse datasets derive from surveys, whose results and contrivances are highly affected by landscape diversity, varied human impact on landscape, methodology and available technology, the duration of projects and funding sources, the degree of archaeological training of surveyors, the accessibility of material from second generation researchers and pre-determined positions guiding survey design and final interpretation.

To propose employment of a uniform theoretical framework, methodological strategy and technological tool-kit for future survey could be considered idealistic, and in fact, such an initiative is probably simplistic and short-sighted. Consequently the problem of records discrepancies can be effectively tackled by consistently publishing data, collected according to a minimum set of essential criteria, rather than strict methodological standardisation.

The quantity and quality of recorded material is probably best introduced into a scheme that acknowledges a set degree of landscape alteration processes (e.g. Casana 2008: 439-440, Appendix I). The above information may be acquired through the accessible soil maps provided by an authorised body for collection and dissemination of information regarding land characteristics and development. In Cyprus, this body is the DGRC (Ministry of Agriculture, Natural Resources and

Environment: www.moa.gov.cy). Other countries, such as the U.K., provide open access information (British Geological Survey: www.bgs.ac.uk; Open Geospatial Consortium: www.opengeospatial.org), while the European Soil Bureau (http://eusoils.jrc.ec.europa.eu/) and FAO (www.fao.org/DOCREP) make available a substantial amount of available geo-data. In addition, using maps, personal field observations, interpretations of satellite imagery and other available technological datasets and tools may provide insightful information regarding landscape characteristics that affect the degree of soil erosion, such as slope morphology, vegetation, land use and flow concentration lines.

Another important factor is the degree of archaeological visibility, which in association with erosion rates provides useful background information on the likelihood of material accumulation and subsequent recording from a given locality. Information such as soil characteristics and condition, vegetation types and density, weather conditions and recording time should be clearly stated. The distinction between different degrees of visibility may not be uniform in the different survey projects, even in occasions where they deal with climatically and geomorphologically similar areas. Archaeological visibility is highly subjective and the relation between 'high', 'medium' and 'low' visibility (Chapter Two, p.68) is the result of intuitive comparison (see also Given et al. 2003). However, the variance between the three factors may be deduced through the quantifiable comparative number and size of recorded artefacts.

As far as terminology is concerned, it is crucial to record and publish the criteria used for site identification, which are equally important as the survey results themselves. Beyond public dissemination of these terminological parameters, more specific terms concerning site function should be made available. Beyond the independent initiative of researchers, information concerning proximity to water sources, particularly hydrological networks, proximity and association to natural paths, proximity and association to highly eroding or eroded surfaces and material variety should be clearly stated.

In such attempts, academic and government cooperation and open-access dissemination of information is fundamental. Protection of personal and institutional intellectual property can be established through publications pre-dating the incorporation of survey data to open access databases (Nicholas and Bannister 2004: 329-332; Smith 2004; Ouzman 2005; Xia 2006: 274-276, 279-281; György Szilágyi 2009; Nicholas 2012). In addition, controlled access to this information should be ensured for the protection of archaeological sites from illegal excavations (Manacorda and Chappell 2006: 4; Mackenzie 2006: 77, 82-83; Passas and Bowman Proulx 2006: 53). Nevertheless, even with the lack of open-access information concerning what is proposed in the present research as 'essential' information for survey data, it is necessary to conform to a comparable and convertible database design, which may be available to new researchers.

Finally, as archaeology investigates all materially visible aspects of human life and incorporates theoretical approaches, methodological and technological implementations from various disciplines it is necessary to actively incorporate additional aspects from the earth sciences. It is necessary to render landscape that encompasses human activities central to any preliminary investigation. It is inadequate to simply employ a geologist to discuss the characteristics of the area through poorly connected introductory chapters (compare Malmgren 2003: 7 for Klavdhia-Tremithos and Constantinou 2007 for Apliki-Karamallos with Noller 2008 for Phlamoudhi). It is further inadequate to limit citation to studies on traditional land use, despite their indisputable importance and outdated settlement pattern models. Natural landscape is one of the most influential elements affecting archaeological research and interpretation. For that reason, its characteristics are an inextricable set of information for any survey and excavation project. Landscape may not only provide a new insight into habitation choices, place-making and abandonment patterns, but also introduce new perspectives concerning subjective topics of archaeological deliberation, such as identity. In order to proceed from description to interpretation, it is necessary to synthesise the available data through different perspectives and levels of consideration.

Research Potential - Future Considerations

It is argued that landscape provides the conceptual flexibility to understand the multifarious aspects of societies (Bourdieu 1996: 66; Taylor and Spencer 2004: 2). This invaluable contribution is evident in the existence of studies of different perspective focusing on ancient economy, environment, symbology, subsistence patterns, patterns of settlement continuity and change at different scales. To understand landscapes of the past, it is important first to understand the meaning of landscape to people who described and investigated past landscapes through an assemblage of theoretical and methodological traditions and trends. A research program that will employ landscape information and its perception diachronically from the ancient written sources, to travellers, antiquarians, early archaeological missions, geographers and archaeological surveyors of Cyprus is a project under development by the author. A second broad goal is the reconstruction of the natural landscape, its resources and related activities with the incorporation of eco-facts (palaeo-flora and fauna) from excavated sites (e.g. Moody 2012 for Crete). Regarding more specific goals of the chronological period covered by the present study and the geographic areas of interest, my goals are distinguished in short-term and long-term.

Short-Term Goals for the Vasilikos and Maroni Valleys

The two valleys are currently under the investigation of the MVASP, TL and KAMBE projects, which emphasises the urban environment of Kalavasos-*Ayios Dhimitrios* and Maroni complex through the employment of geophysical survey. The relation of the two valleys has not been comprehensively discussed before the synthesis provided in Chapter Four, resulting in multiple hypotheses that are equally plausible. This is related to the lack of archaeological investigation in the area between the two valleys, where archaeological visibility due to long-practised cultivation is particularly low. For that reason it is suggested that future research assesses the

degree of alluvial coverage through an inter-disciplinary project involving archaeologists and earth scientists.

Issues of landscape management may be discerned through further investigation of Tochni-*Lakkia*, a key site for our understanding of the association of the two valleys (Chapter Four, Appendix I, pp.194-205). Tochni forms a case study of the Cyprus Ancient Shorelines Project (CASP), which investigates the impact of the detrimental effects of the combination of the Mediterranean geomorphology and climate on coastal sites and the consequences of rapid industrialisation on coastal and site preservation. Marine survey, undertaken in 2013 and 2014, and cooperation with the Department of Lands and Surveys of the Republic of Cyprus can help assess the degree of land loss for at least the past century and archaeological loss since the abandonment of the site. In addition the degree and quality of alluviation may be assessed through observations on exposed sections and further information concerning the annual degree of alluviation of the Vasilikos valley (e.g. Moody 2000 for Medieval Crete), before the construction of the Kalavasos dam. Erosion monitoring through archaeological drawings, photographic documentation and GIS analysis must continue at more frequent intervals than the current 6 month spans employed in the present study.

Another promising area for discernment of local settlement pattern models is the zone surrounding the Kalavasos mines, which the VVP could not survey during the 1975 season, as it formed part of military establishments (Todd 2004c: 21; Todd and Warren 2012: 50; Todd 2013: 16-17). A survey of this area may provide insight into the widely discussed specialised mining villages (Du Plat Taylor 1952; Muhly 1989; Knapp 2003).

Finally, the potential of productive comparison of soil types and EC/MC occupation in the area N of Psematismenos, where the northernmost limits of MVASP are located, is very promising. There has already been notable evidence of EC/MC activities in the locality of Skarinou-*Giofyrka* (Catling 1962: 153, no.147; Georgiou 2006: 174: no.359) and it is likely that expansion of the MVASP survey grid into the

N, to adequately cover the chalk plateaus will provide additional archaeological documentation concerning the local and regional relations of the Maroni valley. Investigation on agricultural terracing technology similar to Hudson (1971, 1992), Morgan (1986), Treacy and Denevan (1994), Frederick and Krahtopoulou (2000: 87, fig.6.3) and Wilkinson (2003: 188, fig.9.4), examination of, construction materials (e.g. Whitelaw 1991; Fall et al. 2012: 2340-2341, 2343-2345), stratigraphy and cultural inclusions (e.g. Betancourt and Hope Simpson 1992; Malpass 1987; Shea 1997; Fall et al. 2012: 2340-2341, 2343-2345) and dating (Frederick and Krahtopoulou 2000: 92) can provide additional valuable information for understanding landscape formation processes and potentially assist in the evaluation of archaeological visibility at Maroni and the island in general.

Long-term Goals for Island-Wide Investigation

Acknowledging the current economic position of Cyprus and the financial restrictions affecting the activities of the government-run Department of Antiquities, many have considered that the most time and cost efficient methods for investigating, monitoring and preserving the cultural heritage are watching briefs and archaeological survey (Pain 2012 for Spain; Van den Dries *et al.* 2010; Schlanger and Aitchison 2010; Aitchison 2009; 2011). While the specifics of such an undertaking are not discussed in detail in the present study, such measures do not necessarily require government or educational institutional direction. In fact, they may be coordinated in the long term through recording of a given number of landscape characteristics discussed earlier in the present chapter, by government, academic and private archaeology practitioners.

To conclude, this study presents the potential of in-depth landscape investigation in archaeological methodological principles and theoretical interpretation. It demonstrates that a space-oriented approach, involving open/unconstructed, constructed and concealed place can provide new insights into diachronic problems of Bronze Age Cyprus and methods for the reconsideration of questions that

materially-oriented studies reasoned were resolved. Such an approach and its original perspective of space segregation practices, depending on the area of interest, provide endless possibilities for academic and disciplinary development, promote a *de novo* investigation of 'answered' questions, challenge conservative interpretations, liberate archaeological investigation from the dread of comparative survey studies, and provide research with new categories of data for archaeological interpretive frameworks.

Table 8A: Comparative spread of material evidence from the Kouris, the Vasilikos and Maroni Valleys.

	ECI	ECII	ECIII	MCI	MCII	MCIII	LCIA	LCIB	LCIIA	LCIIB	LCIIC	LCIIIA	LCIIIB
Maroni Valley	Psematismenos-*Trelloukkas* Cemetery					Maroni-*Kapsaloudhia* Cemetery			Maroni-*Vournes* earlier tombs		Maroni-*Vournes* West Building and Ashlar Building		
	Surface finds from Psematismenos and Maroni					Maroni-*Vournes*, Basin Building (limestone workshop)							
		Maroni-*Aspri Moutti* (reported but non-located site)					Maroni-*Tsaroukkas* Tombs				Maroni-*Tsaroukkas* settlement		
Vasilikos Valley		Kalavasos-*Cinema* Tombs							Kalavasos-*Mangia* Cemetery		Kalavasos-*Ayios Dhimitrios* monumental architecture		
			Kalavasos-*Panayia* and Kalavasos-*Mosque/Mavrovouni* Tombs						Surface evidence from several Kalavasos localities				
			Surface Evidence from several Kalavasos localities										
						T.2 *Panayia* Church			Kalavasos-*Ayios Dhimitrios* early architecture				
								Kalavasos-*Ayios Dhimitrios* Cemetery					

<table>
<tr><th></th><th colspan="2">ECI</th><th>ECII</th><th>ECIII</th><th>MCI</th><th>MCII</th><th>MCIII</th><th>LCIA</th><th>LCIB</th><th>LCIIA</th><th>LCIIB</th><th>LCIIC</th><th>LCIIIA</th><th>LCIIIB</th></tr>
<tr><td>North Kouris Valley</td><td colspan="3">Unpublished tombs from Erimi, Kandou and Ypsonas</td><td colspan="5">Erimi-Laonin tou Porakou</td><td colspan="3"></td><td colspan="2">Alassa-Paleotaverna and Alassa-Pano Mandilaris settlement</td><td></td></tr>
<tr><td></td><td colspan="4"></td><td colspan="3">Alassa-Palialona cemetery</td><td colspan="6">Alassa-Pano Mandilaris Tombs</td><td></td></tr>
<tr><td></td><td colspan="10"></td><td colspan="2">Erimi-Pitharka</td><td></td></tr>
<tr><td>South Kouris Valley</td><td colspan="3">Unpublished tombs</td><td colspan="6">Episkopi-Phaneromeni</td><td colspan="5">Episkopi-Bamboula</td><td>Kourion-Kaloriziki</td></tr>
<tr><td>Symboulos Valley</td><td colspan="4">Sotira-Kaminoudhia settlement and cemetery</td><td></td><td colspan="2">Sotira-Troullin tou Nikola surface evidence</td><td colspan="7"></td></tr>
<tr><td rowspan="4">Paramali Valley</td><td colspan="3">Paramali-Hadjina surface evidence</td><td colspan="11"></td></tr>
<tr><td colspan="5">Paramali-Pharkonia surface evidence</td><td colspan="7"></td></tr>
<tr><td colspan="6">Paramali-Lakkos surface evidence</td><td colspan="6"></td></tr>
<tr><td colspan="7">Paramali-Mandra tou Pouppou surface evidence</td><td colspan="5"></td></tr>
<tr><td>Avdhimou Valley</td><td colspan="3">Anogyra-Trapezi surface evidence</td><td colspan="12"></td></tr>
<tr><td></td><td colspan="6">Anoyira-Kannavokambos, Avdhimou-Ambelovounos, Avdhimou-Amolo, Avdhimou-Stymbouli surface evidence</td><td colspan="6"></td></tr>
</table>

	ECI	ECII	ECIII	MCI	MCII	MCIII	
					Anogyra-*Kolokos*, Anogyra-*Livadhia*, Anoyira-*Peralijithias*, Avdhimou-*Alatomi*, Avdhimou-*Büyük Tarla* surface evidence.		

Table 8B: Chronological comparison of identity manifestations from the Kouris, Vasilikos and Maroni Valleys and the Limassol area.

<table>
<tr><th></th><th>ECI</th><th>ECII</th><th>ECIII</th><th>MCI</th><th>MCII</th><th>MCIII</th><th>LCIA</th><th>LCIB</th><th>LCIIA</th><th>LCIIB</th><th>LCIIC</th><th>LCIIIA</th><th>LCIIIB</th></tr>
<tr><td rowspan="4">Maroni Valley</td><td colspan="12">- Kinship based group identity through multiple burials.</td><td></td><td></td></tr>
<tr><td colspan="3">- Individual identity through the deposition of unique artefacts
- Strong community identity through locally common burial materials.</td><td colspan="10"></td><td></td><td></td></tr>
<tr><td colspan="9"></td><td colspan="3">- Elite identity through imposing architecture
- Professional identity through artefacts deposited on Tsaroukkas tombs and the multiple economic activities recovered at Vournes.
- Individual identity through unique imported artefacts recovered in tombs.
- Group identity through large tombs and diversity in constructed space.
- Elite and community identity through the construction of monumental architecture in the heart of fertile land.
- Socio-economic identity through scrip and seal use and through professional identity.</td><td></td><td></td></tr>
<tr><td colspan="10"></td><td colspan="3">Migration of identity through de-territorialisation</td></tr>
</table>

<table>
<tr><th></th><th>ECI</th><th>ECII</th><th>ECIII</th><th>MCI</th><th>MCII</th><th>MCIII</th><th>LCIA</th><th>LCIB</th><th>LCIIA</th><th>LCIIB</th><th>LCIIC</th><th>LCIIIA</th><th>LCIIIB</th></tr>
<tr><td rowspan="6">Vasilikos Valley</td><td colspan="3"></td><td colspan="10">- Individual Identity through single burial internments.
- One possible example of professional identity (metalworker, leather worker, hunter).</td></tr>
<tr><td colspan="2"></td><td colspan="10">- Community identity through common cultural practices viewed in burial depositions and persistent habitation within a known landscape.</td></tr>
<tr><td colspan="3"></td><td colspan="9">- Kinship based group identity through multiple internments in tombs.
- Gender identity associated with the distribution of metal artefact types.
- Professional identity through unique tomb artefacts and probable specialised function sites (Ora-Betaleyi).</td></tr>
<tr><td colspan="7"></td><td colspan="5">- Elite identity through imposing architecture.
- Individual Identity through unique tomb artefacts.
- Professional identity through evidence of agriculture, metalworking, woodworking, textile production, pottery production and trade at Kalavasos-Ayios Dhimitrios and Tochni-Lakkia.
- Group identity through large tombs and diversities in constructed space.
Elite socio-economic identity through script and seal use and professional diversities.</td></tr>
<tr><td colspan="10"></td><td colspan="3">- Migration of identity through de-territorialisation</td></tr>
</table>

	ECI	ECII	ECIII	MCI	MCII	MCIII	LCIA	LCIB	LCIIA	LCIIB	LCIIC	LCIIIA	LCIIIB
North Kouris Valley			- Community identity through common burial practices and persistence of habitation within a known landscape. - Professional identity through space segregation between the domestic vs. workshop area of Erimi-*Laonin tou Porakou* - Kinship based group identity through multiple burials. - Individual identity (within the community) through picrolite pendants from Erimi-*Laonin tou Porakou.*										
										- Elite identity through imposing architecture and sealings with elite iconography. - Professional identity through different activities detected in the urban Alassa-*Paleotaverna* and *Pano Mandilaris* - Socio-Economic identity through script and seal use and professional diversities. - Social and kinship identity through the employment of architectural elements in 1 tomb. - Community identity and territoriality through the construction of an imposing monumental structure.			
												REGIONAL IDENTITY	
South Kouris Valley			- Community identity through common burial practices and persistence of habitation within the same landscape. - Kinship based group identity through multiple burials										
							- Elite identity indirectly argued through evidence for urbanisation. - Professional identity through spatial segregation between the domestic compounds of the landowners and the merchants. - Socio-Economic identity through script and seal use and professional diversities.						
												REGIONAL IDENTITY	

	ECI	ECII	ECIII	MCI	MCII	MCIII	LCIA	LCIB	LCIIA	LCIIB	LCIIC	LCIIIA	LCIIIB
Symboulos Valley	- Community identity through common burial practices and merging of domestic and non-domestic activities within the agglutinative architecture of the settlement.												
Avdhimou Valley			- Kinship based group identity through multiple burials. - Individual identity through the deposition of unique artefacts (the material is too limited to support community identity through common practices).										
Pyrgos-Mavrorachi			- Community identity through the deposition of common materials in the tombs. - Kinship based group identity through multiple burials.										
				- Professional identity through the spatial segregation of a workshop and through distinct tombs (Coppersmith's tomb).									

	ECI	ECII	ECIII	MCI	MCII	MCIII	LCIA	LCIB	LCIIA	LCIIB	LCIIC	LCIIIA	LCIIIB
Limassol		- Sporadic information from unpublished and/or poorly published material refers to the widespread practice of anthropomorphic figurines deposition, suggestive of individual identity manifestation.				- Kinship based group identity through multiple burials. - Community identity through local particularities in burial depositions (e.g. *Enaerios*). - Individual identity through the deposition of unique artefacts in tombs. - Professional identity through the deposition of professional insignia in tombs (e.g. copper lumps and scale pans).							

APPENDIX II

SITES AND GEO-COORDINATES (UNIVERSAL TRANSVERSE MERCATOR)

Vasilikos Valley

Asgata-*Ayia Marina*	36N5239593851089 UTM
Asgata-*Kambos*	36N5243783849518 UTM
Asgata-*Neron tou Phani*	36N5241443849622 UTM
Kalavasos-*Agkastromeni*	36N5267173847815 UTM
Kalavasos-*Alonia tou Pano Zyou*	36N5271883848286 UTM
Kalavasos-*Ammos*	36N5274183847839 UTM
Kalavasos-*Andronikidhes*	36N5268953845411 UTM
Kalavasos-*Argaki*	36N5261833845725 UTM
Kalavasos-*Argaki tou Tahiri*	36N5276693847776 UTM
Kalavasos-*Argaki tou Yeorgyiou*	36N5273973846374 UTM
Kalavasos-*Argakia East*	36N5273133845788 UTM
Kalavasos-*Arkhangelos*	36N5265373848868 UTM
Kalavasos-*Ayiasmata*	36N5276583848160 UTM
Kalavasos-*Ayios Dhimitrios*	36N5276693845432 UTM
Kalavasos-*Ayios Kaloyeros*	36N5261463849154 UTM
Kalavasos-*Ayios Yeorgyios*/*Kephala*	36N5289873844741 UTM
Kalavasos-*Ayious*	36N5283603845537 UTM
Kalavasos-*Ayious East*	36N5285483845369 UTM
Kalavasos-*Bamboulos*	36N5256603847379 UTM

Kalavasos-*Draconikiaes*	36N5284313846390 UTM
Kalavasos-*Fournia*	36N5275643847065 UTM
Kalavasos-*Gouppos*	36N5259123848946 UTM
Kalavasos-*Ipsopamboulos*	36N5281503847065 UTM
Kalavasos-*Kafkalia I-II*	36N5272503845202 UTM
Kalavasos-*Kafkalia III*	36N5271883845411 UTM
Kalavasos-*Kafkalia IV*	36N5275013845286 UTM
Kalavasos-*Kafkalia V*	36N5273343845327 UTM
Kalavasos-*Kafkalia VI*	36N5270623845495 UTM
Kalavasos-*Kafkalies 26*	36N5289043845934 UTM
Kalavasos-*Kafkalies 27*	36N5290923845976 UTM
Kalavasos-*Kambanaris*	36N5281503847232 UTM
Kalavasos-*Kaoukkos*	36N5277743845830 UTM
Kalavasos-*Kapparovouno*	36N5274073848160 UTM
Kalavasos-*Kaphkalia A*	36N5286793844405 UTM
Kalavasos-*Kaphkalia B*	36N5288613844323 UTM
Kalavasos-*Kaphkalia C*	36N5291093844339 UTM
Kalavasos-*Kharkokolymbos*	36N5254183849726 UTM
Kalavasos-*Khorapheri/Vounaritashi*	36N5264133846688 UTM
Kalavasos-*Kokkinikremmos*	36N5276273846793 UTM
Kalavasos-*Kokkinoyia*	36N5288623844867 UTM
Kalavasos-*Kondon Klisourin*	36N5270623848631 UTM

Kalavasos-*Kopetra*	36N5282973845893 UTM
Kalavasos-*Krommidhia*	36N5284813844471 UTM
Kalavasos-*Laos/Pamboules*	36N5263083845160 UTM
Kalavasos-*Laroumena*	36N5264973848411 UTM
Kalavasos-*Latomari/Argakia*	36N5269573845872 UTM
Kalavasos-*Lourca*	36N5277943846918 UTM
Kalavasos-*Lourca North*	36N5277743847211 UTM
Kalavasos-*Loures*	36N5294253843197 UTM
Kalavasos-*Malouteri*	36N5262763848842 UTM
Kalavasos-*Mandres tou Sani*	36N5278993847776 UTM
Kalavasos-*Mangia I*	36N5284013846123 UTM
Kalavasos-*Mangia II*	36N5284013846123 UTM
Kalavasos-*Mangia III*	36N5282553846060 UTM
Kalavasos-*Mangia IV*	36N5282553846060 UTM
Kalavasos-*Mangia V*	36N5283603846206 UTM
Kalavasos-*Mangia Tombs 7 and 8*	36N5285693846018 UTM
Kalavasos-*Markotis*	36N5259103850759 UTM
Kalavasos-*Mazeri*	36N5259643850324 UTM
Kalavasos-*Melisotriba*	36N5260163850012 UTM
Kalavasos-*Melisotriba East*	36N5261203849830 UTM
Kalavasos-*Mersinia*	36N5257853846918 UTM
Kalavasos-*Mitsingites*	36N5271463846583 UTM

Kalavaxos-*Pamboules*	36N5287363844930 UTM
Kalavasos-*Pamboulos tou Haji MIkhaili*	36N5253253845097 UTM
Kalavasos-*Perivolia I*	36N5280673846311 UTM
Kalavasos-*Perivolia II*	36N5275643846311 UTM
Kalavasos-*Pervolia*	36N5270833848816 UTM
Kalavasos-*Petra I*	36N5244563850116 UTM
Kalavasos-*Petra II*	36N5245863849674 UTM
Kalavasos-*Pidieri*	36N5261203846227 UTM
Kalavasos-*Plakes*	36N5255973845600 UTM
Kalavasos-*Potamia*	36N5265283848160 UTM
Kalavasos-*Potima I*	36N5263803849570 UTM
Kalavasos-*Potima II*	36N5263803849570 UTM
Kalavasos-*Potima III*	36N5263803849570 UTM
Kalavasos-*Psoumadhes*	36N5265963845100 UTM
Kalavasos-*Sirmata*	36N5285273845851 UTM
Kalavasos-*Skhisti Petra*	36N5263923845662 UTM
Kalavasos-*Sokopra*	36N5288453843711 UTM
Kalavasos-*Spilios*	36N5247943849518 UTM
Kalavasos-*Tenta*	36N5277943845641 UTM
Kalavasos-*Vasilikos River Bridge Site*	36N5281083845453 UTM
Kalavasos Village-*Cinema*	36N5272503847462 UTM
Kalavasos Village- *Mosque/Mavrovouni*	36N5270413847860 UTM

Kalavasos Village-*Panayia Church*	36N5270623847755 UTM
Kalavasos Village-*Plot 37*	36N5269993848129 UTM
Kalavasos-*Yeromano*	36N5264853850090 UTM
Kalavasos-*Yeroskhinia*	36N5263503845955 UTM
Kalavasos-*Yirtomylos*	36N5261203849362 UTM
Kalavasos-*Zoulofdidhes*	36N5257223845558 UTM
Mari-*Alonotopo*	36N5278523843992 UTM
Mari-*Asprous*	36N5255133842607 UTM
Mari-*Kopetra*	36N5258063843590 UTM
Mari-*Kopetra/Loura Kaphkaloudi*	36N5257433843402 UTM
Mari-*Kremmos tou Sani/Livadhia*	36N5290653842774 UTM
Mari-*Mazera*	36N5278693843248 UTM
Mari-*Mesovouni*	36N5284483843231 UTM
Mari-*Moutsounin/Mandra tou Rirou*	36N5273553844846 UTM
Mari-*Paliambela*	36N5284813844174 UTM
Mari-*Skali I*	36N5268323844951 UTM
Mari-*Skali II*	36N5266433844909 UTM
Mari Village	36N5273563844273 UTM
Ora-*Ammouthia*	36N5252693851142 UTM
Ora-*Asprokhorapha*	36N5255083851512 UTM
Ora-*Betaleyi*	36N5242903851486 UTM
Ora-*Klitari*	36N5251113851248 UTM

Ora-*Lakxia tou Constandi*	36N5259923851994 UTM
Ora-*Loures*	36N5255463850825 UTM
Ora-*Mazokambos*	36N5245553850824 UTM
Ora-*Mersinia*	36N5263303851803 UTM
Sanidha-*Moutti tou Ayiou Serkou*	36N5176103851803 UTM
Tokhni-*Kapsala*	36N5281293848066 UTM
Tokhni-*Lakkia*	36N5298903842054 UTM
Tokhni-*Latomaes*	36N5286113847211 UTM
Tokhni-*Mesovouni*	36N5307673844365 UTM
Tokhni-*Mouthkia*	36N5297203844134 UTM
Tokhni-*Oriti North*	36N5275513849674 UTM
Tokhni-*Oriti South*	36N5275253849414 UTM
Tokhni-*Petreli*	36N5308293844867 UTM
Tokhni-*Petreli North*	36N5305993845244 UTM
Tokhni-*Styllos*	36N5292413843909 UTM
Vasa-*Livadhia*	36N5238413851274 UTM
Zygi-*Petrini*	36N5303353842435 UTM

Maroni Valley

Maroni-*Aspres*	36N5345413844901 UTM
Maroni-*Aspri Moutti* (Dikaios)	36N5314493845050 UTM (speculated)
Maroni-*Kapsaloudhia*	36N5343763845149 UTM

Maroni-*Karagiannidhes*	36N5329043845745	UTM
Maroni-*Petrera*	36N5333673845282	UTM
Maroni-*Tsaroukkas*	36N5354513844918	UTM
Maroni-*Viklari*	36N5327393844901	UTM
Maroni Village	36N5324913846042	UTM
Maroni-*Vournes*	36N5349553844968	UTM
Psematismenos-*Maraes*	36N5319953845563	UTM
Psematismenos-*Trelloukkas*	36N5313503846373	UTM
Psematismenos-*Palia/Koliokremmos*	36N5310693846588	UTM

Limassol Area

Ayios Athanasios	36N5054483839113	UTM
Ayios Ioannis	36N5014003836176	UTM
Ekali	36N5007653839748	UTM
Enaerios	36N5048923838319	UTM
Germasogeia	36N5082263840462	UTM
Hioni	36N5052103841018	UTM
Katholiki	36N5032253837287	UTM
Pyrgos-*Mavrorachi*	36N5162433844193	UTM

Kouris Valley

Alassa-*Paleotaverna*	36N4930953846248	UTM

Alassa-*Palialona*	36N4930483845776 UTM
Alassa-*Pano Mandilaris*	36N4930483846484 UTM
Episkopi-*Bamboula*	36N4914903836332 UTM
Episkopi-*Phaneromeni*	36N4920563836332 UTM
Episkopi-*Phoinijin*	36N4937003835065 UTM
Erimi-*Kafkalla*	36N4923873838457 UTM
Erimi-*Laonin tou Porakou*	36N4931903842990 UTM
Erimi-*Pitharka*	36N4922453837985 UTM

Symboulos Valley

Sotira-*Kaminoudhia*	36N4870993841526 UTM
Sotira-*Troullin tou Nikola*	36N4858713841904 UTM

Paramali Valley

Avdhimou-*Shylles*	36N4806113837701 UTM
Paramali-*Mandra tou Pouppou*	36N4809883840251 UTM
Paramali-*Pharkonia*	36N4811303841573 UTM

Avdhimou Valley

Anogyra-*Kannavokambos*	36N4759363842093 UTM
Anogyra-*Kolokos*	36N4761723843368 UTM
Anogyra-*Livadhia*	36N4757003843509 UTM

Anogyra-*Peralijithias*	36N4771163844218 UTM
Anogyra-*Trapezi*	36N4760783841621 UTM
Avdhimou-*Alatomi*	36N4778253837654 UTM
Avdhimou-*Ambelovounos*	36N4772583839071 UTM
Avdimou-*Amolo*	36N4785333837182 UTM
Avdhimou-*Büyük Tarla*	36N4773533840393 UTM
Avdhimou-*Stymbouli*	36N4776833837040 UTM

Other Mentioned Sites

Akanthou	36N5676873913838 UTM
Alambra-*Mouttes*	36N5359373871571 UTM
Ambelikou-*Aletri*	36N4823593885660 UTM
Analiontas-*Paleokklisia*	36N5264123873555 UTM
Apliki-*Karamallos*	36N4865263883279 UTM
Aredhiou-*Vouppes*	36N5176813878119 UTM
Athienou-*Bamboulari tis Koukkouminas*	36N5488353880104 UTM
Ayia Irini-*Paleokastro*	36N4966463905107 UTM
Ayios Iacovos-*Melia*	36N5738383908480 UTM
Ayios-Sozomenos	36N5397073879905 UTM
Dhali-*Kafkalia*	36N5381203874944 UTM
Hala Sultan Tekke-*Vyzakia*	36N5520103855497 UTM
Enkomi-*Ayios Iacovos*	36N5797923890621 UTM
Galinoporni	36N6174953930705 UTM
Kalopsidha-*Kouphos*	36N5720533883080 UTM
Katydhata-*Laonarka*	36N4900983881493 UTM

Kazaphani-*Ayios Andronikos*	36N5321663907687 UTM
Kition-*Bamboula*	36N5530023858871 UTM
Klavdhia-*Trimithos*	36N5464543860855 UTM
Korovia-*Nitovikla*	36N6145183929515 UTM
Kouklia-*Palaepaphos*	36N4607293840416 UTM
Maa-*Palaekastro*	36N4466403847361 UTM
Marki-*Alonia*	36N5291903875738 UTM
Morphou-*Toumba tou Skourou*	36N4994243894193 UTM
Myrtou-*Pigadhes*	36N5065683906496 UTM
Phlamoudhi-*Melissa* and *Vounari*	36N5776093916418 UTM
Politiko-*Phoradhes*	36N5220463876135 UTM
Pyla-*Kokkinokremmos*	36N5625273874151 UTM
Rizokarpaso	36N6246393938643 UTM
Sinda-*Siri Dash*	36N5637183890422 UTM

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